REPLACE SECTION

⚠ SAFETY SUMMARY

Notes on the operation on the password inputting screen.

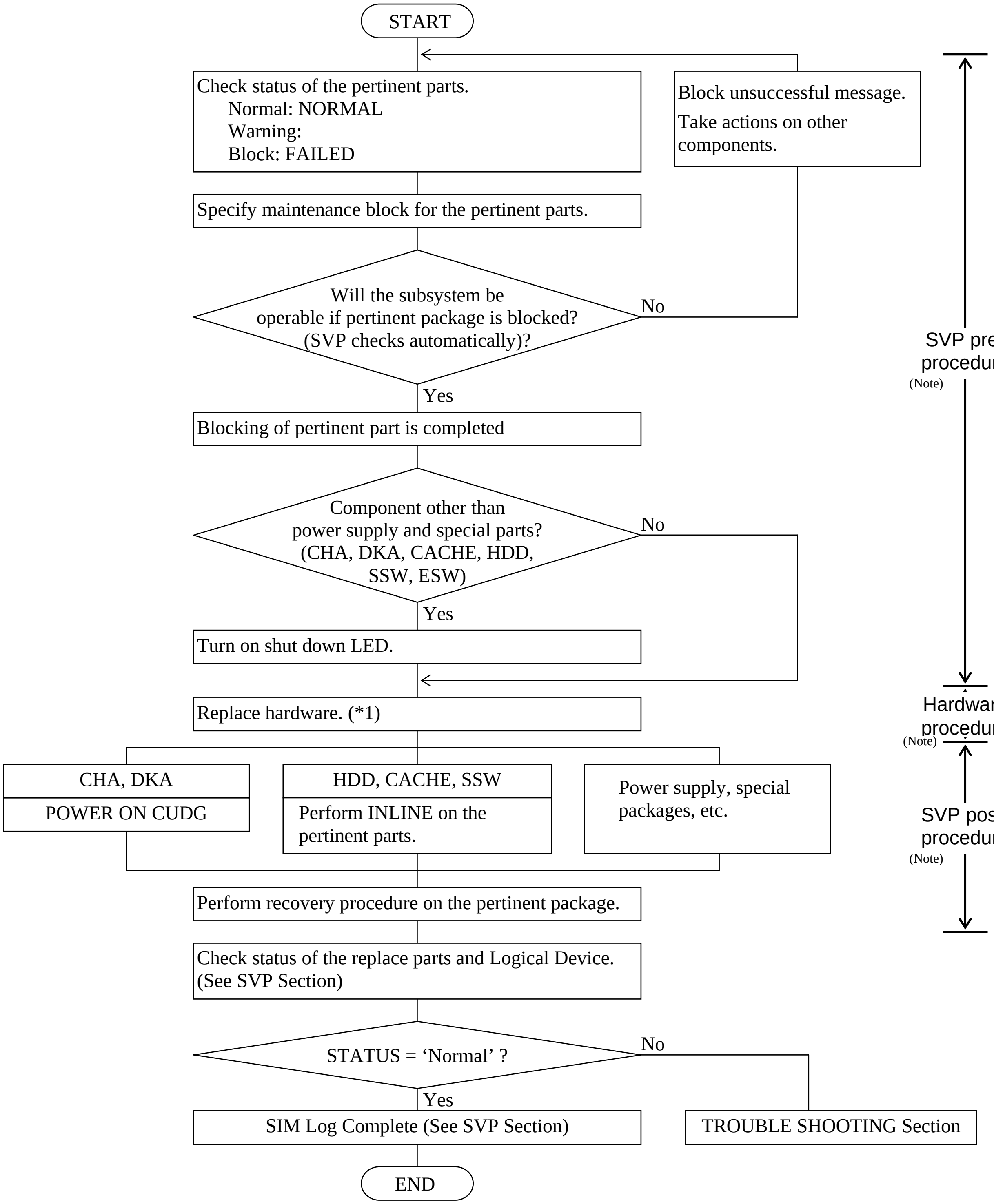
The password inputting screen is displayed on the SVP screen to arouse maintenance person’s attention when the operation concerned can cause a serious failure such as a system down or a data loss.

- When the password inputting screen is displayed, be sure to observe the cautions given in the procedure concerned in the maintenance manual.
- When a confirmation by the technical support division is required in the maintenance manual, be sure to get it before executing the maintenance procedure concerned.
- Each PCB is operated by the microprogram owned by it individually.
  If the PCB is replaced in the procedure that makes the version of the microprogram disagree with that of the PCB, the subsystem cannot operate normally. Be sure to make the revisions consistent each other.

Contents

1. Hot Replace

1.1 Hot Replace Flowchart


START
Check status of the pertinent parts.
Normal: NORMAL
Warning:
Block: FAILED
Block unsuccessful message.
Take actions on other components.
Specify maintenance block for the pertinent parts.
Will the subsystem be operable if pertinent package is blocked? (SVP checks automatically)?
No
Yes
Blocking of pertinent part is completed
Component other than power supply and special parts? (CHA, DKA, CACHE, HDD, SSW, ESW)
No
Yes
Turn on shut down LED.
Replace hardware. (*1)
CHA, DKA
POWER ON CUDG
HDD, CACHE, SSW
Perform INLINE on the pertinent parts.
Power supply, special packages, etc.
Perform recovery procedure on the pertinent package.
Check status of the replace parts and Logical Device. (See SVP Section)
STATUS = 'Normal' ?
No
Yes
SIM Log Complete (See SVP Section)
TROUBLE SHOOTING Section
END
SVP pre-procedure
(Note)
Hardware procedure
(Note)
SVP post-procedure
(Note)

*1: When there are some parts to exchange and the HDDFAN (FAN Assembly) is contained in the parts, the HDDFAN must be exchanged first.

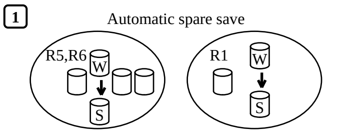
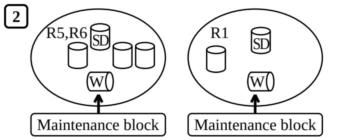
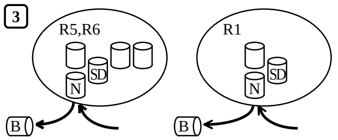
Note :

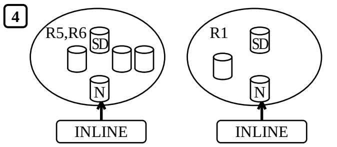
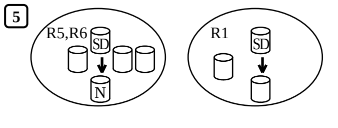
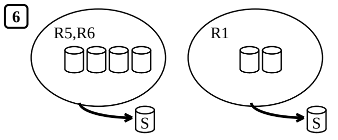
SVP pre-procedure:	An SVP (PC) process of issuing a maintenance block instruction after checking the status of the parts to be replaced so that the live parts can be removed and replaced.
Hardware procedure:	A process of removing a parts to be replaced (shut down LED on) and installing a maintenance package. Be sure to wear your wrist strap, and attach to ground, prior to performing the following work. This will insure that the IC and LSI on the PCB, are protected from static electricity.
SVP post-procedure:	An SVP (PC) process of making functional checks (CUDG and INLINE) on the replacement package and building it into the subsystem.

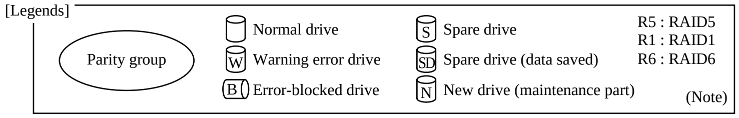
1.2 Concept of Drive Maintenance

[Spare drive present]

[Case 1] When a drive exceeds the warning threshold value

Condition item		Condi-tion	Procedure		
			SVP Pre-procedure		Hardware-Procedure
			Threshold value exceeded	Maintenance block	Drive replacement
Threshold value exceeded	Warning	○	1 	2  R5,R6 SD W Maintenance block R1 SD W Maintenance block	3 
	Block	–			
Other case (secondary measure)			① Block source drive (case 2) ② Block destination a) Unused spare present (case 6) b) Unused spare absent (case 7)		

Procedure		
SVP Post-procedure		
INLINE	Copy back	Recovery
4 	5 	6 
① Block new drive (case 8)	① Block source drive (case 9) ② Block destination (case 8)	



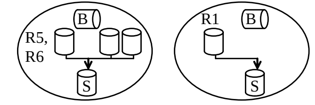
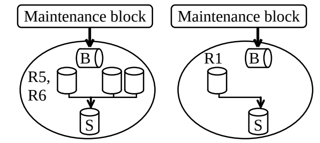
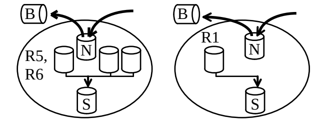
Note: In the RAID system, two drives form a mirroring pair and the two mirroring pairs (four drives) compose the RAID. In the above diagram, only the two mirroring pairs are shown.

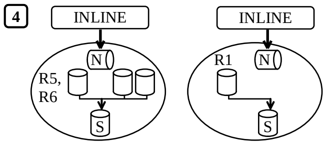
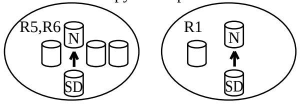
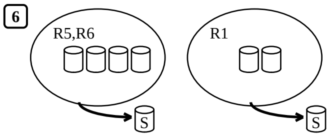
[Spare drive present]

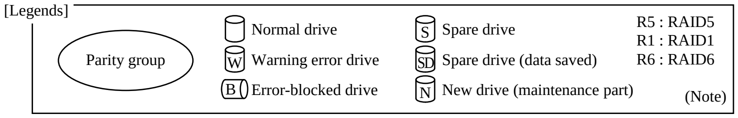
[Case 2] A case where the one drive is blocked

When a spare drive exists, a correction copy from the blocked drive is started automatically.
In this case, go to Case 2.1 when the blocked drive is to be replaced during the correction copy from it and a copy back that follows is to be made automatically, or go to Case 2.2 when the blocked drive is to be replaced after the correction copy is completed.

[Case 2.1] A case where the one drive is blocked and it is replaced during an automatic correction copy is made from it

Condition item		Condi-tion	Procedure		
			SVP Pre-procedure		Hardware-procedure
			Block one drive	Maintenance block	Drive replacement
Threshold value exceeded	Warning	–	1 Automatic correction copy 	2 A blocked drive is replaced during an automatic correction copy. 	3 A blocked drive is replaced during an automatic correction copy. 
	Block	○			
Other case (secondary measure)			① When a copy destination drive is blocked a) Unused spare present (case 10) b) Unused spare absent (case 11)	Note: When the blocked drive is replaced while the automatic correction copy is being made from it, the copy back written in Item [5] is started automatically. When you replace the drive after the automatic correction copy is completed, refer to Case 2.2.	

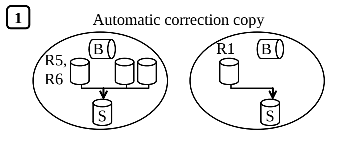
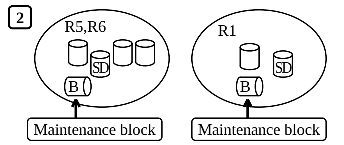
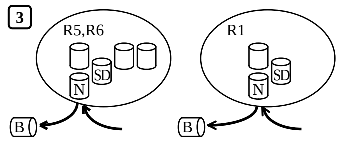
Procedure		
SVP Post-procedure		
INLINE	Automatic copy back	Recovery
4 	5 The copy back is started automatically after the correction copy is completed. 	6 
① Block new drive (case 8)	① Block source drive (case 9) ② Block destination (case 8)	

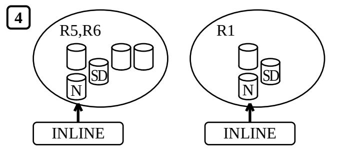
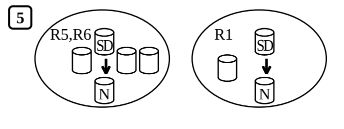
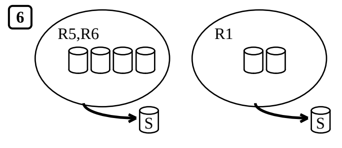


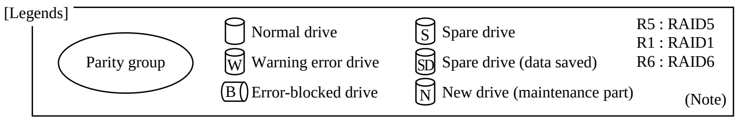
Note: In the RAID system, two drives form a mirroring pair and the two mirroring pairs (four drives) compose the RAID. In the above diagram, only the two mirroring pairs are shown.

[Spare drive present]

[Case 2.2] A case where the one drive is blocked and it is replaced after an automatic correction copy is made from it

Condition item		Condi-tion	Procedure		
			SVP Pre-procedure		Hardware-procedure
			Block one drive	Maintenance block	Drive replacement
Threshold value exceeded	Warning	–	 1 Automatic correction copy R5, R6 B S R1 B S	 2 R5,R6 SD B Maintenance block R1 SD B Maintenance block	
	Block	○			
Other case (secondary measure)			① Block destination a) Unused spare present (case 10) b) Unused spare absent (case 11)		

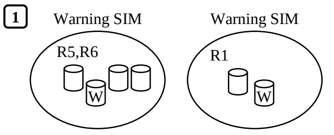
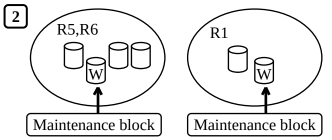
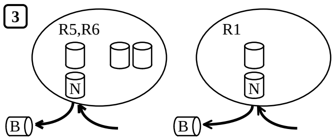
Procedure		
SVP Post-procedure		
INLINE	Copy back	Recovery
		
① Block new drive (case 8)	① Block source drive (case 9) ② Block destination (case 8)	

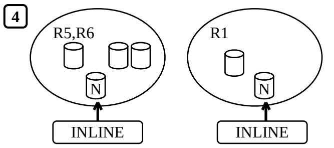
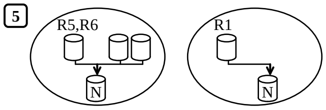
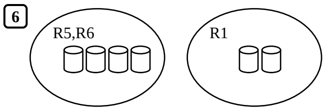


Note: In the RAID system, two drives form a mirroring pair and the two mirroring pairs (four drives) compose the RAID. In the above diagram, only the two mirroring pairs are shown.

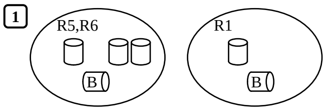
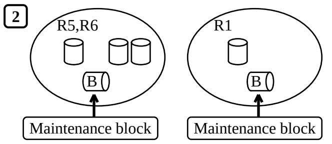
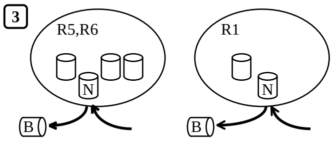
[Spare drive absent]

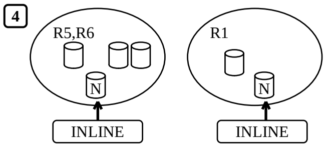
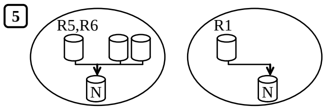
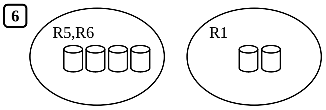
[Case 3] When a drive exceeds the warning threshold value (without spare drive)

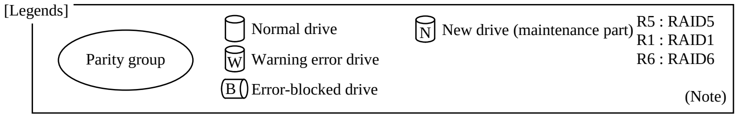
Condition item		Condi-tion	Procedure		
			SVP Pre-procedure		Hardware-Procedure
			Threshold value exceeded	Maintenance block	Drive replacement
Threshold value exceeded	Warning	○	1 	2  R5,R6 R1 W W Maintenance block Maintenance block	3 
	Block	–			
Other case (secondary measure)					

Procedure		
SVP Post-procedure		
INLINE	Correction copy	Recovery
4 	5 	6 
① Block new drive (case 5)	① Block destination (case 5)	

[Case 4] When a drive is blocked (without spare drive)

Condition item		Cond i-tion	Procedure		
			SVP Pre-procedure		Hardware-Procedure
			Block one drive	Maintenance block	Drive replacement
Threshold value exceeded	Warning	–	1 	2  R5,R6 R1 B B Maintenance block Maintenance block	3 
	Block	○			
Other case (secondary measure)					

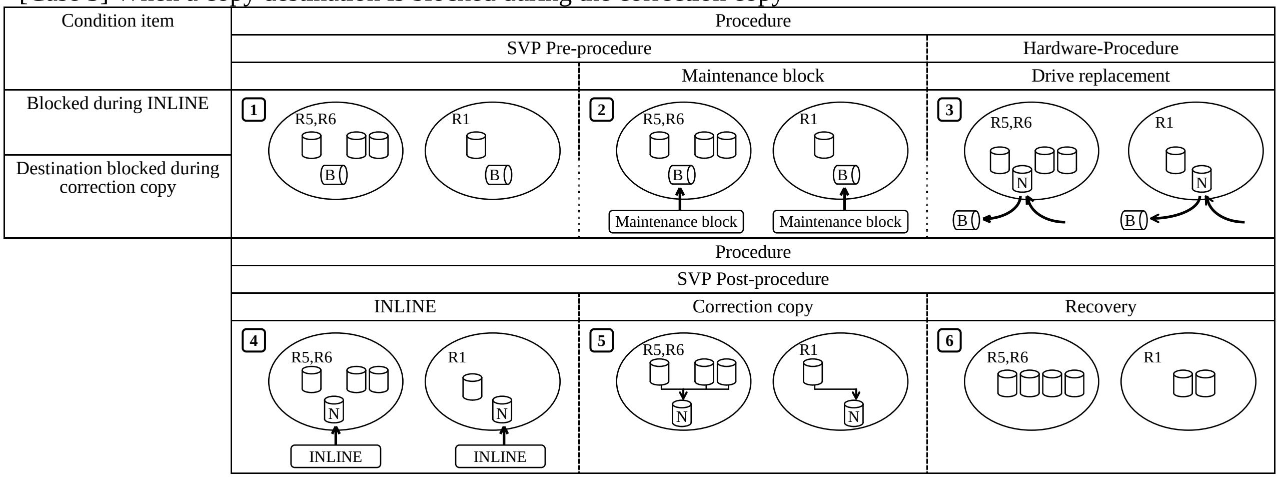
Procedure		
SVP Post-procedure		
INLINE	Correction copy	Recovery
4 	5 	6 
① Block new drive (case 5)	① Block destination (case 5)	



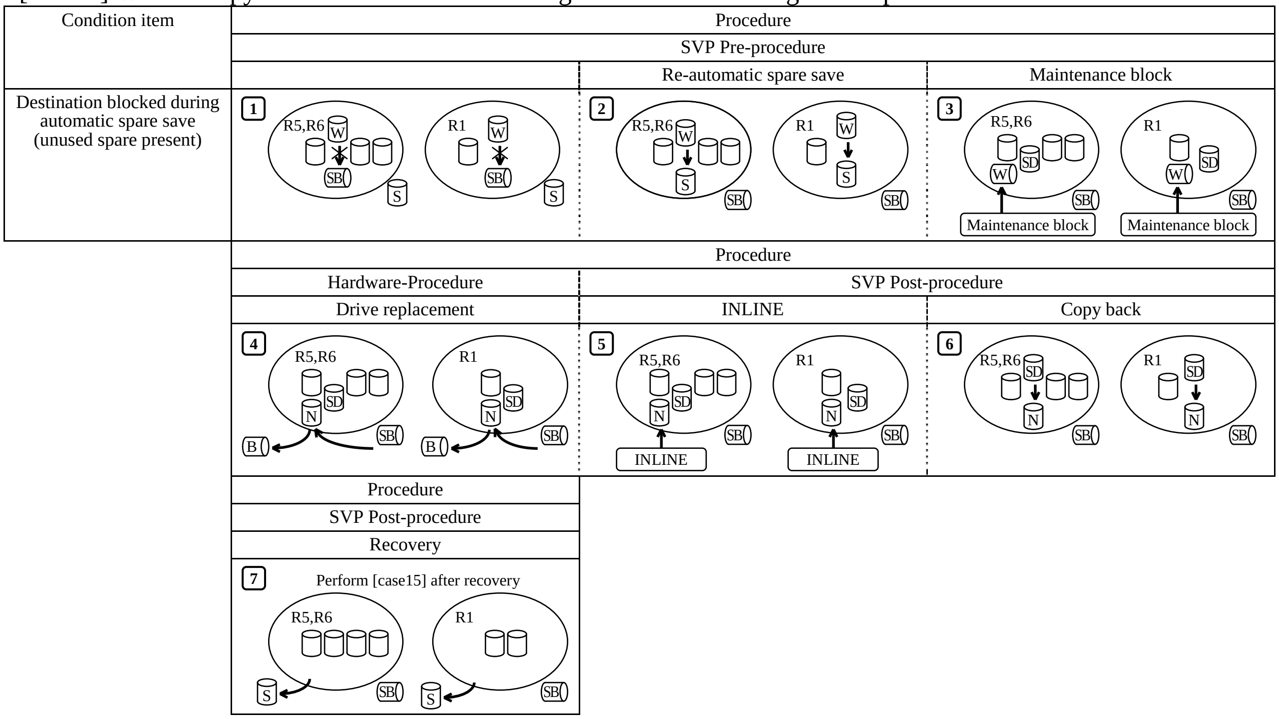
Note: In the RAID system, two drives form a mirroring pair and the two mirroring pairs (four drives) compose the RAID. In the above diagram, only the two mirroring pairs are shown.

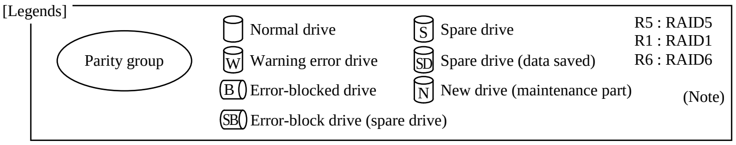
[Case in which a secondary error occurred during error]

[Case 5] When a copy destination is blocked during the correction copy



[Case 6] When a copy destination is blocked during the automatic saving to the spare drive

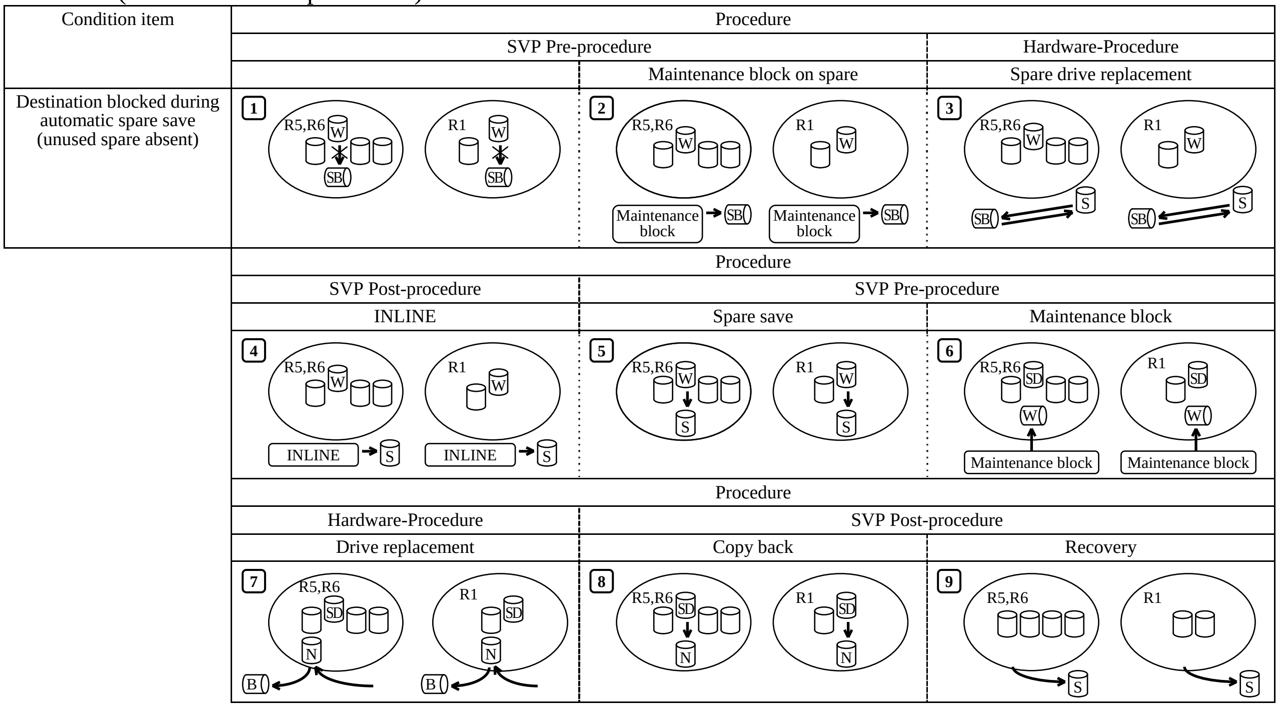




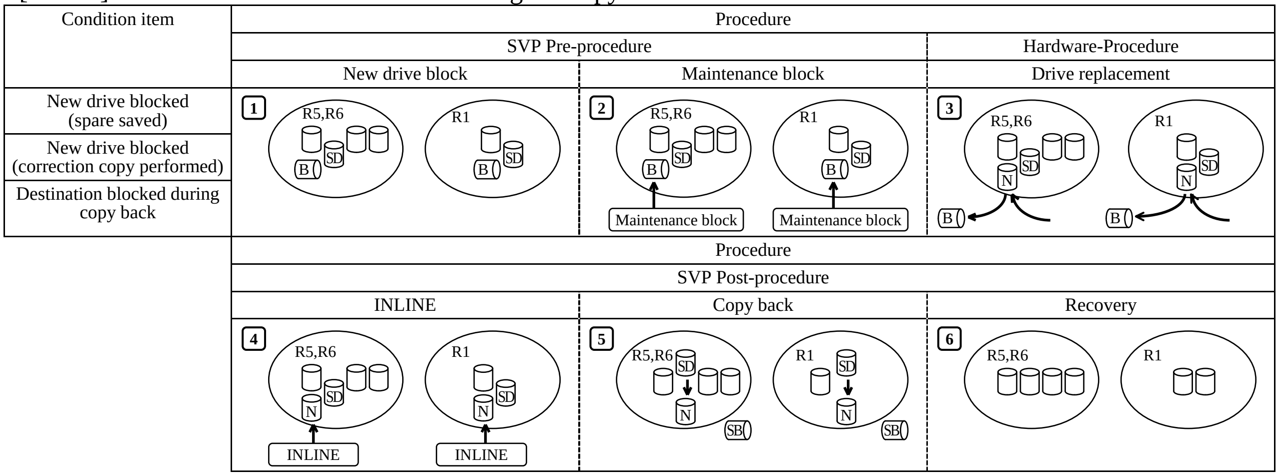
Note: In the RAID system, two drives form a mirroring pair and the two mirroring pairs (four drives) compose the RAID. In the above diagram, only the two mirroring pairs are shown.

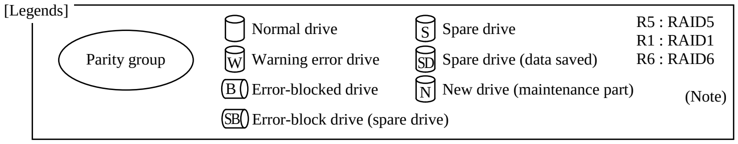
[Case in which a secondary error occurred during error recovery]

[Case 7] When a copy destination drive is blocked during the automatic saving to the spare drive (without unused spare drive)



[Case 8] When the new drive is blocked during the copy back

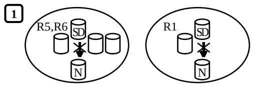
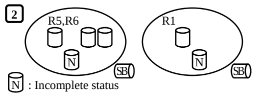
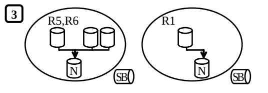


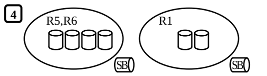


Note: In the RAID system, two drives form a mirroring pair and the two mirroring pairs (four drives) compose the RAID. In the above diagram, only the two mirroring pairs are shown.

[Case in which a secondary error occurred during error recovery]

[Case 9] When a copy source drive is blocked during the copy back

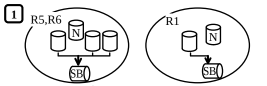
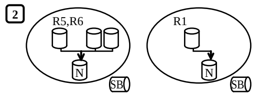
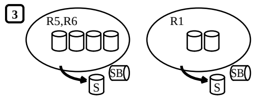
Condition item	Procedure		
	SVP Pre-procedure		SVP Post-procedure
			Correction Copy
Source blocked during copyback		 N : Incomplete status	

Procedure
SVP Post-procedure
Correction Copy
 After recovering execute [Case 15].

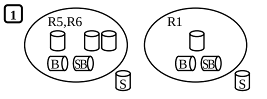
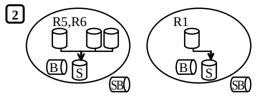
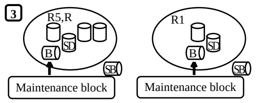
[Case 10] A case where the copy destination drive is blocked during the automatic correction copy (and a unused spare drive exists)

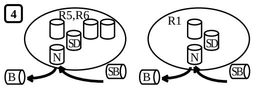
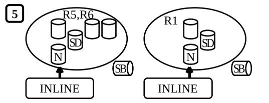
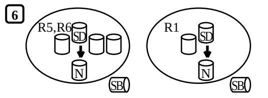
When the blocked drive has been replaced through performance of the operation for Case 2.1, go to Case 10.1 or otherwise, go to Case 10.2.

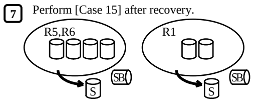
[Case 10.1] When the blocked drive has been replaced through performance of the operation for Case 2.1

Condition item	Procedure		
	SVP Pre-procedure		
		Starting collection copy automatically	Maintenance block
Destination blocked during automatic correction copy (unused spare present)	 Correction cop error		 Perform [case 15] after recovery.

[Case 10.2] When the operation for Case 2.1 has not been performed

Condition item	Procedure		
	SVP Pre-procedure		
		Re-automatic correction copy	Maintenance block
Destination blocked during automatic correction copy (unused spare present)			

Procedure		
Hardware-procedure	SVP Post-procedure	
Drive replacement	INLINE	Copy back
		

Procedure
SVP Post-procedure
Recovery
Perform [Case 15] after recovery. 

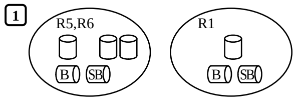
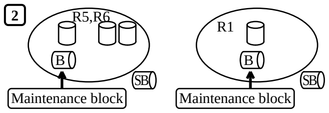
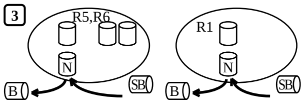
[Legends]

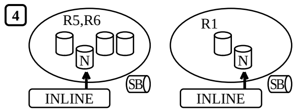
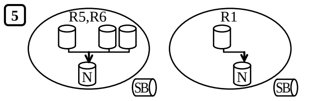
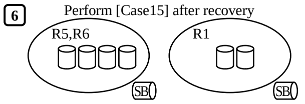
Parity group
Normal drive
B Error-blocked drive
SB Error-block drive (spare drive)
SD Spare drive (data saved)
S Spare drive
N New drive (maintenance part)
R5 : RAID5
R1 : RAID1
R6 : RAID6
(Note)

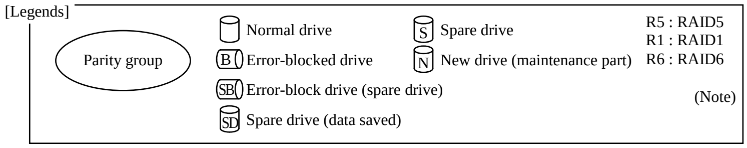
Note: In the RAID system, two drives form a mirroring pair and the two mirroring pairs (four drives) compose the RAID. In the above diagram, only the two mirroring pairs are shown.

[Case in which a secondary error occurred during error recovery]

[Case 11] When a copy destination drive is blocked during the automatic correction copy (without unused spare drive)

Condition item	Procedure		
	SVP Pre-procedure		Hardware-procedure
		Maintenance block	Drive replacement
Destination blocked during automatic correction copy (unused spare absent)	1  Note: When the blocked drive is replaced in the case 2, same as a case 10.1, collection copy starting automatically.	2 	3 

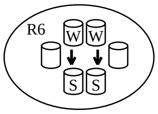
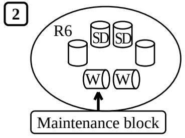
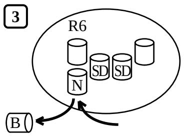
	Procedure		
	SVP Post-procedure		
	INLINE	Correction copy	Recovery
	4 	5 	6 Perform [Case15] after recovery 

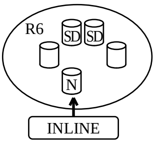
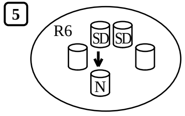
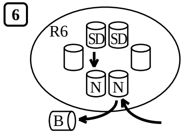


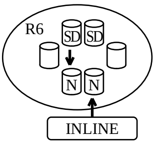
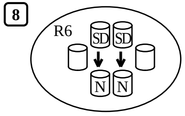
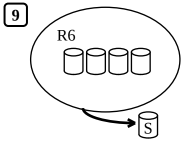
Note: In the RAID system, two drives form a mirroring pair and the two mirroring pairs (four drives) compose the RAID. In the above diagram, only the two mirroring pairs are shown.

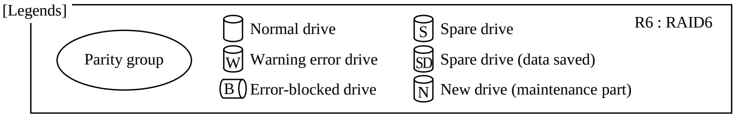
[Spare drive present]

[Case 12] RAID6 When two drives exceed the warning threshold value

Condition item		Condi-tion	Procedure		
			SVP Pre-procedure		Hardware-Procedure
			Threshold value exceeded	Maintenance block	Replacement of the first drive
Threshold value exceeded	Warning	○	1 Automatic saving(s) to the spare drive allowed to be made up to twice 	2  Proceed the drive to the next step when the copying from it is completed. It is not necessary to wait until the copying from the two drives is completed.	3 
	Block	–			
Other case (secondary measure)			① Block source drive (case 2) ② Block destination (a) Unused spare present (case 6) (b) Unused spare absent (case 7)		

Procedure		
SVP Post-procedure		Hardware-procedure
INLINE test of the first drive	Copy back to the first drive	Replacement of the second drive during the copy back to the first drive
4 	5 	6 
① Block new drive (case 8)	① Block source drive (case 9) ② Block destination (case 8)	

Procedure		
SVP Post-procedure		
INLINE test of the second drive	Copy back to the second drive	Recovery
7 	8 	9 
① Block new drive (case 8)	① Block source drive (case 9) ② Block destination (case 8)	

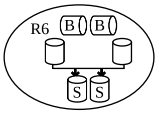
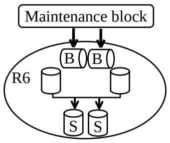
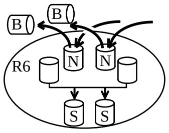


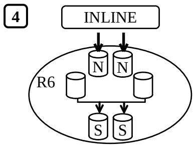
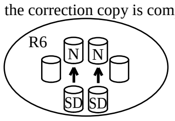
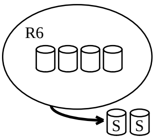
[Spare drive present]

[Case 13] RAID6 When two drives are blocked

- When you replace the two blocked drives while making an automatic correction copy from them, go to Case 13.1.
- When you replace the two blocked drives after making an automatic correction copy from them, go to Case 13.2.
- When you replace one of the two blocked drives from each of which an automatic correction copy is being made, go to Case 13.3.

[Case 13.1] RAID6 A case where the two drives is blocked and it is replaced while an automatic correction copy is made from it

Condition item		Condi-tion	Procedure		
			SVP Pre-procedure		Hardware-procedure
			Detachment of the two drives	Maintenance block	Replacement of the first drive
Threshold value exceeded	Warning	–	1 Automatic correction copy (allowed to be made up to twice) 	2 A blocked drive is replaced during an automatic correction copy. 	3 A blocked drive is replaced during an automatic correction copy. 
	Block	○			
Other case (secondary measure)			① Block destination (a) Unused spare present (case 10) (b) Unused spare absent (case 11)	Note: When the blocked drive is replaced while an automatic correction copy is being made from it, the copy-back written in Item [5] is started automatically. When you replace the drive after the automatic correction copy is completed, refer to Case 13.2.	

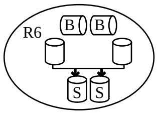
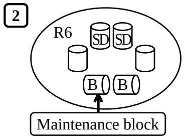
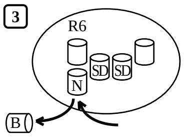
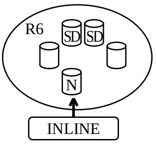
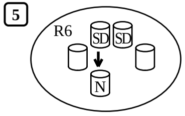
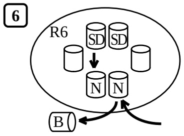
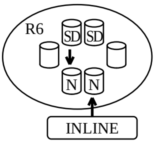
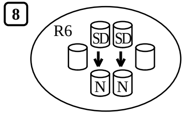
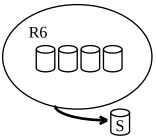
Procedure		
SVP Post-procedure		
INLINE test of the first drive	Copy back to the first drive	Recovery
4 	5 The copy-back is started automatically after the correction copy is completed. 	6 
① Block new drive (case 8)	① Block source drive (case 9) ② Block destination (case 8)	

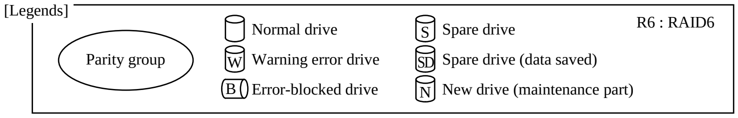
[Legends]

Parity group	Normal drive	Spare drive	R6 : RAID6
	W Warning error drive	SD Spare drive (data saved)	
	B Error-blocked drive	N New drive (maintenance part)	

[Spare drive present]

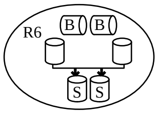
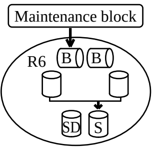
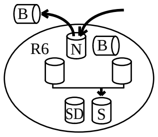
[Case 13.2] RAID6 A case where the two drives is blocked and it is replaced after an automatic correction copy is made from it

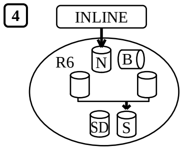
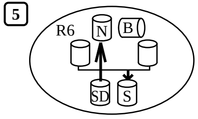
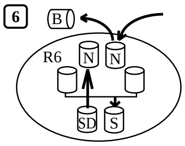
Condition item		Condi-tion	Procedure		
			SVP Pre-procedure		Hardware-procedure
			Detachment of the two drives	Maintenance block	Replacement of the first drive
Threshold value exceeded	Warning	–	1 Automatic correction copy or copies allowed to be made up to twice 	2 	3 
	Block	○			
Other case (secondary measure)			① Block destination (a) Unused spare present (case 10) (b) Unused spare absent (case 11)		
			Procedure		
			SVP Post-procedure		Hardware-procedure
			INLINE test of the first drive	Copy back to the first drive	Replacement of the second drive during the copy back to the first drive
			4 	5 	6 
			① Block new drive (case 8)	① Block source drive (case 9) ② Block destination (case 8)	
			Procedure		
			SVP Post-procedure		
			INLINE test of the second drive	Copy back to the second drive	Recovery
			7 	8 	9 
			① Block new drive (case 8)	① Block source drive (case 9) ② Block destination (case 8)	

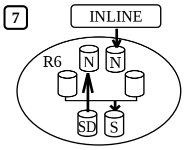
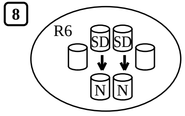
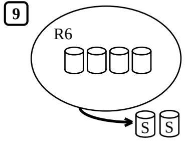


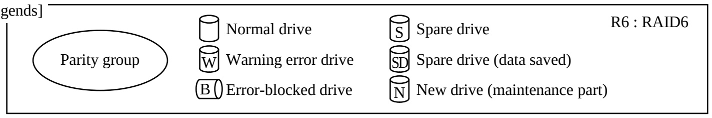
[Spare drive present]

[Case 13.3] RAID6 A case where the two drives is blocked and it is an automatic correction copy from one of the drives is in progress and that from the other drive is completed

Condition item		Condi-tion	Procedure		
			SVP Pre-procedure		Hardware-procedure
			Detachment of the two drives	Maintenance block	Replacement of the first drive
Threshold value exceeded	Warning	–	1 Automatic correction copy or copies allowed to be made up to twice. 	2  Select the drive which is completed automatic collection copy.	3 
	Block	○			
Other case (secondary measure)			① Block destination (a) Unused spare present (case 10) (b) Unused spare absent (case 11)		

Procedure		
SVP Post-procedure		Hardware-procedure
INLINE test of the first drive	Copy back to the first drive	Replacement of the second drive during the copy back to the first drive
4 	5 	6  Make a copy-back to the first drive, and then replace the second drive while an automatic correction copy is being made from the second drive.
① Block new drive (case 8)	① Block source drive (case 9) ② Block destination (case 8)	

Procedure		
SVP Post-procedure		
INLINE test of the second drive	Copy back to the second drive	Recovery
7 	8  When an automatic correction copy from the second drive is completed, a copy-back to the second drive is started automatically in the same way as Case 2.1.	9 
① Block new drive (case 8)	① Block source drive (case 9) ② Block destination (case 8)	

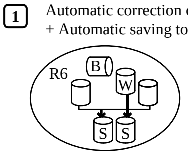
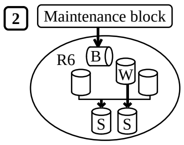
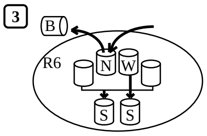


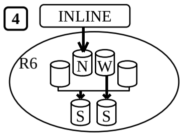
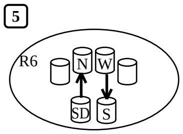
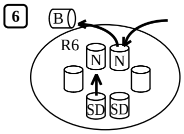
[Spare drive present]

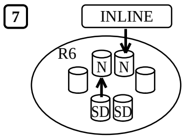
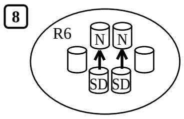
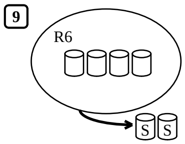
[Case 14] RAID6 When a drive is blocked and another drive exceeds the warning threshold value

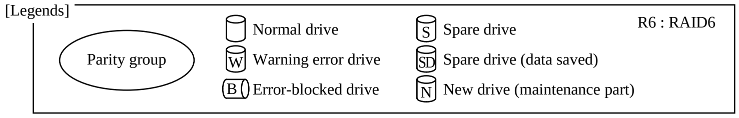
- When replacing a blocked drive while an automatic correction copy is being made from it, go to Case 14.1.
- When replacing a blocked drive after the automatic correction copy from it is completed, go to Case 14.2.

[Case 14.1] When replacing a blocked drive while an automatic correction copy is being made from it

Condition item		Condi-tion	Procedure		
			SVP Pre-procedure		Hardware-procedure
			Detachment of the two drives	Maintenance block	Replacement of the first drive
Threshold value exceeded	Warning	○	 Automatic correction copy + Automatic saving to the spare disk	 A blocked drive is replaced during an automatic correction copy.	
	Block	○			
Other case (secondary measure)			① Block destination (a) Unused spare present (case 10) (b) Unused spare absent (case 11)	Note: When an automatic saving to a spare drive is completed before this operation is performed, the following Items [6] and [7] may be executed in advance.	

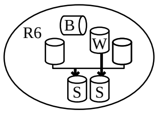
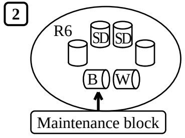
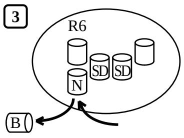
Procedure		
SVP Post-procedure		Hardware-procedure
INLINE test of the first drive	Copy back to the first drive	Replacement of the second drive during the copy back to the first drive
	 A blocked drive is replaced during an automatic correction copy.	
① Block new drive (case 8)	① Block source drive (case 9) ② Block destination (case 8)	

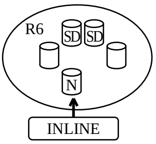
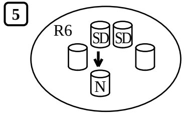
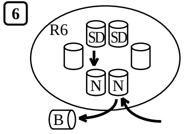
Procedure		
SVP Post-procedure		
INLINE test of the second drive	Copy back to the second drive	Recovery
		
① Block new drive (case 8)	① Block source drive (case 9) ② Block destination (case 8)	

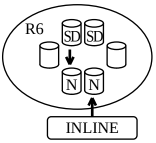
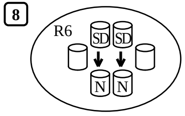
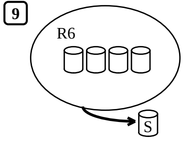


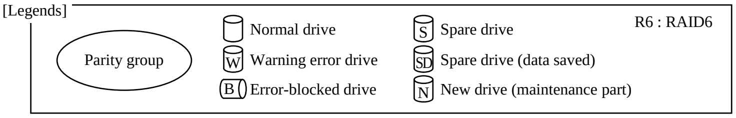
[Spare drive present]

[Case 14.2] When replacing a blocked drive after the automatic correction copy from it is completed

Condition item		Condi-tion	Procedure		
			SVP Pre-procedure		Hardware-procedure
			Detachment of the two drives	Maintenance block	Replacement of the first drive
Threshold value exceeded	Warning	○	1 Automatic correction copy + Automatic saving to the spare disk 	2  Proceed the drive to the next step when the copying from it is completed. It is not necessary to wait until the copying from the two drives is completed.	3 
	Block	○			
Other case (secondary measure)			① Block destination (a) Unused spare present (case 10) (b) Unused spare absent (case 11)		

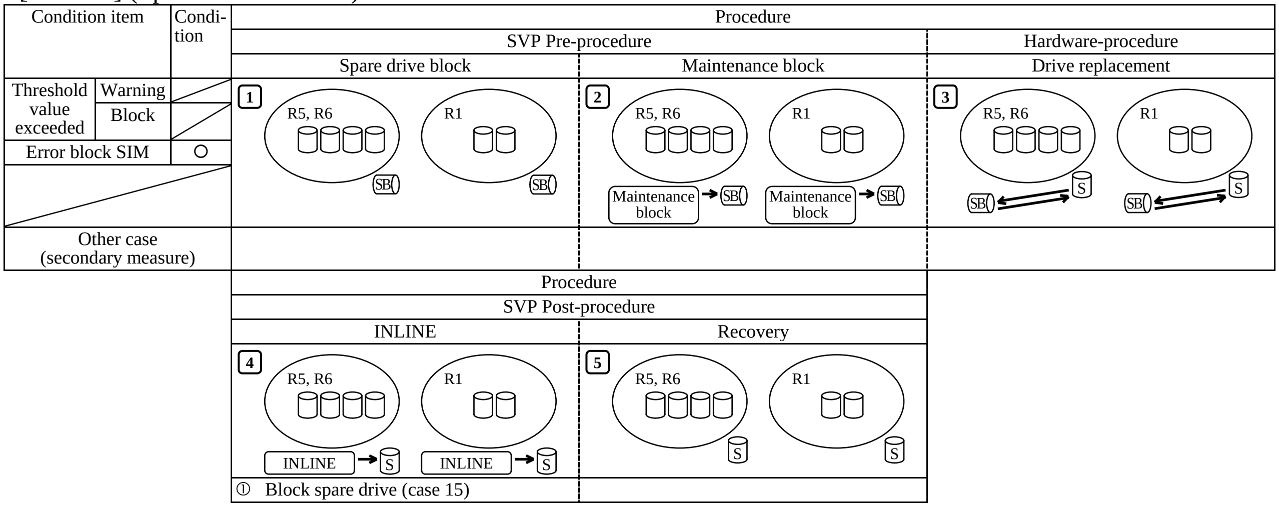
Procedure		
SVP Post-procedure		Hardware-procedure
INLINE test of the first drive	Copy back to the first drive	Replacement of the second drive during the copy back to the first drive
4 	5 	6 
① Block new drive (case 8)	① Block source drive (case 9) ② Block destination (case 8)	

Procedure		
SVP Post-procedure		
INLINE test of the second drive	Copy back to the second drive	Recovery
7 	8 	9 
① Block new drive (case 8)	① Block source drive (case 9) ② Block destination (case 8)	

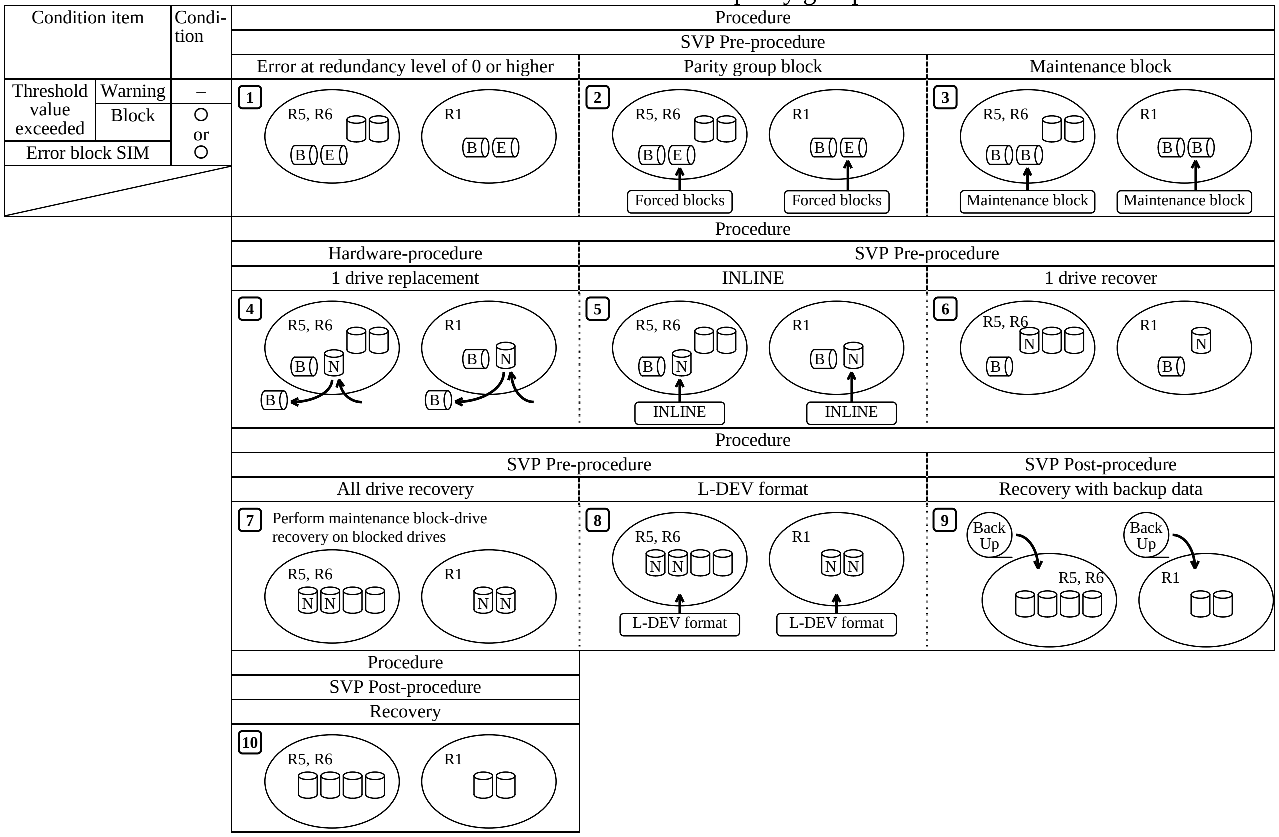


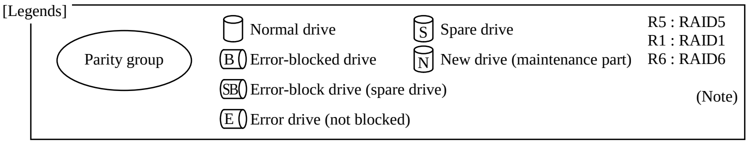
[Other Cases]

[Case 15] (Spare drive blocked)



[Case 16] (Case in which a block level error occurred in a normal drive with a redundancy level of 0)
RAID5 : When two or more drives are blocked in a parity group.
RAID1 : When two drives are blocked in a Mirroring pair.
RAID6 : When three or more drives are blocked in a parity group.

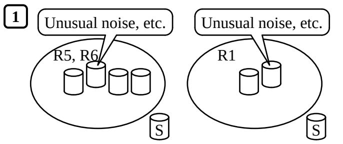
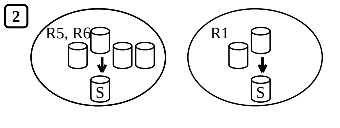
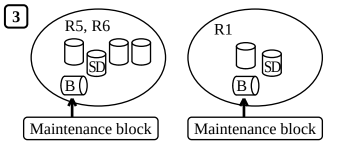


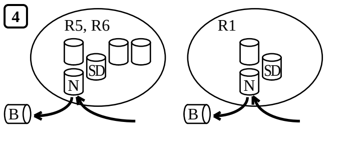
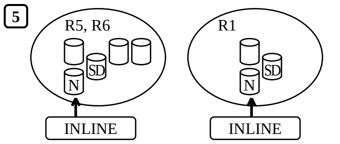
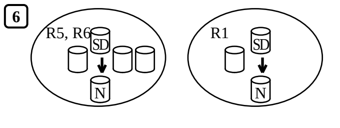


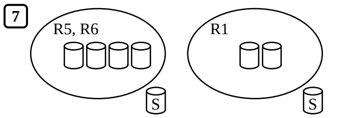
Note: In the RAID system, two drives form a mirroring pair and the two mirroring pairs (four drives) compose the RAID. In the above diagram, only the two mirroring pairs are shown.

[Other Cases]

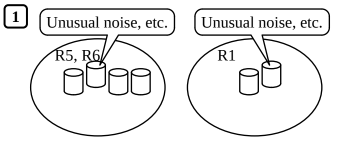
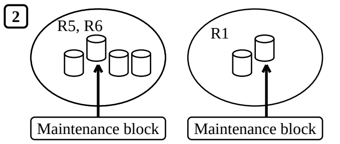
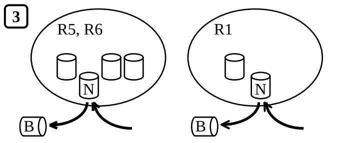
[Case 17] (Preventive drive replacement 1)

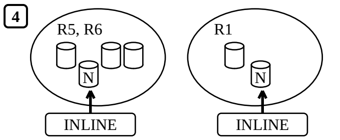
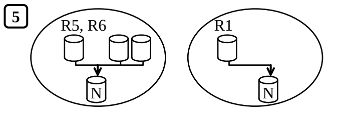
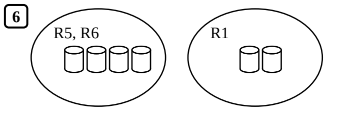
Condition item		Condi-tion	Procedure		
			SVP Pre-procedure		
			Replacement	Spare save	Maintenance block
Threshold value exceeded	Warning	–	1  Unusual noise, etc. Unusual noise, etc. R5, R6 R1 S S	2 	3  R5, R6 R1 SD SD B B Maintenance block Maintenance block
	Block	–			
Others (unusual noise, etc.)		○			
Spare drive		○			
Other case (secondary measure)				① Block source drive (case 2) ② Block destination drive (a) Unused spare present (case 6) (b) Unused spare absent (case 7)	

Procedure		
Hardware-procedure	SVP Post-procedure	
Drive replacement	INLINE	Copy back
4 	5 	6 
	① Block new drive (case 8)	① Block source drive (case 9) ② Block destination drive (case 8)

Procedure
SVP Post-procedure
Recovery
7 

[Case 18] (Preventive drive replacement 2)

Condition item		Condi-tion	Procedure		
			SVP Pre-procedure		Hardware-procedure
			Replacemant	Maintenance block	Drive replacement
Threshold value exceeded	Warning	–	1 	2 	3 
	Block	–			
Others (unusual noise, etc.)		○			
Spare drive		–			
Other case (secondary measure)					

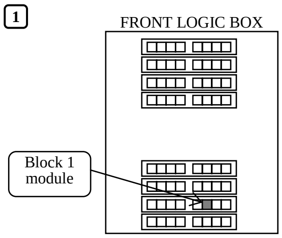
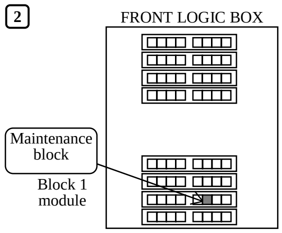
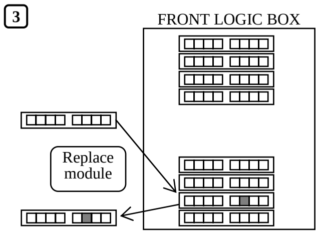
Procedure		
SVP Post-procedure		
INLINE	Correction copy	Recovery
4 	5 	6 
① Block new drive (case 5)	② Block destination drive (case 5)	

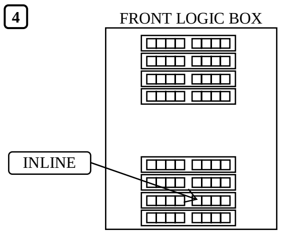
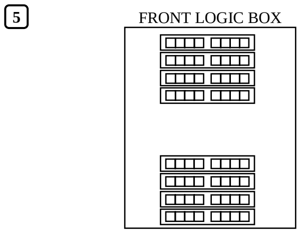
[Legends]

Parity group
Normal drive
B Error-blocked drive
SD Spare drive (data saved)
E Error drive (not blocked)
S Spare drive
N New drive (maintenance part)
R5 : RAID5
R1 : RAID1
R6 : RAID6
(Note)

Note: In the RAID system, two drives form a mirroring pair and the two mirroring pairs (four drives) compose the RAID. In the above diagram, only the two mirroring pairs are shown.

1.3 Concept of Cache Maintenance

<table>
<tr><th colspan="2" rowspan="3">Condition item</th><th rowspan="3">Condi
-tion</th><th colspan="3">Procedure</th></tr>
<tr><th colspan="2">SVP Pre-procedure</th><th>Hardware-Procedure</th></tr>
<tr><th>Block</th><th>Maintenance block</th><th>PCB replacement</th></tr>
<tr><td rowspan="2">Threshold value exceeded</td><td>Warning</td><td></td><td rowspan="4"> </td><td rowspan="4"> </td><td rowspan="4"> </td></tr>
<tr><td>Block</td><td>○</td></tr>
<tr><td colspan="2">CACHE
(WP741-A)</td><td>○</td></tr>
<tr><td colspan="3">CACHE space:
16G ~ 512G</td></tr>
<tr><td colspan="3"></td><td></td><td></td><td></td></tr>
</table>

<table>
<tr><th colspan="2">Procedure</th></tr>
<tr><th colspan="2">SVP Post-procedure</th></tr>
<tr><th>INLINE</th><th>Recovery</th></tr>
<tr><td> </td><td> </td></tr>
<tr><td></td><td></td></tr>
</table>

1.4 How to Interpret the Hot Replace Procedure

[In case of replacement when SIM was reported]

① Search a work ID which coincides with the work ID corresponding to SIM ACC (FPC) (refer to FPC list on page ACC04-10) from Parts Replacement Process Table on page REP01-170. Search a work ID corresponding to the pertinent condition if “Condition Item” is described in Parts Replacement Process Table.

② If the work ID is found,

- Take actions according to the SVP pre-procedure, hardware procedure, SVP post-procedure number that match the work ID.

If no work ID is found,

- Search a work ID corresponding to SIM ACC (FPC, and error details) from Parts Replacement Process Table on page REP01-170.
- Take actions according to the SVP pre-procedure, hardware procedure, SVP post-procedure number that match the work ID.

Note : See page REP01-150 for the procedure for searching a work ID to replace a drive.
When replacing a drive, be sure to see page REP01-130 and REP01-140.

[In case of replacement when SIM was not reported]

① Search a work ID corresponding to the part to be replaced from Parts Replacement Process Table on page REP01-170.

② Take actions according to the SVP pre-procedure, hardware procedure, SVP post-procedure number that match the work ID.

Note: See page REP01-150 for the procedure for searching the work ID to replace a drive.
When replacing a drive, be sure to see page REP01-130 and REP01-140.

---<Example>---

Condition to replace

SIM was reported

Work ID corresponding to SIM ACC FPC is RCA1

* Search an applicable Work ID identified by shaded area in the following sample of Parts Replacement Process Table under the above conditions.

<Cache Memory>

Work ID	Part Name	Procedure			Replacing Time (*1)(*2)
		Pre-procedure	Replacement processing	Post-procedure	
RCA1	Cache Memory Cache Memory Module(*3) SSD	PRE-PROCEDURE B (REP02-02-10) (*3: PRE-PROCEDURE A (REP02-01-10))	CACHE REPLACEMENT PROCESSING - RCA1 (REP03-10-10)	POST-PROCEDURE (REP04-01-10)	20 min

PROCEDURE BEFORE PDEV EXCHANGE AND CORRECTION COPY

Instructions before blocking and exchanging PDEV with a drive failure error is listed below:

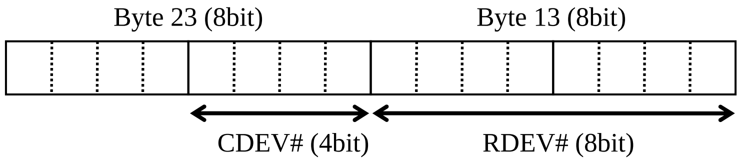
When exchanging unblocked PDEV, redundancy in the ECC group is lost. Therefore, during PDEV exchange, the other PDEV in the same ECC group is fenced by a drive failure error, all the LDEV in the ECC group is fenced. Accordingly, to prevent the above problem from occurring, the status of PDEV. When there is a PDEV in the same ECC group having more drive failure errors than the exchanging PDEV exists, replace the PDEV with highest drive failure errors.

Table 1.4-1 Before PDEV exchange, following items are checked.

#	Items checked	Procedure
1	Error Count	“Threshold Counter Display” (See SVP02-580)
2	ORM Over Rate	“ORM Over Rate HDD# Display” (See SVP02-390)
3	Write Error	“Pinned Track Display” (See SVP02-1130)
4	PDEV Erase	Confirm that Start Drive Erase SIM (*1) is not logged. If Start Drive Erase SIM (*1) is logged, wait until End Drive Erase SIM (*1) (*2) is logged. If Drive Replace is executed before End Drive Erase SIM (*1) is logged, Drive Erase may be abnormal end and Abnormal End Drive Erase SIM (*1) is logged. In that case, the drive can not be reused, and can not be ensured that the drive erase is completed.

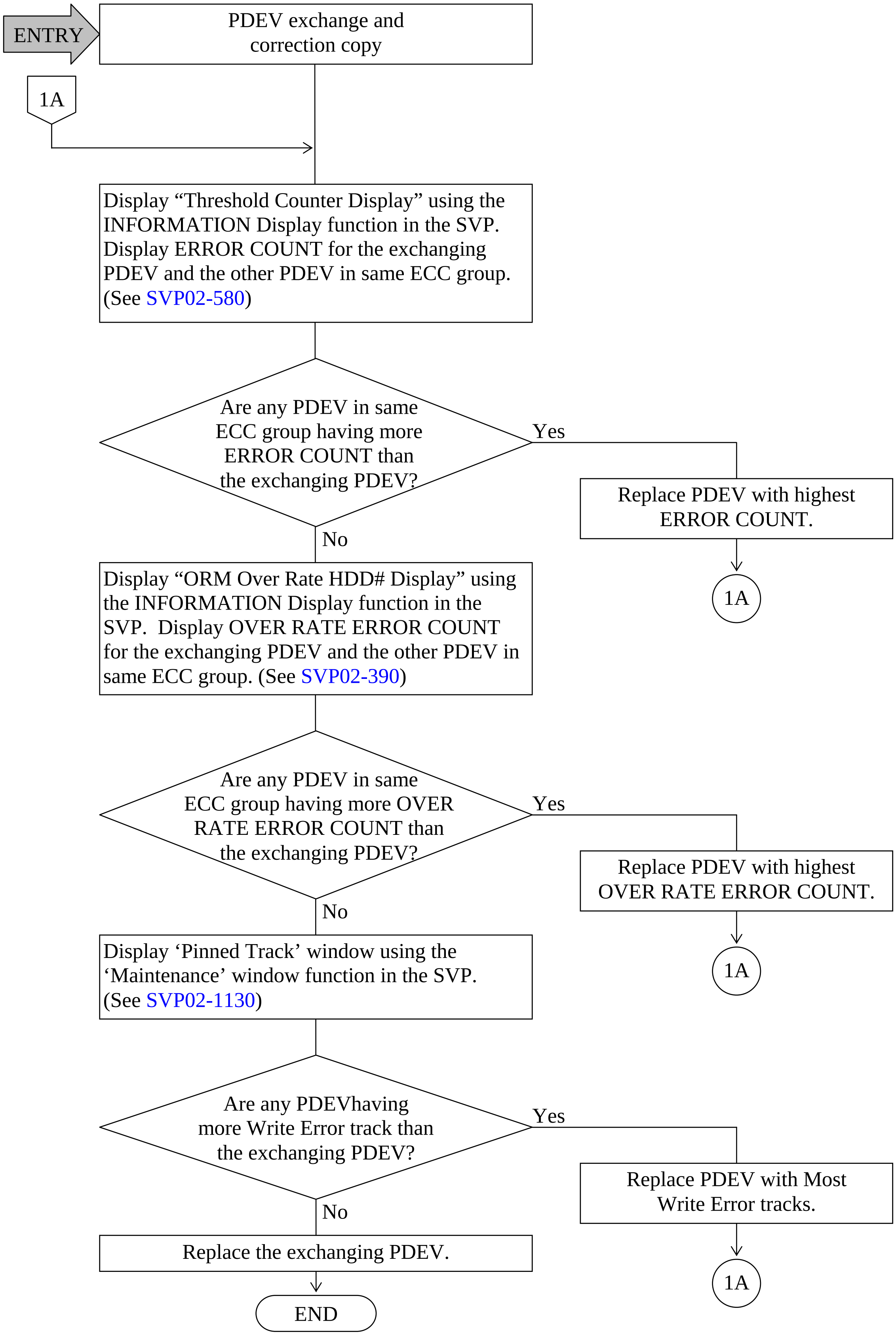
*1: Start Drive Erase SIM = 0x4C1xyy
End Drive Erase SIM = 0x4C2xyy
Abnormal end Drive Erase SIM = 0x4C3xyy

A detail of “xyy” in each SIM indicates CDEV#/RDEV#. See the table below.



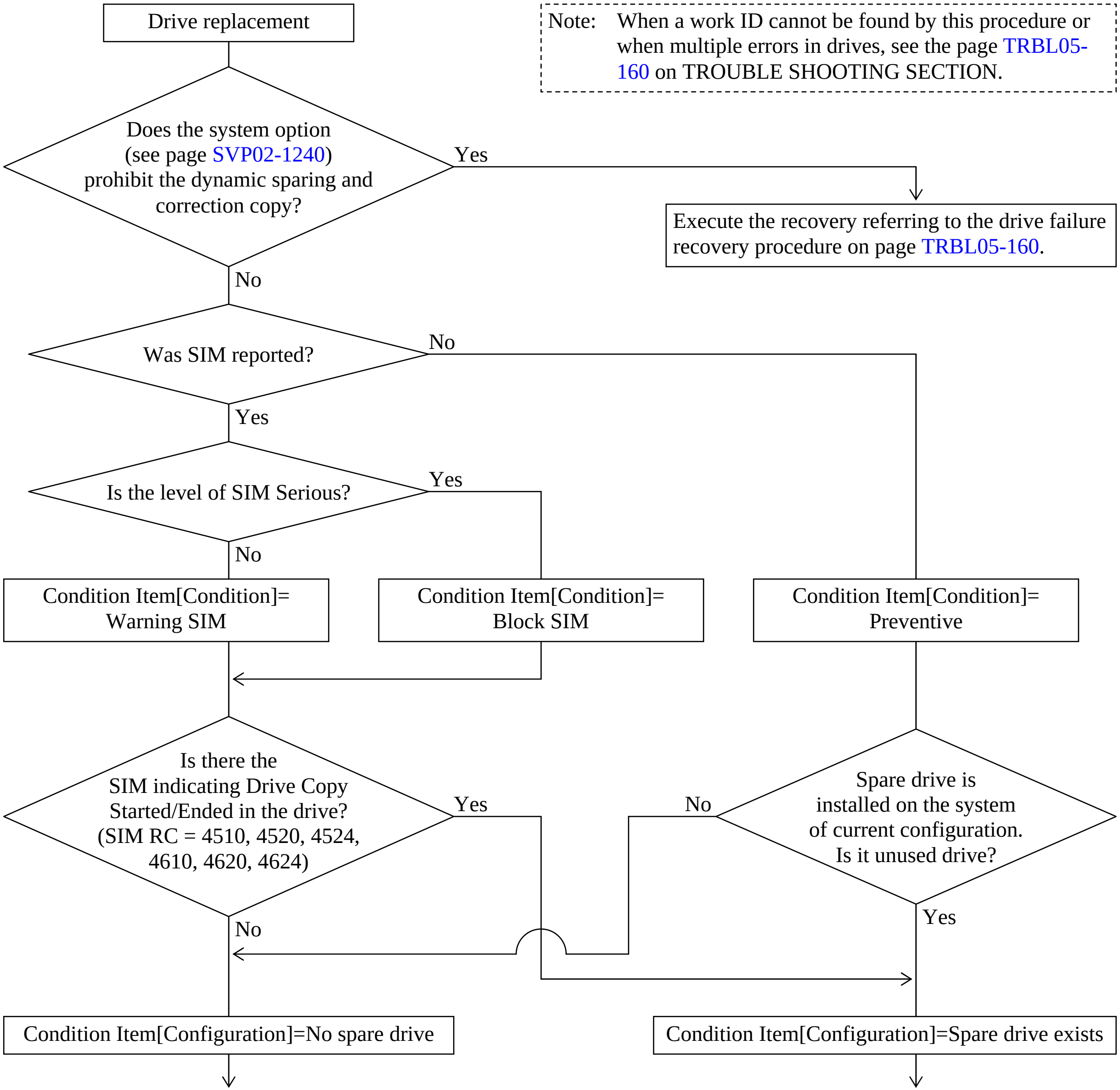
*2: Confirm that CDEV#/RDEV# of End Drive Erase SIM (*1) corresponds to CDEV#/RDEV# of Start Drive Erase SIM (*1).

PROCEDURE BEFORE PDEV EXCHANGE AND CORRECTION COPY


ENTRY
PDEV exchange and correction copy
1A
Display "Threshold Counter Display" using the INFORMATION Display function in the SVP. Display ERROR COUNT for the exchanging PDEV and the other PDEV in same ECC group. (See SVP02-580)
Are any PDEV in same ECC group having more ERROR COUNT than the exchanging PDEV?
Yes
Replace PDEV with highest ERROR COUNT.
1A
No
Display "ORM Over Rate HDD# Display" using the INFORMATION Display function in the SVP. Display OVER RATE ERROR COUNT for the exchanging PDEV and the other PDEV in same ECC group. (See SVP02-390)
Are any PDEV in same ECC group having more OVER RATE ERROR COUNT than the exchanging PDEV?
Yes
Replace PDEV with highest OVER RATE ERROR COUNT.
1A
No
Display 'Pinned Track' window using the 'Maintenance' window function in the SVP. (See SVP02-1130)
Are any PDEVhaving more Write Error track than the exchanging PDEV?
Yes
Replace PDEV with Most Write Error tracks.
1A
No
Replace the exchanging PDEV.
END

How to search a Work ID to replace a drive

Note: When a work ID cannot be found by this procedure or when multiple errors in drives, see the page TRBL05-160 on TROUBLE SHOOTING SECTION.


Drive replacement
Does the system option (see page SVP02-1240) prohibit the dynamic sparing and correction copy?
Yes
Execute the recovery referring to the drive failure recovery procedure on page TRBL05-160.
No
Was SIM reported?
No
Yes
Is the level of SIM Serious?
Yes
No
Condition Item[Condition]= Warning SIM
Condition Item[Condition]= Block SIM
Condition Item[Condition]= Preventive
Is there the SIM indicating Drive Copy Started/Ended in the drive? (SIM RC = 4510, 4520, 4524, 4610, 4620, 4624)
Yes
No
Spare drive is installed on the system of current configuration. Is it unused drive?
No
Yes
Condition Item[Configuration]=No spare drive
Condition Item[Configuration]=Spare drive exists

Search an appropriate Work ID from the Parts Replacement Process Table on REP01-170 according to the Condition Item [Condition] and Condition Item [Configuration] gotten in the above flowchart, and whether the drive to be replaced is installed in the position of spare drive or not.

-----------------<<Example>>-----------------

- SIM was reported.
- Level of the SIM is not “Serious”. = Condition Item[Condition] is “Warning SIM”.
- There is the SIM that RC is 4510 in the drive. = Condition Item[Configuration] is “Unused spare drive exists”.
- The drive to be replaced is not a spare drive. = “Data Drive”

* Under the above conditions, the shaded area is searched from Parts Replacement Process Table. Therefore, in this example Work ID should be RDK1.

<Data Drive, Spare Drive>

Work ID	Parts Name	Condition Item				Procedure			Reference information		
		Condition			Config-uration	Pre-procedure	Replacement processing	Post-procedure	Replacing time	Outline	Case
		Failure		Preventive	Unused Spare drive						
		Warning SIM	Block SIM								
RDK1	Data Drive	×	×	—	Yes	PRE-PROCEDURE A (REP02-01-10)	DRIVE REPLACEMENT PROCESSING - RDK1 (REP03-01-10)	POST-PROCEDURE (REP04-01-10)	20 min	Drive replace ~ Copy back	Case 1 Case 2

1.5 Parts Replacement Process Table

Note : If any other message that is not explained below is displayed, see the SVP Message Section (SVPMSG00-00).

<Data Drive, Spare Drive>

Work ID	Parts Name	Condition Item				Procedure			Reference information		
		Condition			Configuration	Pre-procedure	Replacement processing	Post-procedure	Replacing time *2 *8 *9	Outline	Case *1
		Failure		Preventive	Unused Spare drive						
		Warning SIM	Block SIM								
RDK1	Data Drive *3	×	×	—	Yes	PRE-PROCEDURE A (REP02-01-10)	DRIVE REPLACEMENT PROCESSING - RDK1 (REP03-01-10)	POST-PROCEDURE (REP04-01-10)	20 min	Drive replace ~ Copy back	Case 1 Case 2
RDK2	Data Drive *3	—	—	×	Yes	PRE-PROCEDURE A (REP02-01-10)	DRIVE REPLACEMENT PROCESSING - RDK2 (REP03-02-10)	POST-PROCEDURE (REP04-01-10)	—	Copy to Spare drive ~ Drive replace ~ Copy back	Case 17
RDK3	Data Drive *3, *6	×	×	×	No	PRE-PROCEDURE A (REP02-01-10)	DRIVE REPLACEMENT PROCESSING - RDK3 (REP03-03-10)	POST-PROCEDURE (REP04-01-10)	20 min	Drive replace ~ Correction copy	Case 3 Case 4 Case 18
RDK4 *4, *5	Data Drive *3	*4				PRE-PROCEDURE A (REP02-01-10)	DRIVE REPLACEMENT PROCESSING - RDK4 (REP03-04-10)	POST-PROCEDURE (REP04-01-10)	—	LDEV formatting after replacing all the HDDs blocked in a parity group *5	Case 16
RDK5	Spare Drive *3	—				PRE-PROCEDURE A (REP02-01-10)	DRIVE REPLACEMENT PROCESSING - RDK5 (REP03-05-10)	POST-PROCEDURE (REP04-01-10)	20 min	Spare drive replace	Case 15

*1: Refer to REP01-20

*2: This time does not include copy back time of data in HDD. Refer to *8 for the HDD copy time.

*3: Parts Name indicates attribute of a drive.
Data Drive: The drive is installed in the position for a drive except spare drive (Data Drive).
Spare Drive: The drive is installed in the position for a spare drive.

*4: RDK4 is a Work ID for a work which is applicable to a case that two or more drives in a same parity group are blocked. As to RAID 6, when three or more drives are blocked. When the procedures instructed by RDK7 are executed, data will be lost. Ask the technical support division about the appropriateness of the operation. When you want to restore LDEV status for the purpose of data backup, please go to TRBL05-360.

*5: Confirm the parity group and the LDEV No. corresponding to the HDD through the SVP STATUS. See page SVP03-220 for the procedure for referring to SVP STATUS

*6: See “PROCEDURE BEFORE PDEV EXCHANGE AND CORRECTION COPY” (REP01-130).

*7: In case of RAID6, when two HDDs were blocked in the parity group, you can start the replacement from either of two HDDs.

Note: If a Work ID cannot be found or if multiple drive error is occurring, see page TRBL05-160 on TROUBLE SHOOTING section.

*8: HDD copy time

(1) No I/O, Other than OPEN-V Copy Mode = Interleave Medium

- When the micro version is lower than 70-03-0x-xx/xx.

HDD type	Copy type	RAID1 (2D+2D)	RAID5 (3D+1P)	RAID5 (7D+1P)	RAID6 (6D+2P)
K146 (15Krpm)	Drive copy	1h00m	←	←	←
	Correction copy	↑	2h00m	2h20m	2h30m
J600 (10Krpm)	Drive copy	3h20m	←	←	←
	Correction copy	↑	9h20m	14h40m	16h40m
J300 (10Krpm)	Drive copy	1h40m	←	←	←
	Correction copy	↑	3h40m	5h30m	6h20m
H2R0 (7.2Krpm)	Drive copy	11h10m	←	←	←
	Correction copy	↑	28h30m	37h00m	38h00m
H1R0 (7.2Krpm)	Drive copy	6h30m	←	←	←
	Correction copy	↑	13h20m	21h10m	24h00m
H500 (7.2Krpm)	Drive copy	3h40m	←	←	←
	Correction copy	↑	8h50m	14h00m	15h50m
H2R0AT (SATA-W/V)	Drive copy	29h00m	←	←	←
	Correction copy	↑	30h20m	33h40m	38h50m
S400 (SSD)	Drive copy	2h00m	←	←	←
	Correction copy	↑	3h00m	4h10m	4h30m
S200 (SSD)	Drive copy	1h00m	←	←	←
	Correction copy	↑	1h30m	2h10m	2h30m

- When the micro version is 70-03-0x-xx/xx or later.

HDD type	Drive copy	Correction copy (Other than 14D+2P)	Correction copy (14D+2P)
K300 (15Krpm)	1h20m	←	←
K146 (15Krpm)	1h00m	←	←
J1R2 (10Krpm)	4h00m	←	5h30m
J900 (10Krpm)	3h30m	←	5h00m
J600 (10Krpm)	3h20m	←	4h40m
J300 (10Krpm)	1h40m	←	2h20m
H4R0 (7.2Krpm)	14h10m	←	24h00m
H3R0 (7.2Krpm)	13h30m	←	17h40m
H2R0 (7.2Krpm)	11h10m	←	←
H1R0 (7.2Krpm)	6h30m	←	←
H500 (7.2Krpm)	3h40m	←	←
H2R0AT (SATA-E)	14h50m	←	22h40m
H2R0AT (SATA-W/V)	29h00m	←	50h40m
M800 (SSD)	3h20m	←	4h00m
S400/M400 (SSD)	2h00m	←	2h20m
S200/M200 (SSD)	1h00m	←	1h20m
P1R6 (FMD)	7h50m	←	11h10m
P3R2 (FMD)	15h40m	←	22h20m

(2) No I/O, OPEN-V Copy Mode = Interleave Medium

- When the micro version is lower than 70-03-0x-xx/xx.

HDD type	Copy type	RAID1 (2D+2D)	RAID5 (3D+1P)	RAID5 (7D+1P)	RAID6 (6D+2P)
K146	Drive copy	1h00m	←	←	←
(15Krpm)	Correction copy	↑	1h50m	2h00m	2h00m
J600	Drive copy	2h50m	←	←	←
(10Krpm)	Correction copy	↑	5h40m	7h40m	7h50m
J300	Drive copy	1h30m	←	←	←
(10Krpm)	Correction copy	↑	2h20m	3h00m	3h20m
H2R0	Drive copy	11h00m	←	←	←
(7.2Krpm)	Correction copy	↑	17h30m	22h30m	24h30m
H1R0	Drive copy	5h30m	←	←	←
(7.2Krpm)	Correction copy	↑	8h40m	11h10m	12h10m
H500	Drive copy	3h10m	←	←	←
(7.2Krpm)	Correction copy	↑	5h40m	7h20m	8h00m
H2R0AT	Drive copy	27h40m	←	←	←
(SATA-W/V)	Correction copy	↑	28h50m	31h50m	36h50m
S400	Drive copy	1h50m	←	←	←
(SSD)	Correction copy	↑	3h10m	4h10m	4h30m
S200	Drive copy	50m	←	←	←
(SSD)	Correction copy	↑	1h40m	2h10m	2h30m

- When the micro version is 70-03-0x-xx/xx or later.

HDD type	Drive copy	Correction copy (Other than 14D+2P)	Correction copy (14D+2P)
K300 (15Krpm)	1h20m	←	1h40m
K146 (15Krpm)	1h00m	←	←
J1R2 (10Krpm)	3h50m	←	6h50m
J900 (10Krpm)	3h20m	←	5h10m
J600 (10Krpm)	2h50m	←	4h35m
J300 (10Krpm)	1h30m	←	2h10m
H4R0 (7.2Krpm)	13h50m	←	23h50m
H3R0 (7.2Krpm)	13h20m	←	17h00m
H2R0 (7.2Krpm)	11h00m	←	←
H1R0 (7.2Krpm)	5h30m	←	←
H500 (7.2Krpm)	3h10m	←	←
H2R0AT (SATA-E)	11h30m	←	←
H2R0AT (SATA-W/V)	27h40m	←	48h00m
M800 (SSD)	2h50m	←	5h00m
S400/M400 (SSD)	1h50m	←	2h10m
S200/M200 (SSD)	50m	←	1h10m
P1R6 (FMD)	5h40m	←	11h20m
P3R2 (FMD)	11h20m	←	22h40m

- When CVS is used, the copy time is proportional to the amount of LDEV assigned in the parity group.
  (Eg: If the amount of LDEV assigned is 50%, the copy time is half the above-mentioned values.)
- When the parity group is used for HTI/HDP/HDT-POOL, depending on the POOL used amount, the copy time becomes shorter than the above-mentioned values.
- When the copy is executed while executing the Quick Format, the copy might be completed earlier than the above-mentioned values because the area under the format is not copied.
- Copy time may become about 30% slower compared with the value in the table by machine configuration.
- The described copy time is a standard. The real format time may be different by RAID GROUP, an emulation type the generation and a drive type.

*9: The drive copy to the spare drive of the RAID1 is copied from the drive (normal drive) of the pair of which the failure occurred.
(Because there is a case where a failure occurs in the copy source drive and the copy time is delayed in the usual form that performs copying from the drive of which the failure occurred.)
However, the copy back (copy from the spare drive to the data drive) is copied from the spare drive as usual.

<Cache Memory>

Work ID	Part Name	Procedure			Replacing Time (*1)(*2)
		Pre-procedure	Replacement processing	Post-procedure	
RCA1	Cache Memory PCB Cache Memory Module	PRE-PROCEDURE A (REP02-01-10)	CACHE REPLACEMENT PROCESSING - RCA1 (REP03-10-10)	POST-PROCEDURE (REP04-01-10)	20 min
RSS1	SSD	PRE-PROCEDURE A (REP02-01-10)	SSD REPLACEMENT PROCESSING - RSS1 (REP03-36-10)	POST-PROCEDURE (REP04-01-10)	20 min

*1: The destaging operation takes 30 minutes to 2 hours (SVP time out).

*2: The time for the dump is not included.

Note: When a cache PCB is replaced for preventive reasons, one side of cache is blocked. As a result, the subsystem performance may degrade.

<CHA, DKA, SSW, and ESW>

Work ID	Part Name	Procedure			Replacing Time (*2)
		Pre-procedure	Replacement processing	Post-procedure	
RMP1	MPB	PRE-PROCEDURE A (REP02-01-10)	MPB REPLACEMENT PROCESSING - RMP1 (REP03-11-10)	POST-PROCEDURE (REP04-01-10)	20 min
RCH1	Fibre-T CHA	PRE-PROCEDURE A (REP02-01-10)	Fibre CHA REPLACEMENT PROCESSING - RCH1 (REP03-12-10)	POST-PROCEDURE (REP04-01-10)	20 min
RCH2	Mainframe Fibre CHA	PRE-PROCEDURE A (REP02-01-10)	Mainframe Fibre CHA REPLACEMENT PROCESSING - RCH2 (REP03-13-10)	POST-PROCEDURE (REP04-01-10)	20 min
RCH3	FCoE CHA	PRE-PROCEDURE A (REP02-01-10)	FCoE CHA REPLACEMENT PROCESSING - RCH3 (REP03-35-10)	POST-PROCEDURE (REP04-01-10)	20 min
RDA1	DKA	PRE-PROCEDURE A (REP02-01-10)	DKA REPLACEMENT PROCESSING - RDA1 (REP03-14-10)	POST-PROCEDURE (REP04-01-10)	20 min
RES1	ESW	PRE-PROCEDURE A (REP02-01-10)	ESW REPLACEMENT PROCESSING - RES1 (REP03-15-10)	POST-PROCEDURE (REP04-01-10)	13 min
RCD1	Fibre-T CHA	PRE-PROCEDURE A (REP02-01-10)	Fibre CHA Dummy REPLACEMENT PROCESSING - RCD1 (REP03-39-10)	POST-PROCEDURE (REP04-01-10)	20 min

*2: The time for the dump is not included.

Note: Replacing a MPB may affect I/O when there is much write pending data in cache. We recommend to replace a MPB when all the cache write pending rate per CLPR in a MPB is less than 40%.

If a failure occurs in replacing a channel adaptor or a disk adaptor, see “5.3 Error Recovery Procedure during CHA/DKA replacement” (TRBL05-70).

<Other Parts of DKC>

Work ID	Part Name	Procedure			Replacing Time
		Pre-procedure	Replacement processing	Post-procedure	
RTC1	DKCPANEL	PRE-PROCEDURE A (REP02-01-10)	DKCPANEL REPLACEMENT PROCESSING - RTC1 (REP03-16-10)	POST-PROCEDURE (REP04-01-10)	16 min
RTC2	SSVPMN	PRE-PROCEDURE A (REP02-01-10)	SSVPMN REPLACEMENT PROCESSING - RTC2 (REP03-17-10)	POST-PROCEDURE (REP04-01-10)	22 min
RTC3	FAN(60sp) Assembly	PRE-PROCEDURE A (REP02-01-10)	DKCFAN(60sq) REPLACEMENT PROCESSING - RTC3 (REP03-18-10)	POST-PROCEDURE (REP04-01-10)	8 min
RTC4	FAN(80sp) Assembly	PRE-PROCEDURE A (REP02-01-10)	DKCFAN(80sq) REPLACEMENT PROCESSING - RTC4 (REP03-19-10)	POST-PROCEDURE (REP04-01-10)	8 min
RTC5	SVP Unit	PRE-PROCEDURE A (REP02-01-10) (*1)	SVP REPLACEMENT PROCESSING - RTC5 (REP03-20-10)	POST-PROCEDURE (REP04-01-10)	40 min(*2) 85 min(*3)
RTC6	HUBBOX	PRE-PROCEDURE A (REP02-01-10)	HUBBOX REPLACEMENT PROCESSING - RTC6 (REP03-21-10)	POST-PROCEDURE (REP04-01-10)	40 min
RTC7	Battery	PRE-PROCEDURE A (REP02-01-10)	Battery REPLACEMENT PROCESSING - RTC7 (REP03-22-10)	POST-PROCEDURE (REP04-01-10)	11 min
RTC8	DKCPS	PRE-PROCEDURE A (REP02-01-10)	DKCPS REPLACEMENT PROCESSING - RTC8 (REP03-23-10)	POST-PROCEDURE (REP04-01-10)	11 min
RTC9	Fibre SFP Transceiver	PRE-PROCEDURE A (REP02-01-10)	SFP REPLACEMENT PROCESSING - RTC9 (REP03-24-10)	POST-PROCEDURE (REP04-01-10)	5 min
—	PDU	—	PDU REPLACEMENT PROCESSING (REP03-34-10)	POST-PROCEDURE (REP04-01-10)	30 min

*1: When SVP is not able to operate, start from “2. HARDWARE REPLACEMENT PROCESSING” in “SVP REPLACEMENT PROCESSING - RTC5”. (When SVP High Reliability Kit is not installed.)

*2: Replace time when SVP High Reliability Kit is not installed or when SVP High Reliability Kit is installed and target is Standby SVP.

*3: Replace time when SVP High Reliability Kit is installed and target is Master SVP.

<Other Parts of DKU>

Work ID	Part Name	Procedure			Replacing Time
		Pre-procedure	Replacement processing	Post-procedure	
RU21	SSW	PRE-PROCEDURE A (REP02-01-10)	2.5 inch SSW REPLACEMENT PROCESSING - RU21 (REP03-26-10)	POST-PROCEDURE (REP04-01-10)	10 min
RU31	SSW	PRE-PROCEDURE A (REP02-01-10)	3.5 inch SSW REPLACEMENT PROCESSING - RU31 (REP03-27-10)	POST-PROCEDURE (REP04-01-10)	10 min
RU22	HDDPWR	PRE-PROCEDURE A (REP02-01-10)	2.5 inch HDDPWR REPLACEMENT PROCESSING - RU22 (REP03-28-10)	POST-PROCEDURE (REP04-01-10)	10 min
RU32	HDDPWR	PRE-PROCEDURE A (REP02-01-10)	3.5 inch HDDPWR REPLACEMENT PROCESSING - RU32 (REP03-29-10)	POST-PROCEDURE (REP04-01-10)	10 min
RU23	DKUPS	PRE-PROCEDURE A (REP02-01-10)	2.5 inch DKUPS REPLACEMENT PROCESSING - RU23 (REP03-30-10)	POST-PROCEDURE (REP04-01-10)	10 min
RU33	DKUPS	PRE-PROCEDURE A (REP02-01-10)	3.5 inch DKUPS REPLACEMENT PROCESSING - RU33 (REP03-31-10)	POST-PROCEDURE (REP04-01-10)	10 min
RU24	FAN Assembly (*1)	PRE-PROCEDURE A (REP02-01-10)	2.5 inch HDDFAN REPLACEMENT PROCESSING - RU24 (REP03-32-10)	POST-PROCEDURE (REP04-01-10)	10 min
RU34	FAN Assembly (*1)	PRE-PROCEDURE A (REP02-01-10)	3.5 inch HDDFAN REPLACEMENT PROCESSING - RU34 (REP03-33-10)	POST-PROCEDURE (REP04-01-10)	10 min
RUF1	SSW	PRE-PROCEDURE A (REP02-01-10)	FBX SSW REPLACEMENT PROCESSING - RUF1 (REP03-37-10)	POST-PROCEDURE (REP04-01-10)	10 min
RUF3	DKUPS	PRE-PROCEDURE A (REP02-01-10)	FBX DKUPS REPLACEMENT PROCESSING - RUF3 (REP03-38-10)	POST-PROCEDURE (REP04-01-10)	10 min

*1: When there are some parts to exchange and the HDDFAN (FAN Assembly) is contained in the parts, the HDDFAN must be exchanged first.

1.6 Availability of the online maintenance when TrueCopy for Mainframe/TrueCopy/HAM is used

Component	Maintenance Type	Condition	TC-MF path established		During initial copy		After completing initial copy	
			MCU	RCU	MCU	RCU	MCU	RCU
Logical Device	Blockade	—	×	×	SVP2031W (*2)	SVP2034W (*2)	SVP2031W (*2)	SVP2034W (*2)
	Recovery	—	×	×	SVP2031W (*2)	SVP2034W (*2)	SVP2031W (*2)	SVP2034W (*2)
	Format	—	×	×	SVP2031W (*2)	SVP2034W (*2)	SVP2031W (*2)	SVP2034W (*2)
	Verify	—	×	×	×	×	×	×
HDD canister	Replace	—	×	×	×	×	×	×
CACHE	Replace	—	×	×	SVP2059W	SVP2079W	× (*1)	× (*1)
CHA	Replace	With Alternate path.	×	×	×	SVP2038W	×	SVP2038W
		Without Alternate path.	×	×	SVP2073W	SVP2038W	SVP2074W	SVP2038W
DKA	Replace	—	×	×	×	×	×	×
DKC	Replace	With Alternate path.	×	×	SVP2059W	SVP2079W		SVP2038W
		Without Alternate path.	×	×	SVP2059W	SVP2079W	SVP2074W	SVP2038W
MP	Replace	—	×	×	×	×	×	×

Component	Maintenance Type	Condition	Suspend	
			MCU	RCU
Logical Device	Blockade	—	SVP2031W (*2)	SVP2034W (*2)
	Recovery	—	SVP2031W (*2)	SVP2034W (*2)
	Format	—	SVP2031W (*2)	SVP2034W (*2)
	Verify	—	×	×
HDD canister	Replace	—	×	×
Cache or SM	Replace	—	×	×
CHE or CHF	Replace	With Alternate path.	×	SVP2038W
		Without Alternate path.	×	SVP2038W
DKA	Replace	—	×	×
DKC	Replace	With Alternate path.	×	SVP2038W
		Without Alternate path.	×	SVP2038W
MP	Replace	—	×	×

×: Maintenance is available.
SVPXXXXW : Maintenance is not available based on the specification.
Refer to SVP MESSAGE SECTION.

Note: About replacement of CHE in the RCU side.
If the CHE that will be replaced is connected to a path, from MCU please confirm that the Path is deleted from MCU.
After replacement, please add the Path.

The pair can be suspended if the ESTPAIR or paircreate (pairresync) command is issued during the HDD Canister or the Cache PCB replacement. Please ask your customer before the online maintenance operation.

*1: In the case of distinct UR pairs, it is recommended to execute the maintenance activity involving cache blockade at primary / secondary sites of Sync Pairs, keeping the write-pending data volumes at below 20%.
Also, if the maintenance activity is carried out at the aforesaid sites, maintenance activity consumes time, further there is a possibility of MIH occurrence etc., to the extent of affecting the processing on the host.

Note the following when performing a maintenance operation in an environment where TPC-R, which is disaster recovery software of IBM, is used.

*2: If you need to delete a pair used by TrueCopy for Mainframe when performing a maintenance operation, delete the TrueCopy for Mainframe pair by using Web Console.
After the maintenance operation is completed, you can restore the status of the TrueCopy for Mainframe pair by performing operations using TPC-R.

1.7 Availability of the online maintenance when ShadowImage for Mainframe/ ShadowImage is used

Component	Maintenance Type	Condition	Reserve-Volume	Pending/Resync/ SP-PEND		Duplex		Split		Suspend	
				S-VOL/ P-VOL	T-VOL/ S-VOL	S-VOL/ P-VOL	T-VOL/ S-VOL	S-VOL/ P-VOL	T-VOL/ S-VOL	S-VOL/ P-VOL	T-VOL/ S-VOL
Logical Device	Blockade	—	SVP2484W	SVP2483W	SVP2485W	SVP2483W	SVP2485W	SVP2483W	SVP2485W	×	
	Restore	—	×	SVP2483W	SVP2485W	SVP2483W	SVP2485W	SVP2483W	SVP2485W	×	
	Format	—	×	SVP2483W	SVP2485W	SVP2483W	SVP2485W	SVP2483W	SVP2485W	×	
	Verify	—	×	×		×		×		×	
HDD canister	Replace	—	×	×		×		×		×	
	Dynamic Sparing	—	×	×		×		×		×	
	Correction Copy	—	×	×		×		×		×	
Cache PCB	Replace	—	×	×		×		×		×	
CHA	Replace	—	×	× (*1)		× (*1)		× (*1)		× (*1)	
DKA	Replace	—	×	×		×		×		×	
MP	Replace	—	×	×		×		×		×	

*1: In the case of SI-MF, when all CHM is specified to de-install with pair includes 3390-A volume, the alert message of ‘SVPXXXXW’ is shown.

1.8 Availability of the online maintenance when XRC is used

Component	Maintenance Type	During initial copy		Established		Suspend	
		Primary	Secondary	Primary	Secondary	Primary	Secondary
Logical Device	Blockade	**	**	**	**	**	**
	Recovery	**	**	**	**	**	**
	Format	**	**	**	**	**	**
	Verify	×	×	×	×	×	×
HDD canister	Replace	×	×	×	×	×	×
Cache PCB	Replace	*	×	*	×	*	×
CHA	Replace	×	×	×	×	×	×
DKA	Replace	×	×	×	×	×	×
MP	Replace	*	×	*	×	*	×
ESW PCB	Replace	×	×	×	×	×	×

×: Maintenance is available

*: When a maintenance operation is needed while XRC is being used, I/O's for XRC pair volumes or XRC itself should be stopped before the maintenance operation.
If the maintenance operation must be done while XRC is being used, you must confirm that the usage of Sidefile monitor is less than 20% of total Cache capacity by monitoring each combination of MPPK and CLPR usage before you start the maintenance operation. Only when the usage of Sidefile monitor is less than 20% of total Cache capacity, you can proceed the maintenance operation.
Refer to SVP SECTION "2.4 Monitoring" (SVP02-240) about Sidefile monitor.
Select the [Monitor] icon in the 'SVP' window.
Next select the [Monitor] menu in the 'Information' window and select [start....].
Next select the 'Sidefile' box in the 'Item' menu in the 'Monitoring' window and select [OK].

**: When a maintenance operation is needed while XRC is being used, XRC should be stopped before the maintenance operation.

1.9 Availability of the online maintenance when UR is used

JNL-GROUP

Component	Maintenance Type	Condition	TC-MF path established		Initial		Active	
			MCU	RCU	MCU	RCU	MCU	RCU
Logical Device	Blockade	—	×	×	SVP3825W	SVP3825W	SVP3825W	SVP3825W
	Recovery	—	×	×	SVP3825W	SVP3825W	SVP3825W	SVP3825W
	Format	—	×	×	SVP3825W	SVP3825W	SVP3825W	SVP3825W
	Verify	—	×	×	×	×	×	×
HDD canister	Replace	—	×	×	×	×	×	×
CACHE	Replace	—	×	×	×	×	×	×
CHA	Replace	With Alternate path	×	×	×	×	×	×
		Without Alternate path	×	×	×	×	×	×
DKA	Replace	—	×	×	×	×	×	×
DKC	Replace	With Alternate path	×	×	×	×	×	×
		Without Alternate path	×	×	×	×	×	×
MP	Replace	—	×	×	×	×	×	×

Component	Maintenance Type	Condition	Halting		Stop		Stopping	
			MCU	RCU	MCU	RCU	MCU	RCU
Logical Device	Blockade	—	SVP3825W	SVP3825W	SVP3825W	SVP3825W	SVP3825W	SVP3825W
	Recovery	—	SVP3825W	SVP3825W	SVP3825W	SVP3825W	SVP3825W	SVP3825W
	Format	—	SVP3825W	SVP3825W	SVP3825W	SVP3825W	SVP3825W	SVP3825W
	Verify	—	×	×	×	×	×	×
HDD canister	Replace	—	×	×	×	×	×	×
CACHE	Replace	—	×	×	×	×	×	×
CHA	Replace	With Alternate path	×	×	×	×	×	×
		Without Alternate path	×	×	×	×	×	×
DKA	Replace	—	×	×	×	×	×	×
DKC	Replace	With Alternate path	×	×	×	×	×	×
		Without Alternate path	×	×	×	×	×	×
MP	Replace	—	×	×	×	×	×	×

DATA-VOL

Component	Maintenance Type	Condition	TC-MF path established		During initial copy		After completing initial copy	
			MCU	RCU	MCU	RCU	MCU	RCU
Logical Device	Blockade	—	×	×	SVP2031W	SVP2034W	SVP2031W	SVP2034W
	Recovery	—	×	×	SVP2031W	SVP2034W	SVP2031W	SVP2034W
	Format	—	×	×	SVP2031W	SVP2034W	SVP2031W	SVP2034W
	Verify	—	×	×	×	×	×	×
HDD canister	Replace	—	×	×	×	×	×	×
CACHE	Replace	—	×	×	SVP2059W	SVP2079W	×	×
CHF	Replace	With Alternate path	×	×	SVP3848W	×	SVP3848W	×
		Without Alternate path	×	×	SVP3848W	SVP2073W	SVP3848W	SVP2074W
CHM	Replace	—	×	×	×	SVP4291W (*1)	×	SVP4291W (*1)
DKA	Replace	—	×	×	×	×	×	×
DKC	Replace	With Alternate path	×	×	SVP3848W	×	SVP3848W	×
		Without Alternate path	×	×	SVP3848W	SVP2073W	SVP3848W	SVP2074W
MP	Replace	—	×	×	×	×	×	×

Component	Maintenance Type	Condition	Suspend		Suspending		Deleting	
			MCU	RCU	MCU	RCU	MCU	RCU
Logical Device	Blockade	—	SVP2031W	SVP2034W	SVP2031W	SVP2034W	SVP2031W	SVP2034W
	Recovery	—	SVP2031W	SVP2034W	SVP2031W	SVP2034W	SVP2031W	SVP2034W
	Format	—	SVP2031W	SVP2034W	SVP2031W	SVP2034W	SVP2031W	SVP2034W
	Verify	—	×	×	×	×	×	×
HDD canister	Replace	—	×	×	×	×	×	×
CACHE	Replace	—	×	×	×	×	×	×
CHF	Replace	With Alternate path	SVP3848W	×	SVP3848W	×	SVP3848W	×
		Without Alternate path	SVP3848W	×	SVP3848W	SVP2075W	SVP3848W	SVP2075W
CHM	Replace	—	×	×	×	SVP4291W (*1)	×	SVP4291W (*1)
DKA	Replace	—	×	×	×	×	×	×
DKC	Replace	With Alternate path	SVP3848W	×	SVP3848W	×	SVP3848W	×
		Without Alternate path	SVP3848W	×	SVP3848W	SVP2075W	SVP3848W	SVP2075W
MP	Replace	—	×	×	×	×	×	×

×: Maintenance is available

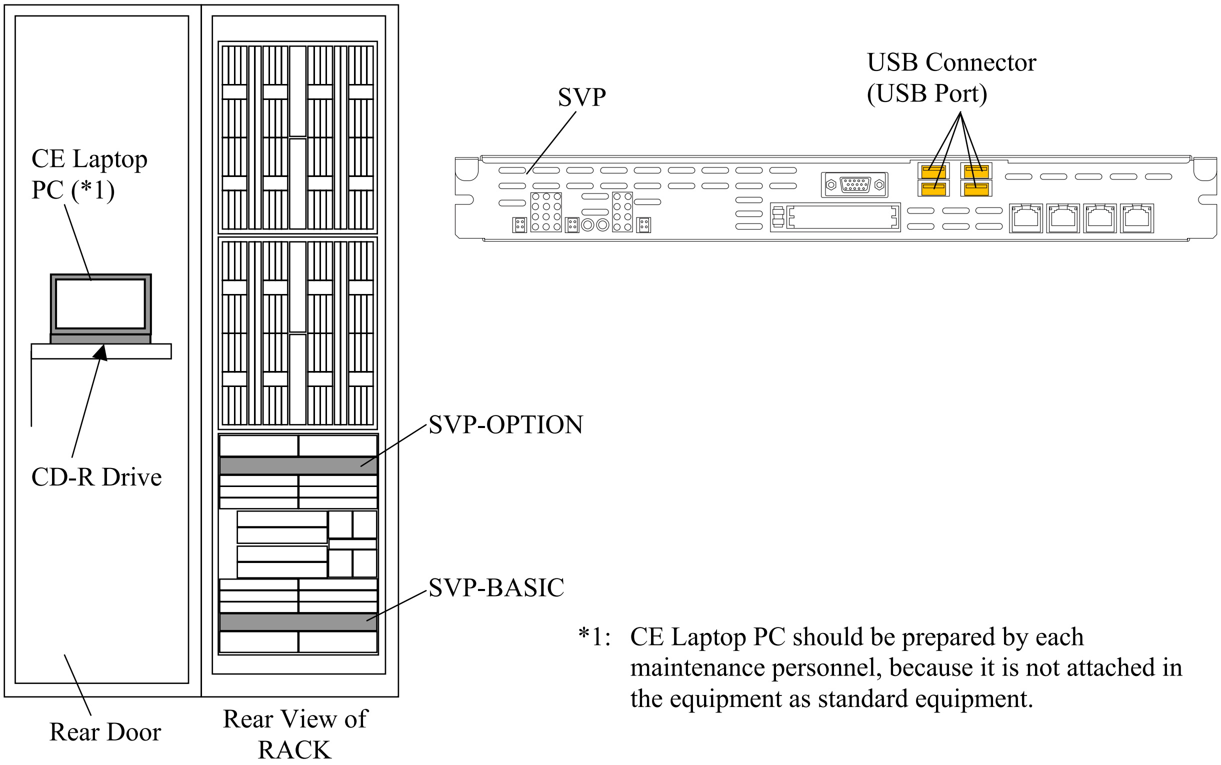
SVPXXXXW: Maintenance is not available based on the specification. Refer to SVP MESSAGE SECTION.

*1: In this operation, when the normal CHM disappear, the warning message of ‘SVP4291W’ will be outputted.

1.10 About the storage media used for installation/maintenance process

The media showed in following table are attached in subsystem, in order to advance installation, maintenance, and failure analysis smoothly. Please implement installation or collect information according to the work procedure indicated in each section.

No.	Media	Description	Installation device	Remarks
1	CD-ROM	CD-R for micro program storage. Used for installation or micro program download in time of micro FC.	CD-R Drive of CE Laptop PC	Attached to the device
2	USB Memory	The USB memory for configuration information backup. Used for configuration information storage in time of device configuration change.	USB Connector of SVP	Attached to the device
3	USB Memory	USB memory for collecting device dump information. Used for collecting dump information in time of failure analysis or operation investigation.	USB Connector of SVP	Attached to the device



*1: CE Laptop PC should be prepared by each maintenance personnel, because it is not attached in the equipment as standard equipment.

Fig. 1.10-1 Information Collection Device for each Media

[PRE-PROCEDURE A]

— OUTLINE —

① Display Initial Screen
② Change SVP operation mode
③ Open Maintenance window

1. <Initial screen>
Display the SVP initial screen from SVP Section "1. How to Operate the SVP (PC)" (SVP01-10).

   For CE Laptop PC, please refer to 3.1.5.3.
   - "3.1.5.3 Attachment/Removal Procedure of CE Laptop PC" (INST03-01-120)

---

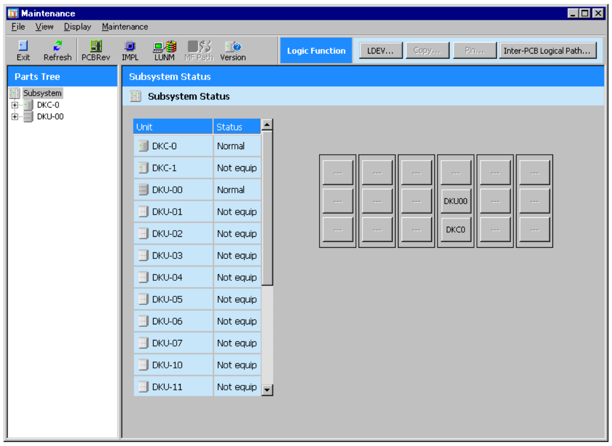
2. <Maintenance Other Components>
Select the [Maintenance Components]-[Maintenance Other Components] from Action Menu.
And open the 'Maintenance Other Components' window.

---

3. <Operation mode change>
Change the mode to [Modify Mode].
Select (CL) [Maintenance].

---

4. <Maintenance window>
The 'Maintenance' window is displayed.



Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

[PRE-PROCEDURE B]

— OUTLINE —

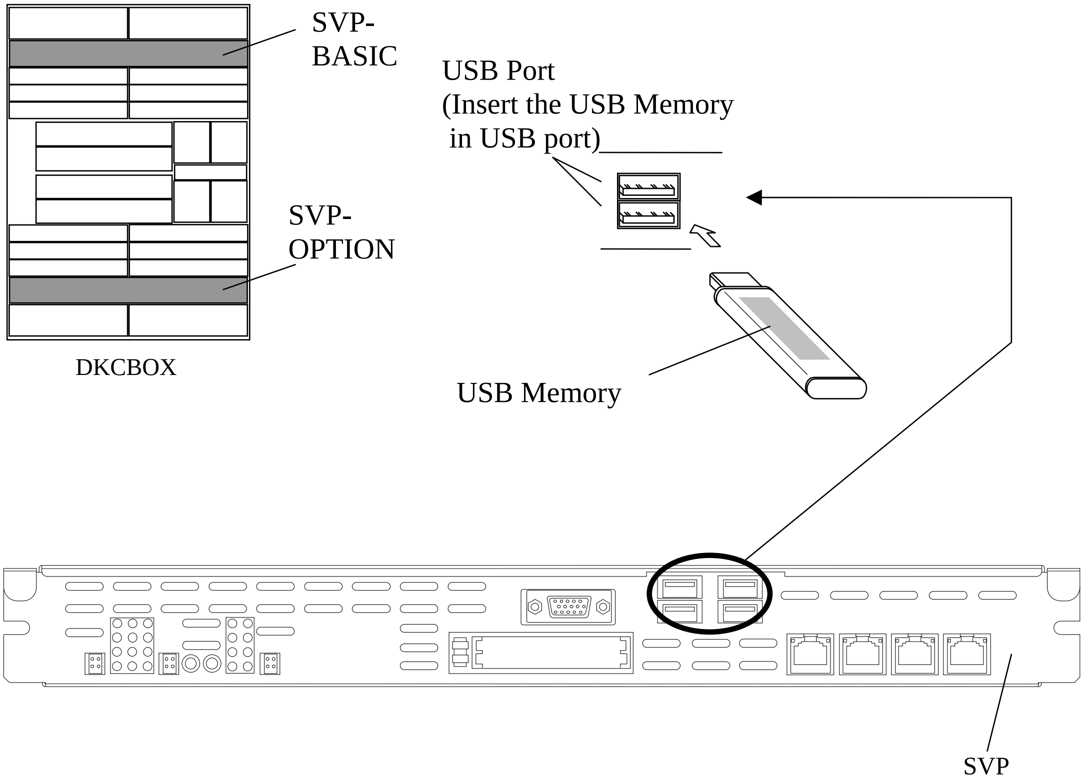
① Installation of USB memory
② Display Initial Screen
③ Open Maintenance window

A USB memory is being provided with each replacement SSW, CACHE, ESW, DKA and CHAs assembly to collect more detailed information about transient failures. Return the USB memory that contains the failure information together with the failed PCB after the failed PCB replacement.

1. Installation of USB memory

(1) Collecting information to the external USB memory.
Connect the USB memory to one of the USB ports on the SVP in the array as shown below. If the Additional SVP is installed, the USB memory must be installed in the SVP that is the active SVP.

① Insert the USB memory in USB port on the SVP.



2. <Initial screen>
   Display the SVP initial screen from SVP Section “1. How to Operate the SVP (PC)” (SVP01-10).

---

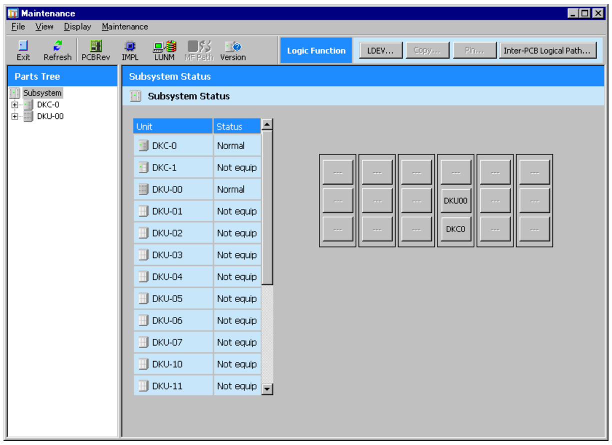
3. <Maintenance Other Components>
   Select the [Maintenance Components]-[Maintenance Other Components] from Action Menu. And open the ‘Maintenance Other Components’ window.

---

4. <Operation mode change>
   Change the mode to [Modify Mode].
   Select (CL) [Maintenance].

---

5. <Maintenance window>
   The ‘Maintenance’ window is displayed.



Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

[DRIVE REPLACEMENT PROCESSING - RDK1]

— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select drive (status check)
    ② Check progress of copy processing
    ③ Specify Replacement
    ④ Place HDD into unpluggable state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Execute CUDG on P-DEV
    ② Specify recovery
    ③ Copy back

⚠ **CAUTION**

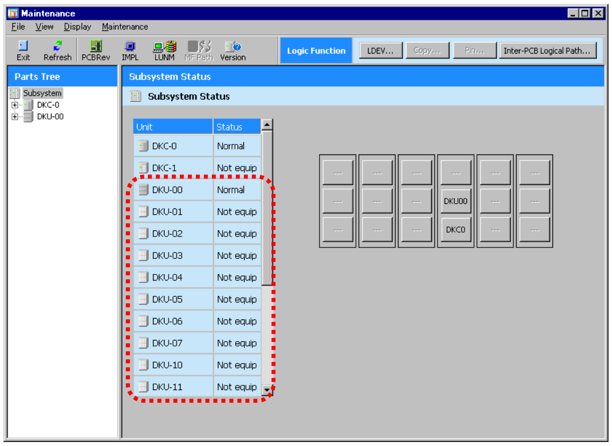
If No Charging of FMD (SIM = 50EXYY) occurs in replacement of a FMD, the FMD ACTIVE LED will change to low-speed blinking. In this case, it takes 90 minutes at most for the FMD ACTIVE LED to go out and for the battery in the FMD to be fully charged.

Notice: If Drive Replacement is operated during running Drive Erase, Drive Erase may be abnormal end. The drive can not be reused, and can not be ensured that the drive erase is completed.

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

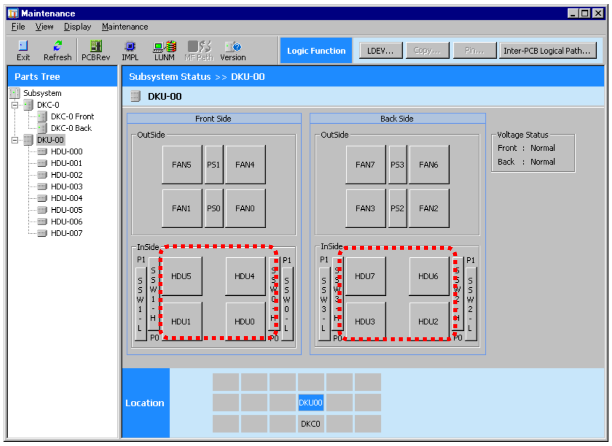
Open the ‘Maintenance’ window according to PRE PROCEDURE A (REP02-01-10). Select (CL) the DKU information [DKU-nn] of the DKU which installs the HDD to be replaced in the ‘Maintenance’ window.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Prt... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status
DKU00
DKC0

Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <Select HDU>

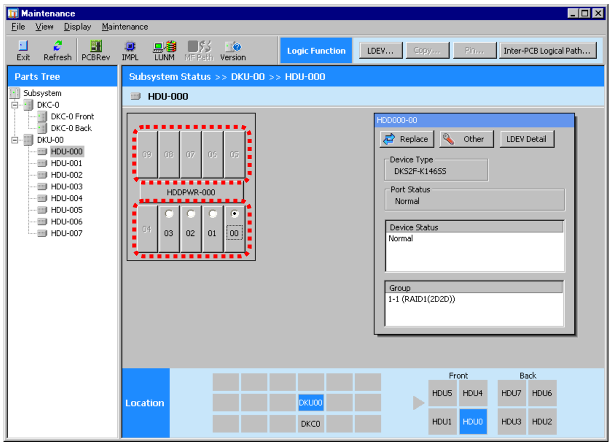
Select (CL) the HDU information [HDUn] of the HDU which installs the HDD to be replaced.



Voltage Status
Front : Normal
Back : Normal

1-3. <Select HDD>

Check and select (CL) [nn] to be replaced.

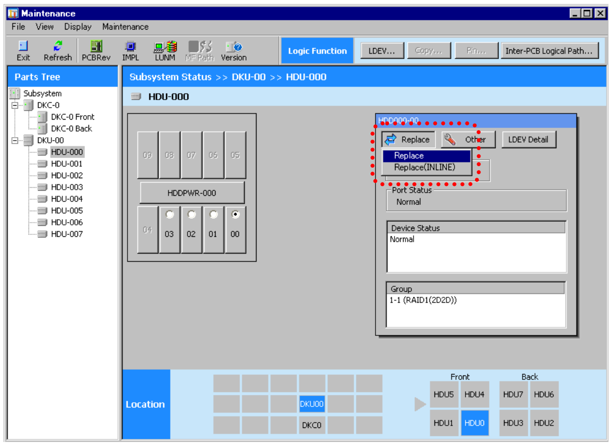


Device Type: DKS2F-K146SS
Port Status: Normal
Device Status: Normal
Group: 1-1 (RAID1(2D2D))

1-4. <Specify replacement of HDD>

Make sure that the “Device Status” is [Failed] or [Warning] or [Reserved].

Select (CL) [Replace]-[Replace].



Port Status: Normal

Device Status: Normal

Group: 1-1 (RAID1(2D2D))

1-5.<Checking the P-DEV status>

CAUTION

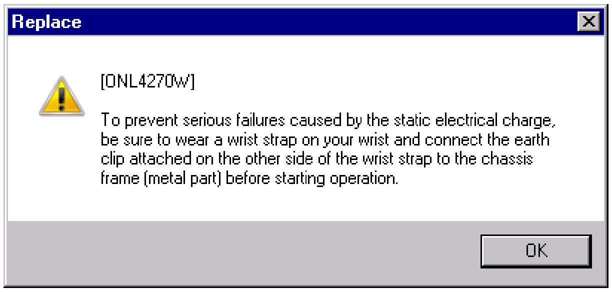
When the screen appears prompting the operator to input a password to prevent multiple maintenance or for executing a pin check, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

“Checking...” is displayed.

1-6. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.



[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

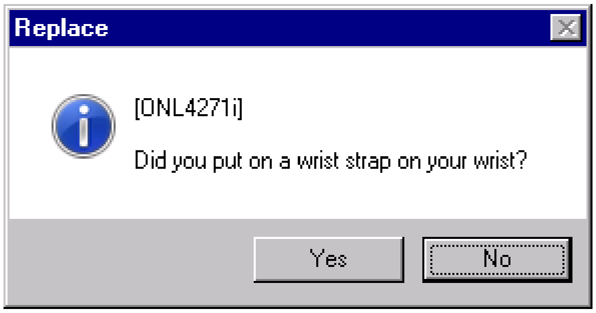
(1) <Confirm wearing wrist strap>

In response to a message, “Did you put on a wrist strap on your wrist?”.

Select (CL) [Yes] when wrist strap is on your wrist.

Select (CL) [No] when there is no wrist strap on your wrist.

When [No] is selected (CL), go to Step (2).



[ONL4271i]

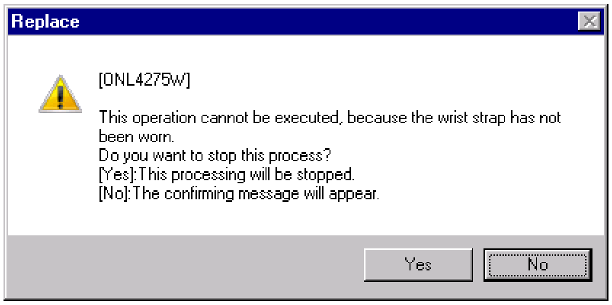
Did you put on a wrist strap on your wrist?

(2)

In response to a message, “This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?

[Yes]: This processing will be stopped.

[No]: The confirming message will appear.”



[ONL4275W]

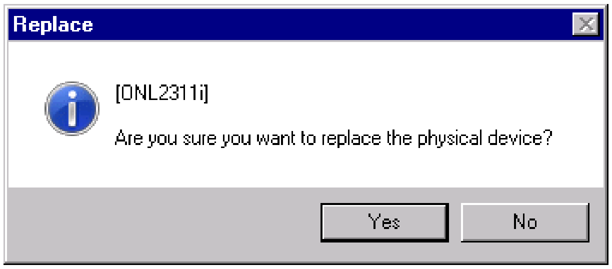
This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

When [Yes] is selected (CL), returned to Step 1-3.

When [No] is selected (CL), returned to Step 1-6.

1-7. <P-DEV blocking>

Select (CL) [Yes] in response to “Are you sure you want to replace the physical device?”.



[ONL2311i]

Are you sure you want to replace the physical device?

1-8. <Blocking the Physical device>

“Blocking...” is displayed.

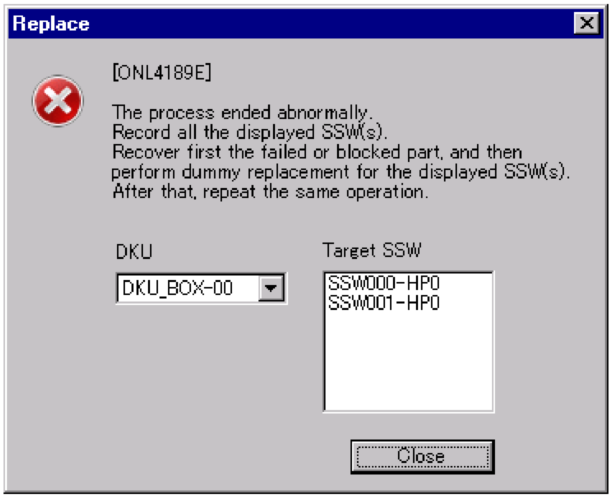
1-9. <Spin down the Physical device>

“Spinning down...” is displayed.

Perform the dummy replacement of the displayed SSW(s) when the window is displayed. Select the DKU list and record the target SSW(s) because two or more DKU might be listed.

Select (CL) [Close] button and perform the dummy replacement of the target SSW(s).

Retry the replacement after completing the dummy replacement of SSW.



[ONL4189E]

The process ended abnormally.
Record all the displayed SSW(s).
Recover first the failed or blocked part, and then perform dummy replacement for the displayed SSW(s).
After that, repeat the same operation.

DKU: DKU_BOX-00

Target SSW:
SSW000-HP0
SSW001-HP0

1-10. <Check shut down LED>

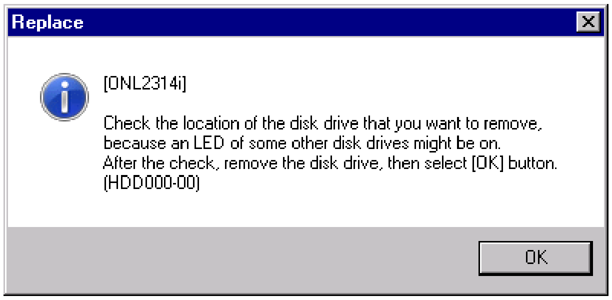
⚠ CAUTION

If a wrong HDD is removed, a data loss or a system down may occur.

Check the shut down LED on the HDD to be replaced.
If LED is off, reconfirm the location of the HDD to be replaced with LOCATION SECTION before replacing the hardware.

1-11. <Confirm Removal>

Select (CL) [OK] in response to “Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on. After the check, remove the disk drive, then select [OK] button. (HDDxnn-nn)” after the unit is removed. (Step 2-3)



[ONL2314i]

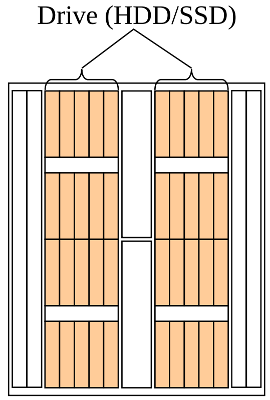
Check the location of the disk drive that you want to remove,
because an LED of some other disk drives might be on.
After the check, remove the disk drive, then select [OK] button.
(HDD000-00)

1-12. <Replace HDD>

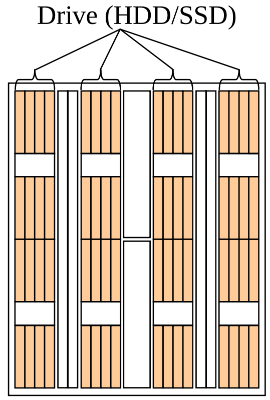
Replace HDD.
Go to “2. HARDWARE REPLACEMENT PROCESSING”.

2. HARDWARE REPLACEMENT PROCESSING

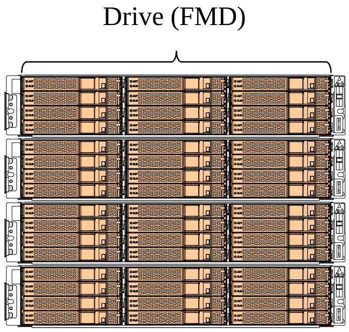
Location	Function Name of Component		Part Name	HDA Label
DKU	1	Disk Drive (HDD)	HDU700-146KCMSS	S5B-K146SS
				S5C-K146SS
			HDU700-300JCMSS	R5C-J300SS
				R5D-J300SS
				S5B-J300SS
				S5D-J300SS
				S5E-J300SS
			HDU700-300KCMSS	R5C-K300SS
				S5C-K300SS
			HDU700-500HCMSS	S5A-H500SS
				S5B-H500SS
			HDU700-600JCMSS	R5C-J600SS
				R5D-J600SS
				S5C-J600SS
				S5D-J600SS
				S5E-J600SS
			HDU700-900JCMSS	R5D-J900SS
				S5D-J900SS
				S5E-J900SS
			HDU700-1R0HCMSS	S5B-H1R0SS
			HDU700-1R2JCMSS	R5E-J1R2SS
				S5F-J1R2SS
			HDU700-2R0H2MAT	R2C-H2R0AT
				R2D-H2R0AT
				R2E-H2R0AT
			HDU700-2R0H3MSS	S2C-H2R0SS
				S2D-H2R0SD
				S2D-H2R0SS
				S2P-H2R0SS
				S2E-H2R0SS
				W2E-H2R0SS
			HDU700-3R0H3MSS	S2D-H3R0SS
				S2E-H3R0SS
				W2E-H3R0SS
			HDU700-4R0H3MSS	S2E-H4R0SS
				W2E-H4R0SS
	2	Flash Drive (SSD)	HDU700-200MCMSS	B5A-M200SS
				R5B-M200SS
			HDU700-200SAMSS	T5A-S200SS
				T5C-S200SS
			HDU700-200SCMSS	R5A-S200SS
				R5B-S200SS
			HDU700-400MCMSS	B5A-M400SS
				R5B-M400SS
			HDU700-400SCMSS	R5A-S400SS
				R5B-S400SS
			HDU700-800MCMSS	B5A-M800SS
			HDU700-400S1MSS	T2A-S400SS
				T2C-S400SS
Front View of FBX DKU	3	Flash Module Drive (FMD)	HDU700-1R6FMSS	H1A-P1R6SS
				H1C-P1R6SS
			HDU700-3R2FMSS	H1B-P3R2SS
				H1C-P3R2SS



Front or Rear View of DKU
(In case of 3.5inch Drive)



Front or Rear View of DKU
(In case of 2.5inch Drive)



Front View of DKU
(In case of FMD)

NOTICE:

- Replace the drive in the subsystem in power on status only.
  Do not replace the drive in power off status.
- Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.
- HDD is a precise component. Be careful in handling HDD to avoid vibration and impact.

2-1. Open the FAN door.

2-1-1. In case of 3.5inch/2.5inch drive

a. Put the stopper of the FAN door into the open able and closable state. (Refer to the INST03-01-160.)

b. Loosen the two screws and open the FAN door.

2-1-2. In case of FMD

a. Go to procedure 2-2. Check the Shut Down LED.

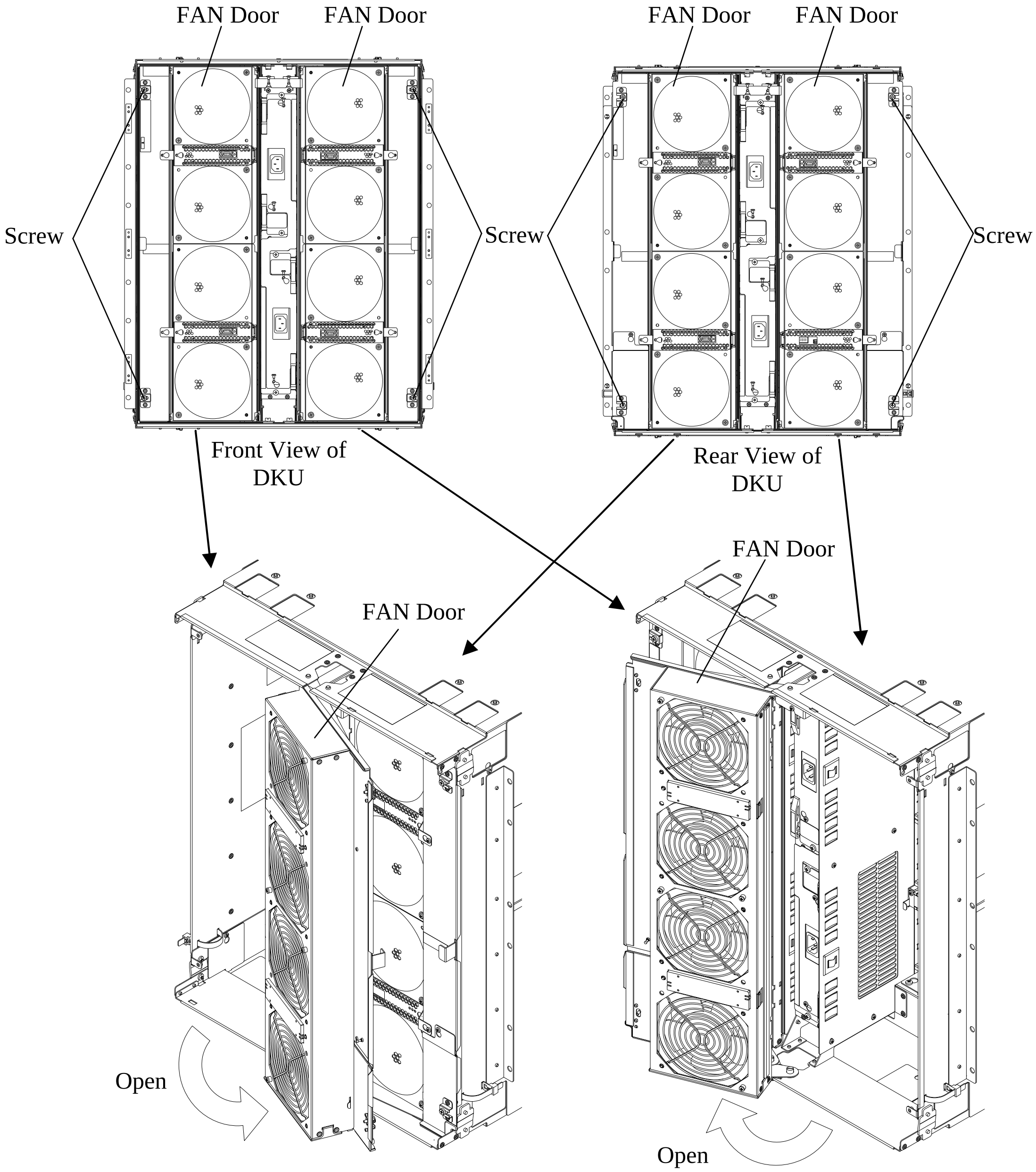
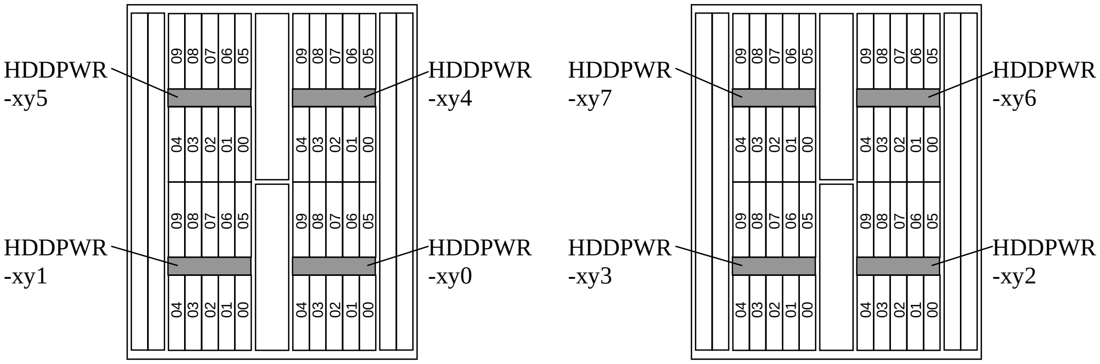


Fig. 3.1.2-1 FAN Door Opening

2-2. Check the Shut Down LED.

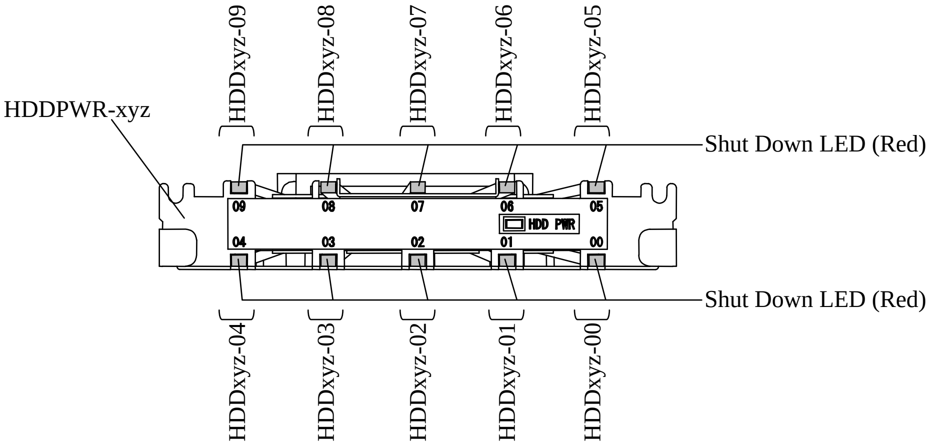
2-2-1. In case of 3.5inch/2.5inch drive

a. Check that the Shut Down LED on the HDDPWR corresponding to drive (HDD/SSD) is turned on. Refer to Fig. 3.1.2-2 or 3.1.2-3.



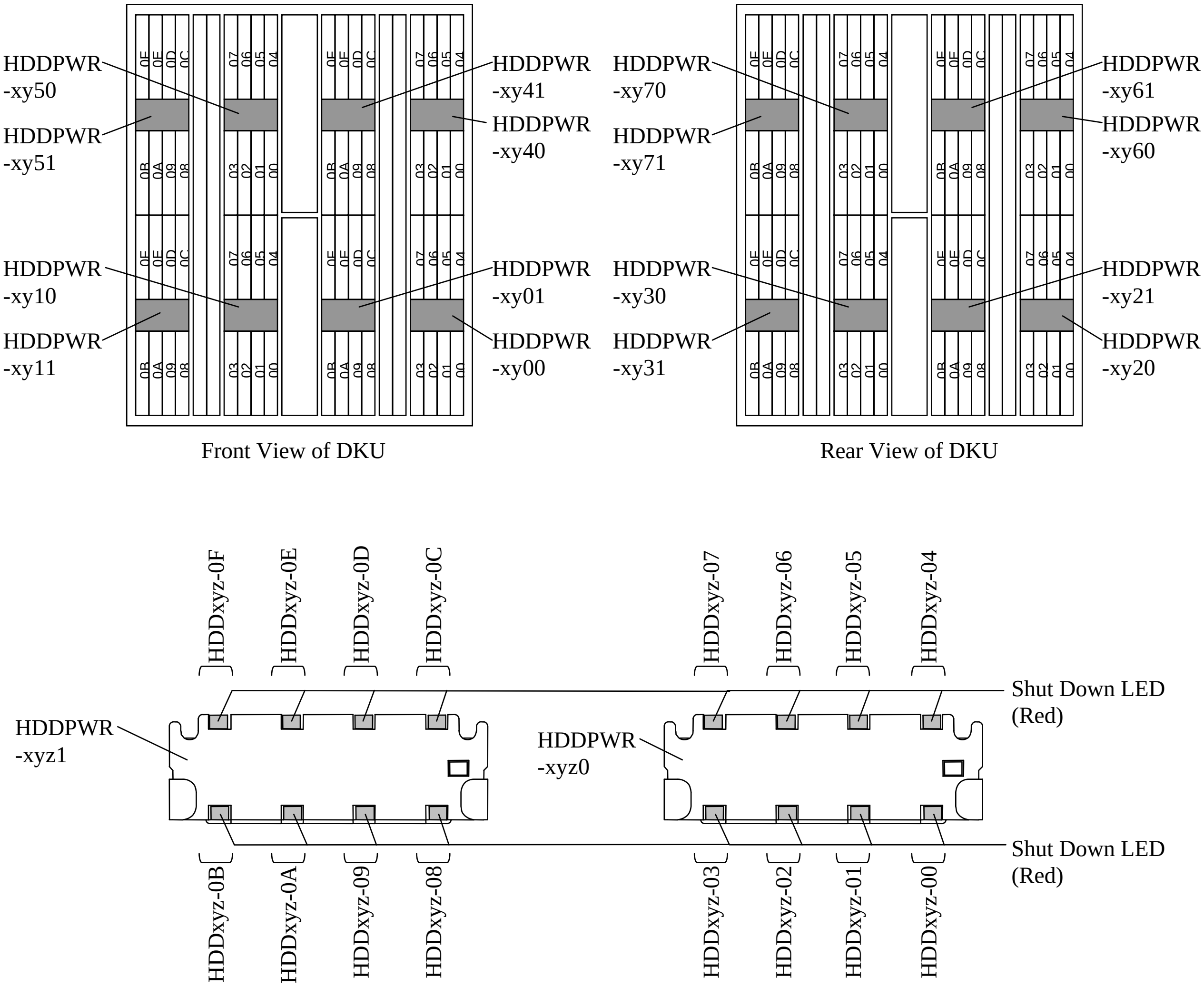
Front View of DKU

Rear View of DKU



Note: HDDPWR-xyz
→HDU No. (0, 1, 2, ..., 7)
→DKU No. (0, 1, 2, ..., 7)
→DKC No. (0, 1)

Fig. 3.1.2-2 Checking of Shut Down LED (In case of 3.5inch Drive)

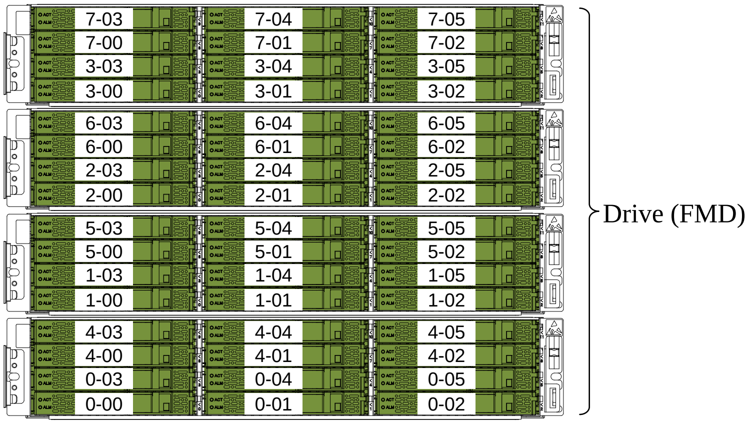


Note: HDDPWR-xyz
- z → HDU No. (0, 1, 2,….., 7)
- y → DKU No. (0, 1, 2,….., 7)
- x → DKC No. (0, 1)

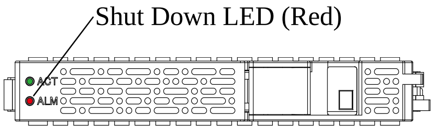
Fig. 3.1.2-3 Checking of Shut Down LED (In case of 2.5inch Drive)

2-2-2. In case of FMD

a. Check that the Shut Down LED on drive is turned on.



Front View of FBX DKU



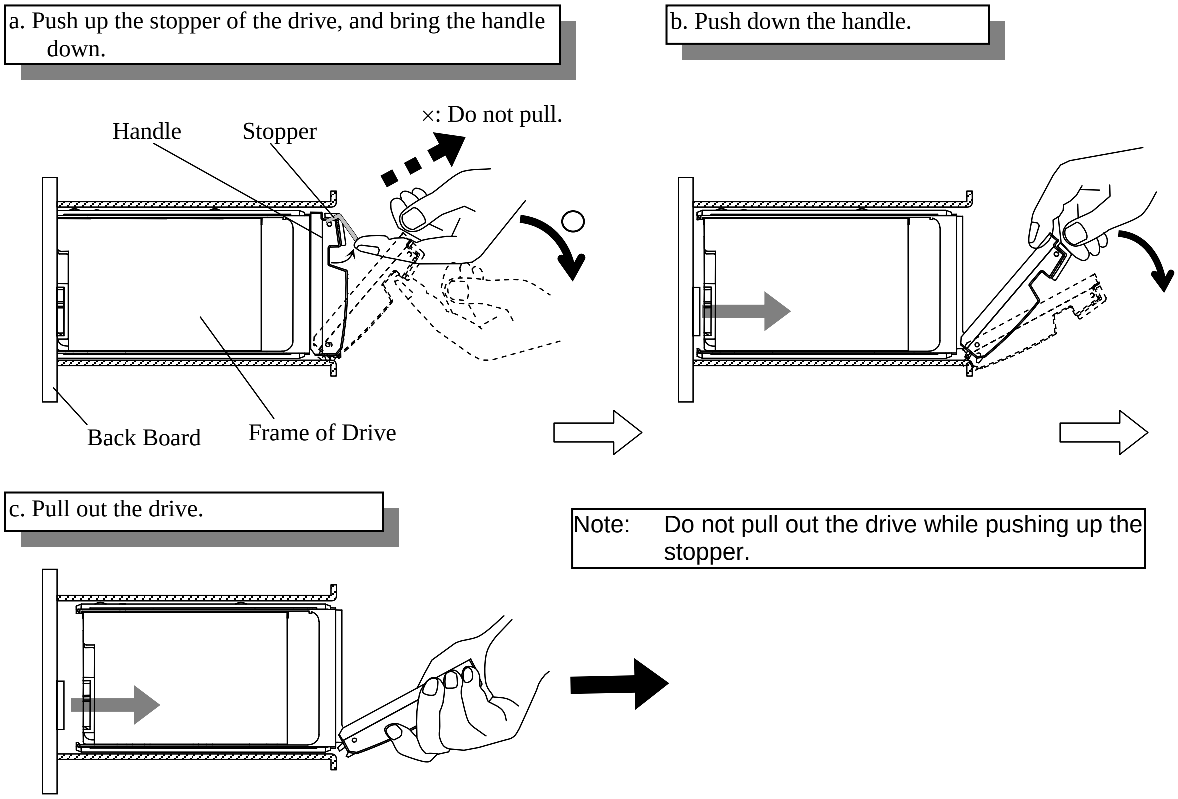
Front View of Drive (FMD)

Fig. 3.1.2-3A Checking of Shut Down LED (In case of FMD)

2-3. Remove the drive.

2-3-1. In case of 3.5inch drive.

a. Push up the stopper of drive, and bring the handle down. Don’t pull the handle during this process.
b. Push down the handle.
c. Pull out the drive.
d. Fig. 3.1.2-5 illustrates the case of wrong procedure.

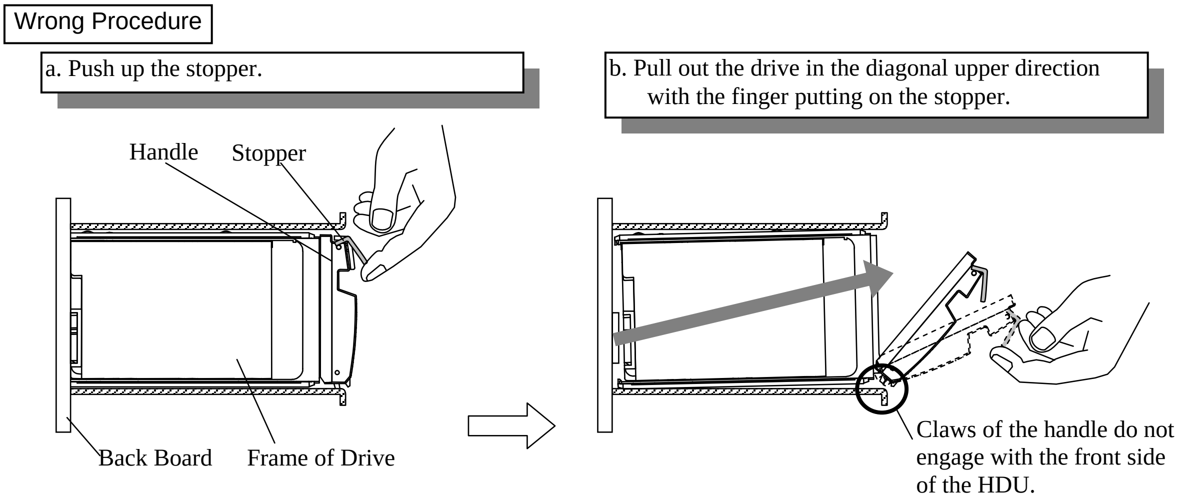

a. Push up the stopper of the drive, and bring the handle down.

b. Push down the handle.

c. Pull out the drive.

Note: Do not pull out the drive while pushing up the stopper.

Fig. 3.1.2-4 Removal of Drive


Wrong Procedure

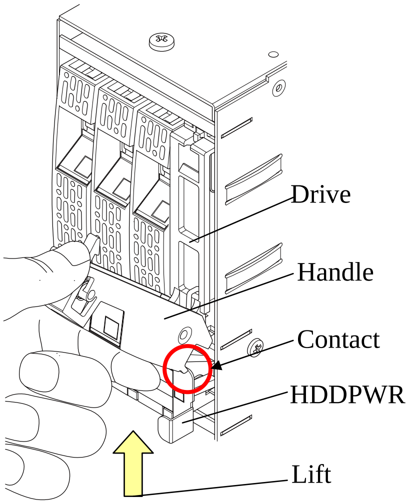
a. Push up the stopper.

b. Pull out the drive in the diagonal upper direction with the finger putting on the stopper.

Claws of the handle do not engage with the front side of the HDU.

Fig. 3.1.2-5 Removal of Drive (Wrong Procedure)

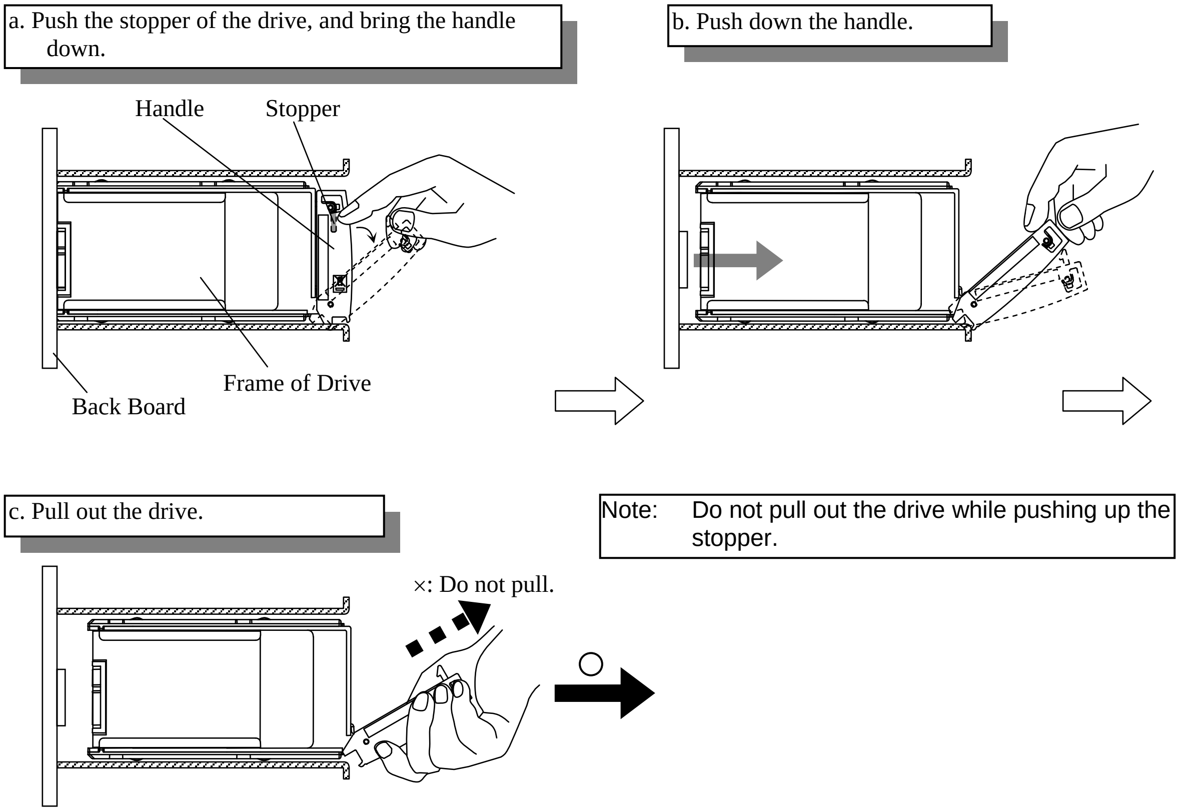
2-3-2. In case of 2.5inch drive.



Instruction for the insertion and removal of the 2.5-inch drive:

The upper part of HDDPWR might come in contact with the lower part of the drive, and it becomes an obstruction of the insertion and removal at the time of the 2.5-inch drive insertion and removal. In this case, avoid the HDDPWR by lifting the drive lightly.

a. Push the stopper of drive, and bring the handle down. Don't pull the handle during this process.
b. Push down the handle.
c. Pull out the drive.
d. Fig. 3.1.2-7 illustrates the case of wrong procedure.


a. Push the stopper of the drive, and bring the handle down.

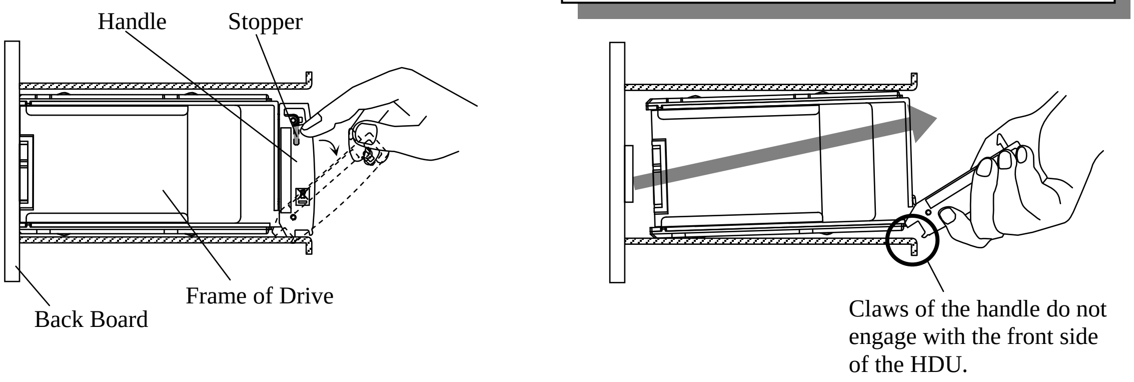
b. Push down the handle.

c. Pull out the drive.

Note: Do not pull out the drive while pushing up the stopper.

Fig. 3.1.2-6 Removal of Drive

Wrong Procedure



a. Push the stopper.

b. Pull out the drive in the diagonal upper direction with the finger putting on the stopper.

Claws of the handle do not engage with the front side of the HDU.

Fig. 3.1.2-7 Removal of Drive (Wrong Procedure)

2-3-3. In case of FMD

Notice: When the FMD is removed in replacing procedure, the fans of the DKUPS equipped in the rear of the FBX DKU rotate at the highest speed. When the spare FMD is installed, the fans of the DKUPS rotate at the speed suitable for environmental temperature.

a. Pull the stopper of the drive handle toward you to have the lock off.
b. Tilt the handle toward you, and then remove the drive by pulling it out taking care not to apply a shock to it.

Note: When handling the drive, hold the rail side because the shield spring is subject to breakage.

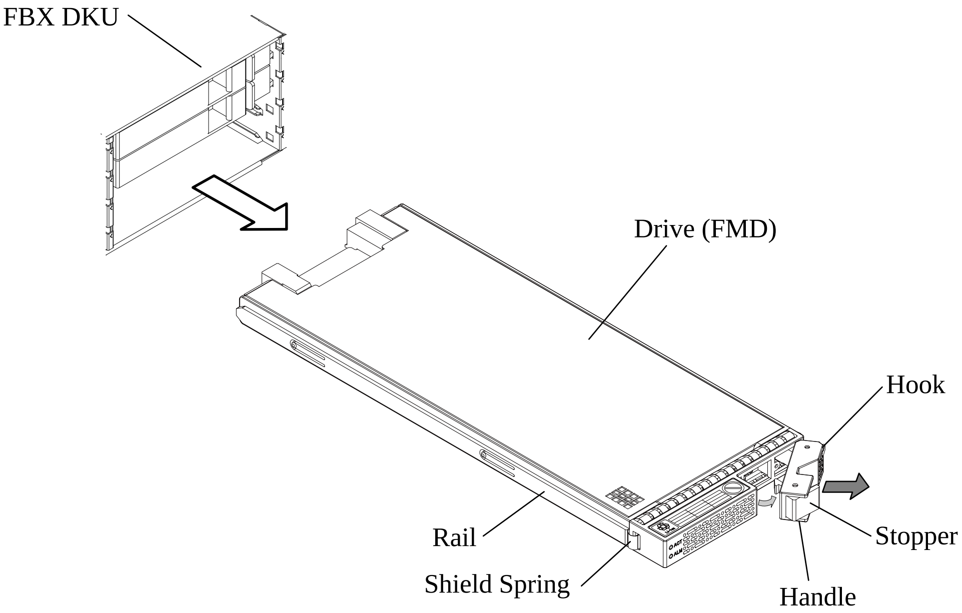
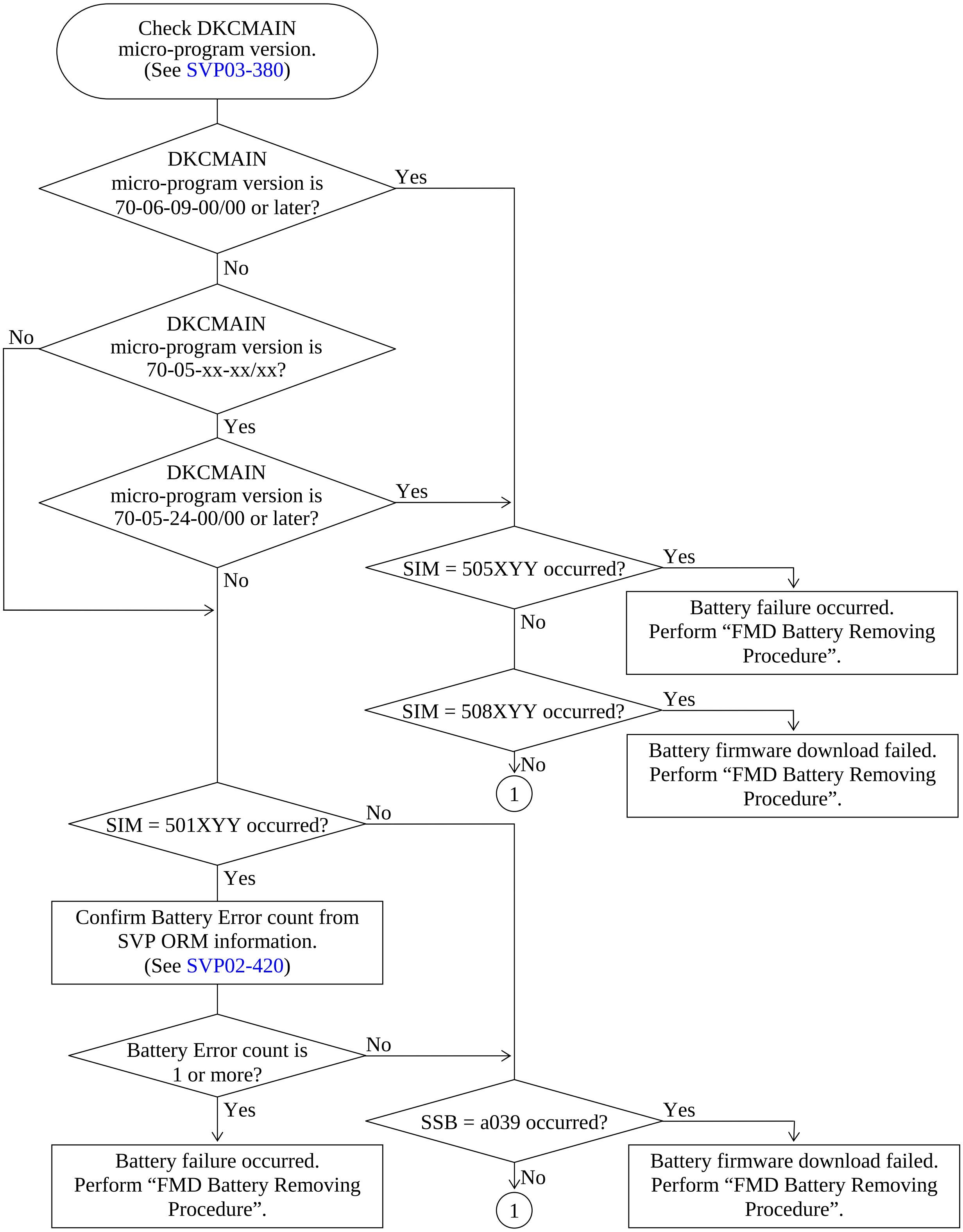
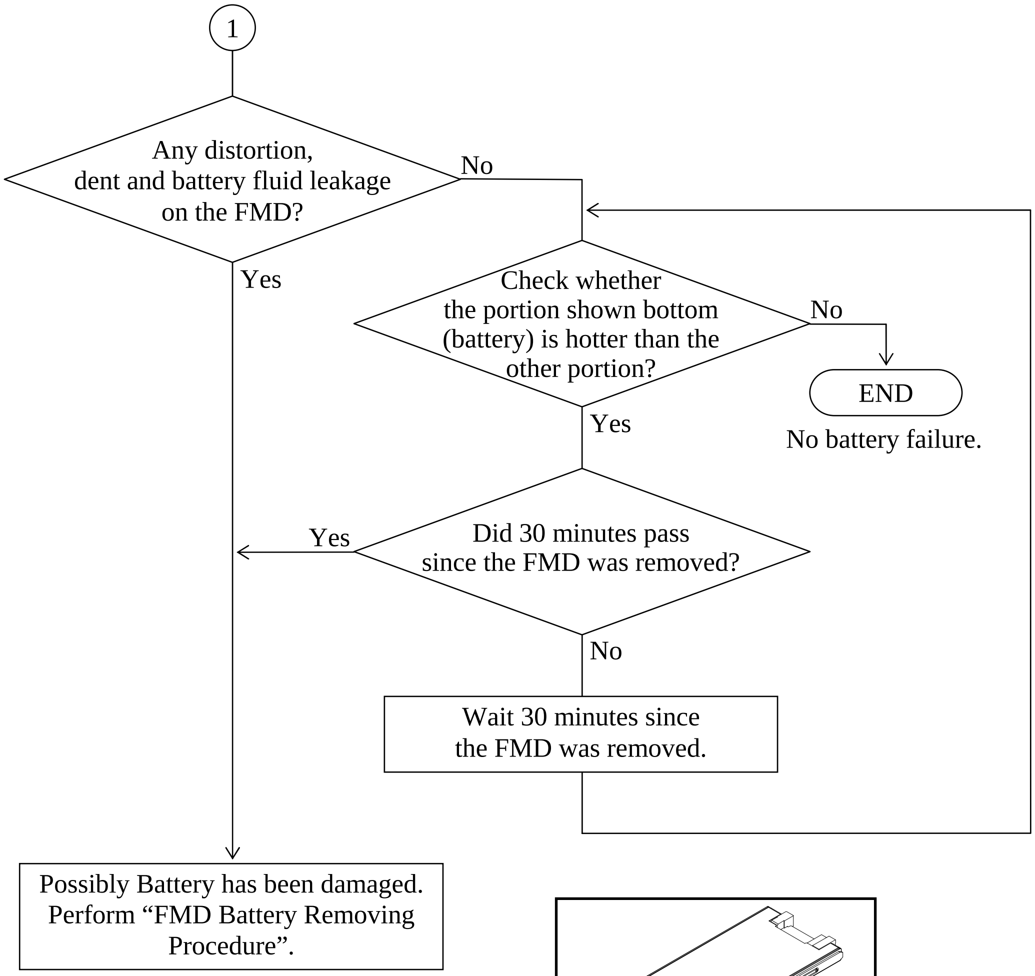
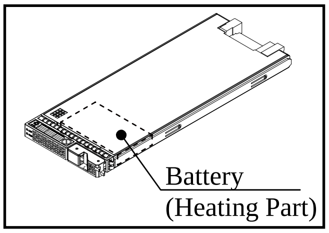


Fig. 3.1.2-7A Removal of Drive (In case of FMD)

c. Check whether a failure of the battery built in the FMD has occurred by using the flowchart below. If a battery failure has occurred, remove the battery from the FMD. If no battery failure has occurred, go to Procedure 2-4.


Check DKCMAIN micro-program version. (See SVP03-380)
DKCMAIN micro-program version is 70-06-09-00/00 or later?
Yes
No
DKCMAIN micro-program version is 70-05-xx-xx/xx?
No
Yes
DKCMAIN micro-program version is 70-05-24-00/00 or later?
Yes
No
SIM = 505XYY occurred?
Yes
No
Battery failure occurred. Perform “FMD Battery Removing Procedure”.
SIM = 508XYY occurred?
Yes
No
Battery firmware download failed. Perform “FMD Battery Removing Procedure”.
1
SIM = 501XYY occurred?
No
Yes
Confirm Battery Error count from SVP ORM information. (See SVP02-420)
Battery Error count is 1 or more?
No
Yes
Battery failure occurred. Perform “FMD Battery Removing Procedure”.
SSB = a039 occurred?
Yes
No
1
Battery firmware download failed. Perform “FMD Battery Removing Procedure”.


1
Any distortion, dent and battery fluid leakage on the FMD?
No
Yes
Check whether the portion shown bottom (battery) is hotter than the other portion?
No
END
No battery failure.
Yes
Did 30 minutes pass since the FMD was removed?
Yes
No
Wait 30 minutes since the FMD was removed.
Possibly Battery has been damaged. Perform “FMD Battery Removing Procedure”.


Battery
(Heating Part)

d. FMD Battery Removing Procedure

(d)-1 Remove 4 Screws (SB310N) on the bottom side of FMD by using cross-head screw driver.

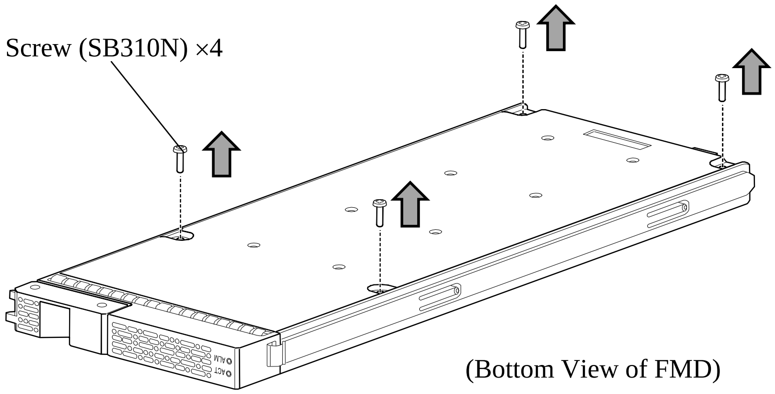


Fig. 3.1.2-7B Removing Screws

(d)-2 Remove Top Cover and Bottom Cover.

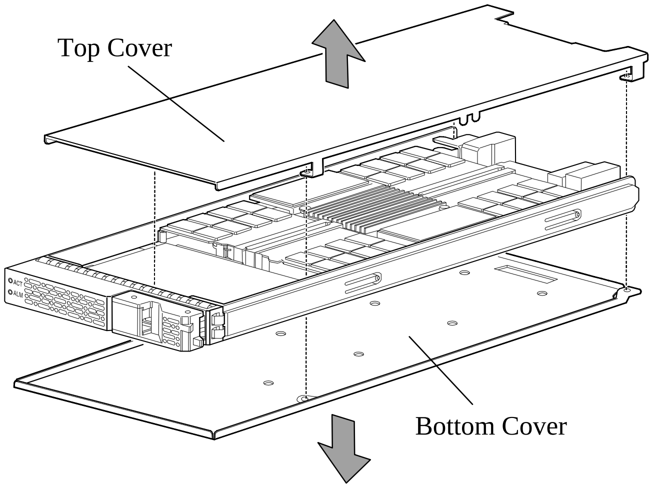


Fig. 3.1.2-7C Removing Covers

(d)-3 Remove 2 sets of Tapping-screw and Washer by using cross-head screw driver.

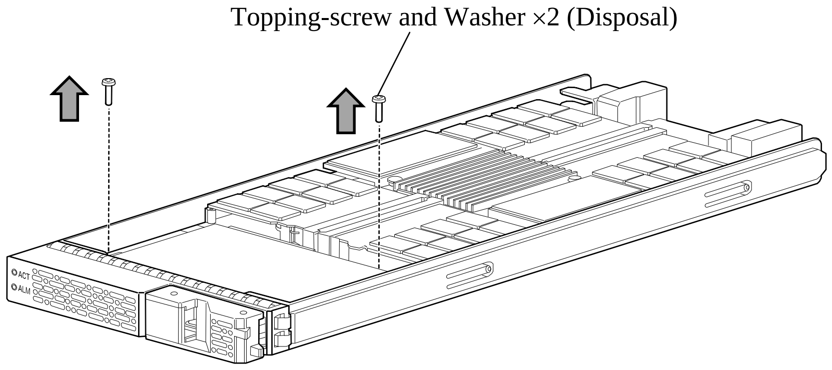


Fig. 3.1.2-7D Removing Tapping-screws and Washers

(d)-4 Move the Battery to the bezel side and disconnect the Battery from the circuit board.

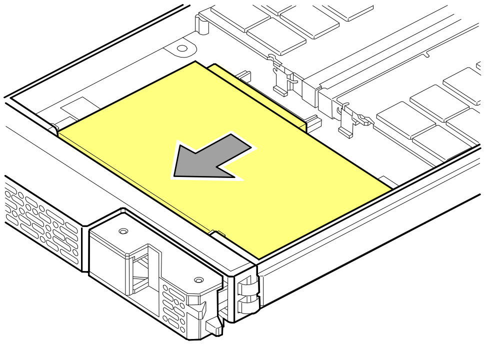


Fig. 3.1.2-7E Disconnecting from Connector

(d)-5 Remove the Battery to the bottom side of FMD. (After the connector comes off, battery is lowered below.)

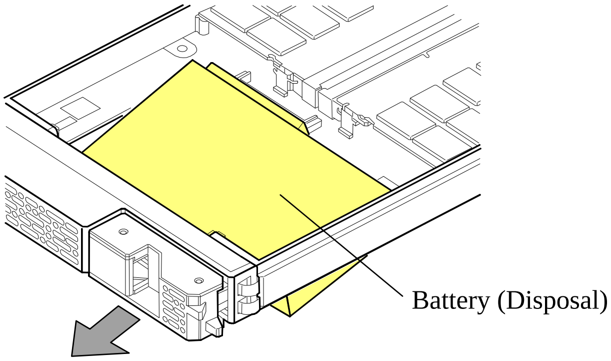


Fig. 3.1.2-7F Removing Battery

(d)-6 Attach Top Cover and Bottom Cover.
(d)-7 Attach 4 Screws (SB310N) on the bottom side of FMD.

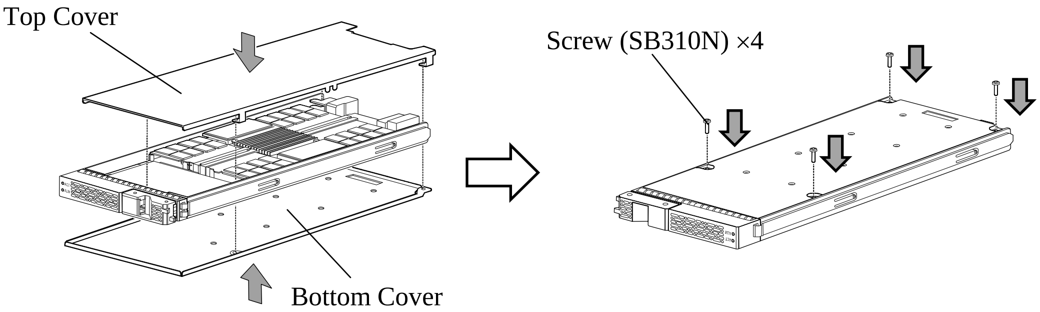


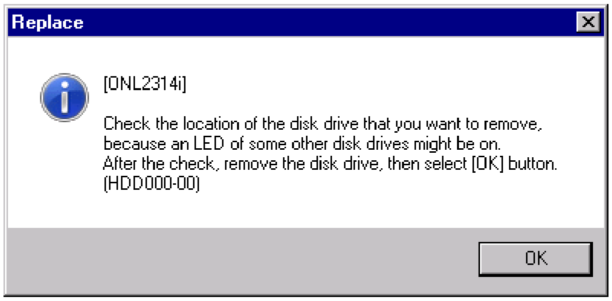
Fig. 3.1.2-7G Reassembling FMD

(d)-8 Dispose of the Tapping-screws, Washers and Battery removed in procedures (d)-3 and (d)-5.
When dispose of the Battery, follow the directions given by the local law where the product is used.

2-4. Check and handling of the drive.

(1) <Confirm Removal>

Select (CL) [OK] in response to “Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on. After the check, remove the disk drive, then select [OK] button. (HDDxnn-nn)” after the unit is removed. (Step 2-3)



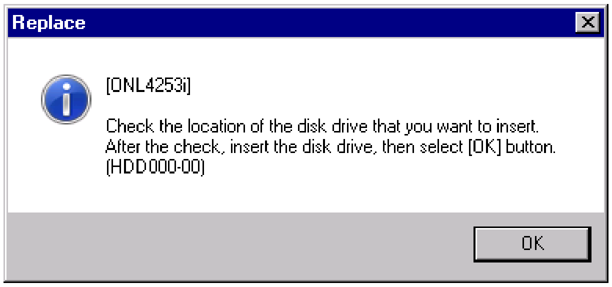
[ONL2314i]

Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on.
After the check, remove the disk drive, then select [OK] button.
(HDD000-00)

---

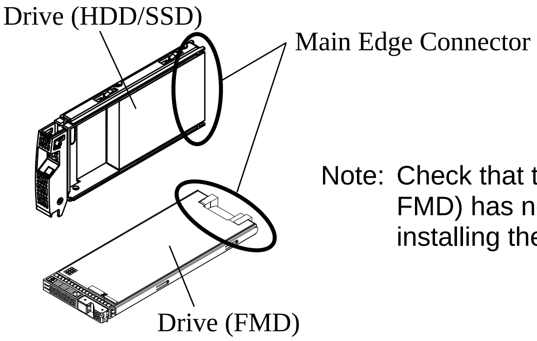
(2) <Confirm Insertion>

“Check the location of the disk drive that you want to insert. After the check, insert the disk drive, then select [OK] button. (HDDnnn-nn)” is displayed.



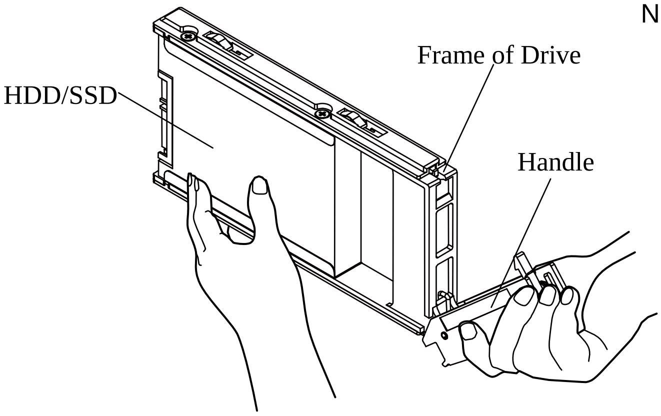
[ONL4253i]

Check the location of the disk drive that you want to insert.
After the check, insert the disk drive, then select [OK] button.
(HDD000-00)



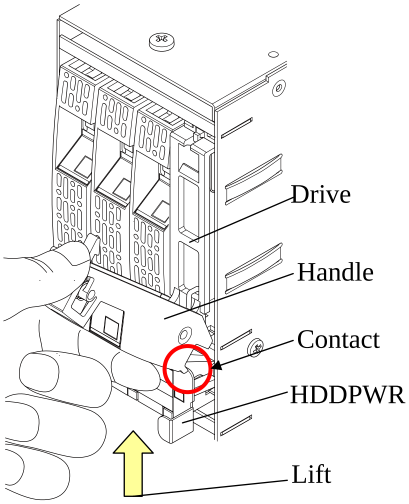
Note: Check that the main edge connector of the drive (HDD/SSD/FMD) has no deformation, damage or sticking of dust before installing the drive.

Handling of Drive



Note on the installation:
Do not insert the drive by pushing its frame.

2-5. Install the drive.



Instruction for the insertion and removal of the 2.5-inch drive:

The upper part of HDDPWR might come in contact with the lower part of the drive, and it becomes an obstruction of the insertion and removal at the time of the 2.5-inch drive insertion and removal. In this case, avoid the HDDPWR by lifting the drive lightly.

Caution – Back Board, or drive connector or drive handle may be damaged when the drive is forcibly inserted.

If the drive cannot be easily inserted until the claws on the handle reach the DKU, or if the handle binds or stops before it can be locked, then remove the drive and perform inspection:

a) Check the drive slot in DKU to be free and clear of obstructions.
b) Check connector on back board for visible defects.
c) Inspect connector on drive for visible defects.
d) Inspect drive top and bottom guide for defects. Note special alignment tab on bottom guide on some drive. A damaged tab can bind on the lower slot guides in DKU.
e) During installation make sure the drive is inserted in alignment with slot guides.
f) Check upper rear spring on SSD has been removed. (This applies only on SSD)

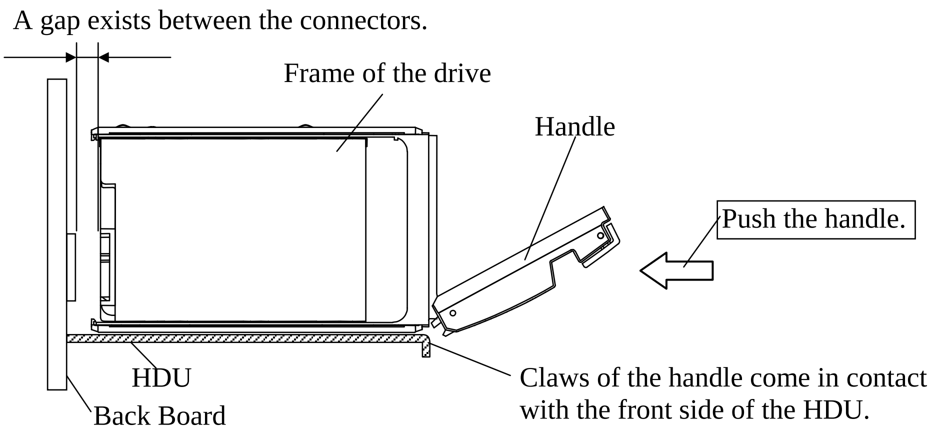
Reinsert drive after inspections have passed.

2-5-1. In case of 3.5inch/2.5inch drive

a. Insert the drive into the HDU holding its handle.
(Insert the canister until the claws that are located at the bottom of the handle come in contact with the front side of the HDU.)

b. Turn the handle at a stroke by pushing its top with your thumb.
(Turn the handle until it latches with the stopper. Do not stop the handle on its way of turning.)

a. Insert the HDD/SSD canister into the HDU holding its handle.


A gap exists between the connectors.
Frame of the drive
Handle
Push the handle.
HDU
Back Board
Claws of the handle come in contact
with the front side of the HDU.

b. Turn the handle at a stroke by pushing its top with your thumb.
(Do not stop the handle on its way of turning.)

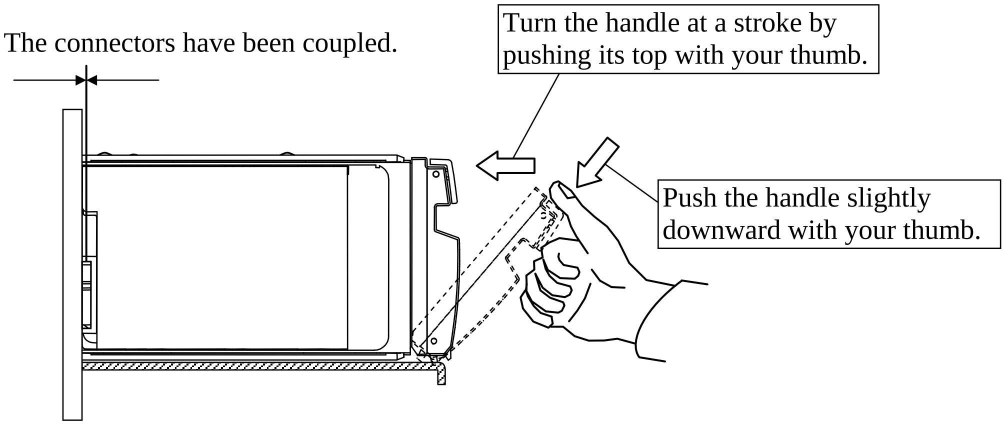

The connectors have been coupled.
Turn the handle at a stroke by
pushing its top with your thumb.
Push the handle slightly
downward with your thumb.

Fig. 3.1.2-8 Method of Installing Drive

c. Close the FAN door and tighten the screws. (Refer to Fig. 3.1.2-1.)

d. Put the FAN door stopper into the neutral state.

2-5-2. In case of FMD

Note: When handling the drive, hold the rail side because the shield spring is subject to breakage.

a. Open the handle fully and fit the drive in the guide rail and slide it in the direction shown by the arrow not to give a shock.

b. Push the drive in until it reaches the position where a hook of the handle can be entered into the square hole on a frame.

c. Pull the stopper lightly and close the handle, and then press the stopper to have the lock on. If the handle is closed in the state where the hook of the handle cannot enter into the square hole, the drive cannot be installed correctly because it runs into the frame of the FBX DKU.

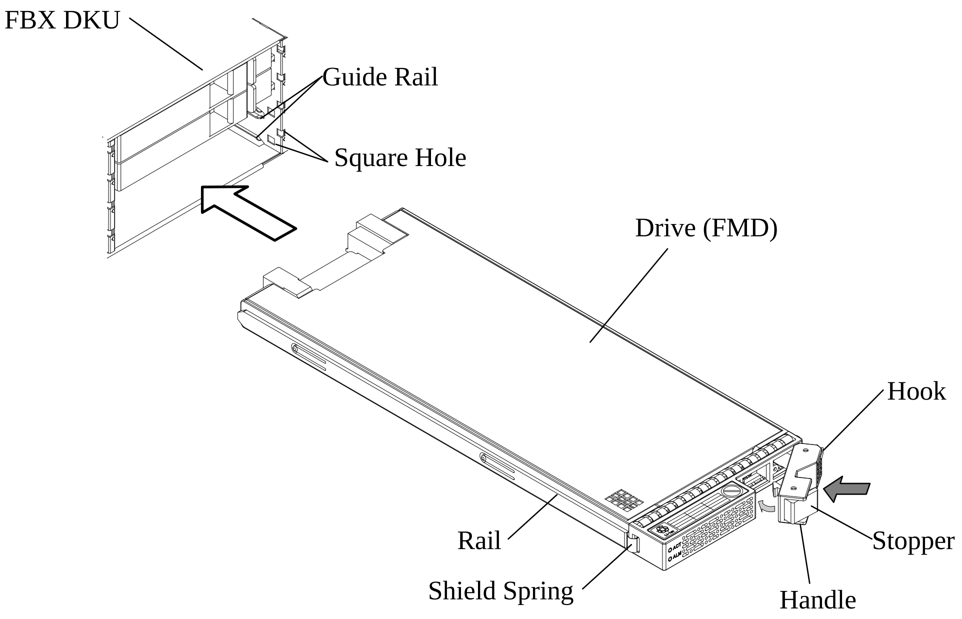


Fig. 3.1.2-9 Installation of Drive (In case of FMD)

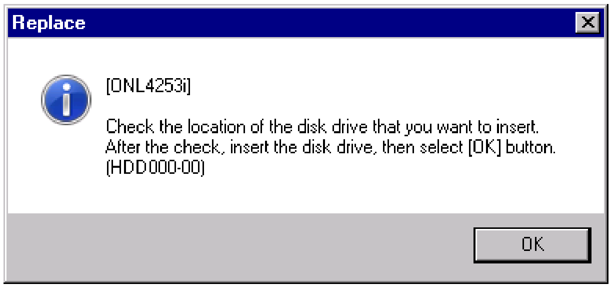
2-6. Go to “3. POST-PROCESSING of SVP”.

Before starting the <Check the beginning of recovery> operation in POST-PROCEDURES of SVP, be sure to insert a removable media for dump, collect failure information, and return the removable media with the failed HDD.
A dump removable media is attached with a Spare HDD.

3. POST-PROCESSING of SVP

3-1. <Confirm Insertion>

"Check the location of the disk drive that you want to insert. After the check, insert the disk drive, then select [OK] button. (HDDnnn-nn)"is displayed.

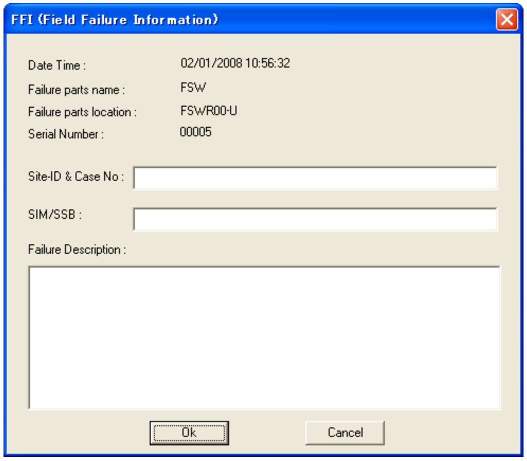


[ONL4253i]

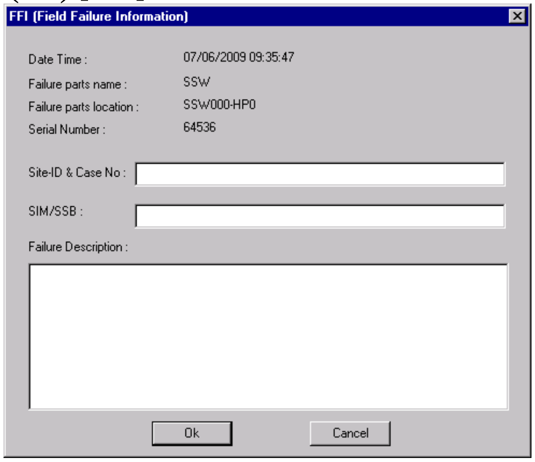
Check the location of the disk drive that you want to insert.
After the check, insert the disk drive, then select [OK] button.
(HDD000-00)

3-2. <Get the error information>

Input the Field Failure Information, and select (CL) [OK].

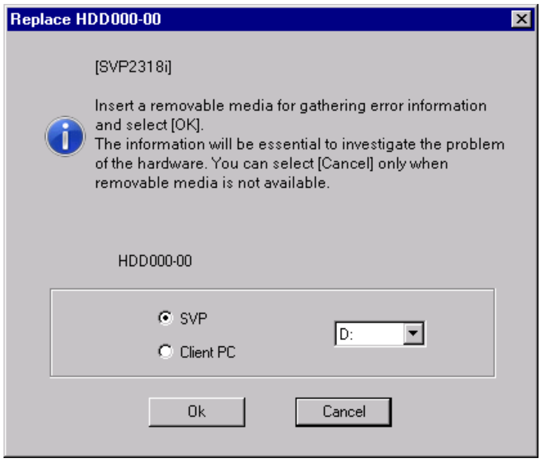


Date Time : 02/01/2008 10:56:32
Failure parts name : FSW
Failure parts location : FSWR00-U
Serial Number : 00005



Date Time : 07/06/2009 09:35:47
Failure parts name : SSW
Failure parts location : SSW000-HP0
Serial Number : 64536

"Insert a removable media for gathering error information and select [OK]. The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available." is displayed.
Select a Client PC arbitrary drive, and select (CL) [Ok].
Trouble information is preserved in console PC connected with SVP.
Please select the Client PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu.
The drive letter becomes the drive letter of console PC connected with SVP.



[SVP2318i]

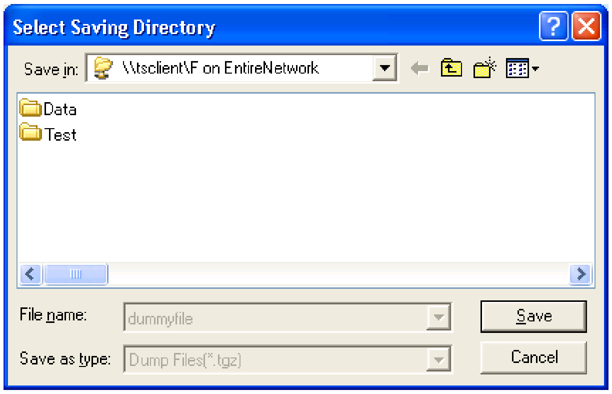
Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.

HDD000-00

● SVP
○ Client PC
D:

When Client PC is selected, the directory selection dialog is displayed.
Please select an arbitrary directory if necessary.

Console PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of console PC.

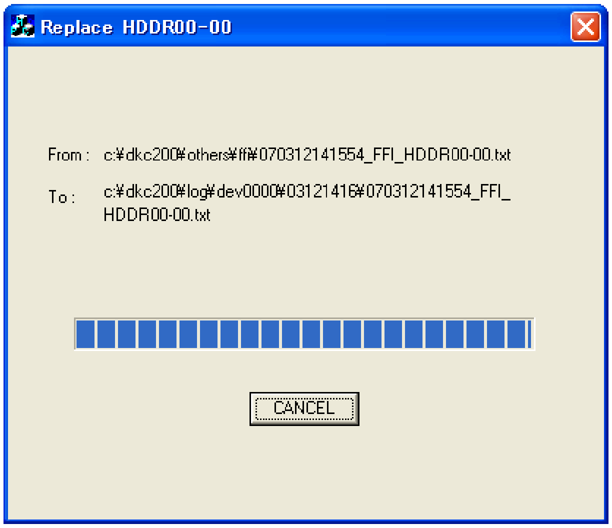


Save in: \\tsclient\F on EntireNetwork
File name: dummyfile
Save as type: Dump Files(*.tgz)

Select (CL) [Save] when saving a file in a specified directory.
It returns to the drive selection screen when [Cancel] is selected (CL).

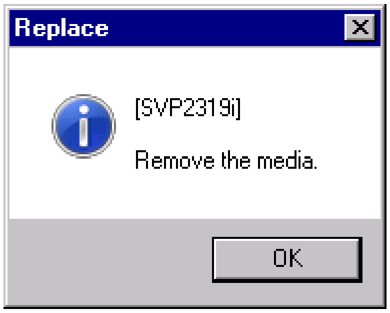
3-3. <Copy of the error information>

The error information is copied onto media.



From : c:¥dkc200¥others¥ff¥070312141554_FFI_HDDR00-00.txt
To : c:¥dkc200¥log¥dev0000¥03121416¥070312141554_FFI_HDDR00-00.txt

"Remove the media." is displayed.
Select (CL) [OK].



[SVP2319i]

Remove the media.

3-4. <Spin up the Physical Drive>

"Spinning up..." is displayed.

3-5. <DKU INLINE>

"DKU INLINE is now running..." is displayed.

3-6. <Replacement of the DKU micro-program>

When the revision of the DKU micro-program in the SVP hard disk is newer than that in the PDEV, the following message appears on the screen.
The message “Exchanging DKU micro-program...” appears.

3-7. <Restore Physical Drive>

“Restoring...” is displayed.

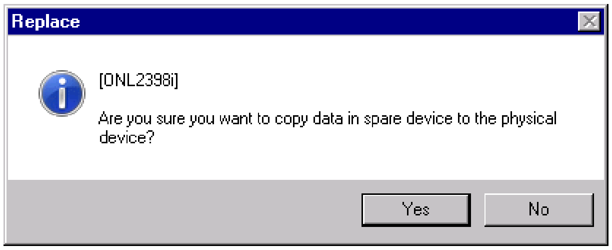
3-8. <Check the Physical Drive>

“Checking...” is displayed.

3-9.<Check the beginning of copy-back>

A message, which asks for confirmation of whether or not to start a copy-back or to make the automatic copy-back, is displayed.

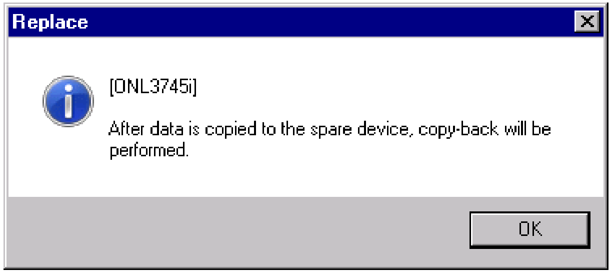
[Confirmation of starting a copy-back]
Select (CL) [Yes] in response to “Are you sure you want to copy data in spare device to the physical device?.”.
Go to Step 3-10.



[ONL2398i]

Are you sure you want to copy data in spare device to the physical device?

[Confirmation of making an automatic copy-back]
Select (CL) [OK] in response to a message, “After data is copied to the spare device, copy-back will be performed.”.



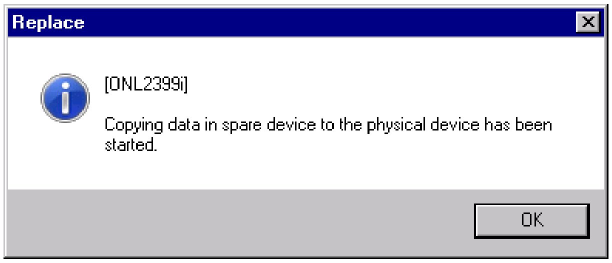
[ONL3745i]

After data is copied to the spare device, copy-back will be performed.

It goes to 3-11 when HDDFAN doors of the object are not closed.
It goes to 3-12 when HDDFAN doors of the object are closed.

3-10. <Check starting of copyback>

"Copying..." is displayed.
Select (CL) [OK] in response to "Copying data in spare device to the physical device has been started.".



[ONL2399i]

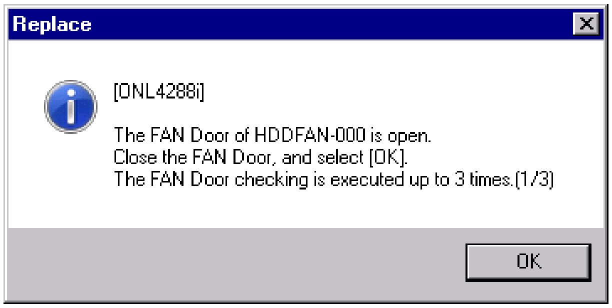
Copying data in spare device to the physical device has been started.

It goes to 3-11 when HDDFAN doors of the object are not closed.
It goes to 3-12 when HDDFAN doors of the object are closed.

3-11. <Warning of HDDFAN door open>

(1)

"The FAN Door of HDDFAN-xxx is open.
Close the FAN Door, and select [OK].
The FAN Door checking is executed up to 3 times. (n/3)" is displayed.
After the FAN door is closed, select (CL) [OK] in response to this message.



[ONL4288i]

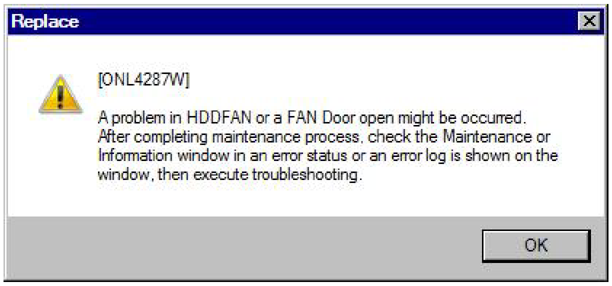
The FAN Door of HDDFAN-000 is open.
Close the FAN Door, and select [OK].
The FAN Door checking is executed up to 3 times.(1/3)

It returns to 3-11 when HDDFAN doors of the object are not closed.
It goes to (2) when HDDFAN doors of the object are closed.

Note: It goes to 3-12 when it cannot be confirmed that the FAN doors are closed in the three times FAN door check.

(2)

“A problem in HDDFAN or a FAN Door open might be occurred.
After completing the maintenance process, check the Maintenance or Information window in an error status or an error log is shown on the window, then execute troubleshooting.” is displayed.
Select (CL) [OK] in response to this message.

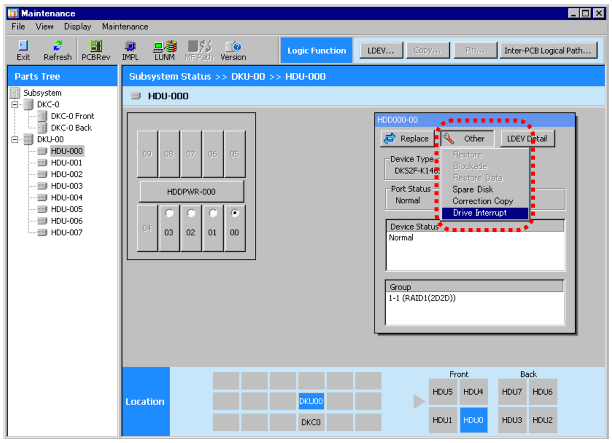


[ONL4287W]

A problem in HDDFAN or a FAN Door open might be occurred.
After completing maintenance process, check the Maintenance or Information window in an error status or an error log is shown on the window, then execute troubleshooting.

3-12.

When interrupting a copy, select (CL) the [Drive Interrupt] button.



Device Type: DKS2F-K14
Port Status: Normal
Device Status: Normal
Group: 1-1 (RAID1(2D2D))

3-13.

Go to POST-PROCEDURE [REP04-01-10].

[DRIVE REPLACEMENT PROCESSING - RDK2]

— OUTLINE —

1. PRE-PROCESSING of SVP
    - ① Select drive (status check)
    - ② Specify Replacement
    - ③ Save Spare
    - ④ Select drive (status check)
    - ⑤ Check progress of copy processing
    - ⑥ Specify Replacement
    - ⑦ Place HDD into unpluggable state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    - ① Execute CUDG on P-DEV
    - ② Specify recovery
    - ③ Copy back

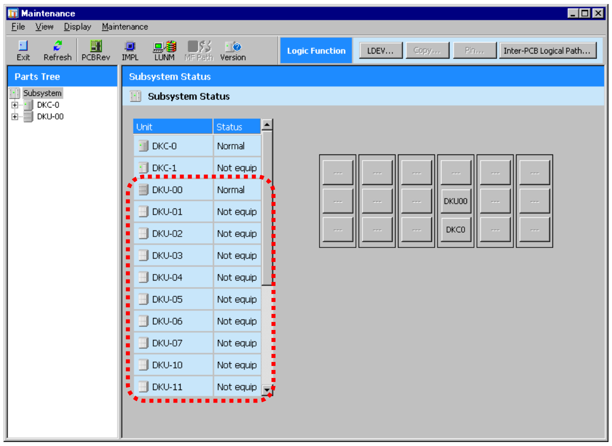
⚠ CAUTION

If No Charging of FMD (SIM = 50EXYY) occurs in replacement of a FMD, the FMD ACTIVE LED will change to low-speed blinking. In this case, it takes 90 minutes at most for the FMD ACTIVE LED to go out and for the battery in the FMD to be fully charged.

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

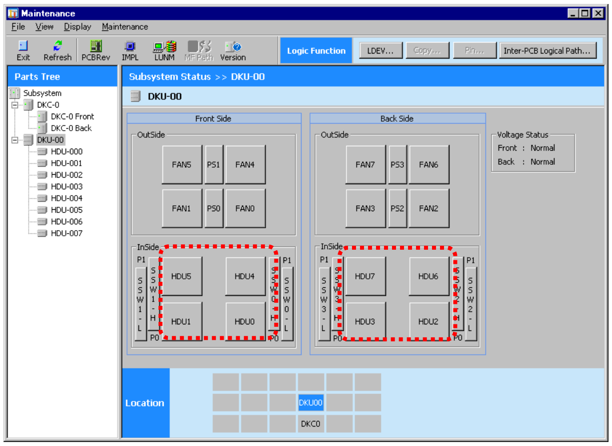
Open the ‘Maintenance’ window according to PRE PROCEDURE A (REP02-01-10). Select (CL) the DKU information [DKU-nn] of the DKU which installs the HDD to be replaced in the ‘Maintenance’ window.



Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <Select HDU>

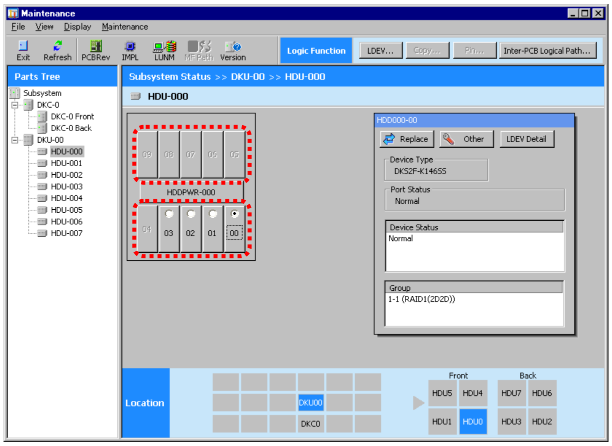
Select (CL) the HDU information [HDUn] of the HDU which installs the HDD to be replaced.



Voltage Status
Front : Normal
Back : Normal

1-3. <Select HDD>

Check and select (CL) [nn] to be replaced.



Device Type: DKS2F-K146SS

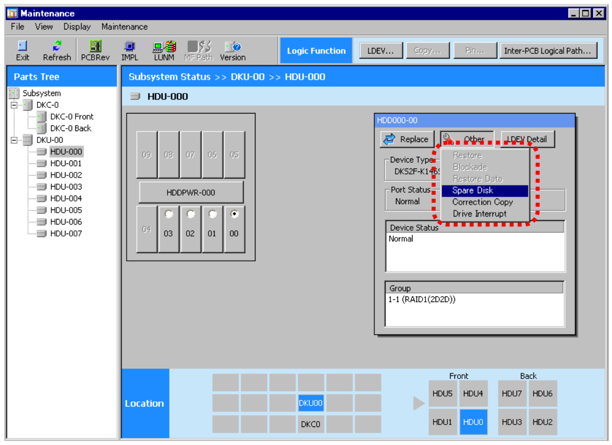
Port Status: Normal

Device Status: Normal

Group: 1-1 (RAID1(2D2D))

1-4. <Specify replacement of HDD>

Select (CL) [Other]-[Spare Disk].



Device Type: DKS2F-K14

Port Status: Normal

Device Status: Normal

Group: 1-1 (RAID1(2D2D))

1-5. <Checking the P-DEV status>

⚠ CAUTION

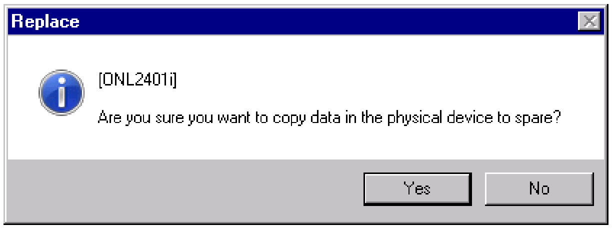
When the screen appears prompting the operator to input a password to prevent multiple maintenance or for executing a pin check, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

“Checking...” is displayed.

1-6. <Saving the spare>

Select (CL) [Yes] in response to “Are you sure you want to copy data in the physical device to spare?”.



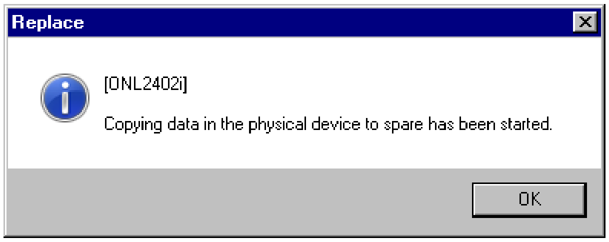
[ONL2401i]
Are you sure you want to copy data in the physical device to spare?

1-7. <Saving in process>

“Copying...” is displayed.

1-8. <End of spare saving>

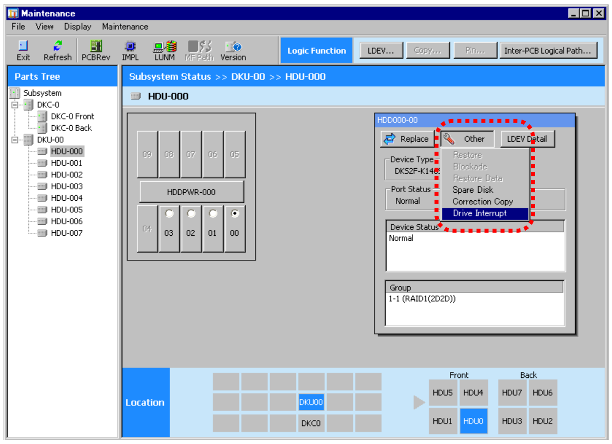
Select (CL) [OK] in response to “Copying data in the physical device to spare has been started.”.



[ONL2402i]
Copying data in the physical device to spare has been started.

1-9.

When interrupting a copy, select (CL) the [Drive Interrupt] button.



Device Type: DKS2F-K146

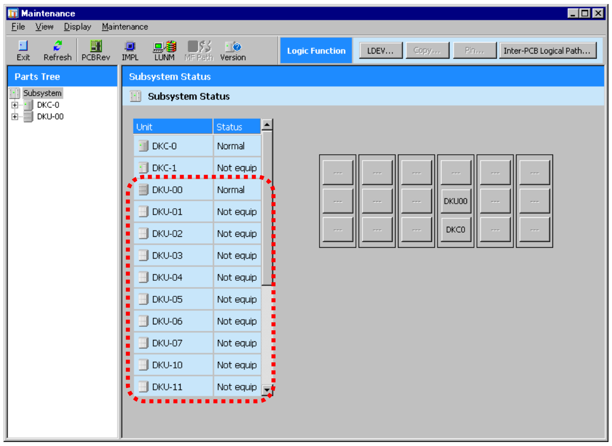
Port Status: Normal

Device Status: Normal

Group: 1-1 (RAID1(2D2D))

1-10. <Maintenance window>

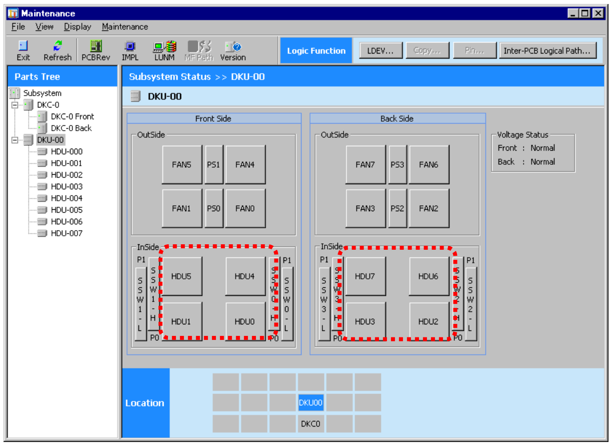
Select (CL) the DKU information [DKU-nn] of the DKU which installs the SSW to be replaced in the 'Maintenance' window.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Pri... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status
Subsystem Status
DKU00
DKC0

Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-11. <Select HDU>

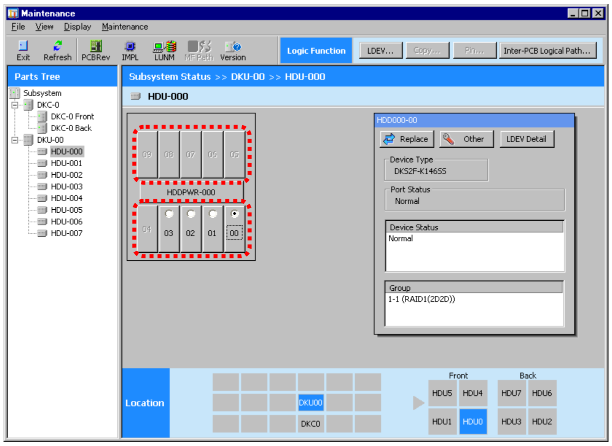
Select (CL) the HDU information [HDUn] of the HDU which installs the HDD to be replaced.



Voltage Status
Front : Normal
Back : Normal

1-12. <Select HDD>

Check and select (CL) [nn] to be replaced.

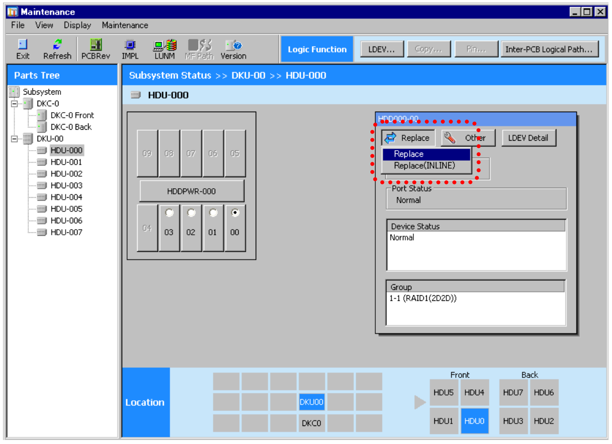


Device Type: DKS2F-K146SS
Port Status: Normal
Device Status: Normal
Group: 1-1 (RAID1(2D2D))

1-13. <Specify replacement of HDD>

Make sure that the “Device Status” is [Failed] or [Warning] or [Reserved].

Select (CL) [Replace]-[Replace].



Port Status: Normal
Device Status: Normal
Group: 1-1 (RAID1(2D2D))

1-14.<Checking the P-DEV status>

⚠ CAUTION

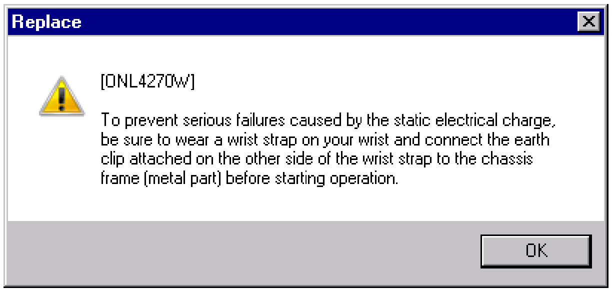
When the screen appears prompting the operator to input a password to prevent multiple maintenance or for executing a pin check, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

“Checking...” is displayed.

1-15. <Wear a wrist strap>

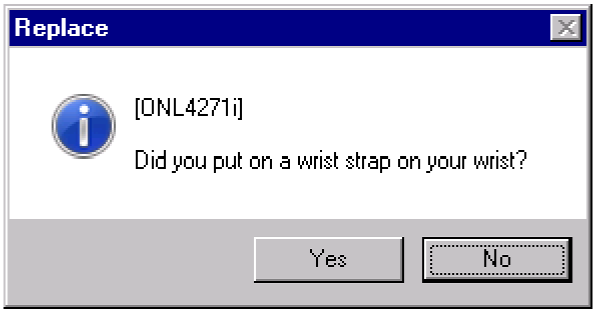
Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.



[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

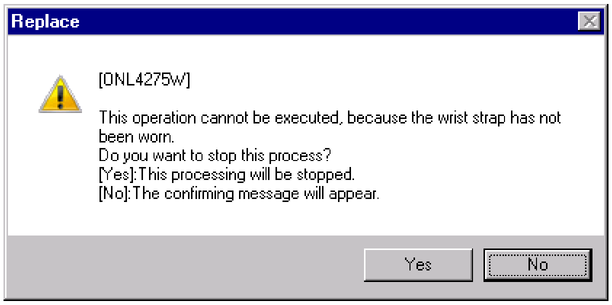
(1) <Confirm wearing wrist strap>
In response to a message, “Did you put on a wrist strap on your wrist?”.
Select (CL) [Yes] when wrist strap is on your wrist.
Select (CL) [No] when there is no wrist strap on your wrist.
When [No] is selected (CL), go to Step (2).



[ONL4271i]

Did you put on a wrist strap on your wrist?

(2)
In response to a message, “This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?
[Yes]: This processing will be stopped.
[No]: The confirming message will appear.”



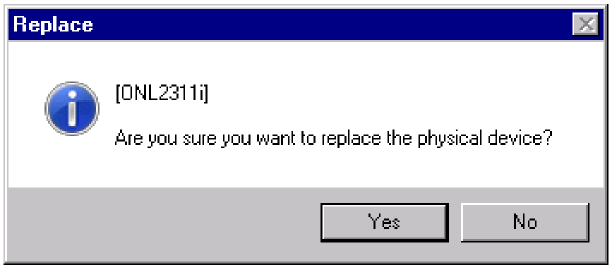
[ONL4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

When [Yes] is selected (CL), returned to Step 1-12.
When [No] is selected (CL), returned to Step 1-15.

1-16. <P-DEV blocking>

Select (CL) [Yes] in response to “Are you sure you want to replace the physical device?”.



[ONL2311i]

Are you sure you want to replace the physical device?

1-17. <Blocking the Physical device>

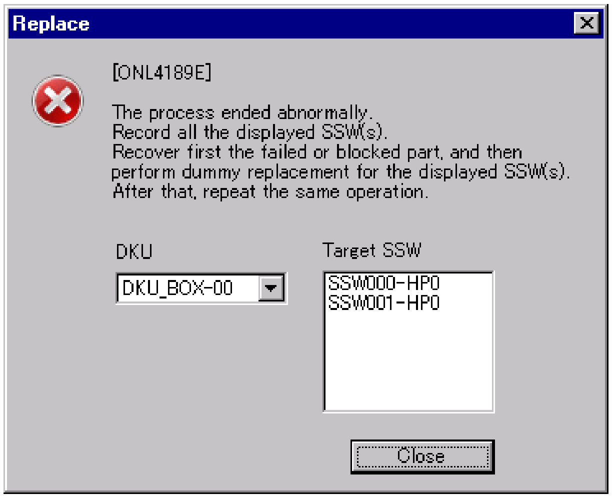
“Blocking...” is displayed.

1-18. <Spin down the Physical device>

"Spinning down..." is displayed.

Perform the dummy replacement of the displayed SSW(s) when the window is displayed. Select the DKU list and record the target SSW(s) because two or more DKU might be listed.
Select (CL) [Close] button and perform the dummy replacement of the target SSW(s).

Retry the replacement after completing the dummy replacement of SSW.



[ONL4189E]

The process ended abnormally.
Record all the displayed SSW(s).
Recover first the failed or blocked part, and then perform dummy replacement for the displayed SSW(s).
After that, repeat the same operation.

SSW000-HP0
SSW001-HP0

1-19. <Check shut down LED>

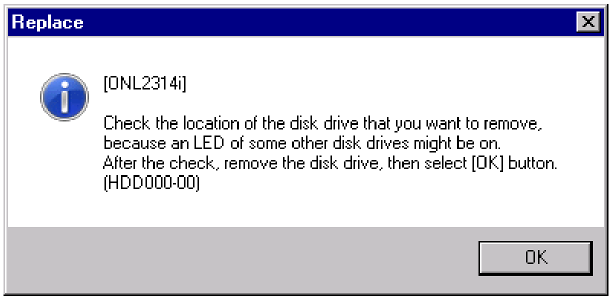
CAUTION

If a wrong HDD is removed, a data loss or a system down may occur.

Check the shut down LED on the HDD to be replaced.
If LED is off, reconfirm the location of the HDD to be replaced with LOCATION SECTION before replacing the hardware.

1-20. <Confirm Removal>

Select (CL) [OK] in response to "Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on. After the check, remove the disk drive, then select [OK] button. (HDDxnn-nn)" after the unit is removed. (Step 2-3)



[ONL2314i]

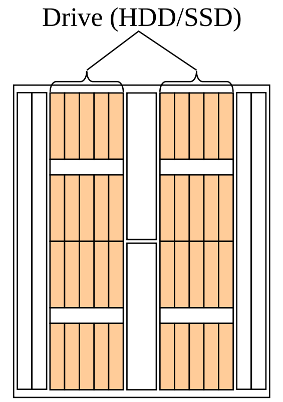
Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on.
After the check, remove the disk drive, then select [OK] button.
(HDD000-00)

1-21. <Replace HDD>

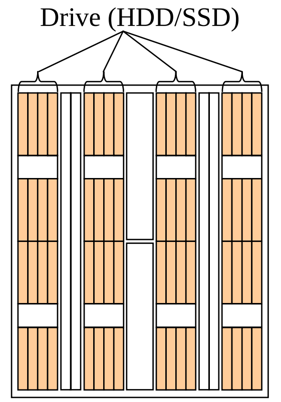
Replace HDD.
Go to "2. HARDWARE REPLACEMENT PROCESSING".

2. HARDWARE REPLACEMENT PROCESSING

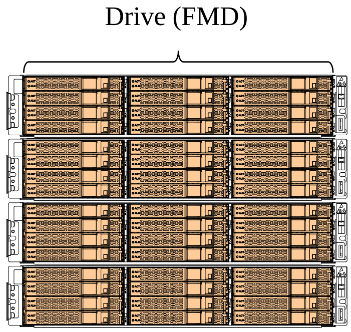
Location	Function Name of Component		Part Name	HDA Label
DKU	1	Disk Drive (HDD)	HDU700-146KCMSS	S5B-K146SS
				S5C-K146SS
			HDU700-300JCMSS	R5C-J300SS
				R5D-J300SS
				S5B-J300SS
				S5D-J300SS
				S5E-J300SS
			HDU700-300KCMSS	R5C-K300SS
				S5C-K300SS
			HDU700-500HCMSS	S5A-H500SS
				S5B-H500SS
			HDU700-600JCMSS	R5C-J600SS
				R5D-J600SS
				S5C-J600SS
				S5D-J600SS
				S5E-J600SS
			HDU700-900JCMSS	R5D-J900SS
				S5D-J900SS
				S5E-J900SS
			HDU700-1R0HCMSS	S5B-H1R0SS
			HDU700-1R2JCMSS	R5E-J1R2SS
				S5F-J1R2SS
			HDU700-2R0H2MAT	R2C-H2R0AT
				R2D-H2R0AT
				R2E-H2R0AT
			HDU700-2R0H3MSS	S2C-H2R0SS
				S2D-H2R0SD
				S2D-H2R0SS
				S2P-H2R0SS
				S2E-H2R0SS
				W2E-H2R0SS
			HDU700-3R0H3MSS	S2D-H3R0SS
				S2E-H3R0SS
				W2E-H3R0SS
			HDU700-4R0H3MSS	S2E-H4R0SS
				W2E-H4R0SS
	2	Flash Drive (SSD)	HDU700-200MCMSS	B5A-M200SS
				R5B-M200SS
			HDU700-200SAMSS	T5A-S200SS
				T5C-S200SS
			HDU700-200SCMSS	R5A-S200SS
				R5B-S200SS
			HDU700-400MCMSS	B5A-M400SS
				R5B-M400SS
			HDU700-400SCMSS	R5A-S400SS
				R5B-S400SS
			HDU700-800MCMSS	B5A-M800SS
			HDU700-400S1MSS	T2A-S400SS
				T2C-S400SS
Front View of FBX DKU	3	Flash Module Drive (FMD)	HDU700-1R6FMSS	H1A-P1R6SS
				H1C-P1R6SS
			HDU700-3R2FMSS	H1B-P3R2SS
				H1C-P3R2SS



Front or Rear View of DKU
(In case of 3.5inch Drive)



Front or Rear View of DKU
(In case of 2.5inch Drive)



Front View of DKU
(In case of FMD)

NOTICE:

- Replace the drive in the subsystem in power on status only.
  Do not replace the drive in power off status.
- Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.
- HDD is a precise component. Be careful in handling HDD to avoid vibration and impact.

2-1. Open the FAN door.

2-1-1. In case of 3.5inch/2.5inch drive

a. Put the stopper of the FAN door into the open able and closable state. (Refer to the INST03-01-160.)

b. Loosen the two screws and open the FAN door.

2-1-2. In case of FMD

a. Go to procedure 2-2. Check the Shut Down LED.

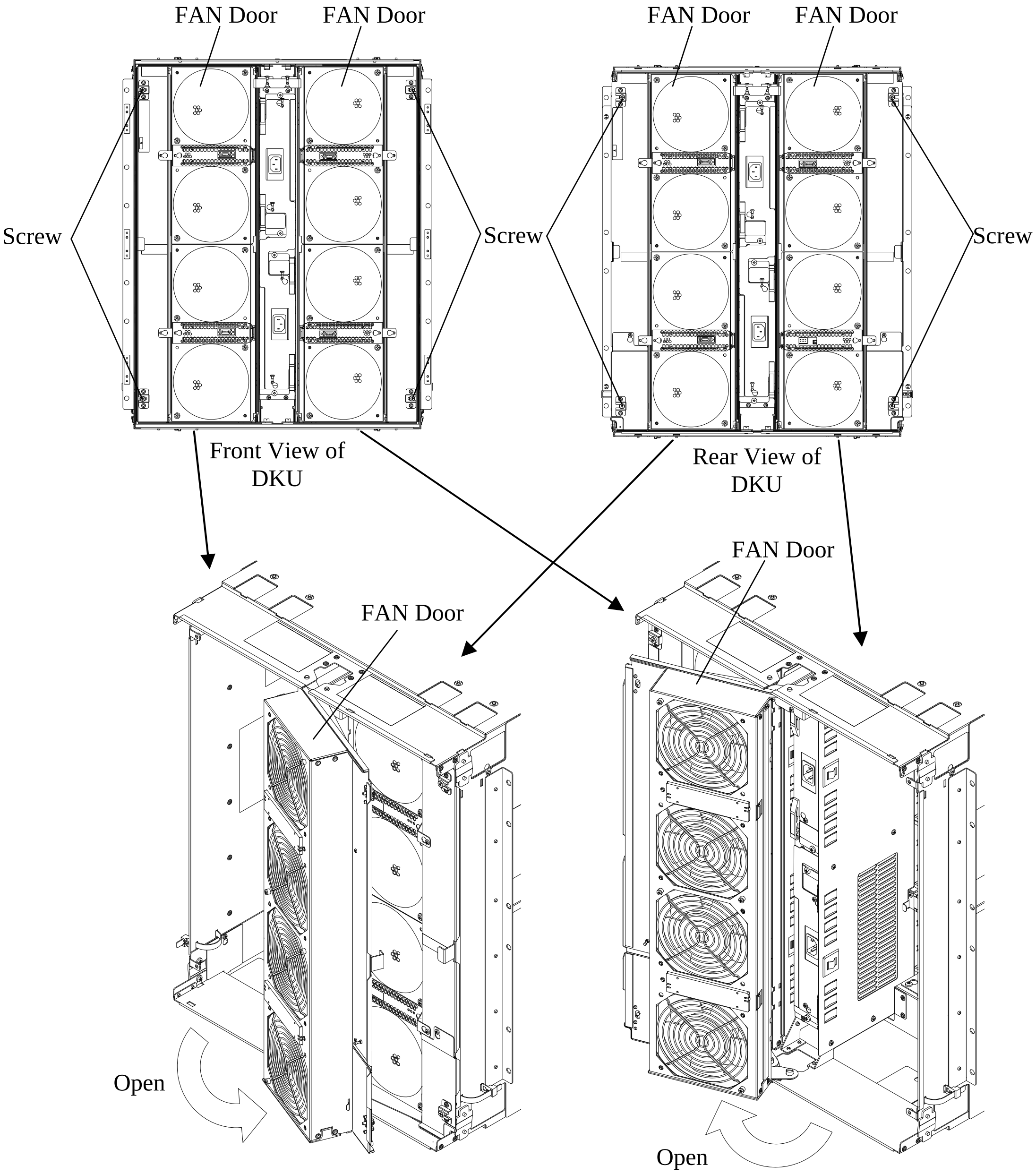
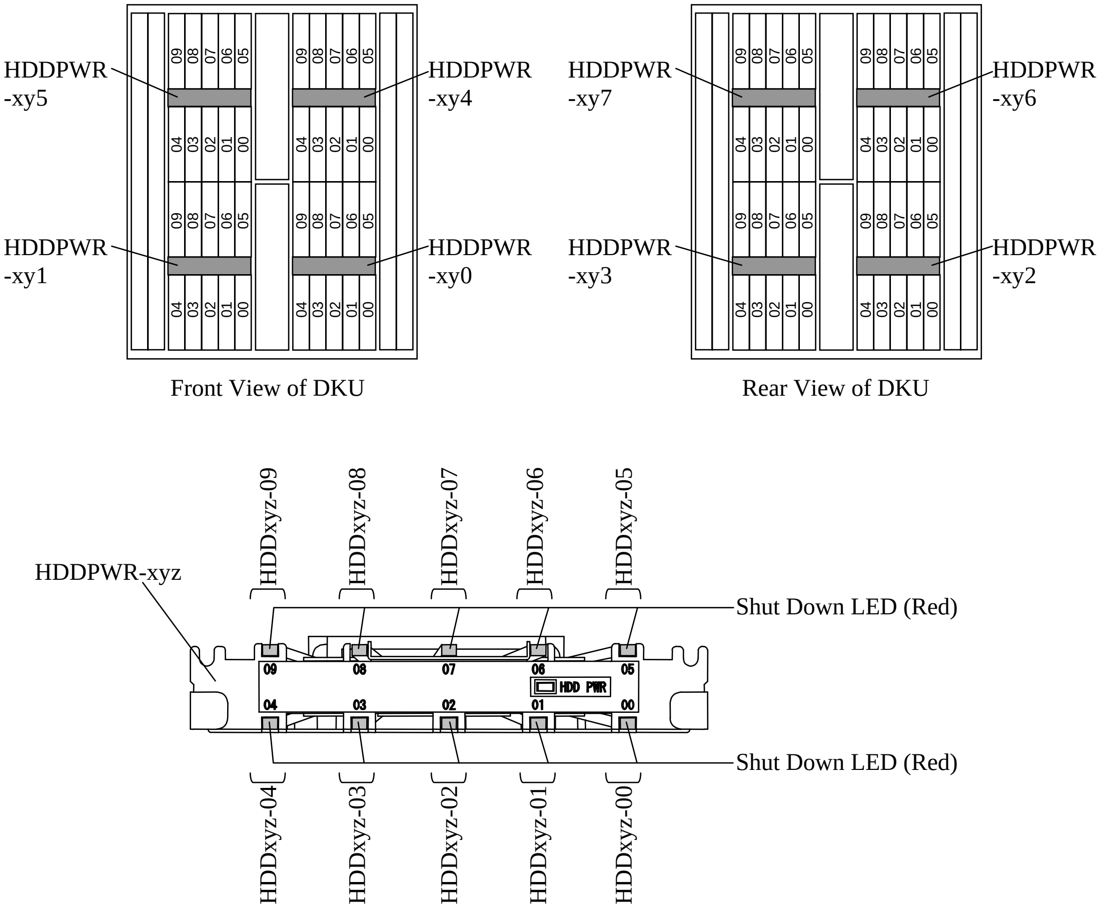


Fig. 3.2.2-1 FAN Door Opening

2-2. Check the Shut Down LED.

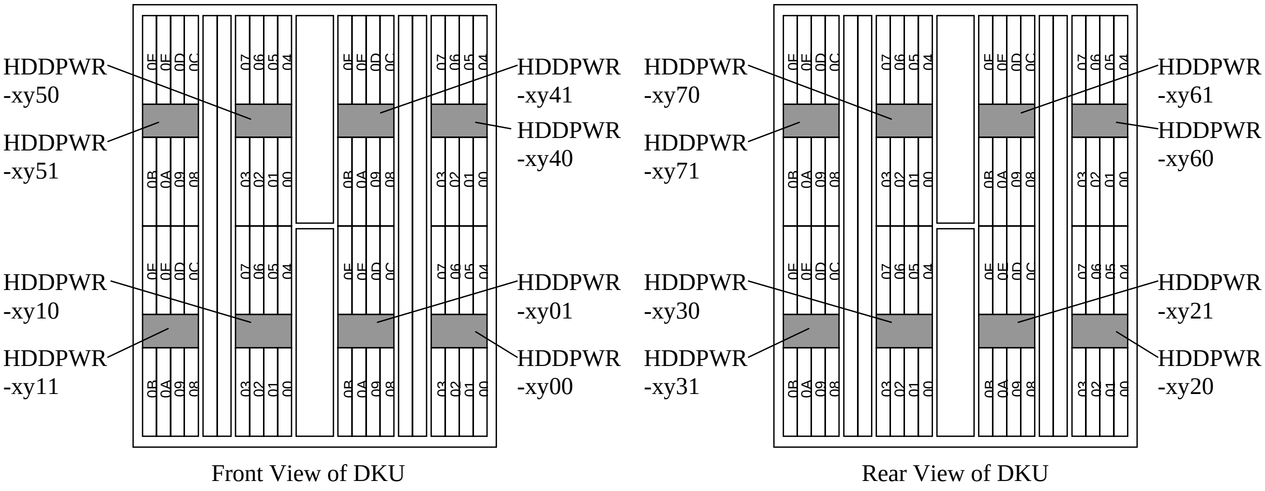
2-2-1. In case of 3.5inch/2.5inch drive

a. Check that the Shut Down LED on the HDDPWR corresponding to drive (HDD/SSD) is turned on. Refer to Fig. 3.2.2-2 or 3.2.2-3.



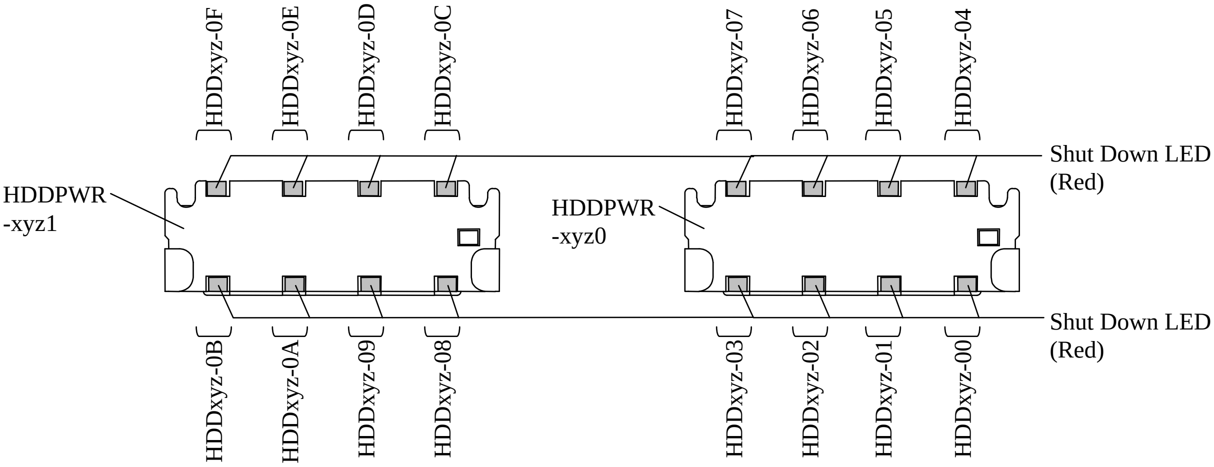
Note: HDDPWR-xyz
→HDU No. (0, 1, 2, ..., 7)
→DKU No. (0, 1, 2, ..., 7)
→DKC No. (0, 1)

Fig. 3.2.2-2 Checking of Shut Down LED (In case of 3.5inch Drive)



Front View of DKU

Rear View of DKU

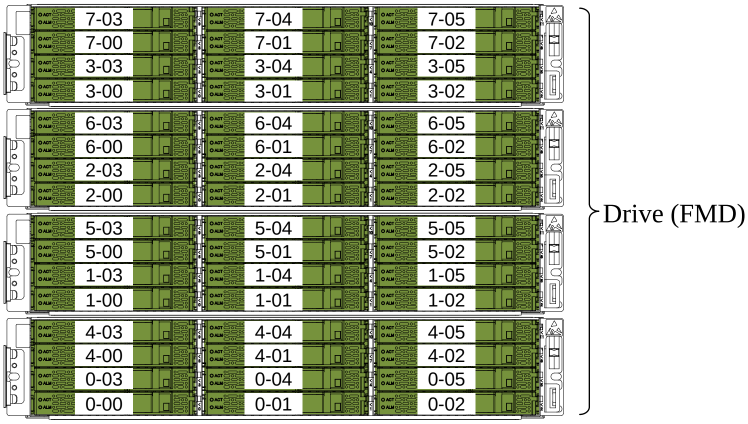


Note: HDDPWR-xyz
→HDU No. (0, 1, 2,….., 7)
→DKU No. (0, 1, 2,….., 7)
→DKC No. (0, 1)

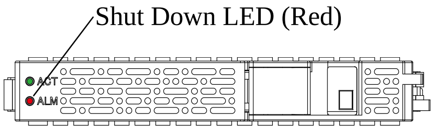
Fig. 3.2.2-3 Checking of Shut Down LED (In case of 2.5inch Drive)

2-2-2. In case of FMD

a. Check that the Shut Down LED on drive is turned on.



Front View of FBX DKU



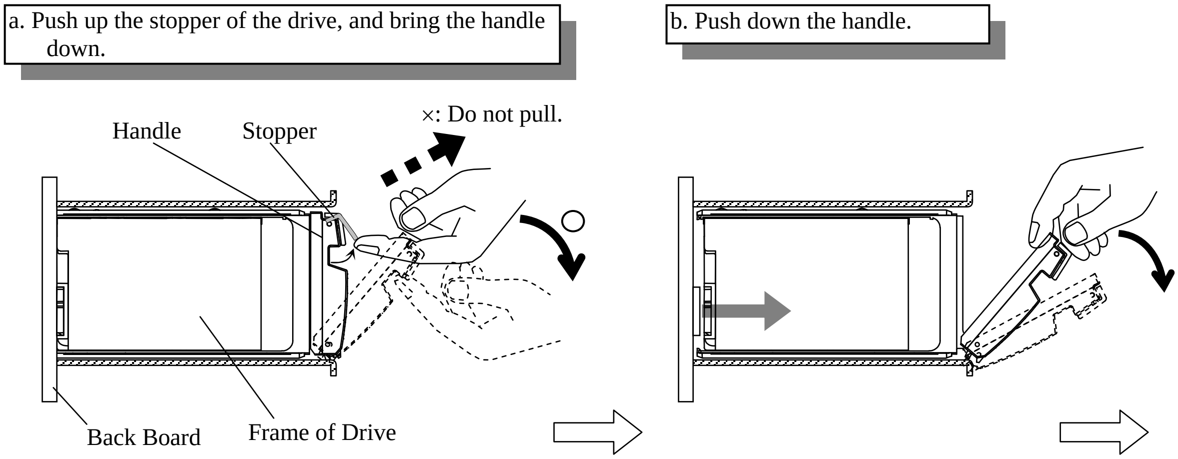
Front View of Drive (FMD)

Fig. 3.2.2-3A Checking of Shut Down LED (In case of FMD)

2-3. Remove the drive.

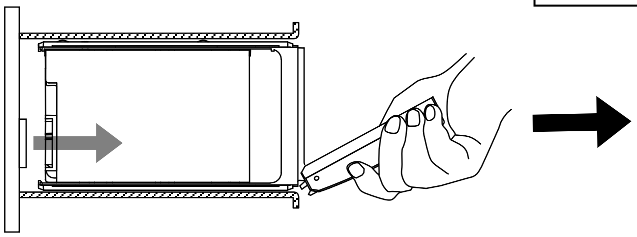
2-3-1. In case of 3.5inch drive.

a. Push up the stopper of drive, and bring the handle down. Don’t pull the handle during this process.
b. Push down the handle.
c. Pull out the drive.
d. Fig. 3.2.2-5 illustrates the case of wrong procedure.


a. Push up the stopper of the drive, and bring the handle down.

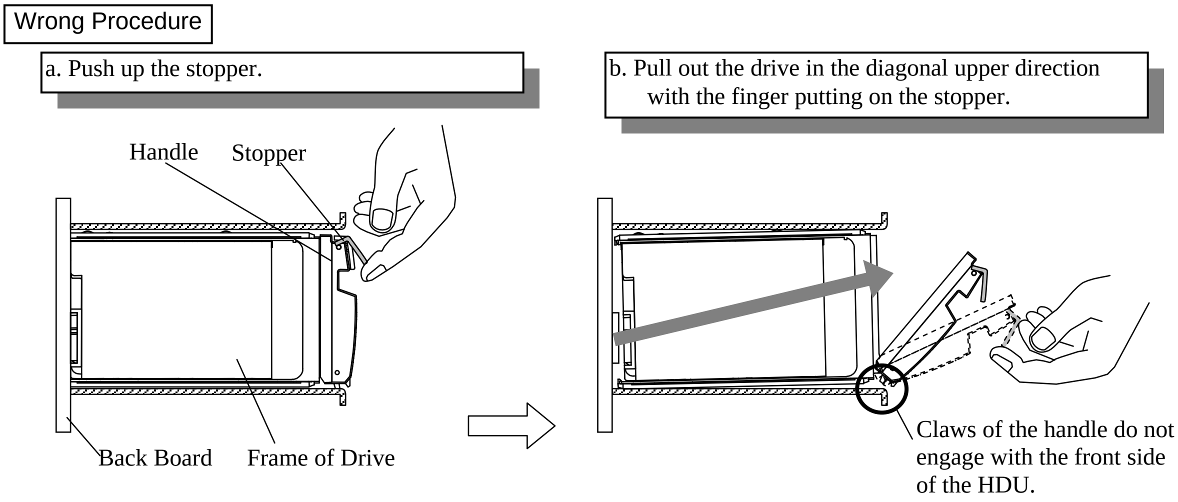
b. Push down the handle.

c. Pull out the drive.



Note: Do not pull out the drive while pushing up the stopper.

Fig. 3.2.2-4 Removal of Drive


Wrong Procedure

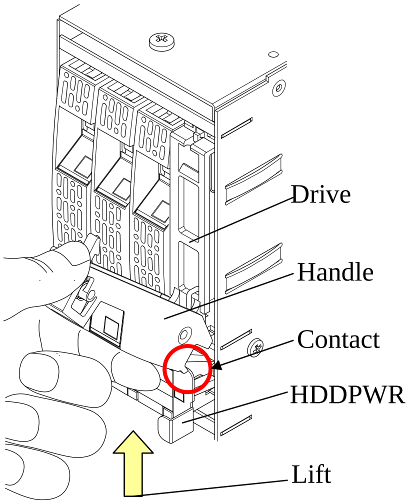
a. Push up the stopper.

b. Pull out the drive in the diagonal upper direction with the finger putting on the stopper.

Claws of the handle do not engage with the front side of the HDU.

Fig. 3.2.2-5 Removal of Drive (Wrong Procedure)

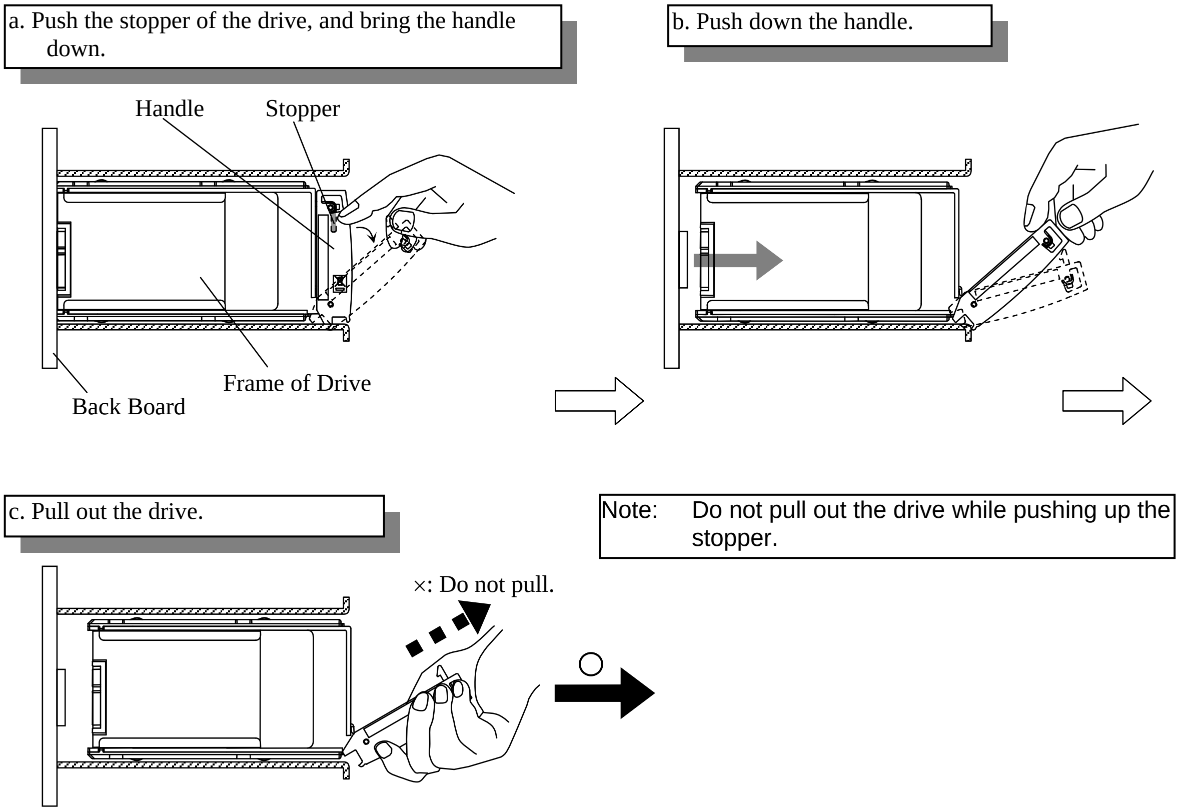
2-3-2. In case of 2.5inch drive.



Instruction for the insertion and removal of the 2.5-inch drive:

The upper part of HDDPWR might come in contact with the lower part of the drive, and it becomes an obstruction of the insertion and removal at the time of the 2.5-inch drive insertion and removal. In this case, avoid the HDDPWR by lifting the drive lightly.

a. Push the stopper of drive, and bring the handle down. Don’t pull the handle during this process.
b. Push down the handle.
c. Pull out the drive.
d. Fig. 3.2.2-7 illustrates the case of wrong procedure.



a. Push the stopper of the drive, and bring the handle down.

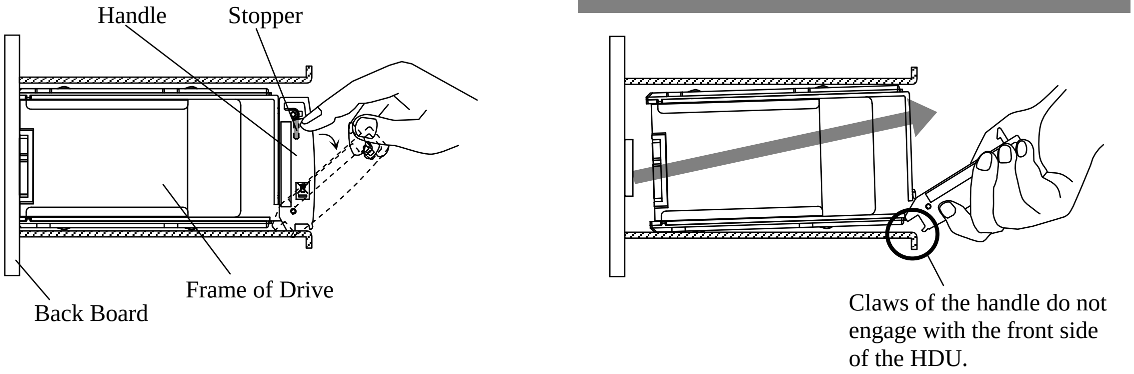
b. Push down the handle.

c. Pull out the drive.

Note: Do not pull out the drive while pushing up the stopper.

Fig. 3.2.2-6 Removal of Drive

Wrong Procedure


a. Push the stopper.

b. Pull out the drive in the diagonal upper direction with the finger putting on the stopper.

Handle
Stopper
Frame of Drive
Back Board
Claws of the handle do not engage with the front side of the HDU.

Fig. 3.2.2-7 Removal of Drive (Wrong Procedure)

2-3-3. In case of FMD

Notice: When the FMD is removed in replacing procedure, the fans of the DKUPS equipped in the rear of the FBX DKU rotate at the highest speed. When the spare FMD is installed, the fans of the DKUPS rotate at the speed suitable for environmental temperature.

a. Pull the stopper of the drive handle toward you to have the lock off.
b. Tilt the handle toward you, and then remove the drive by pulling it out taking care not to apply a shock to it.

Note: When handling the drive, hold the rail side because the shield spring is subject to breakage.

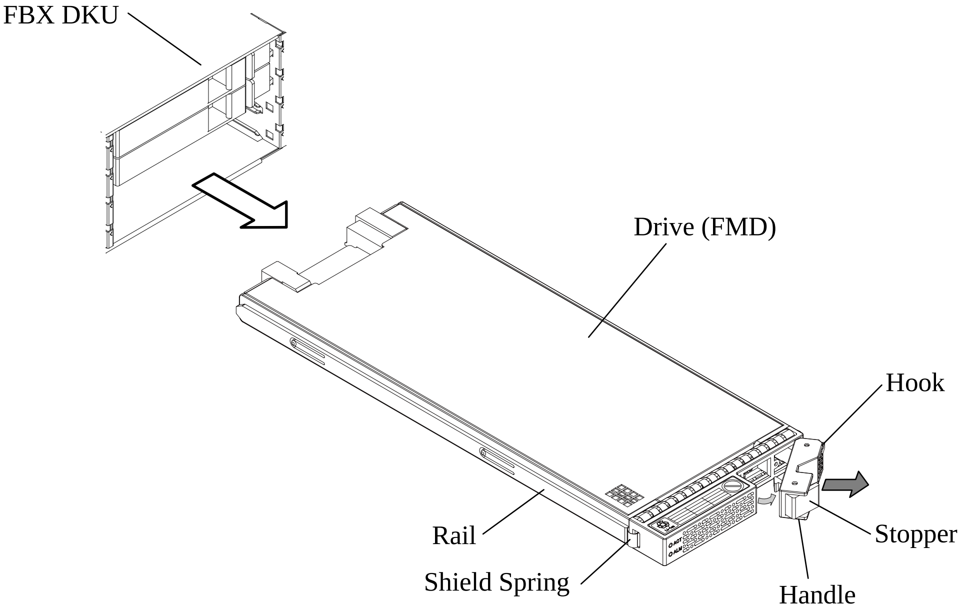
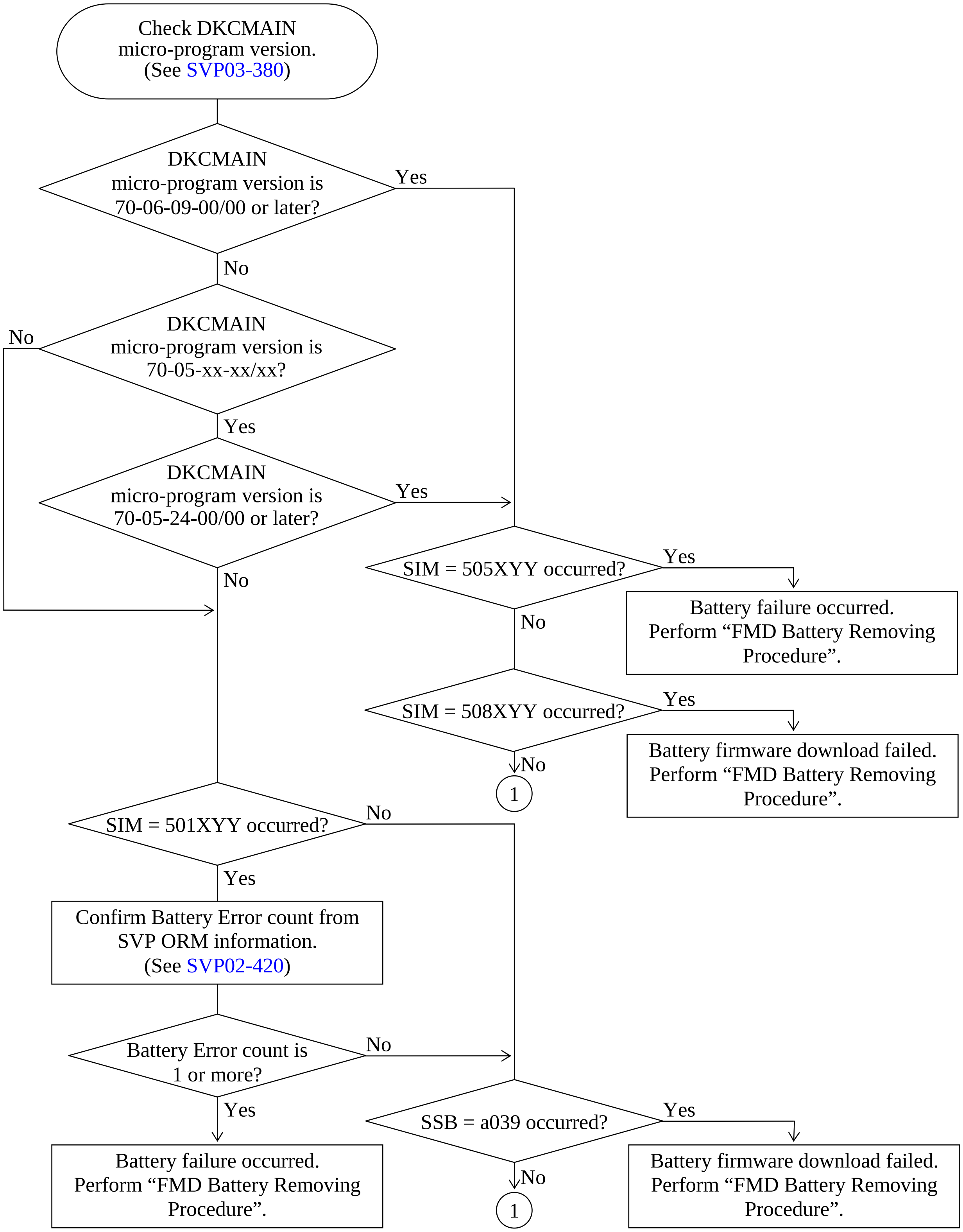
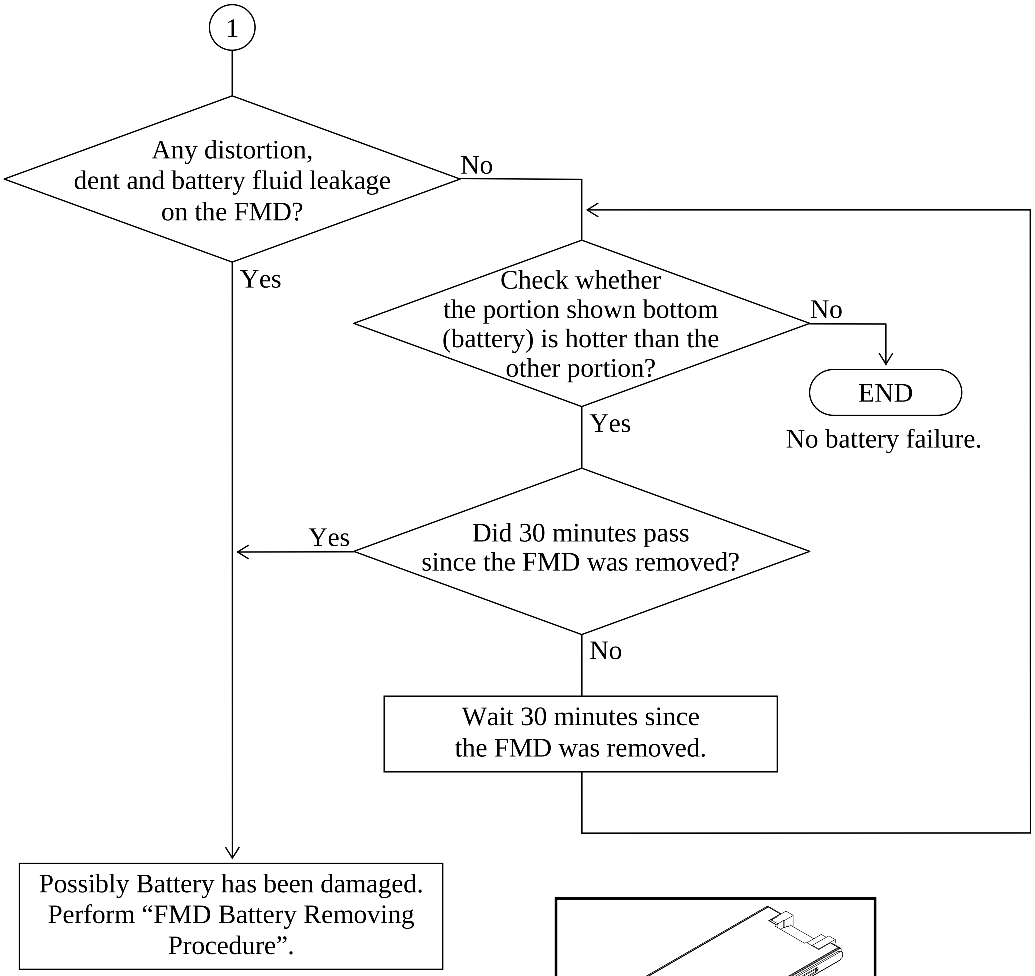
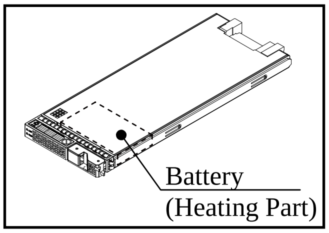


Fig. 3.2.2-7A Removal of Drive (In case of FMD)

c. Check whether a failure of the battery built in the FMD has occurred by using the flowchart below. If a battery failure has occurred, remove the battery from the FMD. If no battery failure has occurred, go to Procedure 2-4.


Check DKCMAIN micro-program version. (See SVP03-380)
DKCMAIN micro-program version is 70-06-09-00/00 or later?
Yes
No
DKCMAIN micro-program version is 70-05-xx-xx/xx?
No
Yes
DKCMAIN micro-program version is 70-05-24-00/00 or later?
Yes
No
SIM = 505XYY occurred?
Yes
Battery failure occurred. Perform “FMD Battery Removing Procedure”.
No
SIM = 508XYY occurred?
Yes
Battery firmware download failed. Perform “FMD Battery Removing Procedure”.
No
1
SIM = 501XYY occurred?
No
Yes
Confirm Battery Error count from SVP ORM information. (See SVP02-420)
Battery Error count is 1 or more?
No
Yes
Battery failure occurred. Perform “FMD Battery Removing Procedure”.
SSB = a039 occurred?
Yes
Battery firmware download failed. Perform “FMD Battery Removing Procedure”.
No
1


1
Any distortion, dent and battery fluid leakage on the FMD?
No
Yes
Check whether the portion shown bottom (battery) is hotter than the other portion?
No
END
No battery failure.
Yes
Did 30 minutes pass since the FMD was removed?
Yes
No
Wait 30 minutes since the FMD was removed.
Possibly Battery has been damaged. Perform “FMD Battery Removing Procedure”.


Battery
(Heating Part)

d. FMD Battery Removing Procedure

(d)-1 Remove 4 Screws (SB310N) on the bottom side of FMD by using cross-head screw driver.

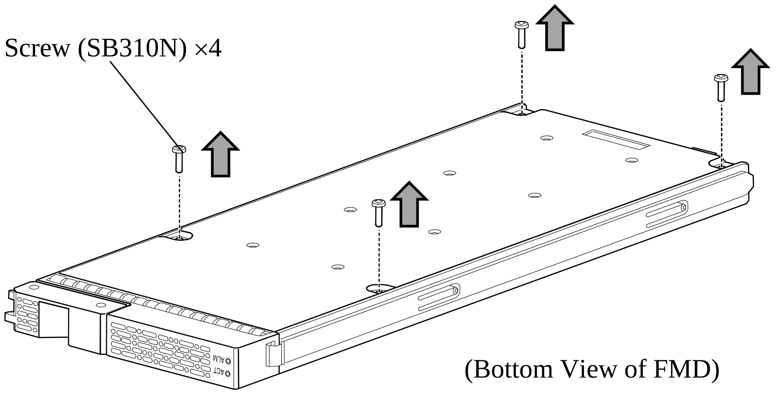


Fig. 3.2.2-7B Removing Screws

(d)-2 Remove Top Cover and Bottom Cover.

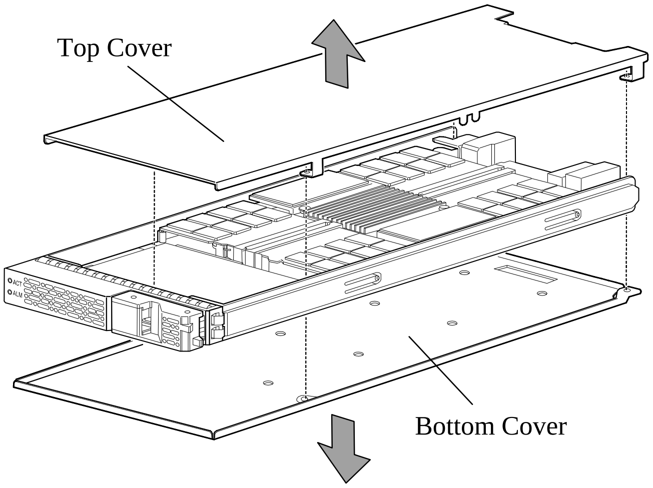


Fig. 3.2.2-7C Removing Covers

(d)-3 Remove 2 sets of Tapping-screw and Washer by using cross-head screw driver.

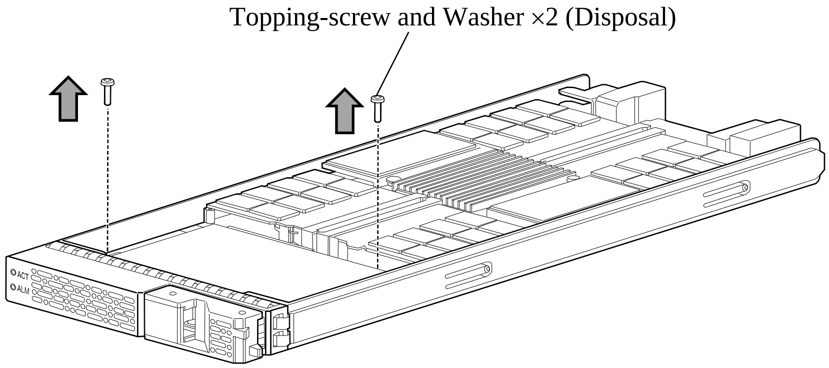


Fig. 3.2.2-7D Removing Tapping-screws and Washers

(d)-4 Move the Battery to the bezel side and disconnect the Battery from the circuit board.

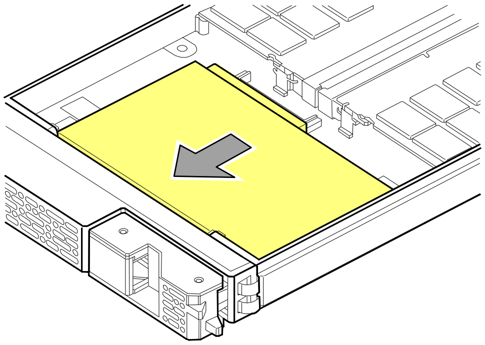


Fig. 3.2.2-7E Disconnecting from Connector

(d)-5 Remove the Battery to the bottom side of FMD. (After the connector comes off, battery is lowered below.)

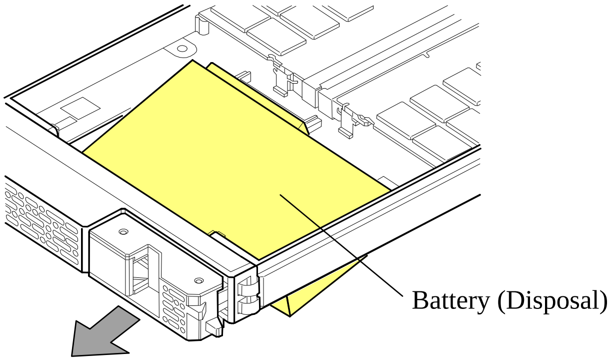


Fig. 3.2.2-7F Removing Battery

(d)-6 Attach Top Cover and Bottom Cover.
(d)-7 Attach 4 Screws (SB310N) on the bottom side of FMD.

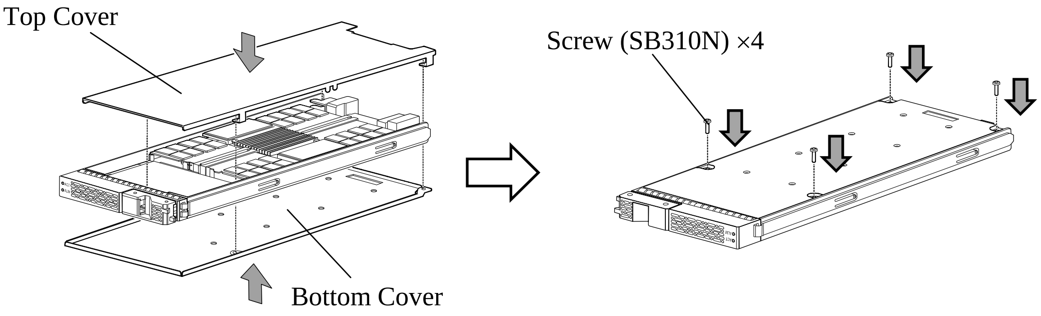


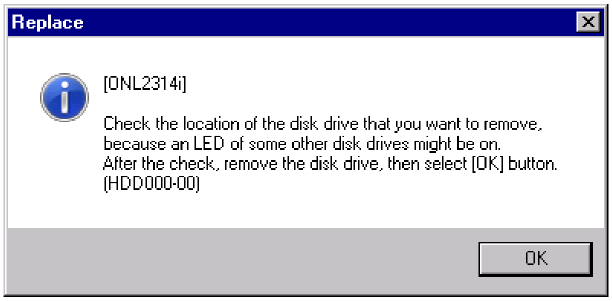
Fig. 3.2.2-7G Reassembling FMD

(d)-8 Dispose of the Tapping-screws, Washers and Battery removed in procedures (d)-3 and (d)-5.
When dispose of the Battery, follow the directions given by the local law where the product is used.

2-4. Check and handling of the drive.

(1) <Confirm Removal>

Select (CL) [OK] in response to "Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on. After the check, remove the disk drive, then select [OK] button. (HDDxnn-nn)" after the unit is removed. (Step 2-3)



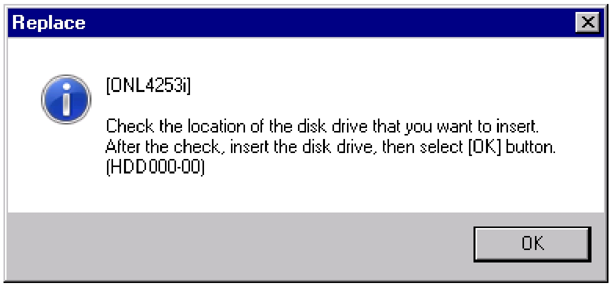
[ONL2314i]

Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on.
After the check, remove the disk drive, then select [OK] button.
(HDD000-00)

---

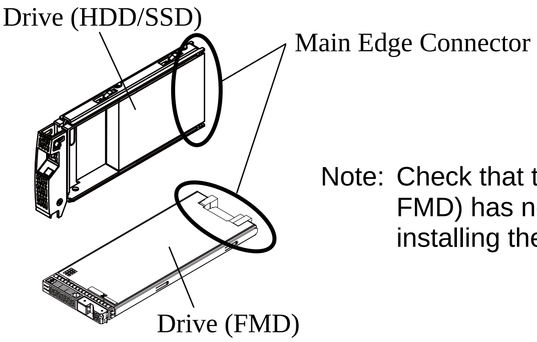
(2) <Confirm Insertion>

"Check the location of the disk drive that you want to insert. After the check, insert the disk drive, then select [OK] button. (HDDnnn-nn)" is displayed.



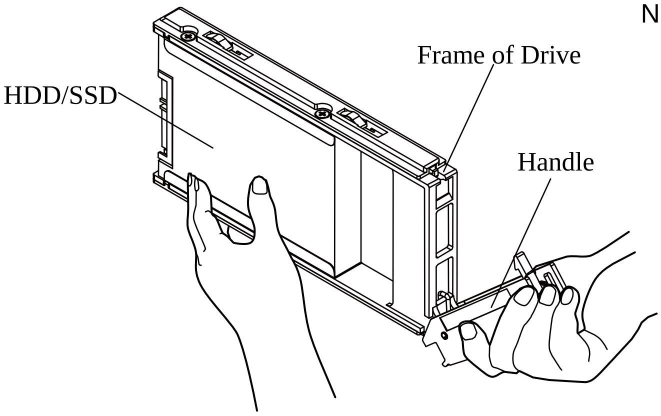
[ONL4253i]

Check the location of the disk drive that you want to insert.
After the check, insert the disk drive, then select [OK] button.
(HDD000-00)



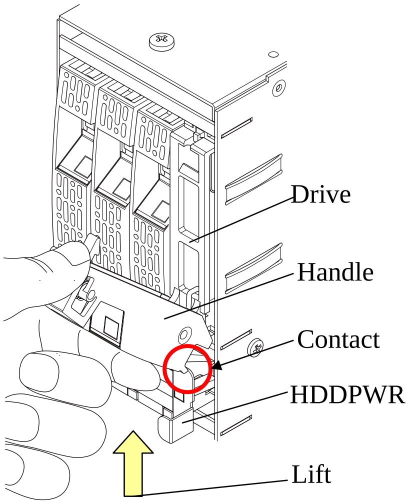
Note: Check that the main edge connector of the drive (HDD/SSD/FMD) has no deformation, damage or sticking of dust before installing the drive.

Handling of Drive



Note on the installation:
Do not insert the drive by pushing its frame.

2-5. Install the drive.



Instruction for the insertion and removal of the 2.5-inch drive:

The upper part of HDDPWR might come in contact with the lower part of the drive, and it becomes an obstruction of the insertion and removal at the time of the 2.5-inch drive insertion and removal. In this case, avoid the HDDPWR by lifting the drive lightly.

Caution – Back Board, or drive connector or drive handle may be damaged when the drive is forcibly inserted.

If the drive cannot be easily inserted until the claws on the handle reach the DKU, or if the handle binds or stops before it can be locked, then remove the drive and perform inspection:

a) Check the drive slot in DKU to be free and clear of obstructions.
b) Check connector on back board for visible defects.
c) Inspect connector on drive for visible defects.
d) Inspect drive top and bottom guide for defects. Note special alignment tab on bottom guide on some drive. A damaged tab can bind on the lower slot guides in DKU.
e) During installation make sure the drive is inserted in alignment with slot guides.
f) Check upper rear spring on SSD has been removed. (This applies only on SSD)

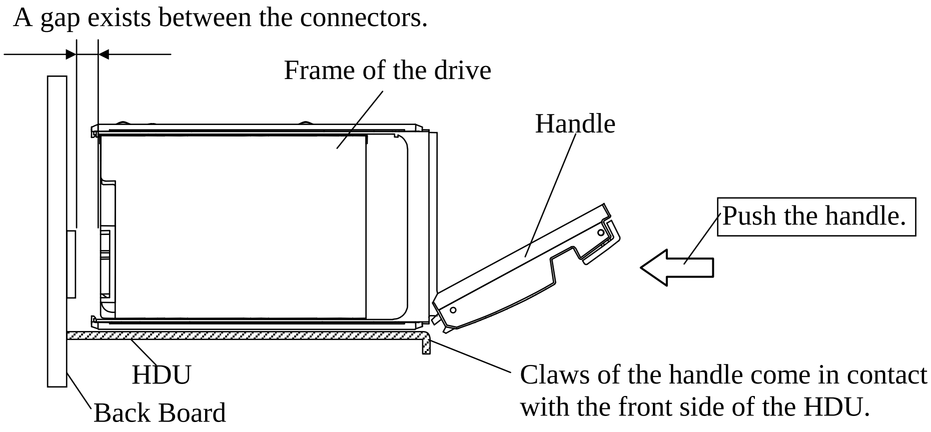
Reinsert drive after inspections have passed.

2-5-1. In case of 3.5inch/2.5inch drive

a. Insert the drive into the HDU holding its handle.
(Insert the canister until the claws that are located at the bottom of the handle come in contact with the front side of the HDU.)

b. Turn the handle at a stroke by pushing its top with your thumb.
(Turn the handle until it latches with the stopper. Do not stop the handle on its way of turning.)

a. Insert the HDD/SSD canister into the HDU holding its handle.


A gap exists between the connectors.
Frame of the drive
Handle
Push the handle.
HDU
Back Board
Claws of the handle come in contact with the front side of the HDU.

b. Turn the handle at a stroke by pushing its top with your thumb.
(Do not stop the handle on its way of turning.)

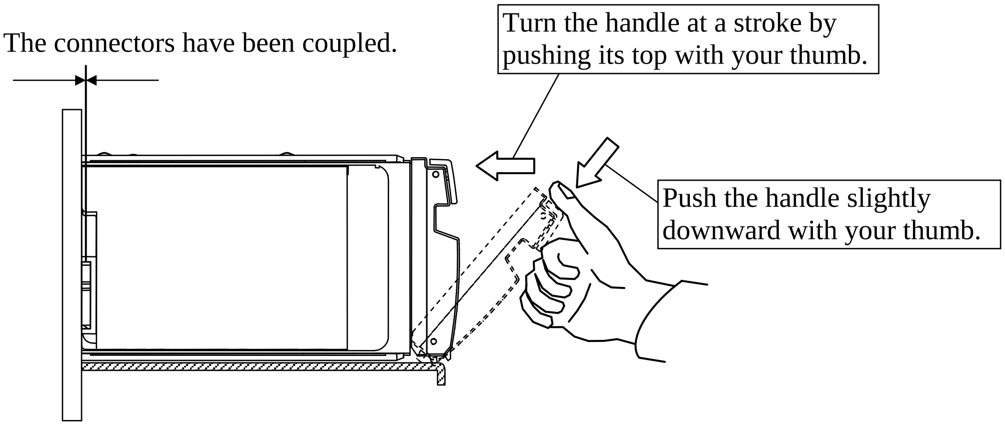

The connectors have been coupled.
Turn the handle at a stroke by pushing its top with your thumb.
Push the handle slightly downward with your thumb.

Fig. 3.2.2-8 Method of Installing Drive

c. Close the FAN door and tighten the screws. (Refer to Fig. 3.2.2-1.)

d. Put the FAN door stopper into the neutral state.

2-5-2. In case of FMD

Note: When handling the drive, hold the rail side because the shield spring is subject to breakage.

a. Open the handle fully and fit the drive in the guide rail and slide it in the direction shown by the arrow not to give a shock.

b. Push the drive in until it reaches the position where a hook of the handle can be entered into the square hole on a frame.

c. Pull the stopper lightly and close the handle, and then press the stopper to have the lock on. If the handle is closed in the state where the hook of the handle cannot enter into the square hole, the drive cannot be installed correctly because it runs into the frame of the FBX DKU.

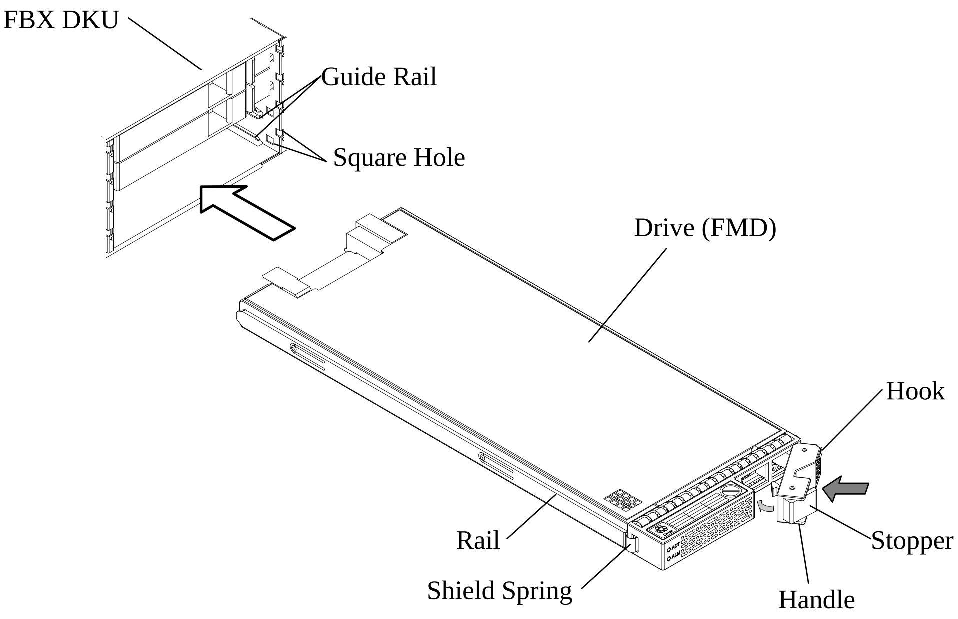


Fig. 3.2.2-9 Installation of Drive (In case of FMD)

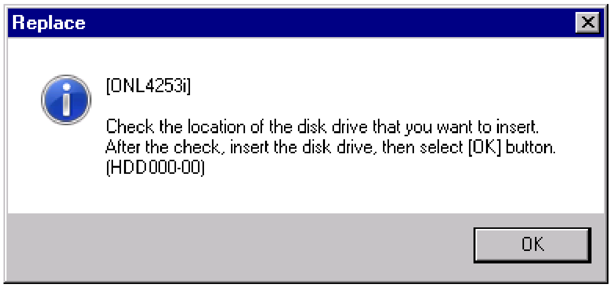
2-6. Go to “3. POST-PROCESSING of SVP”.

Before starting the <Check the beginning of recovery> operation in POST-PROCEDURES of SVP, be sure to insert a removable media for dump, collect failure information, and return the removable media with the failed HDD.
A dump removable media is attached with a Spare HDD.

3. POST-PROCESSING of SVP

3-1. <Confirm Insertion>

"Check the location of the disk drive that you want to insert. After the check, insert the disk drive, then select [OK] button. (HDDnnn-nn)"is displayed.

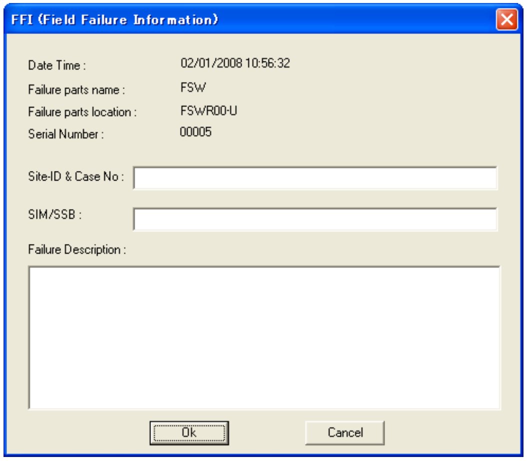


[ONL4253i]

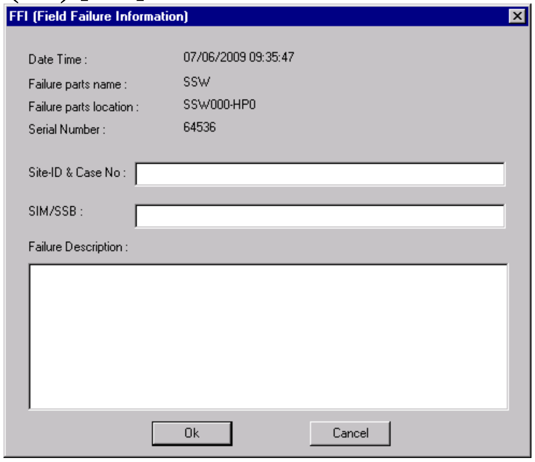
Check the location of the disk drive that you want to insert.
After the check, insert the disk drive, then select [OK] button.
(HDD000-00)

3-2. <Get the error information>

Input the Field Failure Information, and select (CL) [OK].

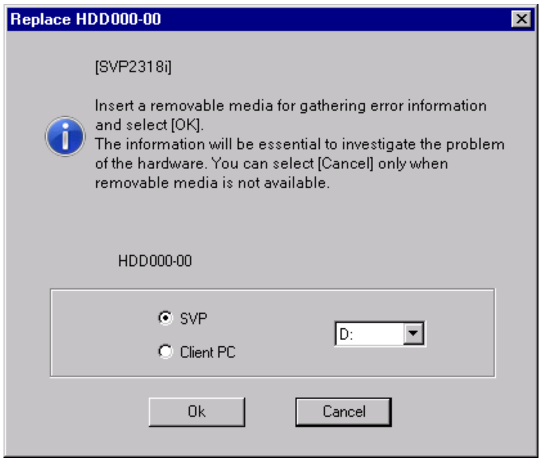


Date Time : 02/01/2008 10:56:32
Failure parts name : FSW
Failure parts location : FSWR00-U
Serial Number : 00005
Site-ID & Case No :
SIM/SSB :
Failure Description :



Date Time : 07/06/2009 09:35:47
Failure parts name : SSW
Failure parts location : SSW000-HP0
Serial Number : 64536
Site-ID & Case No :
SIM/SSB :
Failure Description :

"Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available." is displayed.
Select a Client PC arbitrary drive, and select (CL) [Ok].
Trouble information is preserved in console PC connected with SVP.
Please select the Client PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu.
The drive letter becomes the drive letter of console PC connected with SVP.



[SVP2318i]

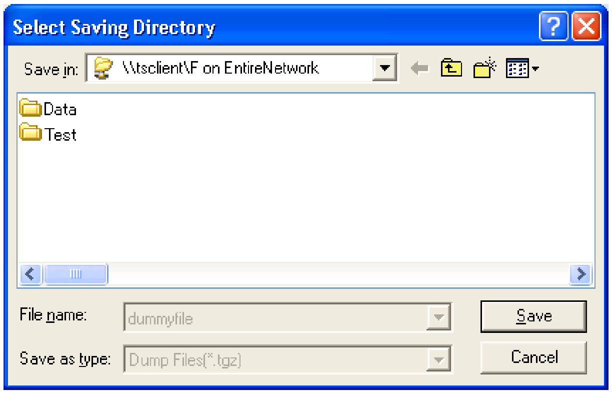
Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.

HDD000-00

● SVP
○ Client PC
D:

When Client PC is selected, the directory selection dialog is displayed.
Please select an arbitrary directory if necessary.

Console PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of console PC.



Save in: \\tsclient\F on EntireNetwork

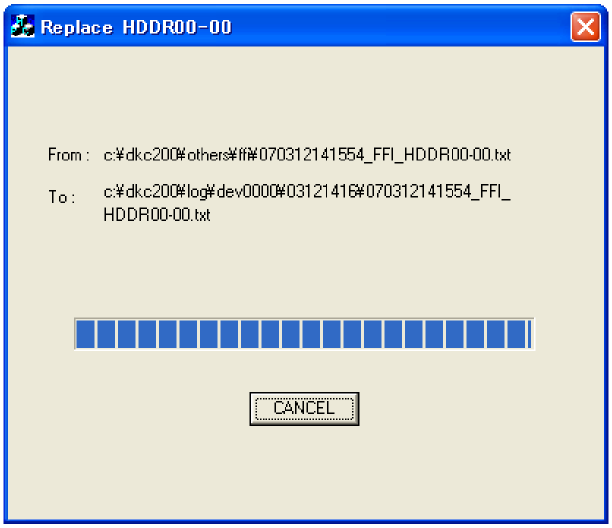
File name: dummyfile

Save as type: Dump Files(*.tgz)

Select (CL) [Save] when saving a file in a specified directory.
It returns to the drive selection screen when [Cancel] is selected (CL).

3-3. <Copy of the error information>

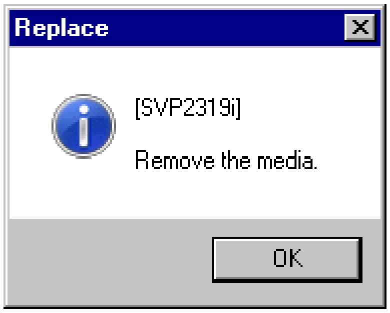
The error information is copied onto media.



From : c:¥dkc200¥others¥ff¥070312141554_FFI_HDDR00-00.txt

To : c:¥dkc200¥log¥dev0000¥03121416¥070312141554_FFI_HDDR00-00.txt

"Remove the media." is displayed.
Select (CL) [OK].



[SVP2319i]

Remove the media.

3-4. <Spin up the Physical Drive>
"Spinning up..." is displayed.

3-5. <DKU INLINE>
"DKU INLINE is now running..." is displayed.

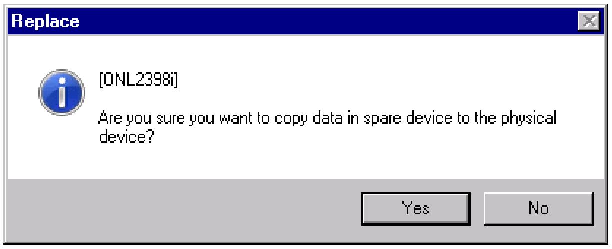
3-6. <Replacement of the DKU micro-program>
When the revision of the DKU micro-program in the SVP hard disk is newer than that in the PDEV, the following message appears on the screen.
The message "Exchanging DKU micro-program..." appears.

3-7. <Restore Physical Drive>
"Restoring..." is displayed.

3-8. <Check the Physical Drive>
"Checking..." is displayed.

3-9. <Check the beginning of copy-back>
A message, which asks for confirmation of whether or not to start a copy-back or to make the automatic copy-back, is displayed.

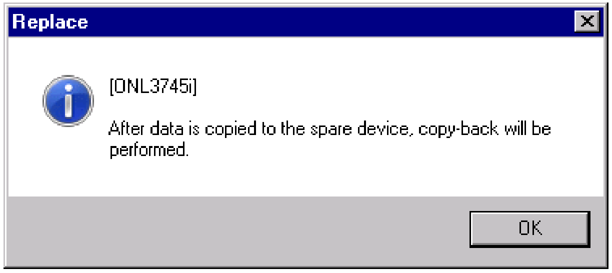
[Confirmation of starting a copy-back]
Select (CL) [Yes] in response to "Are you sure you want to copy data in spare device to the physical device?.".
Go to Step 3-10..



[ONL2398i]

Are you sure you want to copy data in spare device to the physical device?

[Confirmation of making an automatic copy-back]
Select (CL) [OK] in response to a message, "After data is copied to the spare device, copy-back will be performed.".



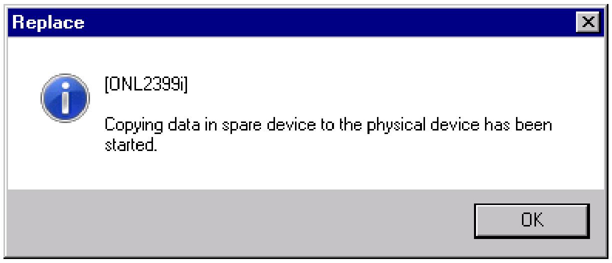
[ONL3745i]

After data is copied to the spare device, copy-back will be performed.

It goes to 3-11 when HDDFAN doors of the object are not closed.
It goes to 3-12 when HDDFAN doors of the object are closed.

3-10. <Check starting of copyback>

“Copying...” is displayed.
Select (CL) [OK] in response to “Copying data in spare device to the physical device has been started.”.



[ONL2399i]

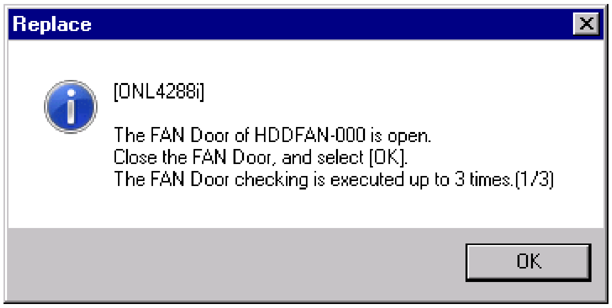
Copying data in spare device to the physical device has been started.

It goes to 3-11 when HDDFAN doors of the object are not closed.
It goes to 3-12 when HDDFAN doors of the object are closed.

3-11. <Warning of HDDFAN door open>

(1)

“The FAN Door of HDDFAN-xxx is open. Close the FAN Door, and select [OK]. The FAN Door checking is executed up to 3 times. (n/3)” is displayed.
After the FAN door is closed, select (CL) [OK] in response to this message.



[ONL4288i]

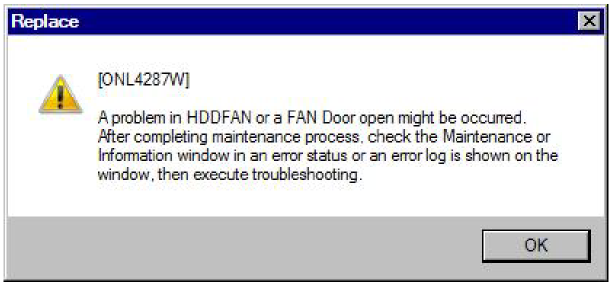
The FAN Door of HDDFAN-000 is open.
Close the FAN Door, and select [OK].
The FAN Door checking is executed up to 3 times.(1/3)

It returns to 3-11 when HDDFAN doors of the object are not closed.
It goes to (2) when HDDFAN doors of the object are closed.

Note: It goes to 3-12 when it cannot be confirmed that the FAN doors are closed in the three times FAN door check.

(2)

“A problem in HDDFAN or a FAN Door open might be occurred. After completing the maintenance process, check the Maintenance or Information window in an error status or an error log is shown on the window, then execute troubleshooting.” is displayed.
Select (CL) [OK] in response to this message.

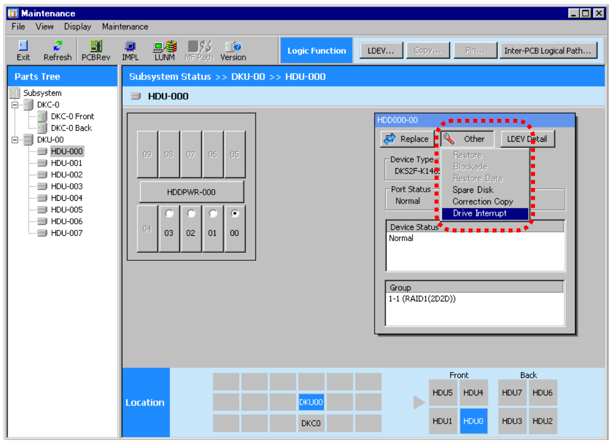


[ONL4287W]

A problem in HDDFAN or a FAN Door open might be occurred. After completing maintenance process, check the Maintenance or Information window in an error status or an error log is shown on the window, then execute troubleshooting.

3-12.

When interrupting a copy, select (CL) the [Drive Interrupt] button.



Device Type: DKS2F-K14…
Port Status: Normal
Device Status: Normal
Group: 1-1 (RAID1(2D2D))

3-13.

Go to POST-PROCEDURE [REP04-01-10].

[DRIVE REPLACEMENT PROCESSING - RDK3]

— OUTLINE —

1. PRE-PROCESSING of SVP
    - ① Select P-DEV (status check)
    - ② Specify Replacement
    - ③ Place HDD into unpluggable state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    - ① Execute CUDG on P-DEV
    - ② Specify recovery
    - ③ Correction copy

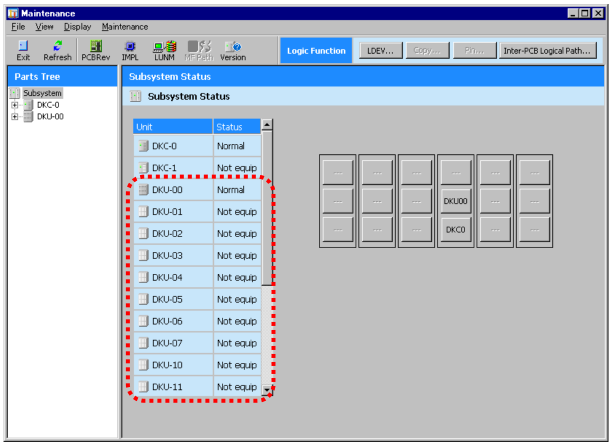
⚠ CAUTION

If No Charging of FMD (SIM = 50EXYY) occurs in replacement of a FMD, the FMD ACTIVE LED will change to low-speed blinking. In this case, it takes 90 minutes at most for the FMD ACTIVE LED to go out and for the battery in the FMD to be fully charged.

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

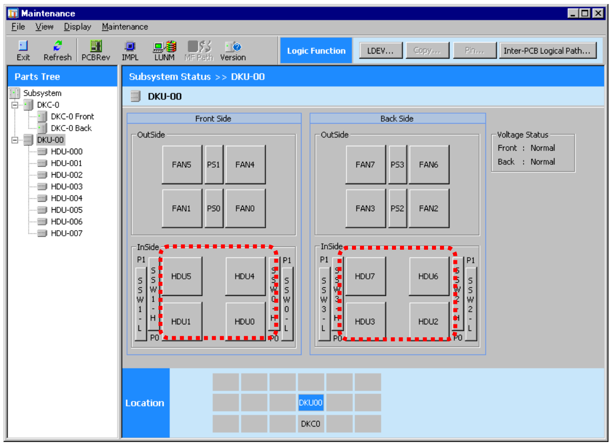
Open the ‘Maintenance’ window according to PRE PROCEDURE A (REP02-01-10). Select (CL) the DKU information [DKU-nn] of the DKU which installs the HDD to be replaced in the ‘Maintenance’ window.



Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <Select HDU>

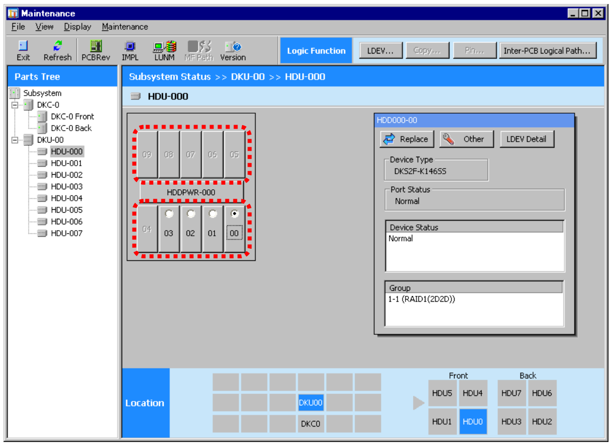
Select (CL) the HDU information [HDUn] of the HDU which installs the HDD to be replaced.



Voltage Status
Front : Normal
Back : Normal

1-3. <Select HDD>

Check and select (CL) [nn] to be replaced.

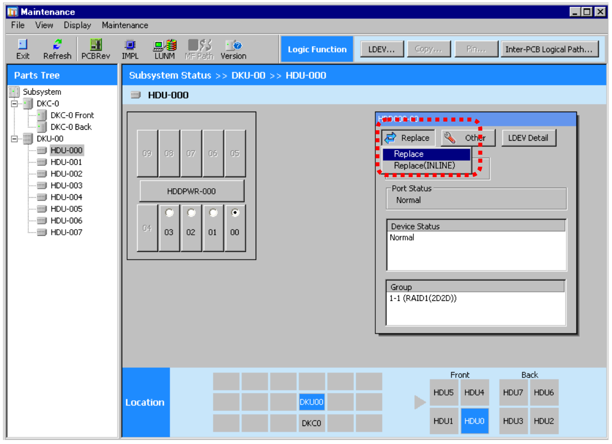


Device Type: DKS2F-K146SS
Port Status: Normal
Device Status: Normal
Group: 1-1 (RAID1(2D2D))

1-4. <Specify replacement of HDD>

Make sure that the "Device Status" is [Failed] or [Warning].

Select (CL) [Replace]-[Replace].



Port Status: Normal
Device Status: Normal
Group: 1-1 (RAID1(2D2D))

1-5. <Checking the P-DEV status & saving the spare>

⚠ CAUTION

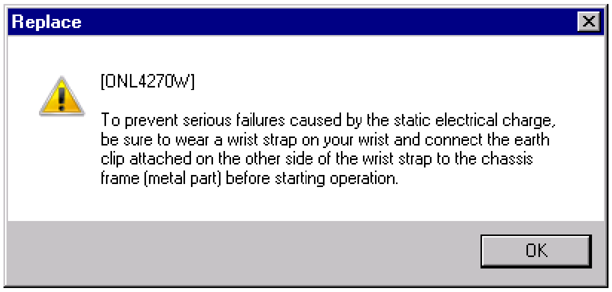
When the screen appears prompting the operator to input a password to prevent multiple maintenance or for executing a pin check, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

“Checking...” is displayed.

1-6. <Wear a wrist strap>

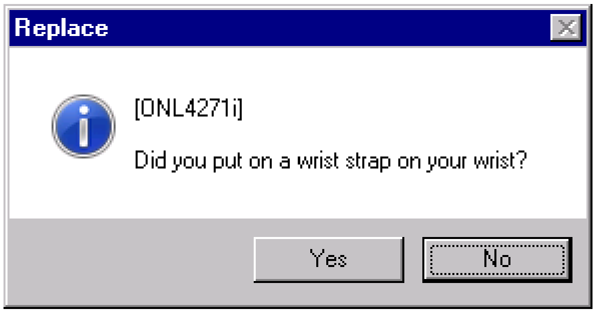
Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.



[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

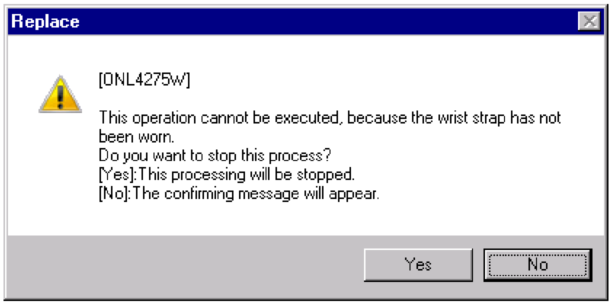
(1) <Confirm wearing wrist strap>
In response to a message, “Did you put on a wrist strap on your wrist?”.
Select (CL) [Yes] when wrist strap is on your wrist.
Select (CL) [No] when there is no wrist strap on your wrist.
When [No] is selected (CL), go to Step (2).



[ONL4271i]

Did you put on a wrist strap on your wrist?

(2)
In response to a message, “This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?
[Yes]: This processing will be stopped.
[No]: The confirming message will appear.”



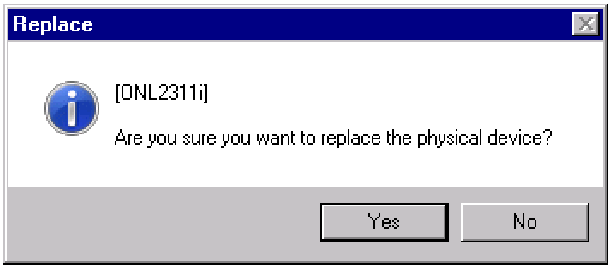
[ONL4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

When [Yes] is selected (CL), returned to Step 1-3.
When [No] is selected (CL), returned to Step 1-6.

1-7. <P-DEV blocking>

Select (CL) [Yes] in response to “Are you sure you want to replace the physical device?”.



[ONL2311i]

Are you sure you want to replace the physical device?

1-8. <Blocking the Physical device>

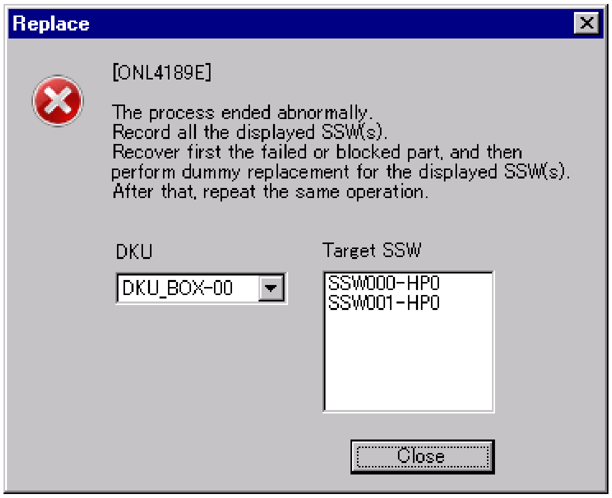
“Blocking...” is displayed.

1-9. <Spin down the Physical device>

“Spinning down...” is displayed.

Perform the dummy replacement of the displayed SSW(s) when the window is displayed. Select the DKU list and record the target SSW(s) because two or more DKU might be listed.
Select (CL) [Close] button and perform the dummy replacement of the target SSW(s).

Retry the replacement after completing the dummy replacement of SSW.



[ONL4189E]

The process ended abnormally.
Record all the displayed SSW(s).
Recover first the failed or blocked part, and then perform dummy replacement for the displayed SSW(s).
After that, repeat the same operation.

SSW000-HP0
SSW001-HP0

1-10. <Check shut down LED>

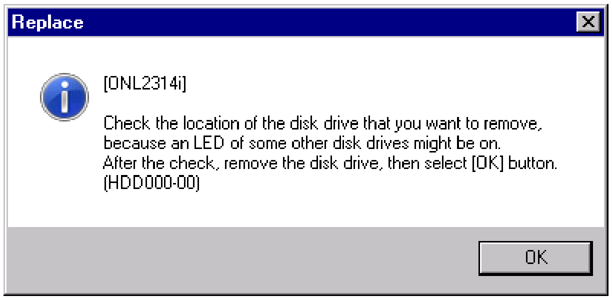
⚠ **CAUTION**

If a wrong HDD is removed, a data loss or a system down may occur.

Check the shut down LED on the HDD to be replaced.
If LED is off, reconfirm the location of the HDD to be replaced with LOCATION SECTION before replacing the hardware.

1-11. <Confirm Removal>

Select (CL) [OK] in response to “Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on. After the check, remove the disk drive, then select [OK] button. (HDDxnn-nn)” after the unit is removed.
(Step 2-3)



[ONL2314I]

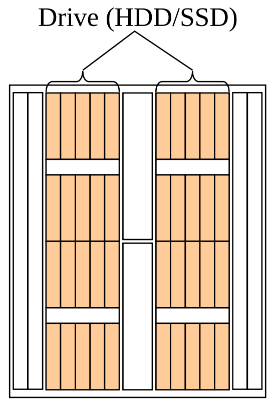
Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on.
After the check, remove the disk drive, then select [OK] button.
(HDD000-00)

1-12. <Replace HDD>

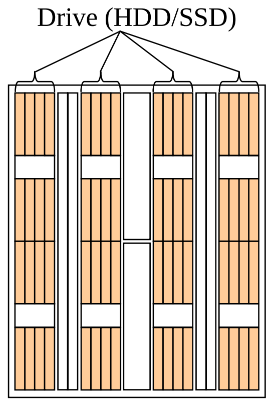
Replace HDD.
Go to “2. HARDWARE REPLACEMENT PROCESSING”.

2. HARDWARE REPLACEMENT PROCESSING

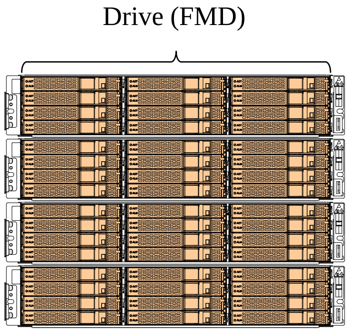
Location		Function Name of Component	Part Name	HDA Label
DKU	1	Disk Drive (HDD)	HDU700-146KCMSS	S5B-K146SS
				S5C-K146SS
			HDU700-300JCMSS	R5C-J300SS
				R5D-J300SS
				S5B-J300SS
				S5D-J300SS
				S5E-J300SS
			HDU700-300KCMSS	R5C-K300SS
				S5C-K300SS
			HDU700-500HCMSS	S5A-H500SS
				S5B-H500SS
			HDU700-600JCMSS	R5C-J600SS
				R5D-J600SS
				S5C-J600SS
				S5D-J600SS
				S5E-J600SS
			HDU700-900JCMSS	R5D-J900SS
				S5D-J900SS
				S5E-J900SS
			HDU700-1R0HCMSS	S5B-H1R0SS
			HDU700-1R2JCMSS	R5E-J1R2SS
				S5F-J1R2SS
			HDU700-2R0H2MAT	R2C-H2R0AT
				R2D-H2R0AT
				R2E-H2R0AT
			HDU700-2R0H3MSS	S2C-H2R0SS
				S2D-H2R0SD
				S2D-H2R0SS
				S2P-H2R0SS
				S2E-H2R0SS
				W2E-H2R0SS
			HDU700-3R0H3MSS	S2D-H3R0SS
				S2E-H3R0SS
				W2E-H3R0SS
			HDU700-4R0H3MSS	S2E-H4R0SS
				W2E-H4R0SS
	2	Flash Drive (SSD)	HDU700-200MCMSS	B5A-M200SS
				R5B-M200SS
			HDU700-200SAMSS	T5A-S200SS
				T5C-S200SS
			HDU700-200SCMSS	R5A-S200SS
				R5B-S200SS
			HDU700-400MCMSS	B5A-M400SS
				R5B-M400SS
			HDU700-400SCMSS	R5A-S400SS
				R5B-S400SS
			HDU700-800MCMSS	B5A-M800SS
			HDU700-400S1MSS	T2A-S400SS
				T2C-S400SS
Front View of FBX DKU	3	Flash Module Drive (FMD)	HDU700-1R6FMSS	H1A-P1R6SS
				H1C-P1R6SS
			HDU700-3R2FMSS	H1B-P3R2SS
				H1C-P3R2SS



Front or Rear View of DKU
(In case of 3.5inch Drive)



Front or Rear View of DKU
(In case of 2.5inch Drive)



Front View of DKU
(In case of FMD)

NOTICE:

- Replace the drive in the subsystem in power on status only.
  Do not replace the drive in power off status.
- Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.
- HDD is a precise component. Be careful in handling HDD to avoid vibration and impact.

2-1. Open the FAN door.

2-1-1. In case of 3.5inch/2.5inch drive

a. Put the stopper of the FAN door into the open able and closable state. (Refer to the INST03-01-160.)

b. Loosen the two screws and open the FAN door.

2-1-2. In case of FMD

a. Go to procedure 2-2. Check the Shut Down LED.

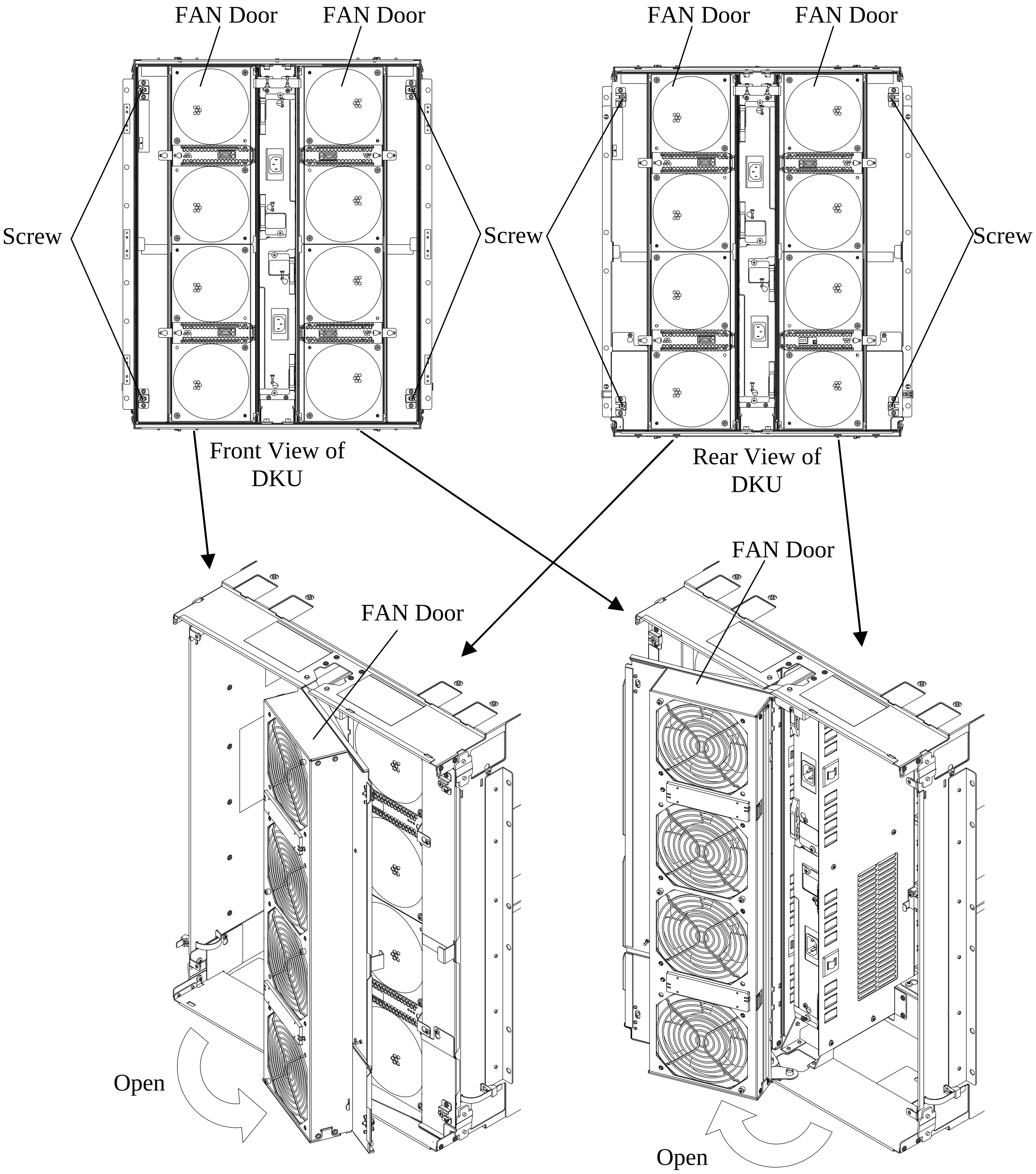
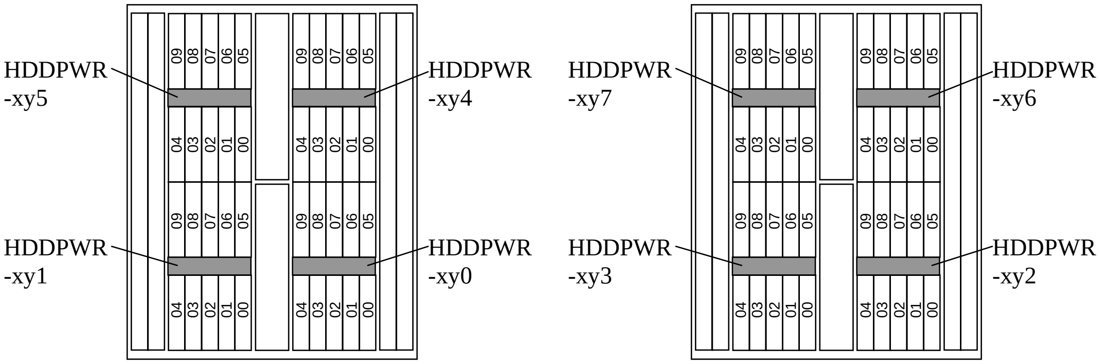


Fig. 3.3.2-1 FAN Door Opening

2-2. Check the Shut Down LED.

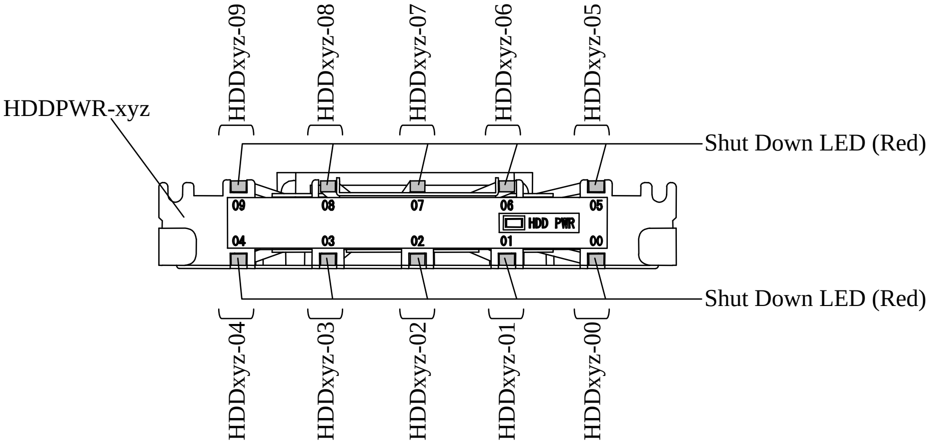
2-2-1. In case of 3.5inch/2.5inch drive

a. Check that the Shut Down LED on the HDDPWR corresponding to drive (HDD/SSD) is turned on. Refer to Fig. 3.3.2-2 or 3.3.2-3.



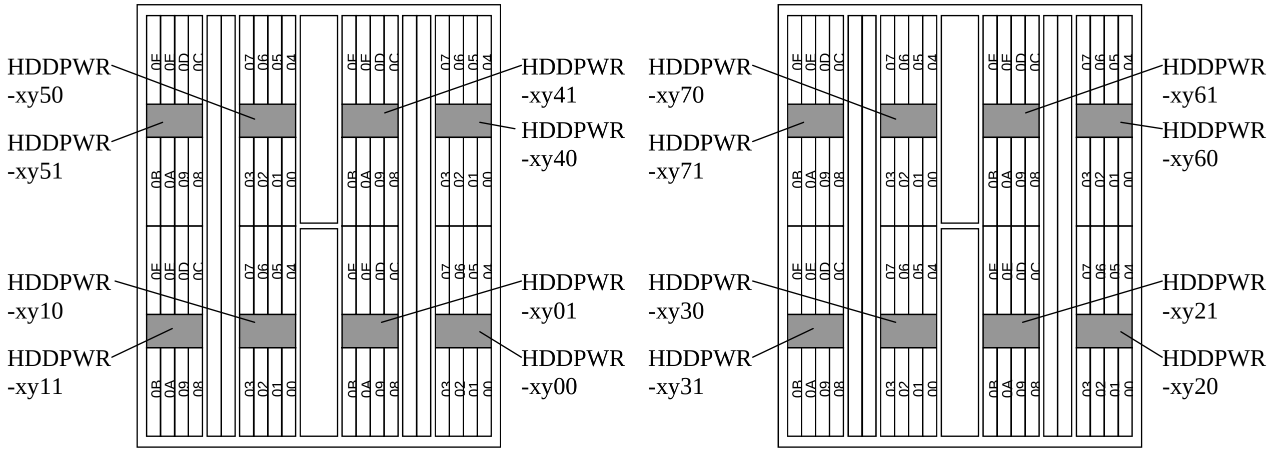
Front View of DKU

Rear View of DKU



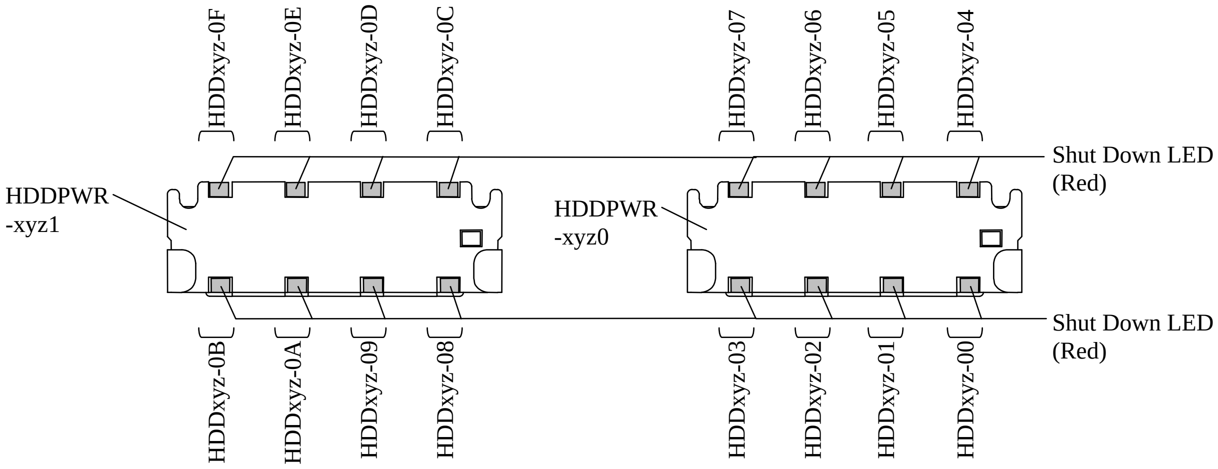
Note: HDDPWR-xyz
→HDU No. (0, 1, 2, ..., 7)
→DKU No. (0, 1, 2, ..., 7)
→DKC No. (0, 1)

Fig. 3.3.2-2 Checking of Shut Down LED (In case of 3.5inch Drive)



Front View of DKU

Rear View of DKU

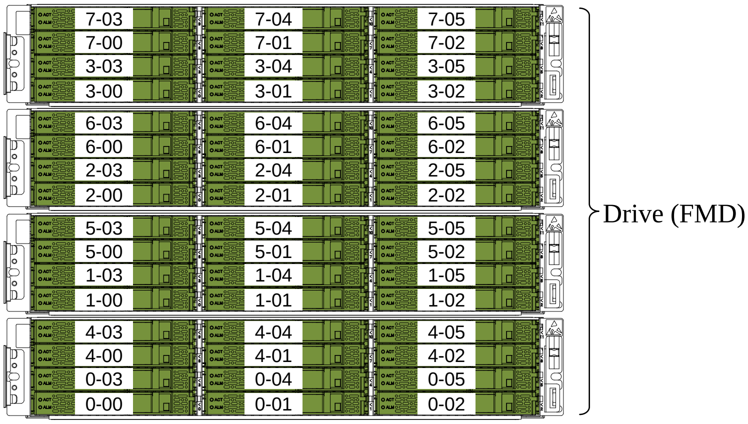


Note: HDDPWR-xyz
- HDU No. (0, 1, 2,….., 7)
- DKU No. (0, 1, 2,….., 7)
- DKC No. (0, 1)

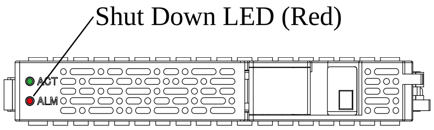
Fig. 3.3.2-3 Checking of Shut Down LED (In case of 2.5inch Drive)

2-2-2. In case of FMD

a. Check that the Shut Down LED on drive is turned on.



Front View of FBX DKU



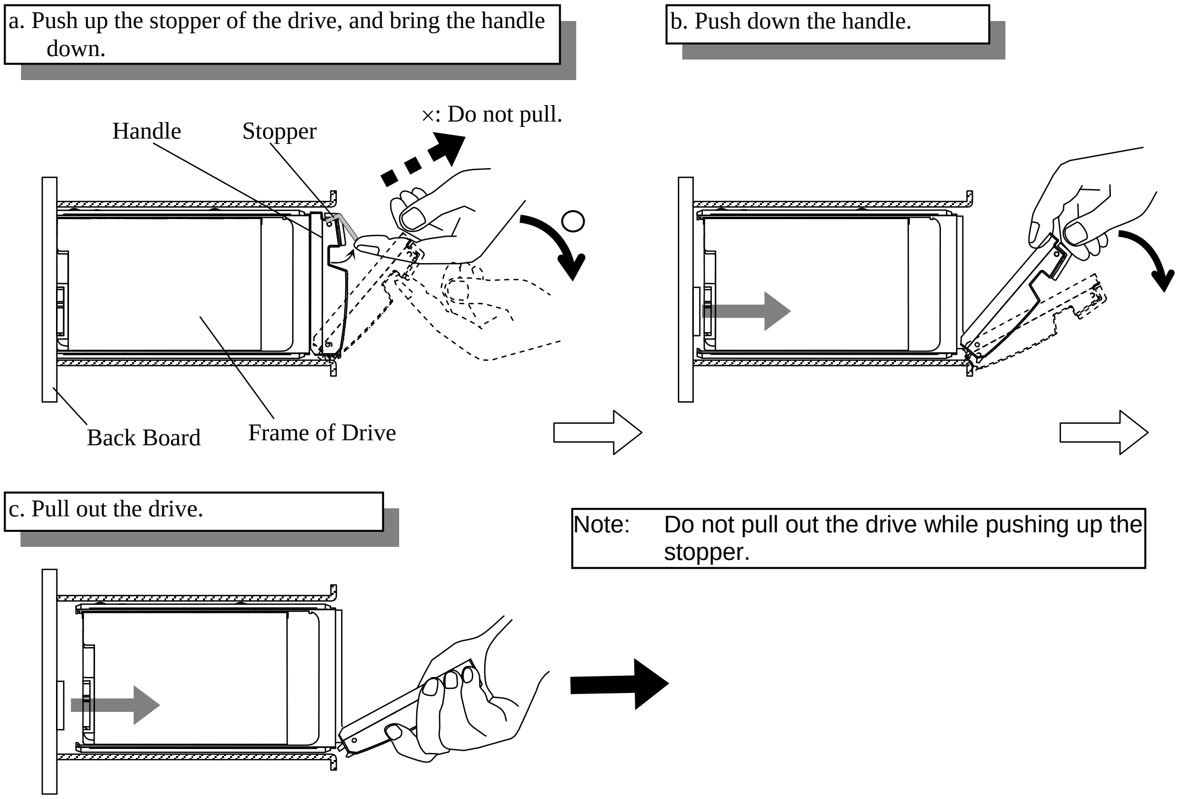
Front View of Drive (FMD)

Fig. 3.3.2-3A Checking of Shut Down LED (In case of FMD)

2-3. Remove the drive.

2-3-1. In case of 3.5inch drive.

a. Push up the stopper of drive, and bring the handle down. Don’t pull the handle during this process.
b. Push down the handle.
c. Pull out the drive.
d. Fig. 3.3.2-5 illustrates the case of wrong procedure.



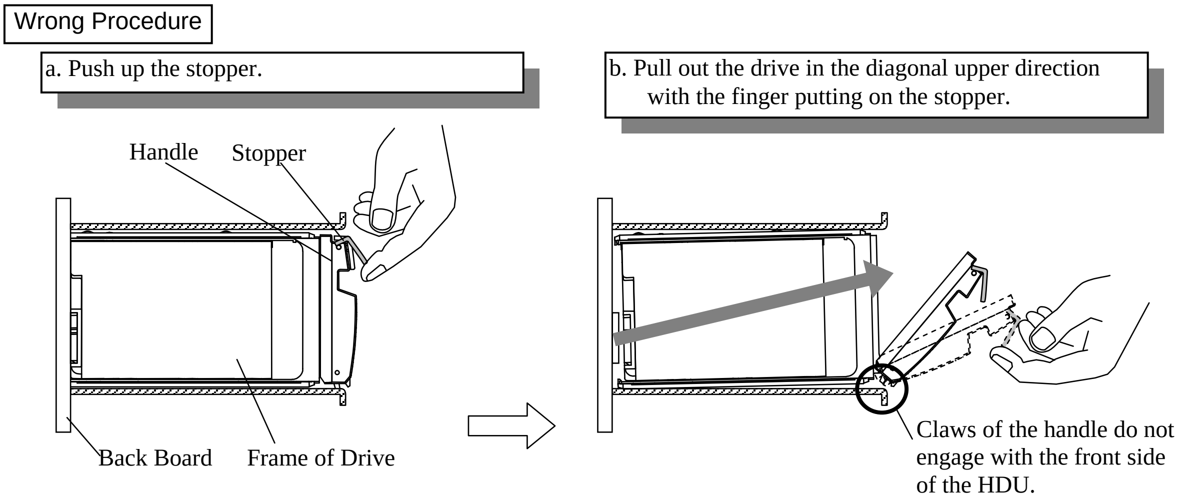
a. Push up the stopper of the drive, and bring the handle down.

b. Push down the handle.

c. Pull out the drive.

Note: Do not pull out the drive while pushing up the stopper.

Fig. 3.3.2-4 Removal of Drive



Wrong Procedure

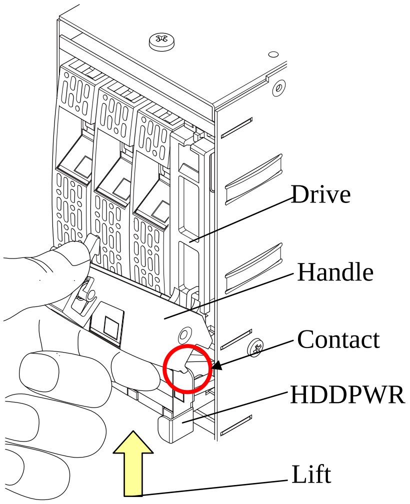
a. Push up the stopper.

b. Pull out the drive in the diagonal upper direction with the finger putting on the stopper.

Claws of the handle do not engage with the front side of the HDU.

Fig. 3.3.2-5 Removal of Drive (Wrong Procedure)

2-3-2. In case of 2.5inch drive.



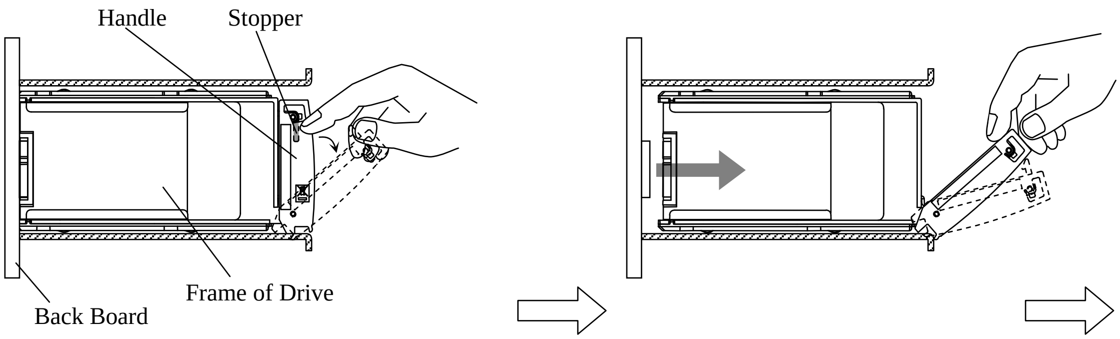
Instruction for the insertion and removal of the 2.5-inch drive:

The upper part of HDDPWR might come in contact with the lower part of the drive, and it becomes an obstruction of the insertion and removal at the time of the 2.5-inch drive insertion and removal. In this case, avoid the HDDPWR by lifting the drive lightly.

a. Push the stopper of drive, and bring the handle down. Don’t pull the handle during this process.
b. Push down the handle.
c. Pull out the drive.
d. Fig. 3.3.2-7 illustrates the case of wrong procedure.

a. Push the stopper of the drive, and bring the handle down.

b. Push down the handle.



c. Pull out the drive.

Note: Do not pull out the drive while pushing up the stopper.

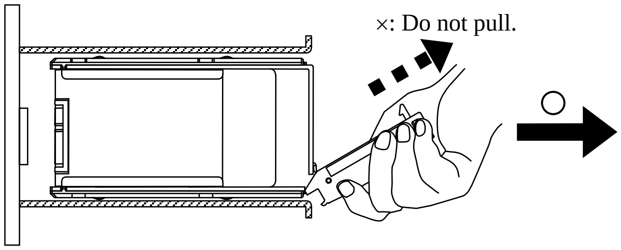
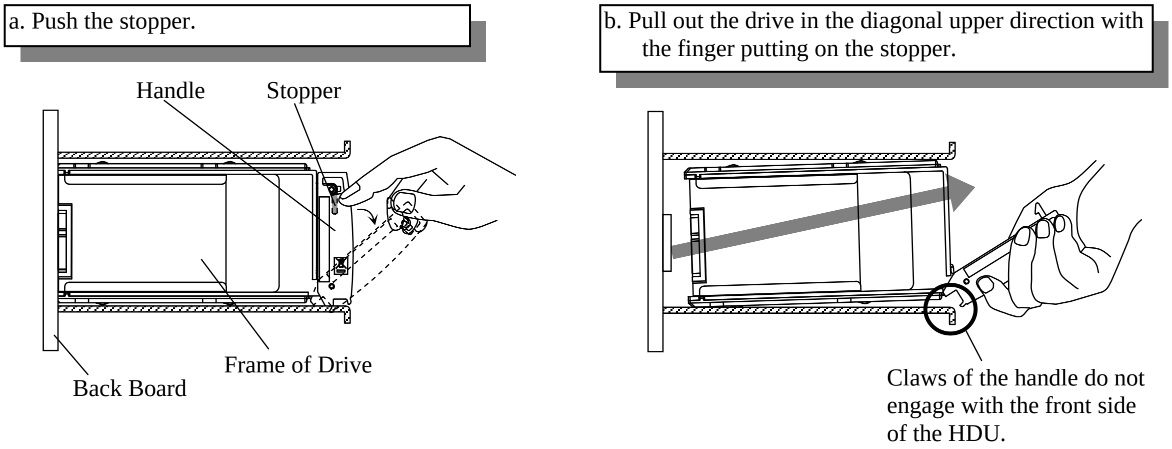


Fig. 3.3.2-6 Removal of Drive

Wrong Procedure


a. Push the stopper.

b. Pull out the drive in the diagonal upper direction with the finger putting on the stopper.

Handle
Stopper
Frame of Drive
Back Board
Claws of the handle do not engage with the front side of the HDU.

Fig. 3.3.2-7 Removal of Drive (Wrong Procedure)

2-3-3. In case of FMD

Notice: When the FMD is removed in replacing procedure, the fans of the DKUPS equipped in the rear of the FBX DKU rotate at the highest speed. When the spare FMD is installed, the fans of the DKUPS rotate at the speed suitable for environmental temperature.

a. Pull the stopper of the drive handle toward you to have the lock off.
b. Tilt the handle toward you, and then remove the drive by pulling it out taking care not to apply a shock to it.

Note: When handling the drive, hold the rail side because the shield spring is subject to breakage.

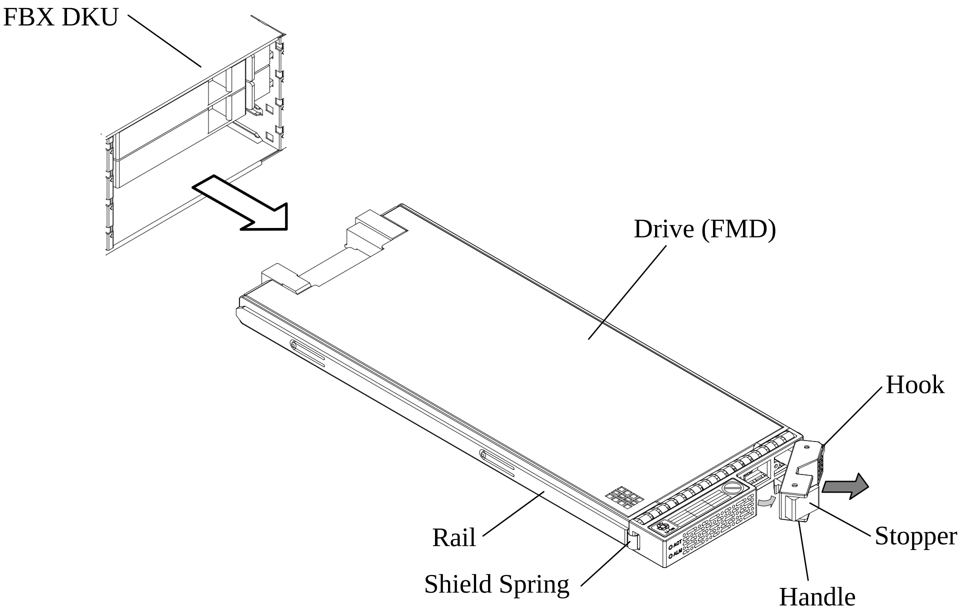
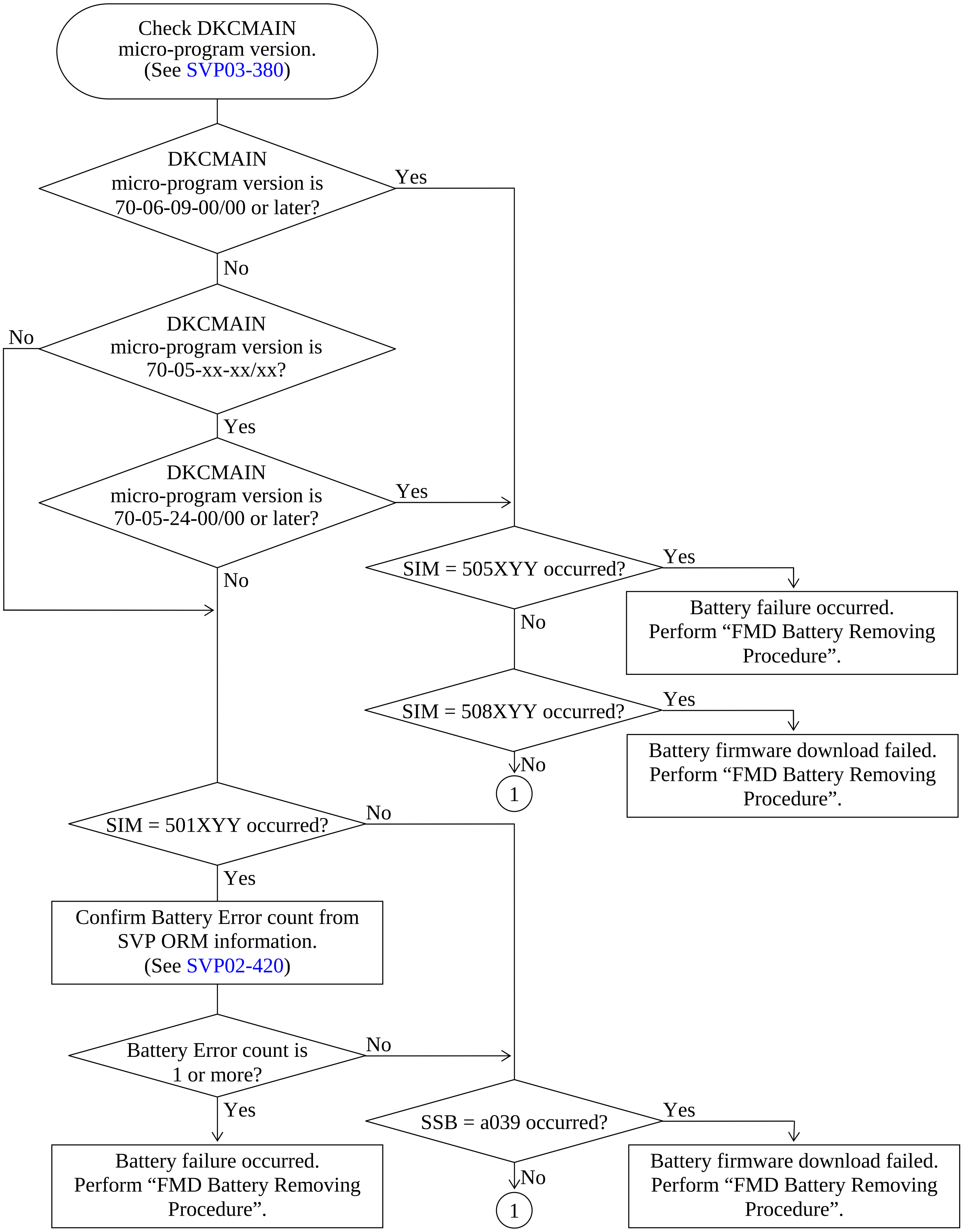
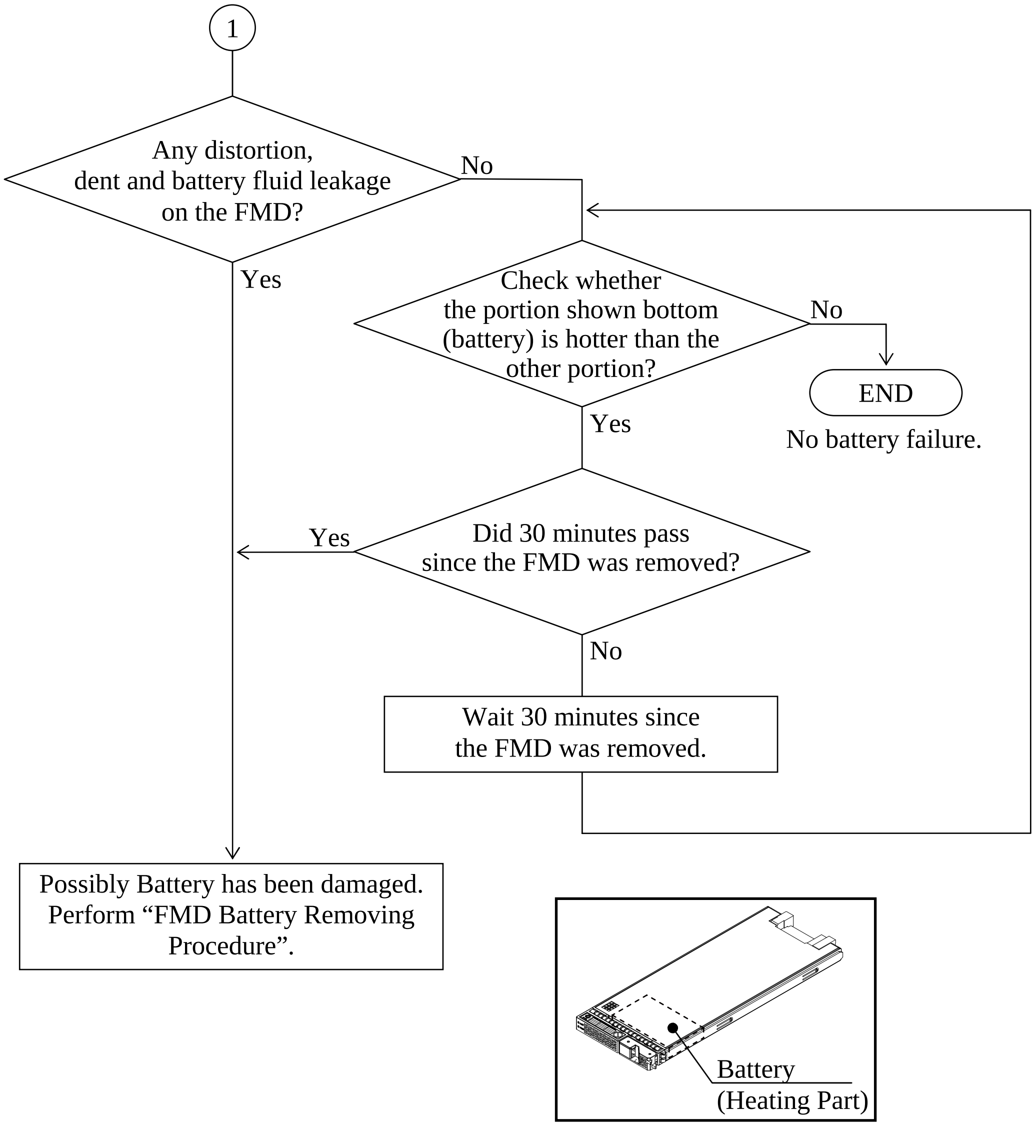


Fig. 3.3.2-7A Removal of Drive (In case of FMD)

c. Check whether a failure of the battery built in the FMD has occurred by using the flowchart below. If a battery failure has occurred, remove the battery from the FMD. If no battery failure has occurred, go to Procedure 2-4.


Check DKCMAIN micro-program version. (See SVP03-380)
DKCMAIN micro-program version is 70-06-09-00/00 or later?
Yes
No
DKCMAIN micro-program version is 70-05-xx-xx/xx?
No
Yes
DKCMAIN micro-program version is 70-05-24-00/00 or later?
Yes
No
SIM = 505XYY occurred?
Yes
Battery failure occurred. Perform “FMD Battery Removing Procedure”.
No
SIM = 508XYY occurred?
Yes
Battery firmware download failed. Perform “FMD Battery Removing Procedure”.
No
1
SIM = 501XYY occurred?
No
Yes
Confirm Battery Error count from SVP ORM information. (See SVP02-420)
Battery Error count is 1 or more?
No
Yes
Battery failure occurred. Perform “FMD Battery Removing Procedure”.
SSB = a039 occurred?
Yes
Battery firmware download failed. Perform “FMD Battery Removing Procedure”.
No
1


1
Any distortion, dent and battery fluid leakage on the FMD?
No
Yes
Check whether the portion shown bottom (battery) is hotter than the other portion?
No
END
No battery failure.
Yes
Did 30 minutes pass since the FMD was removed?
Yes
No
Wait 30 minutes since the FMD was removed.
Possibly Battery has been damaged. Perform “FMD Battery Removing Procedure”.
Battery
(Heating Part)

d. FMD Battery Removing Procedure

(d)-1 Remove 4 Screws (SB310N) on the bottom side of FMD by using cross-head screw driver.

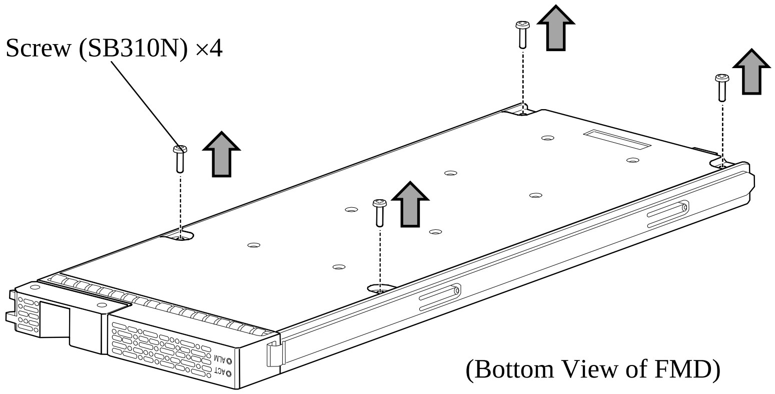


Fig. 3.3.2-7B Removing Screws

(d)-2 Remove Top Cover and Bottom Cover.

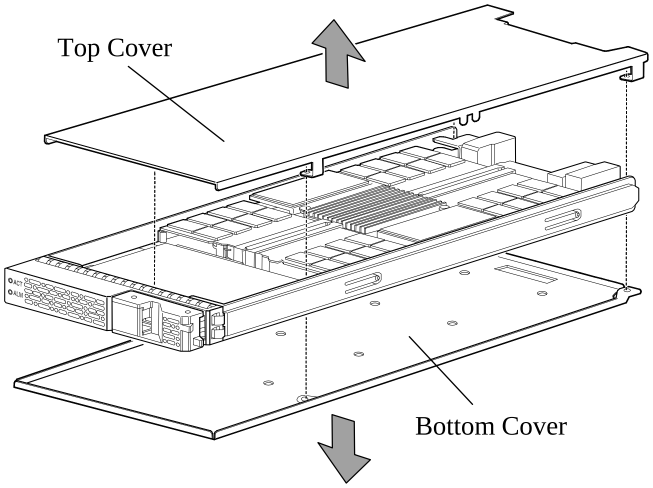


Fig. 3.3.2-7C Removing Covers

(d)-3 Remove 2 sets of Tapping-screw and Washer by using cross-head screw driver.

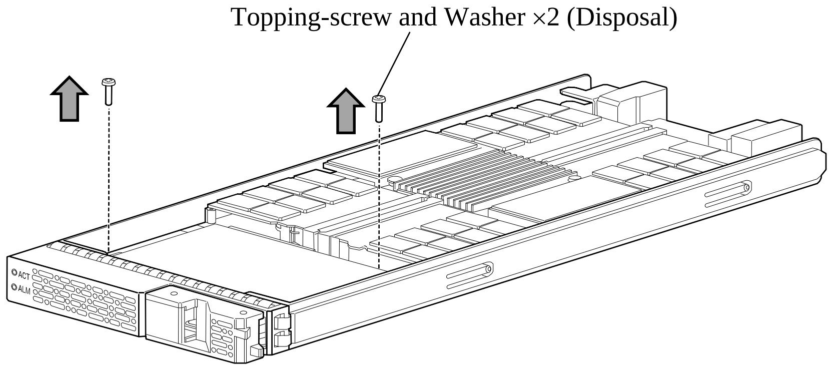


Fig. 3.3.2-7D Removing Tapping-screws and Washers

(d)-4 Move the Battery to the bezel side and disconnect the Battery from the circuit board.

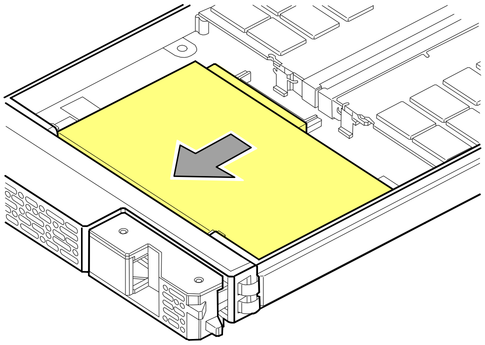


Fig. 3.3.2-7E Disconnecting from Connector

(d)-5 Remove the Battery to the bottom side of FMD. (After the connector comes off, battery is lowered below.)

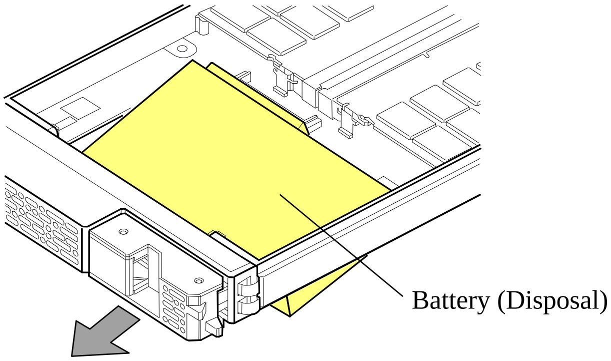


Fig. 3.3.2-7F Removing Battery

(d)-6 Attach Top Cover and Bottom Cover.
(d)-7 Attach 4 Screws (SB310N) on the bottom side of FMD.

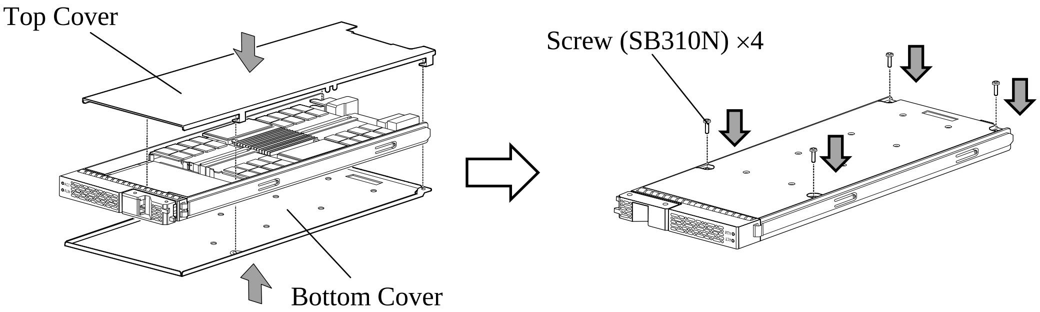


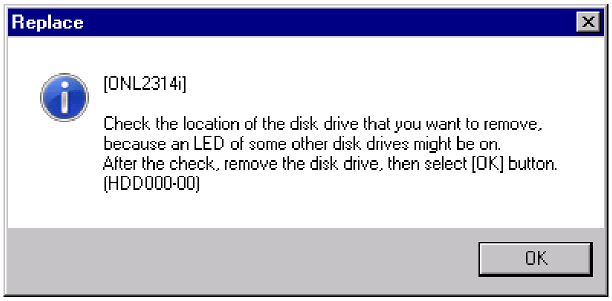
Fig. 3.3.2-7G Reassembling FMD

(d)-8 Dispose of the Tapping-screws, Washers and Battery removed in procedures (d)-3 and (d)-5.
When dispose of the Battery, follow the directions given by the local law where the product is used.

2-4. Check and handling of the drive.

(1) <Confirm Removal>

Select (CL) [OK] in response to “Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on. After the check, remove the disk drive, then select [OK] button. (HDDxnn-nn)” after the unit is removed. (Step 2-3)



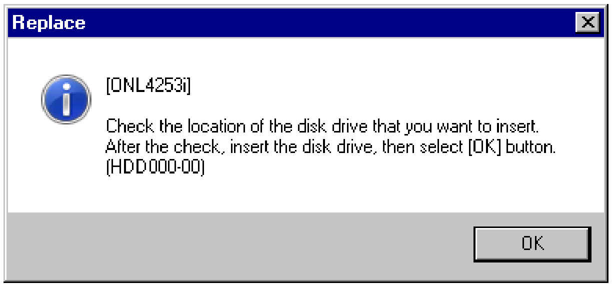
[ONL2314i]

Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on.
After the check, remove the disk drive, then select [OK] button.
(HDD000-00)

---

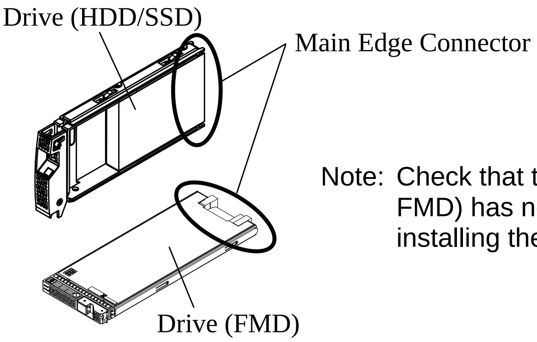
(2) <Confirm Insertion>

“Check the location of the disk drive that you want to insert. After the check, insert the disk drive, then select [OK] button. (HDDnnn-nn)” is displayed.



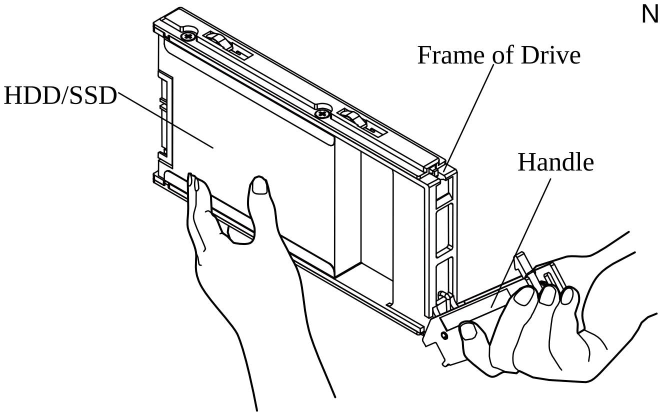
[ONL4253i]

Check the location of the disk drive that you want to insert.
After the check, insert the disk drive, then select [OK] button.
(HDD000-00)



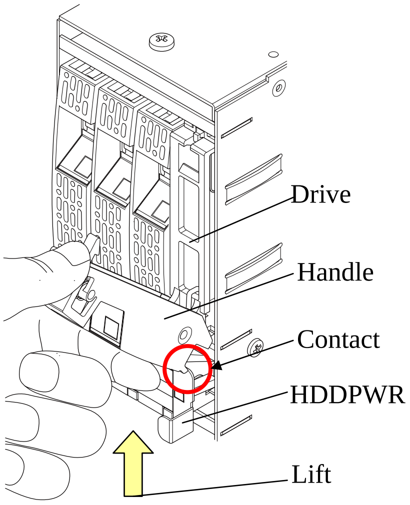
Note: Check that the main edge connector of the drive (HDD/SSD/ FMD) has no deformation, damage or sticking of dust before installing the drive.

Handling of Drive



Note on the installation:
Do not insert the drive by pushing its frame.

2-5. Install the drive.



Instruction for the insertion and removal of the 2.5-inch drive:

The upper part of HDDPWR might come in contact with the lower part of the drive, and it becomes an obstruction of the insertion and removal at the time of the 2.5-inch drive insertion and removal. In this case, avoid the HDDPWR by lifting the drive lightly.

Caution – Back Board, or drive connector or drive handle may be damaged when the drive is forcibly inserted.

If the drive cannot be easily inserted until the claws on the handle reach the DKU, or if the handle binds or stops before it can be locked, then remove the drive and perform inspection:

a) Check the drive slot in DKU to be free and clear of obstructions.
b) Check connector on back board for visible defects.
c) Inspect connector on drive for visible defects.
d) Inspect drive top and bottom guide for defects. Note special alignment tab on bottom guide on some drive. A damaged tab can bind on the lower slot guides in DKU.
e) During installation make sure the drive is inserted in alignment with slot guides.
f) Check upper rear spring on SSD has been removed. (This applies only on SSD)

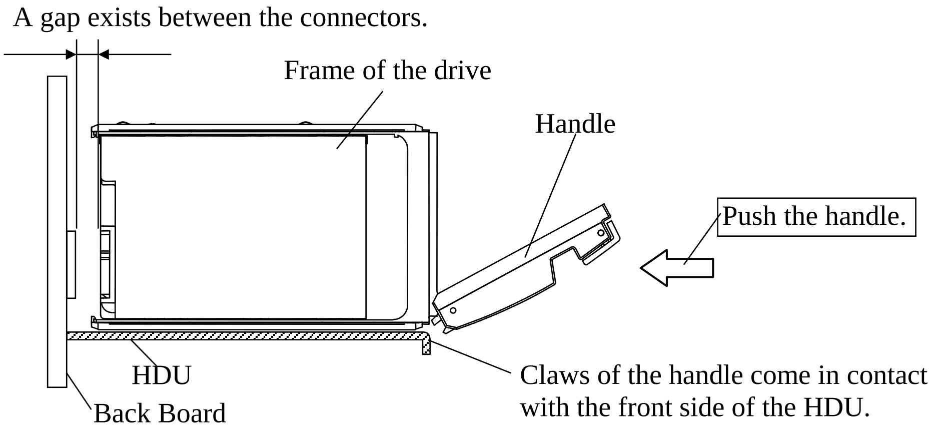
Reinsert drive after inspections have passed.

2-5-1. In case of 3.5inch/2.5inch drive

a. Insert the drive into the HDU holding its handle.
(Insert the canister until the claws that are located at the bottom of the handle come in contact with the front side of the HDU.)

b. Turn the handle at a stroke by pushing its top with your thumb.
(Turn the handle until it latches with the stopper. Do not stop the handle on its way of turning.)

a. Insert the HDD/SSD canister into the HDU holding its handle.


A gap exists between the connectors.
Frame of the drive
Handle
Push the handle.
HDU
Back Board
Claws of the handle come in contact with the front side of the HDU.

b. Turn the handle at a stroke by pushing its top with your thumb.
(Do not stop the handle on its way of turning.)

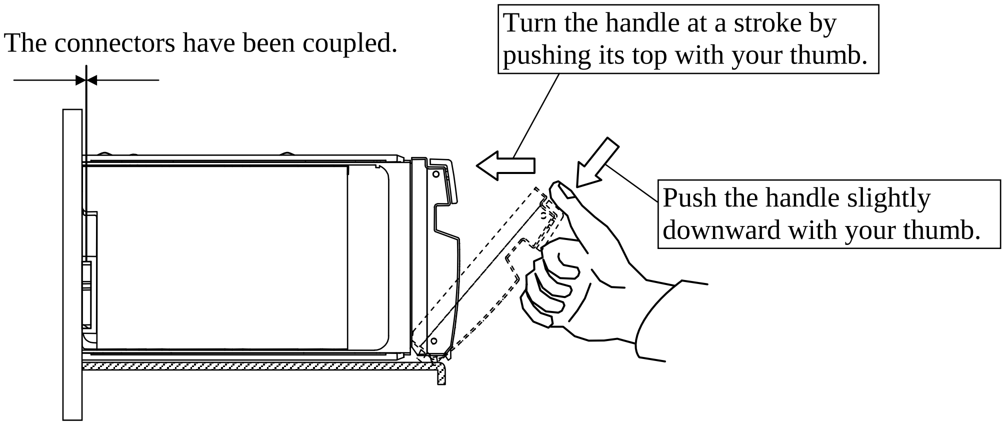

The connectors have been coupled.
Turn the handle at a stroke by pushing its top with your thumb.
Push the handle slightly downward with your thumb.

Fig. 3.3.2-8 Method of Installing Drive

c. Close the FAN door and tighten the screws. (Refer to Fig. 3.3.2-1.)

d. Put the FAN door stopper into the neutral state.

2-5-2. In case of FMD

Note: When handling the drive, hold the rail side because the shield spring is subject to breakage.

a. Open the handle fully and fit the drive in the guide rail and slide it in the direction shown by the arrow not to give a shock.

b. Push the drive in until it reaches the position where a hook of the handle can be entered into the square hole on a frame.

c. Pull the stopper lightly and close the handle, and then press the stopper to have the lock on. If the handle is closed in the state where the hook of the handle cannot enter into the square hole, the drive cannot be installed correctly because it runs into the frame of the FBX DKU.

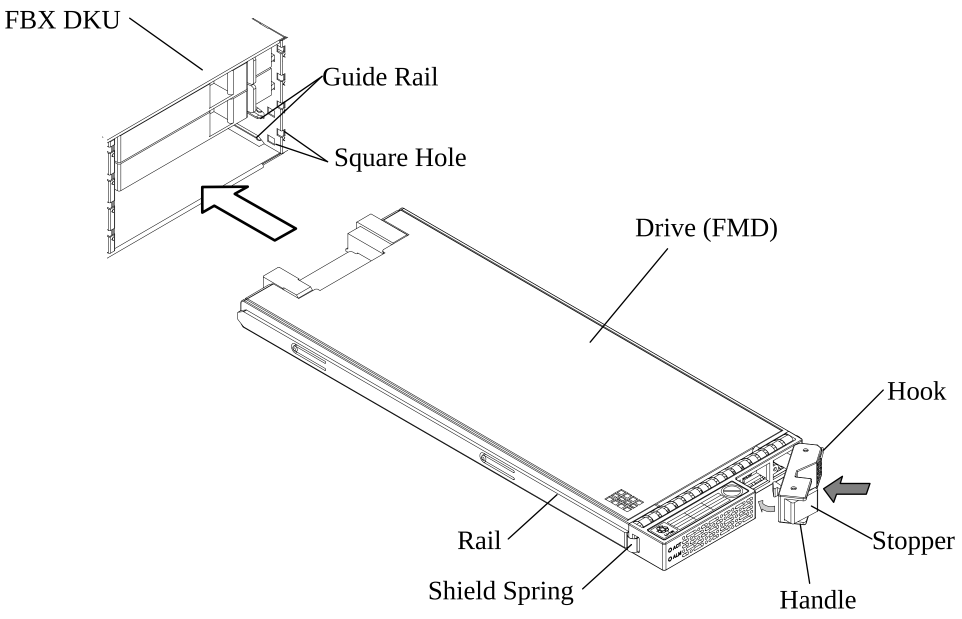


Fig. 3.3.2-9 Installation of Drive (In case of FMD)

2-6. Go to “3. POST-PROCESSING of SVP”.

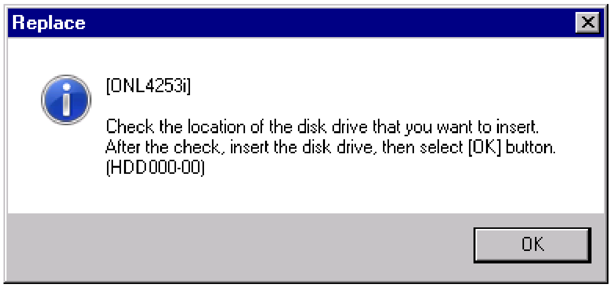
Before starting the <Check the beginning of recovery> operation in POST-PROCEDURES of SVP, be sure to insert a removable media for dump, collect failure information, and return the removable media with the failed HDD.

A dump removable media is attached with a Spare HDD.

3. POST-PROCESSING of SVP

3-1. <Confirm Insertion>

"Check the location of the disk drive that you want to insert. After the check, insert the disk drive, then select [OK] button. (HDDnnn-nn)"is displayed.

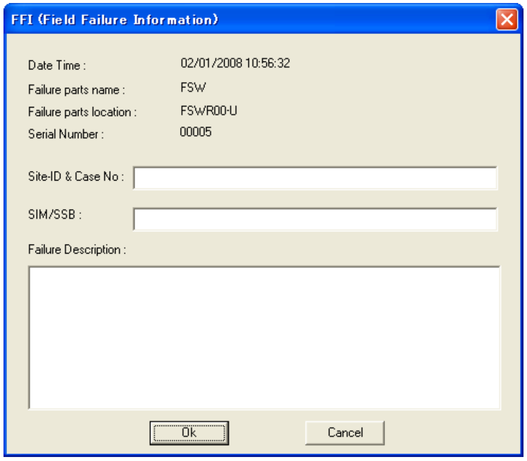

Replace

[ONL4253i]

Check the location of the disk drive that you want to insert.
After the check, insert the disk drive, then select [OK] button.
(HDD000-00)

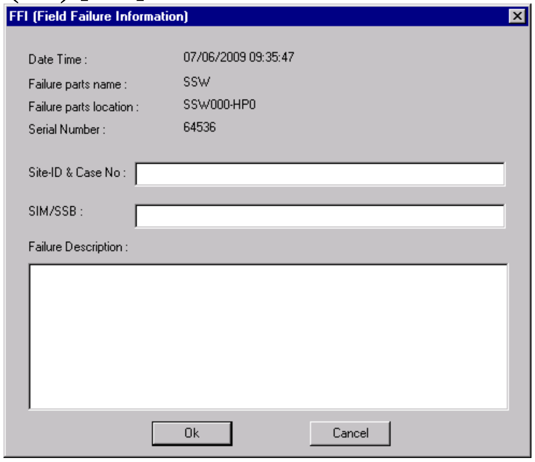
3-2. <Get the error information>

Input the Field Failure Information, and select (CL) [OK].


FFI (Field Failure Information)

Date Time : 02/01/2008 10:56:32
Failure parts name : FSW
Failure parts location : FSWR00-U
Serial Number : 00005

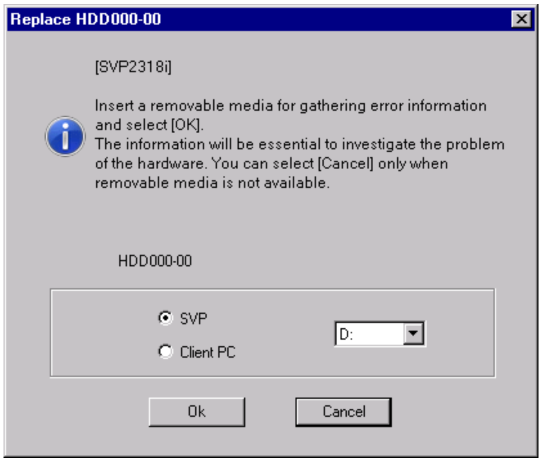
Site-ID & Case No :
SIM/SSB :
Failure Description :


FFI (Field Failure Information)

Date Time : 07/06/2009 09:35:47
Failure parts name : SSW
Failure parts location : SSW000-HP0
Serial Number : 64536

Site-ID & Case No :
SIM/SSB :
Failure Description :

"Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available." is displayed.
Select a Client PC arbitrary drive, and select (CL) [Ok].
Trouble information is preserved in console PC connected with SVP.
Please select the Client PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu.
The drive letter becomes the drive letter of console PC connected with SVP.


Replace HDD000-00

[SVP2318i]

Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.

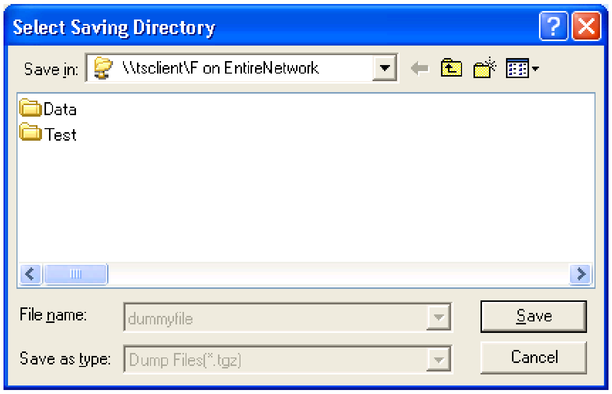
HDD000-00

● SVP
○ Client PC

D:

When Client PC is selected, the directory selection dialog is displayed.
Please select an arbitrary directory if necessary.

Console PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of console PC.


Select Saving Directory

Save in: \\tsclient\F on EntireNetwork

Data
Test

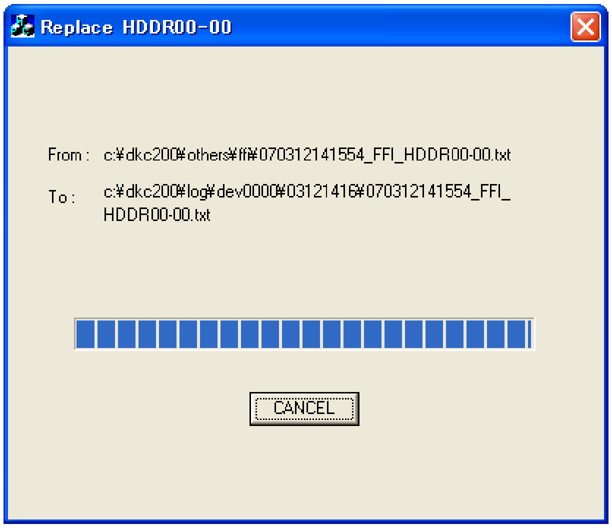
File name: dummyfile

Save as type: Dump Files(*.tgz)

Select (CL) [Save] when saving a file in a specified directory.
It returns to the drive selection screen when [Cancel] is selected (CL).

3-3. <Copy of the error information>

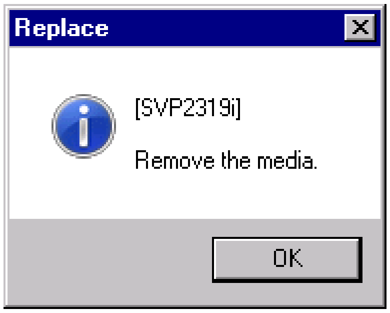
The error information is copied onto media.


Replace HDDR00-00

From : c:¥dkc200¥others¥ff¥070312141554_FFI_HDDR00-00.txt

To : c:¥dkc200¥log¥dev0000¥03121416¥070312141554_FFI_HDDR00-00.txt

“Remove the media.” is displayed.
Select (CL) [OK].


Replace

[SVP2319i]

Remove the media.

3-4. <Spin up the Physical Drive>

“Spinning up...” is displayed.

3-5. <DKU INLINE>

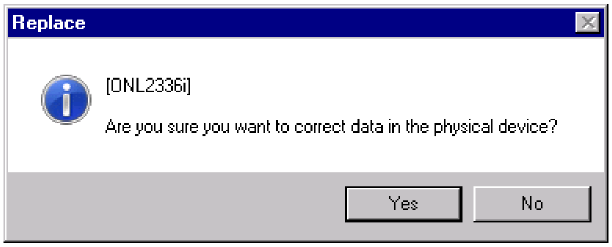
“DKU INLINE is now running...” is displayed.

3-6. <Replacement of the DKU micro-program>
When the revision of the DKU micro-program in the SVP hard disk is newer than that in the PDEV, the following message appears on the screen.
The message “Exchanging DKU micro-program...” appears.

3-7. <Restore Physical Drive>
“Restoring...” is displayed.

3-8. <Check the Physical Drive>
“Checking...” is displayed.
Device is still blocked.

3-9. <Check the beginning of correction copy>
Select (CL) [Yes] in response to “Are you sure you want to correct data in the physical device?”.



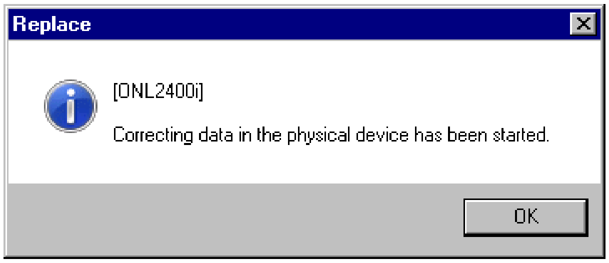
[ONL2336I]
Are you sure you want to correct data in the physical device?

3-10. <Correct data>
“Correcting...” is displayed.

3-11. <Check the starting of Correction copy>

Select (CL) [OK] in response to “Correcting data in the physical device has been started.”.

It goes to 3-12 when HDDFAN doors of the object are not closed.
It goes to 3-13 when HDDFAN doors of the object are closed.



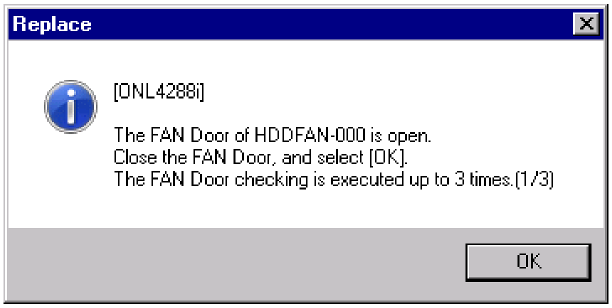
[ONL2400i]

Correcting data in the physical device has been started.

3-12. <Warning of HDDFAN door open>

(1)

“The FAN Door of HDDFAN-xxx is open.
Close the FAN Door, and select [OK].
The FAN Door checking is executed up to 3 times. (n/3)” is displayed.
After the FAN door is closed, select (CL) [OK] in response to this message.



[ONL4288i]

The FAN Door of HDDFAN-000 is open.
Close the FAN Door, and select [OK].
The FAN Door checking is executed up to 3 times.(1/3)

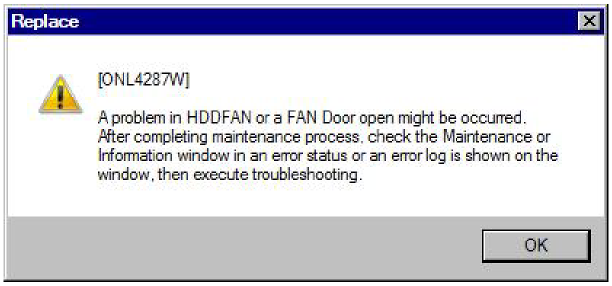
It returns to 3-12 when HDDFAN doors of the object are not closed.
It goes to 3-13 when HDDFAN doors of the object are closed.

Note: It goes to (2) when it cannot be confirmed that the FAN doors are closed in the three times FAN door check.

---

(2)

“A problem in HDDFAN or a FAN Door open might be occurred.
After completing the maintenance process, check the Maintenance or Information window in an error status or an error log is shown on the window, then execute troubleshooting.” is displayed.
Select (CL) [OK] in response to this message.

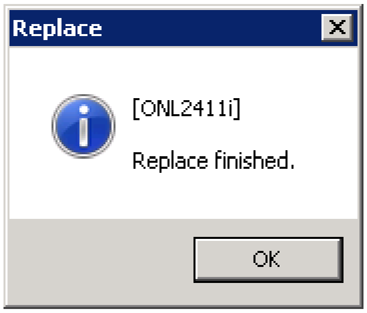


[ONL4287W]

A problem in HDDFAN or a FAN Door open might be occurred.
After completing maintenance process, check the Maintenance or Information window in an error status or an error log is shown on the window, then execute troubleshooting.

3-13. <Check the end of P-DEV recovery>

Select (CL) [OK] in response to “Replace finished.”.

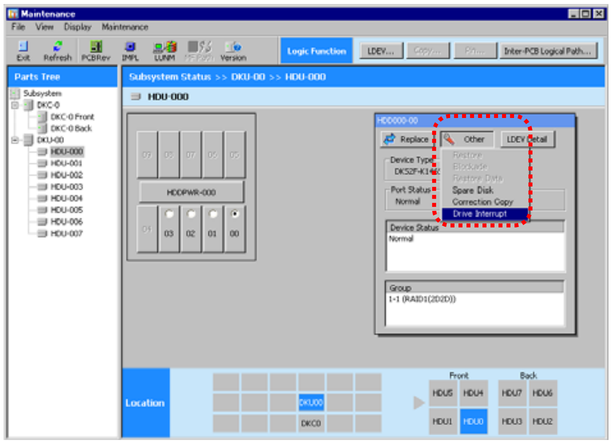


[ONL2411i]

Replace finished.

3-14.

When interrupting the correction copy, select the PDEV to which the copy is being made and select (CL) the [Drive Interrupt] button.



Device Type: DKS2F-K14

Port Status: Normal

Device Status: Normal

Group: 1-1 (RAID1(2D2D))

3-15.

Go to POST-PROCEDURE [REP04-01-10].

[DRIVE REPLACEMENT PROCESSING - RDK4]

— OUTLINE —

1. PRE-PROCESSING of SVP
   ① Select P-DEV (status check)
   ② Specify Replacement
   ③ Block parity group (enter password)
   ④ Restore the Logical Device
   ⑤ Place HDD into unpluggable state
   ⑥ Replace HDD
   ⑦ Perform steps ② to ⑤ on blocked drives in parity group
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
   ① Execute CUDG on P-DEV
   ② Perform L-DEV formatting on P-DEV
   ③ Recover with backup data

⚠ **CAUTION**

This is a special (exceptional) operation that can cause a serious failure such as a system down or a data loss and requires an input of a password. Ask the technical support division about the appropriateness of the operation, and input the password after getting an approval of executing the operation.

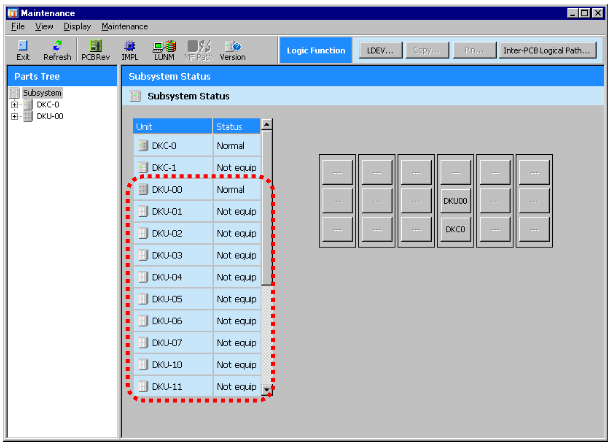
⚠ **CAUTION**

If No Charging of FMD (SIM = 50EXYY) occurs in replacement of a FMD, the FMD ACTIVE LED will change to low-speed blinking. In this case, it takes 90 minutes at most for the FMD ACTIVE LED to go out and for the battery in the FMD to be fully charged.

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

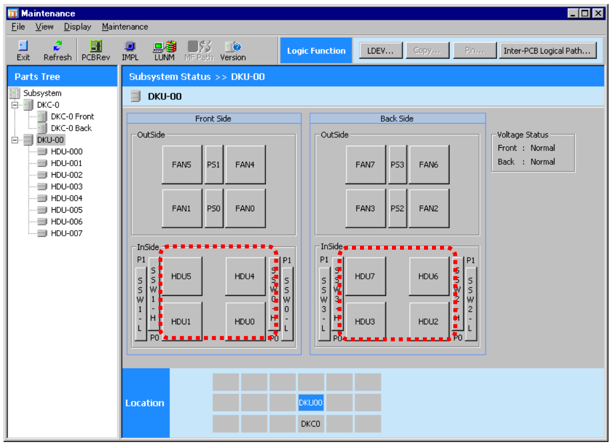
Open the ‘Maintenance’ window according to PRE PROCEDURE A (REP02-01-10). Select (CL) the DKU information [DKU-nn] of the DKU which installs the HDD to be replaced in the ‘Maintenance’ window.



Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <Select HDU>

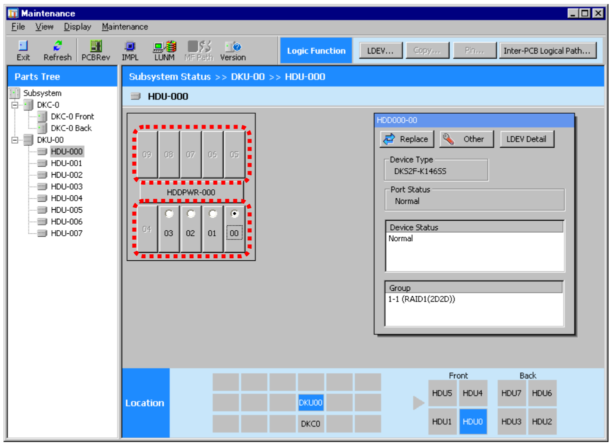
Select (CL) the HDU information [HDUn] of the HDU which installs the HDD to be replaced.



Voltage Status
Front : Normal
Back : Normal

1-3. <Select HDD>

Check and select (CL) [nn] to be replaced.

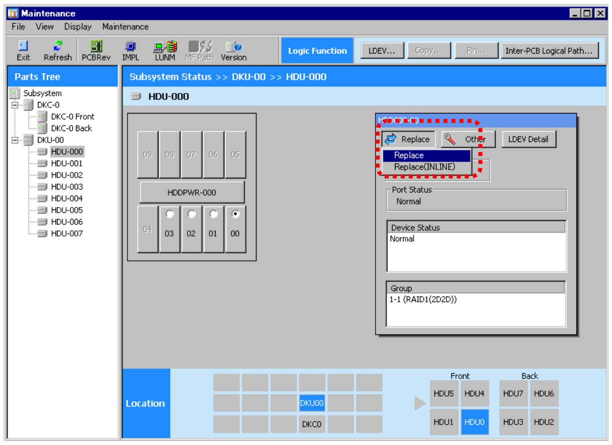


Device Type: DKS2F-K146SS
Port Status: Normal
Device Status: Normal
Group: 1-1 (RAID1(2D2D))

1-4. <Specify replacement of HDD>

Make sure that the “Device Status” is [Failed].

Select (CL) [Replace]-[Replace].



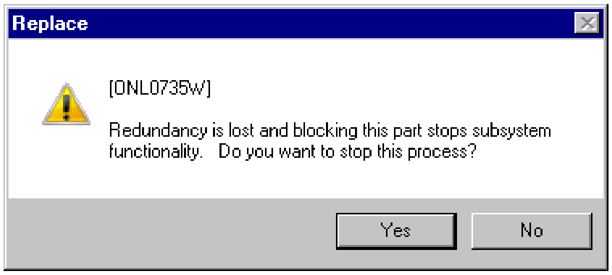
Port Status: Normal
Device Status: Normal
Group: 1-1 (RAID1(2D2D))

1-5. <Confirm lost data>

⚠ CAUTION

Executing this operation may cause a serious error such as a system down or a data loss. Accordingly, confirmation of the appropriateness of the operation and input of a password on the succeeding password input screen is required.

Select (CL) [No] in response to "Redundancy is lost and blocking this part stops subsystem functionality. Do you want to stop this process?".



[ONL0735W]

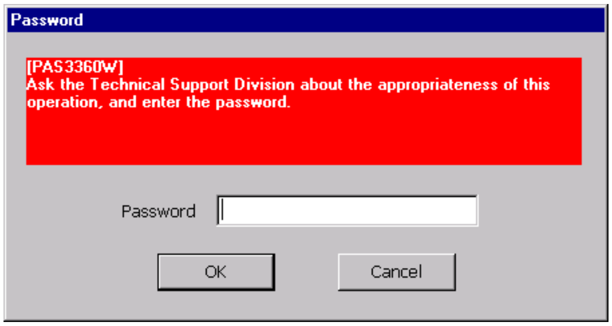
Redundancy is lost and blocking this part stops subsystem functionality. Do you want to stop this process?

1-6. <Enter password>

⚠ CAUTION

This is a special (exceptional) operation that can cause a serious failure such as a system down or a data loss and requires an input of a password. Ask the technical support division about the appropriateness of the operation, and input the password after getting an approval of executing the operation.

Enter the password in response to "Ask the Technical Support Division about the appropriateness of this operation, and enter the password." and select (CL) [OK]. Password is needed for this operation.



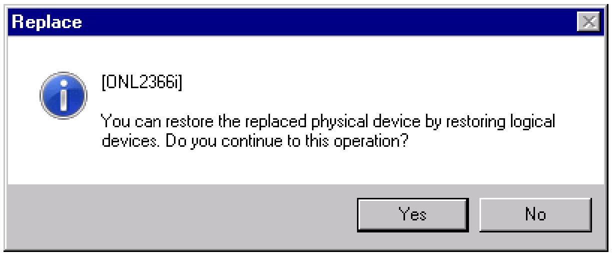
[PAS3360W]
Ask the Technical Support Division about the appropriateness of this operation, and enter the password.

1-7. <Checking the P-DEV status>

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

“Checking...” is displayed.

When “You can restore the replaced physical device by restoring logical devices. Do you continue to this operation?” is displayed, PDEV is automatically recovered by recovering LDEV.



[ONL2366i]

You can restore the replaced physical device by restoring logical devices. Do you continue to this operation?

When you replace PDEV and format LDEV, please select (CL) [Yes].
When you want to change LDEV into a collection access state for the purpose of data backup, please select [No] and go to LDEV recovery for multiple PDEV failures (step 1-7-1).

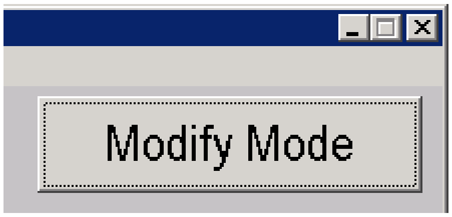
1-7-1. Restore the Logical Device

Notice:
Executing this operation may cause a serious error such as a system down or a data loss. Accordingly, confirmation of the appropriateness of the operation and input of a password on the succeeding password input screen is required.

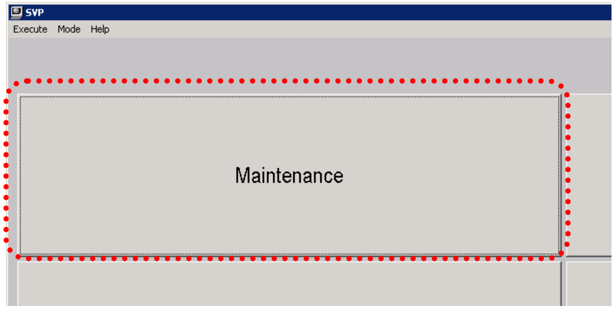
(1) <Preparation>
Close each menu of the starting SVP entirely.

---

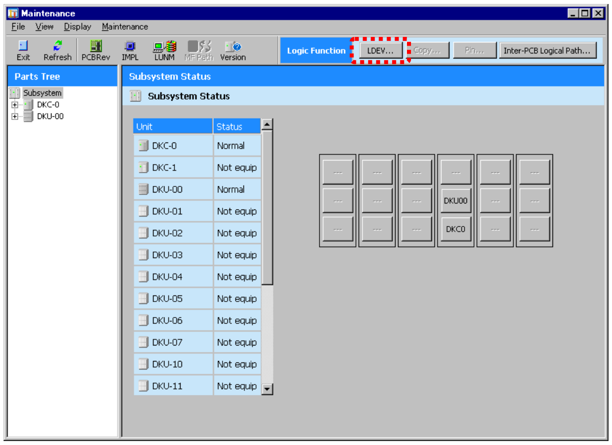
(2) <Start>
Change the mode to [Modify Mode].



Select (CL) the [Maintenance] in the 'SVP' window.



Select (CL) [LDEV...] on the dialog bar in the 'Maintenance' window.

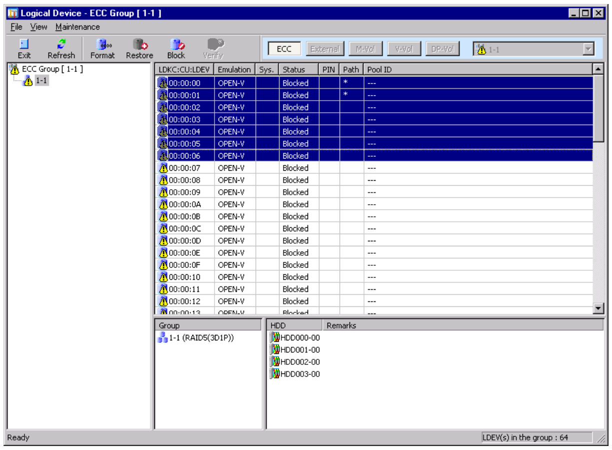


Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

(3) <Selection of Logical Device>

> Notice:
> Be careful enough not to make a mistake in selecting a device.

Select (CL) the target device (or group) from the list in the right of the 'Logical Device' window.


Logical Device - ECC Group [1-1]
File View Maintenance
Exit Refresh Format Restore Block Verify
ECC External M-Vol V-Vol DP-Vol
1-1
ECC Group [1-1]
1-1

LDKC:CU:LDEV	Emulation	Sys.	Status	PIN	Path	Pool ID
00:00:00	OPEN-V		Blocked		*	---
00:00:01	OPEN-V		Blocked		*	---
00:00:02	OPEN-V		Blocked			---
00:00:03	OPEN-V		Blocked			---
00:00:04	OPEN-V		Blocked			---
00:00:05	OPEN-V		Blocked			---
00:00:06	OPEN-V		Blocked			---
00:00:07	OPEN-V		Blocked			---
00:00:08	OPEN-V		Blocked			---
00:00:09	OPEN-V		Blocked			---
00:00:0A	OPEN-V		Blocked			---
00:00:0B	OPEN-V		Blocked			---
00:00:0C	OPEN-V		Blocked			---
00:00:0D	OPEN-V		Blocked			---
00:00:0E	OPEN-V		Blocked			---
00:00:0F	OPEN-V		Blocked			---
00:00:10	OPEN-V		Blocked			---
00:00:11	OPEN-V		Blocked			---
00:00:12	OPEN-V		Blocked			---
00:00:13	OPEN-V		Blocked			---

Group
1-1 (RAID5(3D1P))

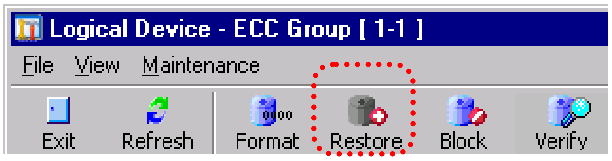
HDD	Remarks
HDD000-00	
HDD001-00	
HDD002-00	
HDD003-00	

Ready

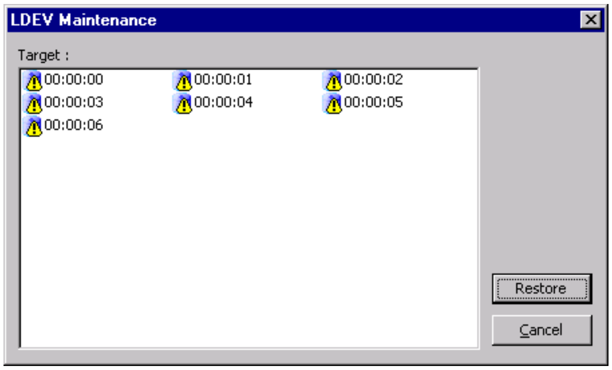
LDEV(s) in the group : 64

(4) <Execution>

Select (CL) [Restore] on the tool bar in the 'Logical Device' window.

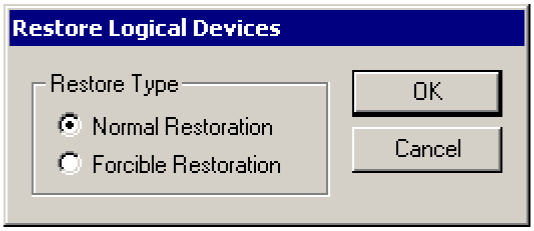


(5) <Check>
Check the device (or group) to be restored in the ‘LDEV Maintenance’ window, and select (CL) [Restore].



---

(6) <Selection of Recovery Processing>
Select (CL) [Restore Type] in the ‘Restore Logical Devices’ window, and select (CL) [OK].
“Normal Restoration”
“Forcible Restoration”



Restore Type
● Normal Restoration
○ Forcible Restoration

■Normal Restoration
Explanation:
In case LDEV(s) is (are) blocked due to multiple PDEV failures in one parity group, this option spins up the PDEV which was blocked last to restore the LDEV(s).
When to choose this option?
Use this option when you would like to restore the LDEV(s) that is (are) blocked due to multiple PDEV failures in one parity group.

Notice:
The purpose of this action is to restore the PDEV blocked last and restore the parity group status to “correction access”. Therefore do not replace or self-replace any failed HDD in the parity group before performing this action.

■Forcible Restoration

Explanation:

This option restores only the LDEV status forcibly without considering data consistency etc.

When all PDEV status in the parity group is “normal”, the LDEV status is changed from “blocked” to “normal”.

When to choose this option?

In case “Normal Restoration” cannot restore LDEV, use this option by following the instructions of the technical support division.

After PDEV is manually restored, the LDEV status is changed to “normal” forcibly.

> Notice:
> The data consistency may not be guaranteed. Contact the technical support division to ask for instructions.

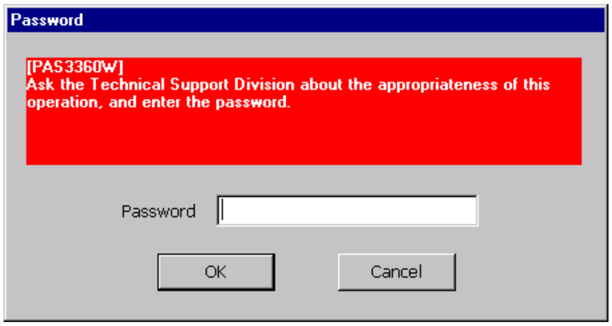
---

(7) <Password Input>

<u>This operation is required only when “Forcible Restoration” is selected in Step (6).</u>

> Notice:
> This is a special (exceptional) operation that can cause a serious failure such as a system down or a data loss and requires an input of a password. Ask the technical support division about the appropriateness of the operation, and input the password after getting an approval of executing the operation.

Corresponding to the following message, enter the password and select (CL) the [OK] button.
“Ask the Technical Support Division about the appropriateness of this operation, and enter the password.”



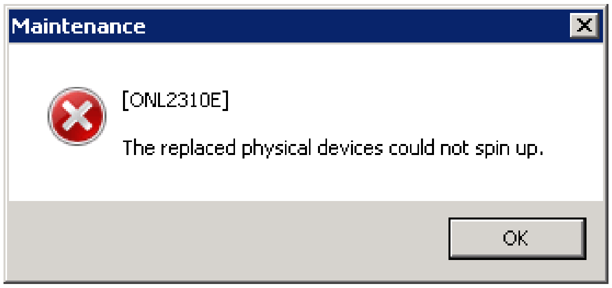
[PAS3360W]
Ask the Technical Support Division about the appropriateness of this operation, and enter the password.

(8) <Processing Wait>
The following message is displayed.
“Restoring the logical device...”

In case that, “Normal Restoration” is selected in Step (6).
If multiple PDEV failures, the restoration processing of the recoverable PDEV is performed here.

This processing cannot recover it when the following message is displayed.
“The replaced physical devices could not spin up.”

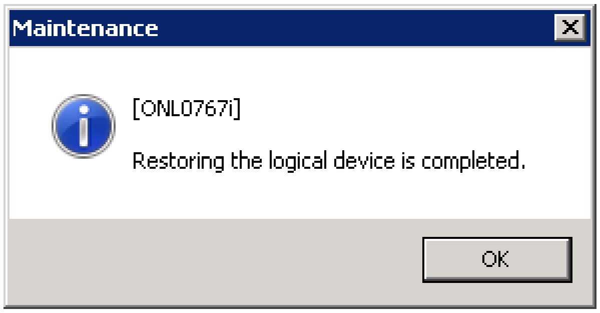
Perform the procedure RDK4 refer to REP01-170.


Maintenance

[ONL2310E]
The replaced physical devices could not spin up.

---

(9) <Completion Check>
When the restoration is completed, the following message is displayed. Select (CL) [OK].
“Restoring the logical device is completed.”


Maintenance

[ONL0767i]
Restoring the logical device is completed.

---

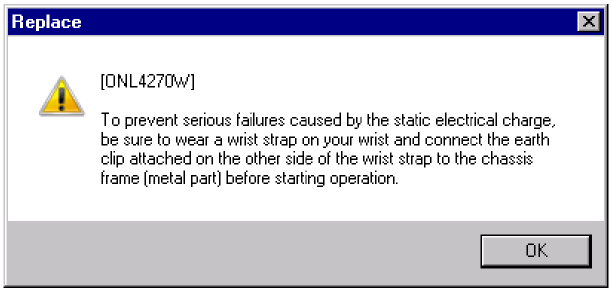
(10) <Check of Device Status>
Check the target device status in the ‘Logical Device’ window.

---

(11) <Post-processing>
Close the ‘Logical Device’ window.
Close the ‘Maintenance’ window.
Change the mode to [View Mode].

1-8. <Wear a wrist strap>

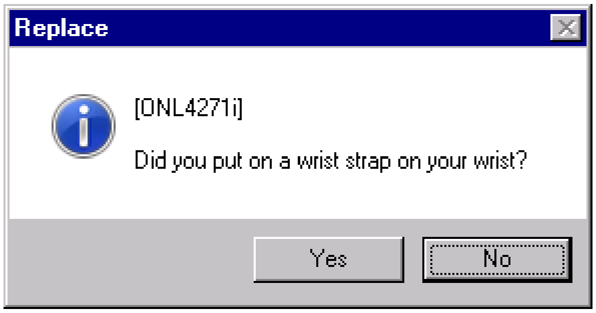
Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.



[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

(1) <Confirm wearing wrist strap>
In response to a message, “Did you put on a wrist strap on your wrist?”.
Select (CL) [Yes] when wrist strap is on your wrist.
Select (CL) [No] when there is no wrist strap on your wrist.
When [No] is selected (CL), go to Step (2).

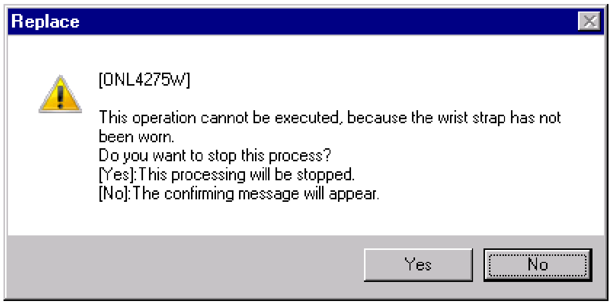


[ONL4271i]

Did you put on a wrist strap on your wrist?

(2)
In response to a message, “This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?
[Yes]: This processing will be stopped.
[No]: The confirming message will appear.”

When [Yes] is selected (CL), returned to Step 1-3.
When [No] is selected (CL), returned to Step 1-8.

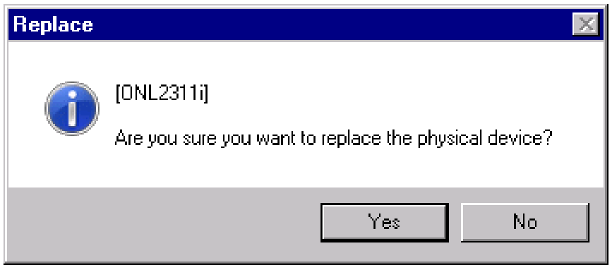


[ONL4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-9. <P-DEV blocking>

Select (CL) [Yes] in response to “Are you sure you want to replace the physical device?”.



[ONL2311i]

Are you sure you want to replace the physical device?

1-10. <Blocking the Physical device>

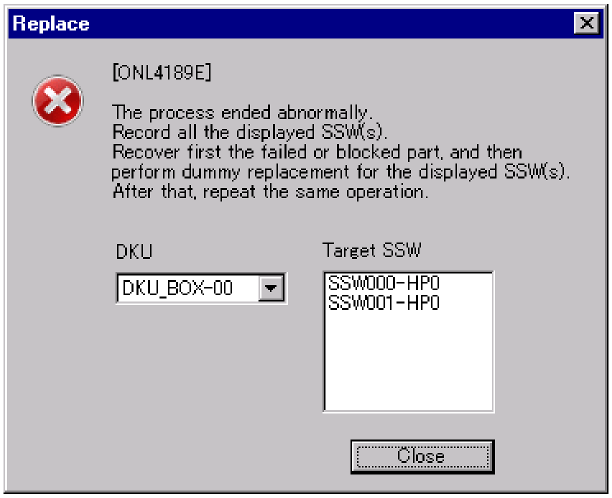
“Blocking...” is displayed.

1-11. <Spin down the Physical device>

"Spinning down..." is displayed.
The Shut down LED is lit.

Perform the dummy replacement of the displayed SSW(s) when the window is displayed. Select the DKU list and record the target SSW(s) because two or more DKU might be listed.
Select (CL) [Close] button and perform the dummy replacement of the target SSW(s).

Retry the replacement after completing the dummy replacement of SSW.



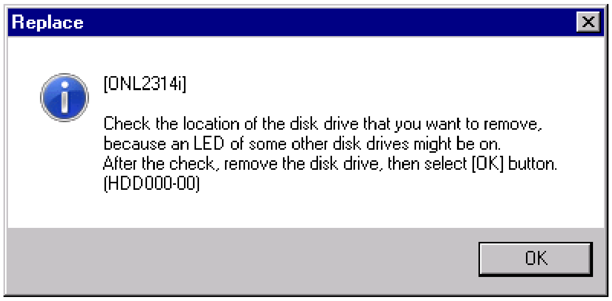
[ONL4189E]

The process ended abnormally.
Record all the displayed SSW(s).
Recover first the failed or blocked part, and then perform dummy replacement for the displayed SSW(s).
After that, repeat the same operation.

SSW000-HP0
SSW001-HP0

1-12. <Confirm Removal>

Select (CL) [OK] in response to "Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on. After the check, remove the disk drive, then select [OK] button. (HDDxnn-nn)" after the unit is removed. (Step 2-3)



[ONL2314i]

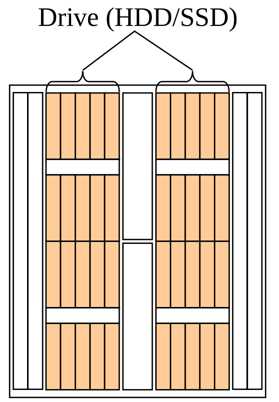
Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on.
After the check, remove the disk drive, then select [OK] button.
(HDD000-00)

1-13. <Replace HDD>

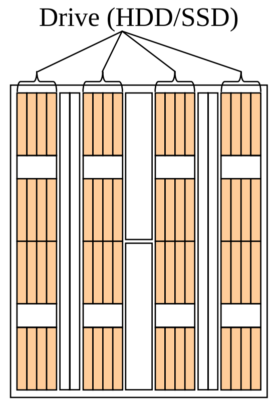
Replace HDD.
Go to "2. HARDWARE REPLACEMENT PROCESSING".

2. HARDWARE REPLACEMENT PROCESSING

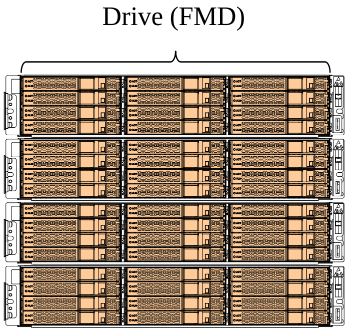
Location	Function Name of Component		Part Name	HDA Label
DKU	1	Disk Drive (HDD)	HDU700-146KCMSS	S5B-K146SS
				S5C-K146SS
			HDU700-300JCMSS	R5C-J300SS
				R5D-J300SS
				S5B-J300SS
				S5D-J300SS
				S5E-J300SS
			HDU700-300KCMSS	R5C-K300SS
				S5C-K300SS
			HDU700-500HCMSS	S5A-H500SS
				S5B-H500SS
			HDU700-600JCMSS	R5C-J600SS
				R5D-J600SS
				S5C-J600SS
				S5D-J600SS
				S5E-J600SS
			HDU700-900JCMSS	R5D-J900SS
				S5D-J900SS
				S5E-J900SS
			HDU700-1R0HCMSS	S5B-H1R0SS
			HDU700-1R2JCMSS	R5E-J1R2SS
				S5F-J1R2SS
			HDU700-2R0H2MAT	R2C-H2R0AT
				R2D-H2R0AT
				R2E-H2R0AT
			HDU700-2R0H3MSS	S2C-H2R0SS
				S2D-H2R0SD
				S2D-H2R0SS
				S2P-H2R0SS
				S2E-H2R0SS
				W2E-H2R0SS
			HDU700-3R0H3MSS	S2D-H3R0SS
				S2E-H3R0SS
				W2E-H3R0SS
			HDU700-4R0H3MSS	S2E-H4R0SS
				W2E-H4R0SS
	2	Flash Drive (SSD)	HDU700-200MCMSS	B5A-M200SS
				R5B-M200SS
			HDU700-200SAMSS	T5A-S200SS
				T5C-S200SS
			HDU700-200SCMSS	R5A-S200SS
				R5B-S200SS
			HDU700-400MCMSS	B5A-M400SS
				R5B-M400SS
			HDU700-400SCMSS	R5A-S400SS
				R5B-S400SS
			HDU700-800MCMSS	B5A-M800SS
			HDU700-400S1MSS	T2A-S400SS
				T2C-S400SS
Front View of FBX DKU	3	Flash Module Drive (FMD)	HDU700-1R6FMSS	H1A-P1R6SS
				H1C-P1R6SS
			HDU700-3R2FMSS	H1B-P3R2SS
				H1C-P3R2SS



Front or Rear View of DKU
(In case of 3.5inch Drive)



Front or Rear View of DKU
(In case of 2.5inch Drive)



Front View of DKU
(In case of FMD)

NOTICE:

- Replace the drive in the subsystem in power on status only.
  Do not replace the drive in power off status.
- Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.
- HDD is a precise component. Be careful in handling HDD to avoid vibration and impact.

2-1. Open the FAN door.

2-1-1. In case of 3.5inch/2.5inch drive

a. Put the stopper of the FAN door into the open able and closable state. (Refer to the INST03-01-160.)

b. Loosen the two screws and open the FAN door.

2-1-2. In case of FMD

a. Go to procedure 2-2. Check the Shut Down LED.

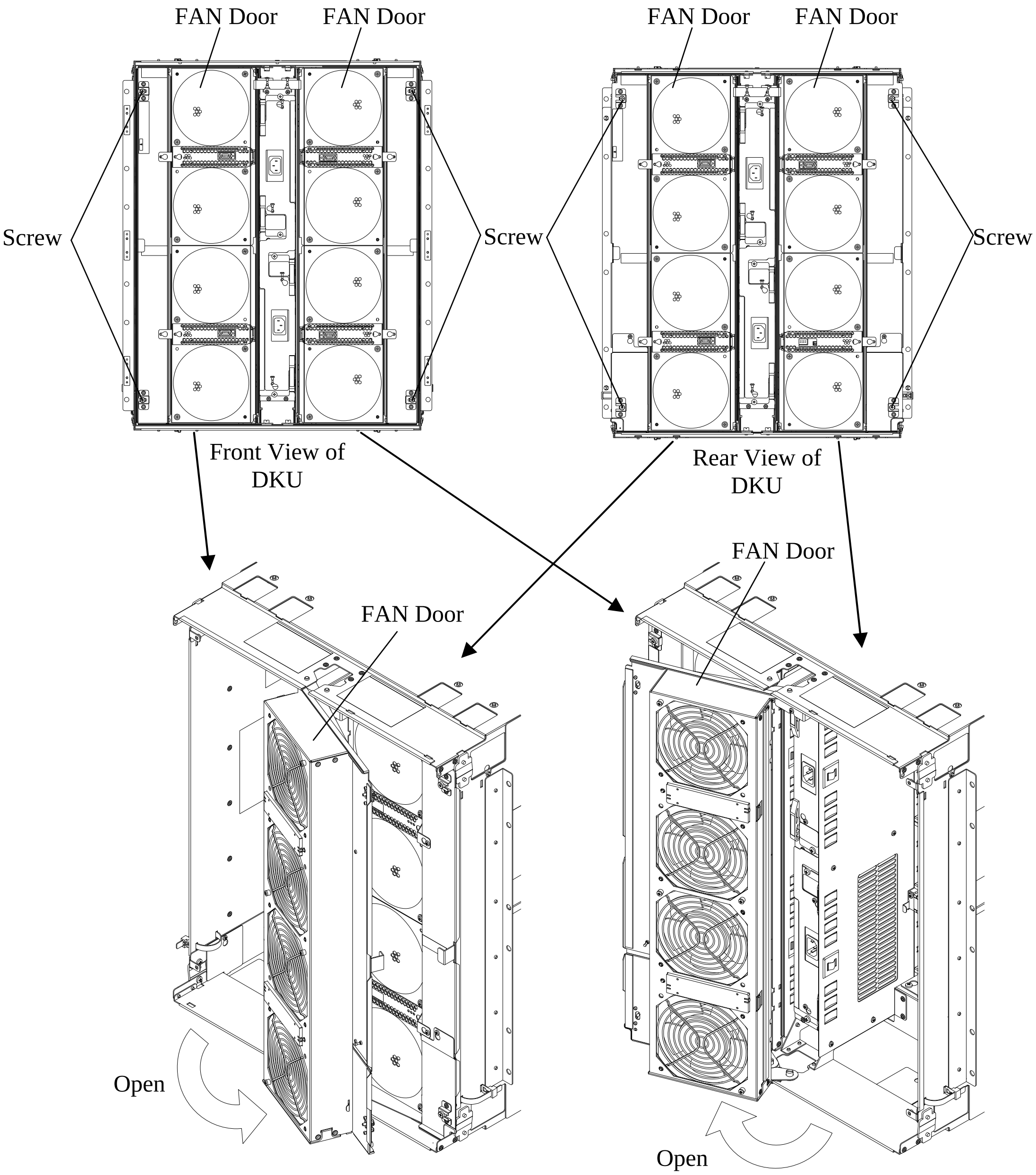
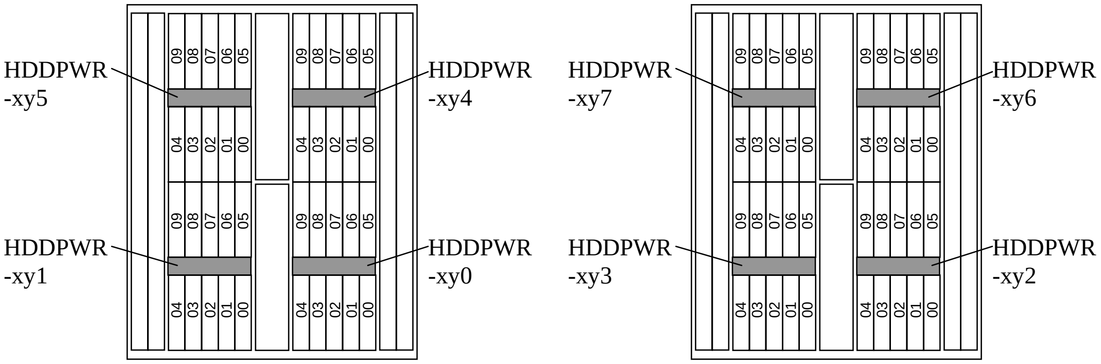


Fig. 3.4.2-1 FAN Door Opening

2-2. Check the Shut Down LED.

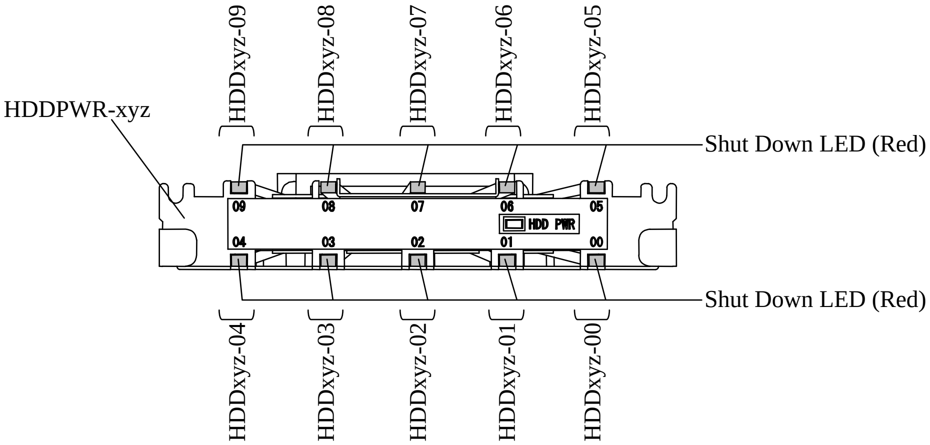
2-2-1. In case of 3.5inch/2.5inch drive

a. Check that the Shut Down LED on the HDDPWR corresponding to drive (HDD/SSD) is turned on. Refer to Fig. 3.4.2-2 or 3.4.2-3.



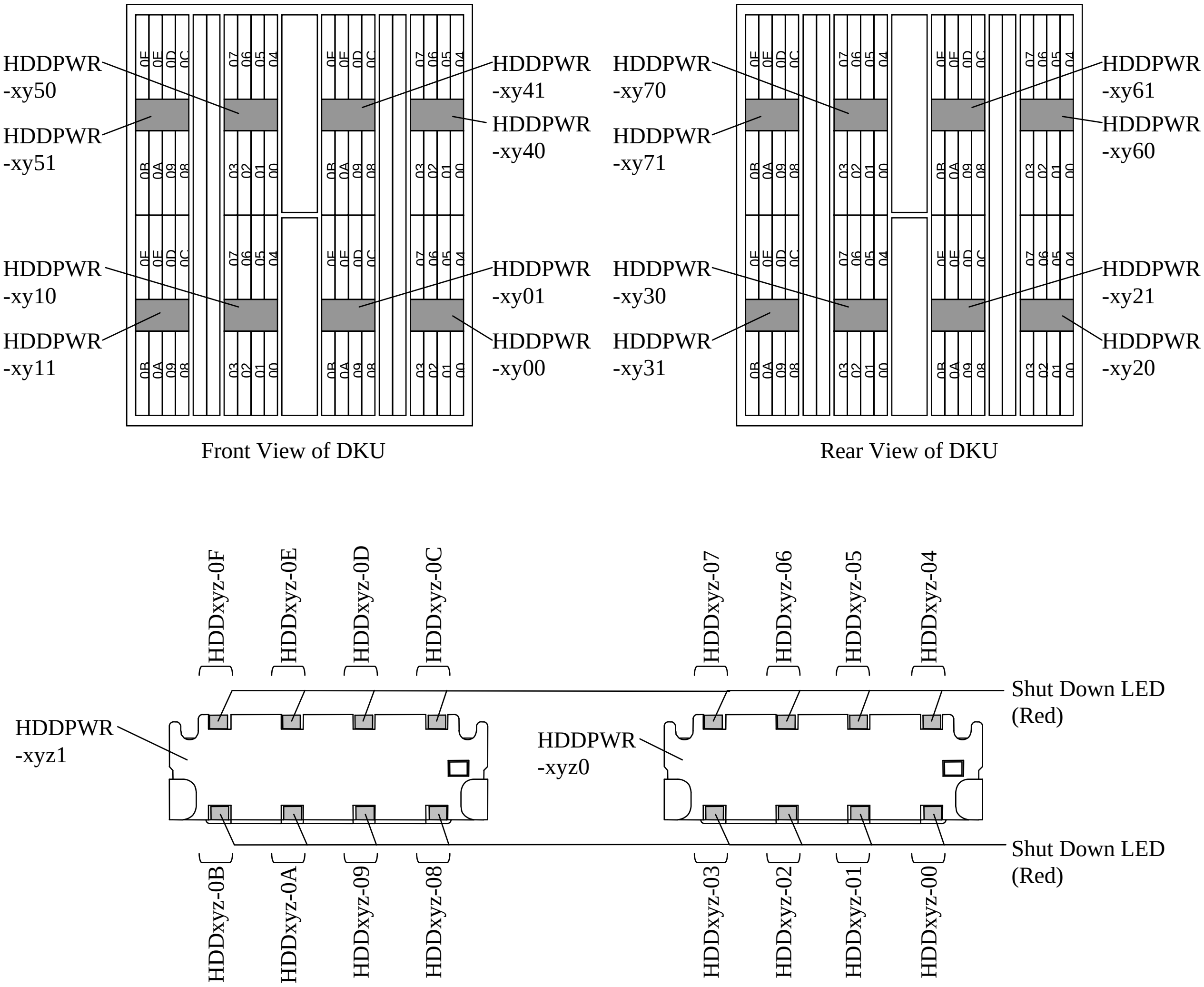
Front View of DKU

Rear View of DKU



Note: HDDPWR-xyz
→HDU No. (0, 1, 2, ..., 7)
→DKU No. (0, 1, 2, ..., 7)
→DKC No. (0, 1)

Fig. 3.4.2-2 Checking of Shut Down LED (In case of 3.5inch Drive)

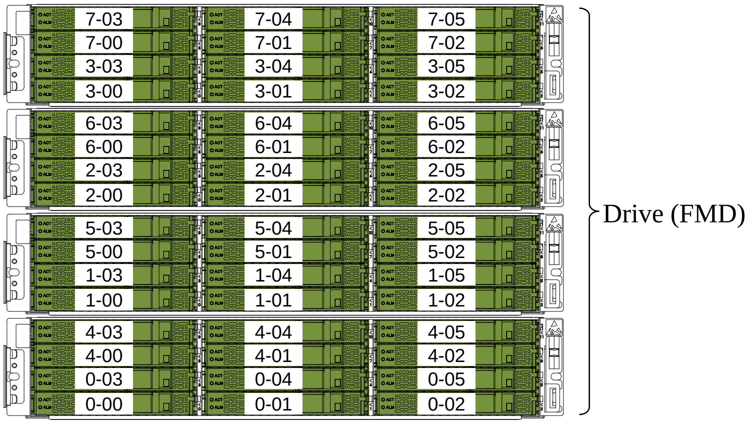


Note: HDDPWR-xyz
→HDU No. (0, 1, 2,….., 7)
→DKU No. (0, 1, 2,….., 7)
→DKC No. (0, 1)

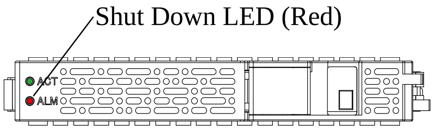
Fig. 3.4.2-3 Checking of Shut Down LED (In case of 2.5inch Drive)

2-2-2. In case of FMD

a. Check that the Shut Down LED on drive is turned on.



Front View of FBX DKU



Front View of Drive (FMD)

Fig. 3.4.2-3A Checking of Shut Down LED (In case of FMD)

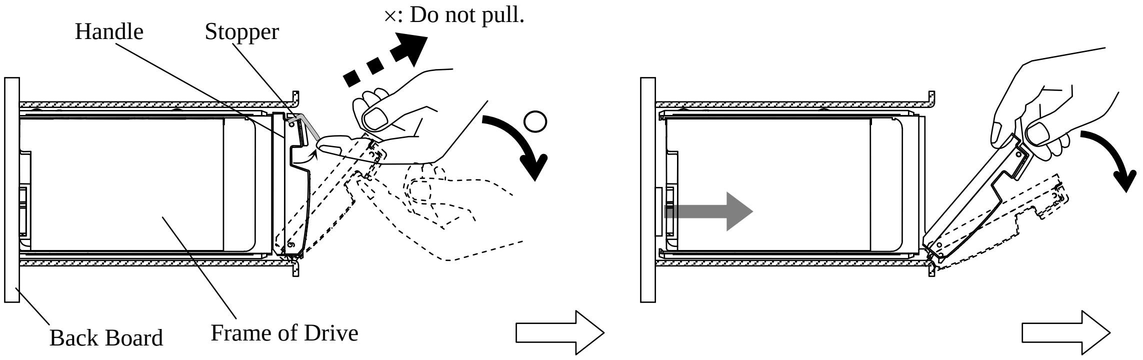
2-3. Remove the drive.

2-3-1. In case of 3.5inch drive.

a. Push up the stopper of drive, and bring the handle down. Don't pull the handle during this process.
b. Push down the handle.
c. Pull out the drive.
d. Fig. 3.4.2-5 illustrates the case of wrong procedure.

a. Push up the stopper of the drive, and bring the handle down.

b. Push down the handle.



c. Pull out the drive.

Note: Do not pull out the drive while pushing up the stopper.

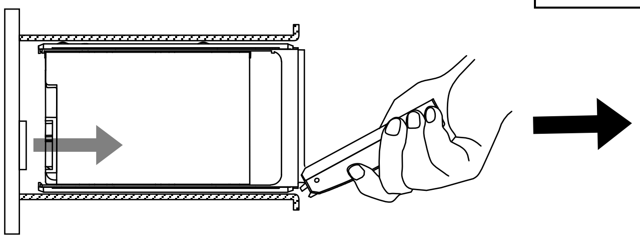


Fig. 3.4.2-4 Removal of Drive

Wrong Procedure

a. Push up the stopper.

b. Pull out the drive in the diagonal upper direction with the finger putting on the stopper.

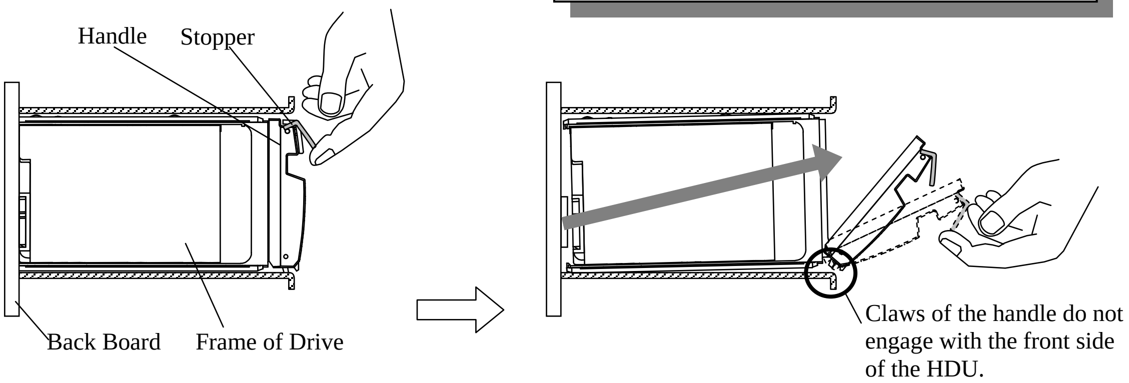
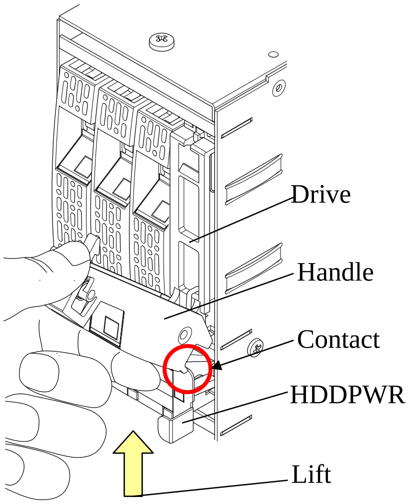

Handle
Stopper
Back Board
Frame of Drive
Claws of the handle do not engage with the front side of the HDU.

Fig. 3.4.2-5 Removal of Drive (Wrong Procedure)

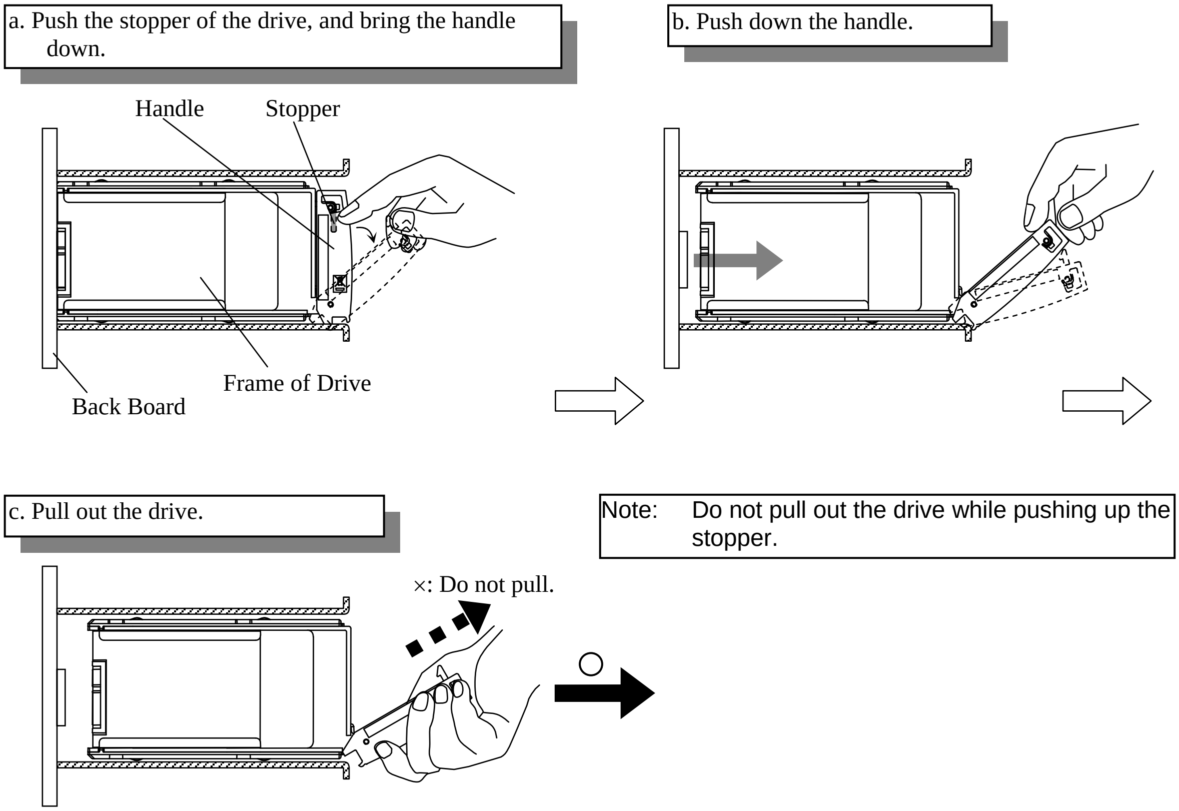
2-3-2. In case of 2.5inch drive.



Instruction for the insertion and removal of the 2.5-inch drive:

The upper part of HDDPWR might come in contact with the lower part of the drive, and it becomes an obstruction of the insertion and removal at the time of the 2.5-inch drive insertion and removal. In this case, avoid the HDDPWR by lifting the drive lightly.

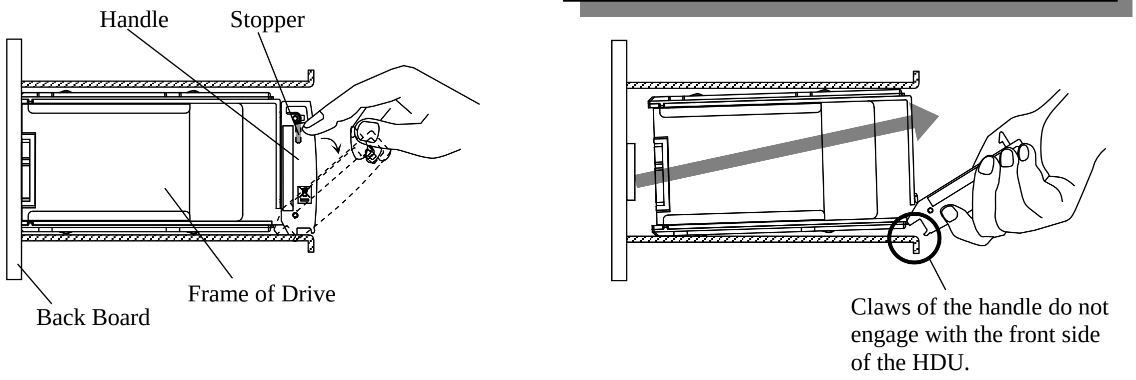
a. Push the stopper of drive, and bring the handle down. Don’t pull the handle during this process.
b. Push down the handle.
c. Pull out the drive.
d. Fig. 3.4.2-7 illustrates the case of wrong procedure.



Note: Do not pull out the drive while pushing up the stopper.

Fig. 3.4.2-6 Removal of Drive

Wrong Procedure


a. Push the stopper.

b. Pull out the drive in the diagonal upper direction with the finger putting on the stopper.

Handle
Stopper
Frame of Drive
Back Board
Claws of the handle do not engage with the front side of the HDU.

Fig. 3.4.2-7 Removal of Drive (Wrong Procedure)

2-3-3. In case of FMD

Notice: When the FMD is removed in replacing procedure, the fans of the DKUPS equipped in the rear of the FBX DKU rotate at the highest speed. When the spare FMD is installed, the fans of the DKUPS rotate at the speed suitable for environmental temperature.

a. Pull the stopper of the drive handle toward you to have the lock off.
b. Tilt the handle toward you, and then remove the drive by pulling it out taking care not to apply a shock to it.

Note: When handling the drive, hold the rail side because the shield spring is subject to breakage.

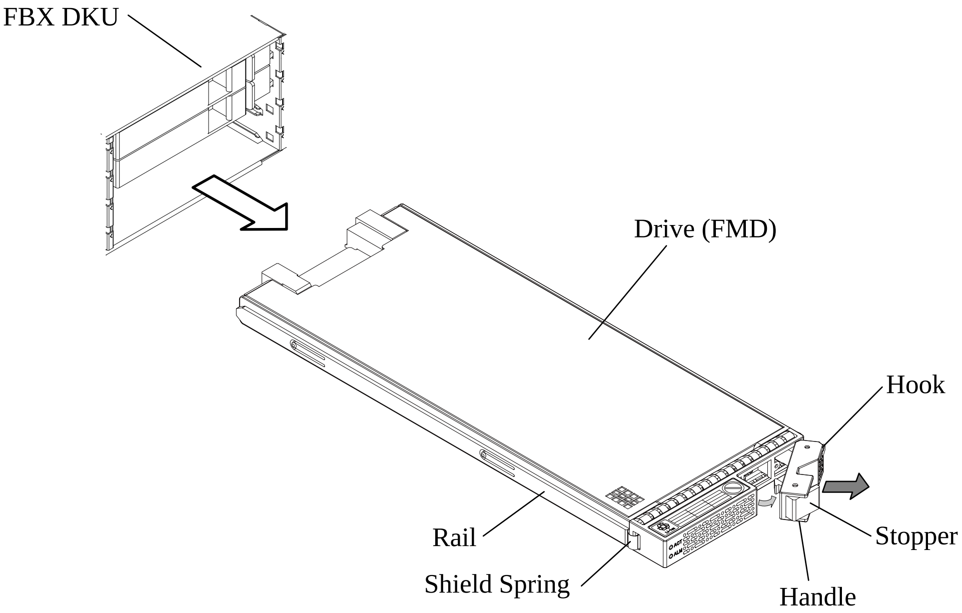
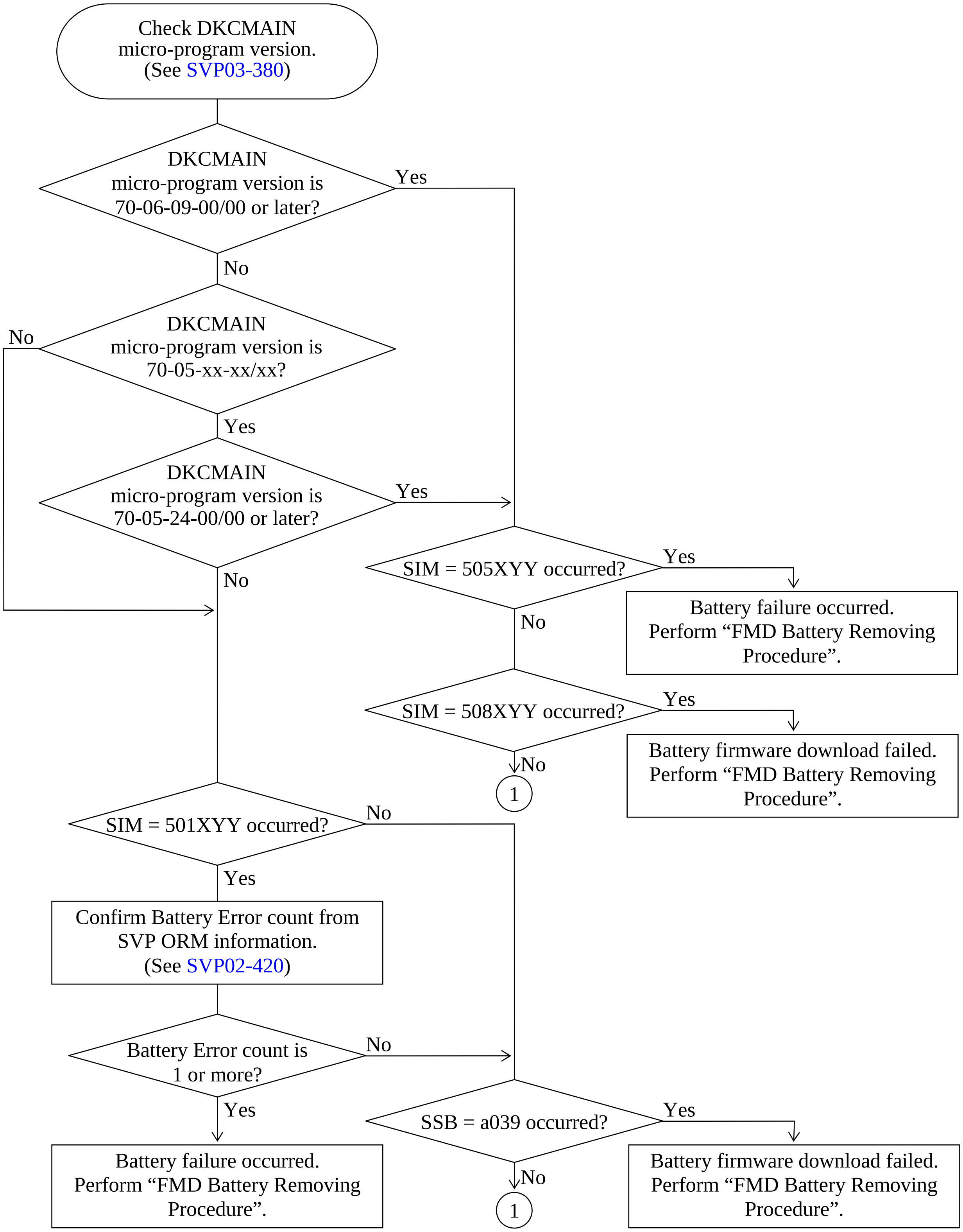
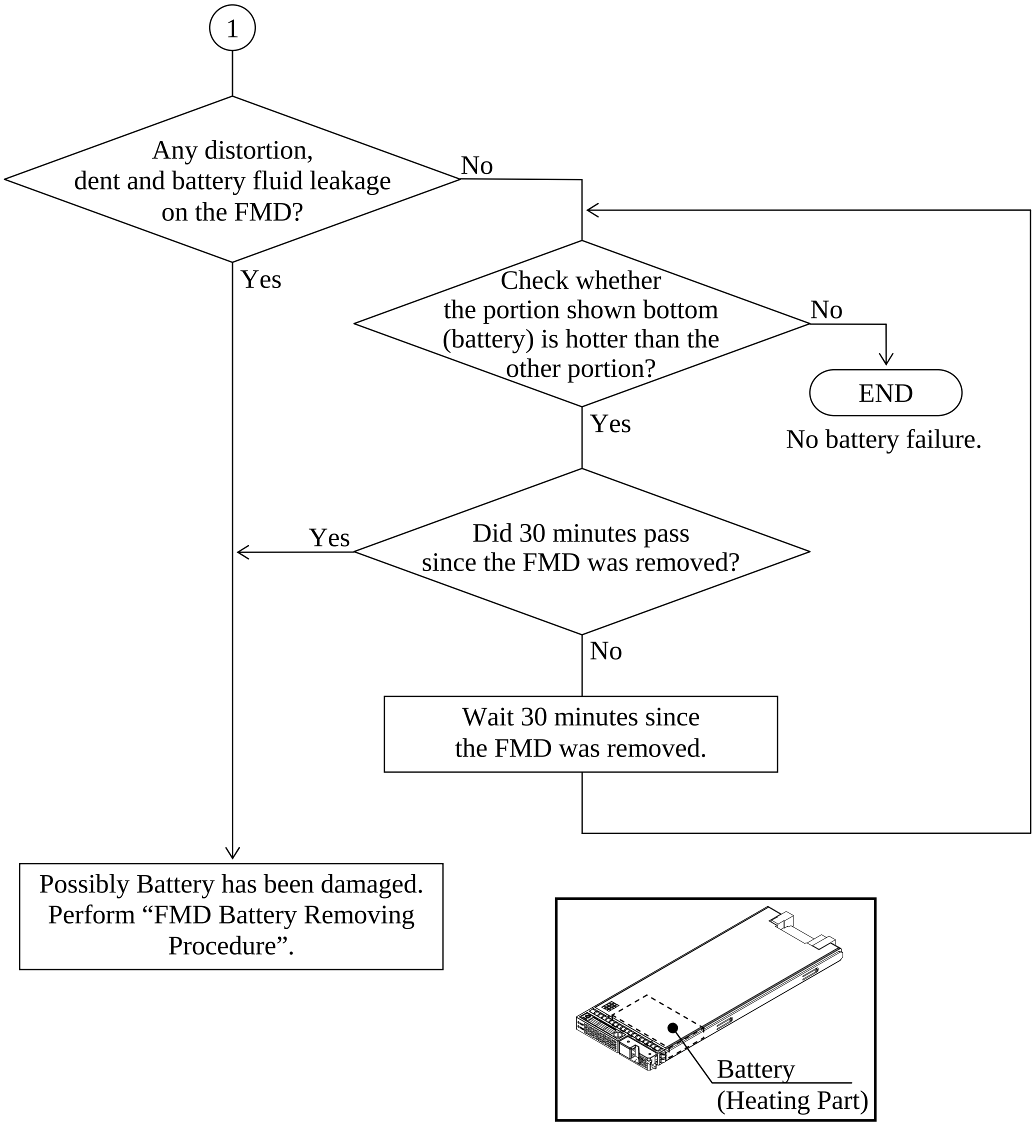


Fig. 3.4.2-7A Removal of Drive (In case of FMD)

c. Check whether a failure of the battery built in the FMD has occurred by using the flowchart below. If a battery failure has occurred, remove the battery from the FMD. If no battery failure has occurred, go to Procedure 2-4.


Check DKCMAIN micro-program version. (See SVP03-380)
DKCMAIN micro-program version is 70-06-09-00/00 or later?
Yes
No
DKCMAIN micro-program version is 70-05-xx-xx/xx?
No
Yes
DKCMAIN micro-program version is 70-05-24-00/00 or later?
Yes
No
SIM = 505XYY occurred?
Yes
Battery failure occurred. Perform “FMD Battery Removing Procedure”.
No
SIM = 508XYY occurred?
Yes
Battery firmware download failed. Perform “FMD Battery Removing Procedure”.
No
1
SIM = 501XYY occurred?
No
Yes
Confirm Battery Error count from SVP ORM information. (See SVP02-420)
Battery Error count is 1 or more?
No
Yes
Battery failure occurred. Perform “FMD Battery Removing Procedure”.
SSB = a039 occurred?
Yes
Battery firmware download failed. Perform “FMD Battery Removing Procedure”.
No
1


1
Any distortion, dent and battery fluid leakage on the FMD?
No
Yes
Check whether the portion shown bottom (battery) is hotter than the other portion?
No
END
No battery failure.
Yes
Did 30 minutes pass since the FMD was removed?
Yes
No
Wait 30 minutes since the FMD was removed.
Possibly Battery has been damaged. Perform “FMD Battery Removing Procedure”.
Battery
(Heating Part)

d. FMD Battery Removing Procedure

(d)-1 Remove 4 Screws (SB310N) on the bottom side of FMD by using cross-head screw driver.

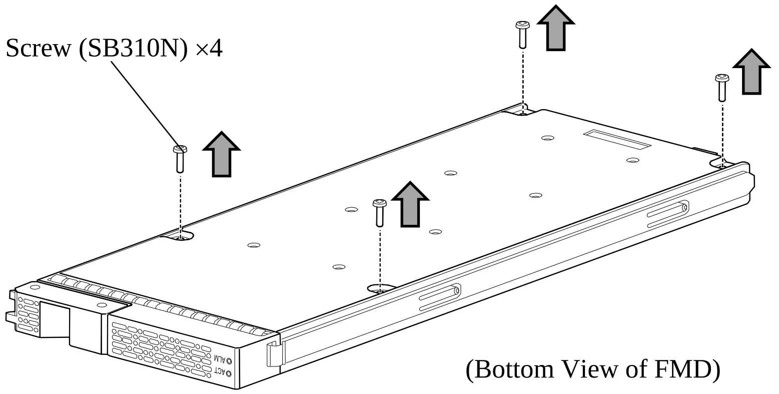


Fig. 3.4.2-7B Removing Screws

(d)-2 Remove Top Cover and Bottom Cover.

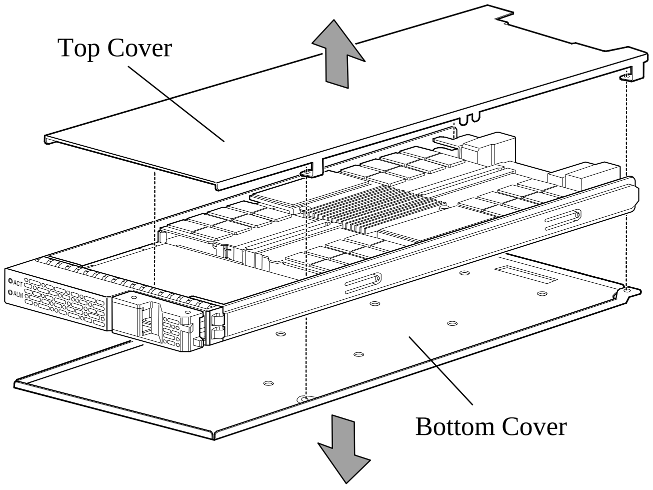


Fig. 3.4.2-7C Removing Covers

(d)-3 Remove 2 sets of Tapping-screw and Washer by using cross-head screw driver.

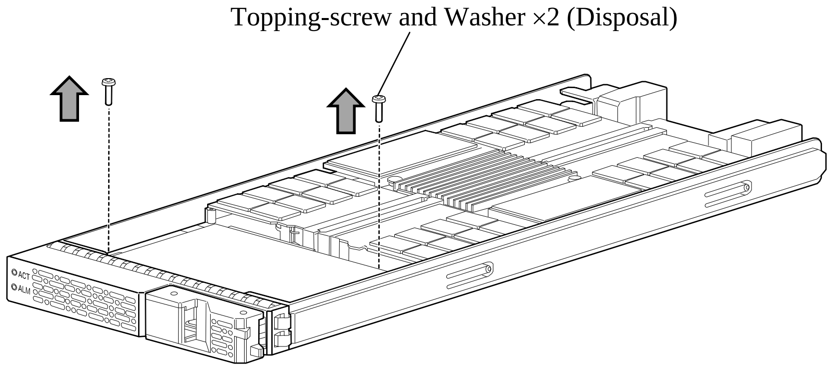


Fig. 3.4.2-7D Removing Tapping-screws and Washers

(d)-4 Move the Battery to the bezel side and disconnect the Battery from the circuit board.

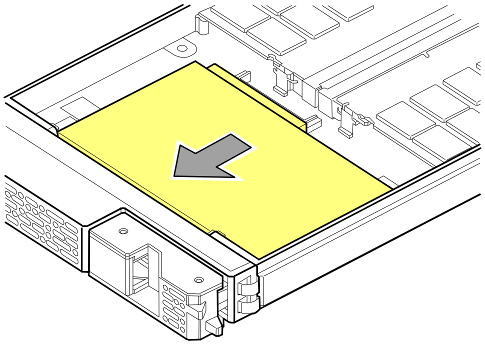


Fig. 3.4.2-7E Disconnecting from Connector

(d)-5 Remove the Battery to the bottom side of FMD. (After the connector comes off, battery is lowered below.)

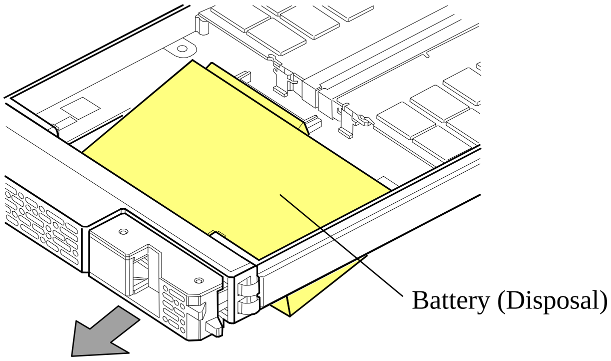


Fig. 3.4.2-7F Removing Battery

(d)-6 Attach Top Cover and Bottom Cover.
(d)-7 Attach 4 Screws (SB310N) on the bottom side of FMD.

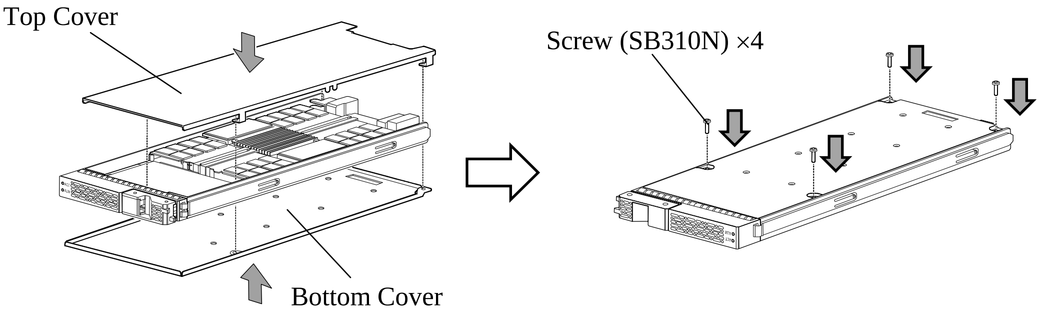


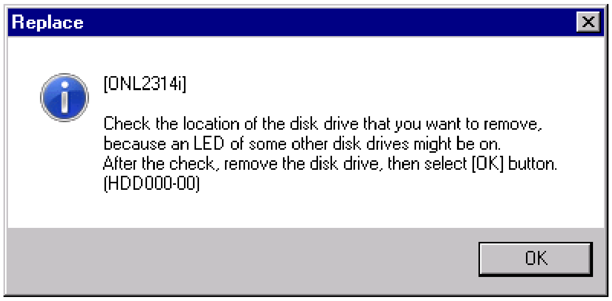
Fig. 3.4.2-7G Reassembling FMD

(d)-8 Dispose of the Tapping-screws, Washers and Battery removed in procedures (d)-3 and (d)-5.
When dispose of the Battery, follow the directions given by the local law where the product is used.

2-4. Check and handling of the drive.

(1) <Confirm Removal>

Select (CL) [OK] in response to “Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on. After the check, remove the disk drive, then select [OK] button. (HDDxnn-nn)” after the unit is removed. (Step 2-3)



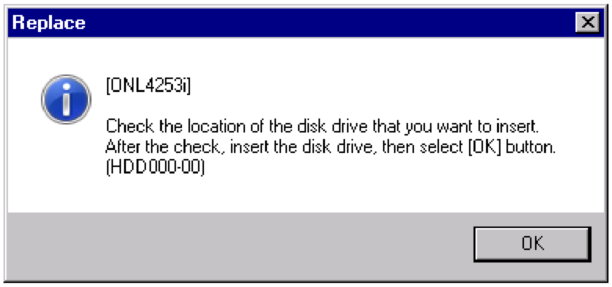
[ONL2314i]

Check the location of the disk drive that you want to remove,
because an LED of some other disk drives might be on.
After the check, remove the disk drive, then select [OK] button.
(HDD000-00)

---

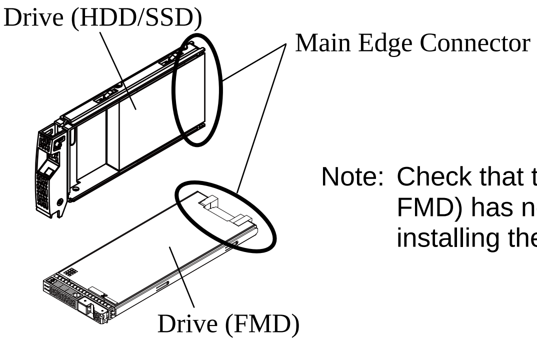
(2) <Confirm Insertion>

“Check the location of the disk drive that you want to insert. After the check, insert the disk drive, then select [OK] button. (HDDnnn-nn)” is displayed.



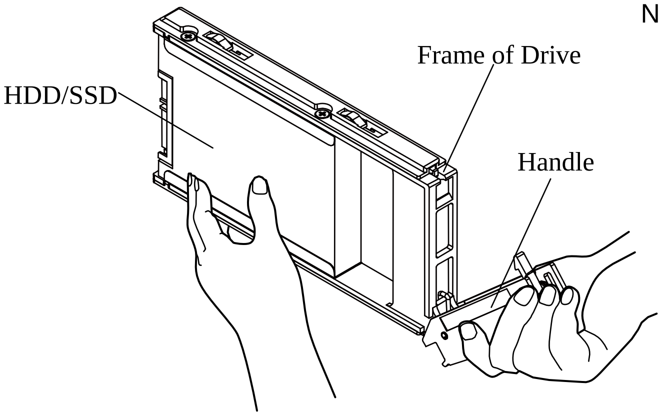
[ONL4253i]

Check the location of the disk drive that you want to insert.
After the check, insert the disk drive, then select [OK] button.
(HDD000-00)



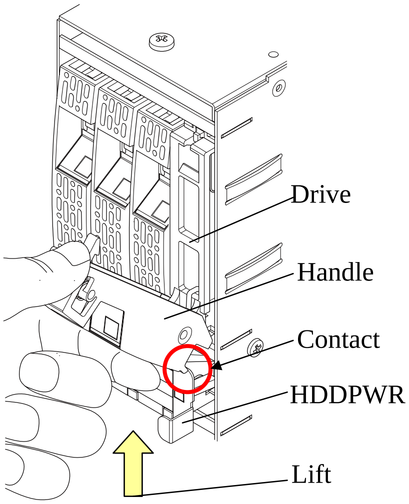
Note: Check that the main edge connector of the drive (HDD/SSD/FMD) has no deformation, damage or sticking of dust before installing the drive.

Handling of Drive



Note on the installation:
Do not insert the drive by pushing its frame.

2-5. Install the drive.



Instruction for the insertion and removal of the 2.5-inch drive:

The upper part of HDDPWR might come in contact with the lower part of the drive, and it becomes an obstruction of the insertion and removal at the time of the 2.5-inch drive insertion and removal. In this case, avoid the HDDPWR by lifting the drive lightly.

Caution – Back Board, or drive connector or drive handle may be damaged when the drive is forcibly inserted.

If the drive cannot be easily inserted until the claws on the handle reach the DKU, or if the handle binds or stops before it can be locked, then remove the drive and perform inspection:

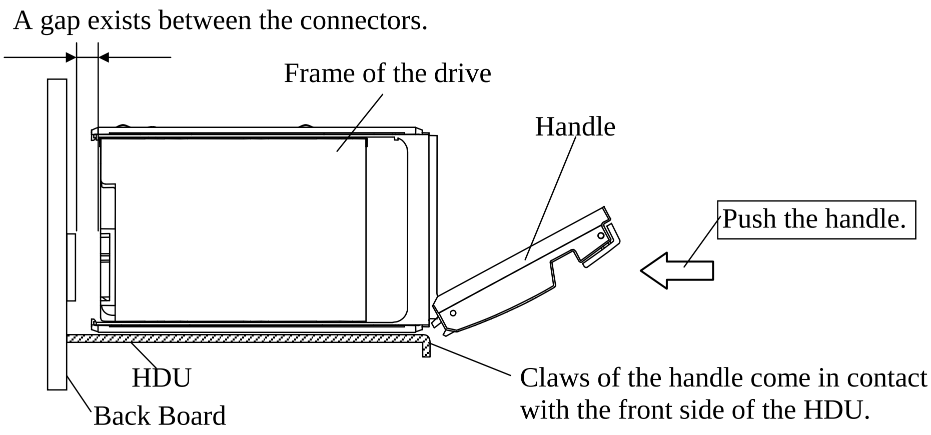
a) Check the drive slot in DKU to be free and clear of obstructions.
b) Check connector on back board for visible defects.
c) Inspect connector on drive for visible defects.
d) Inspect drive top and bottom guide for defects. Note special alignment tab on bottom guide on some drive. A damaged tab can bind on the lower slot guides in DKU.
e) During installation make sure the drive is inserted in alignment with slot guides.
f) Check upper rear spring on SSD has been removed. (This applies only on SSD)
Reinsert drive after inspections have passed.

2-5-1. In case of 3.5inch/2.5inch drive

a. Insert the drive into the HDU holding its handle.
(Insert the canister until the claws that are located at the bottom of the handle come in contact with the front side of the HDU.)

b. Turn the handle at a stroke by pushing its top with your thumb.
(Turn the handle until it latches with the stopper. Do not stop the handle on its way of turning.)

a. Insert the HDD/SSD canister into the HDU holding its handle.


A gap exists between the connectors.
Frame of the drive
Handle
Push the handle.
HDU
Back Board
Claws of the handle come in contact with the front side of the HDU.

b. Turn the handle at a stroke by pushing its top with your thumb.
(Do not stop the handle on its way of turning.)

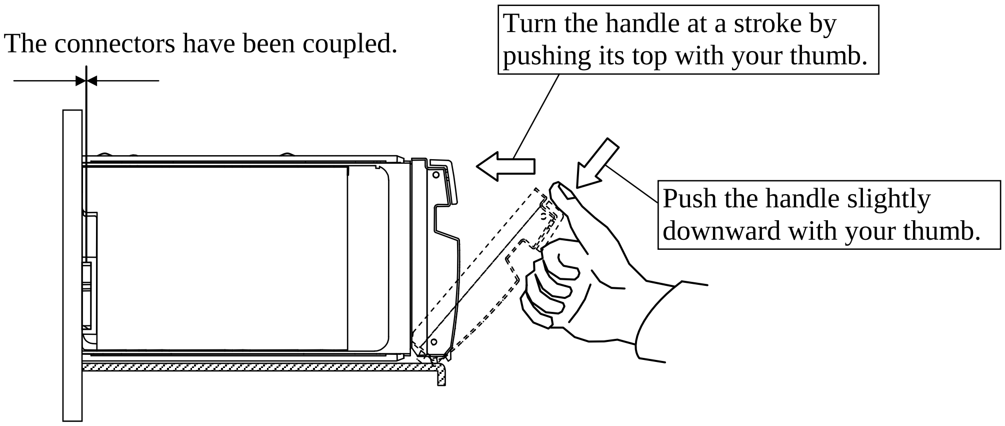

The connectors have been coupled.
Turn the handle at a stroke by pushing its top with your thumb.
Push the handle slightly downward with your thumb.

Fig. 3.4.2-8 Method of Installing Drive

c. Close the FAN door and tighten the screws. (Refer to Fig. 3.4.2-1.)

d. Put the FAN door stopper into the neutral state.

2-5-2. In case of FMD

Note: When handling the drive, hold the rail side because the shield spring is subject to breakage.

a. Open the handle fully and fit the drive in the guide rail and slide it in the direction shown by the arrow not to give a shock.

b. Push the drive in until it reaches the position where a hook of the handle can be entered into the square hole on a frame.

c. Pull the stopper lightly and close the handle, and then press the stopper to have the lock on. If the handle is closed in the state where the hook of the handle cannot enter into the square hole, the drive cannot be installed correctly because it runs into the frame of the FBX DKU.

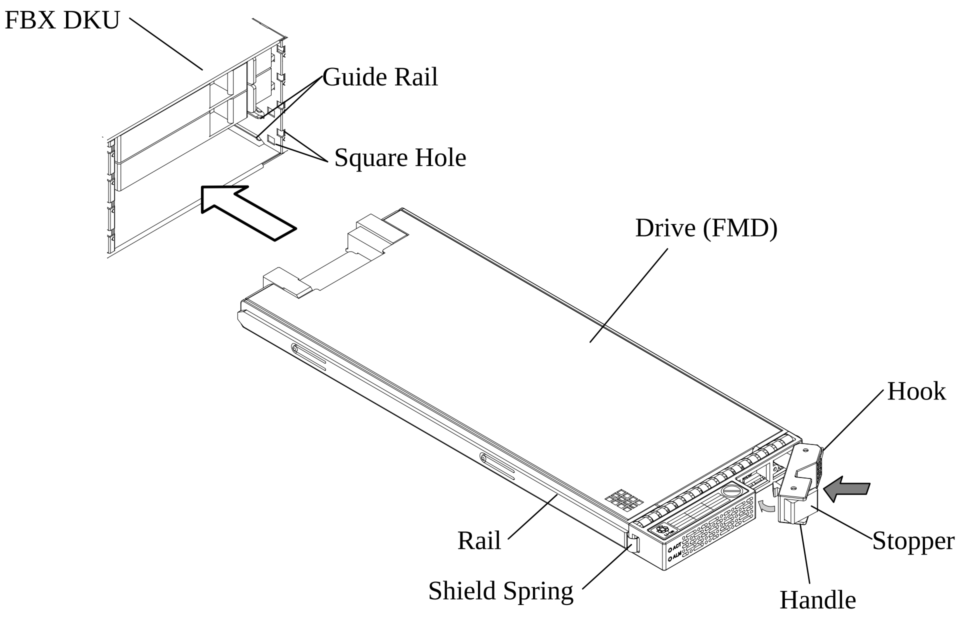


Fig. 3.4.2-9 Installation of Drive (In case of FMD)

2-6. Go to “3. POST-PROCESSING of SVP”.

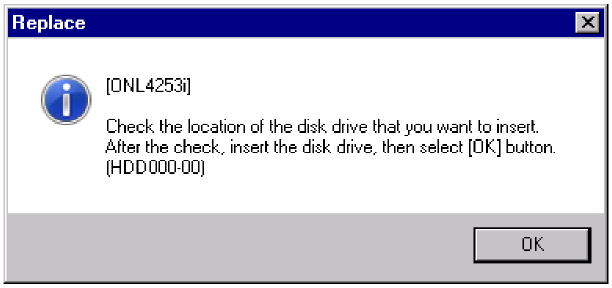
⚠ CAUTION

Before starting the <Check the beginning of recovery> operation in POST-PROCEDURES of SVP, be sure to insert a removable media for dump, collect failure information, and return the removable media with the failed HDD.
A dump removable media is attached with a Spare HDD.

3. POST-PROCESSING of SVP

3-1. <Confirm Insertion>

"Check the location of the disk drive that you want to insert. After the check, insert the disk drive, then select [OK] button. (HDDnnn-nn)"is displayed.

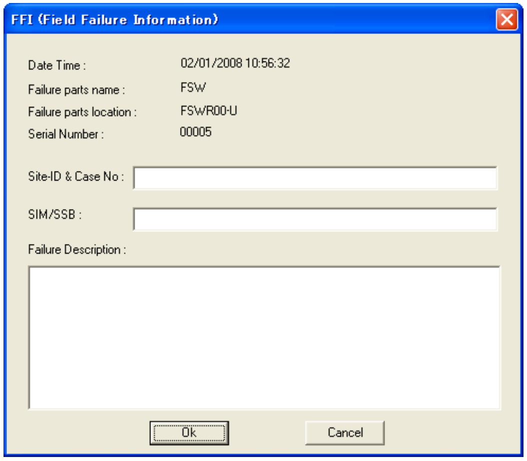


[ONL4253i]

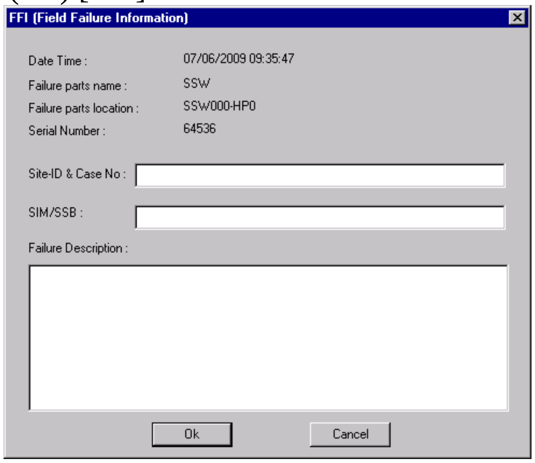
Check the location of the disk drive that you want to insert.
After the check, insert the disk drive, then select [OK] button.
(HDD000-00)

3-2. <Get the error information>

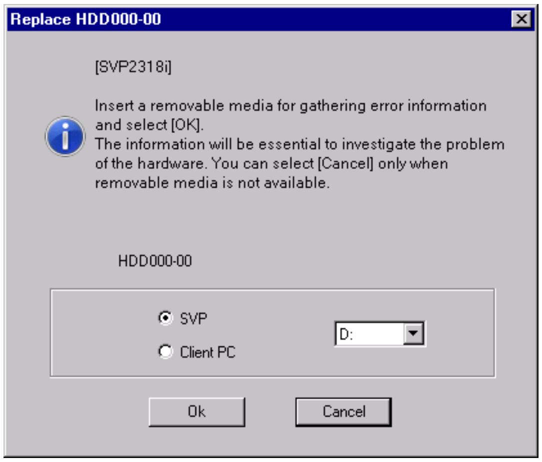
Input the Field Failure Information, and select (CL) [OK].



Date Time : 02/01/2008 10:56:32
Failure parts name : FSW
Failure parts location : FSWR00-U
Serial Number : 00005
Site-ID & Case No :
SIM/SSB :
Failure Description :



Date Time : 07/06/2009 09:35:47
Failure parts name : SSW
Failure parts location : SSW000-HP0
Serial Number : 64536
Site-ID & Case No :
SIM/SSB :
Failure Description :


Replace HDD000-00

[SVP2318i]

Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.

HDD000-00

● SVP
○ Client PC

“Insert a removable media for gathering error information and select [OK].

The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.” is displayed.

Select a Client PC arbitrary drive, and select (CL) [Ok].

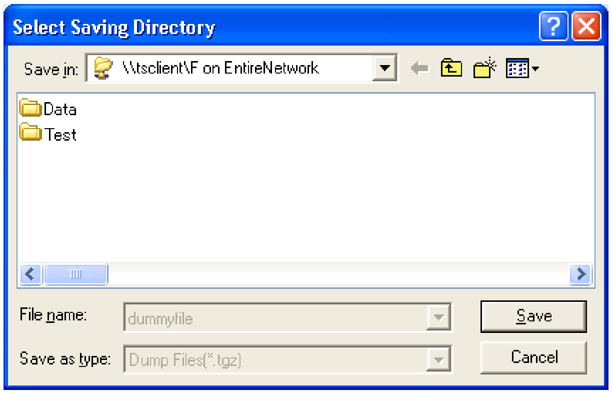
Trouble information is preserved in console PC connected with SVP.

Please select the Client PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu.

The drive letter becomes the drive letter of console PC connected with SVP.

When Client PC is selected, the directory selection dialog is displayed.
Please select an arbitrary directory if necessary.

Console PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of console PC.



Select Saving Directory

Save in: \\tsclient\F on EntireNetwork

Data
Test

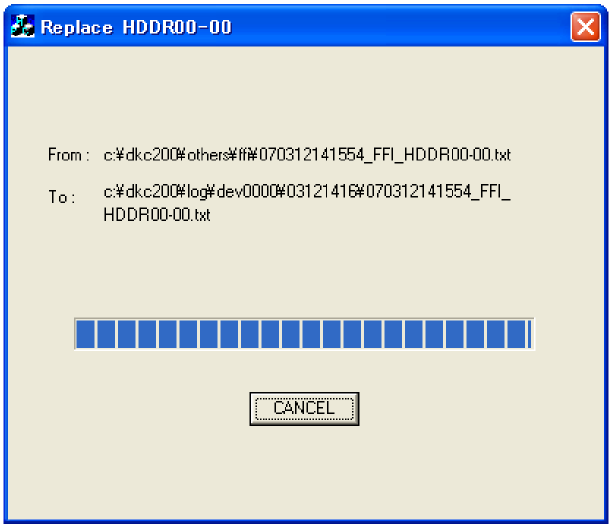
File name: dummyfile

Save as type: Dump Files(*.tgz)

Select (CL) [Save] when saving a file in a specified directory.
It returns to the drive selection screen when [Cancel] is selected (CL).

3-3. <Copy of the error information>

The error information is copied onto media.

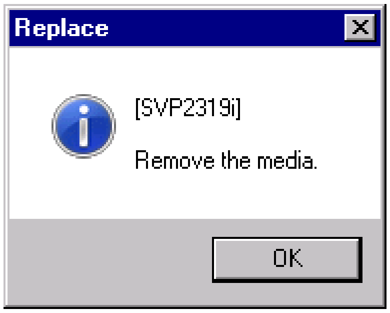


Replace HDDR00-00

From : c:¥dkc200¥others¥ff¥070312141554_FFI_HDDR00-00.txt

To : c:¥dkc200¥log¥dev0000¥03121416¥070312141554_FFI_HDDR00-00.txt

“Remove the media.” is displayed.
Select (CL) [OK].



Replace

[SVP2319i]

Remove the media.

3-4. <Spin up the Physical Drive>
“Spinning up...” is displayed.

3-5. <DKU INLINE>
“DKU INLINE is now running...” is displayed.

3-6. <Replacement of the DKU micro-program>
When the revision of the DKU micro-program in the SVP hard disk is newer than that in the PDEV, the following message appears on the screen.
The message “Exchanging DKU micro-program...” appears.

3-7. <Restore Physical Drive>
“Restoring...” is displayed.

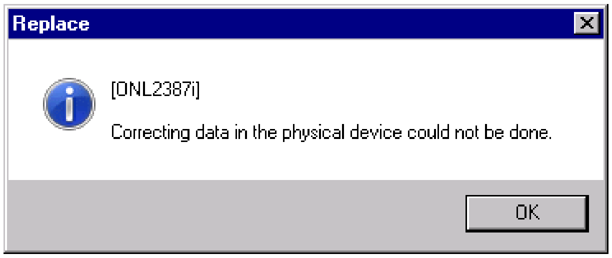
3-8. <Check the Drive status>
“Checking...” is displayed.

3-9. <Correction Copy disable message>

⚠ CAUTION

If a blocked HDD exists in the same parity group, replace the HDD.
After confirming that "NORMAL" is indicated for all the HDDs in the same parity group, execute an L-DEV formatting following the procedure below.

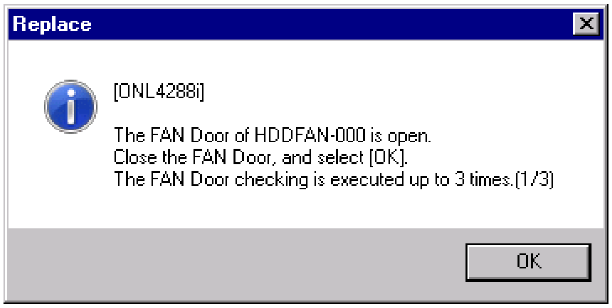
Select (CL) [OK] in response to “Correcting data in the physical device could not be done.”.



[ONL2387i]
Correcting data in the physical device could not be done.

(1)

"The FAN Door of HDDFAN-xxx is open.
Close the FAN Door, and select [OK].
The FAN Door checking is executed up to 3 times. (n/3)" is displayed.
After the FAN door is closed, select (CL) [OK] in response to this message.



[ONL4288I]

The FAN Door of HDDFAN-000 is open.
Close the FAN Door, and select [OK].
The FAN Door checking is executed up to 3 times.(1/3)

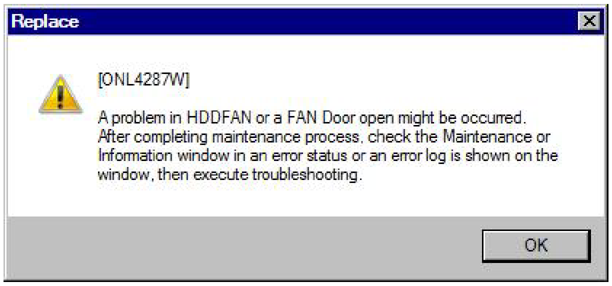
It returns to (1) when HDDFAN doors of the object are not closed.
It goes to 3-10 when HDDFAN doors of the object are closed.

Note: It goes to (2) when it cannot be confirmed that the FAN doors are closed in the three times FAN door check.

---

(2)

"A problem in HDDFAN or a FAN Door open might be occurred.
After completing the maintenance process, check the Maintenance or Information window in an error status or an error log is shown on the window, then execute troubleshooting." is displayed.
Select (CL) [OK] in response to this message.



[ONL4287W]

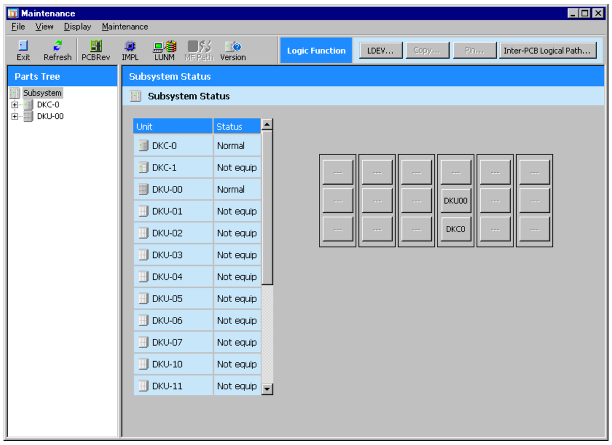
A problem in HDDFAN or a FAN Door open might be occurred.
After completing maintenance process, check the Maintenance or Information window in an error status or an error log is shown on the window, then execute troubleshooting.

3-10. <Select [Logical Device]>

CAUTION

Before you perform following steps, be sure to call T.S.D.
Data stored in Logical Device will be lost due to formatting Logical Device.

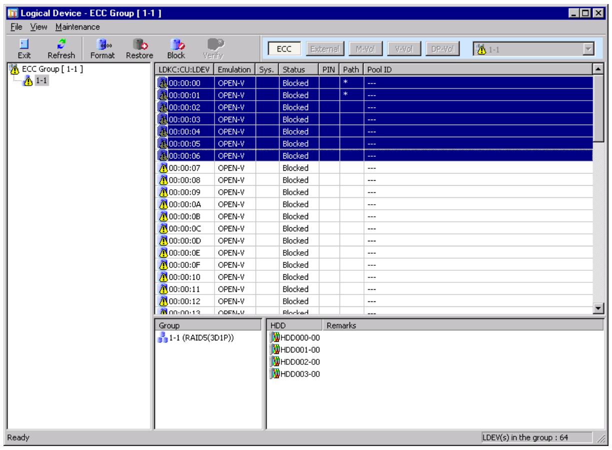
Select (CL) [Logical Device] from [Maintenance].



Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

3-11. <Logical Device Status>

Select (CL) [Format].


Logical Device - ECC Group [1-1]
File View Maintenance
Exit Refresh Format Restore Block Verify
ECC External M-Vol V-Vol DP-Vol 1-1
ECC Group [1-1]
1-1

LDKC:CU:LDEV	Emulation	Sys.	Status	PIN	Path	Pool ID
00:00:00	OPEN-V		Blocked		*	---
00:00:01	OPEN-V		Blocked		*	---
00:00:02	OPEN-V		Blocked			---
00:00:03	OPEN-V		Blocked			---
00:00:04	OPEN-V		Blocked			---
00:00:05	OPEN-V		Blocked			---
00:00:06	OPEN-V		Blocked			---
00:00:07	OPEN-V		Blocked			---
00:00:08	OPEN-V		Blocked			---
00:00:09	OPEN-V		Blocked			---
00:00:0A	OPEN-V		Blocked			---
00:00:0B	OPEN-V		Blocked			---
00:00:0C	OPEN-V		Blocked			---
00:00:0D	OPEN-V		Blocked			---
00:00:0E	OPEN-V		Blocked			---
00:00:0F	OPEN-V		Blocked			---
00:00:10	OPEN-V		Blocked			---
00:00:11	OPEN-V		Blocked			---
00:00:12	OPEN-V		Blocked			---

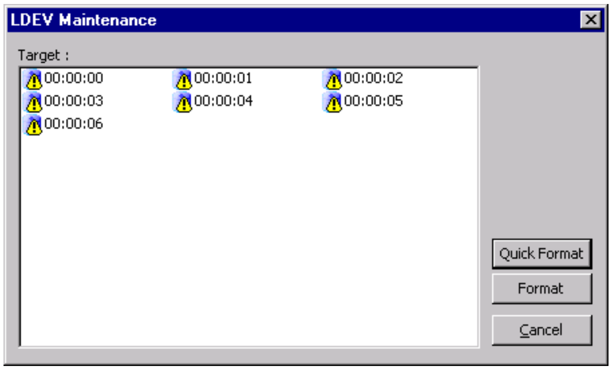
Group
1-1 (RAID5(3D1P))

HDD	Remarks
HDD000-00	
HDD001-00	
HDD002-00	
HDD003-00	

Ready
LDEV(s) in the group : 64

3-12. <Format Logical Device>

Select (CL) [Format] or [Quick Format].
If the target LDEV is not blocked, return to 'Logical Device' dialog box.



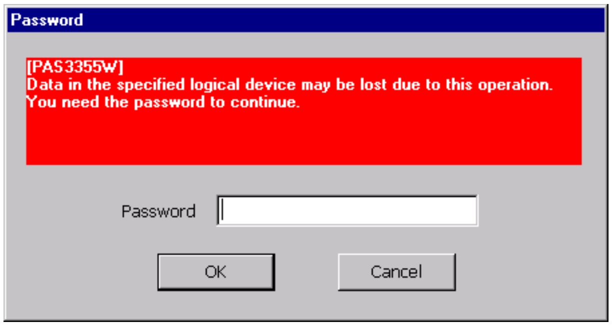
Target :
00:00:00 00:00:01 00:00:02
00:00:03 00:00:04 00:00:05
00:00:06

3-13. <Caution message for DATA lost>

CAUTION

This is a special (exceptional) operation that can cause a serious failure such as a system down or a data loss and requires an input of a password. Ask the technical support division about the appropriateness of the operation, and input the password after getting an approval of executing the operation.

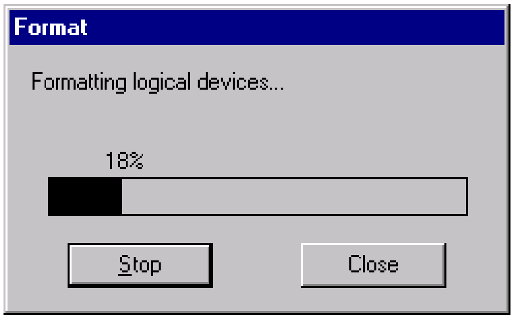
"Data in the specified logical device may be lost due to this operation. You need the password to continue." is displayed.
Enter the password and select (CL) [OK].



[PAS3355W]
Data in the specified logical device may be lost due to this operation.
You need the password to continue.

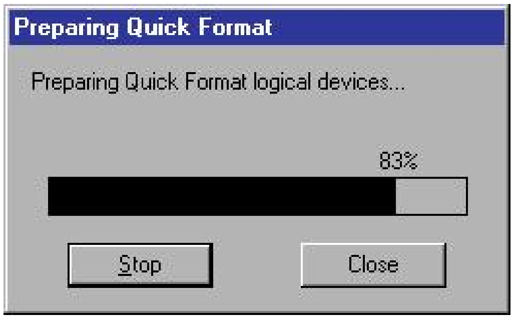
3-14. <Confirmation of processing progress>

- In case of LDEV formatting
  "Formatting logical devices..." is displayed.



Formatting logical devices...

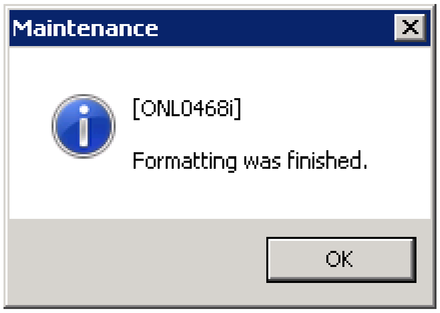
- In case of Quick Format
  "Preparing Quick Format logical devices..." is displayed.



Preparing Quick Format logical devices...

3-15. <Confirmation of processing end>

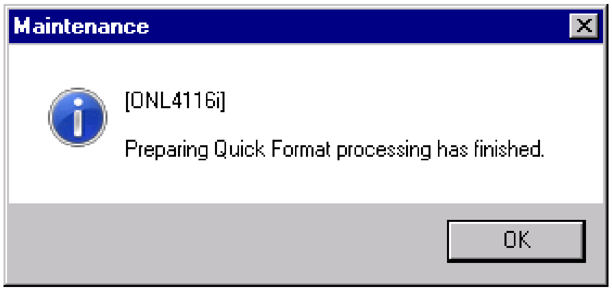
- In case of LDEV formatting
  Select (CL) [OK] in response to "Formatting was finished.".



[ONL0468i]

Formatting was finished.

- In case of Quick Format
  Select (CL) [OK] in response to "Preparing Quick Format processing has finished.".



[ONL4116i]

Preparing Quick Format processing has finished.

3-16. <Recover data>

Ask the customer for recovering data with backup data.
Go to POST-PROCEDURE [REP04-01-10].

[DRIVE REPLACEMENT PROCESSING - RDK5]

— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select P-DEV (status check)
    ② Specify Replacement
    ③ Place HDD into unpluggable state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Execute CUDG on P-DEV
    ② Specify recovery

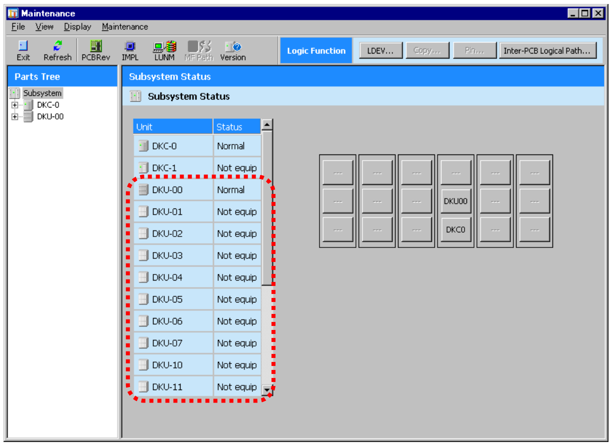
⚠ **CAUTION**

If No Charging of FMD (SIM = 50EXYY) occurs in replacement of a FMD, the FMD ACTIVE LED will change to low-speed blinking. In this case, it takes 90 minutes at most for the FMD ACTIVE LED to go out and for the battery in the FMD to be fully charged.

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

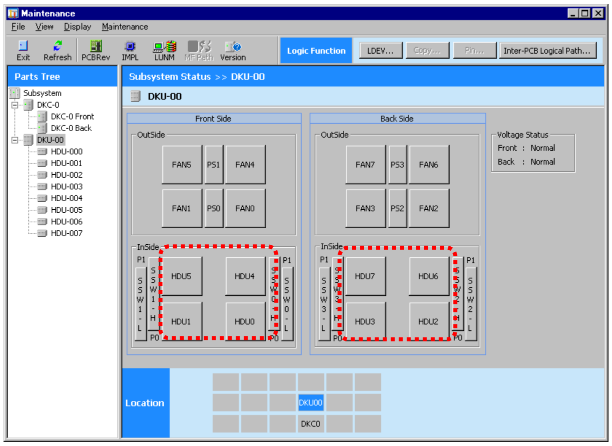
Open the ‘Maintenance’ window according to PRE PROCEDURE A (REP02-01-10). Select (CL) the DKU information [DKU-nn] of the DKU which installs the HDD to be replaced in the ‘Maintenance’ window.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Prt... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status
DKU00
DKC0

Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <Select HDU>

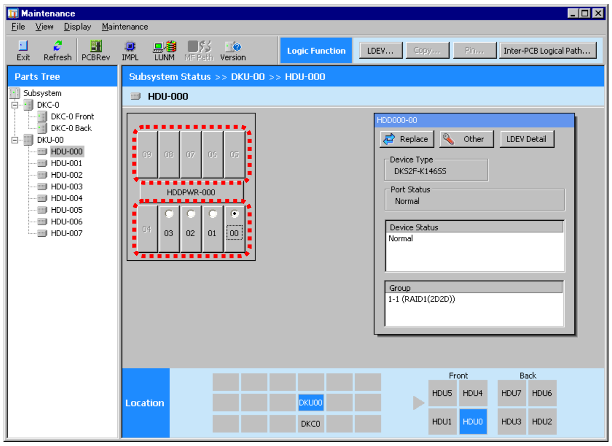
Select (CL) the HDU information [HDUn] of the HDU which installs the HDD to be replaced.



Voltage Status
Front : Normal
Back : Normal

1-3. <Select HDD>

Check and select (CL) [nn] to be replaced.

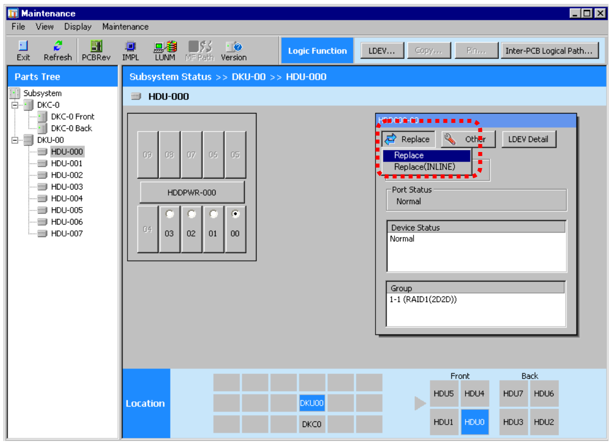


1-4. <Specify replacement of HDD>

Make sure that the “Device Status” is [Failed] or [Warning].

Note: When exchanging in a state where the spare drive is normal like preventive maintenance, confirm “Device Status” is [Spare].

Select (CL) [Replace]-[Replace].



1-5. <Checking the P-DEV status & saving the spare>

⚠ CAUTION

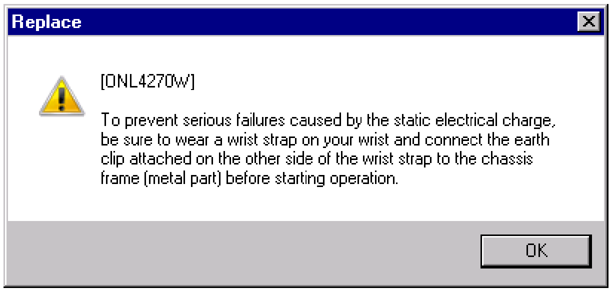
When the screen appears prompting the operator to input a password to prevent multiple maintenance or for executing a pin check, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

“Checking...” is displayed.

1-6. <Wear a wrist strap>

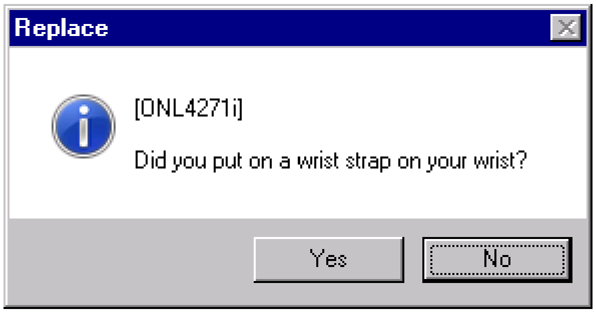
Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.



[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

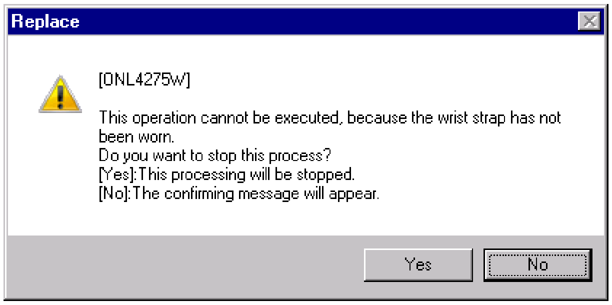
(1) <Confirm wearing wrist strap>
In response to a message, “Did you put on a wrist strap on your wrist?”.
Select (CL) [Yes] when wrist strap is on your wrist.
Select (CL) [No] when there is no wrist strap on your wrist.
When [No] is selected (CL), go to Step (2).



[ONL4271i]

Did you put on a wrist strap on your wrist?

(2)
In response to a message, “This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?
[Yes]: This processing will be stopped.
[No]: The confirming message will appear.”



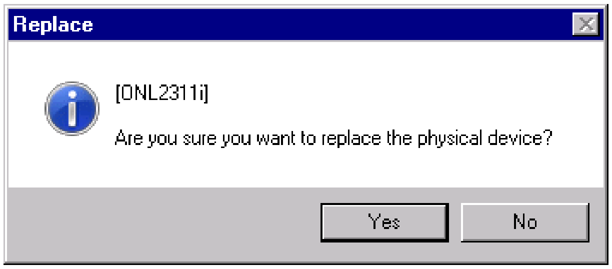
[ONL4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

When [Yes] is selected (CL), returned to Step 1-3.
When [No] is selected (CL), returned to Step 1-6.

1-7. <P-DEV blocking>

Select (CL) [Yes] in response to “Are you sure you want to replace the physical device?”.



[ONL2311i]

Are you sure you want to replace the physical device?

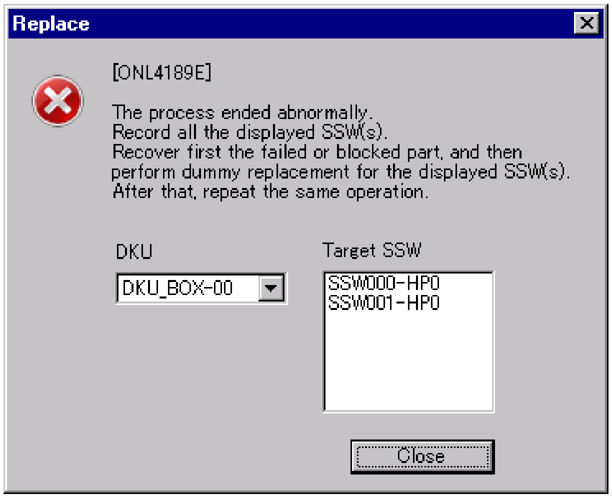
1-8. <Blocking the Physical device>

“Blocking...” is displayed.

1-9. <Spin down the Physical device>
“Spinning down...” is displayed.

Perform the dummy replacement of the displayed SSW(s) when the window is displayed. Select the DKU list and record the target SSW(s) because two or more DKU might be listed.
Select (CL) [Close] button and perform the dummy replacement of the target SSW(s).

Retry the replacement after completing the dummy replacement of SSW.



[ONL4189E]

The process ended abnormally.
Record all the displayed SSW(s).
Recover first the failed or blocked part, and then perform dummy replacement for the displayed SSW(s).
After that, repeat the same operation.

SSW000-HP0
SSW001-HP0

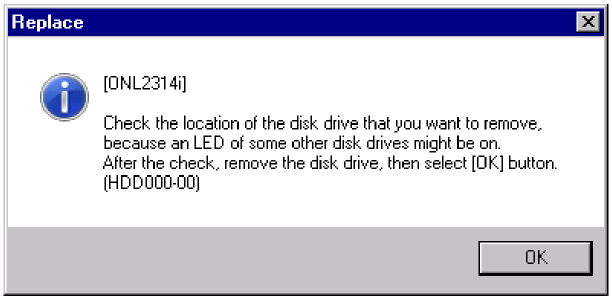
1-10. <Check shut down LED>

⚠ CAUTION

If a wrong HDD is removed, a data loss or a system down may occur.

Check the shut down LED on the HDD to be replaced.
If LED is off, reconfirm the location of the HDD to be replaced with LOCATION SECTION before replacing the hardware.

1-11. <Confirm Removal>
Select (CL) [OK] in response to “Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on. After the check, remove the disk drive, then select [OK] button. (HDDxnn-nn)” after the unit is removed.
(Step 2-3)



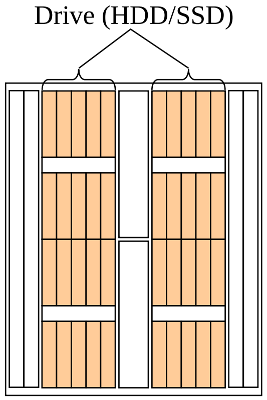
[ONL2314i]

Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on.
After the check, remove the disk drive, then select [OK] button.
(HDD000-00)

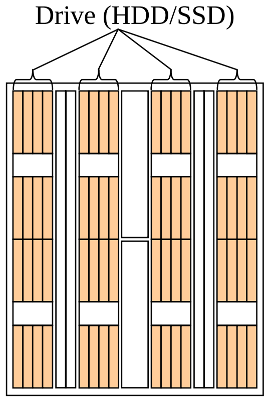
1-12. <Replace HDD>
Replace HDD.
Go to “2. HARDWARE REPLACEMENT PROCESSING”.

2. HARDWARE REPLACEMENT PROCESSING

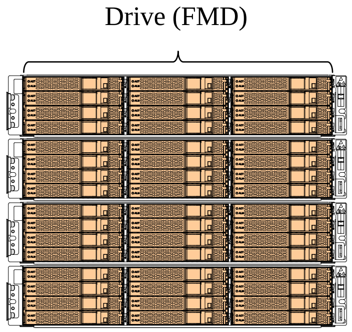
Location	Function Name of Component		Part Name	HDA Label
DKU	1	Disk Drive (HDD)	HDU700-146KCMSS	S5B-K146SS
				S5C-K146SS
			HDU700-300JCMSS	R5C-J300SS
				R5D-J300SS
				S5B-J300SS
				S5D-J300SS
				S5E-J300SS
			HDU700-300KCMSS	R5C-K300SS
				S5C-K300SS
			HDU700-500HCMSS	S5A-H500SS
				S5B-H500SS
			HDU700-600JCMSS	R5C-J600SS
				R5D-J600SS
				S5C-J600SS
				S5D-J600SS
				S5E-J600SS
			HDU700-900JCMSS	R5D-J900SS
				S5D-J900SS
				S5E-J900SS
			HDU700-1R0HCMSS	S5B-H1R0SS
			HDU700-1R2JCMSS	R5E-J1R2SS
				S5F-J1R2SS
			HDU700-2R0H2MAT	R2C-H2R0AT
				R2D-H2R0AT
				R2E-H2R0AT
			HDU700-2R0H3MSS	S2C-H2R0SS
				S2D-H2R0SD
				S2D-H2R0SS
				S2P-H2R0SS
				S2E-H2R0SS
				W2E-H2R0SS
			HDU700-3R0H3MSS	S2D-H3R0SS
				S2E-H3R0SS
				W2E-H3R0SS
			HDU700-4R0H3MSS	S2E-H4R0SS
				W2E-H4R0SS
	2	Flash Drive (SSD)	HDU700-200MCMSS	B5A-M200SS
				R5B-M200SS
			HDU700-200SAMSS	T5A-S200SS
				T5C-S200SS
			HDU700-200SCMSS	R5A-S200SS
				R5B-S200SS
			HDU700-400MCMSS	B5A-M400SS
				R5B-M400SS
			HDU700-400SCMSS	R5A-S400SS
				R5B-S400SS
			HDU700-800MCMSS	B5A-M800SS
			HDU700-400S1MSS	T2A-S400SS
				T2C-S400SS
Front View of FBX DKU	3	Flash Module Drive (FMD)	HDU700-1R6FMSS	H1A-P1R6SS
				H1C-P1R6SS
			HDU700-3R2FMSS	H1B-P3R2SS
				H1C-P3R2SS



Front or Rear View of DKU
(In case of 3.5inch Drive)



Front or Rear View of DKU
(In case of 2.5inch Drive)



Front View of DKU
(In case of FMD)

NOTICE:
- Replace the drive in the subsystem in power on status only.
  Do not replace the drive in power off status.
- Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.
- HDD is a precise component. Be careful in handling HDD to avoid vibration and impact.

2-1. Open the FAN door.

2-1-1. In case of 3.5inch/2.5inch drive

a. Put the stopper of the FAN door into the open able and closable state. (Refer to the INST03-01-160.)

b. Loosen the two screws and open the FAN door.

2-1-2. In case of FMD

a. Go to procedure 2-2. Check the Shut Down LED.

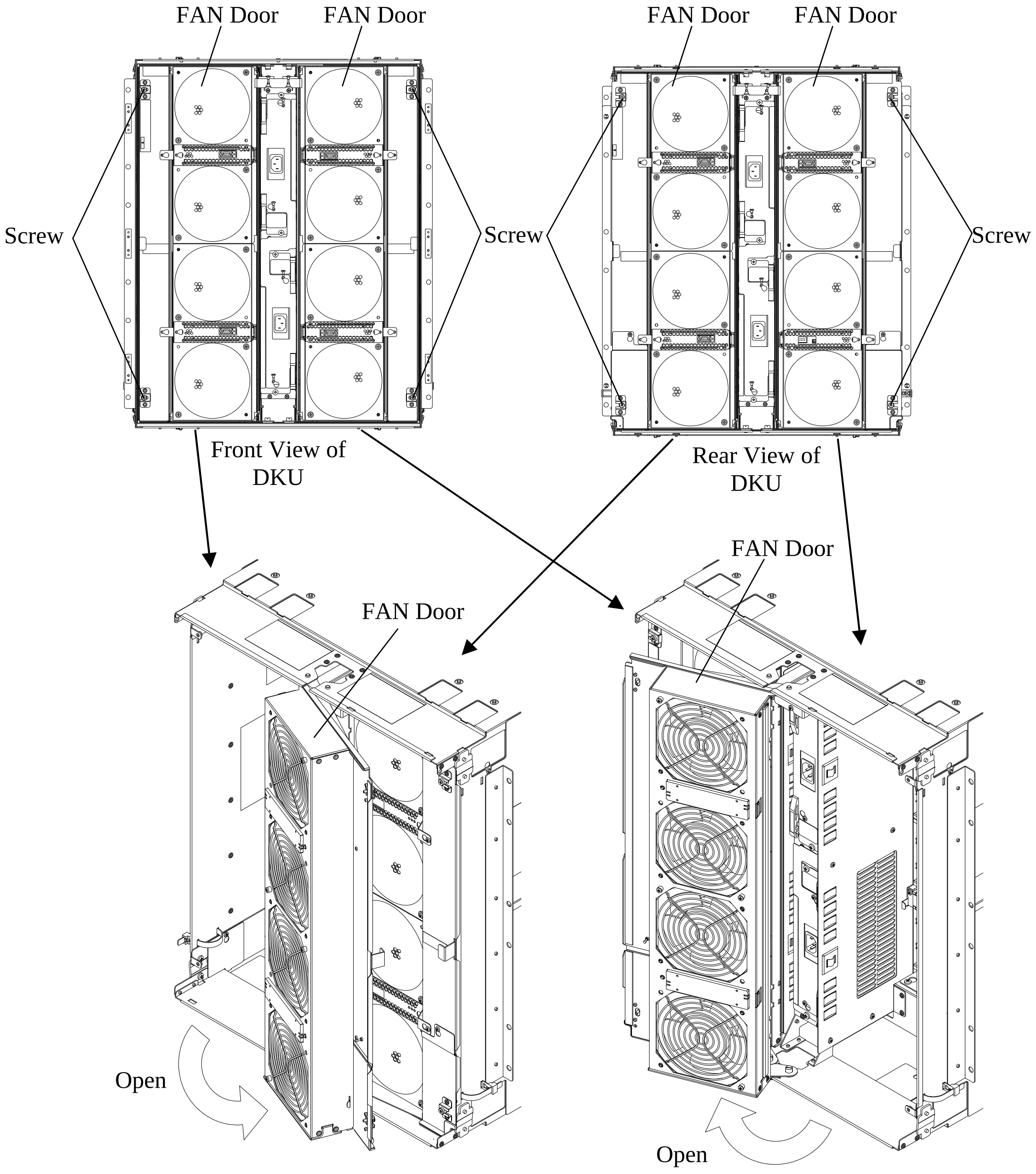
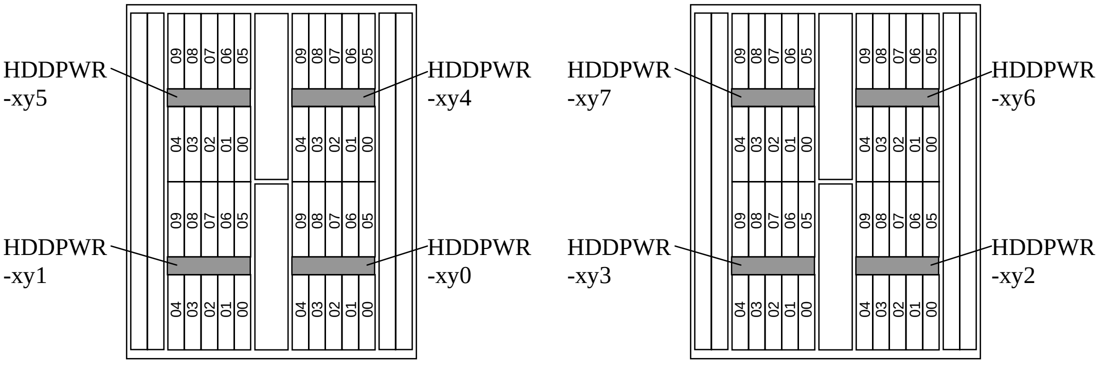


Fig. 3.5.2-1 FAN Door Opening

2-2. Check the Shut Down LED.

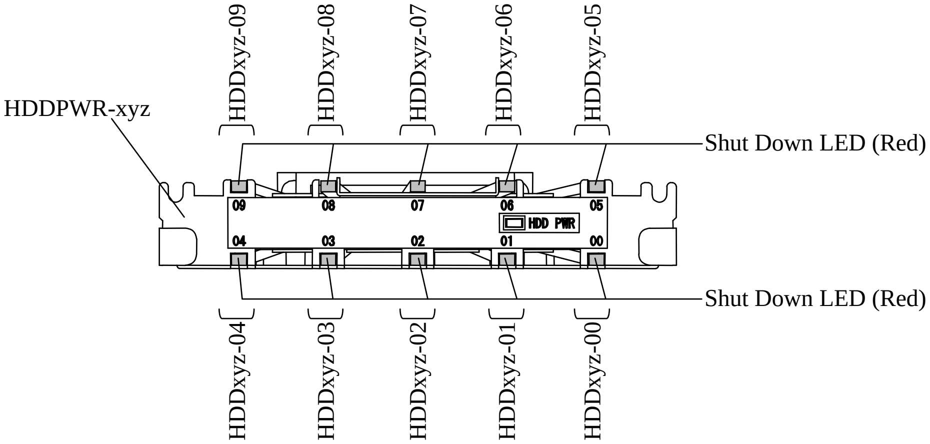
2-2-1. In case of 3.5inch/2.5inch drive

a. Check that the Shut Down LED on the HDDPWR corresponding to drive (HDD/SSD) is turned on. Refer to Fig. 3.5.2-2 or 3.5.2-3.



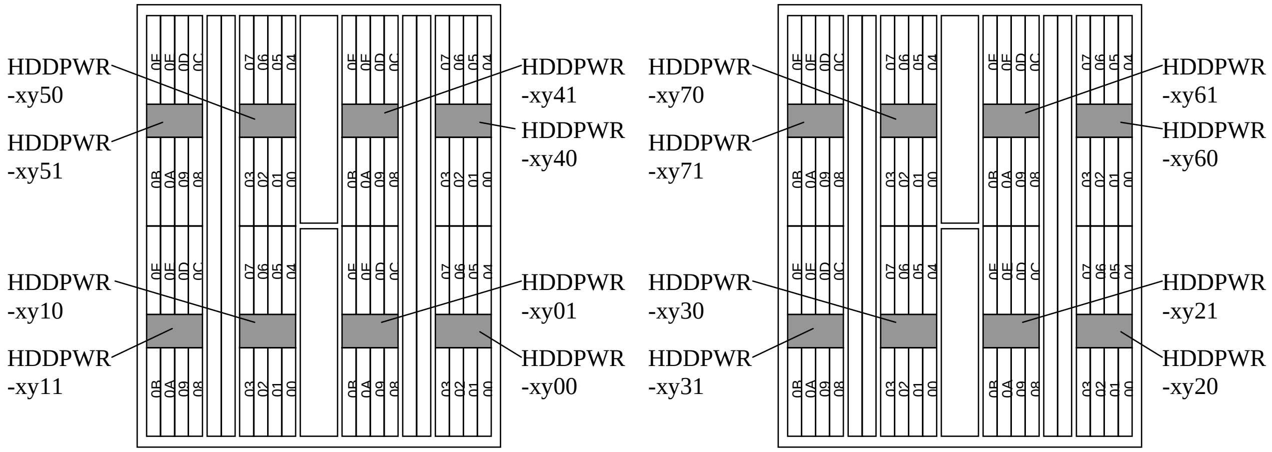
Front View of DKU

Rear View of DKU



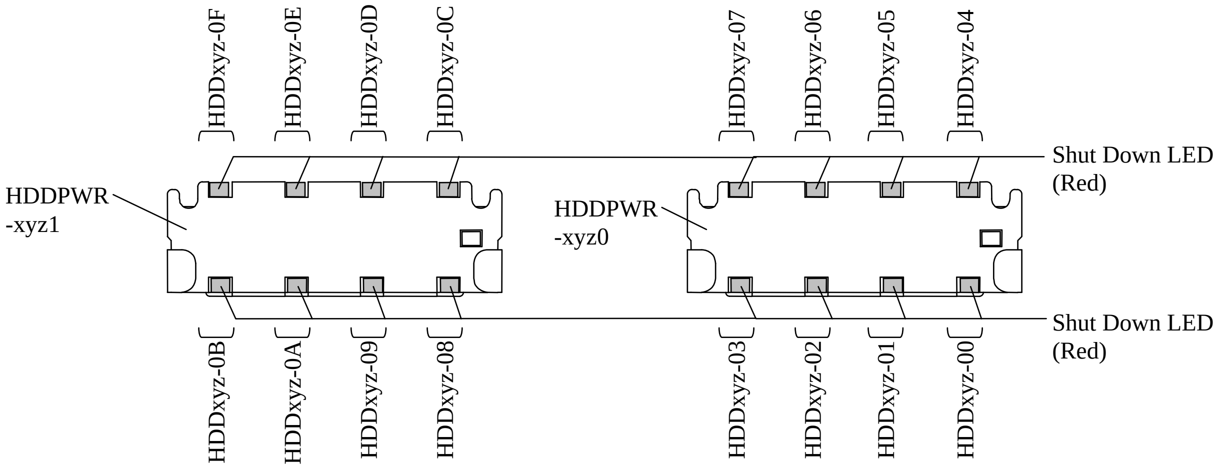
Note: HDDPWR-xyz
→HDU No. (0, 1, 2, ..., 7)
→DKU No. (0, 1, 2, ..., 7)
→DKC No. (0, 1)

Fig. 3.5.2-2 Checking of Shut Down LED (In case of 3.5inch Drive)



Front View of DKU

Rear View of DKU

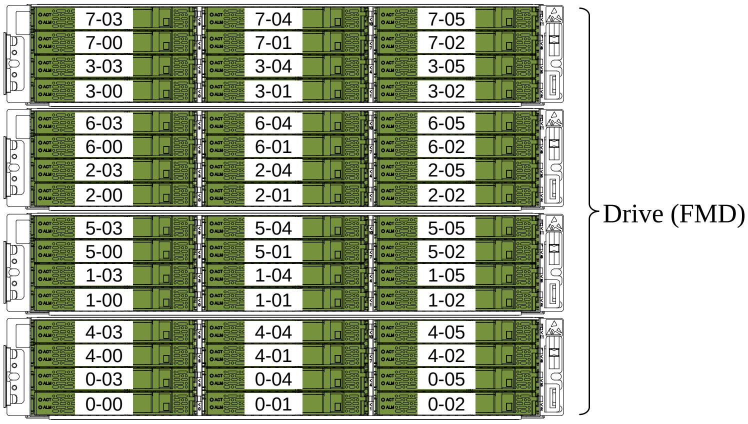


Note: HDDPWR-xyz
→HDU No. (0, 1, 2,….., 7)
→DKU No. (0, 1, 2,….., 7)
→DKC No. (0, 1)

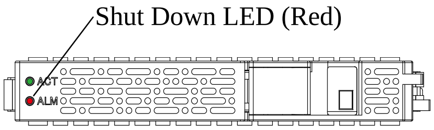
Fig. 3.5.2-3 Checking of Shut Down LED (In case of 2.5inch Drive)

2-2-2. In case of FMD

a. Check that the Shut Down LED on drive is turned on.



Front View of FBX DKU



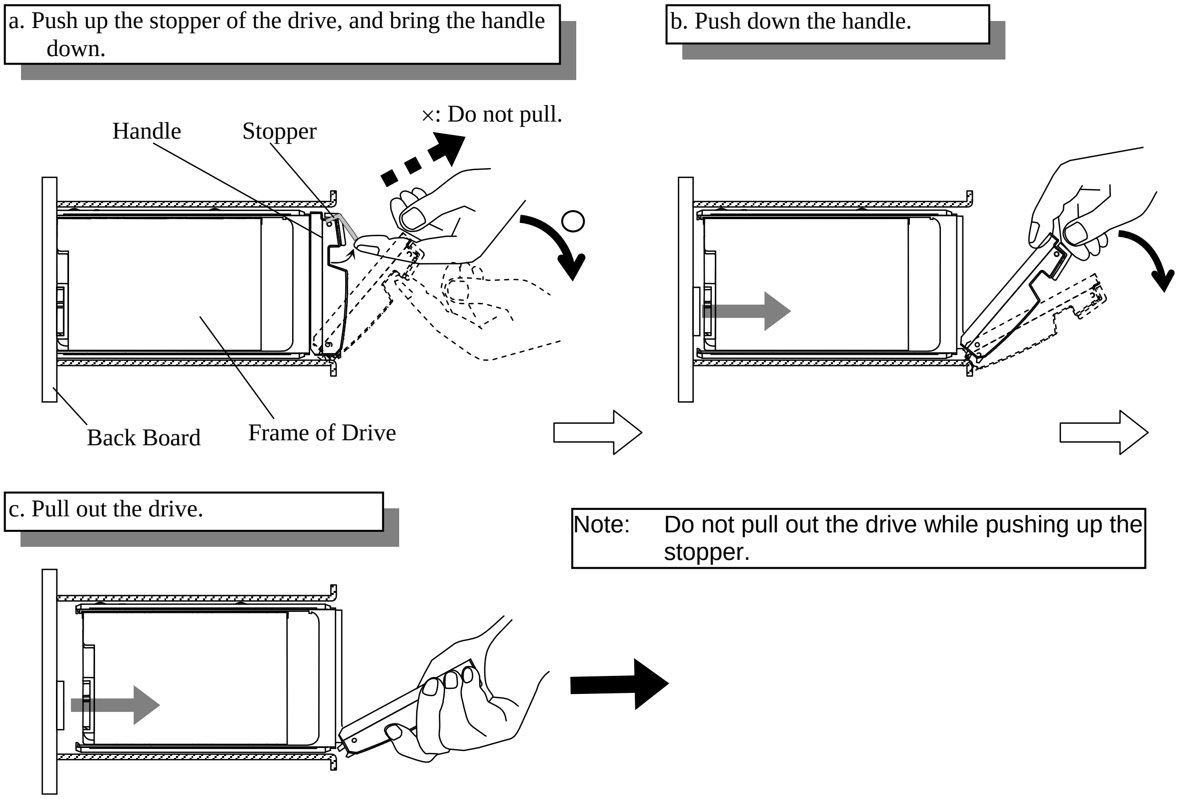
Front View of Drive (FMD)

Fig. 3.5.2-3A Checking of Shut Down LED (In case of FMD)

2-3. Remove the drive.

2-3-1. In case of 3.5inch drive.

a. Push up the stopper of drive, and bring the handle down. Don't pull the handle during this process.
b. Push down the handle.
c. Pull out the drive.
d. Fig. 3.5.2-5 illustrates the case of wrong procedure.

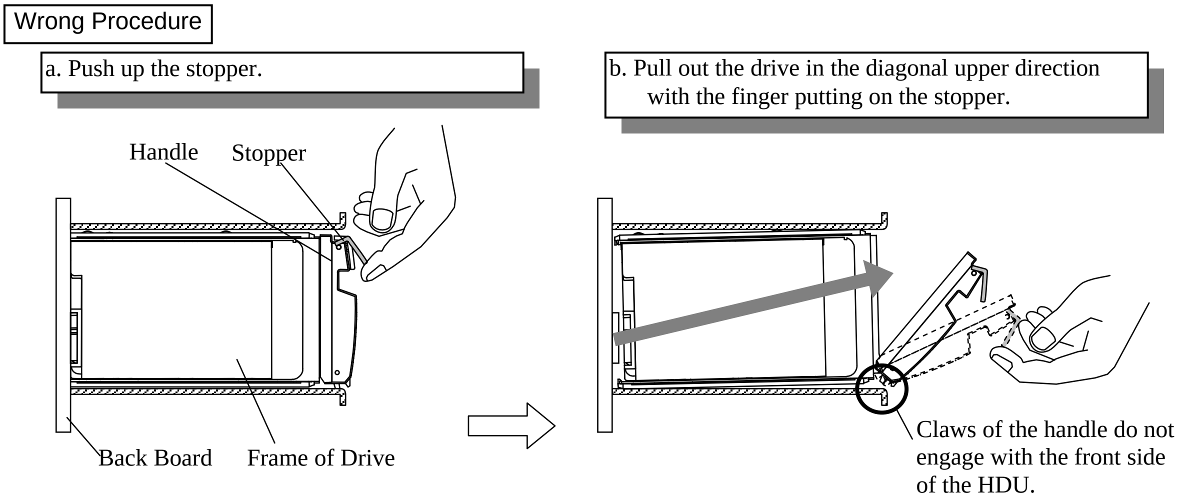

a. Push up the stopper of the drive, and bring the handle down.

b. Push down the handle.

c. Pull out the drive.

Note: Do not pull out the drive while pushing up the stopper.

Fig. 3.5.2-4 Removal of Drive


Wrong Procedure

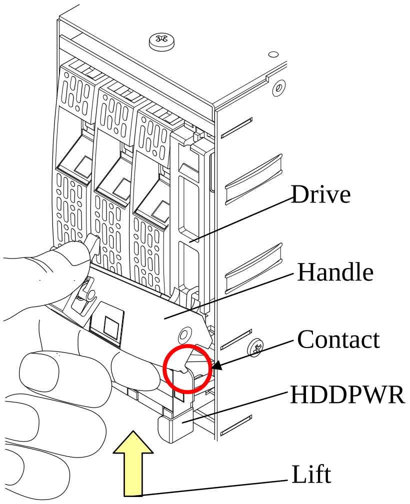
a. Push up the stopper.

b. Pull out the drive in the diagonal upper direction with the finger putting on the stopper.

Claws of the handle do not engage with the front side of the HDU.

Fig. 3.5.2-5 Removal of Drive (Wrong Procedure)

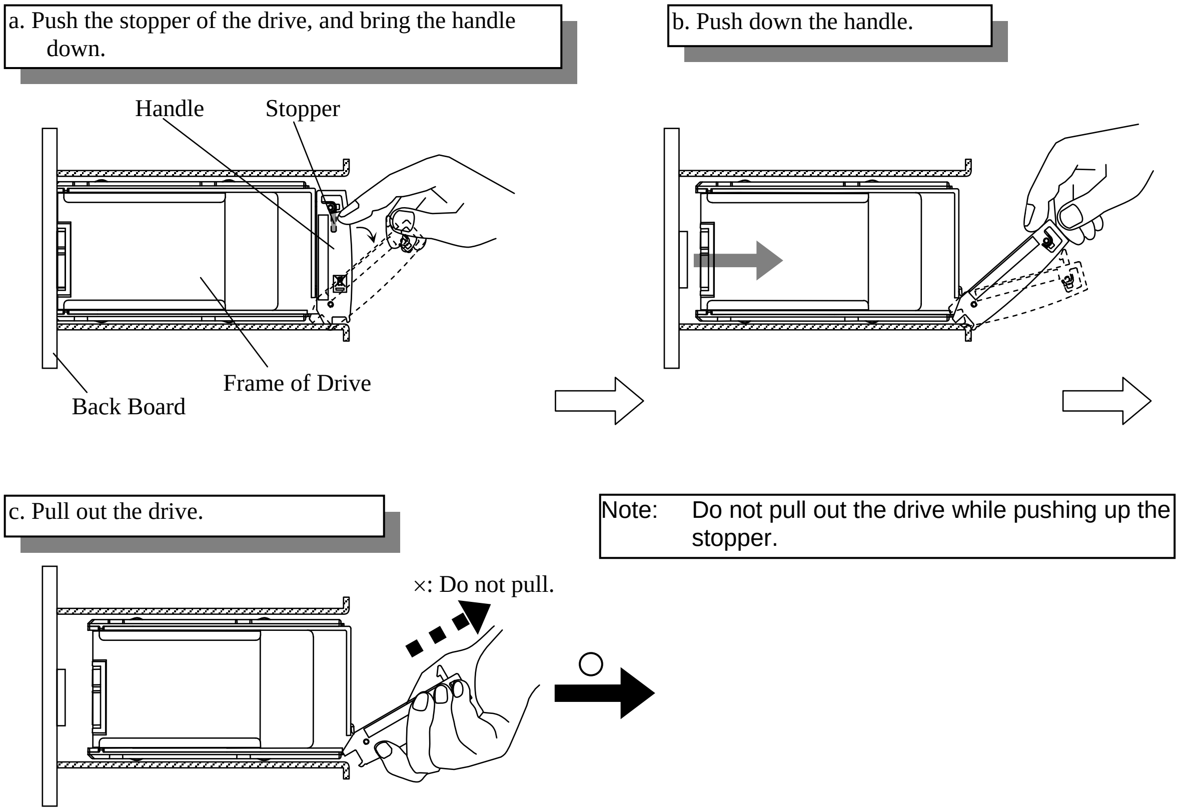
2-3-2. In case of 2.5inch drive.



Instruction for the insertion and removal of the 2.5-inch drive:

The upper part of HDDPWR might come in contact with the lower part of the drive, and it becomes an obstruction of the insertion and removal at the time of the 2.5-inch drive insertion and removal. In this case, avoid the HDDPWR by lifting the drive lightly.

a. Push the stopper of drive, and bring the handle down. Don’t pull the handle during this process.
b. Push down the handle.
c. Pull out the drive.
d. Fig. 3.5.2-7 illustrates the case of wrong procedure.


a. Push the stopper of the drive, and bring the handle down.

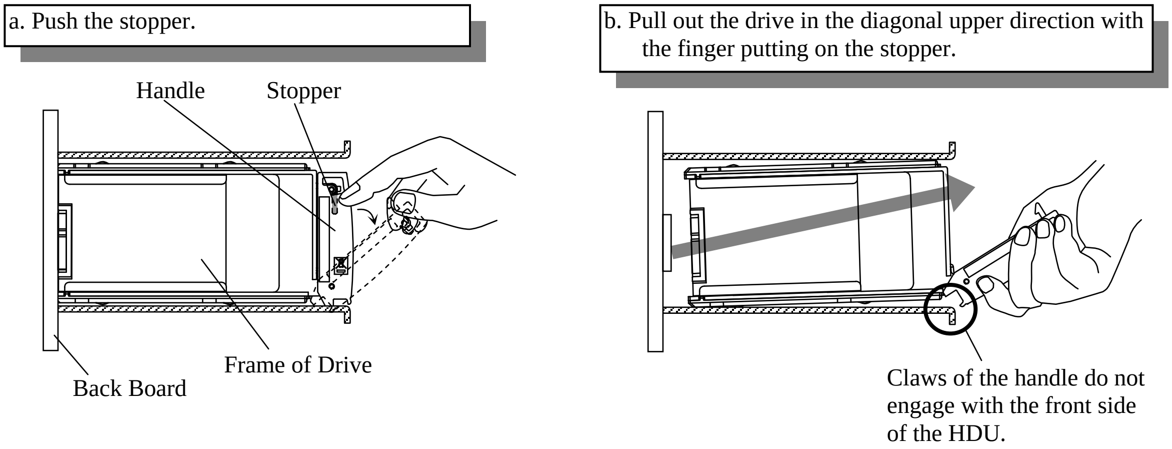
b. Push down the handle.

c. Pull out the drive.

Note: Do not pull out the drive while pushing up the stopper.

Fig. 3.5.2-6 Removal of Drive

Wrong Procedure


a. Push the stopper.

b. Pull out the drive in the diagonal upper direction with the finger putting on the stopper.

Claws of the handle do not engage with the front side of the HDU.

Fig. 3.5.2-7 Removal of Drive (Wrong Procedure)

2-3-3. In case of FMD

Notice: When the FMD is removed in replacing procedure, the fans of the DKUPS equipped in the rear of the FBX DKU rotate at the highest speed. When the spare FMD is installed, the fans of the DKUPS rotate at the speed suitable for environmental temperature.

a. Pull the stopper of the drive handle toward you to have the lock off.

b. Tilt the handle toward you, and then remove the drive by pulling it out taking care not to apply a shock to it.

Note: When handling the drive, hold the rail side because the shield spring is subject to breakage.

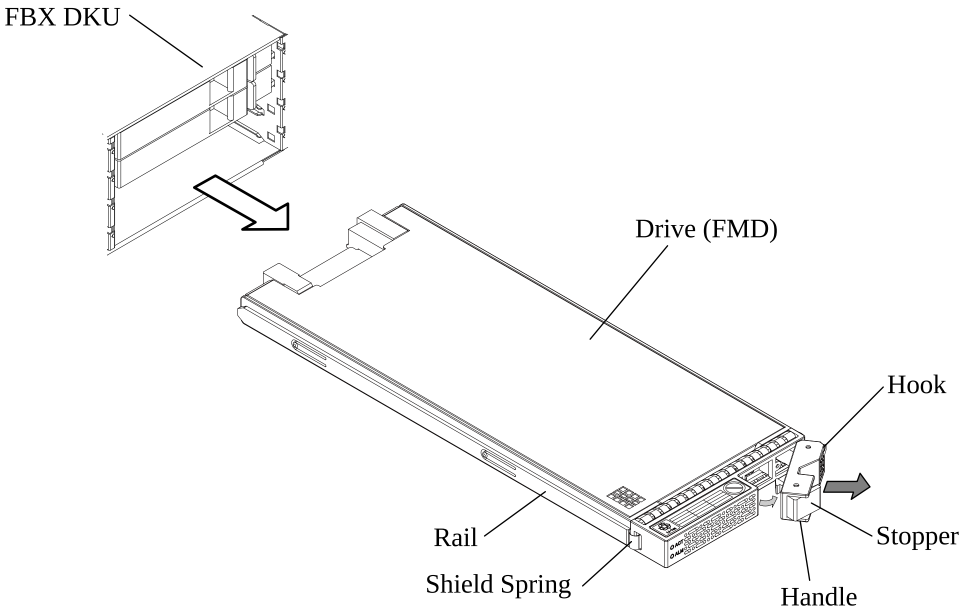
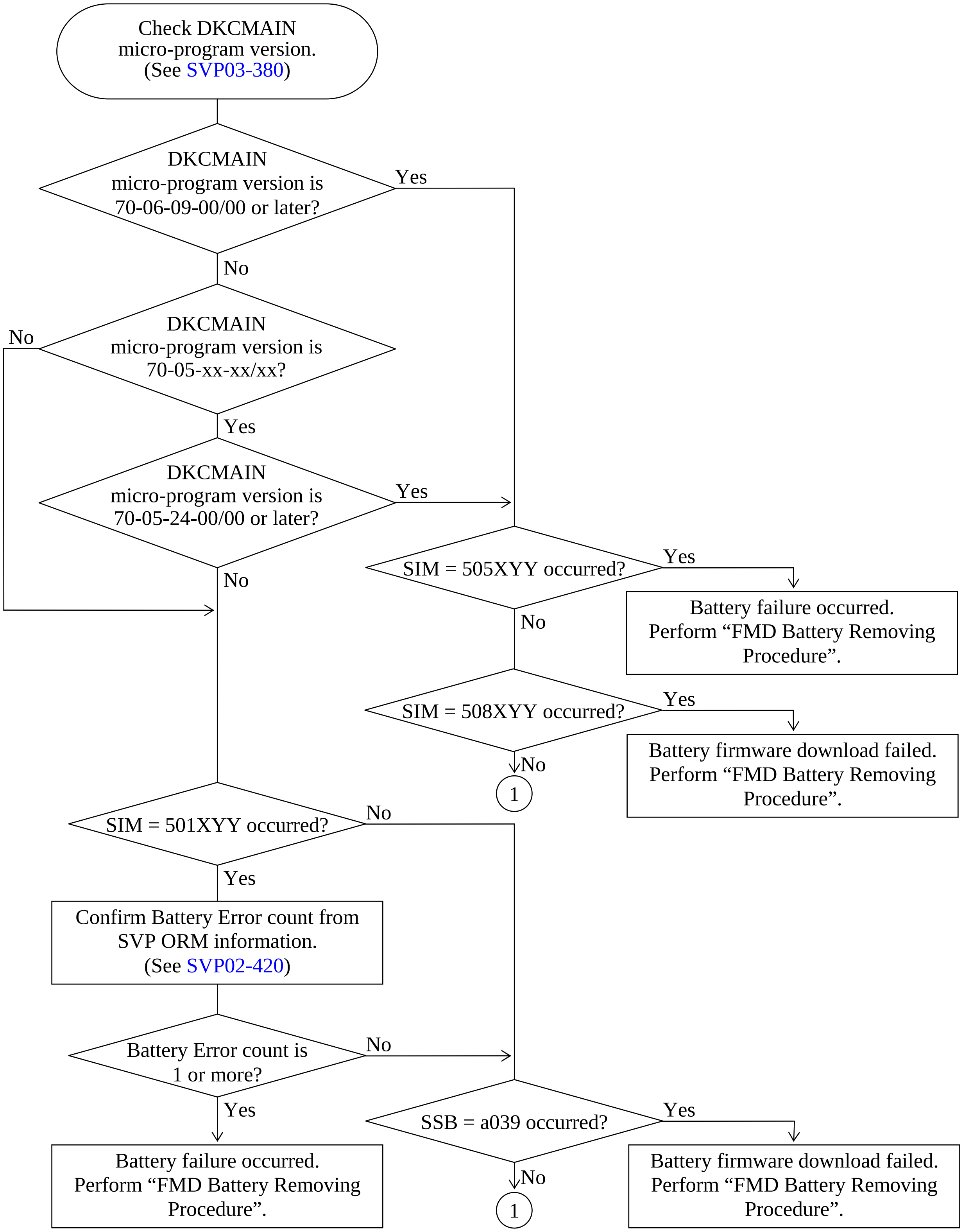
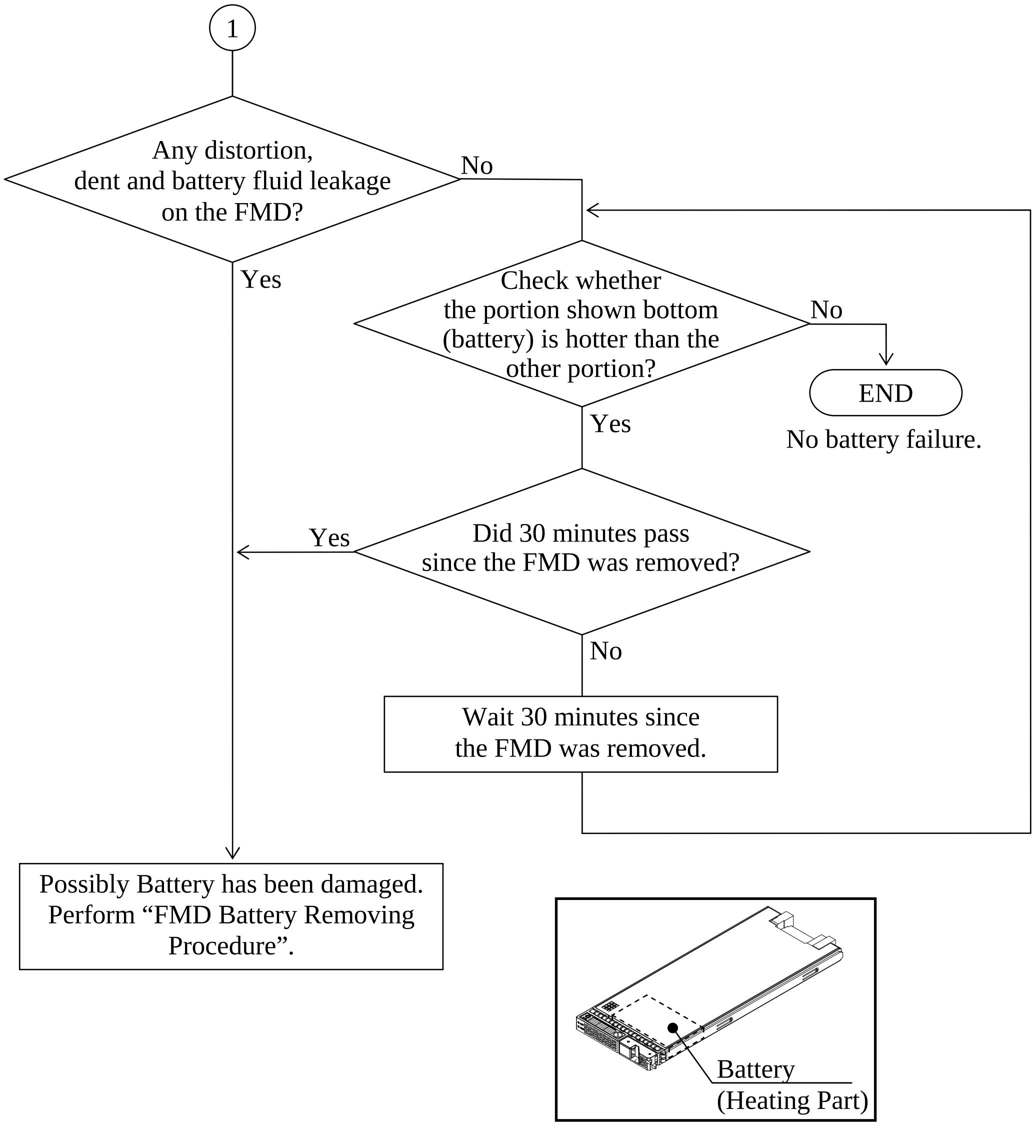


Fig. 3.5.2-7A Removal of Drive (In case of FMD)

c. Check whether a failure of the battery built in the FMD has occurred by using the flowchart below. If a battery failure has occurred, remove the battery from the FMD. If no battery failure has occurred, go to Procedure 2-4.


Check DKCMAIN micro-program version. (See SVP03-380)
DKCMAIN micro-program version is 70-06-09-00/00 or later?
Yes
No
DKCMAIN micro-program version is 70-05-xx-xx/xx?
No
Yes
DKCMAIN micro-program version is 70-05-24-00/00 or later?
Yes
No
SIM = 505XYY occurred?
Yes
Battery failure occurred. Perform "FMD Battery Removing Procedure".
No
SIM = 508XYY occurred?
Yes
Battery firmware download failed. Perform "FMD Battery Removing Procedure".
No
1
SIM = 501XYY occurred?
No
Yes
Confirm Battery Error count from SVP ORM information. (See SVP02-420)
Battery Error count is 1 or more?
No
Yes
Battery failure occurred. Perform "FMD Battery Removing Procedure".
SSB = a039 occurred?
Yes
Battery firmware download failed. Perform "FMD Battery Removing Procedure".
No
1


1
Any distortion,
dent and battery fluid leakage
on the FMD?
No
Yes
Check whether
the portion shown bottom
(battery) is hotter than the
other portion?
No
END
No battery failure.
Yes
Did 30 minutes pass
since the FMD was removed?
Yes
No
Wait 30 minutes since
the FMD was removed.
Possibly Battery has been damaged.
Perform “FMD Battery Removing
Procedure”.
Battery
(Heating Part)

d. FMD Battery Removing Procedure

(d)-1 Remove 4 Screws (SB310N) on the bottom side of FMD by using cross-head screw driver.

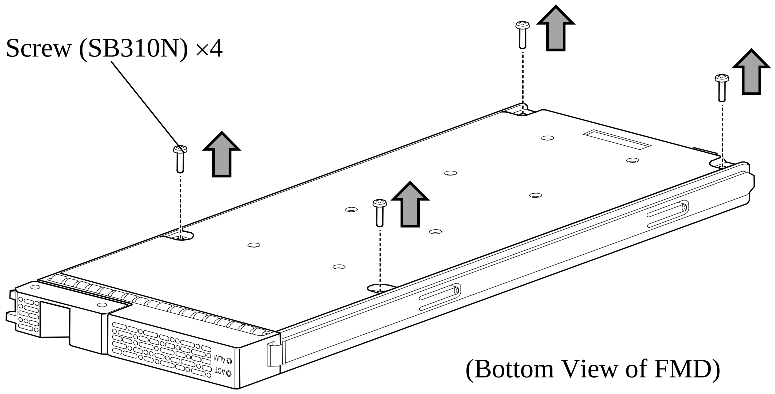


Fig. 3.5.2-7B Removing Screws

(d)-2 Remove Top Cover and Bottom Cover.

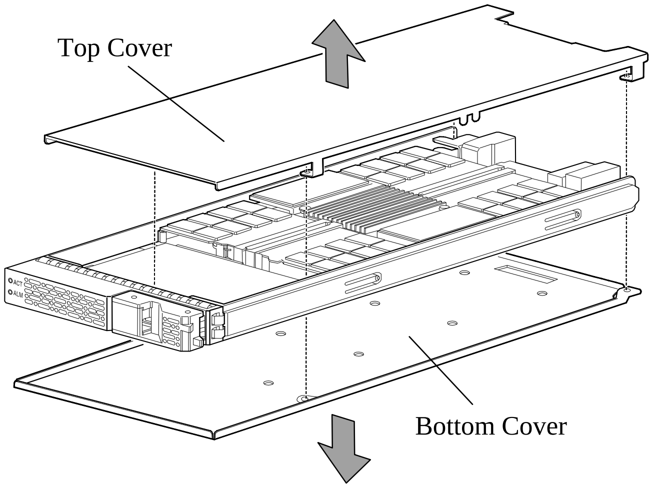


Fig. 3.5.2-7C Removing Covers

(d)-3 Remove 2 sets of Tapping-screw and Washer by using cross-head screw driver.

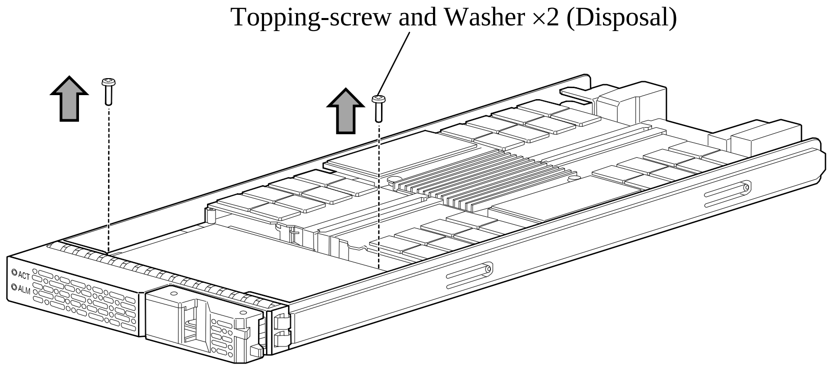


Fig. 3.5.2-7D Removing Tapping-screws and Washers

(d)-4 Move the Battery to the bezel side and disconnect the Battery from the circuit board.

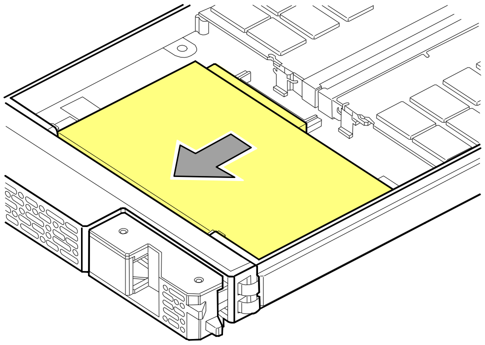


Fig. 3.5.2-7E Disconnecting from Connector

(d)-5 Remove the Battery to the bottom side of FMD. (After the connector comes off, battery is lowered below.)

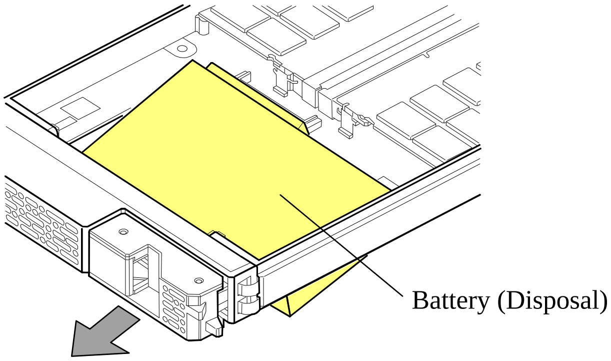


Fig. 3.5.2-7F Removing Battery

(d)-6 Attach Top Cover and Bottom Cover.
(d)-7 Attach 4 Screws (SB310N) on the bottom side of FMD.

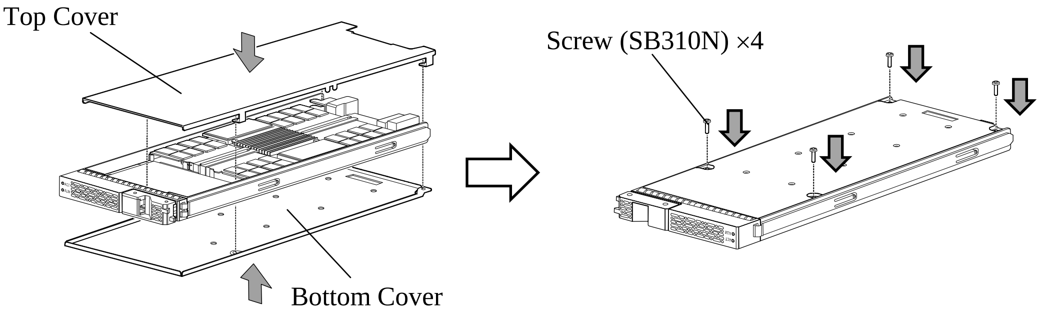


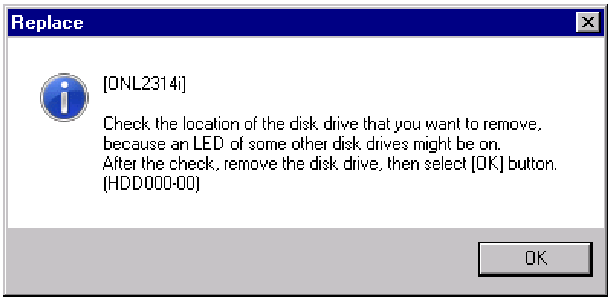
Fig. 3.5.2-7G Reassembling FMD

(d)-8 Dispose of the Tapping-screws, Washers and Battery removed in procedures (d)-3 and (d)-5.
When dispose of the Battery, follow the directions given by the local law where the product is used.

2-4. Check and handling of the drive.

(1) <Confirm Removal>

Select (CL) [OK] in response to “Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on. After the check, remove the disk drive, then select [OK] button. (HDDxnn-nn)” after the unit is removed. (Step 2-3)



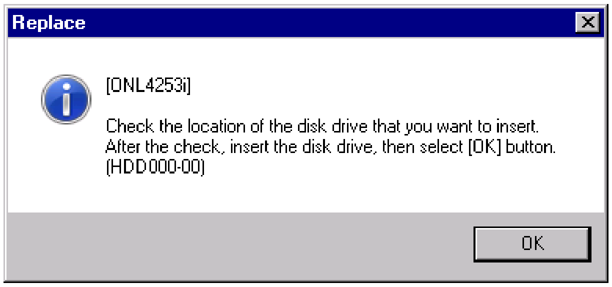
[ONL2314i]

Check the location of the disk drive that you want to remove, because an LED of some other disk drives might be on.
After the check, remove the disk drive, then select [OK] button.
(HDD000-00)

---

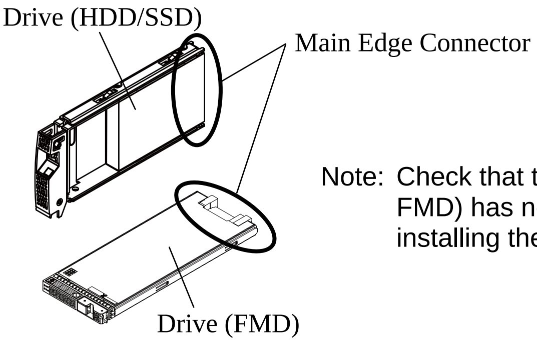
(2) <Confirm Insertion>

“Check the location of the disk drive that you want to insert. After the check, insert the disk drive, then select [OK] button. (HDDnnn-nn)” is displayed.



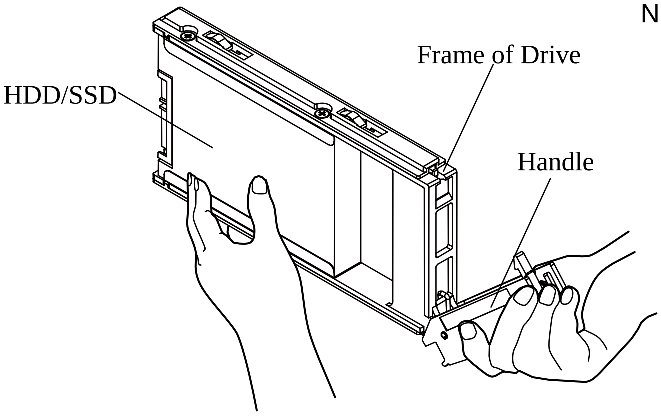
[ONL4253i]

Check the location of the disk drive that you want to insert.
After the check, insert the disk drive, then select [OK] button.
(HDD000-00)



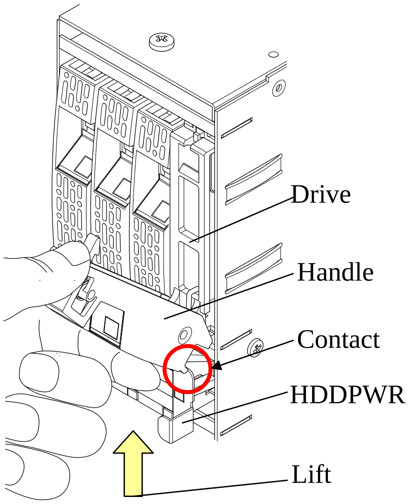
Note: Check that the main edge connector of the drive (HDD/SSD/ FMD) has no deformation, damage or sticking of dust before installing the drive.

Handling of Drive



Note on the installation:
Do not insert the drive by pushing its frame.

2-5. Install the drive.



Instruction for the insertion and removal of the 2.5-inch drive:

The upper part of HDDPWR might come in contact with the lower part of the drive, and it becomes an obstruction of the insertion and removal at the time of the 2.5-inch drive insertion and removal. In this case, avoid the HDDPWR by lifting the drive lightly.

Caution – Back Board, or drive connector or drive handle may be damaged when the drive is forcibly inserted.

If the drive cannot be easily inserted until the claws on the handle reach the DKU, or if the handle binds or stops before it can be locked, then remove the drive and perform inspection:

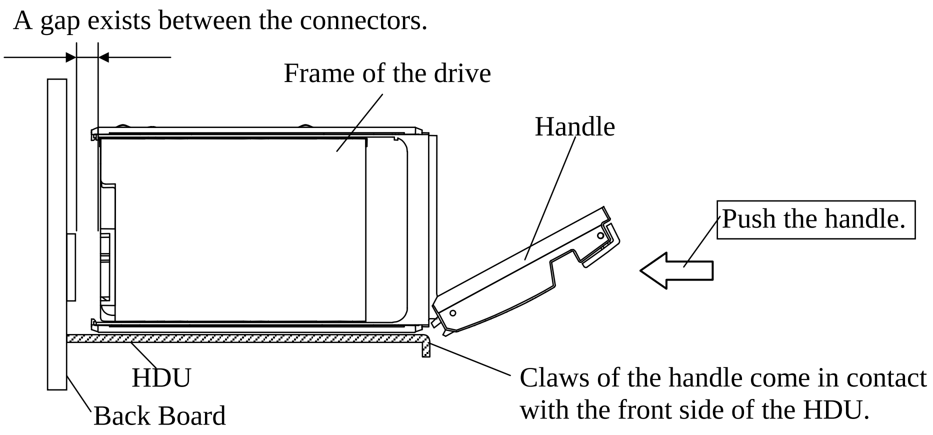
a) Check the drive slot in DKU to be free and clear of obstructions.
b) Check connector on back board for visible defects.
c) Inspect connector on drive for visible defects.
d) Inspect drive top and bottom guide for defects. Note special alignment tab on bottom guide on some drive. A damaged tab can bind on the lower slot guides in DKU.
e) During installation make sure the drive is inserted in alignment with slot guides.
f) Check upper rear spring on SSD has been removed. (This applies only on SSD)
Reinsert drive after inspections have passed.

2-5-1. In case of 3.5inch/2.5inch drive

a. Insert the drive into the HDU holding its handle.
(Insert the canister until the claws that are located at the bottom of the handle come in contact with the front side of the HDU.)

b. Turn the handle at a stroke by pushing its top with your thumb.
(Turn the handle until it latches with the stopper. Do not stop the handle on its way of turning.)

a. Insert the HDD/SSD canister into the HDU holding its handle.


A gap exists between the connectors.
Frame of the drive
Handle
Push the handle.
HDU
Back Board
Claws of the handle come in contact with the front side of the HDU.

b. Turn the handle at a stroke by pushing its top with your thumb.
(Do not stop the handle on its way of turning.)

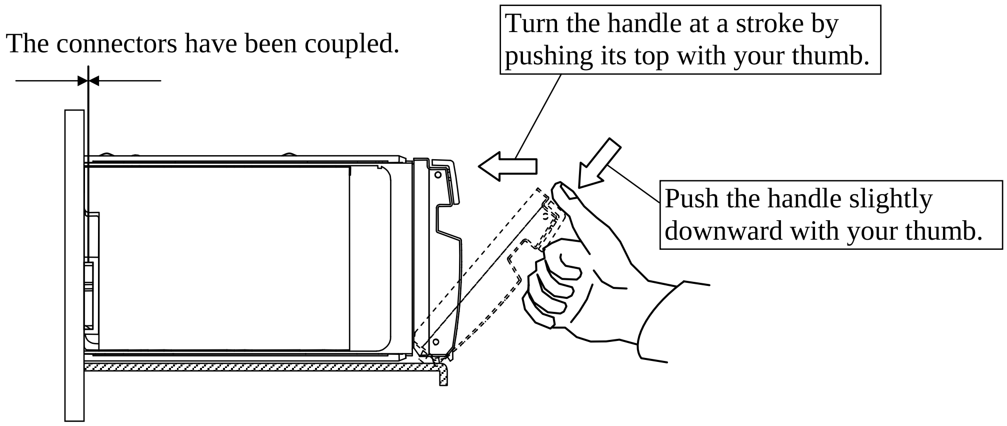

The connectors have been coupled.
Turn the handle at a stroke by pushing its top with your thumb.
Push the handle slightly downward with your thumb.

Fig. 3.5.2-8 Method of Installing Drive

c. Close the FAN door and tighten the screws. (Refer to Fig. 3.5.2-1.)

d. Put the FAN door stopper into the neutral state.

2-5-2. In case of FMD

Note: When handling the drive, hold the rail side because the shield spring is subject to breakage.

a. Open the handle fully and fit the drive in the guide rail and slide it in the direction shown by the arrow not to give a shock.

b. Push the drive in until it reaches the position where a hook of the handle can be entered into the square hole on a frame.

c. Pull the stopper lightly and close the handle, and then press the stopper to have the lock on. If the handle is closed in the state where the hook of the handle cannot enter into the square hole, the drive cannot be installed correctly because it runs into the frame of the FBX DKU.

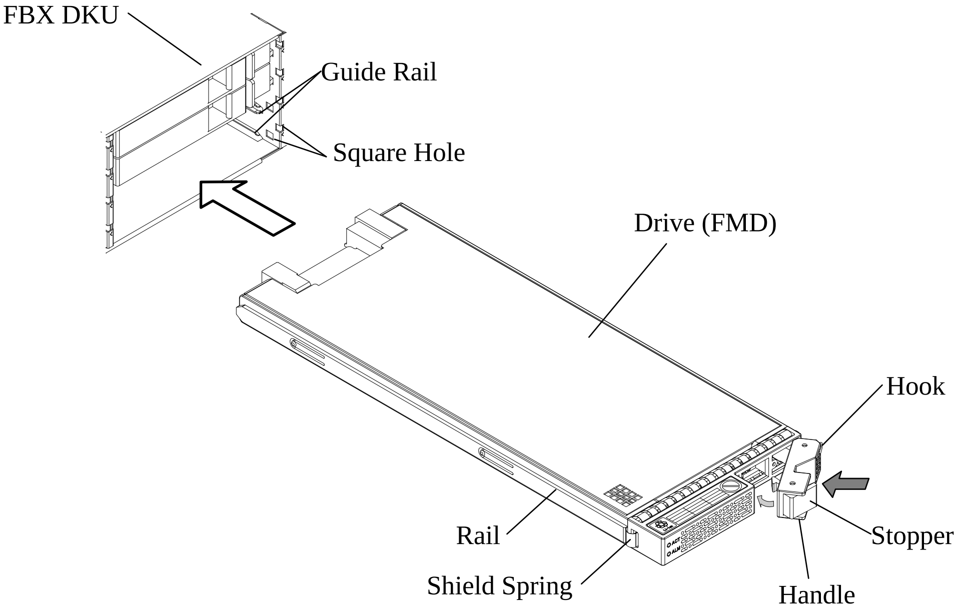


Fig. 3.5.2-9 Installation of Drive (In case of FMD)

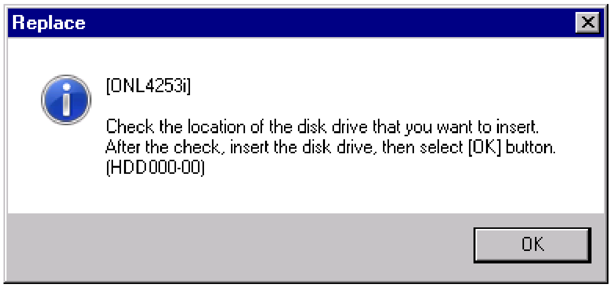
2-6. Go to “3. POST-PROCESSING of SVP”.

Before starting the <Check the beginning of recovery> operation in POST-PROCEDURES of SVP, be sure to insert a removable media for dump, collect failure information, and return the removable media with the failed HDD.
A dump removable media is attached with a Spare HDD.

3. POST-PROCESSING of SVP

3-1. <Confirm Insertion>

“Check the location of the disk drive that you want to insert. After the check, insert the disk drive, then select [OK] button. (HDDnnn-nn)” is displayed.

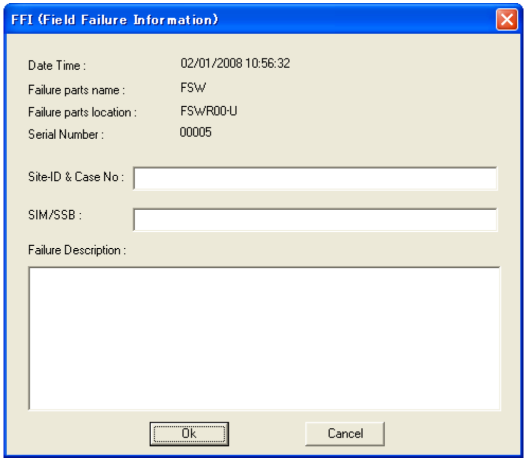


[ONL4253i]

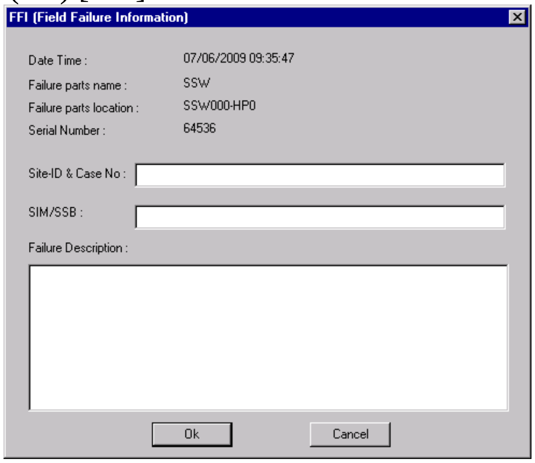
Check the location of the disk drive that you want to insert.
After the check, insert the disk drive, then select [OK] button.
(HDD000-00)

3-2. <Get the error information>

Input the Field Failure Information, and select (CL) [OK].

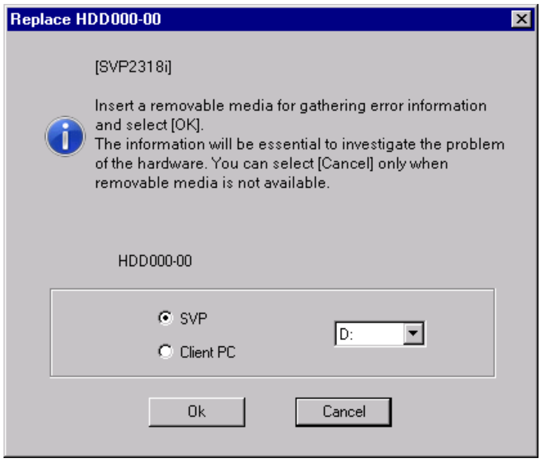


Date Time : 02/01/2008 10:56:32
Failure parts name : FSW
Failure parts location : FSWR00-U
Serial Number : 00005
Site-ID & Case No :
SIM/SSB :
Failure Description :



Date Time : 07/06/2009 09:35:47
Failure parts name : SSW
Failure parts location : SSW000-HP0
Serial Number : 64536
Site-ID & Case No :
SIM/SSB :
Failure Description :

“Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.” is displayed.
Select a Client PC arbitrary drive, and select (CL) [Ok].
Trouble information is preserved in console PC connected with SVP.
Please select the Client PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu.
The drive letter becomes the drive letter of console PC connected with SVP.


Replace HDD000-00

[SVP2318i]

Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.

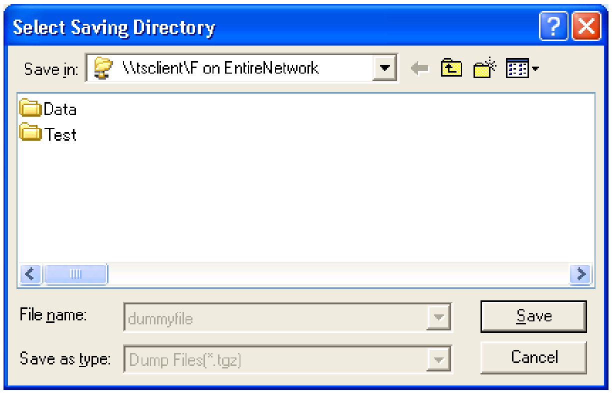
HDD000-00

● SVP
○ Client PC

D:

When Client PC is selected, the directory selection dialog is displayed.
Please select an arbitrary directory if necessary.

Console PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of console PC.



Save in: \\tsclient\F on EntireNetwork

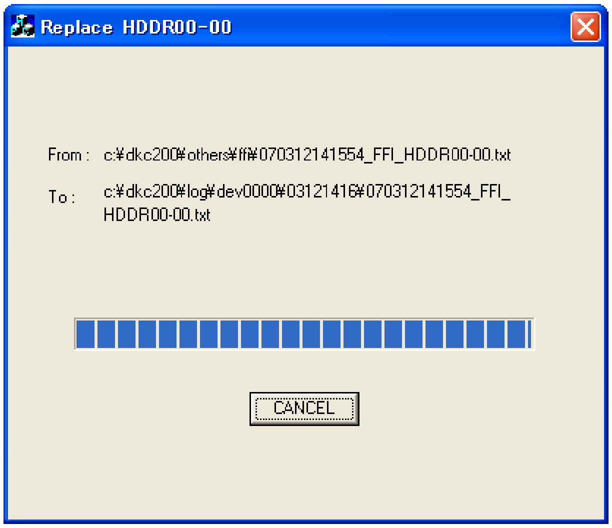
File name: dummyfile

Save as type: Dump Files(*.tgz)

Select (CL) [Save] when saving a file in a specified directory.
It returns to the drive selection screen when [Cancel] is selected (CL).

3-3. <Copy of the error information>

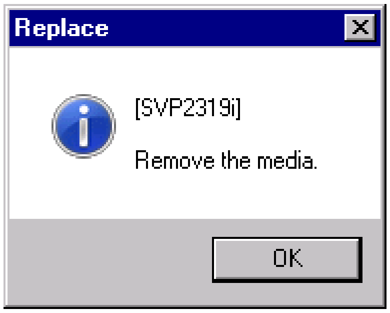
The error information is copied onto media.



From : c:¥dkc200¥others¥ff¥070312141554_FFI_HDDR00-00.txt

To : c:¥dkc200¥log¥dev0000¥03121416¥070312141554_FFI_HDDR00-00.txt

“Remove the media.” is displayed.
Select (CL) [OK].



[SVP2319i]

Remove the media.

3-4. <Check the spin up process>
“Spinning up...” is displayed.

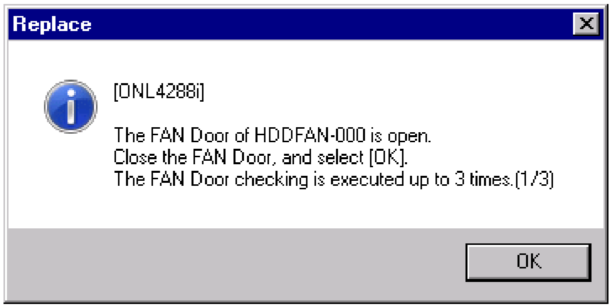
3-5. <Check the INLINE process>
“DKU INLINE is now running...” is displayed.

3-6. <Replacement of the DKU micro-program>
When the revision of the DKU micro-program in the SVP hard disk is newer than that in the PDEV, the following message appears on the screen.
The message “Exchanging DKU micro-program...” appears.

3-7. <Restore Physical Drive>
“Restoring...” is displayed.

(1)

“The FAN Door of HDDFAN-xxx is open.
Close the FAN Door, and select [OK].
The FAN Door checking is executed up to 3 times. (n/3)” is displayed.
After the FAN door is closed, select (CL) [OK] in response to this message.



[ONL4288i]

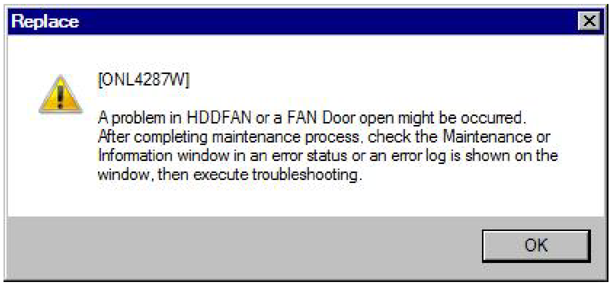
The FAN Door of HDDFAN-000 is open.
Close the FAN Door, and select [OK].
The FAN Door checking is executed up to 3 times.(1/3)

It returns to (1) when HDDFAN doors of the object are not closed.
It goes to 3-8 when HDDFAN doors of the object are closed.

Note: It goes to (2) when it cannot be confirmed that the FAN doors are closed in the three times FAN door check.

(2)

"A problem in HDDFAN or a FAN Door open might be occurred.
After completing the maintenance process, check the Maintenance or Information window in an error status or an error log is shown on the window, then execute troubleshooting." is displayed.
Select (CL) [OK] in response to this message.

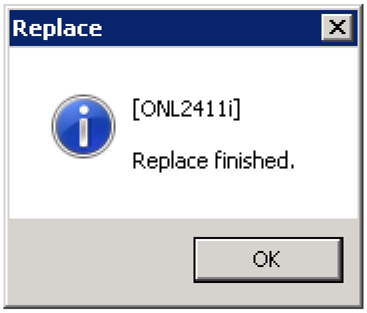


[ONL4287W]

A problem in HDDFAN or a FAN Door open might be occurred.
After completing maintenance process, check the Maintenance or Information window in an error status or an error log is shown on the window, then execute troubleshooting.

3-8. <Check the end of PDEV recovery>

Select (CL) [OK] in response to "Replace finished.".



[ONL2411i]

Replace finished.

3-9.

Go to POST-PROCEDURE [REP04-01-10].

[CACHE REPLACEMENT PROCESSING - RCA1]

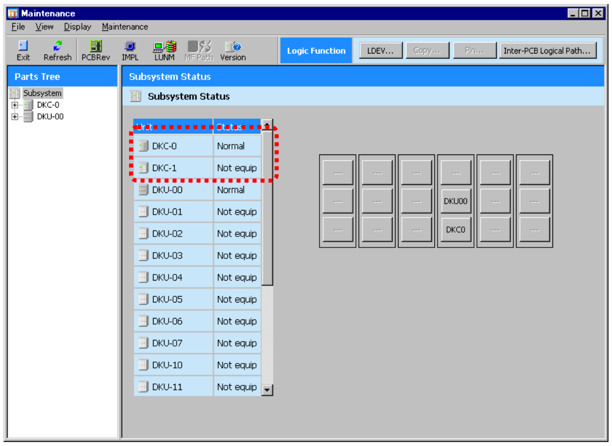
— OUTLINE —

1. PRE-PROCESSING of SVP
    - ① Select cache (status check)
    - ② Specify Replacement
    - ③ Place PCB into blocked state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    - ① Execute CUDG on cache
    - ② Specify recovery
    - ③ Version of Microprogram

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

Select (CL) [DKC-n] in the 'Maintenance' window.

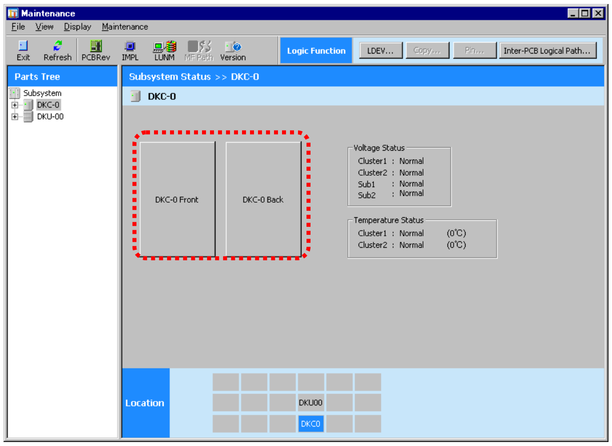


Subsystem Status

Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <DKC window>

Select (CL) [DKC-n Front] in the 'DKC' window.

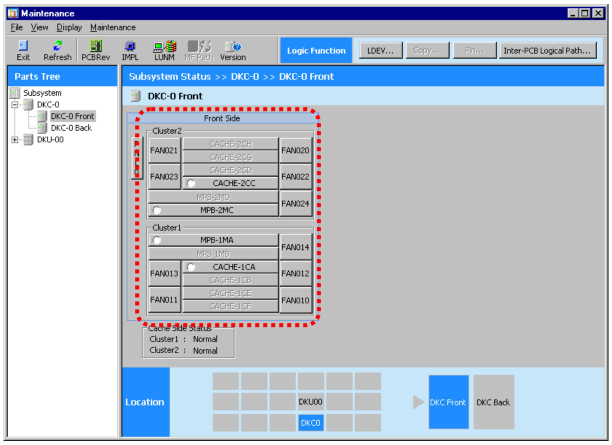


Voltage Status
Cluster1 : Normal
Cluster2 : Normal
Sub1 : Normal
Sub2 : Normal

Temperature Status
Cluster1 : Normal (0˚C)
Cluster2 : Normal (0˚C)

1-3. <Select Cache>

Select (CL) Cache.



Cache Side Status
Cluster1 : Normal
Cluster2 : Normal

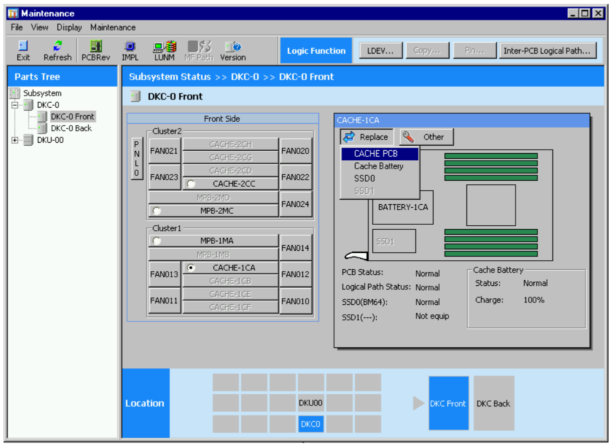
1-4. <Specify replacement of cache>

CAUTION

When the screen appears prompting the operator to input a password to prevent multiple maintenance or for executing a pin check, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

Check status display.
Select (CL) [Replace], and select(CL) [CACHE PCB].

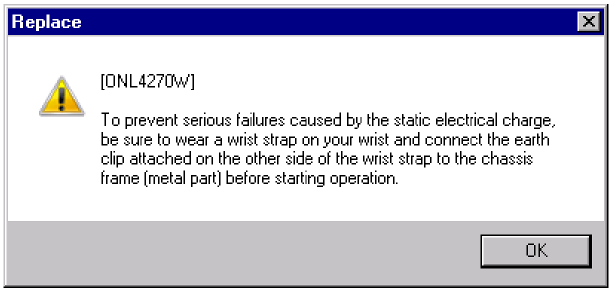

Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function
LDEV...
Copy...
Pin...
Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKC-0 Front
DKC-0 Back
DKU-00
Subsystem Status >> DKC-0 >> DKC-0 Front
DKC-0 Front
Front Side
Cluster2
PNL0
FAN021 FAN020 FAN023 FAN022 FAN024
CACHE-2CH CACHE-2CG CACHE-2CD CACHE-2CC
MPB-2MD MPB-2MC
Cluster1
MPB-1MA MPB-1MB
FAN014 FAN013 FAN012 FAN011 FAN010
CACHE-1CA CACHE-1CB CACHE-1CE CACHE-1CF
CACHE-1CA
Replace
Other
CACHE PCB
Cache Battery
SSD0
SSD1
BATTERY-1CA
SSD1
Location
DKU00
DKC0
DKC Front
DKC Back

PCB Status: Normal
Logical Path Status: Normal
SSD0(BM64): Normal
SSD1(---): Not equip

Cache Battery
Status: Normal
Charge: 100%

1-5. <Wear a wrist strap>

Select (CL) [OK] in response to "To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.".

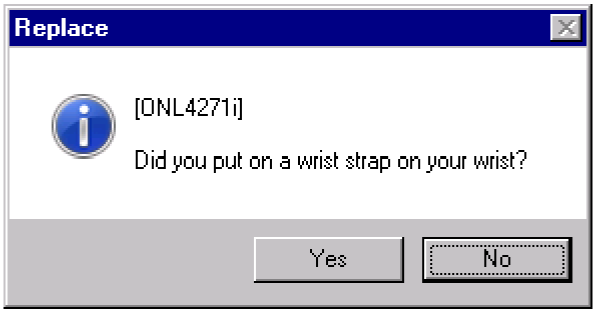


[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

(1) <Confirm wearing wrist strap>

In response to a message, "Did you put on a wrist strap on your wrist?".
Select (CL) [Yes] when wrist strap is on your wrist.
Select (CL) [No] when there is no wrist strap on your wrist.
When [No] is selected (CL), go to Step (2).



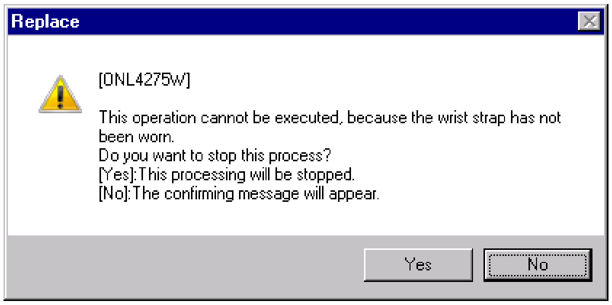
[ONL4271i]

Did you put on a wrist strap on your wrist?

(2)

In response to a message, "This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?
[Yes]: This processing will be stopped.
[No]: The confirming message will appear."

When [Yes] is selected (CL), returned to Step 1-4.
When [No] is selected (CL), returned to Step 1-5.

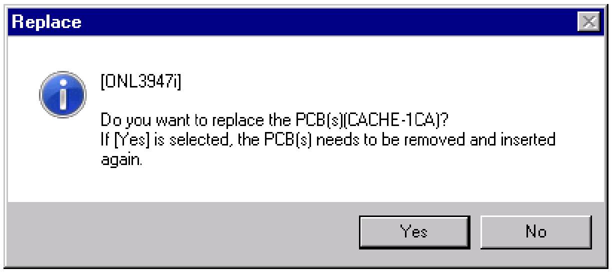


[ONL4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-6. <Check the beginning of cache replace>

Select (CL) [Yes] after making sure that the package to be replaced is correct in response to “Do you want to replace the PCB(s)(CACHE-nnn)? If [Yes] is selected, the PCB(s) needs to be removed and inserted again.”.

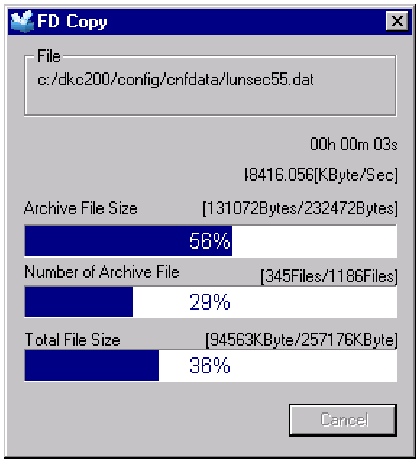


[ONL3947i]

Do you want to replace the PCB(s)(CACHE-1CA)?
If [Yes] is selected, the PCB(s) needs to be removed and inserted again.

1-7. <Compression of the error information>

The error information is compressed.
The dialog of FD Copy is displayed.



File
c:/dkc200/config/cnfdata/lunsec55.dat

00h 00m 03s
18416.056[KByte/Sec]

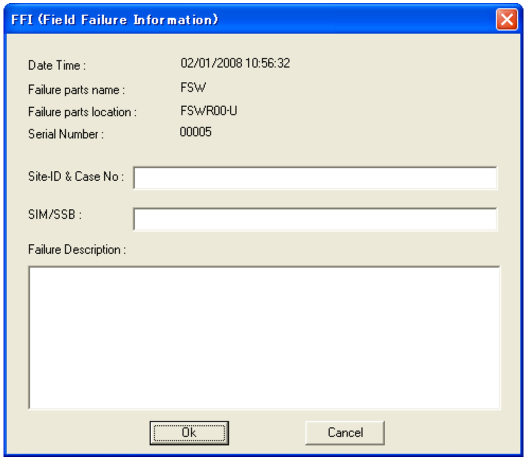
Archive File Size [131072Bytes/232472Bytes]
56%

Number of Archive File [345Files/1186Files]
29%

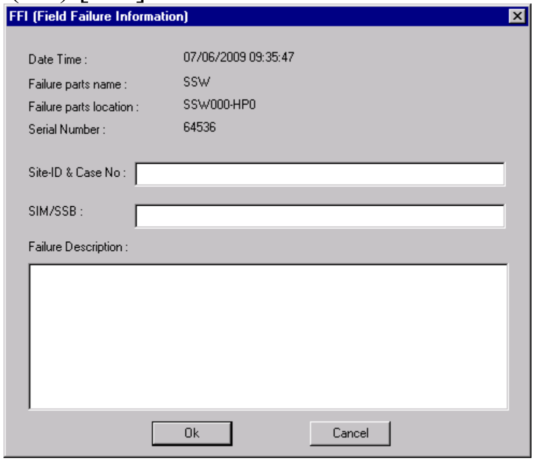
Total File Size [94563KByte/257176KByte]
36%

1-8. <Get the error information>

Input the Field Failure Information, and select (CL) [OK].

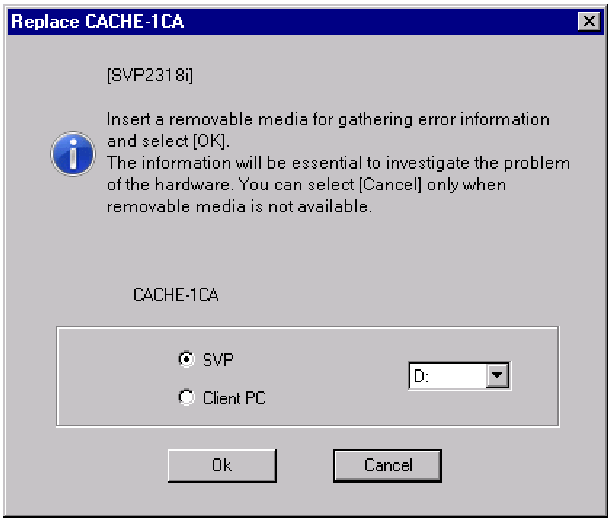


Date Time : 02/01/2008 10:56:32
Failure parts name : FSW
Failure parts location : FSWR00-U
Serial Number : 00005
Site-ID & Case No :
SIM/SSB :
Failure Description :



Date Time : 07/06/2009 09:35:47
Failure parts name : SSW
Failure parts location : SSW000-HP0
Serial Number : 64536
Site-ID & Case No :
SIM/SSB :
Failure Description :

"Insert a removable media for gathering error information and select [OK]. The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available." is displayed.
Trouble information is preserved in console PC connected with SVP.
Please select the Client PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu. The drive letter becomes the drive letter of console PC connected with SVP.


Replace CACHE-1CA

[SVP2318i]

Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.

CACHE-1CA

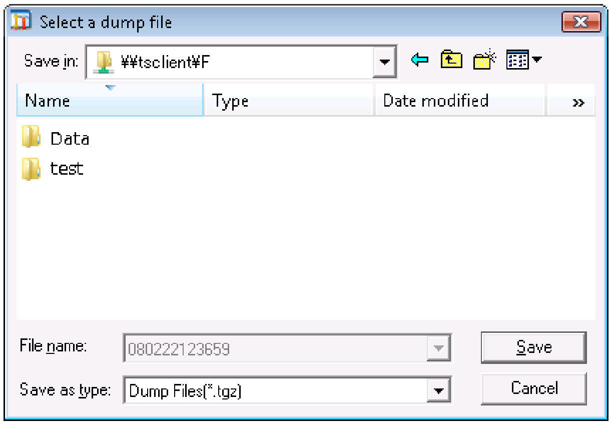
● SVP
○ Client PC
D:

*: When Cache Memory Module is replaced, select (CL) [Cancel] because the dump is not required.

A Primary copy is always placed on the SVP HD in the "c:\dkc200\others\pcbinfo\" directory with the following file name format
"[factory_cd]_[Pcb_type]_[Pcb_SerialNo]_YYMMDDhhmmss.tgz".
(YY denotes Year, MM denotes Month, DD denotes Day, hh denotes Hour, mm denotes Minute, and ss denotes Second)

When Client PC is selected, the directory selection dialog is displayed.
Please select an arbitrary directory if necessary.

Console PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of console PC.


Select a dump file

Save in: ¥¥tsclient¥F

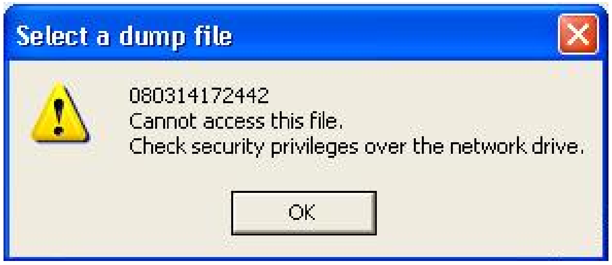
Name	Type	Date modified
Data		
test		

File name: 080222123659
Save as type: Dump Files(*.tgz)

Select (CL) [Save] when saving a file in a specified directory.
It returns to the drive selection screen when [Cancel] is selected (CL).

- When the destination media is write-protected.

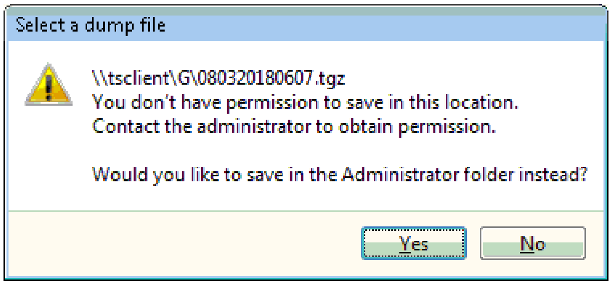
<For Windows XP>



080314172442
Cannot access this file.
Check security privileges over the network drive.

<For Windows Vista>

Selecting (CL) [Yes] displays the "C:\users\Administrator" folder of SVP.
Selecting (CL) [No] displays the folder selected with the Client PC.



\\tsclient\G\080320180607.tgz
You don't have permission to save in this location.
Contact the administrator to obtain permission.

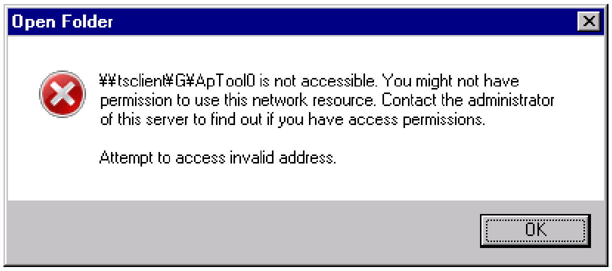
Would you like to save in the Administrator folder instead?

Please appoint another destination whether you remove write protect when you save it and carry it out.

- When dialog of the destination drive specified with the Client PC is open, the media is removed, and then select (CL) [Save].

- When the memory in the destination drive specified with the Client PC is corrupted. The dialog remains displayed after selecting (CL) [OK].

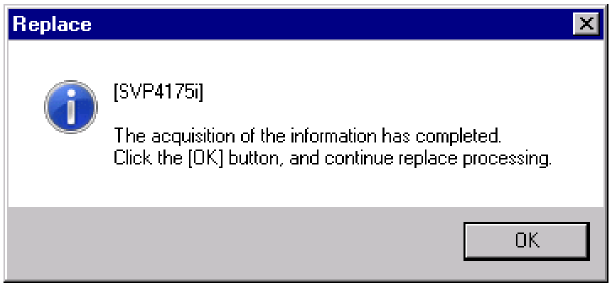
  At the time of the above operation completion, the information collection is not carried out.
  Please choose another directory again after having closed a system message whether you reconnect the drive that you removed when you save it and carry it out.



¥¥tsclient¥G¥ApTool0 is not accessible. You might not have permission to use this network resource. Contact the administrator of this server to find out if you have access permissions.

Attempt to access invalid address.

Select (CL) [OK] in response to "The acquisition of the information has completed. Click the [OK] button, and continue replace processing.".



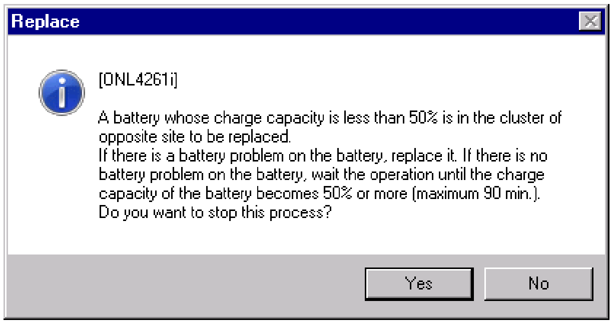
[SVP4175i]

The acquisition of the information has completed.
Click the [OK] button, and continue replace processing.

1-9. <Confirmation of amount of opposite cluster battery charge>

(1)

- When there is PCB whose amount of battery charge is less than 50% in the opposite cluster:
  "A battery whose charge capacity is less than 50% is in the cluster of opposite site to be replaced. If there is a battery problem on the battery, replace it. If there is no battery problem on the battery, wait the operation until the charge capacity of the battery becomes 50% or more (maximum 90 min.). Do you want to stop this process?".



[ONL4261i]

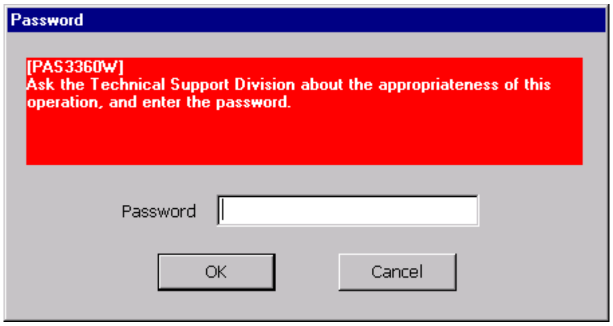
A battery whose charge capacity is less than 50% is in the cluster of opposite site to be replaced.
If there is a battery problem on the battery, replace it. If there is no battery problem on the battery, wait the operation until the charge capacity of the battery becomes 50% or more (maximum 90 min.).
Do you want to stop this process?

  When [Yes] is selected (CL), returned to REP03-10-30 Step 1-4.
  When [No] is selected (CL), go to Step (2)

- When there is no PCB whose amount of charge of the Cache battery is less than 50%: go to Step 1-10.

---

(2) <Input password>
Enter the password and select (CL) [OK].



[PAS3360W]
Ask the Technical Support Division about the appropriateness of this operation, and enter the password.

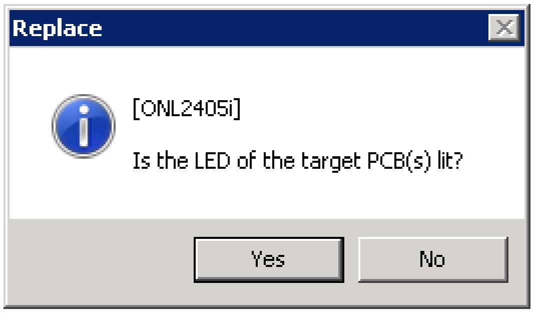
Notice: This is a special (exceptional) operation that can cause a serious failure such as a system down or a data loss if a wrong part to be removed is selected, and requires an input of a password. Ask the technical support division about the appropriateness of the operation, and input the password after getting an approval of executing the operation.

1-10. <Cache blocking>

"The Cache Memory PCB (CACHE-nnn) is being blocked." is displayed.

1-11. <Check shut down LED>

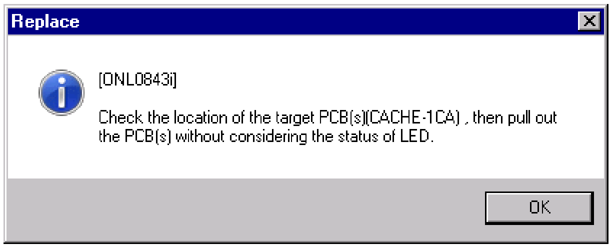
Select (CL)
* [Yes] if LED is on
* [No] if LED is off
in response to “Is the LED of the target PCB(s) lit?”.



[ONL2405i]

Is the LED of the target PCB(s) lit?

If [No] is selected:
Select (CL) [OK] in response to “Check the location of the target PCB(s)(CACHE-nnn), then pull out the PCB(s) without considering the status of LED.”. (Refer to “2. HARDWARE REPLACEMENT PROCESSING”)



[ONL0843i]

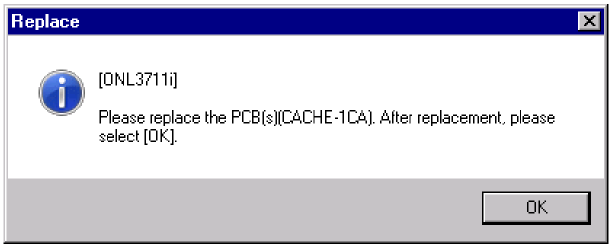
Check the location of the target PCB(s)(CACHE-1CA) , then pull out the PCB(s) without considering the status of LED.

Note: Select (CL) [OK] after pulling out the PCB.

Go to Step 1-12.

1-12. <Cache Replacement>

“Please replace the PCB(s)(CACHE-nnn). After replacement, please select [OK].” is displayed.
Select (CL) [OK] after replacing the PCB.



[ONL3711i]

Please replace the PCB(s)(CACHE-1CA). After replacement, please select [OK].

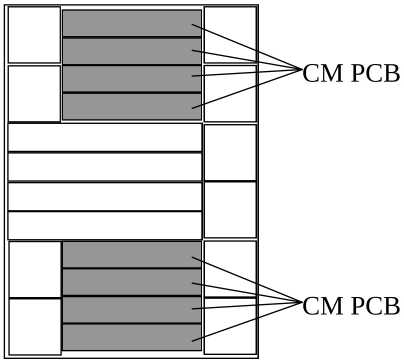
1-13. <Replace cache PCB>

Replace cache.

Go to “2. HARDWARE REPLACEMENT PROCESSING”.

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Front View of DKC	1	CM (Cache Memory) PCB	• WP741-A
	2	CM Module (Non-RoHS2 compliant part)	• 4GB DIMM (C16G) • 8GB DIMM (C32G)
		CM Module (RoHS2 compliant part)	• 4GB DIMM (C16GR) • 8GB DIMM (C32GR)



Front View of DKC

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 CM (Cache Memory) PCB

2-1-1. Remove the CM PCB.

a. Open the DKCPANEL when the replacing CM PCB locations are CACHE-2CD, 2CG, 2CH, 2CM, 2CQ or 2CR.
For the CM PCB location other than the above, go to the procedure c.

b. Loosen the screw, slide the DKCPANEL to the far right, and open the DKCPANEL.

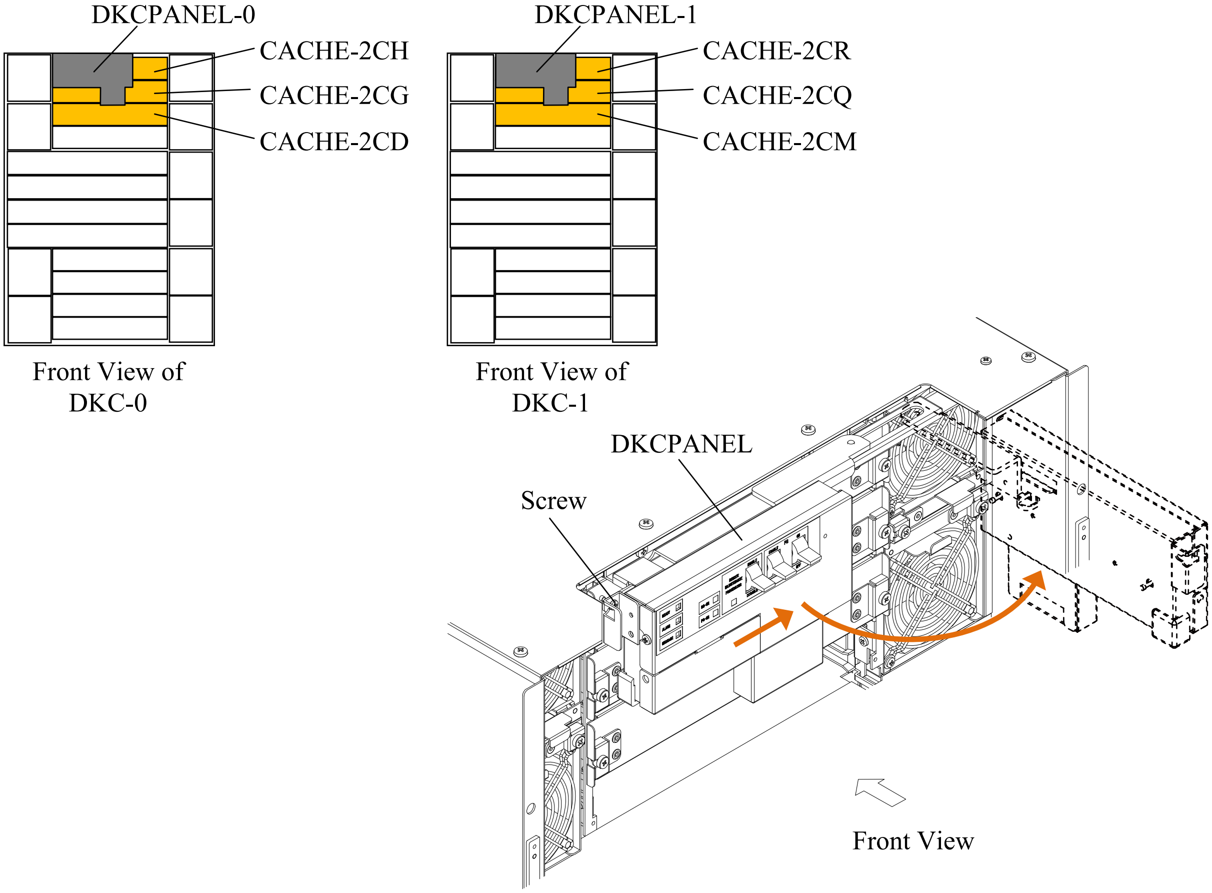


Fig. 3.10.2-1 Shifting of DKCPANEL

c. Check that the Shut Down LED is on. (only hot replace)

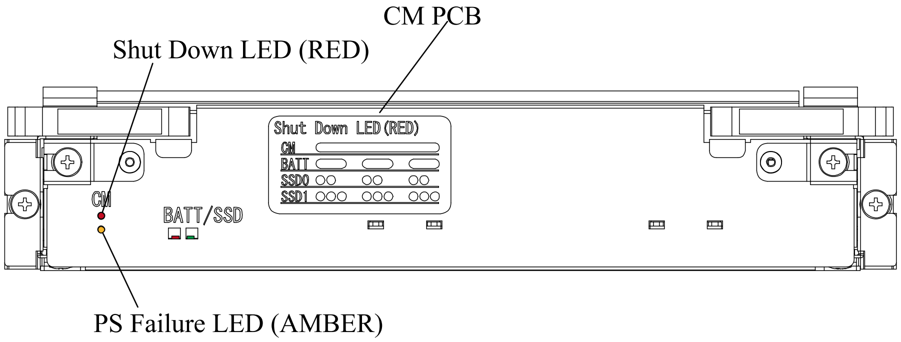
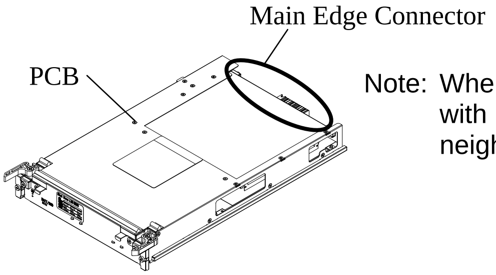


Fig. 3.10.2-2 Confirmation of Shut Down LED

d. Remove the two screws and remove the CM PCB.



Note: When removing the PCB, hold the right and left of the PCB with both hands, and pull it out straight not to contact the neighboring PCB.

Note: After removing the PCB, install the spare PCB immediately.
If the PCB is kept removed for a long time, the wind doesn't flow among installed PCBs, causing the PCBs' temperature rise which may result in temperature warning or temperature alarm.

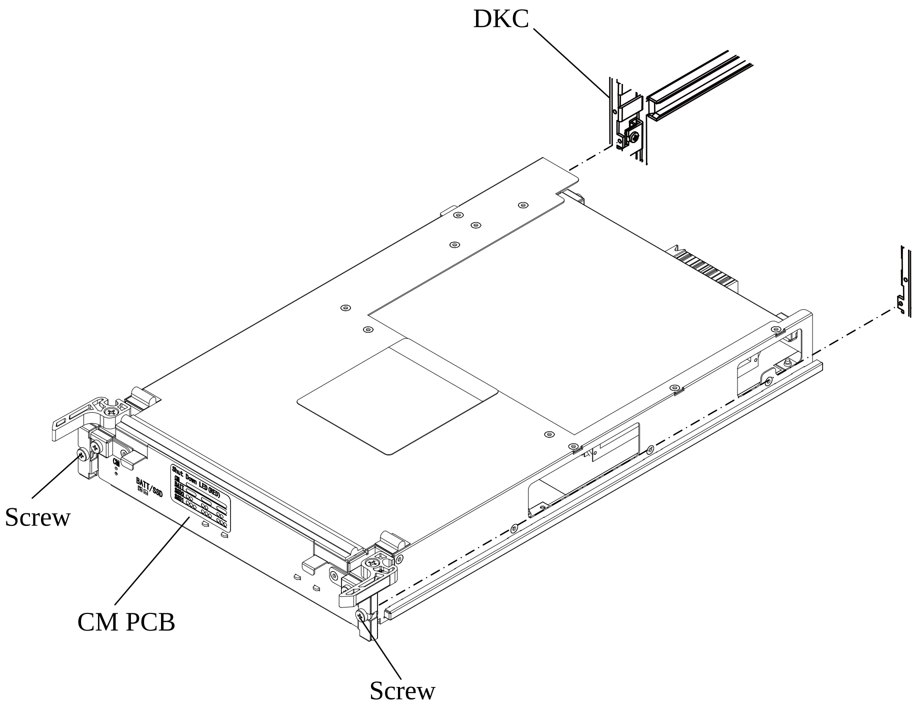


Fig. 3.10.2-3 Removal of CM PCB

2-1-2. Move the CM module.

a. Loosen the two screws and remove the cover.

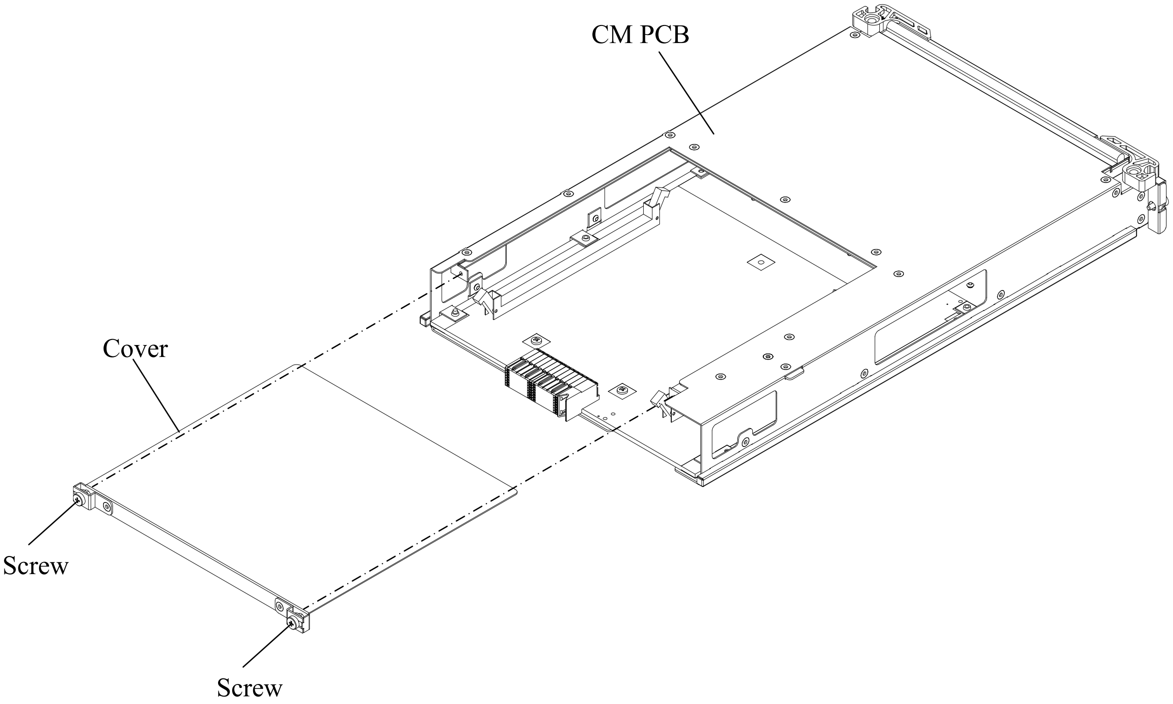
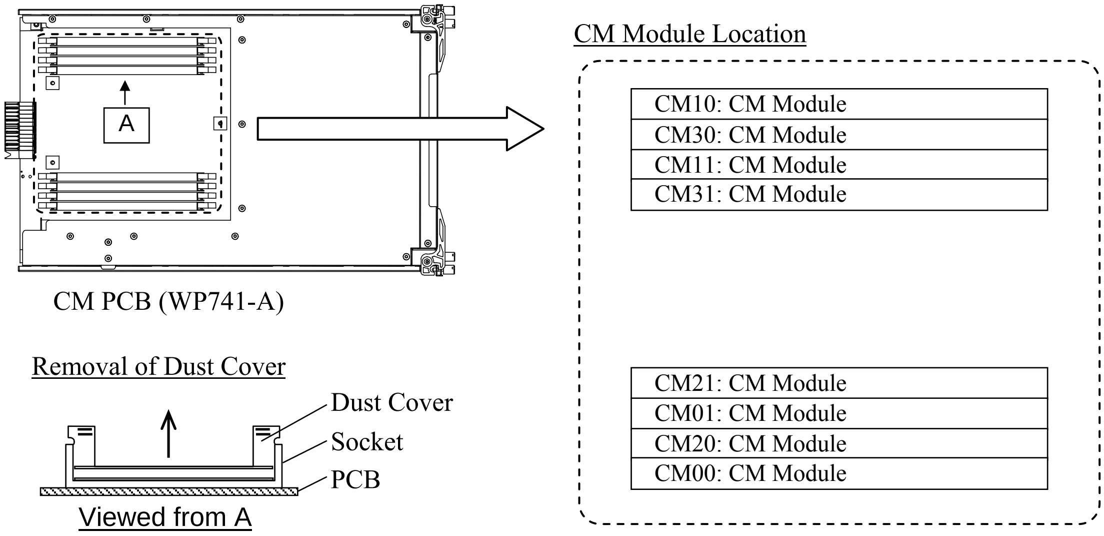
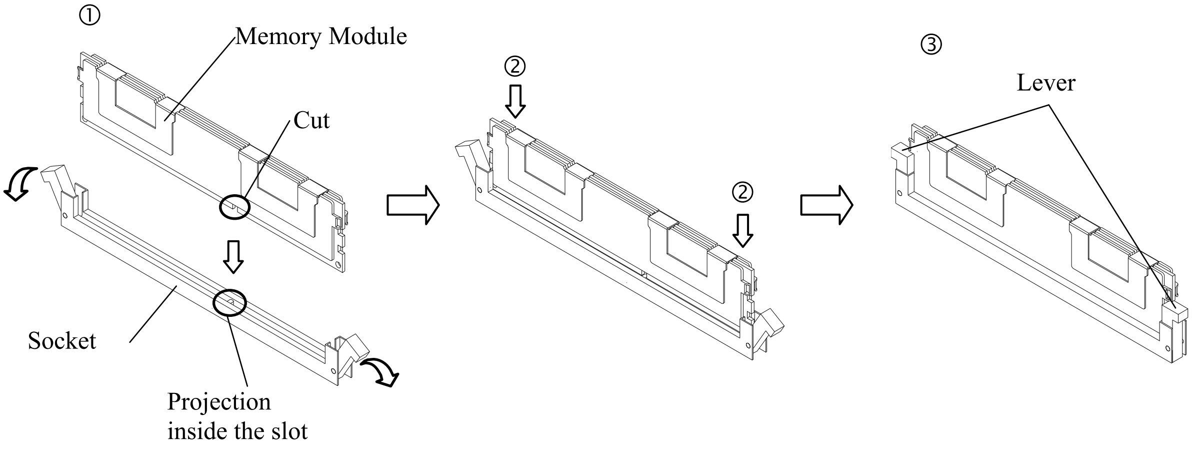


Fig. 3.10.2-4 Removal of Cover

b. Move all the cache memory modules (including dust covers if any) mounted on an extracted PCB to the same mounting positions on the spare PCB.

c. Attach the cover and tighten the screws. (Refer to Fig. 3.10.2-4.)





Installation

① Position the cut of the memory module with the projection inside the slot, and place the memory module on the socket.
② Hold both ends of the memory module by the fingers, and fit it into the socket.
③ Make sure that the lever is firmly fitted in the memory module.

Caution: Do not put intense pressure to which the PCB greatly bends on the memory module after the memory module is secured with the lever at the time equipped with the memory module. The PCB may be damaged, when the intense pressure is applied.

Removal

① Pull the lever outward, and remove the memory module by the inverse process of the installation.

Fig. 3.10.2-5 Insertion Location of CM Module

2-1-3. Move the SSD Memory.

a. Loosen the two screws in the front side of the CM PCB, and remove the cover.
b. Remove the Basic SSD memory from the CM PCB after loosen the screws and put the stopper up.
c. Install the Basic SSD memory in the CM PCB of the spare parts, and put the stopper down, and then secure it with the screws.
d. Move SSD memory in reference to procedure a. to c., if the Option SSD memory is also installed.

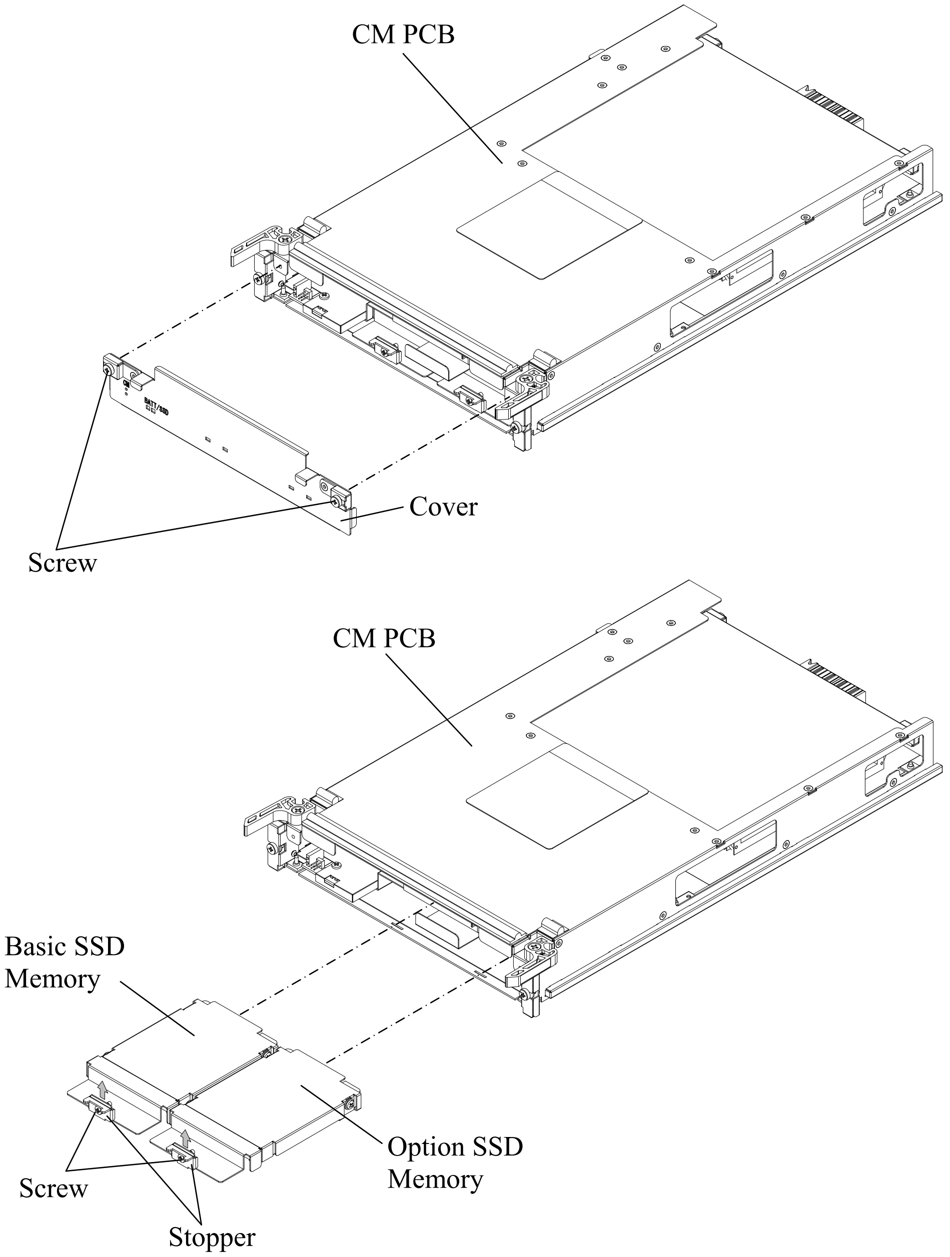


Fig. 3.10.2-6 Movement the SSD memory

e. After removing the battery cable, loosen the screw and remove the battery.

f. Install the battery in the CM package of the maintenance parts, tighten the screw, and then connect the battery cable.

g. Install the cover that is removed in procedure a. to the front side of the CM PCB, and secure it with the two screws.

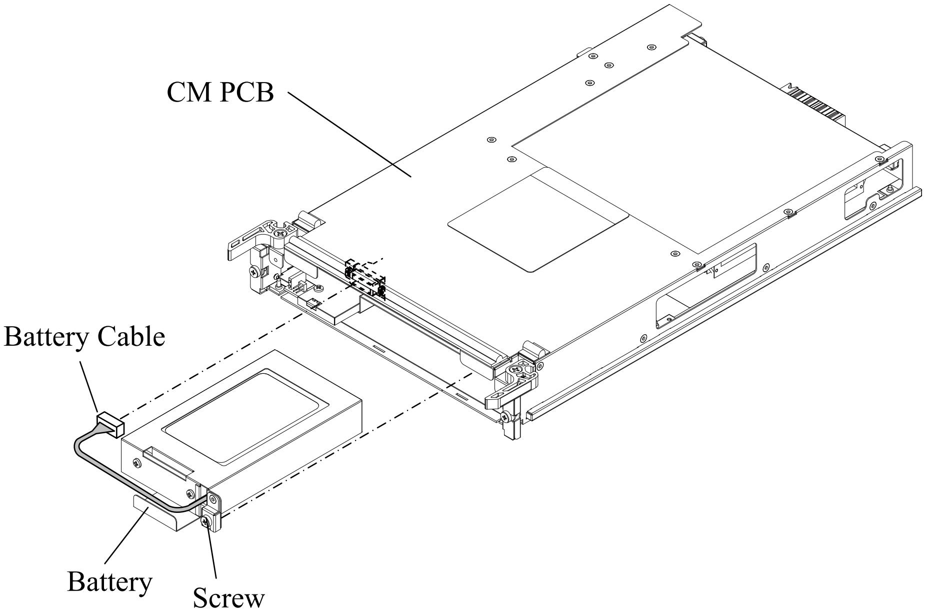
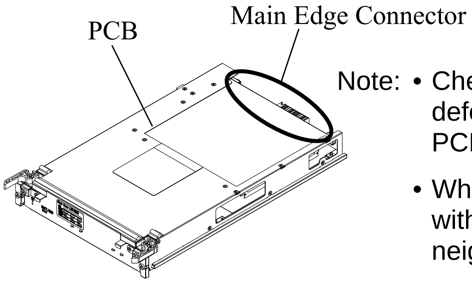


Fig. 3.10.2-7 Movement the Battery

2-1-4. Insert the CM PCB.

a. Insert the CM PCB and tighten the screws.



Note:
- Check that the main edge connector of the PCB has no deformation, damage or sticking of dust before installing the PCB. (See INST03-01-70.)
- When installing the PCB, hold the right and left of the PCB with both hands, and insert it straight not to contact the neighboring PCB.

b. Replace the DKCPANEL and secure it with the screw if the DKCPANEL is opened. (Refer to Fig. 3.10.2-1.)

2-1-5. Go to “3.POST-PROCESSING of SVP” (REP03-10-250).

2-2 CM Module

2-2-1. Remove the CM PCB.

a. Open the DKCPANEL when the removing CM PCB locations are CACHE-2CD, 2CG, 2CH, 2CM, 2CQ or 2CR.
For the CM PCB location other than the above, go to the procedure c.

b. Loosen the screw, slide the DKCPANEL to the far right, and open the DKCPANEL.

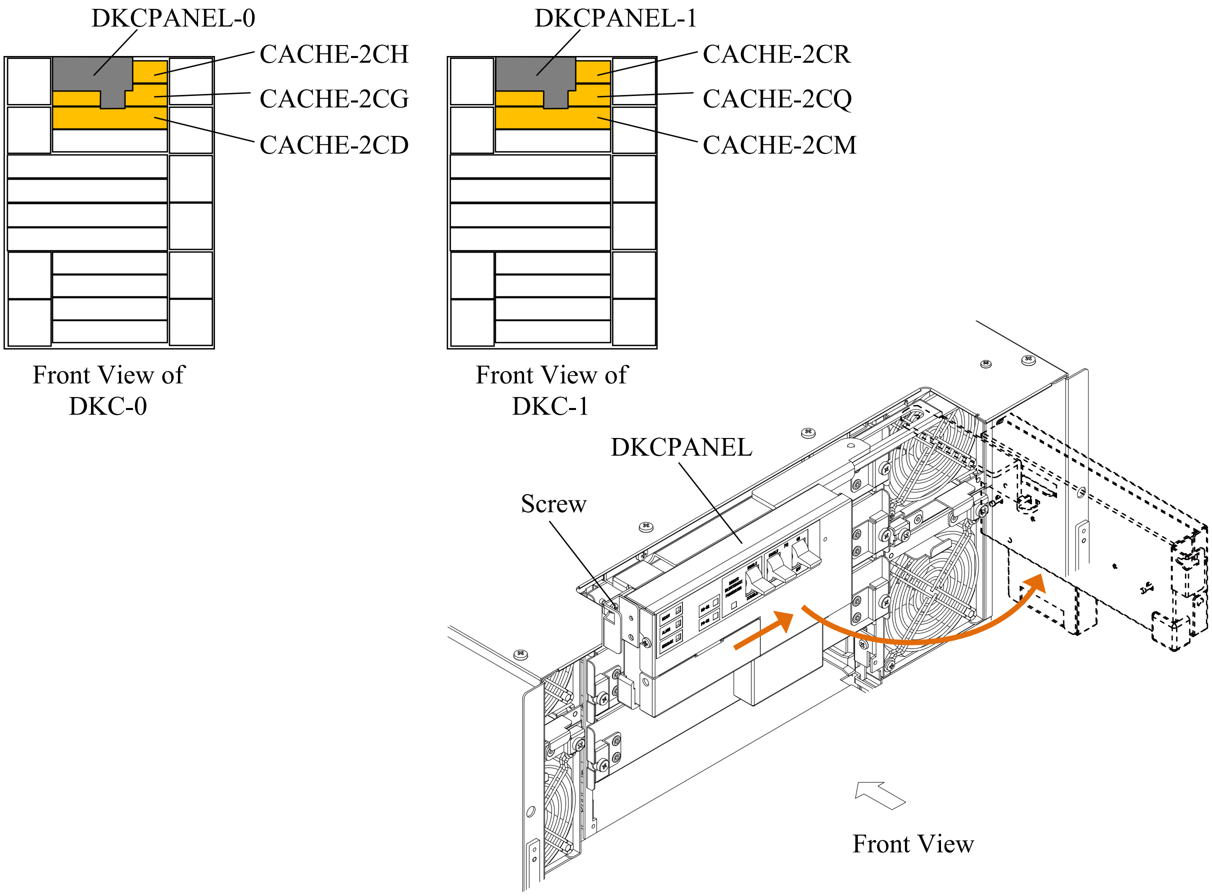


Fig. 3.10.2-8 Shifting of DKCPANEL

c. Check that the Shut Down LED is on. (only hot replace)

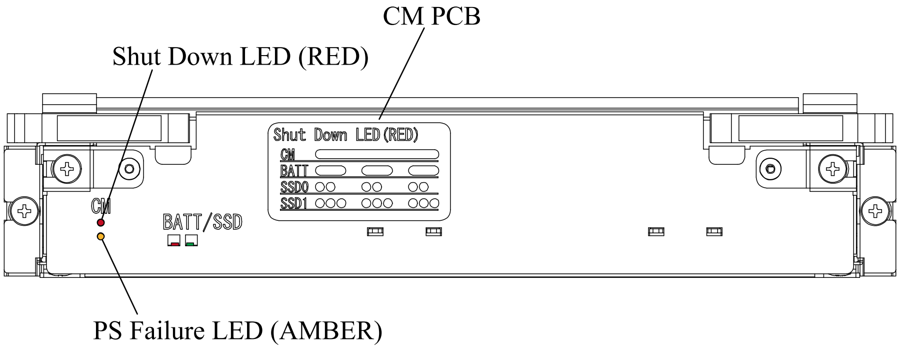
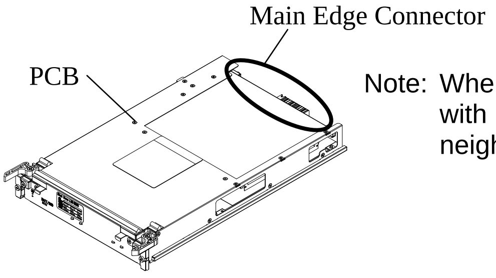


Fig. 3.10.2-9 Confirmation of Shut Down LED

d. Remove the two screws and remove the CM PCB.



Note: When removing the PCB, hold the right and left of the PCB with both hands, and pull it out straight not to contact the neighboring PCB.

Note: After removing the PCB, replace memory modules immediately and install the extracted PCB.
If the PCB is kept removed for a long time, the wind doesn't flow among installed PCBs, causing the PCBs' temperature rise which may result in temperature warning or temperature alarm.

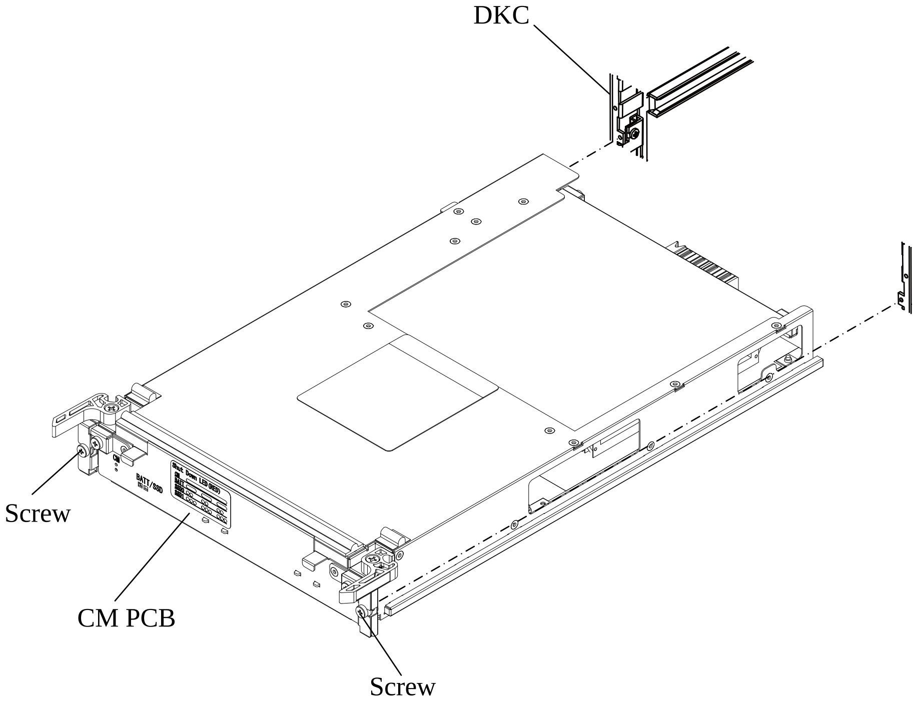


Fig. 3.10.2-10 Removal of CM PCB

2-2-2. Replace the CM module.

a. Loosen the two screws and remove the cover.

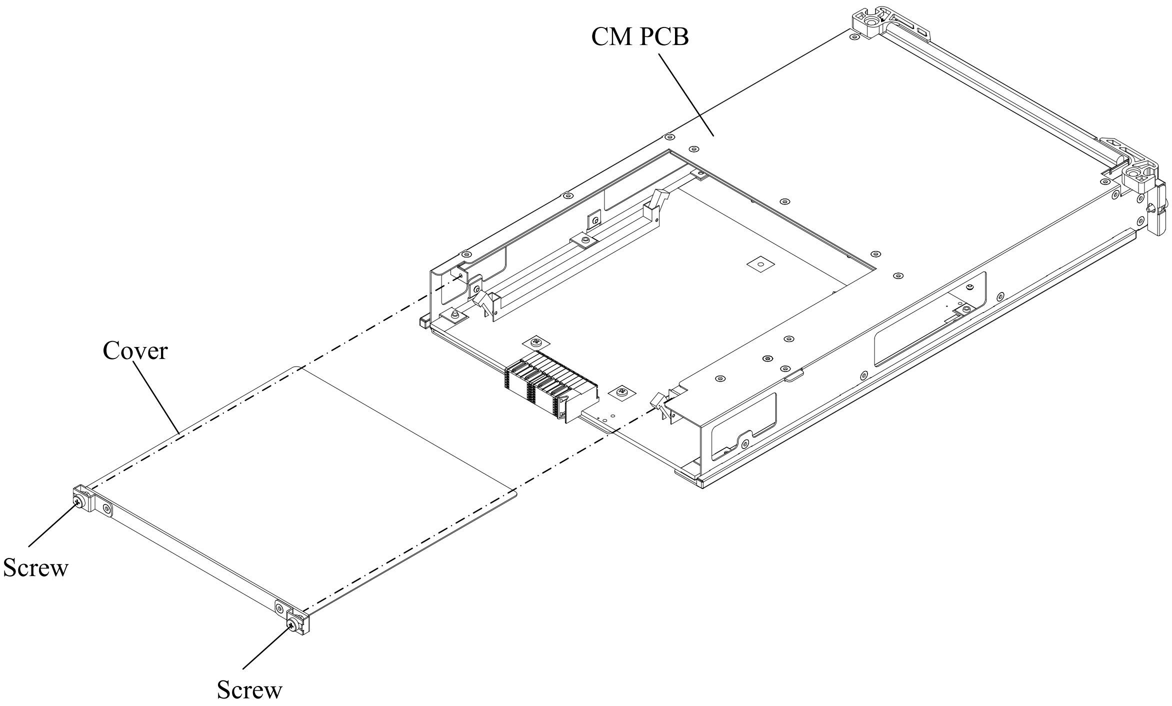
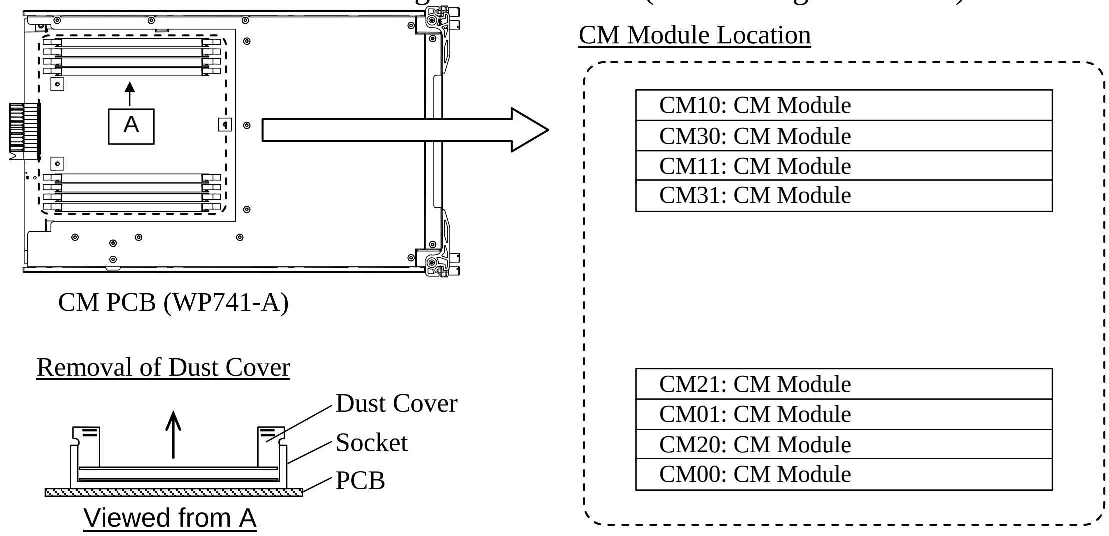
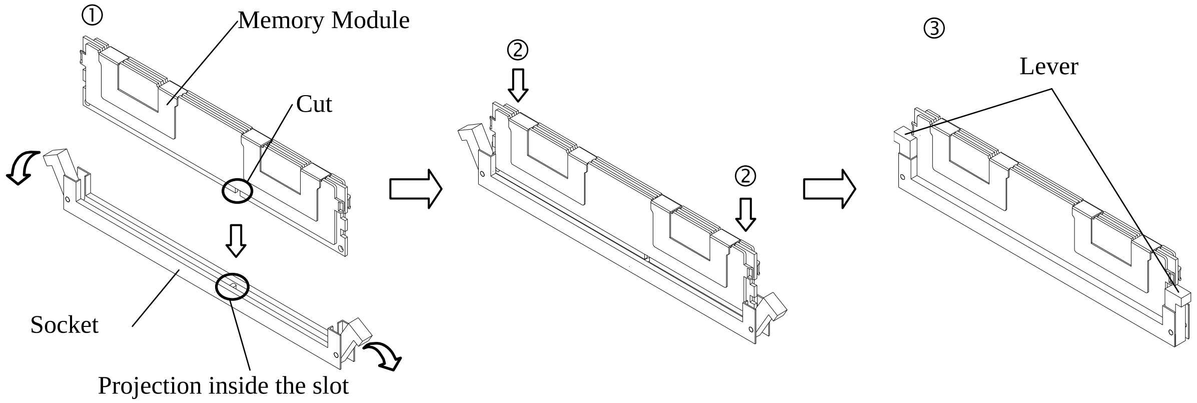


Fig. 3.10.2-11 Removal of Cover

b. Replace the CM Module.

c. Attach the cover and tighten the screws. (Refer to Fig. 3.10.2-11.)





Installation

① Position the cut of the memory module with the projection inside the slot, and place the memory module on the socket.
② Hold both ends of the memory module by the fingers, and fit it into the socket.
③ Make sure that the lever is firmly fitted in the memory module.

Caution: Do not put intense pressure to which the PCB greatly bends on the memory module after the memory module is secured with the lever at the time equipped with the memory module. The PCB may be damaged, when the intense pressure is applied.

Removal

① Pull the lever outward, and remove the memory module by the inverse process of the installation.

Memory Module Appearance

There are two types of memory modules. One has a heat spreader and the other has no heat spreaders. Both memory modules can be used because they are compatible with each other.

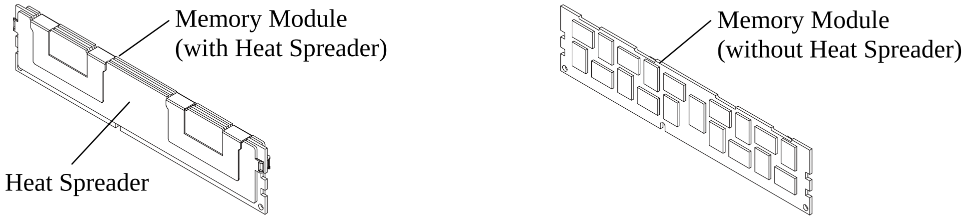
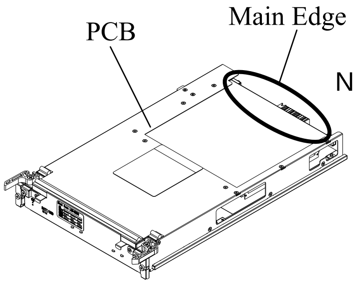


Fig. 3.10.2-12 Replacement of CM Module

2-2-3. Insert the CM PCB.

a. Insert the CM PCB and tighten the screws.



Note:
- Check that the main edge connector of the PCB has no deformation, damage or sticking of dust before installing the PCB. (See INST03-01-70.)
- When installing the PCB, hold the right and left of the PCB with both hands, and insert it straight not to contact the neighboring PCB.

b. Replace the DKCPANEL and secure it with the screw if the DKCPANEL is opened. (Refer to Fig. 3.10.2-8.)

2-2-4. Go to “3. POST-PROCESSING of SVP” (REP03-10-250).

Blank Sheet

Blank Sheet

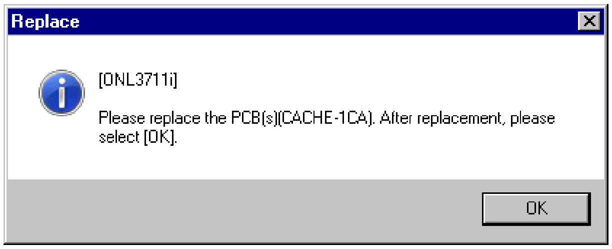
Blank Sheet

Blank Sheet

3. POST-PROCESSING of SVP

3-1. <Cache Replacement>

Select (CL) [OK] in response to “Please replace the PCB(s)(CACHE-nnn). After replacement, please select [OK].” after replacement.



[ONL3711i]

Please replace the PCB(s)(CACHE-1CA). After replacement, please select [OK].

3-2. <INLINE CUDG>

“INLINE CUDG is now running...” is displayed.

3-3. <Restore the Cache Memory>

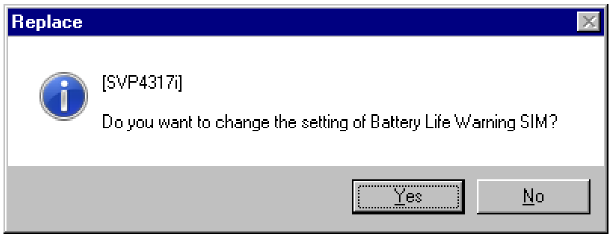
“Restoring the Cache Memory PCB...” is displayed.

If the display of Battery Life Warning SIM is disabled, go to step 3-6.
When the amount of charge of the battery in PCB to be replaced is 50% or more, go to step 3-7.

3-4.

In response to a message, “Do you want to change the setting of Battery Life Warning SIM?”.
Select [Yes] when you exchange CM Battery.
Go to step 3-5.

Select [No] when you use existing CM Battery.
Go to step 3-6.



[SVP4317i]

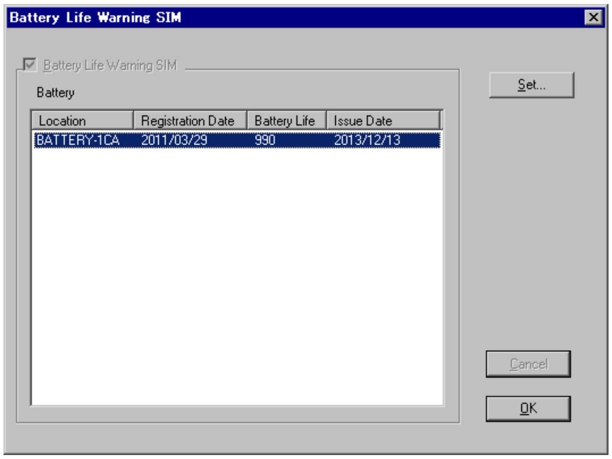
Do you want to change the setting of Battery Life Warning SIM?

3-5. <Setting Battery Life>

(1)
Select (CL) the target CM Battery in the 'Battery Life Warning SIM' screen, and then select (CL) [Set...].
Go to step (2).

Make sure that the all input items are correct and select (CL) [OK].

Note: If the date is displayed as "****/**/**", follow step (2) to set the date.



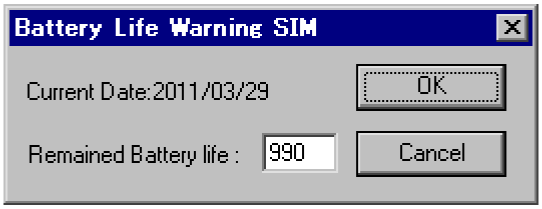
Battery Life Warning SIM

☑ Battery Life Warning SIM

Battery

Location	Registration Date	Battery Life	Issue Date
BATTERY-1CA	2011/03/29	990	2013/12/13

(2)
Select (CL) [OK] after inputting the remainder days until Warning SIM is reported.
Return to step (1).



Battery Life Warning SIM

Current Date:2011/03/29

Remained Battery life : 990

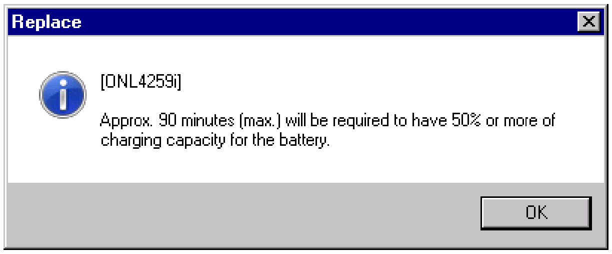
Note: After executing the periodical exchange of a battery, set 33 month (990 days).

Note: Default value is 33 month (990 days), which is 3 month earlier than the lifetime of a battery (3 years).
Determine the number of days remained based on your maintenance plan.

Note: The input ranges of "Remained Battery life" are from 1 to 3650.

3-6.

Select (CL) [OK] in response to "Approx. 90 minutes (max.) will be required to have 50% or more of charging capacity for the battery.".

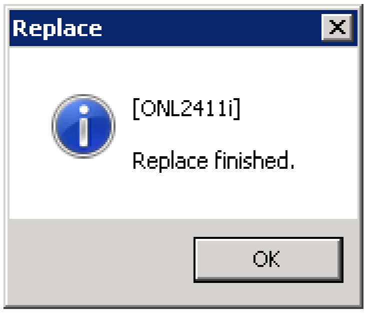


Replace

[ONL4259i]

Approx. 90 minutes (max.) will be required to have 50% or more of charging capacity for the battery.

3-7. <Check the end of Cache recovery>
Select (CL) [OK] in response to “Replace finished.”.



[ONL2411i]

Replace finished.

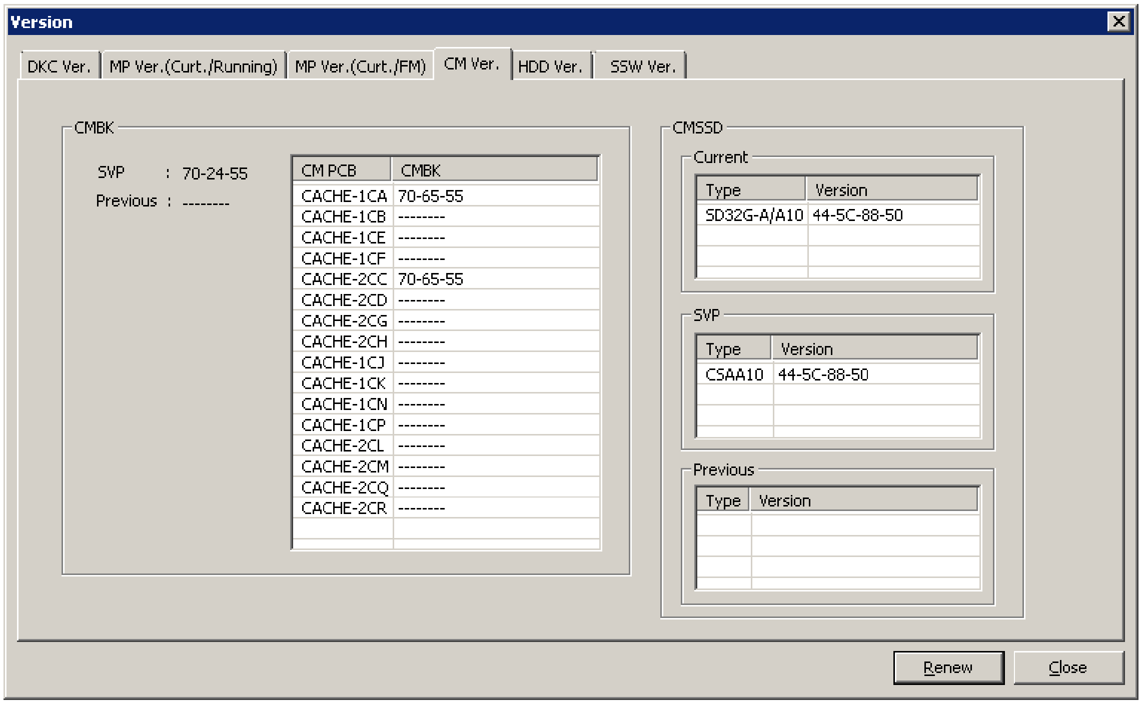
CAUTION

Confirm the version of the exchanged CACHE microprogram on the ‘STATUS’ screen.

If the CMBK microprogram version of the CACHE that is target to be maintained is lower than in the SVP, replace CACHE again.

3-8. <Version of Microprogram>

Select (CL) [Version]-[CM Ver.] in the ‘Maintenance’ window.



SVP : 70-24-55
Previous : --------

CM PCB	CMBK
CACHE-1CA	70-65-55
CACHE-1CB	--------
CACHE-1CE	--------
CACHE-1CF	--------
CACHE-2CC	70-65-55
CACHE-2CD	--------
CACHE-2CG	--------
CACHE-2CH	--------
CACHE-1CJ	--------
CACHE-1CK	--------
CACHE-1CN	--------
CACHE-1CP	--------
CACHE-2CL	--------
CACHE-2CM	--------
CACHE-2CQ	--------
CACHE-2CR	--------

Current

Type	Version
SD32G-A/A10	44-5C-88-50

SVP

Type	Version
CSAA10	44-5C-88-50

Previous

Type	Version

Table 3.10.3-1 Information to Be Displayed

Item	Description
• Display of “CMBK”	
Display of “Current”	“SVP” : Latest version of the drive microprogram stored in the SVP. “Previous” : Previous version of the drive microprogram stored in the SVP. “CM PCB” : CM name “CMBK” : CMBK micro version information (It is stored in FM) that each CM PCB has is displayed.
• Display of “CMSSD”	
Display of “Current”	Current Version. “Type” : SSD type model “Version” : Version of SSD microprogram
Display of “SVP”	Latest version of the SSD microprogram stored in the SVP. “Type” : SSD type “Version” : Version of SSD microprogram
Display of “Previous”	Former version of the SSD microprogram stored in the SVP. “Type” : SSD type “Version” : Version of SSD microprogram

---

3-9.

Go to POST-PROCEDURE [REP04-01-10].

[MPB REPLACEMENT PROCESSING - RMP1]

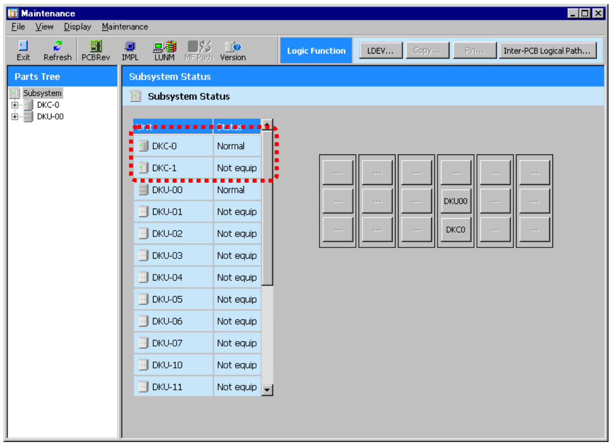
— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select MPB (status check)
    ② Specify Replacement
    ③ Place PCB into blocked state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Specify recovery for MPB
    ② Version of Microprogram

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

Select (CL) [DKC-n] in the ‘Maintenance’ window.

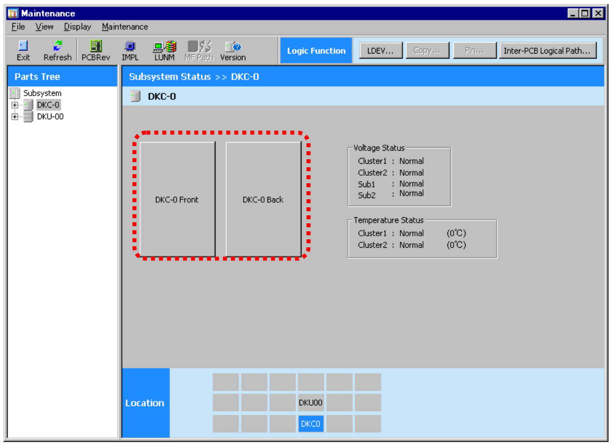


Subsystem Status

Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <DKC window>

Select (CL) [DKC-n Front] in the ‘DKC’ window.

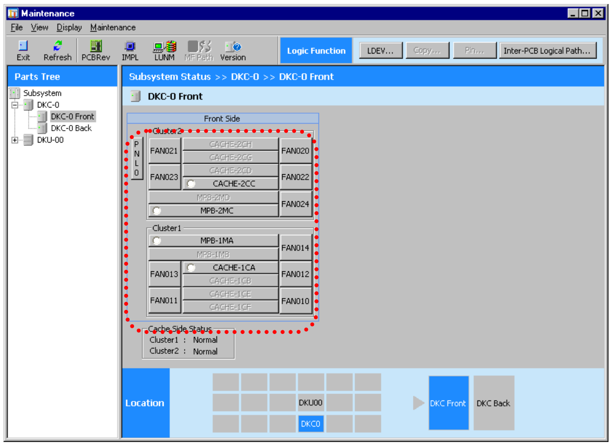


Voltage Status
Cluster1 : Normal
Cluster2 : Normal
Sub1 : Normal
Sub2 : Normal

Temperature Status
Cluster1 : Normal (0℃)
Cluster2 : Normal (0℃)

1-3. <Select MP PCB>

Select (CL) MP PCB.



Cache Side Status
Cluster1 : Normal
Cluster2 : Normal

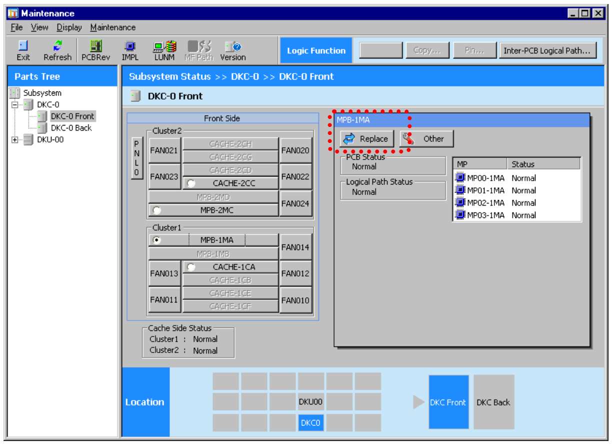
1-4. <Specify replacement of MPB>

CAUTION

When the screen appears prompting the operator to input a password to prevent multiple maintenance or for executing a pin check, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

Check status display.
Select (CL) [Replace].



PCB Status
Normal

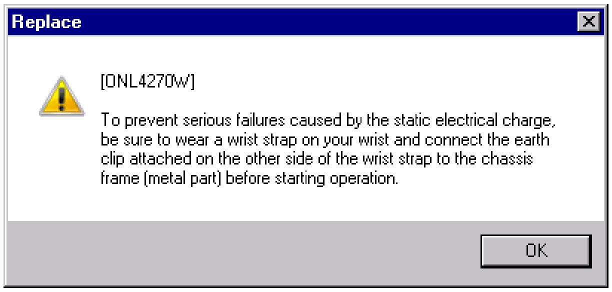
Logical Path Status
Normal

MP	Status
MP00-1MA	Normal
MP01-1MA	Normal
MP02-1MA	Normal
MP03-1MA	Normal

Cache Side Status
Cluster1 : Normal
Cluster2 : Normal

1-5. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

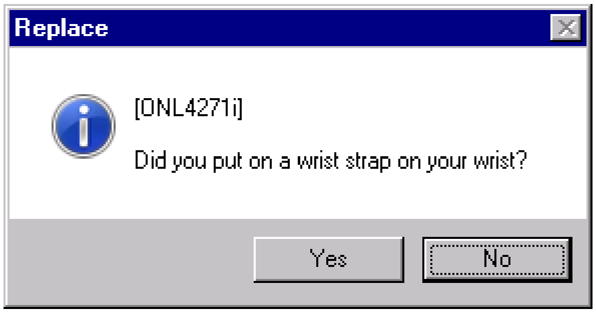


[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

(1) <Confirm wearing wrist strap>

In response to a message, “Did you put on a wrist strap on your wrist?”.
Select (CL) [Yes] when wrist strap is on your wrist.
Select (CL) [No] when there is no wrist strap on your wrist.
When [No] is selected (CL), go to Step (2).



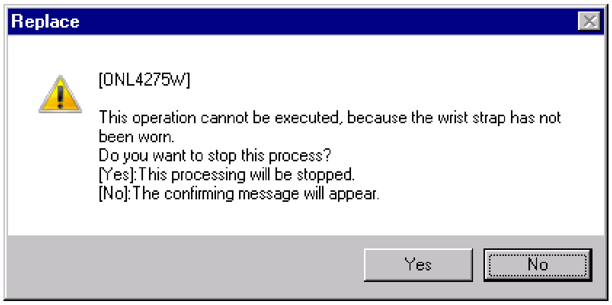
[ONL4271i]

Did you put on a wrist strap on your wrist?

(2)

In response to a message, “This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?
[Yes]: This processing will be stopped.
[No]: The confirming message will appear.”

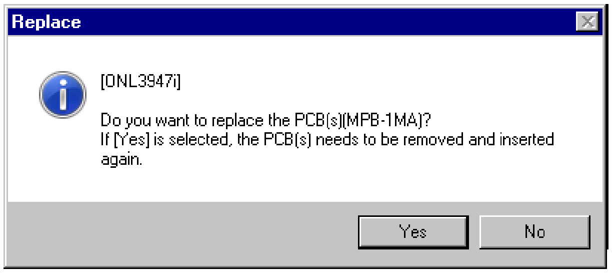
When [Yes] is selected (CL), returned to Step 1-4.
When [No] is selected (CL), returned to Step 1-5.



[ONL4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

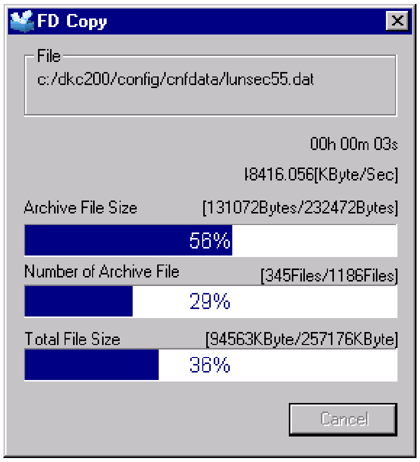
1-6. <Check the beginning of MPB replace>
Select (CL) [Yes] after making sure that the package to be replaced is correct in response to “Do you want to replace the PCB(s)(MPB-nnn)? If [Yes] is selected, the PCB(s) needs to be removed and inserted again.”.



[ONL3947i]

Do you want to replace the PCB(s)(MPB-1MA)?
If [Yes] is selected, the PCB(s) needs to be removed and inserted again.

1-7. <Compression of the error information>
The error information is compressed.
The dialog of FD Copy is displayed.



File
c:/dkc200/config/cnfdata/lunsec55.dat

00h 00m 03s
18416.056[KByte/Sec]

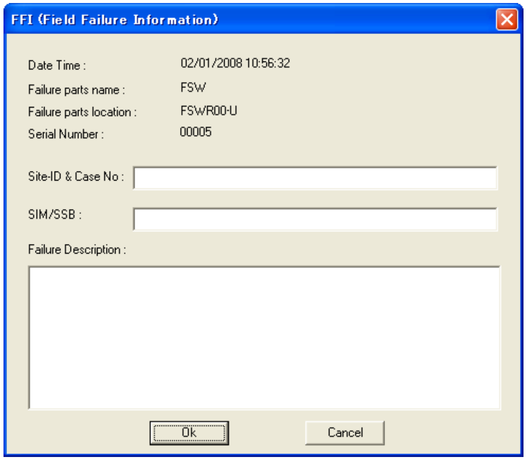
Archive File Size [131072Bytes/232472Bytes]
56%

Number of Archive File [345Files/1186Files]
29%

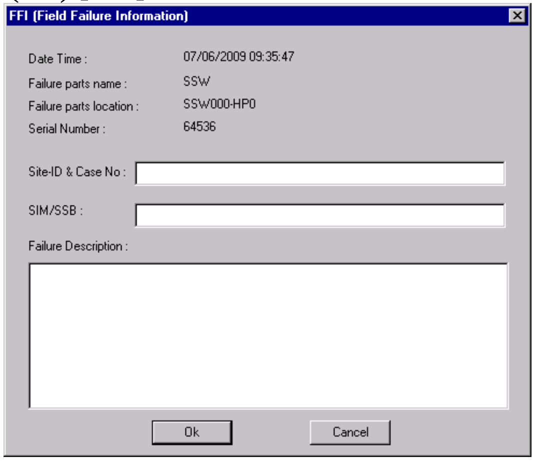
Total File Size [94563KByte/257176KByte]
36%

1-8. <Get the error information>

Input the Field Failure Information, and select (CL) [OK].

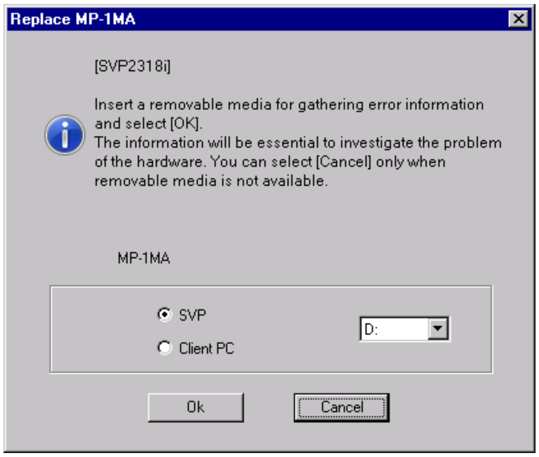

FFI (Field Failure Information)

Date Time : 02/01/2008 10:56:32
Failure parts name : FSW
Failure parts location : FSWR00-U
Serial Number : 00005
Site-ID & Case No :
SIM/SSB :
Failure Description :


FFI (Field Failure Information)

Date Time : 07/06/2009 09:35:47
Failure parts name : SSW
Failure parts location : SSW000-HP0
Serial Number : 64536
Site-ID & Case No :
SIM/SSB :
Failure Description :

“Insert a removable media for gathering error information and select [OK]. The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.” is displayed.
Trouble information is preserved in console PC connected with SVP.
Please select the Client PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu. The drive letter becomes the drive letter of console PC connected with SVP.


Replace MP-1MA

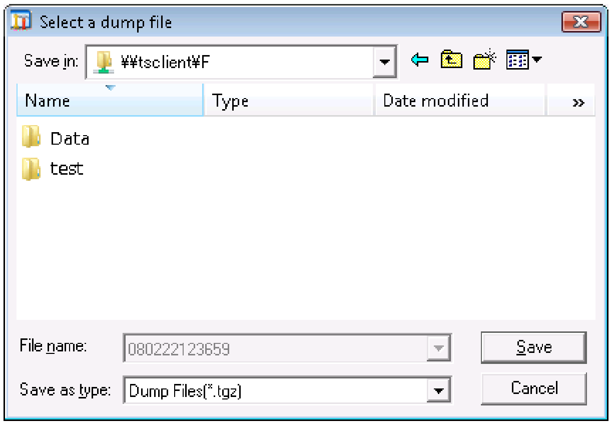
[SVP2318i]

Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.

MP-1MA

● SVP
○ Client PC
D:

A Primary copy is always placed on the SVP HD in the “c:\dkc200\others\pcbinfo\” directory with the following file name format
“[factory_cd]_[Pcb_type]_[Pcb_SerialNo]_YYMMDDhhmmss.tgz”.
(YY denotes Year, MM denotes Month, DD denotes Day, hh denotes Hour, mm denotes Minute, and ss denotes Second)



Save in: ¥¥tsclient¥F

Data
test

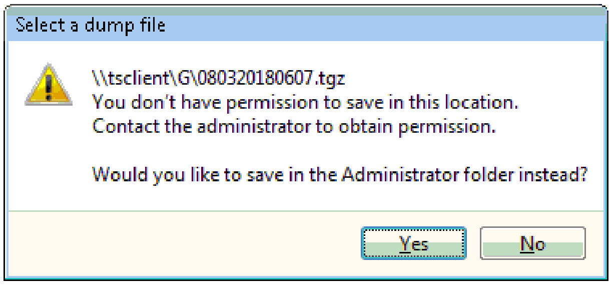
File name: 080222123659

Save as type: Dump Files(*.tgz)

When Client PC is selected, the directory selection dialog is displayed.
Please select an arbitrary directory if necessary.

Console PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of console PC.

Select (CL) [Save] when saving a file in a specified directory.
It returns to the drive selection screen when [Cancel] is selected (CL).



\\tsclient\G\080320180607.tgz
You don't have permission to save in this location.
Contact the administrator to obtain permission.

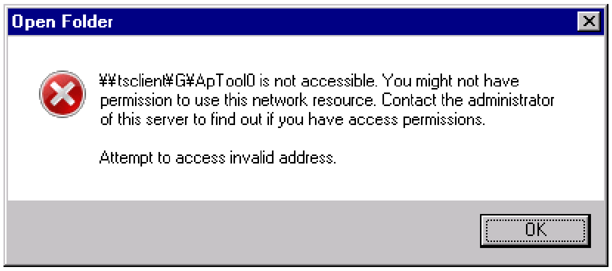
Would you like to save in the Administrator folder instead?

<For Windows Vista>

Selecting (CL) [Yes] displays the “C:\users\Administrator” folder of SVP.
Selecting (CL) [No] displays the folder selected with the Client PC.

Please appoint another destination whether you remove write protect when you save it and carry it out.

- When dialog of the destination drive specified with the Client PC is open, the media is removed, and then select (CL) [Save].

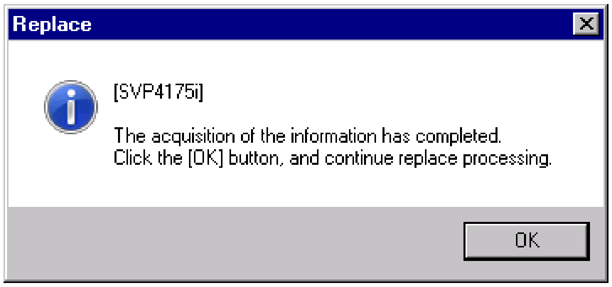


¥¥tsclient¥G¥ApTool0 is not accessible. You might not have permission to use this network resource. Contact the administrator of this server to find out if you have access permissions.

Attempt to access invalid address.

- When the memory in the destination drive specified with the Client PC is corrupted. The dialog remains displayed after selecting (CL) [OK].

  At the time of the above operation completion, the information collection is not carried out.
  Please choose another directory again after having closed a system message whether you reconnect the drive that you removed when you save it and carry it out.



[SVP4175I]

The acquisition of the information has completed.
Click the [OK] button, and continue replace processing.

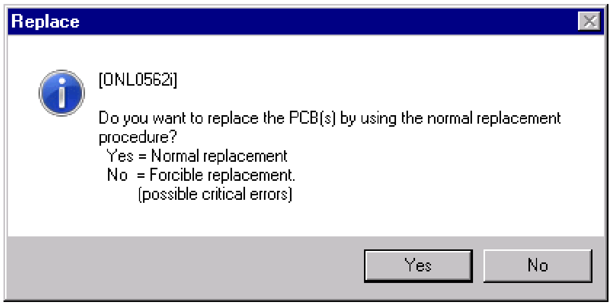
Select (CL) [OK] in response to “The acquisition of the information has completed. Click the [OK] button, and continue replace processing.”.

1-9. <Caution message for system down>

CAUTION

Select (CL) [Yes] in response to the message below.

"Do you want to replace the PCB(s) by using the normal replacement procedure?
Yes = Normal replacement
No = Forcible replacement.
(Possible critical errors)" is displayed.



[ONL0562i]

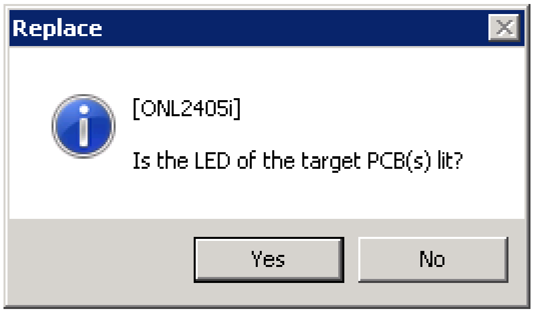
Do you want to replace the PCB(s) by using the normal replacement procedure?
Yes = Normal replacement
No = Forcible replacement.
(possible critical errors)

1-10. <MPB blocking>

"The MPB (MPB-nnn) is being blocked." is displayed.

1-11. <Check shut down LED>

Select (CL)
* [Yes] if LED is on
* [No] if LED is off
in response to “Is the LED of the target PCB(s) lit?”.

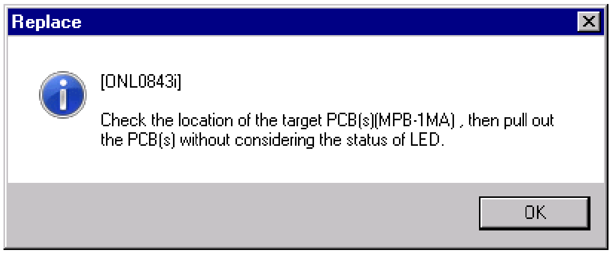


[ONL2405i]

Is the LED of the target PCB(s) lit?

When [No] is selected, the same message is displayed again.
Check the LED and then reply to the message.

If [No] is selected twice:
Select (CL) [OK] in response to “Check the location of the target PCB(s)(MPB-nnn), then pull out the PCB(s) without considering the status of LED.”. (Refer to “2. HARDWARE REPLACEMENT PROCESSING”)



[ONL0843i]

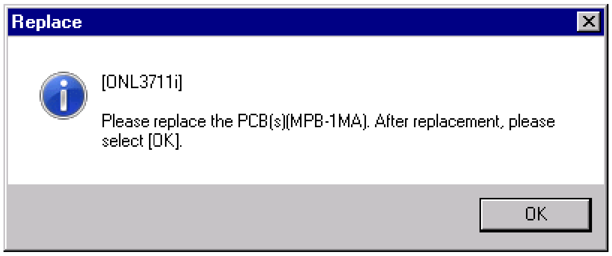
Check the location of the target PCB(s)(MPB-1MA) , then pull out the PCB(s) without considering the status of LED.

Note: Select (CL) [OK] after pulling out the PCB.

Go to Step 1-12.

1-12. <MPB Replacement>

“Please replace the PCB(s)(MPB-nnn). After replacement, please select [OK].” is displayed.
Select (CL) [OK] after replacing the PCB.



[ONL3711i]

Please replace the PCB(s)(MPB-1MA). After replacement, please select [OK].

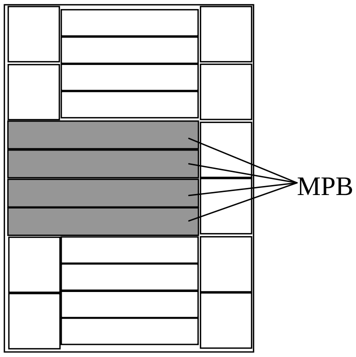
1-13. <Replace MPB>

Replace MPB.

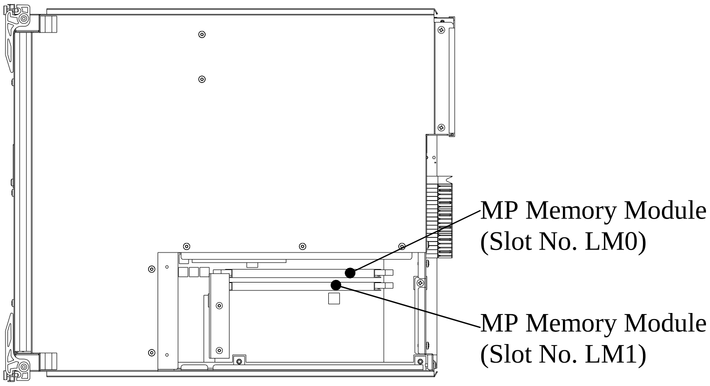
Go to “2. HARDWARE REPLACEMENT PROCESSING”.

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Front View of DKC	1	MPB (Two MP Memory Modules are included.) (Non-RoHS2 compliant part)	• WP752-A
		MPB (Two MP Memory Modules are included.) (RoHS2 compliant part)	• WP752-B
	2	MP Memory Module (Non-RoHS2 compliant part)	• DDR2 2GB DIMM
		MP Memory Module (RoHS2 compliant part)	• DDR2 2GB DIMM



Front View of DKC


MP Memory Module (Slot No. LM0)
MP Memory Module (Slot No. LM1)

MPB (Viewed from the top)

> NOTICE:
> Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1	MPB

2-1-1. Remove the MPB.

a. Check that the Shut Down LED is on. (only hot replace)

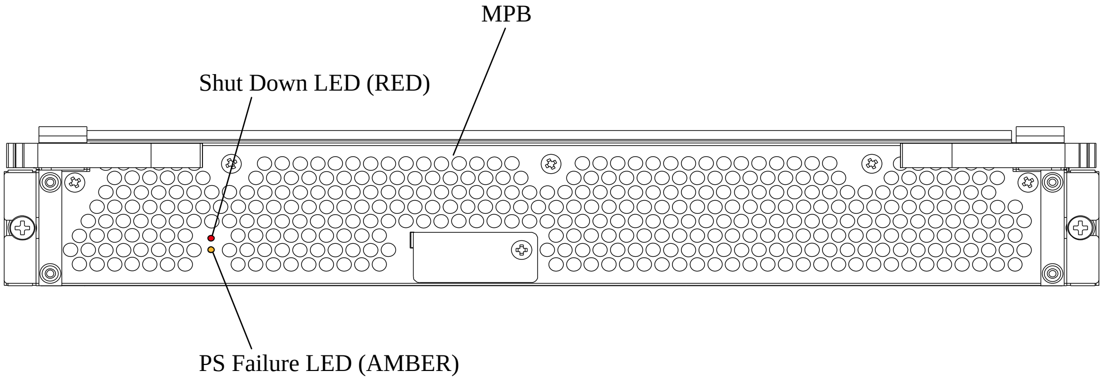
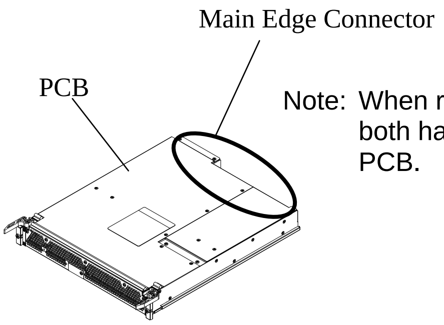


Fig. 3.11.2-1 Confirmation of Shut Down LED

b. Remove the two screws and remove the failed MPB.



Note: When removing the PCB, hold the right and left of the PCB with both hands, and pull it out straight not to contact the neighboring PCB.

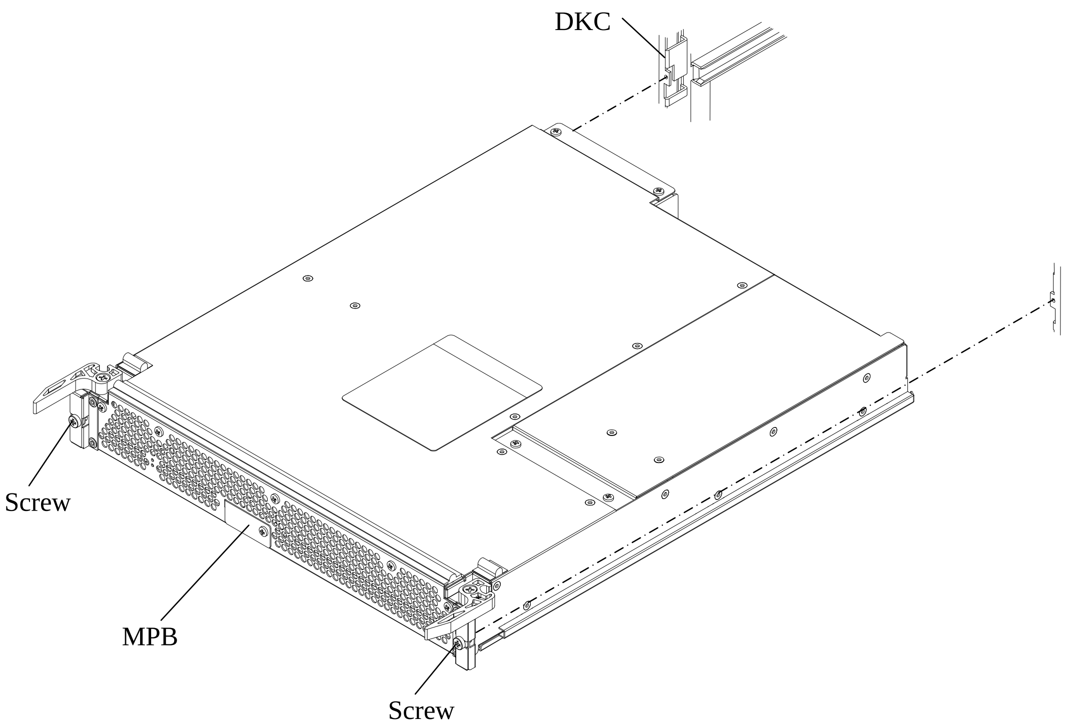
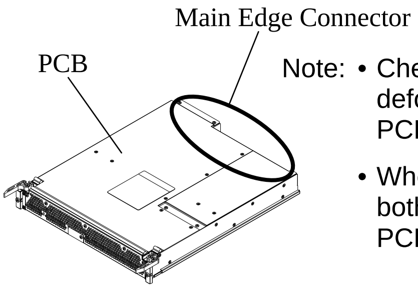


Fig. 3.11.2-2 Removal of MPB

2-1-2. Insert the spare MPB.

a. Insert the spare MPB to the correct location and tighten the screws.



Note:
- Check that the main edge connector of the PCB has no deformation, damage or sticking of dust before installing the PCB. (See INST03-01-70.)
- When installing the PCB, hold the right and left of the PCB with both hands, and insert it straight not to contact the neighboring PCB.

2-1-3. Go to “3. POST-PROCESSING of SVP”.

2-2 MP Memory Module

2-2-1. Remove the MP PCB.

a. Check that the Shut Down LED is on. (only hot replace)

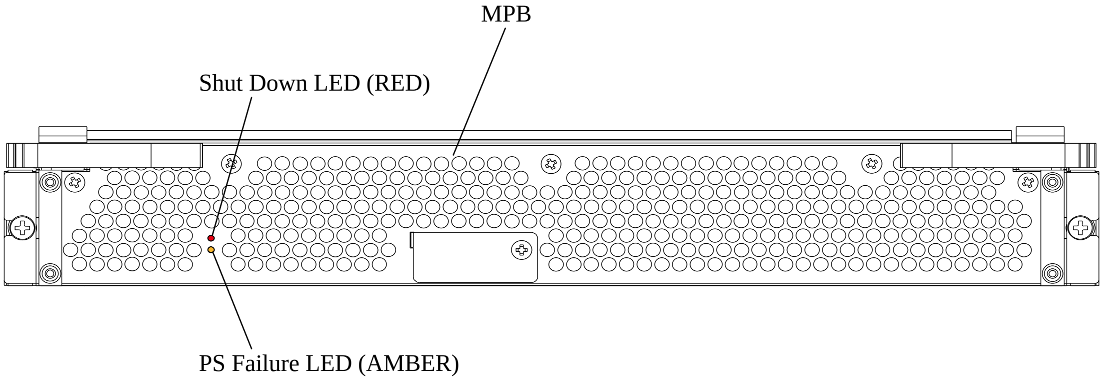
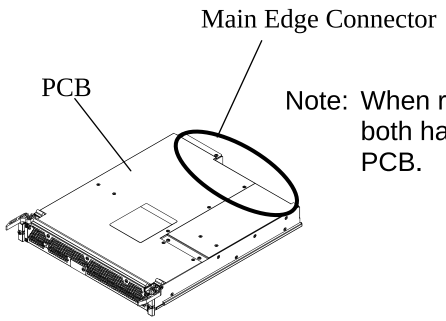


Fig. 3.11.2-3 Confirmation of Shut Down LED

b. Remove the two screws and remove the failed MPB.



Note: When removing the PCB, hold the right and left of the PCB with both hands, and pull it out straight not to contact the neighboring PCB.

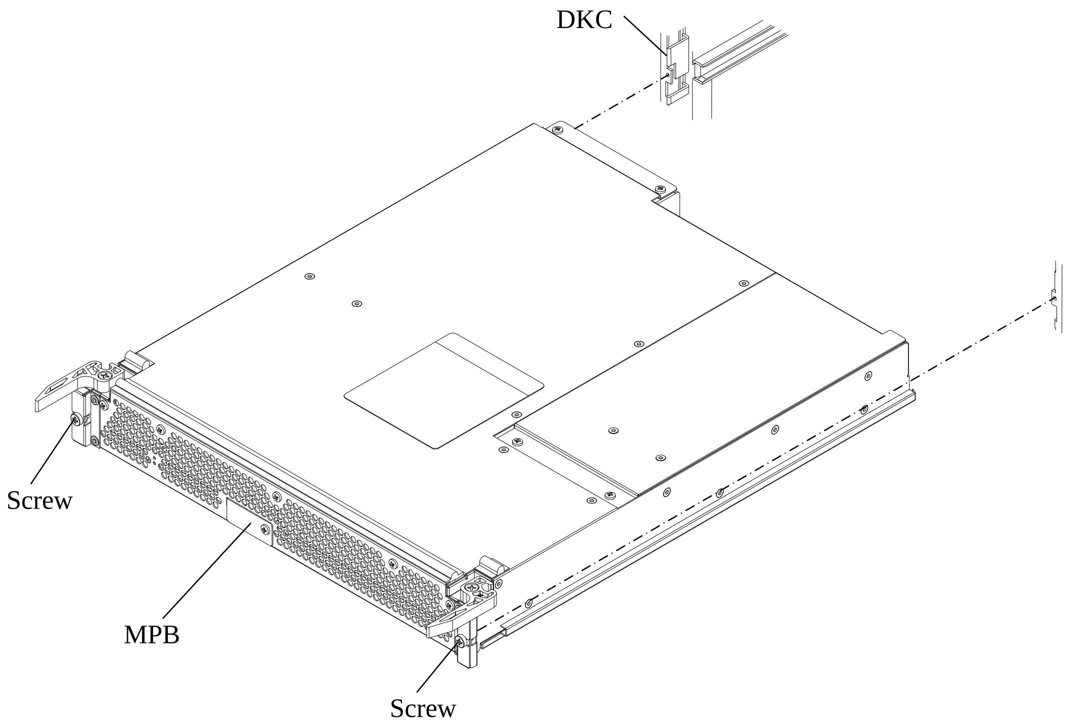


Fig. 3.11.2-4 Removal of MPB

2-2-2. Replace the MP Memory Module.

a. Remove the two screws ①.

b. Loosen the two screws ② and remove the cover.

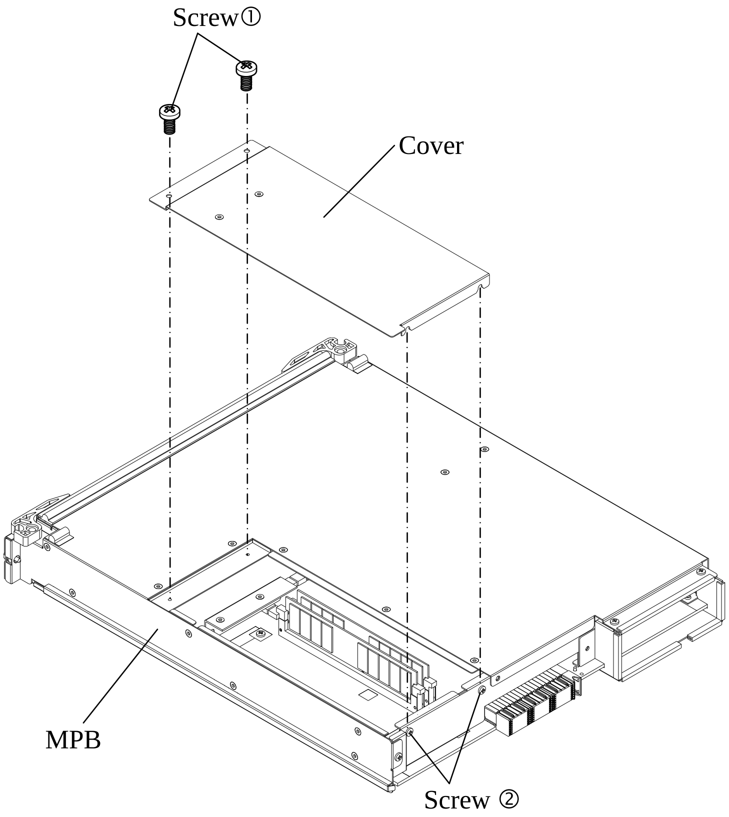
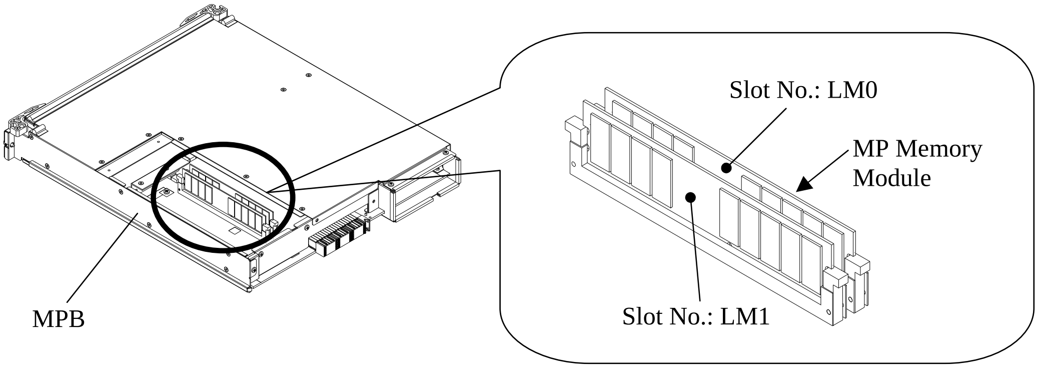


Fig. 3.11.2-5 Removal of Cover

c. Remove the failed MP memory module and insert the spare MP memory module.

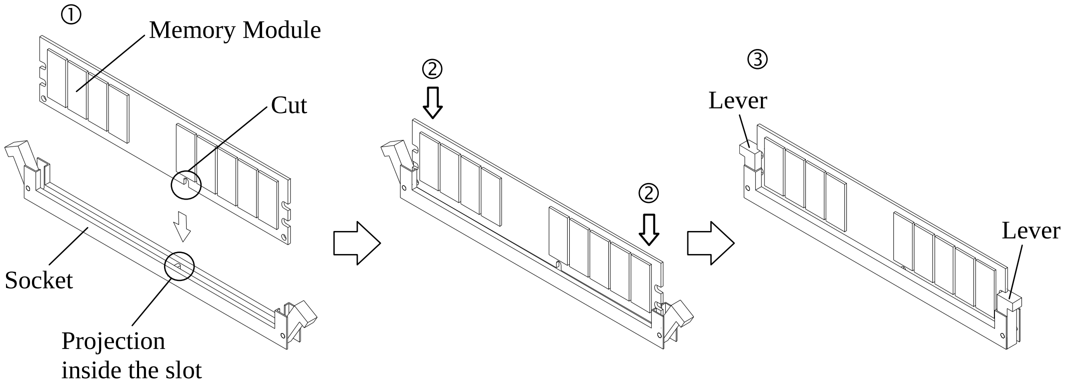
d. Attach the cover and tighten the four screws. (Refer to Fig. 3.11.2-5.)



Installation

① Position the cut of the memory module with the projection inside the slot, and place the memory module on the socket.
② Hold both ends of the memory module by the fingers, and fit it into the socket.
③ Make sure that the lever is firmly fitted in the memory module.

Caution: Do not put intense pressure to which the PCB greatly bends on the memory module after the memory module is secured with the lever at the time equipped with the memory module. The PCB may be damaged, when the intense pressure is applied.



Removal

① Pull the lever outward.
② Hold both ends of the memory module by the fingers, and pull out the memory module from the socket.

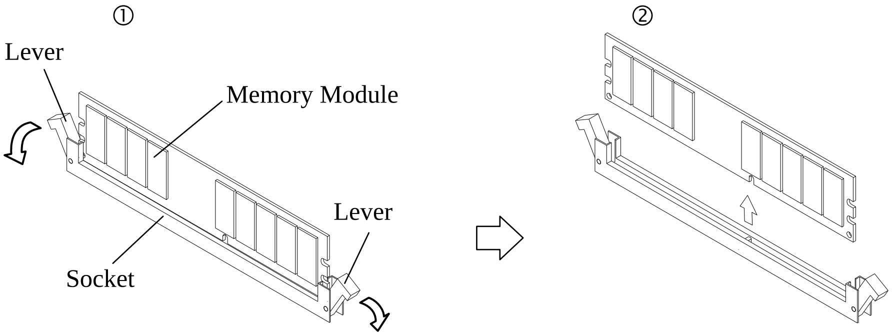
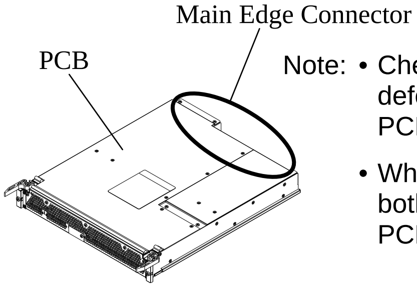


Fig. 3.11.2-6 Replacement of MP Memory Module

2-2-3. Insert the spare MPB.

a. Insert the spare MPB to the correct location and tighten the screws.



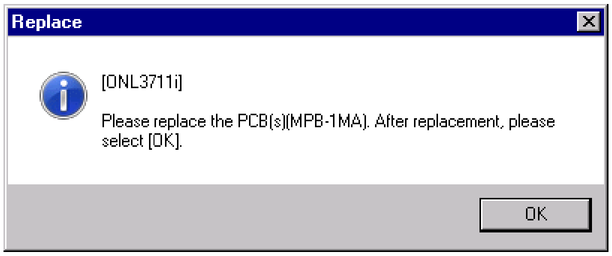
Note:
- Check that the main edge connector of the PCB has no deformation, damage or sticking of dust before installing the PCB. (See INST03-01-70.)
- When installing the PCB, hold the right and left of the PCB with both hands, and insert it straight not to contact the neighboring PCB.

2-2-4. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <MPB Replacement>

Select (CL) [OK] in response to “Please replace the PCB(s)(MPB-nnn). After replacement, please select [OK].”



[ONL3711i]

Please replace the PCB(s)(MPB-1MA). After replacement, please select [OK].

3-2. <Waiting for Power Event>

“Waiting for Power Event...
Usually several minutes (maximum 15 minutes).” is displayed.

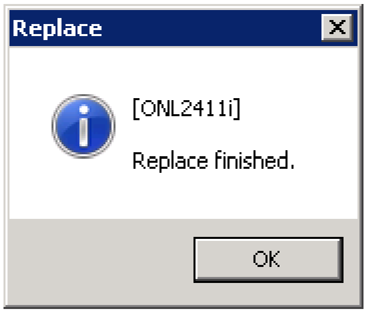
⚠ CAUTION

Confirm the version of the exchanged MP microprogram on the ‘STATUS’ screen. Check whether the version of all processors accords.

If the DKCMAIN microprogram version of the MPB that is target to be maintained is lower than in the SVP, replace MPB again.

3-3. <Check the end of MPB recovery>

Select (CL) [OK] in response to “Replace finished.”.

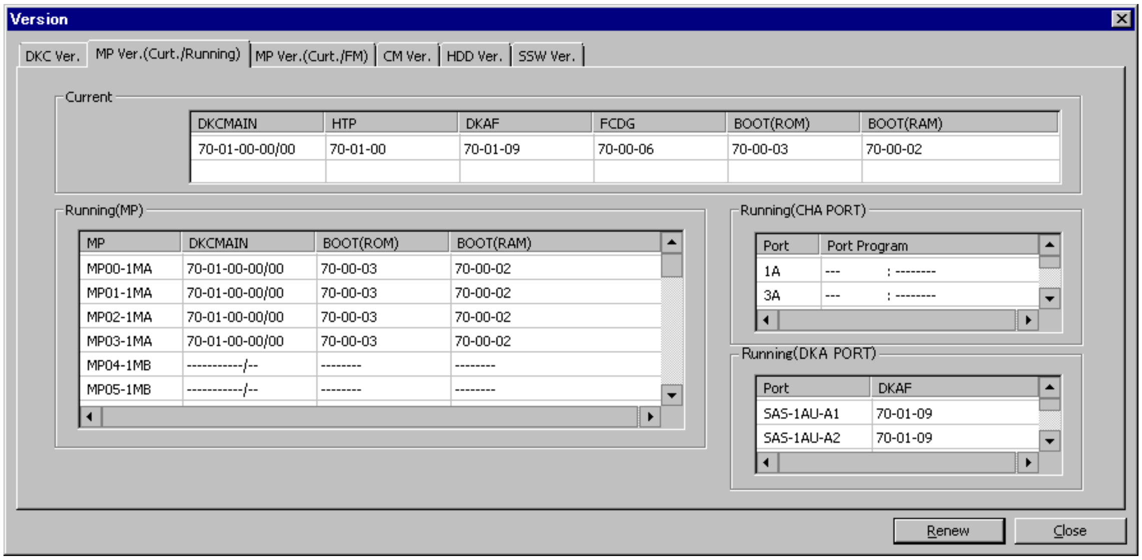


[ONL2411i]

Replace finished.

3-4. Version of Microprogram

Select (CL) [Version]-[MP Ver.(Curt./Running)] in this order in the ‘Maintenance’ window. The ‘Version’ window is displayed.



Current

DKCMAIN	HTP	DKAF	FCDG	BOOT(ROM)	BOOT(RAM)
70-01-00-00/00	70-01-00	70-01-09	70-00-06	70-00-03	70-00-02

Running(MP)

MP	DKCMAIN	BOOT(ROM)	BOOT(RAM)
MP00-1MA	70-01-00-00/00	70-00-03	70-00-02
MP01-1MA	70-01-00-00/00	70-00-03	70-00-02
MP02-1MA	70-01-00-00/00	70-00-03	70-00-02
MP03-1MA	70-01-00-00/00	70-00-03	70-00-02
MP04-1MB	-----------/--	--------	--------
MP05-1MB	-----------/--	--------	--------

Running(CHA PORT)

Port	Port Program
1A	--- : --------
3A	--- : --------

Running(DKA PORT)

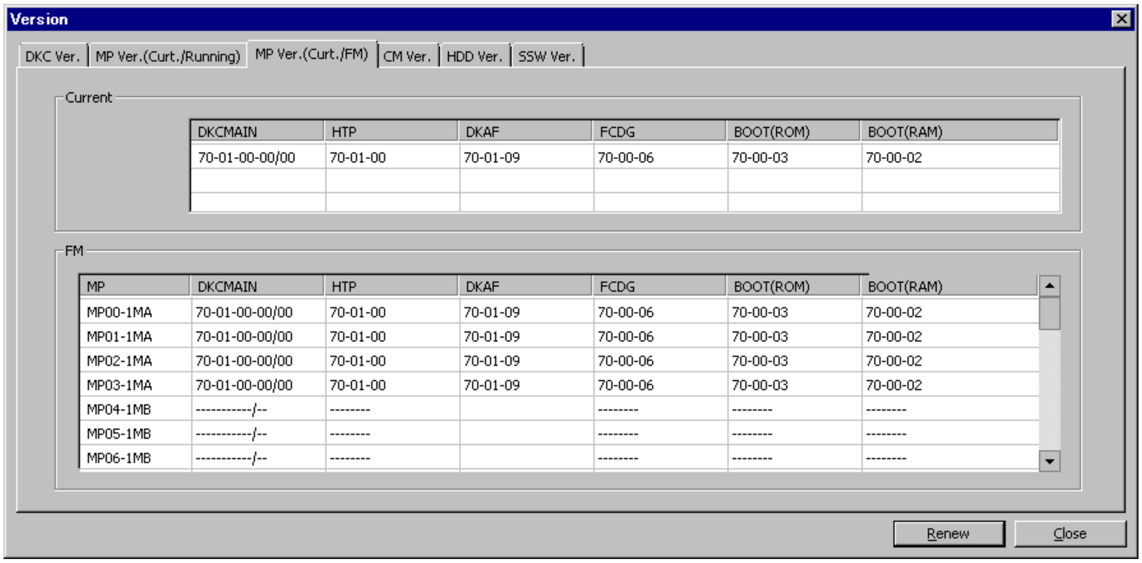
Port	DKAF
SAS-1AU-A1	70-01-09
SAS-1AU-A2	70-01-09

Table 3.11.3-1 Information to Be Displayed

Item	Description
DKC Current Version area	Major version of the microprogram currently running. In regard to a version inconsistent with a corresponding version in the MP Version area or a binary version (Internal administrative information), the area concerned is displayed in red-white-reversal with an asterisk (“*”).
MP Version area	Version of the microprogram of each processor currently running. A version, which is displayed in red-white-reversal, is inconsistent with the DKC Current Version. A version displayed with an asterisk (“*”) at the end of it is the inconsistent one.
CHA PORT area	The version is displayed. Running version of port program (HTP) of each Port is displayed. The target type name is displayed.
DKA PORT area	The SAS-CON Running version is displayed. The Location name is displayed.

Concerning this item, when even a single piece of information is inconsistent, an icon “⚠”, which shows an error, is displayed in the tab portion.

Select (CL) [Version]-[MP Ver.(Curt./FM)] in this order in the ‘Maintenance’ window.



Current

DKCMAIN	HTP	DKAF	FCDG	BOOT(ROM)	BOOT(RAM)
70-01-00-00/00	70-01-00	70-01-09	70-00-06	70-00-03	70-00-02

FM

MP	DKCMAIN	HTP	DKAF	FCDG	BOOT(ROM)	BOOT(RAM)
MP00-1MA	70-01-00-00/00	70-01-00	70-01-09	70-00-06	70-00-03	70-00-02
MP01-1MA	70-01-00-00/00	70-01-00	70-01-09	70-00-06	70-00-03	70-00-02
MP02-1MA	70-01-00-00/00	70-01-00	70-01-09	70-00-06	70-00-03	70-00-02
MP03-1MA	70-01-00-00/00	70-01-00	70-01-09	70-00-06	70-00-03	70-00-02
MP04-1MB	-----------/--	--------		--------	--------	--------
MP05-1MB	-----------/--	--------		--------	--------	--------
MP06-1MB	-----------/--	--------		--------	--------	--------

Table 3.11.3-2 Information to Be Displayed

Item	Description
DKC Current Version area	Major version of the microprogram currently running. In regard to a version inconsistent with a corresponding version in the MP Version area or a binary version (Internal administrative information), the area concerned is displayed in red-white-reversal with an asterisk (“*”).
FM Version area	Version of FM microprogram of each processor. A version, which is displayed in red-white-reversal, is inconsistent with the DKC Current Version. A version displayed with an asterisk (“*”) at the end of it is the inconsistent one.

Concerning this item, when even a single piece of information is inconsistent, an icon “⚠” which shows an error, is displayed in the tab portion.

3-5.

Go to POST-PROCEDURE [REP04-01-10].

[Fibre CHA REPLACEMENT PROCESSING - RCH1]

— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select CHA (status check)
    ② Specify Replacement
    ③ Place PCB into blocked state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Specify recovery for CHA
    ② Path online (for CHA)

1. PRE-PROCESSING of SVP

1-1. <Set path offline or switch of channel path>

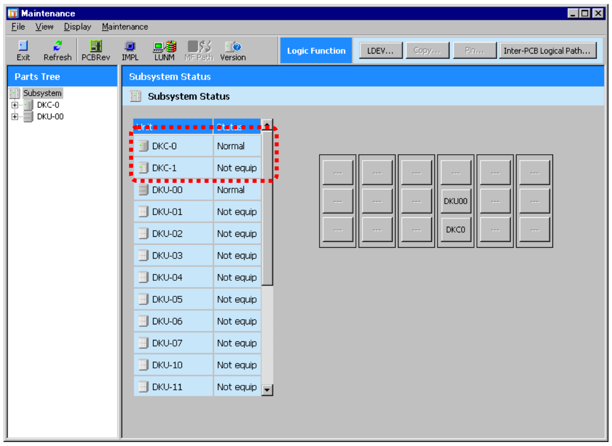
⚠ CAUTION

For Mainframe, the path to be placed offline is that connected with the CHA concerned.
For Open host, the switch to the alternate channel path or host shutdown is that connected with the CHA concerned.
As for other channel path, switching to the alternate channel path or host shutdown is unnecessary.
However, the host must be shut down when the Pinned track in CHA connected port.

Blank Sheet

1-2. <Maintenance window>

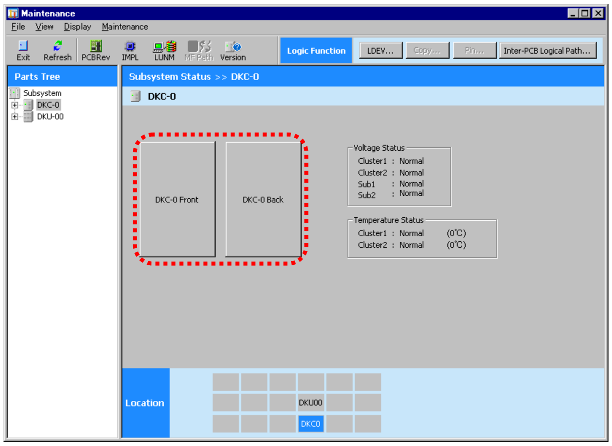
Select (CL) [DKC-n] in the 'Maintenance' window.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function
LDEV... Copy... Pin... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status
Subsystem Status
DKU00
DKC0

Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-3. <DKC window>

Select (CL) [DKC-n Back] in the 'DKC' window.

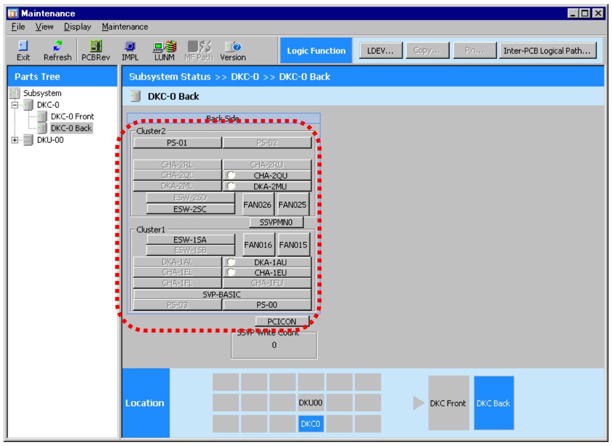

Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function
LDEV... Copy... Pin... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status >> DKC-0
DKC-0
DKC-0 Front
DKC-0 Back
Location
DKU00
DKC0

Voltage Status
Cluster1 : Normal
Cluster2 : Normal
Sub1 : Normal
Sub2 : Normal

Temperature Status
Cluster1 : Normal (0℃)
Cluster2 : Normal (0℃)

1-4. <Select CHA>

Select (CL) CHA.



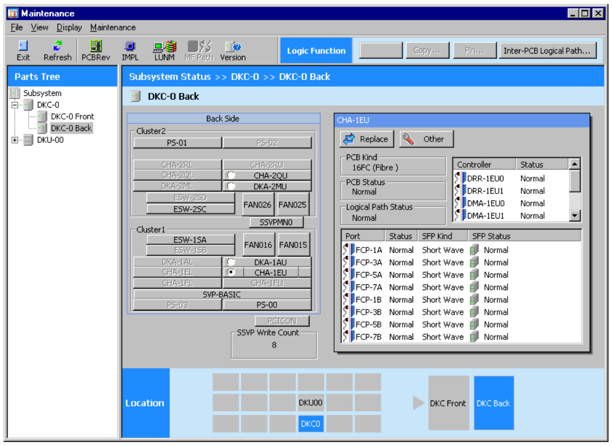
1-5. <Specify Replacement of CHA>

CAUTION

- When the path to the PCB to be replaced is online, ask the customer to place it offline. (For CHA replacement)
- For Open host, switch to the alternate channel path or shut down the host. However, the host must be shut down when the Pinned track in CHA connected port.
- When the screen requests an operator to input a password in order to prevent multiple maintenance, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

Make sure that the status is WARNING.
Select (CL) [Replace].



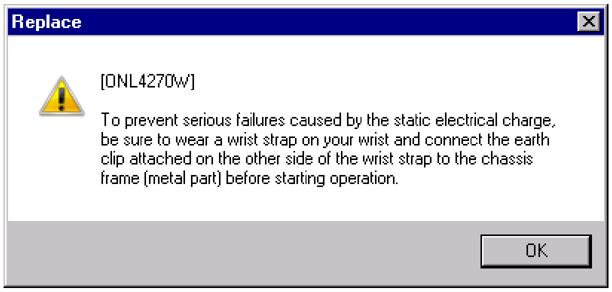
PCB Kind: 16FC (Fibre)
PCB Status: Normal
Logical Path Status: Normal

Controller	Status
DRR-1EU0	Normal
DRR-1EU1	Normal
DMA-1EU0	Normal
DMA-1EU1	Normal

Port	Status	SFP Kind	SFP Status
FCP-1A	Normal	Short Wave	Normal
FCP-3A	Normal	Short Wave	Normal
FCP-5A	Normal	Short Wave	Normal
FCP-7A	Normal	Short Wave	Normal
FCP-1B	Normal	Short Wave	Normal
FCP-3B	Normal	Short Wave	Normal
FCP-5B	Normal	Short Wave	Normal
FCP-7B	Normal	Short Wave	Normal

1-6. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

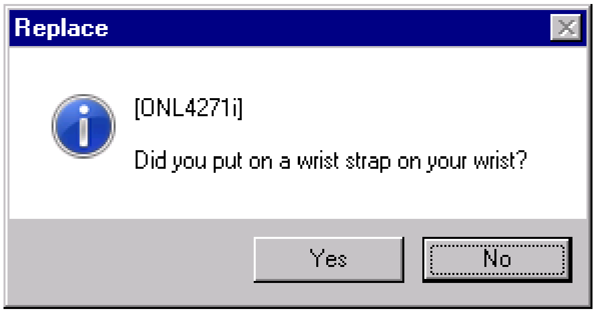


[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

(1) <Confirm wearing wrist strap>

In response to a message, “Did you put on a wrist strap on your wrist?”.
Select (CL) [Yes] when wrist strap is on your wrist.
Select (CL) [No] when there is no wrist strap on your wrist.
When [No] is selected (CL), go to Step (2).



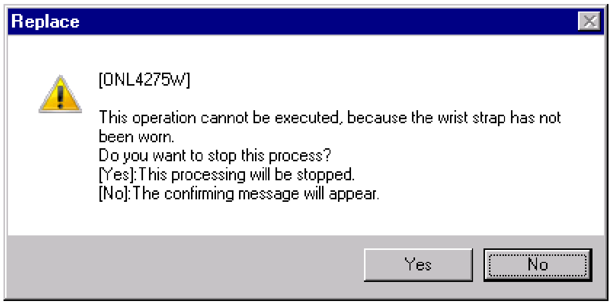
[ONL4271i]

Did you put on a wrist strap on your wrist?

(2)

In response to a message, “This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?
[Yes]: This processing will be stopped.
[No]: The confirming message will appear.”

When [Yes] is selected (CL), returned to Step 1-5.
When [No] is selected (CL), returned to Step 1-6.

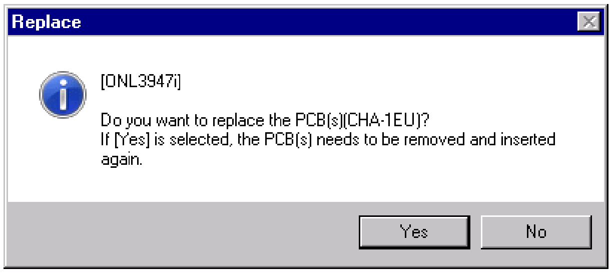


[ONL4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-7.<CHA replace>

Select (CL) [Yes] in response to:
“Do you want to replace the PCB(s)(CHA-nnn)? If [Yes] is selected, the PCB(s) needs to be removed and inserted again.”.



[ONL3947i]

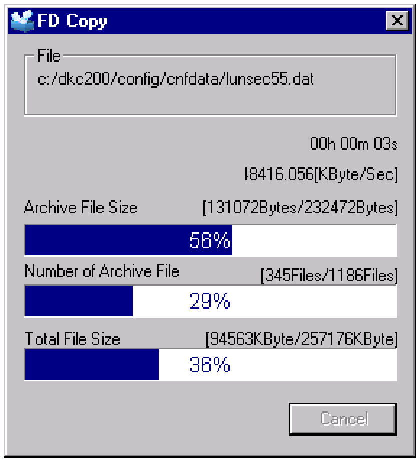
Do you want to replace the PCB(s)(CHA-1EU)?
If [Yes] is selected, the PCB(s) needs to be removed and inserted again.

(Eg. CHA)

1-8. <Compression of the error information>

The error information is compressed.

The dialog of FD Copy is displayed.



File
c:/dkc200/config/cnfdata/lunsec55.dat

00h 00m 03s

18416.056[KByte/Sec]

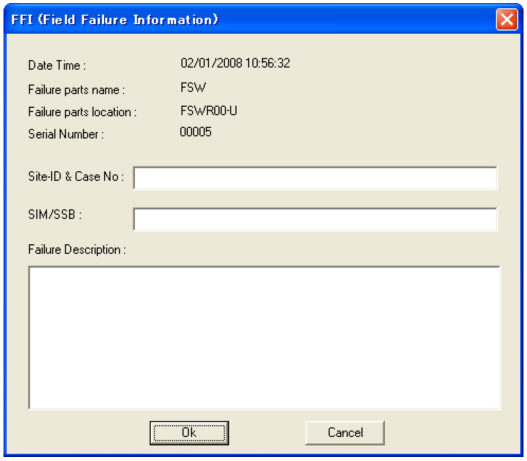
Archive File Size [131072Bytes/232472Bytes]
56%

Number of Archive File [345Files/1186Files]
29%

Total File Size [94563KByte/257176KByte]
36%

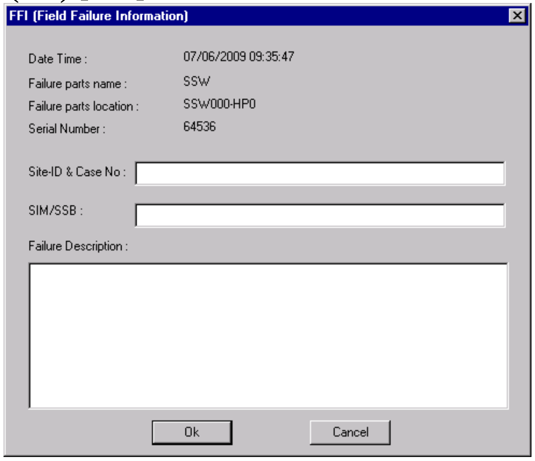
1-9. <Get the error information>

Input the Field Failure Information, and select (CL) [OK].



FFI (Field Failure Information)

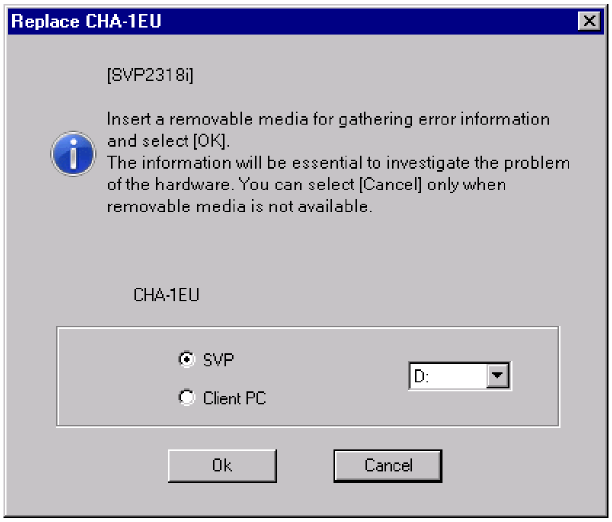
Date Time : 02/01/2008 10:56:32
Failure parts name : FSW
Failure parts location : FSWR00-U
Serial Number : 00005
Site-ID & Case No :
SIM/SSB :
Failure Description :



FFI (Field Failure Information)

Date Time : 07/06/2009 09:35:47
Failure parts name : SSW
Failure parts location : SSW000-HP0
Serial Number : 64536
Site-ID & Case No :
SIM/SSB :
Failure Description :

"Insert a removable media for gathering error information and select [OK]. The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available." is displayed.
Trouble information is preserved in console PC connected with SVP.
Please select the Client PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu. The drive letter becomes the drive letter of console PC connected with SVP.



Replace CHA-1EU

[SVP2318i]

Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.

CHA-1EU

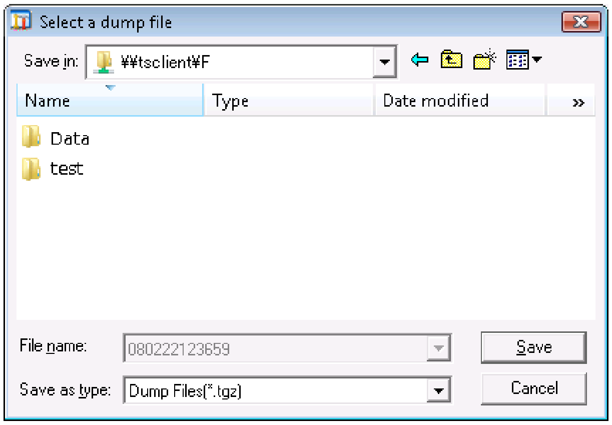
● SVP
○ Client PC

D:

A Primary copy is always placed on the SVP HD in the "c:\dkc200\others\pcbinfo\" directory with the following file name format
"[factory_cd]_[Pcb_type]_[Pcb_SerialNo]_YYMMDDhhmmss.tgz".
(YY denotes Year, MM denotes Month, DD denotes Day, hh denotes Hour, mm denotes Minute, and ss denotes Second)

When Client PC is selected, the directory selection dialog is displayed.
Please select an arbitrary directory if necessary.

Console PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of console PC.



Save in: ¥¥tsclient¥F

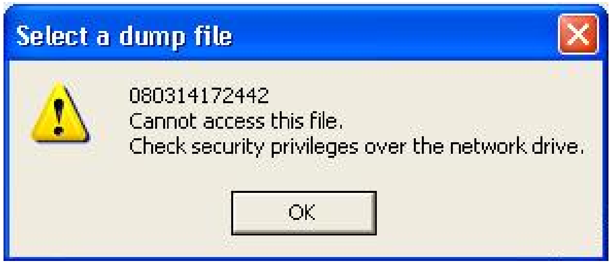
File name: 080222123659

Save as type: Dump Files(*.tgz)

Select (CL) [Save] when saving a file in a specified directory.
It returns to the drive selection screen when [Cancel] is selected (CL).

- When the destination media is write-protected.

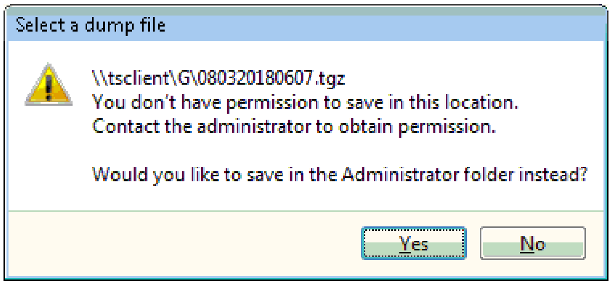
<For Windows XP>



080314172442
Cannot access this file.
Check security privileges over the network drive.

<For Windows Vista>

Selecting (CL) [Yes] displays the "C:\users\Administrator" folder of SVP.
Selecting (CL) [No] displays the folder selected with the Client PC.

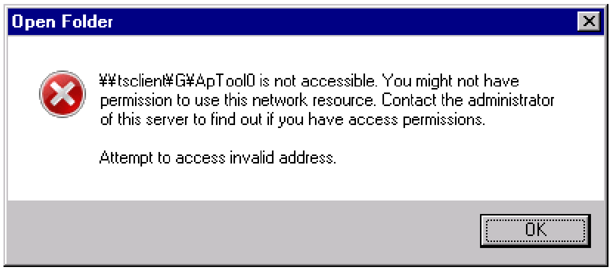


\\tsclient\G\080320180607.tgz
You don't have permission to save in this location.
Contact the administrator to obtain permission.

Would you like to save in the Administrator folder instead?

Please appoint another destination whether you remove write protect when you save it and carry it out.

- When dialog of the destination drive specified with the Client PC is open, the media is removed, and then select (CL) [Save].

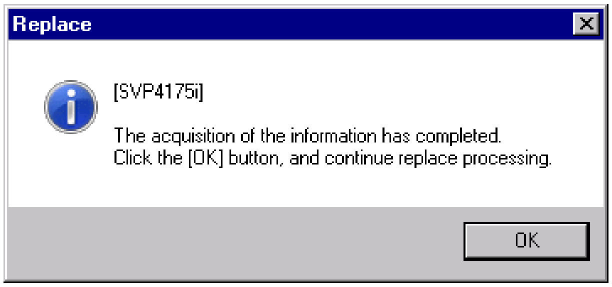


¥¥tsclient¥G¥ApTool0 is not accessible. You might not have permission to use this network resource. Contact the administrator of this server to find out if you have access permissions.

Attempt to access invalid address.

- When the memory in the destination drive specified with the Client PC is corrupted. The dialog remains displayed after selecting (CL) [OK].

  At the time of the above operation completion, the information collection is not carried out.
  Please choose another directory again after having closed a system message whether you reconnect the drive that you removed when you save it and carry it out.



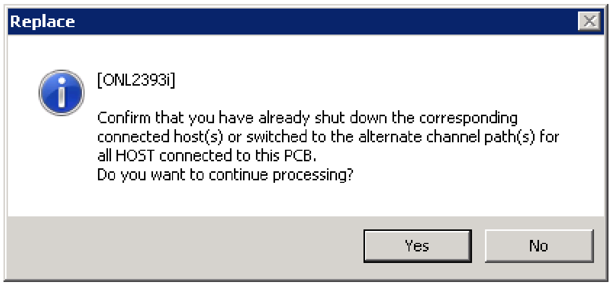
[SVP4175i]

The acquisition of the information has completed.
Click the [OK] button, and continue replace processing.

Select (CL) [OK] in response to “The acquisition of the information has completed. Click the [OK] button, and continue replace processing.”.

1-10. <Confirm Channel Path offline>

Select (CL) [Yes] in response to following message.



[ONL2393i]

Confirm that you have already shut down the corresponding connected host(s) or switched to the alternate channel path(s) for all HOST connected to this PCB.
Do you want to continue processing?

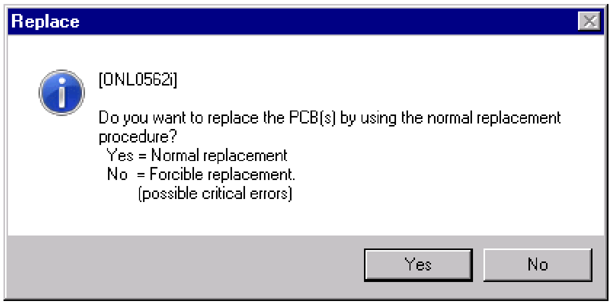
For Fiber CHA:
“Confirm that you have already shut down the corresponding connected host(s) or switched to the alternate channel path(s) for all HOST connected to this PCB. Do you want to continue processing?”.

1-11. <Caution message for system down>

⚠ CAUTION

Select (CL) [Yes] in response to the message below.

"Do you want to replace the PCB(s) by using the normal replacement procedure?
Yes = Normal replacement
No = Forcible replacement.
(Possible critical errors)".



[ONL0562i]

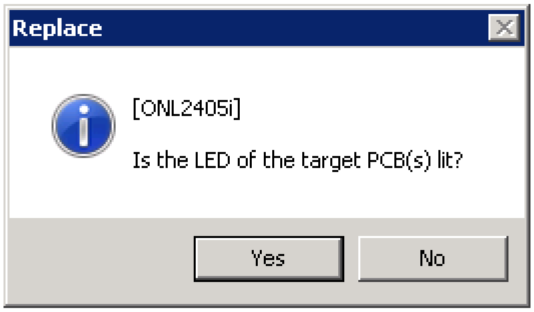
Do you want to replace the PCB(s) by using the normal replacement procedure?
Yes = Normal replacement
No = Forcible replacement.
(possible critical errors)

1-12. <CHA blocking>

"CHA-xxx is being blocked... Usually, several minutes (maximum 15 minutes)"
"CHA-xxx is lighting the LED..."

1-13. <Check shut down LED>

Select (CL)
* [Yes] if LED is on
* [No] if LED is off
in response to "Is the LED of the target PCB(s) lit?".

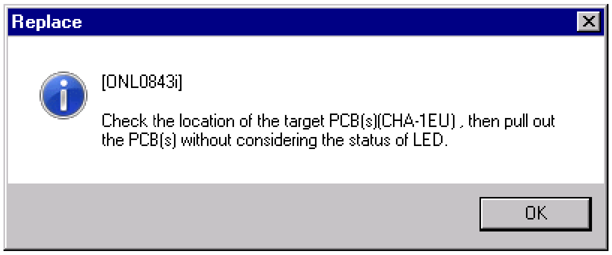


[ONL2405i]

Is the LED of the target PCB(s) lit?

If [No] is selected:
Select (CL) [OK] in response to "Check the location of the target PCB(s)(CHA-nnn), then pull out the PCB(s) without considering the status of LED.". (Refer to "2. HARDWARE REPLACEMENT PROCESSING")

Note: Select (CL) [OK] after pulling out the PCB.



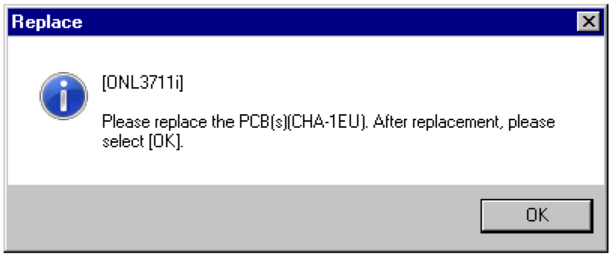
[ONL0843i]

Check the location of the target PCB(s)(CHA-1EU) , then pull out the PCB(s) without considering the status of LED.

Go to Step 1-14.

1-14. <Beginning of CHA replacement>

"Please replace the PCB(s)(CHA-nnn). After replacement, please select [OK]." is displayed.
Select (CL) [OK] after replacing the CHA.



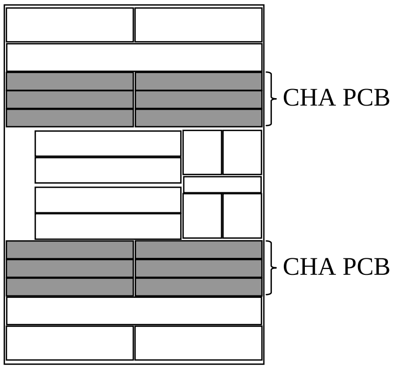
[ONL3711i]

Please replace the PCB(s)(CHA-1EU). After replacement, please select [OK].

Go to "2. HARDWARE REPLACEMENT PROCESSING".

2. HARDWARE REPLACEMENT PROCESSING

Location		Function Name of Component	Part Name
Rear View of DKC	1	CHA (Channel Adapter) PCB for Fibre (8Gbps) (Fibre 4-port Adapter PCB) (Non-RoHS2 compliant part)	• WP712-B (8UFC)
		CHA PCB for Fibre (8Gbps) (Fibre 4-port Adapter PCB) (RoHS2 compliant part)	• WP712-D (8UFCR)
	2	CHA PCB for Fibre (8Gbps) (Fibre 8-port Adapter PCB) (Non-RoHS2 compliant part)	• WP712-A (16UFC)
		CHA PCB for Fibre (8Gbps) (Fibre 8-port Adapter PCB) (RoHS2 compliant part)	• WP712-C (16UFCR)



Rear View of
DKC

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1. Remove the Channel Adapter PCB.

a. Check that the Shut Down LED is on. (only hot replace)

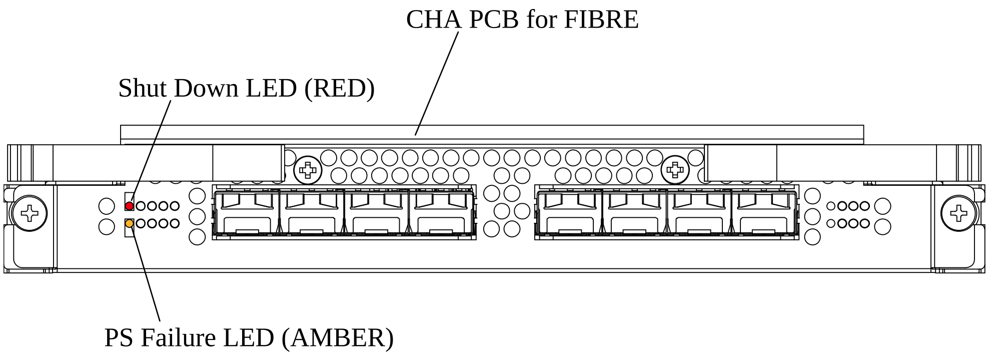
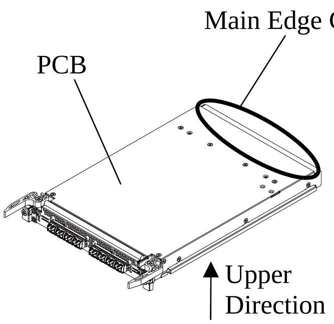


Fig. 3.12.2-1 Confirmation of Shut Down LED

b. Disconnect the optical fibre cables from the failed Channel Adapter PCB.
c. Remove the two screws and remove the failed PCB.



Note: When removing the PCB, hold the right and left of the PCB with both hands, and pull it out straight not to contact the neighboring PCB.
(If it thinks that it is hard to extract, raise and extract a little upwards.)

Note: After removing the PCB, install the spare PCB immediately.
If the PCB is kept removed for a long time, the wind doesn’t flow among installed PCBs, causing the PCBs’ temperature rise which may result in temperature warning or temperature alarm.

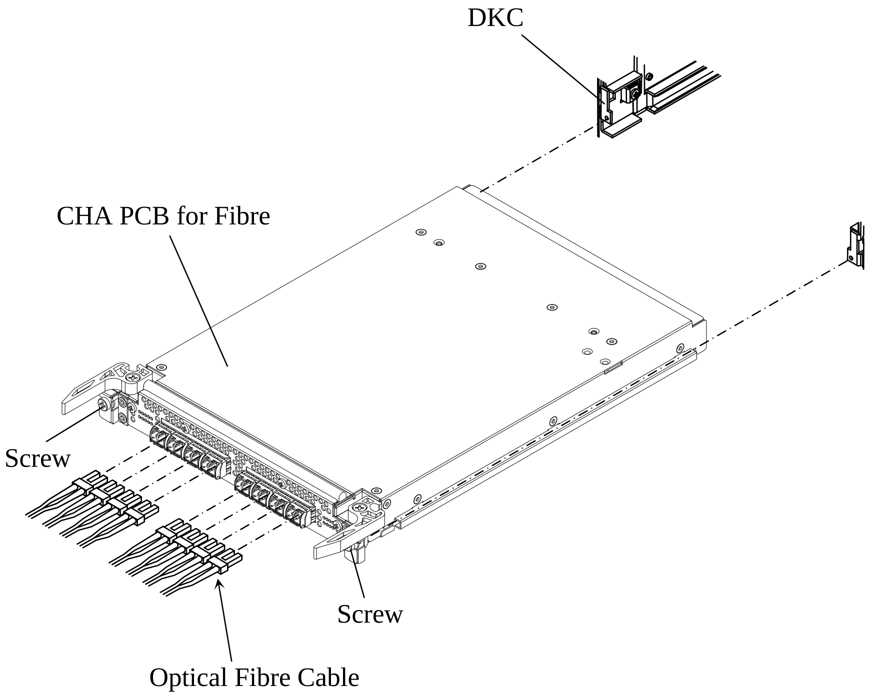
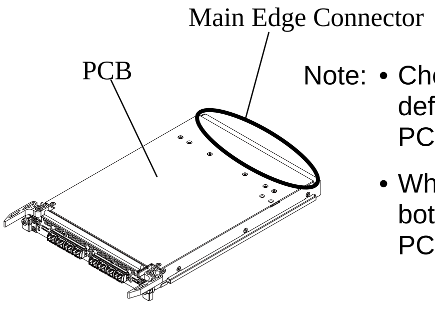


Fig. 3.12.2-2 Removal of PCB

2-2. Insert the spare PCB.

a. Insert the spare PCB to the correct location and tighten the screws.



Note:
- Check that the main edge connector of the PCB has no deformation, damage or sticking of dust before installing the PCB. (See INST03-01-70.)
- When installing the PCB, hold the right and left of the PCB with both hands, and insert it straight not to contact the neighboring PCB.

2-3. Cleaning the fibre cable connectors.

For the tools needed for the cleaning, refer to the tool list on page PARTS06-10.

a. Blow compressed gas against the connector using an air sprayer (for about five seconds).

b. Wipe the connector lightly with a piece of cut gauze wet with ethyl alcohol.

c. Blow compressed air again and check the result of the cleaning. (None of dust, sticking of foreign matter, and dirt must be observed.)

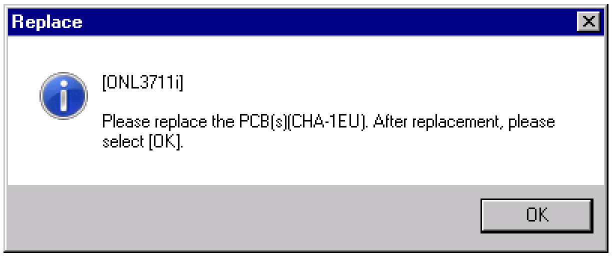
2-4. Connect the optical fibre cables to the spare PCB.

2-5. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Beginning of CHA Replacement>

Select (CL) [OK] in response to “Please replace the PCB(s)(CHA-nnn). After replacement, please select [OK].” after replacement.

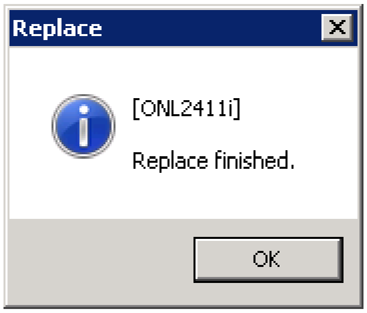


[ONL3711i]

Please replace the PCB(s)(CHA-1EU). After replacement, please select [OK].

3-2. <Check the end of CHA recovery>

Select (CL) [OK] in response to “Replace finished.”.



[ONL2411i]

Replace finished.

3-3. <Path on-line when CHA is replaced>

When a CHA is replaced, set the path (from the host) on the replaced CHA to ONLINE by your customer.

3-4.

Go to POST-PROCEDURE [REP04-01-10].

[Mainframe Fibre CHA REPLACEMENT PROCESSING - RCH2]

— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select CHA (status check)
    ② Specify Replacement
    ③ Place PCB into blocked state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Specify recovery for CHA
    ② Path online (for CHA)

1. PRE-PROCESSING of SVP

1-1. <Set path offline or switch of channel path>

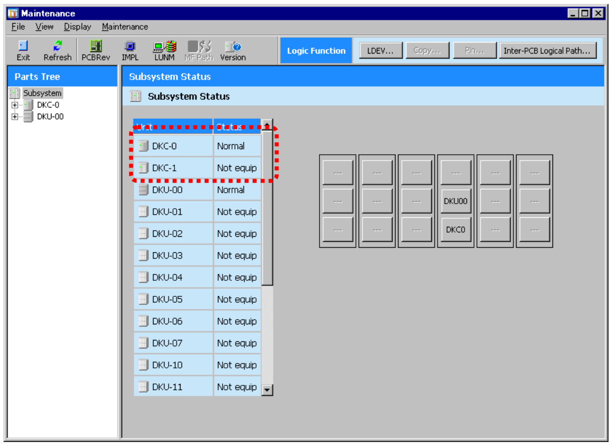
⚠ **CAUTION**

For Mainframe, the path to be placed offline is that connected with the CHA concerned.
For Open host, the switch to the alternate channel path or host shutdown is that connected with the CHA concerned.
As for other channel path, switching to the alternate channel path or host shutdown is unnecessary.
However, the host must be shut down when the Pinned track in CHA connected port.

Blank Sheet

1-2. <Maintenance window>

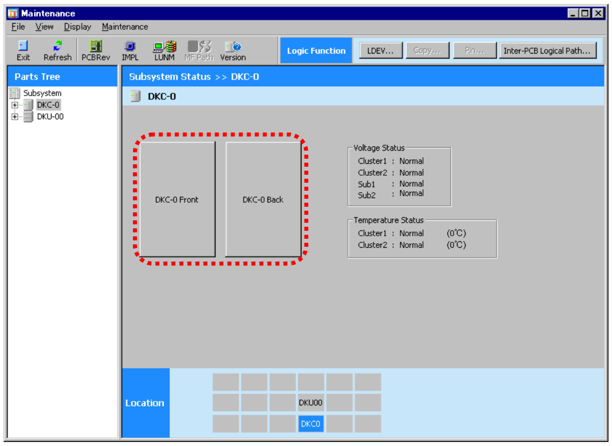
Select (CL) [DKC-n] in the ‘Maintenance’ window.



DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-3. <DKC window>

Select (CL) [DKC-n Back] in the ‘DKC’ window.

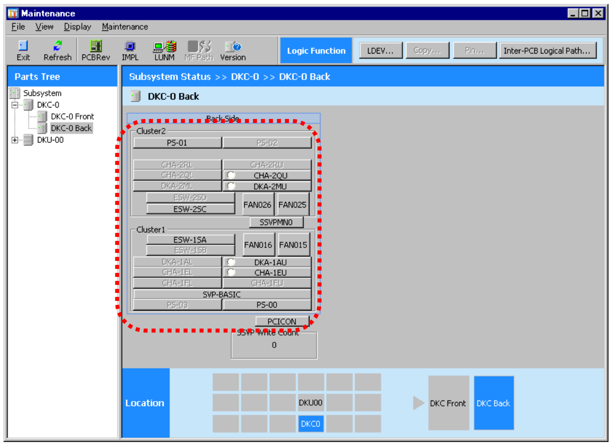

Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function
LDEV...
Copy...
Pri...
Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status >> DKC-0
DKC-0
DKC-0 Front
DKC-0 Back
Location
DKU00
DKC0

Voltage Status
Cluster1 : Normal
Cluster2 : Normal
Sub1 : Normal
Sub2 : Normal

Temperature Status
Cluster1 : Normal (0℃)
Cluster2 : Normal (0℃)

1-4. <Select CHA>

Select (CL) CHA.



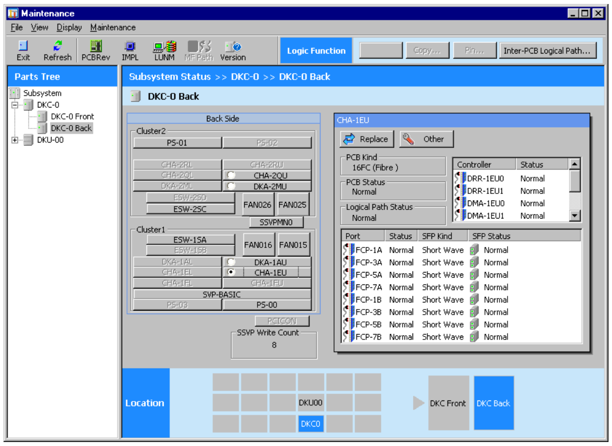
1-5. <Specify Replacement of CHA>

CAUTION

- When the path to the PCB to be replaced is online, ask the customer to place it offline. (For CHA replacement)
- For Mainframe, vary off the concerned channel paths.
- When the screen requests an operator to input a password in order to prevent multiple maintenance, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

Make sure that the status is WARNING.
Select (CL) [Replace].



SSVP Write Count: 8

PCB Kind: 16FC (Fibre)

PCB Status: Normal

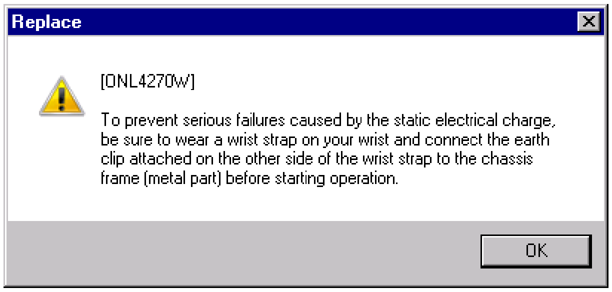
Logical Path Status: Normal

Controller	Status
DRR-1EU0	Normal
DRR-1EU1	Normal
DMA-1EU0	Normal
DMA-1EU1	Normal

Port	Status	SFP Kind	SFP Status
FCP-1A	Normal	Short Wave	Normal
FCP-3A	Normal	Short Wave	Normal
FCP-5A	Normal	Short Wave	Normal
FCP-7A	Normal	Short Wave	Normal
FCP-1B	Normal	Short Wave	Normal
FCP-3B	Normal	Short Wave	Normal
FCP-5B	Normal	Short Wave	Normal
FCP-7B	Normal	Short Wave	Normal

1-6. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.



[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

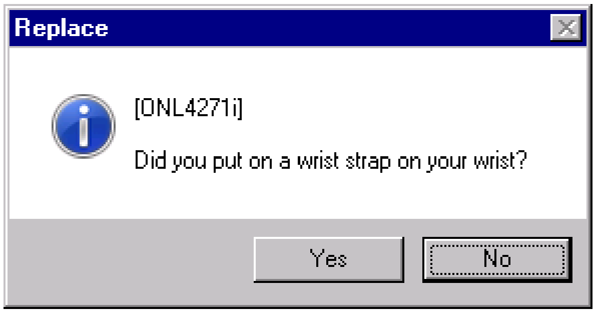
(1) <Confirm wearing wrist strap>

In response to a message, “Did you put on a wrist strap on your wrist?”.

Select (CL) [Yes] when wrist strap is on your wrist.

Select (CL) [No] when there is no wrist strap on your wrist.

When [No] is selected (CL), go to Step (2).



[ONL4271i]

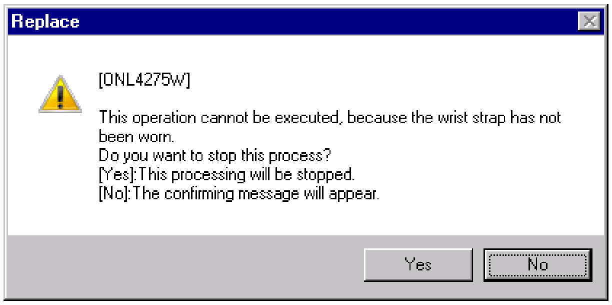
Did you put on a wrist strap on your wrist?

(2)

In response to a message, “This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?

[Yes]: This processing will be stopped.

[No]: The confirming message will appear.”



[ONL4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

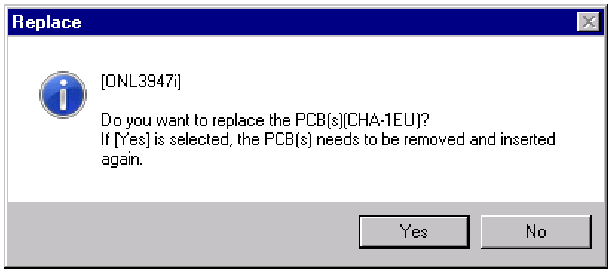
When [Yes] is selected (CL), returned to Step 1-5.

When [No] is selected (CL), returned to Step 1-6.

1-7. <CHA replace>

Select (CL) [Yes] in response to:

“Do you want to replace the PCB(s)(CHA-nnn)? If [Yes] is selected, the PCB(s) needs to be removed and inserted again.”.



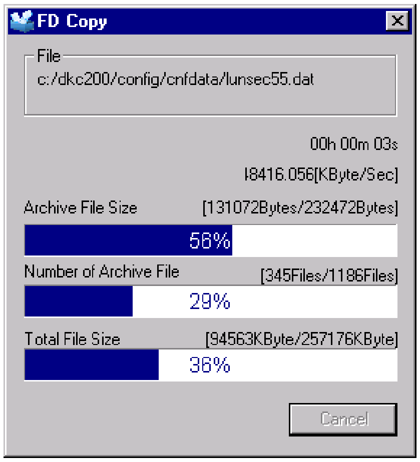
[ONL3947i]

Do you want to replace the PCB(s)(CHA-1EU)?
If [Yes] is selected, the PCB(s) needs to be removed and inserted again.

(Eg. CHA)

1-8. <Compression of the error information>

The error information is compressed.
The dialog of FD Copy is displayed.



c:/dkc200/config/cnfdata/lunsec55.dat

00h 00m 03s

18416.056[KByte/Sec]

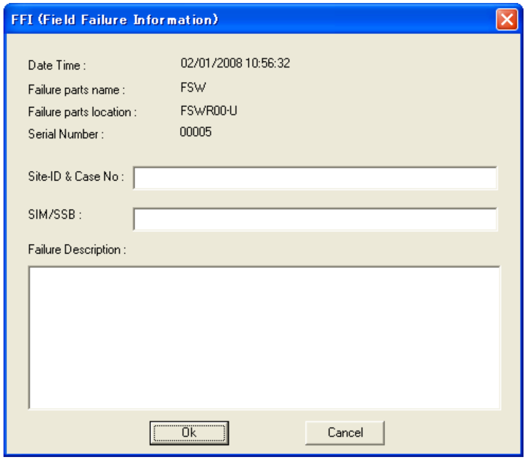
Archive File Size [131072Bytes/232472Bytes] 56%

Number of Archive File [345Files/1186Files] 29%

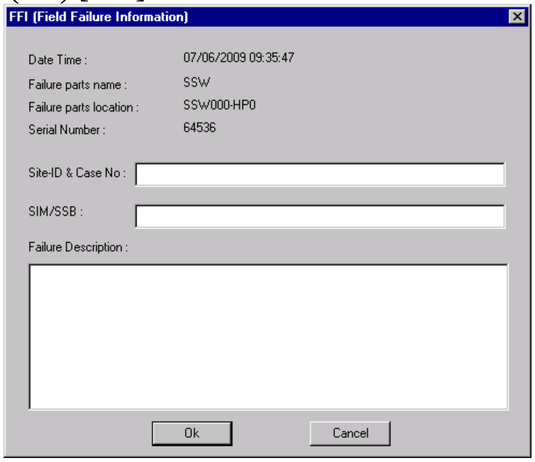
Total File Size [94563KByte/257176KByte] 36%

1-9. <Get the error information>

Input the Field Failure Information, and select (CL) [OK].

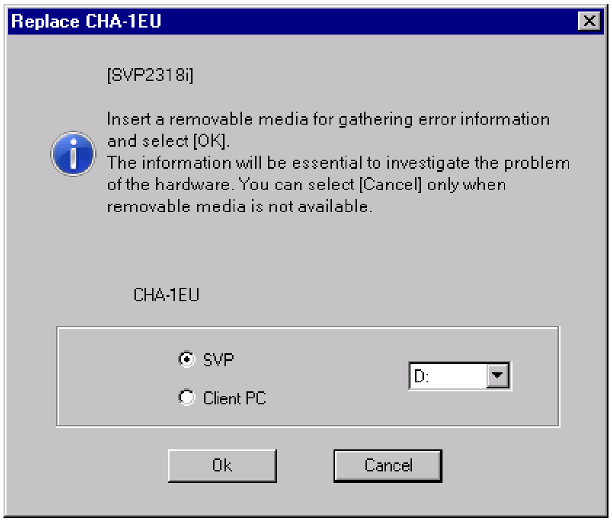


Date Time : 02/01/2008 10:56:32
Failure parts name : FSW
Failure parts location : FSWR00-U
Serial Number : 00005



Date Time : 07/06/2009 09:35:47
Failure parts name : SSW
Failure parts location : SSW000-HP0
Serial Number : 64536

“Insert a removable media for gathering error information and select [OK]. The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.” is displayed.
Trouble information is preserved in console PC connected with SVP.
Please select the Client PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu. The drive letter becomes the drive letter of console PC connected with SVP.


Replace CHA-1EU

[SVP2318i]

Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.

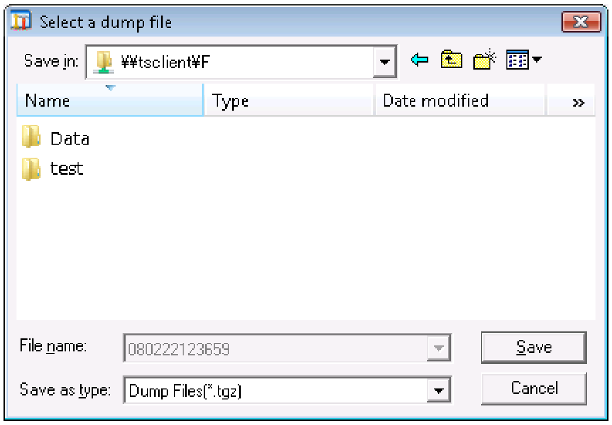
CHA-1EU

● SVP
○ Client PC

D:

A Primary copy is always placed on the SVP HD in the “c:\dkc200\others\pcbinfo\” directory with the following file name format
“[factory_cd]_[Pcb_type]_[Pcb_SerialNo]_YYMMDDhhmmss.tgz”.
(YY denotes Year, MM denotes Month, DD denotes Day, hh denotes Hour, mm denotes Minute, and ss denotes Second)

When Client PC is selected, the directory selection dialog is displayed.
Please select an arbitrary directory if necessary.


Select a dump file

Save in: ¥¥tsclient¥F

File name: 080222123659

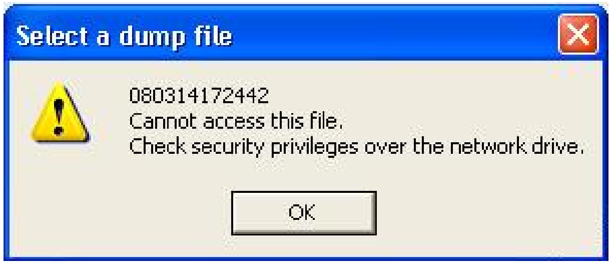
Save as type: Dump Files(*.tgz)

Console PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of console PC.

Select (CL) [Save] when saving a file in a specified directory.
It returns to the drive selection screen when [Cancel] is selected (CL).

- When the destination media is write-protected.

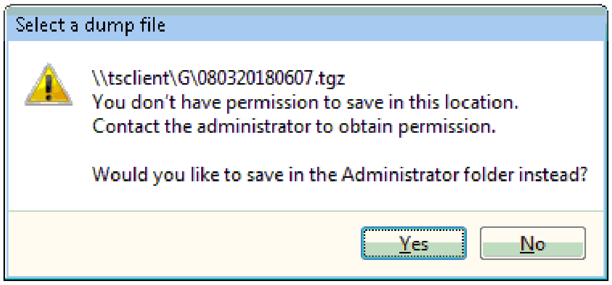
  <For Windows XP>



080314172442
Cannot access this file.
Check security privileges over the network drive.

<For Windows Vista>

Selecting (CL) [Yes] displays the "C:\users\Administrator" folder of SVP.
Selecting (CL) [No] displays the folder selected with the Client PC.



\\tsclient\G\080320180607.tgz
You don't have permission to save in this location.
Contact the administrator to obtain permission.

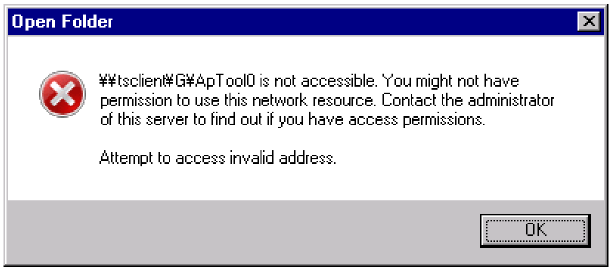
Would you like to save in the Administrator folder instead?

Please appoint another destination whether you remove write protect when you save it and carry it out.

- When dialog of the destination drive specified with the Client PC is open, the media is removed, and then select (CL) [Save].

- When the memory in the destination drive specified with the Client PC is corrupted. The dialog remains displayed after selecting (CL) [OK].

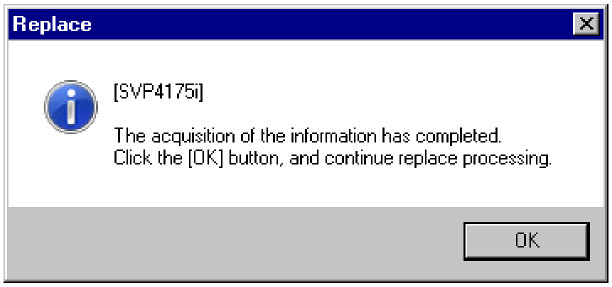
  At the time of the above operation completion, the information collection is not carried out.
  Please choose another directory again after having closed a system message whether you reconnect the drive that you removed when you save it and carry it out.



¥¥tsclient¥G¥ApTool0 is not accessible. You might not have permission to use this network resource. Contact the administrator of this server to find out if you have access permissions.

Attempt to access invalid address.

Select (CL) [OK] in response to "The acquisition of the information has completed. Click the [OK] button, and continue replace processing.".



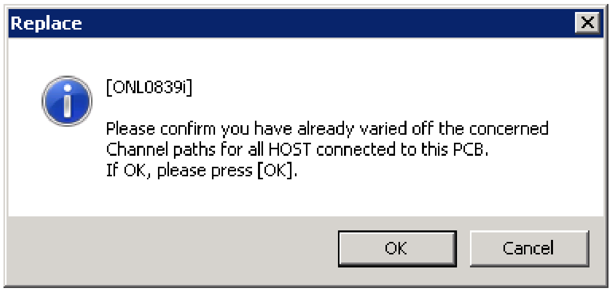
[SVP4175i]

The acquisition of the information has completed.
Click the [OK] button, and continue replace processing.

1-10. <Confirm Channel Path offline>

Select (CL) [OK] in response to following message.

For Mainframe Fiber CHA:
“Please confirm you have already varied off the concerned Channel paths for all HOST connected to this PCB. If OK, please press [OK].”.



Replace

[ONL0839i]

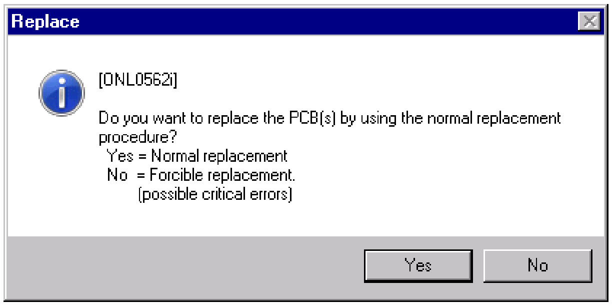
Please confirm you have already varied off the concerned
Channel paths for all HOST connected to this PCB.
If OK, please press [OK].

1-11. <Caution message for system down>

CAUTION

Select (CL) [Yes] in response to the message below.

“Do you want to replace the PCB(s) by using the normal replacement procedure?
Yes = Normal replacement
No = Forcible replacement.
(Possible critical errors)”.



[ONL0562i]

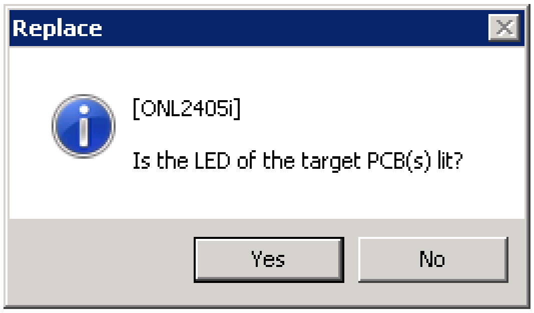
Do you want to replace the PCB(s) by using the normal replacement procedure?
Yes = Normal replacement
No = Forcible replacement.
(possible critical errors)

1-12. <CHA blocking>

“CHA-xxx is being blocked... Usually, several minutes (maximum 15 minutes)”
“CHA-xxx is lighting the LED...”

1-13. <Check shut down LED>

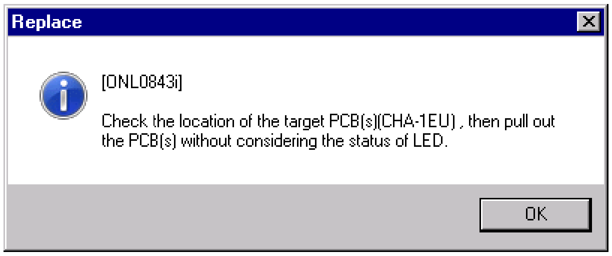
Select (CL)
* [Yes] if LED is on
* [No] if LED is off
in response to “Is the LED of the target PCB(s) lit?”.



[ONL2405i]

Is the LED of the target PCB(s) lit?

If [No] is selected:
Select (CL) [OK] in response to “Check the location of the target PCB(s)(CHA-nnn), then pull out the PCB(s) without considering the status of LED.”. (Refer to “2. HARDWARE REPLACEMENT PROCESSING”)



[ONL0843i]

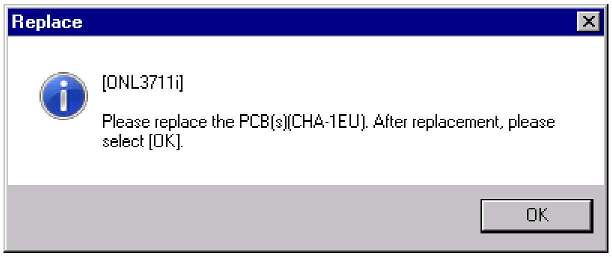
Check the location of the target PCB(s)(CHA-1EU) , then pull out the PCB(s) without considering the status of LED.

Note: Select (CL) [OK] after pulling out the PCB.

Go to step 1-14.

1-14. <Beginning of CHA replacement>

“Please replace the PCB(s)(CHA-nnn). After replacement, please select [OK].” is displayed.
Select (CL) [OK] after replacing the CHA.



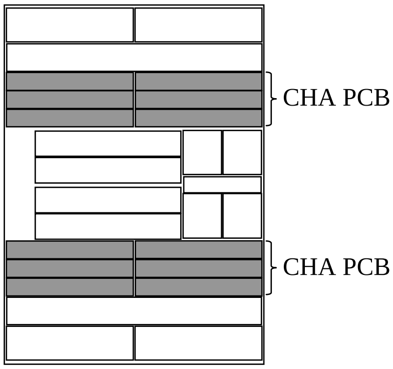
[ONL3711i]

Please replace the PCB(s)(CHA-1EU). After replacement, please select [OK].

Go to “2. HARDWARE REPLACEMENT PROCESSING”.

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Front DKC or Rear DKC	1	CHA (Channel Adapter) PCB for Mainframe Fibre (4Gbps) (MF Fibre 8-port Adapter PCB)	• WP711-A (16MFS)
	2	CHA PCB for Mainframe Fibre (4Gbps) (MF Fibre 8-port Adapter PCB)	• WP711-B (16MFL)
	3	CHA PCB for Mainframe Fibre (8Gbps) (MF Fibre 8-port Adapter PCB) (Non-RoHS2 compliant part)	• WP711-E (16MUS)
		CHA PCB for Mainframe Fibre (8Gbps) (MF Fibre 8-port Adapter PCB) (RoHS2 compliant part)	• WP711-G (16MUSR)
	4	CHA PCB for Mainframe Fibre (8Gbps) (MF Fibre 8-port Adapter PCB)	• WP711-F (16MUL)



Rear View of DKC

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1. Remove the Channel Adapter PCB.

a. Check that the Shut Down LED is on. (only hot replace)

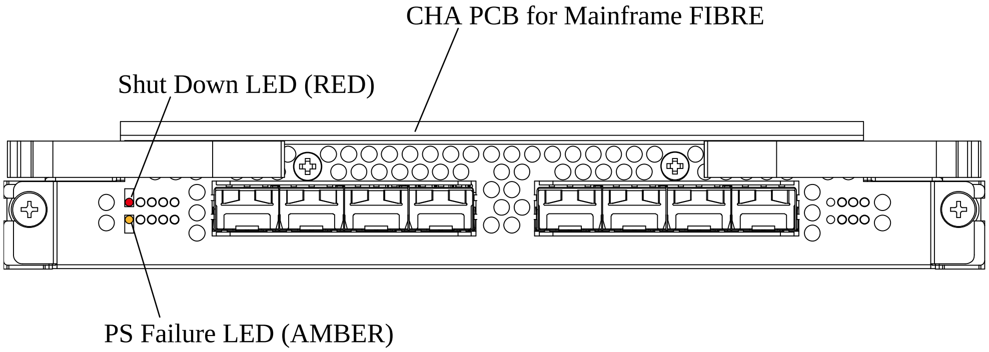
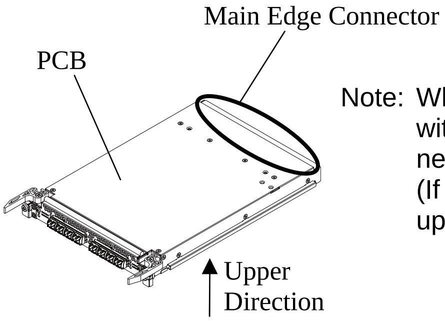


Fig. 3.13.2-1 Confirmation of Shut Down LED

b. Disconnect the optical fibre cables from the failed Channel Adapter PCB.
c. Remove the two screws and remove the failed PCB.



Note: When removing the PCB, hold the right and left of the PCB with both hands, and pull it out straight not to contact the neighboring PCB.
(If it thinks that it is hard to extract, raise and extract a little upwards.)

Note: After removing the PCB, install the spare PCB immediately.
If the PCB is kept removed for a long time, the wind doesn't flow among installed PCBs, causing the PCBs' temperature rise which may result in temperature warning or temperature alarm.

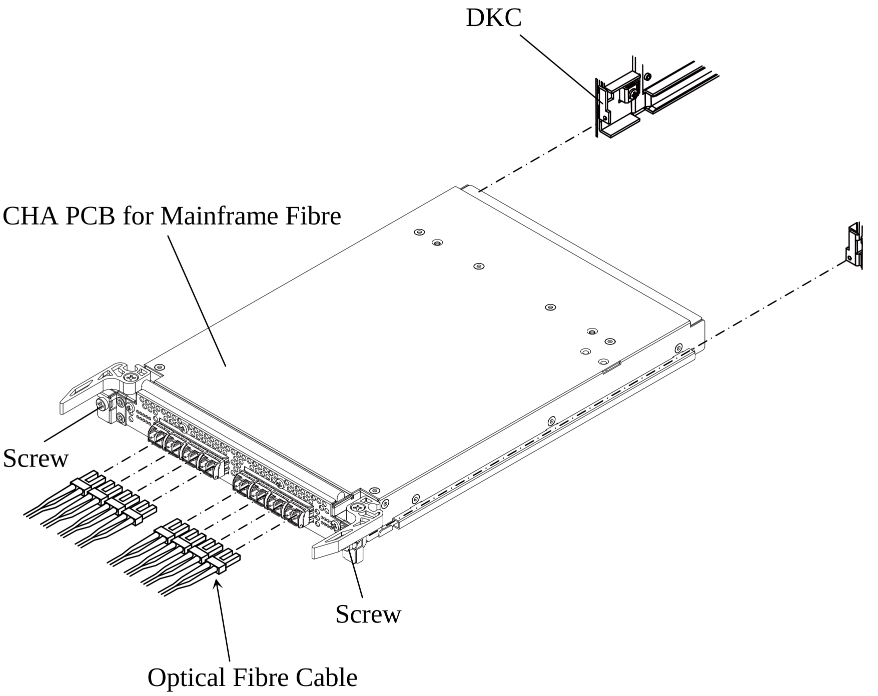
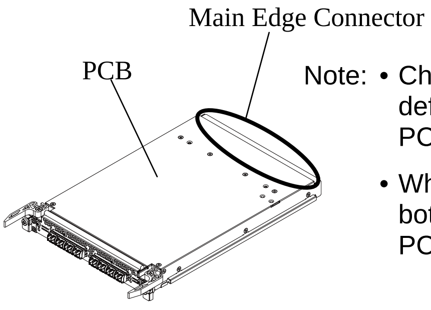


Fig. 3.13.2-2 Removal of PCB

2-2. Insert the spare PCB.

a. Insert the spare PCB to the correct location and tighten the screws.



Note:
- Check that the main edge connector of the PCB has no deformation, damage or sticking of dust before installing the PCB. (See INST03-01-70.)
- When installing the PCB, hold the right and left of the PCB with both hands, and insert it straight not to contact the neighboring PCB.

2-3. Cleaning the fibre cable connectors.

For the tools needed for the cleaning, refer to the tool list on page PARTS06-10.

a. Blow compressed gas against the connector using an air sprayer (for about five seconds).
b. Wipe the connector lightly with a piece of cut gauze wet with ethyl alcohol.
c. Blow compressed air again and check the result of the cleaning. (None of dust, sticking of foreign matter, and dirt must be observed.)

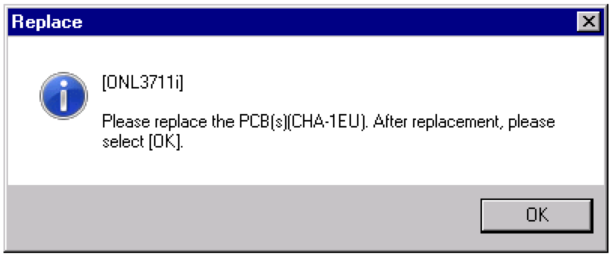
2-4. Connect the optical fibre cables to the spare PCB.

2-5. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Beginning of CHA Replacement>

Select (CL) [OK] in response to "Please replace the PCB(s)(CHA-nnn). After replacement, please select [OK]." after replacement.

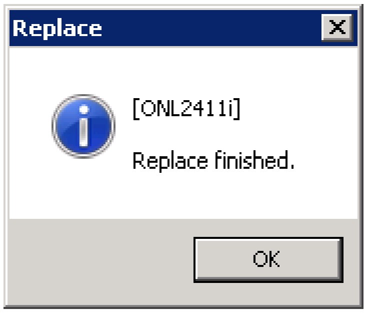


[ONL3711i]

Please replace the PCB(s)(CHA-1EU). After replacement, please select [OK].

3-2. <Check the end of CHA recovery>

Select (CL) [OK] in response to "Replace finished.".



[ONL2411i]

Replace finished.

3-3. <Path on-line when CHA is replaced>

When a CHA is replaced, set the path (from the host) on the replaced CHA to ONLINE by your customer.

3-4.

Go to POST-PROCEDURE [REP04-01-10].

[DKA REPLACEMENT PROCESSING - RDA1]

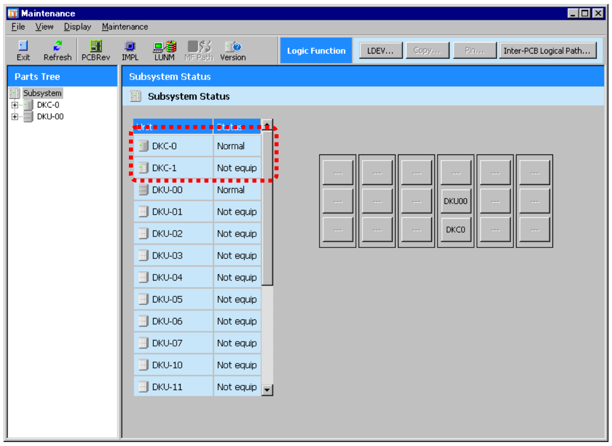
— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select DKA (status check)
    ② Specify Replacement
    ③ Place PCB into blocked state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Specify recovery for DKA

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

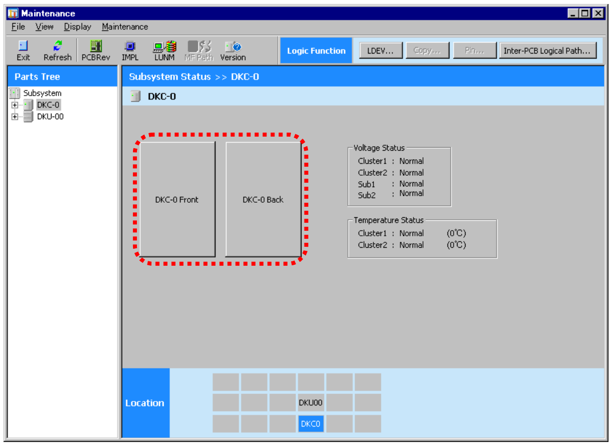
Select (CL) [DKC-n] in the ‘Maintenance’ window.



DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <DKC window>

Select (CL) [DKC-n Back] in the ‘DKC’ window.

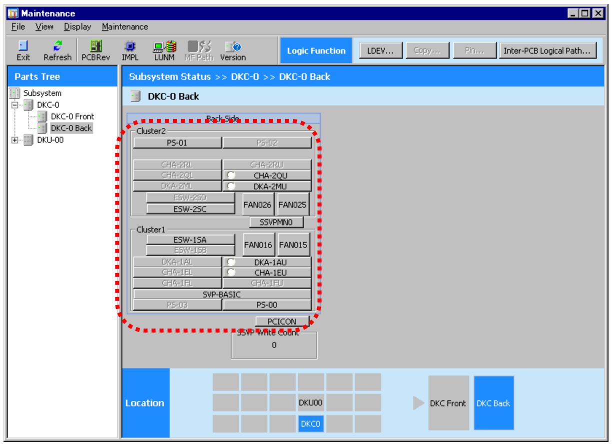


Voltage Status
Cluster1 : Normal
Cluster2 : Normal
Sub1 : Normal
Sub2 : Normal

Temperature Status
Cluster1 : Normal (0℃)
Cluster2 : Normal (0℃)

1-3. <Select DKA>

Select (CL) DKA.



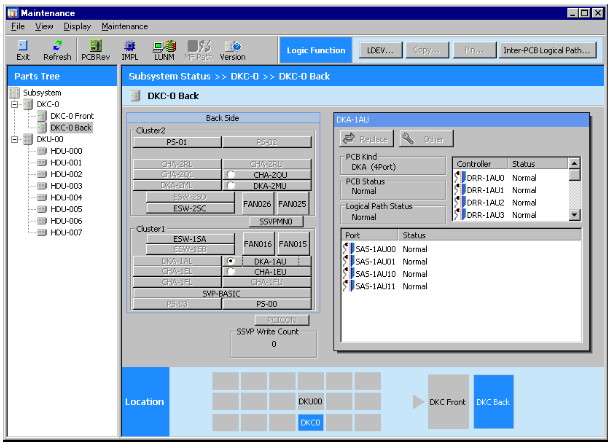
1-4. <Specify Replacement of DKA>

CAUTION

When the screen requests an operator to input a password in order to prevent multiple maintenance, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP Message Section (SVPMSG00-00).

Make sure that the status is WARNING.
Select (CL) [Replace].



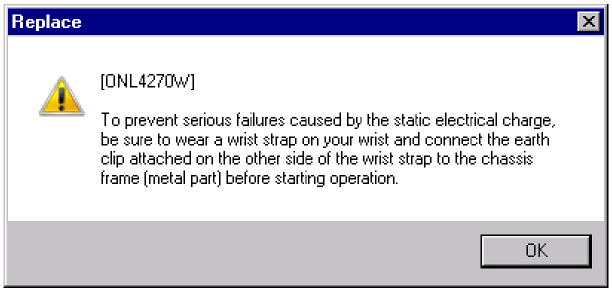
PCB Kind
DKA (4Port)
PCB Status
Normal
Logical Path Status
Normal

Controller	Status
DRR-1AU0	Normal
DRR-1AU1	Normal
DRR-1AU2	Normal
DRR-1AU3	Normal

Port	Status
SAS-1AU00	Normal
SAS-1AU01	Normal
SAS-1AU10	Normal
SAS-1AU11	Normal

1-5. <Wear a wrist strap>

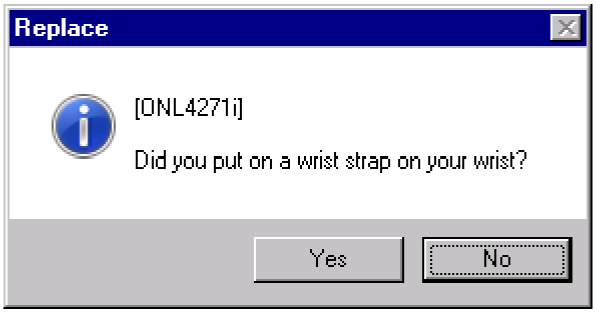
Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.



[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

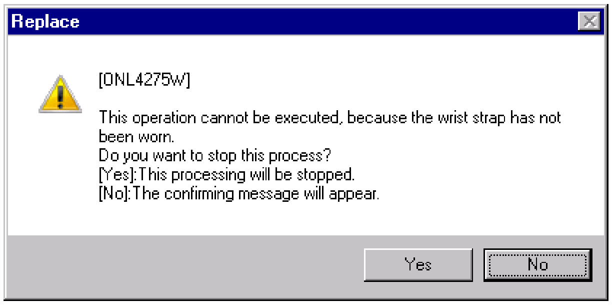
(1) <Confirm wearing wrist strap>
In response to a message, “Did you put on a wrist strap on your wrist?”.
Select (CL) [Yes] when wrist strap is on your wrist.
Select (CL) [No] when there is no wrist strap on your wrist.
When [No] is selected (CL), go to Step (2).



[ONL4271i]

Did you put on a wrist strap on your wrist?

(2)
In response to a message, “This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?
[Yes]: This processing will be stopped.
[No]: The confirming message will appear.”



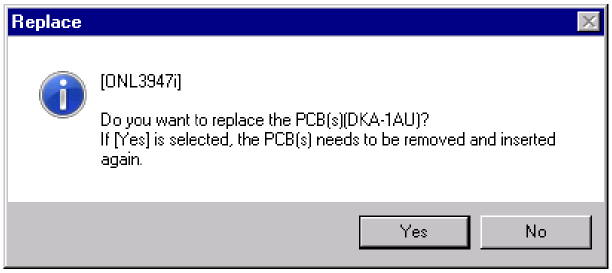
[ONL4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

When [Yes] is selected (CL), returned to Step 1-4.
When [No] is selected (CL), returned to Step 1-5.

1-6. <DKA replace>

Select (CL) [Yes] in response to:
“Do you want to replace the PCB(s)(DKA-nnn)? If [Yes] is selected, the PCB(s) needs to be removed and inserted again.”

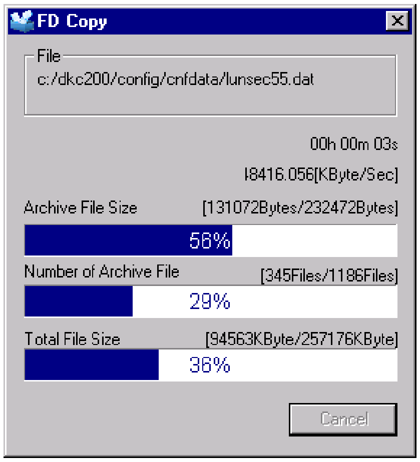


[ONL3947i]

Do you want to replace the PCB(s)(DKA-1AU)?
If [Yes] is selected, the PCB(s) needs to be removed and inserted again.

1-7. <Compression of the error information>

The error information is compressed.
The dialog of FD Copy is displayed.



File
c:/dkc200/config/cnfdata/lunsec55.dat

00h 00m 03s
18416.056[KByte/Sec]

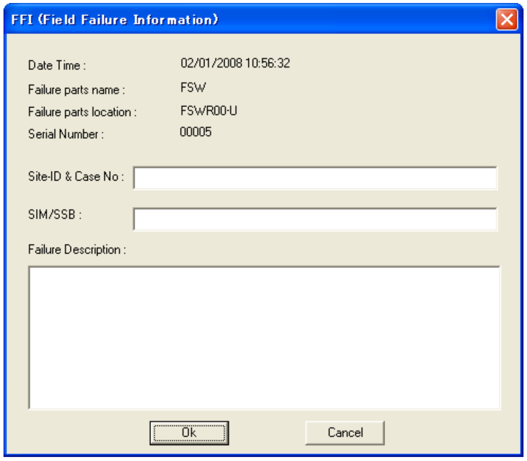
Archive File Size [131072Bytes/232472Bytes]
56%

Number of Archive File [345Files/1186Files]
29%

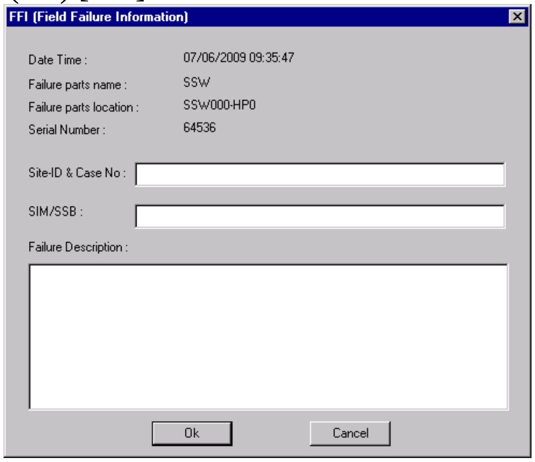
Total File Size [94563KByte/257176KByte]
36%

1-8.<Get the error information>

Input the Field Failure Information, and select (CL) [OK].

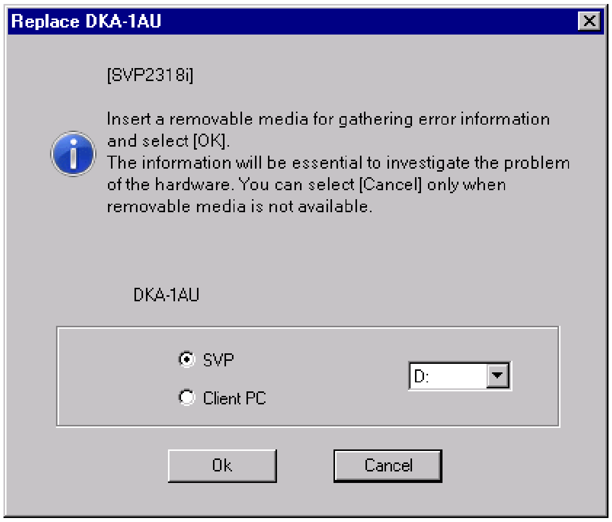


Date Time : 02/01/2008 10:56:32
Failure parts name : FSW
Failure parts location : FSWR00-U
Serial Number : 00005



Date Time : 07/06/2009 09:35:47
Failure parts name : SSW
Failure parts location : SSW000-HP0
Serial Number : 64536

"Insert a removable media for gathering error information and select [OK]. The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available." is displayed.
Trouble information is preserved in console PC connected with SVP.
Please select the Client PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu. The drive letter becomes the drive letter of console PC connected with SVP.



[SVP2318i]

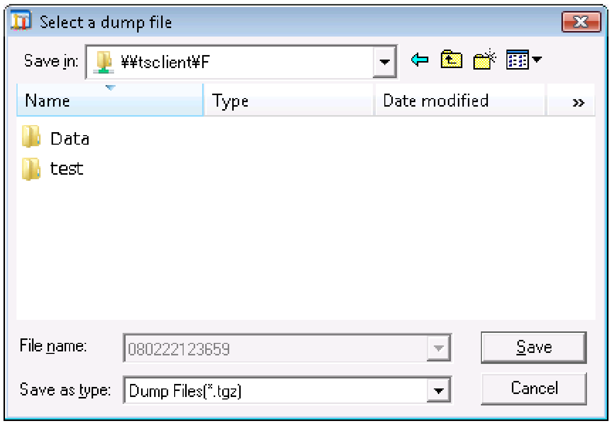
Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.

DKA-1AU

● SVP
○ Client PC

D:

A Primary copy is always placed on the SVP HD in the "c:\dkc200\others\pcbinfo\" directory with the following file name format "[factory_cd]_[Pcb_type]_[Pcb_SerialNo]_YYMMDDhhmmss.tgz".
(YY denotes Year, MM denotes Month, DD denotes Day, hh denotes Hour, mm denotes Minute, and ss denotes Second)



Save in: ¥¥tsclient¥F

File name: 080222123659

Save as type: Dump Files(*.tgz)

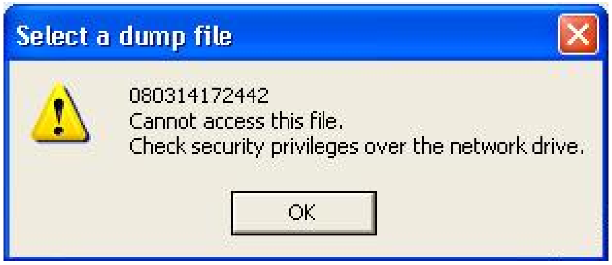
When Client PC is selected, the directory selection dialog is displayed.
Please select an arbitrary directory if necessary.

Console PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of console PC.

Select (CL) [Save] when saving a file in a specified directory.
It returns to the drive selection screen when [Cancel] is selected (CL).

- When the destination media is write-protected.

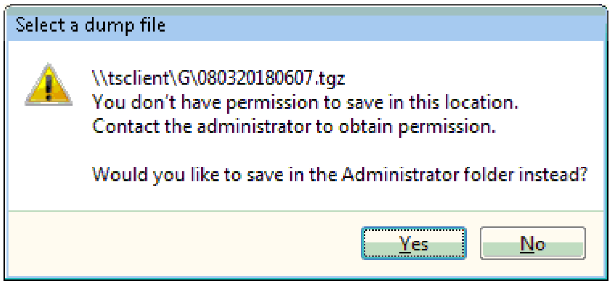
<For Windows XP>



080314172442
Cannot access this file.
Check security privileges over the network drive.

<For Windows Vista>

Selecting (CL) [Yes] displays the “C:\users\Administrator” folder of SVP.
Selecting (CL) [No] displays the folder selected with the Client PC.



\\tsclient\G\080320180607.tgz
You don't have permission to save in this location.
Contact the administrator to obtain permission.

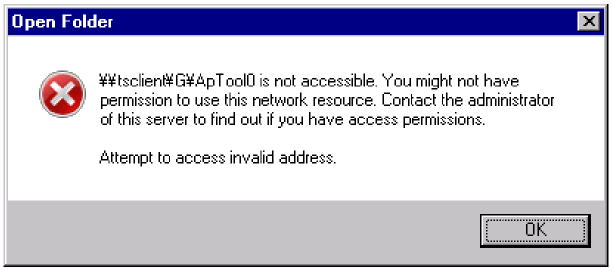
Would you like to save in the Administrator folder instead?

Please appoint another destination whether you remove write protect when you save it and carry it out.

- When dialog of the destination drive specified with the Client PC is open, the media is removed, and then select (CL) [Save].

- When the memory in the destination drive specified with the Client PC is corrupted. The dialog remains displayed after selecting (CL) [OK].

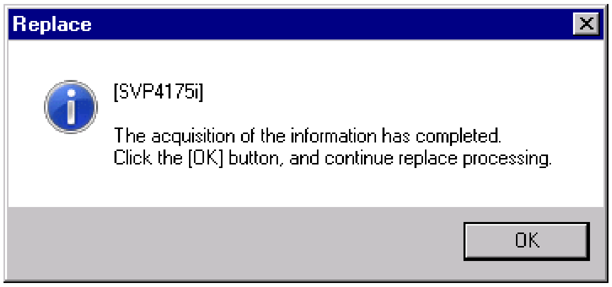
  At the time of the above operation completion, the information collection is not carried out.
  Please choose another directory again after having closed a system message whether you reconnect the drive that you removed when you save it and carry it out.



¥¥tsclient¥G¥ApTool0 is not accessible. You might not have permission to use this network resource. Contact the administrator of this server to find out if you have access permissions.

Attempt to access invalid address.

Select (CL) [OK] in response to “The acquisition of the information has completed. Click the [OK] button, and continue replace processing.”.



[SVP4175i]

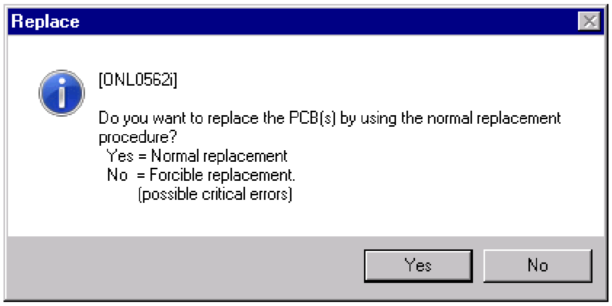
The acquisition of the information has completed.
Click the [OK] button, and continue replace processing.

1-9. <Caution message for system down>

CAUTION

Select (CL) [Yes] in response to the message below.

“Do you want to replace the PCB(s) by using the normal replacement procedure?
Yes = Normal replacement
No = Forcible replacement.
(possible critical errors)”.



[ONL0562i]

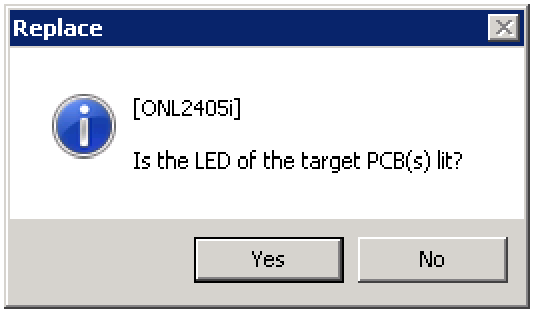
Do you want to replace the PCB(s) by using the normal replacement procedure?
Yes = Normal replacement
No = Forcible replacement.
(possible critical errors)

1-10. <DKA blocking>

“DKA is being blocked...”
“DKA-xxx is lighting the LED...”

1-11. <Check shut down LED>

Select (CL)
* [Yes] if LED is on
* [No] if LED is off
in response to “Is the LED of the target PCB(s) lit?”.

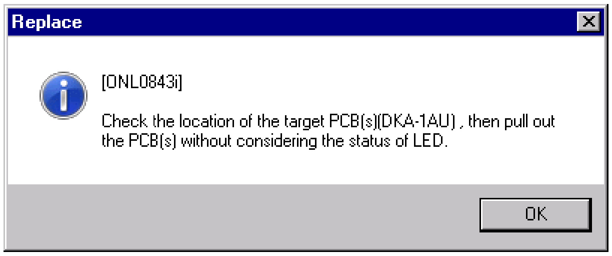


[ONL2405i]

Is the LED of the target PCB(s) lit?

If [No] is selected:
Select (CL) [OK] in response to “Check the location of the target PCB(s)(DKA-nnn), then pull out the PCB(s) without considering the status of LED.”. (Refer to “2. HARDWARE REPLACEMENT PROCESSING”)

Note: Select (CL) [OK] after pulling out the PCB.



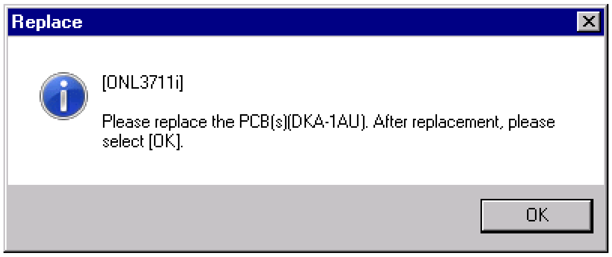
[ONL0843i]

Check the location of the target PCB(s)(DKA-1AU) , then pull out the PCB(s) without considering the status of LED.

Go to Step 1-12.

1-12. <Beginning of DKA replacement>

“Please replace the PCB(s)(DKA-nnn). After replacement, please select [OK].” is displayed.
Select (CL) [OK] after replacing the PCBs.



[ONL3711i]

Please replace the PCB(s)(DKA-1AU). After replacement, please select [OK].

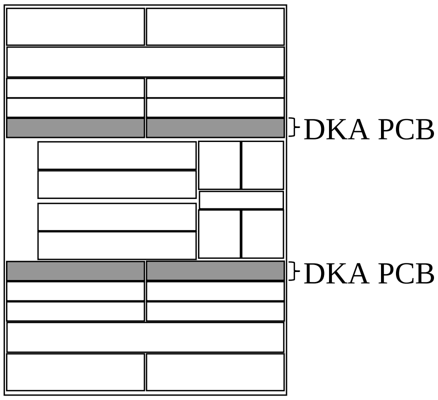
Go to “2. HARDWARE REPLACEMENT PROCESSING”.

Blank Sheet

Blank Sheet

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Rear DKC	1	DKA (Disk Adapter) PCB	• WP720-A



Rear View of DKC

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1. Remove the DKA PCB.

a. Check that the Shut Down LED is on. (only hot replace)

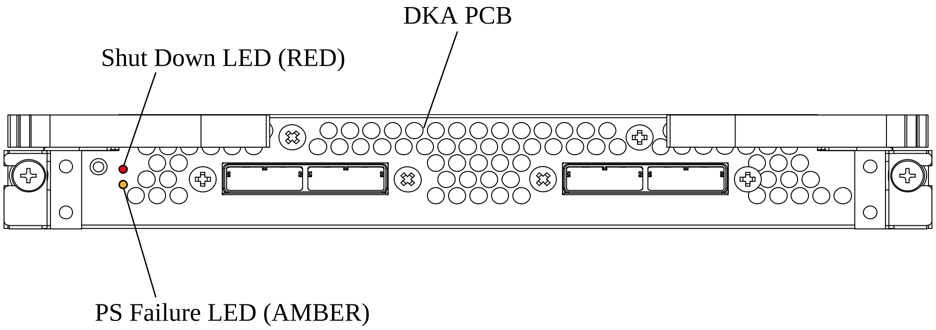
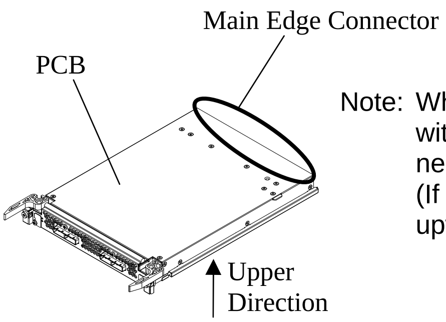


Fig. 3.14.2-1 Confirmation of Shut Down LED

b. Disconnect the cables from the failed DKA PCB.
c. Remove the two screws and remove the failed PCB.



Note: When removing the PCB, hold the right and left of the PCB with both hands, and pull it out straight not to contact the neighboring PCB.
(If it thinks that it is hard to extract, raise and extract a little upwards.)

Note: After removing the PCB, install the spare PCB immediately.
If the PCB is kept removed for a long time, the wind doesn't flow among installed PCBs, causing the PCBs' temperature rise which may result in temperature warning or temperature alarm.

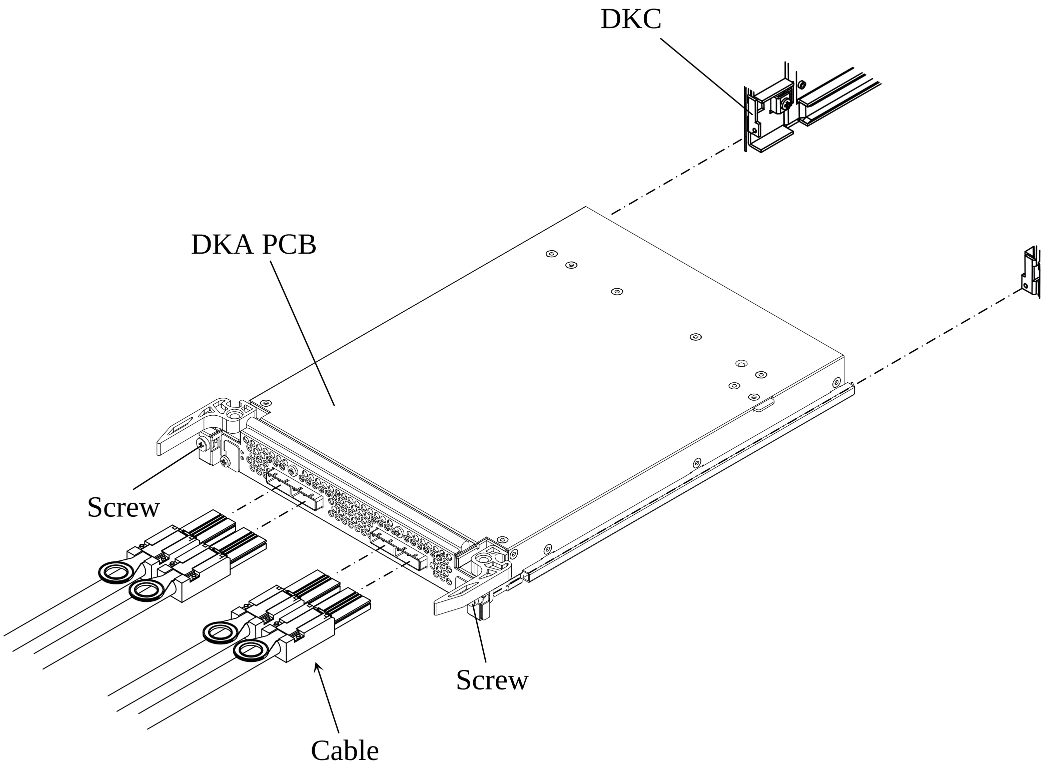
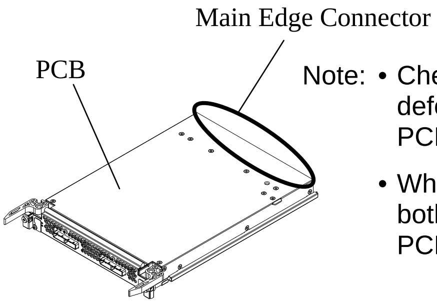


Fig. 3.14.2-2 Removal of PCB

2-2. Insert the spare PCB.

a. Insert the spare PCB to the correct location and tighten the screws.



Note:
- Check that the main edge connector of the PCB has no deformation, damage or sticking of dust before installing the PCB. (See INST03-01-70.)
- When installing the PCB, hold the right and left of the PCB with both hands, and insert it straight not to contact the neighboring PCB.

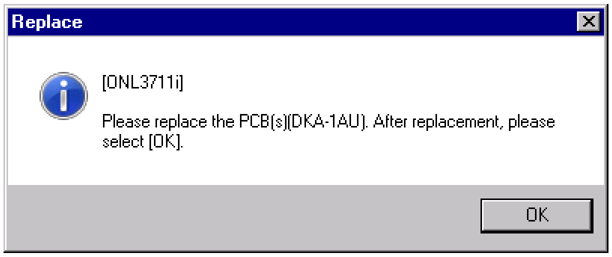
b. Connect the cables to the spare PCB after checking “3.1.7 Notes when connecting the DEV interface cable” (INST03-01-180).

2-3. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Beginning of DKA Replacement>

Select (CL) [OK] in response to “Please replace the PCB(s)(DKA-nnn). After replacement, please select [OK].” after replacement.



[ONL3711i]

Please replace the PCB(s)(DKA-1AU). After replacement, please select [OK].

3-2. <Check the recovery processing>

The following message is displayed:
“Restoring the DKA-xxx...”
“DKA-xxx is being path recovered...”

3-3.

“DKU PATH INLINE is now running...” is displayed.

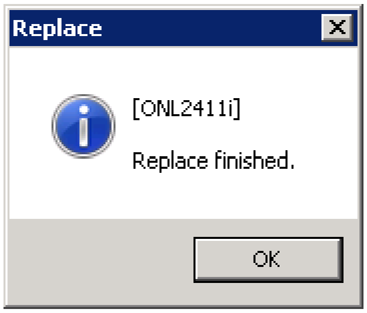
3-4. <Check the recovery processing>

The following message is displayed:

“Restoring the DKA...”

3-5. <Check the end of DKA recovery>

Select (CL) [OK] in response to “Replace finished.”.



[ONL2411i]

Replace finished.

3-6.

Go to POST-PROCEDURE [REP04-01-10].

[ESW REPLACEMENT PROCESSING - RES1]

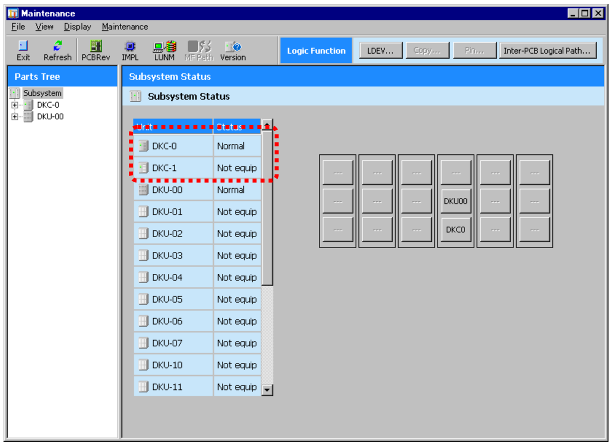
— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select ESW (status check)
    ② Specify Replacement
    ③ Place PCB into blocked state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Specify recovery of ESW

1. PRE-PROCESSING of SVP

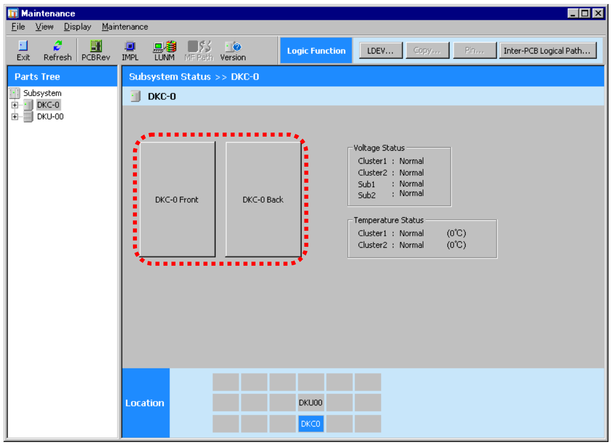
1-1. <Maintenance window>

Select (CL) [DKC-n] in the 'Maintenance' window.



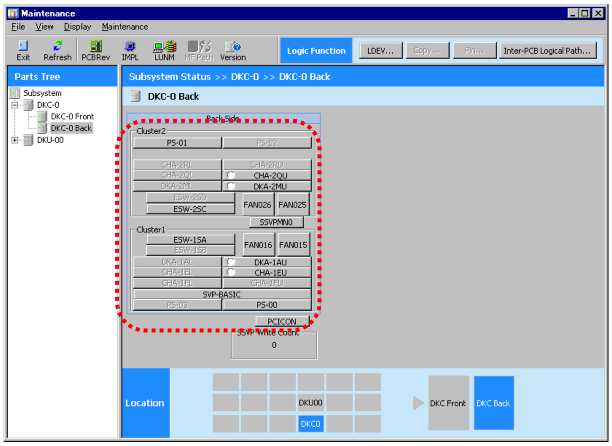
1-2. <DKC window>

Select (CL) [DKC-n Back] in the 'DKC' window.



1-3. <Select ESW>

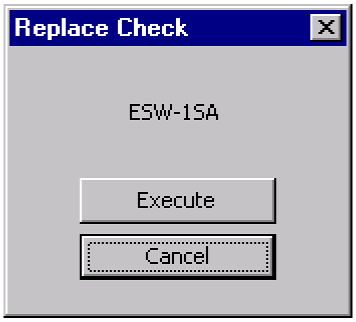
Select (CL) ESW.



1-4. <Specify replacement>

⚠ CAUTION

Be sure to operate procedure 1-5 to 1-7 within thirty minutes.

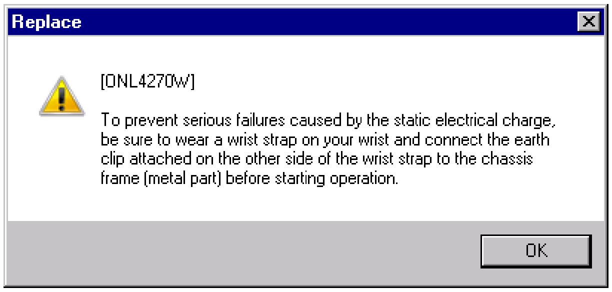


Select (CL) [Execute].

Selecting (CL) [Cancel] returns you to Step 1-3.

1-5. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.



[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

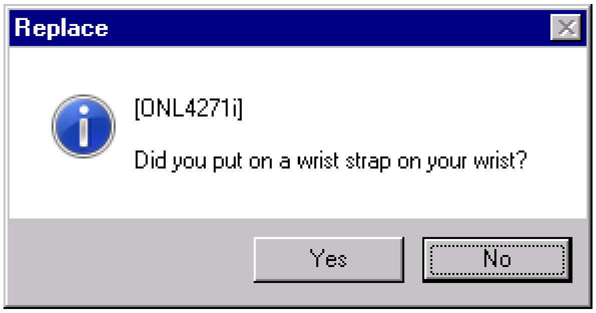
(1) <Confirm wearing wrist strap>

In response to a message, “Did you put on a wrist strap on your wrist?”.

Select (CL) [Yes] when wrist strap is on your wrist.

Select (CL) [No] when there is no wrist strap on your wrist.

When [No] is selected (CL), go to Step (2).



[ONL4271i]

Did you put on a wrist strap on your wrist?

(2)

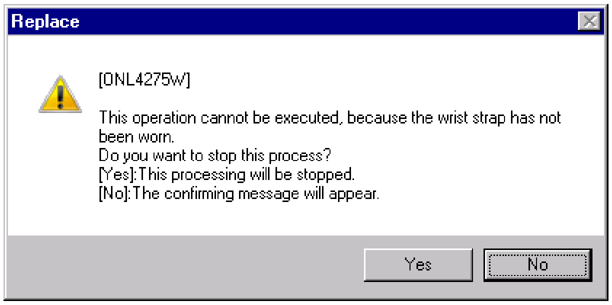
In response to a message, “This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?

[Yes]: This processing will be stopped.

[No]: The confirming message will appear.”

When [Yes] is selected (CL), returned to Step 1-3.

When [No] is selected (CL), returned to Step 1-5.



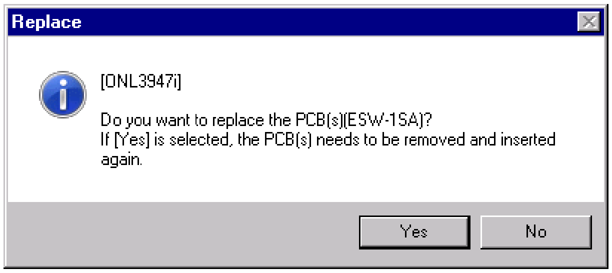
[ONL4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-6. <ESW replace>

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

Select (CL) [Yes] in response to:
“Do you want to replace the PCB(s)(ESW-nnn) ? If [Yes] is selected, the PCB(s) needs to be removed and inserted again.”.

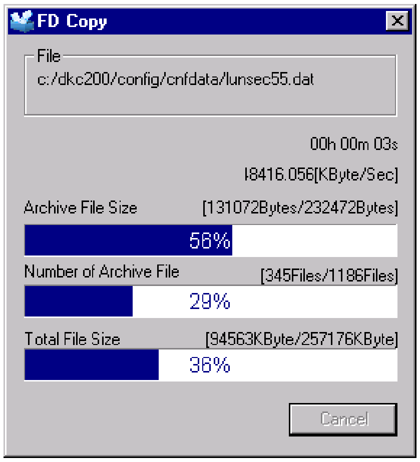


[ONL3947i]

Do you want to replace the PCB(s)(ESW-1SA)?
If [Yes] is selected, the PCB(s) needs to be removed and inserted again.

1-7. <Compression of the error information>

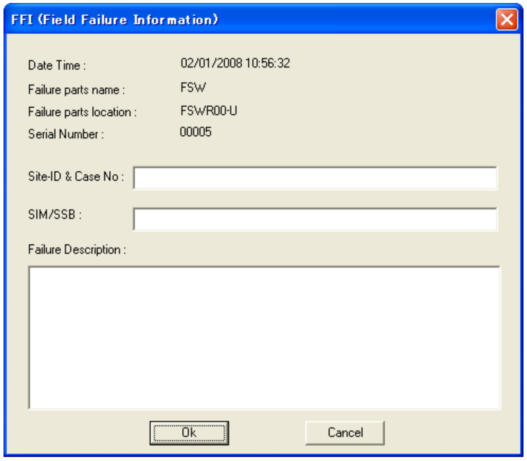
The error information is compressed.
The dialog of FD Copy is displayed.



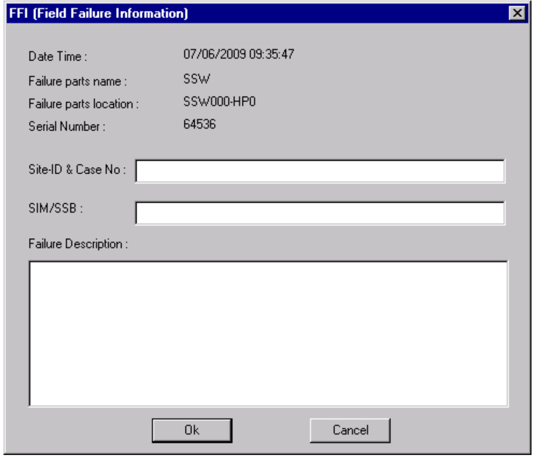
c:/dkc200/config/cnfdata/lunsec55.dat
00h 00m 03s
18416.056[KByte/Sec]
Archive File Size [131072Bytes/232472Bytes] 56%
Number of Archive File [345Files/1186Files] 29%
Total File Size [94563KByte/257176KByte] 36%

1-8. <Get the error information>

Input the Field Failure Information, and select (CL) [OK].

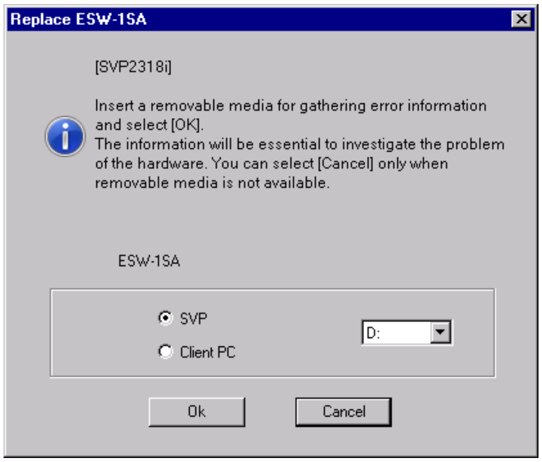


Date Time : 02/01/2008 10:56:32
Failure parts name : FSW
Failure parts location : FSWR00-U
Serial Number : 00005



Date Time : 07/06/2009 09:35:47
Failure parts name : SSW
Failure parts location : SSW000-HP0
Serial Number : 64536

"Insert a removable media for gathering error information and select [OK]. The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available." is displayed.
Trouble information is preserved in console PC connected with SVP.
Please select the Client PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu. The drive letter becomes the drive letter of console PC connected with SVP.


Replace ESW-1SA

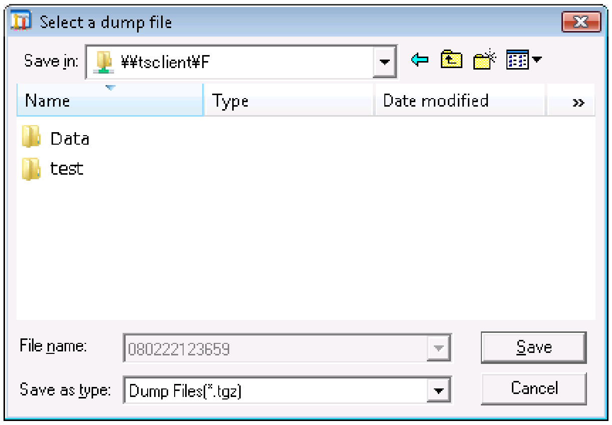
[SVP2318i]

Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.

ESW-1SA

● SVP
○ Client PC
D:

A Primary copy is always placed on the SVP HD in the "c:\dkc200\others\pcbinfo\" directory with the following file name format
"[factory_cd]_[Pcb_type]_[Pcb_SerialNo]_YYMMDDhhmmss.tgz".
(YY denotes Year, MM denotes Month, DD denotes Day, hh denotes Hour, mm denotes Minute, and ss denotes Second)



Save in: ¥¥tsclient¥F

File name: 080222123659

Save as type: Dump Files(*.tgz)

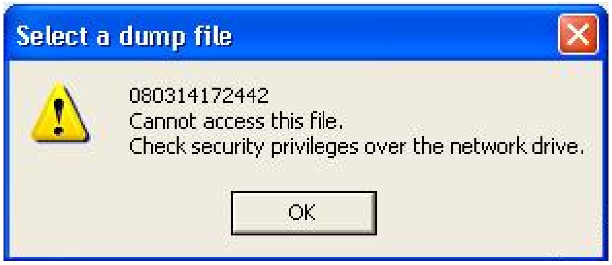
When Client PC is selected, the directory selection dialog is displayed.
Please select an arbitrary directory if necessary.

Console PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of console PC.

Select (CL) [Save] when saving a file in a specified directory.
It returns to the drive selection screen when [Cancel] is selected (CL).

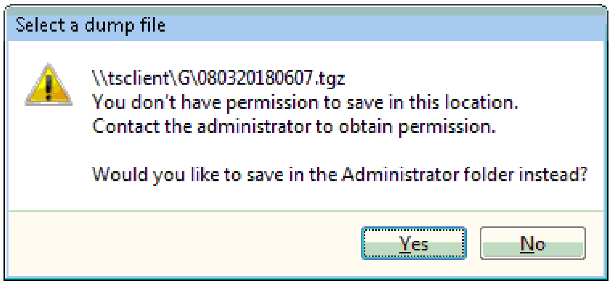
- When the destination media is write-protected.

<For Windows XP>



080314172442
Cannot access this file.
Check security privileges over the network drive.

<For Windows Vista>



\\tsclient\G\080320180607.tgz
You don't have permission to save in this location.
Contact the administrator to obtain permission.

Would you like to save in the Administrator folder instead?

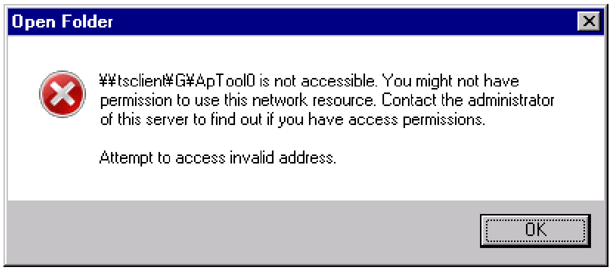
Selecting (CL) [Yes] displays the "C:\users\Administrator" folder of SVP.
Selecting (CL) [No] displays the folder selected with the Client PC.

Please appoint another destination whether you remove write protect when you save it and carry it out.

- When dialog of the destination drive specified with the Client PC is open, the media is removed, and then select (CL) [Save].

- When the memory in the destination drive specified with the Client PC is corrupted. The dialog remains displayed after selecting (CL) [OK].

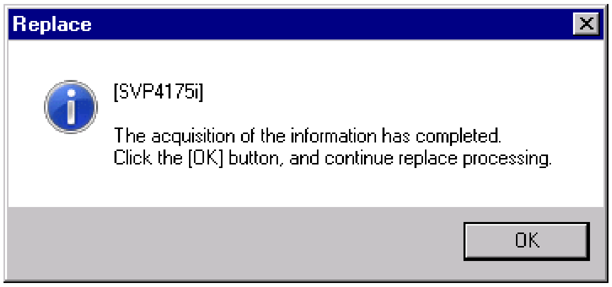
  At the time of the above operation completion, the information collection is not carried out.
  Please choose another directory again after having closed a system message whether you reconnect the drive that you removed when you save it and carry it out.



¥¥tsclient¥G¥ApTool0 is not accessible. You might not have permission to use this network resource. Contact the administrator of this server to find out if you have access permissions.

Attempt to access invalid address.

Select (CL) [OK] in response to “The acquisition of the information has completed. Click the [OK] button, and continue replace processing.”.



[SVP4175i]

The acquisition of the information has completed.
Click the [OK] button, and continue replace processing.

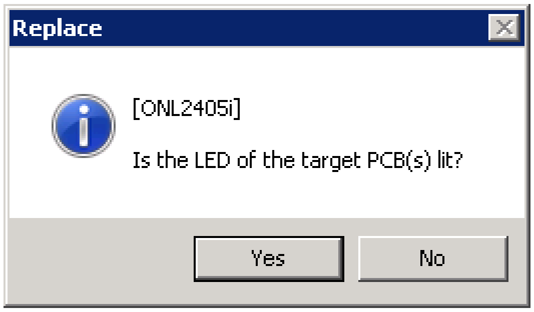
1-9. <Check ESW blocking>

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

“Blocking the ESW...” is displayed.

1-10. <Check shut down LED>

Select (CL)
* [Yes] if LED is on
* [No] if LED is off
in response to “Is the LED of the target PCB(s) lit?”.



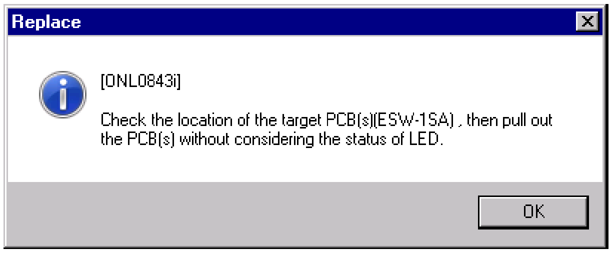
[ONL2405i]

Is the LED of the target PCB(s) lit?

If [No] is selected:

Select (CL) [OK] in response to “Check the location of the target PCB(s)(ESW-nnn), then pull out the PCB(s) without considering the status of LED.”. (Refer to “2. HARDWARE REPLACEMENT PROCESSING”)

Note: Select (CL) [OK] after pulling out the PCB.



[ONL0843i]

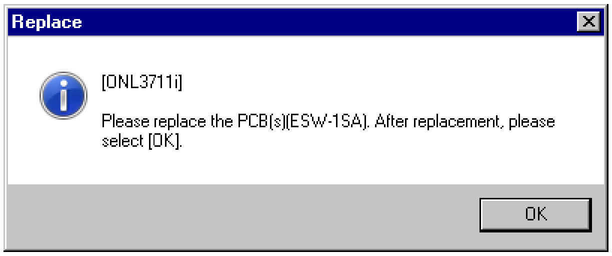
Check the location of the target PCB(s)(ESW-1SA) , then pull out the PCB(s) without considering the status of LED.

Go to Step 1-11.

1-11. <Beginning of ESW replacement>

“Please replace the PCB(s)(ESW-nnn). After replacement, please select [OK].” is displayed.
Select (CL) [OK] after replacing the ESW.

Go to “2. HARDWARE REPLACEMENT PROCESSING”.

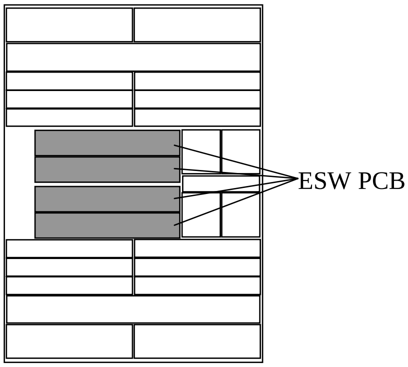


[ONL3711i]

Please replace the PCB(s)(ESW-1SA). After replacement, please select [OK].

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Rear View of DKC	1	ESW PCB	• WP730-A



Rear View of
DKC

> NOTICE:
> Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1. Remove the ESW PCB.

a. Check that the Shut Down LED is on. (only hot replace)

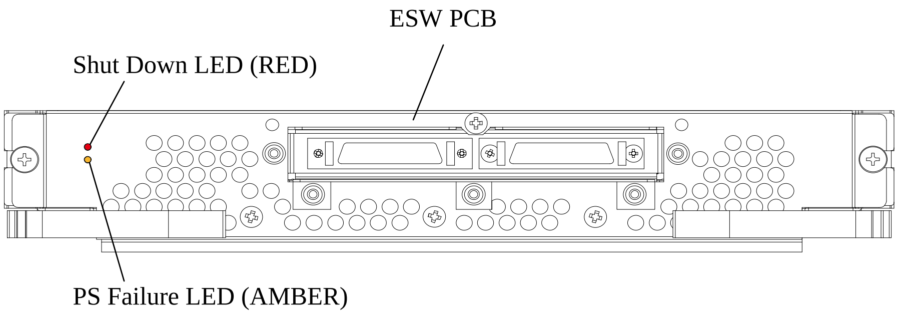
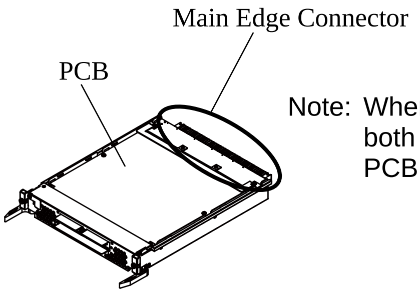


Fig. 3.15.2-1 Confirmation of Shut Down LED

b. Disconnect the cable from the failed ESW PCB.

c. Remove the two screws and remove the failed PCB.



Note: When removing the PCB, hold the right and left of the PCB with both hands, and pull it out straight not to contact the neighboring PCB.

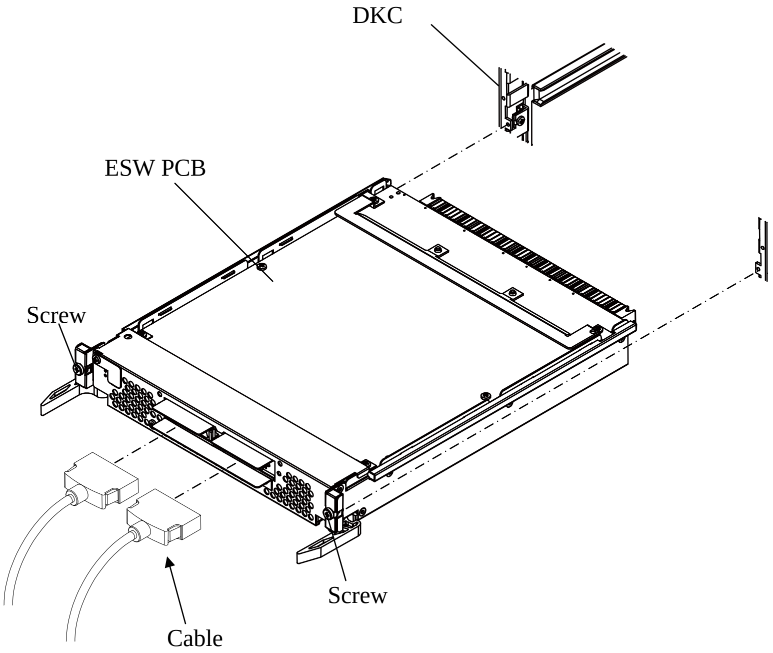
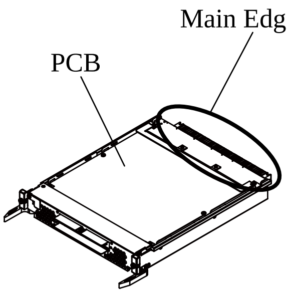


Fig. 3.15.2-2 Removal of PCB

2-2. Insert the spare PCB.

a. Insert the spare PCB to the correct location and tighten the screws.



Note:
- Check that the main edge connector of the PCB has no deformation, damage or sticking of dust before installing the PCB. (See INST03-01-70.)
- When installing the PCB, hold the right and left of the PCB with both hands, and insert it straight not to contact the neighboring PCB.

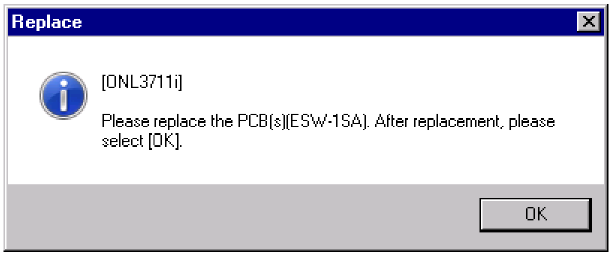
2-3. Connect the cable to the spare PCB.

2-4. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. < Check replacement of ESW>

Select (CL) [OK] in response to "Please replace the PCB(s)(ESW-nnn). After replacement, please select [OK]." after replacement.



[ONL3711i]

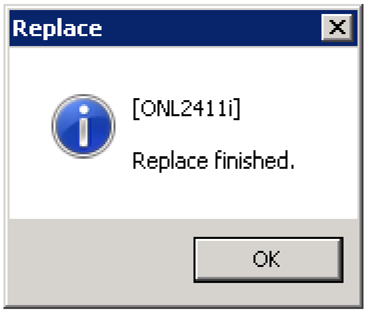
Please replace the PCB(s)(ESW-1SA). After replacement, please select [OK].

3-2. <Check the ESW recovery procedure>

"Restoring the ESW..." is displayed.

3-3. <Check the ESW replace finished>

Select (CL) [OK] in response to "Replace finished.".



[ONL2411i]

Replace finished.

3-4.

Go to POST-PROCEDURE [REP04-01-10].

[DKCPANEL REPLACEMENT PROCESSING - RTC1]

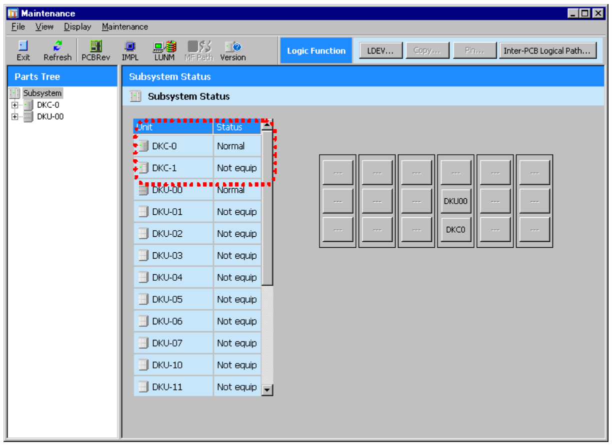
— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select DKCPANEL (status check)
    ② Stop environment monitor
    ③ Specify Replacement
    ④ Detach DKCPANEL
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Specify end of DKCPANEL replacement
    ② Reinstall related parts
    ③ Start environment monitor

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

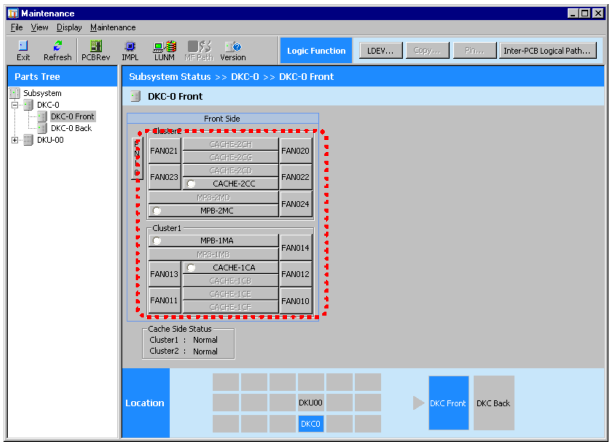
In the ‘Maintenance’ window, check and select (CL) [DKC-x] to be replaced.



Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <Specify DKCPANEL >

Select (CL) [PNLx].



Cache Side Status
Cluster1 : Normal
Cluster2 : Normal

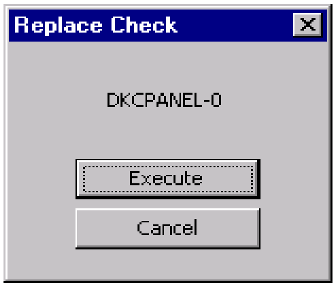
1-3. <Execute>

CAUTION

When the screen prompting an operator to input a password in order to prevent a multiple maintenance, contact the technical support division to ask for an instruction.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

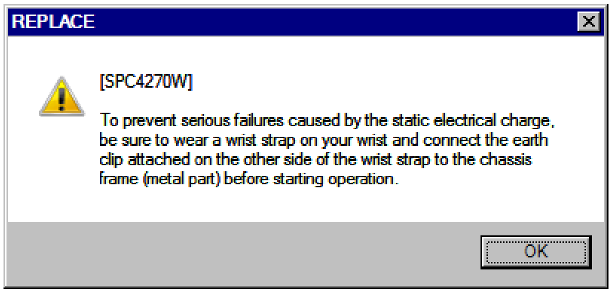
A window shown on the right is displayed.
Select (CL) [Execute].



(Eg. DKCPANEL-0)

1-4. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

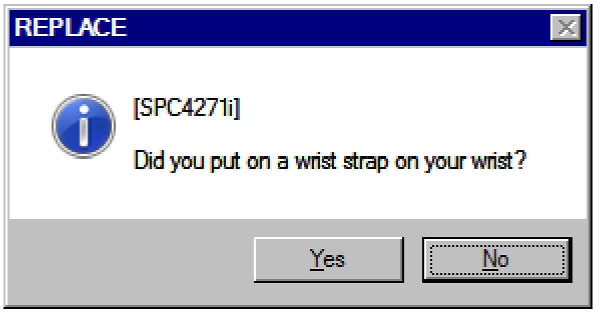


[SPC4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

select (CL) [Yes] and go to Step 1-5.

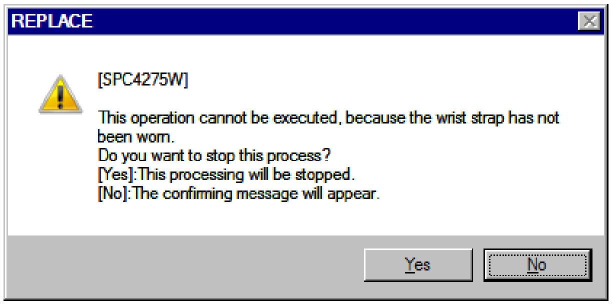


[SPC4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.”
is displayed.

When the processing will be stopped, select (CL) [Yes].

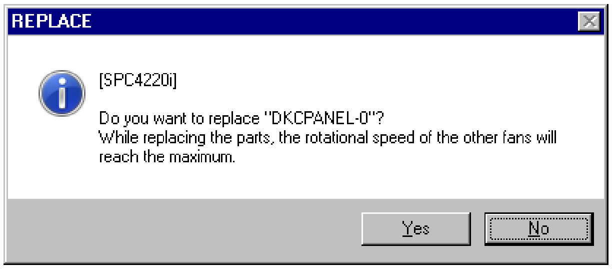


[SPC4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-5. <Check beginning of DKCPANEL Replacement>

Select (CL) [Yes] in response to “Do you want to replace “DKCPANEL-n”? While replacing the parts, the rotational speed of the other fans will reach the maximum.”.



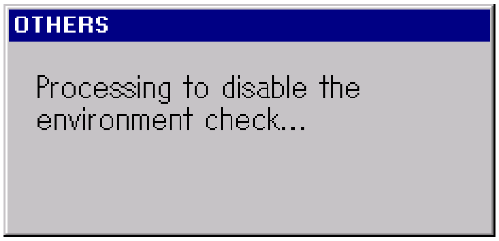
[SPC4220i]

Do you want to replace "DKCPANEL-0"?
While replacing the parts, the rotational speed of the other fans will reach the maximum.

(Eg. DKCPANEL-0)

1-6. <Check environment monitor stopped state>

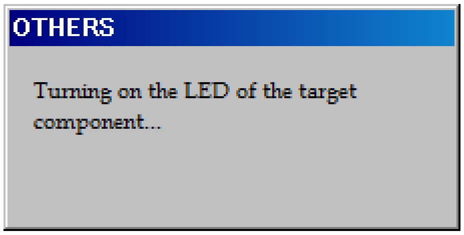
The message “Processing to disable the environment check...” is displayed.



Processing to disable the environment check...

1-7. <Processing before exchanges>

The message “Turning on the LED of the target component...” is displayed.

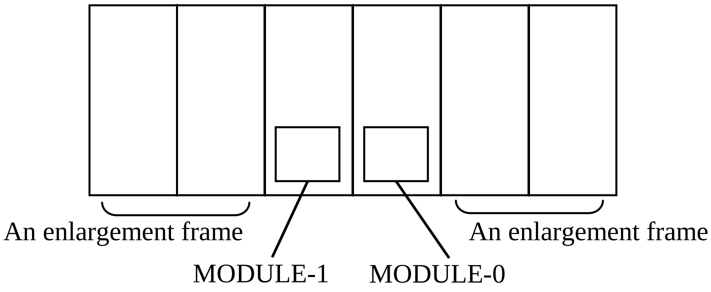


Turning on the LED of the target component...

1-8. <Checking lighting of the LED on the PCB to be pulled out>

Check the Module Number before working.

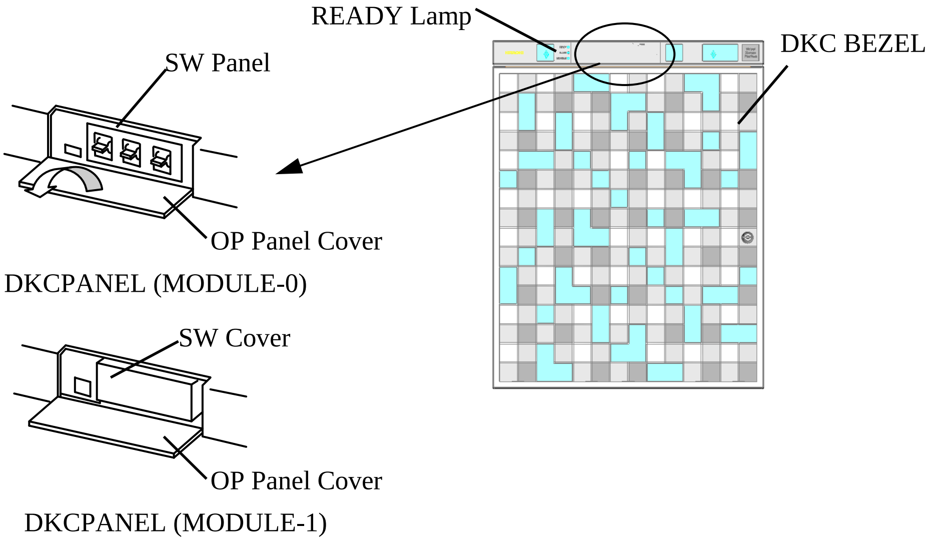
Toward the system connected to MODULE, and the basic rack frame of the right side is MODULE-0, basic rack frame of the left is MODULE-1.



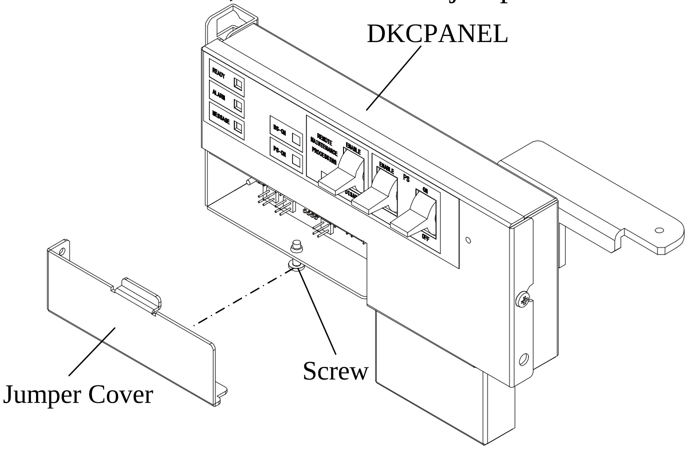
Front View

In addition, there is a confirmation method such as follows. The device which READY lamp of DKC BEZEL turns on is MODULE-0.

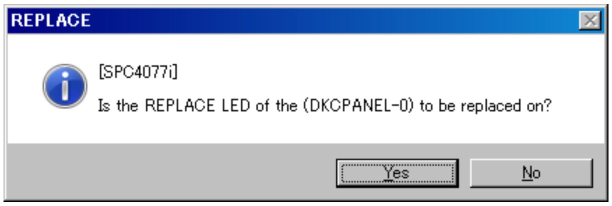
When an READY lamp does not turn on, it is MODULE-0 that I throw an OP panel cover open, and I see an SW panel.



Loosen the screw, and remove the jumper cover.



The message “Is the REPLACE LED of the (DKCPANEL-n) to be replaced on?” is displayed.
When the REPLACE LED on the component to be pulled out is on, select (CL) [Yes] and go to Step 1-10.
When the REPLACE LED on the component to be pulled out is kept off, select (CL) [No] and go to Step 1-9.



[SPC4077i]
Is the REPLACE LED of the (DKCPANEL-0) to be replaced on?

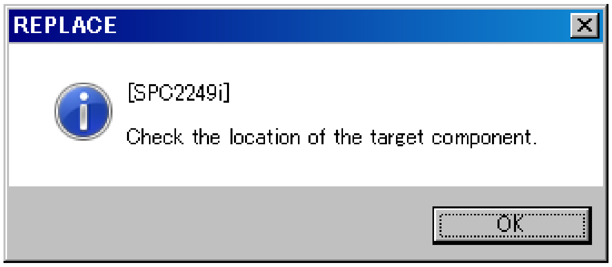
(Eg. DKCPANEL-0)

1-9. <Making sure of the DKCPANEL location>

The message “Check the location of the target component.” is displayed.

See the “2. HARDWARE REPLACEMENT PROCESSING”.

After making sure of the DKCPANEL location, select (CL) [OK] and go to Step 1-10.

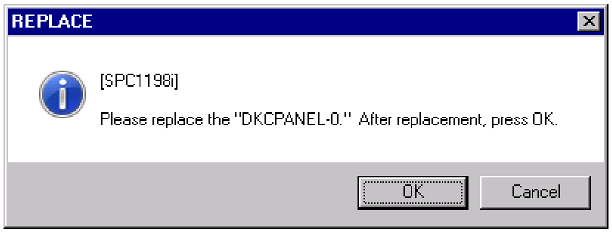


[SPC2249i]
Check the location of the target component.

1-10. <Check beginning of DKCPANEL Replacement>

The message “Please replace the “DKCPANEL-n.” After replacement, press OK.” is displayed.
(Reply with [OK] after replacing the special part.)

Go to “2. HARDWARE REPLACEMENT PROCESSING”.

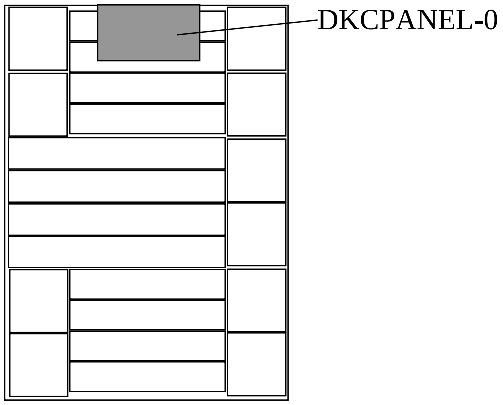


[SPC1198i]
Please replace the "DKCPANEL-0." After replacement, press OK.

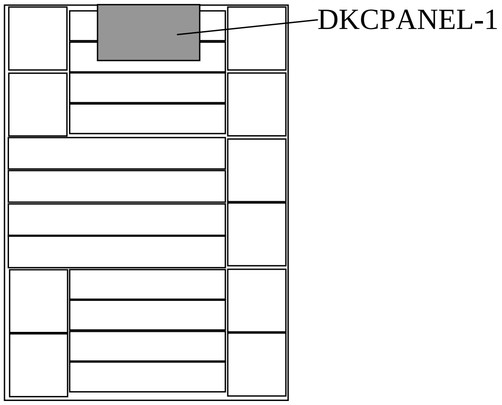
(Eg. DKCPANEL-0)

2. HARDWARE REPLACEMENT PROCESSING

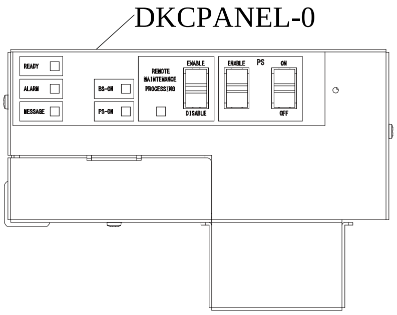
Location	Function Name of Component		Part Name
Front of DKC	1	DKCPANEL	· SH525-A

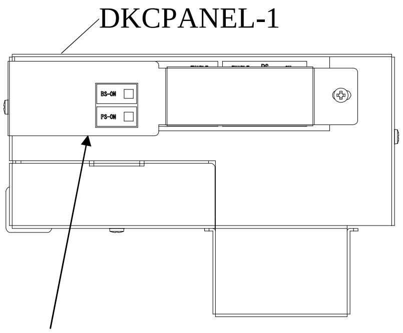


Front View of DKC-0



Front View of DKC-1





Attached cover for covering the LEDs and switches.

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 DKCPANEL

2-1-1. Check the REPLACE LED of DKCPANEL.

a. Loosen the screw, and remove the jumper cover.

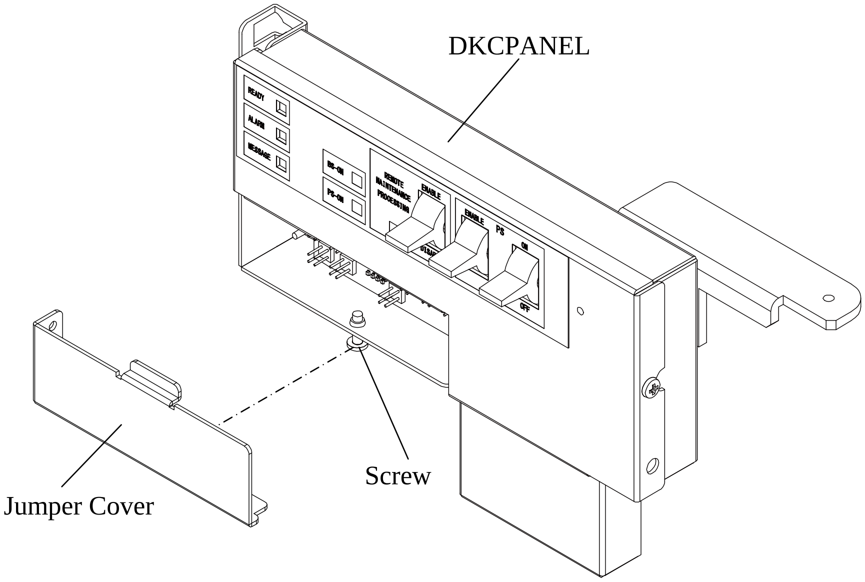


Fig. 3.16.2-1 Removal of Jumper Cover

b. Check that the REPLACE LED is on.

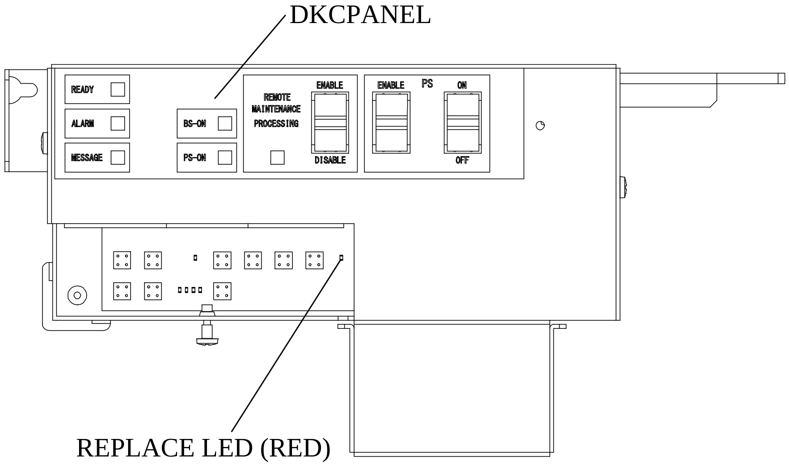


Fig. 3.16.2-2 Confirmation of REPLACE LED

2-1-2. Switches and Jumpers Setting on the DKCPANEL PCB of Spare Parts

a. Set the switches on the DKCPANEL PCB of spare parts as well as the switches on the DKCPANEL PCB that will be removed.

b. Set the jumpers on the DKCPANEL PCB of spare parts as well as the Jumpers on the DKCPANEL PCB that will be removed.

2-1-3. Replace the DKCPANEL PCB.

a. Loosen the two screws, and remove the cover.

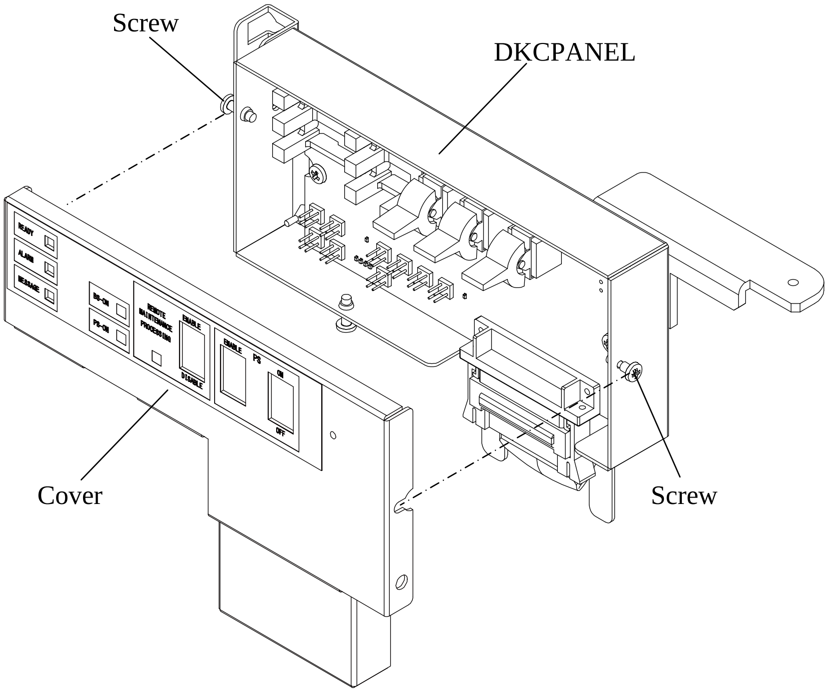


Fig. 3.16.2-3 Removal of Cover

b. Remove the Cable (P1) from the DKCPANEL PCB.

c. Loosen the two screws, and remove the DKCPANEL PCB.

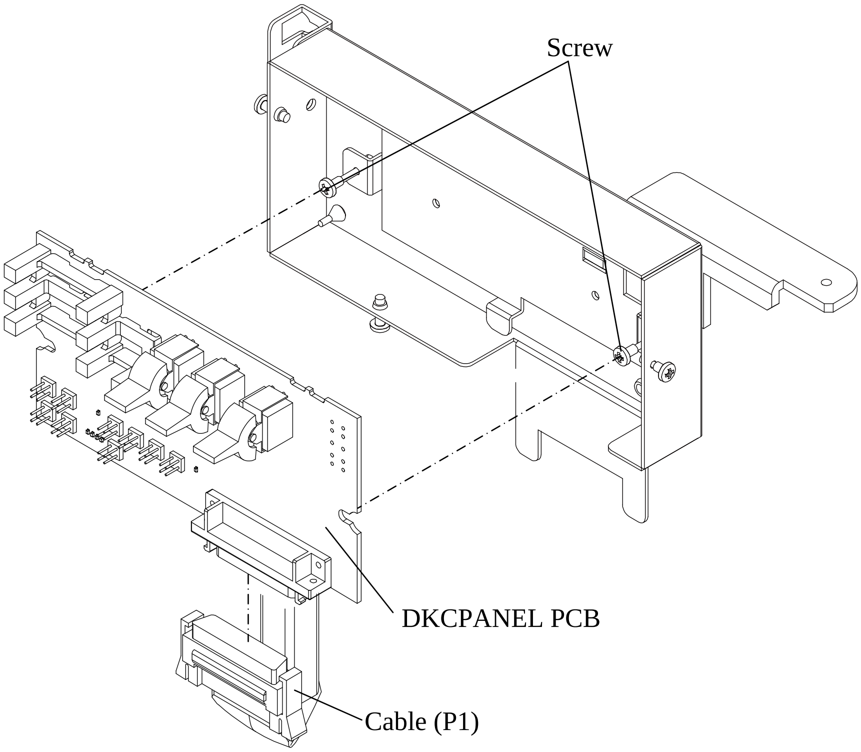


Fig. 3.16.2-4 Removal of DKCPANEL PCB

d. Remove the LIGHTPIPE on the DKCPANEL PCB, and attach it to the DKCPANEL PCB of spare parts.

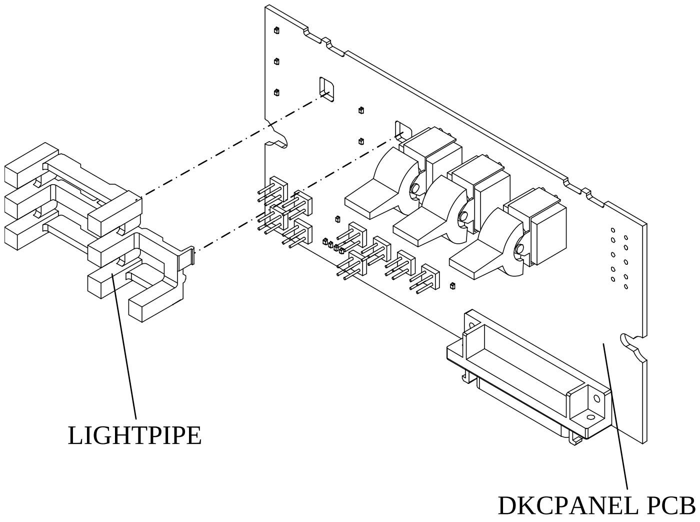


Fig. 3.16.2-5 Removal/Attachment of LIGHTPIPE

e. Attach the DKCPANEL PCB of spare parts, and tighten the screws. (Refer to Fig. 3.16.2-4.)
f. Connect the cable (P1) to the DKCPANEL PCB.

2-1-4. Attach the Cover.

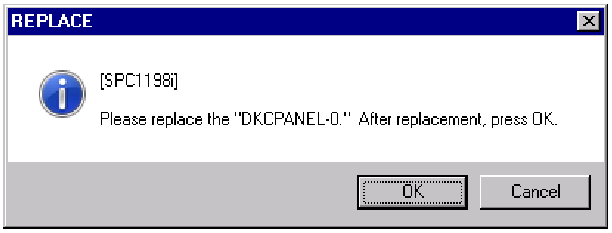
a. Attach the cover, and tighten the two screws. (Refer to Fig. 3.16.2-3)
b. Attach the jumper cover, and tighten the screw. (Refer to Fig. 3.16.2-1)

2-1-5. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check replacement of DKCPANEL>

Select (CL) [OK] in response to “Please replace the “DKCPANEL-n.” After replacement, press OK.”.



[SPC1198i]

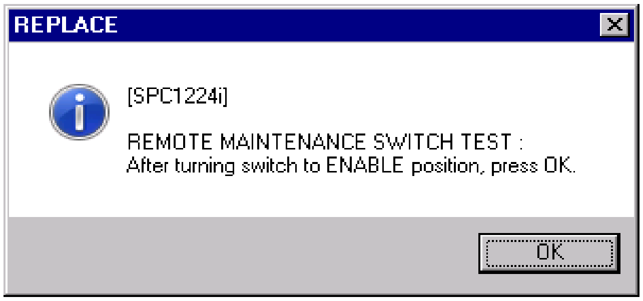
Please replace the "DKCPANEL-0." After replacement, press OK.

(Eg. DKCPANEL-0)

3-2.

Select (CL) [OK] in response to “REMOTE MAINTENANCE SWITCH TEST: After turning switch to ENABLE position, press OK.”.

When DKCPANEL on module1 side is exchanged, it is unnecessary.

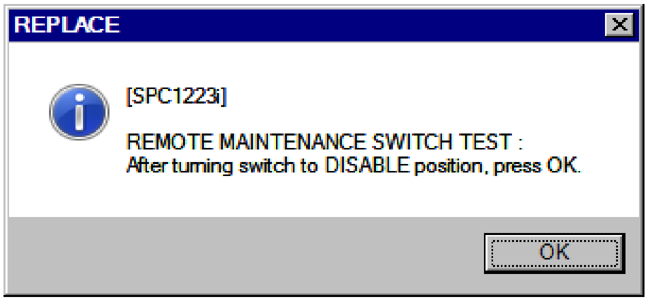


[SPC1224i]

REMOTE MAINTENANCE SWITCH TEST :
After turning switch to ENABLE position, press OK.

3-3.

Select (CL) [OK] in response to “REMOTE MAINTENANCE SWITCH TEST: After turning switch to DISABLE position, Press OK.”.



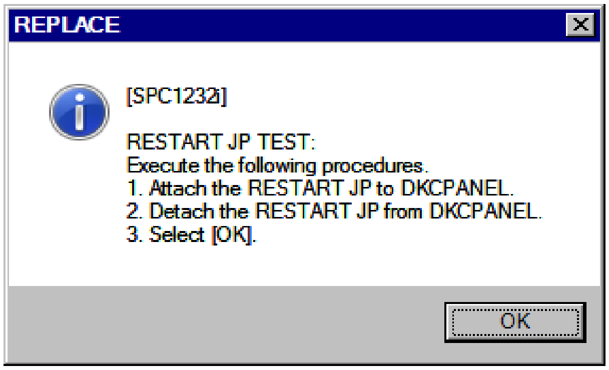
[SPC1223i]

REMOTE MAINTENANCE SWITCH TEST :
After turning switch to DISABLE position, press OK.

3-4.

Select (CL) [OK] in response to “RESTART JP TEST:
Execute the following procedures.

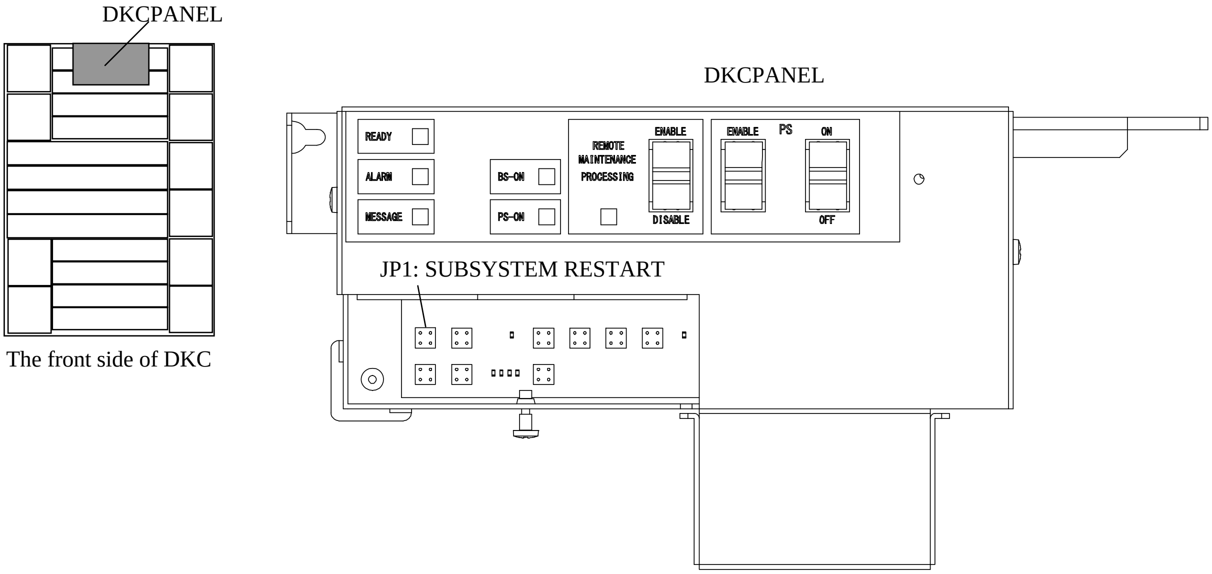
1. Attach the RESTART JP to DKCPANEL.
2. Detach the RESTART JP from DKCPANEL.
3. Select [OK].” is displayed.



REPLACE

[SPC1232I]

RESTART JP TEST:
Execute the following procedures.
1. Attach the RESTART JP to DKCPANEL.
2. Detach the RESTART JP from DKCPANEL.
3. Select [OK].

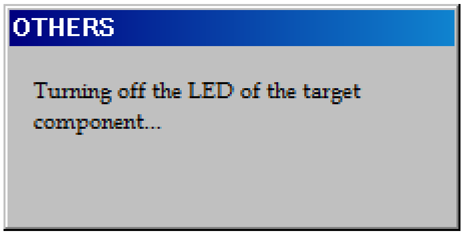


The front side of DKC

Fig. 3.16.3-1 Place of RESTART JP in DKCPANEL package

3-5. <Processing after exchanges>

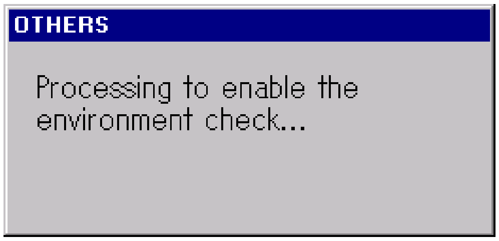
The message “Turning off the LED of the target component...” is displayed.



Turning off the LED of the target component...

3-6. <Check environment monitor start processing>

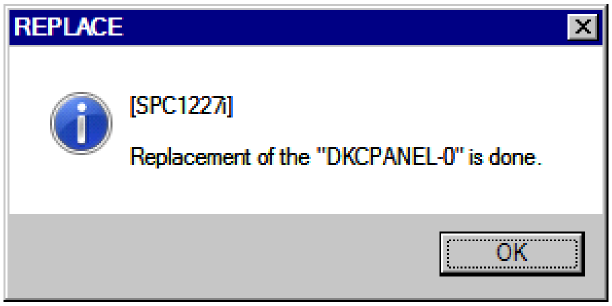
The message “Processing to enable the environment check...” is displayed.



Processing to enable the environment check...

3-7. <Check end of replacement>

Select (CL) [OK] in response to “Replacement of the “DKCPANEL-n” is done.”.



[SPC1227i]

Replacement of the "DKCPANEL-0" is done.

(Eg. DKCPANEL-0)

3-8.

Go to POST-PROCEDURE [REP04-01-10].

[SSVPMN REPLACEMENT PROCESSING - RTC2]

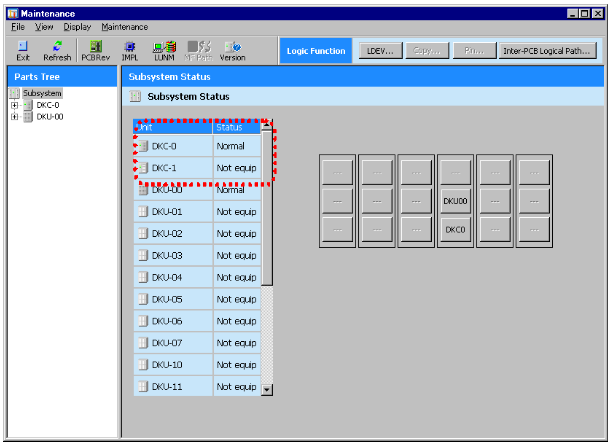
— OUTLINE —

1. PRE-PROCESSING of SVP
    - ① Select SSVPMN (status check)
    - ② Specify Replacement
    - ③ Detach SSVPMN
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    - ① Specify end of SSVPMN replacement
    - ② Reinstall related parts

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

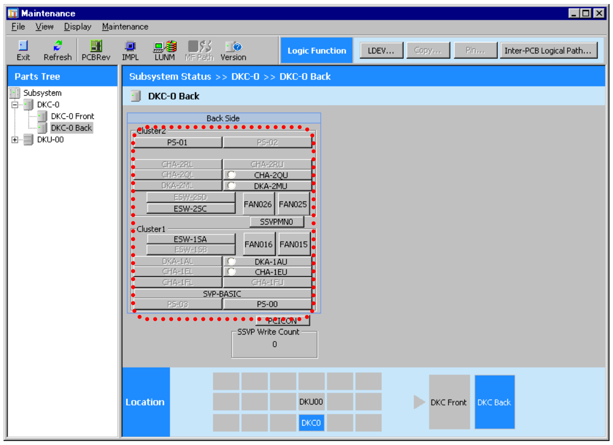
In the ‘Maintenance’ window, check and select (CL) [DKC-x] to be replaced.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Prn... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status
Subsystem Status
DKU00
DKC0

Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

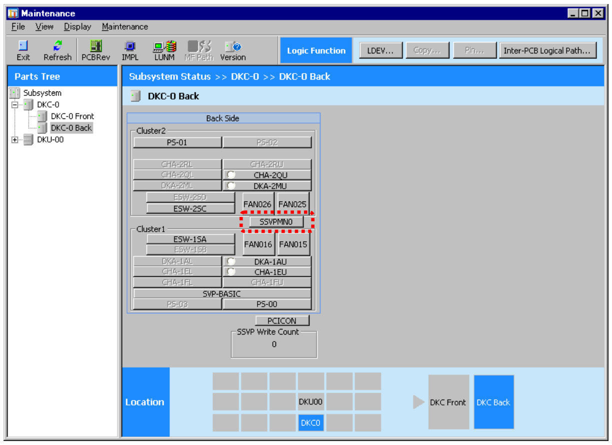
1-2. <Specify SSVPMN >

Select (CL) [DKC-x Back].



[DKC-x Back]

Select (CL) [SSVPMNx].



1-3. <Execute>

CAUTION

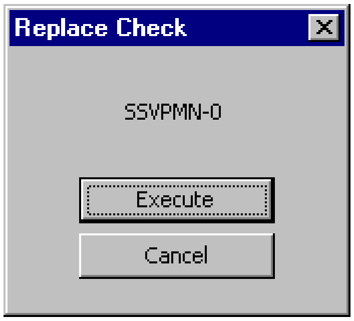
When the screen prompting an operator to input a password in order to prevent a multiple maintenance, contact the technical support division to ask for an instruction.

When the SVP High Reliability Kit has been installed and an SVP fail over (SIM=7FF3XX) is detected, at first, take actions to resolve the failure (SIM=7FF3XX).

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

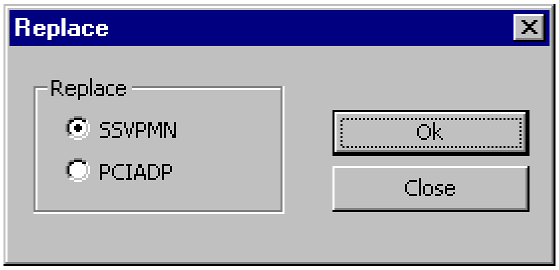
A window shown on the right is displayed.

Select (CL) [Execute] if PCI Option is not installed.



(Eg. PCI Option is not installed)

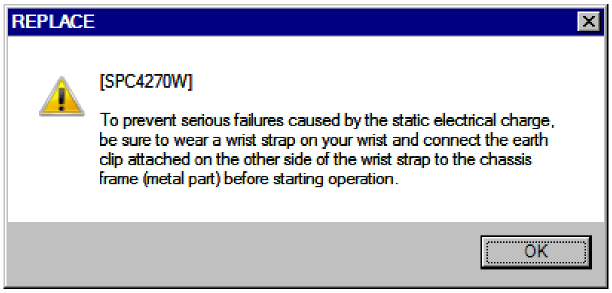
Select (CL) "SSVPMN", and select (CL) [Ok] if PCI Option is installed.



(Eg. PCI Option is installed)

1-4. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

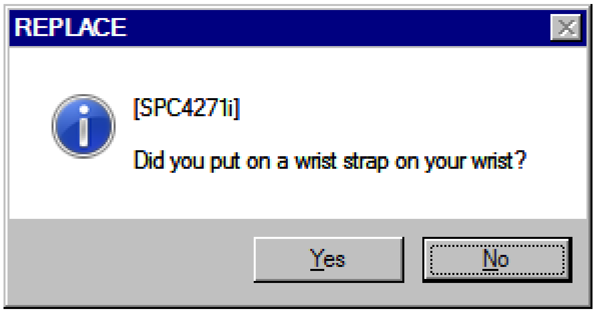


[SPC4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

select (CL) [Yes] and go to Step 1-5.

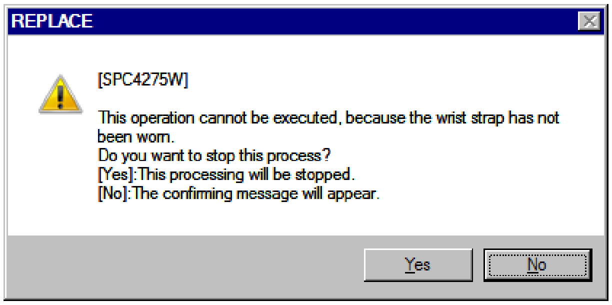


[SPC4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.”
is displayed.

When the processing will be stopped, select (CL) [Yes].

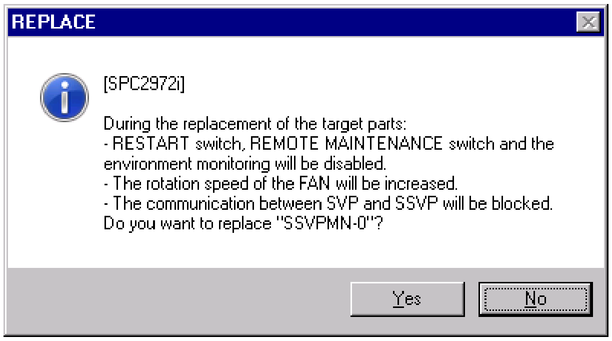


[SPC4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-5. <Check beginning of SSVPMN Replacement>

The message "During the replacement of the target parts:
- RESTART switch, REMOTE MAINTENANCE switch and the environment monitoring will be disabled.
- The rotation speed of the FAN will be increased.
- The communication between SVP and SSVP will be blocked.
Do you want to replace "SSVPMN-n"?" is displayed.
Select (CL) [Yes].



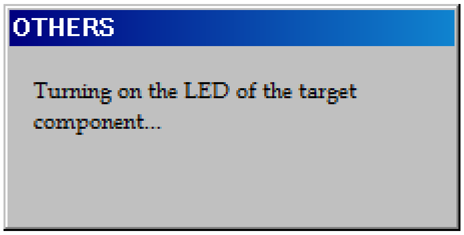
[SPC2972i]

During the replacement of the target parts:
- RESTART switch, REMOTE MAINTENANCE switch and the environment monitoring will be disabled.
- The rotation speed of the FAN will be increased.
- The communication between SVP and SSVP will be blocked.
Do you want to replace "SSVPMN-0"?

(Eg. SSVPMN-0)

1-6. <Processing before exchanges>

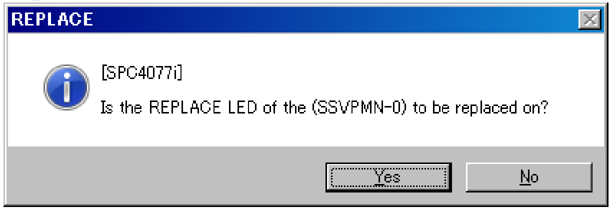
The message "Turning on the LED of the target component..." is displayed.



Turning on the LED of the target component...

1-7. <Checking lighting of the LED on the PCB to be pulled out>

The message "Is the REPLACE LED of the (SSVPMN-n) to be replaced on?" is displayed.
When the REPLACE LED on the component to be pulled out is on, select (CL) [Yes] and go to Step 1-9.
When the REPLACE LED on the component to be pulled out is kept off, select (CL) [No] and go to Step 1-8.



[SPC4077i]

Is the REPLACE LED of the (SSVPMN-0) to be replaced on?

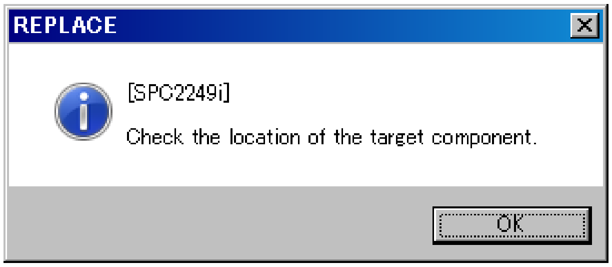
(Eg. SSVPMN-0)

1-8. <Making sure of the SSVPMN location>

The message "Check the location of the target component." is displayed.

See the "2. HARDWARE REPLACEMENT PROCESSING".

After making sure of the SSVPMN location, select (CL) [OK] and go to Step 1-9.



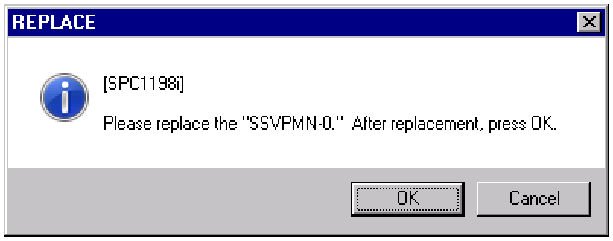
[SPC2249i]

Check the location of the target component.

1-9. <Check beginning of SSVPMN Replacement>

The message “Please replace the “SSVPMN-n.” After replacement, press OK.” is displayed.

Go to “2. HARDWARE REPLACEMENT PROCESSING”.



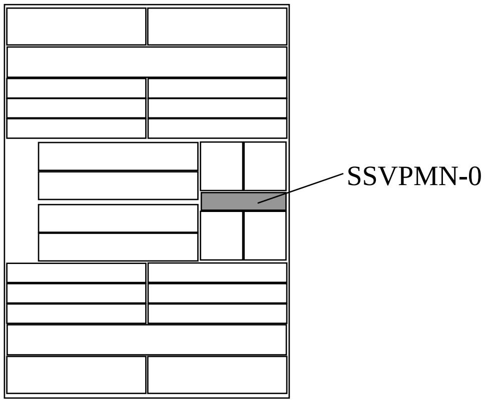
[SPC1198i]

Please replace the "SSVPMN-0." After replacement, press OK.

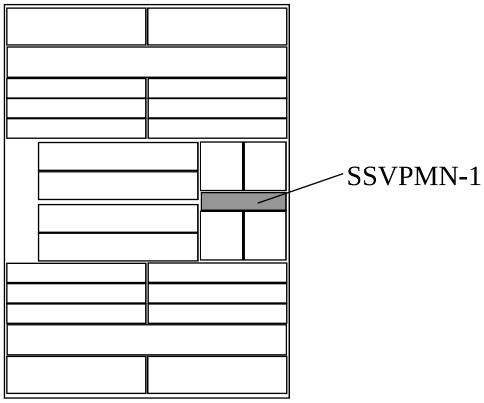
(Eg. SSVPMN-0)

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Rear of DKC	1	SSVPMN	· SH524-A



Rear View of
DKC-0



Rear View of
DKC-1

NOTICE:

Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

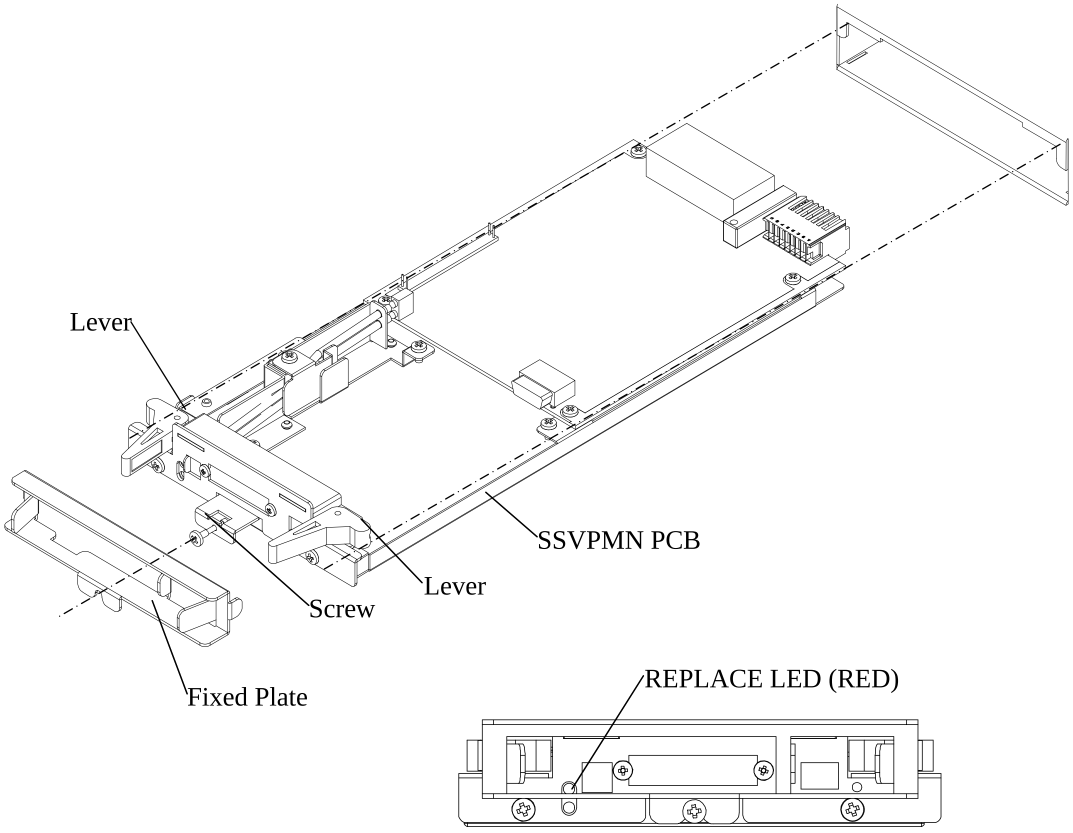
2-1 SSVPMN

2-1-1. Remove the SSVPMN.

a. Check that the REPLACE LED is on.

b. Loosen the screw and remove the fixed plate.

c. Operate the levers and remove the SSVPMN PCB.

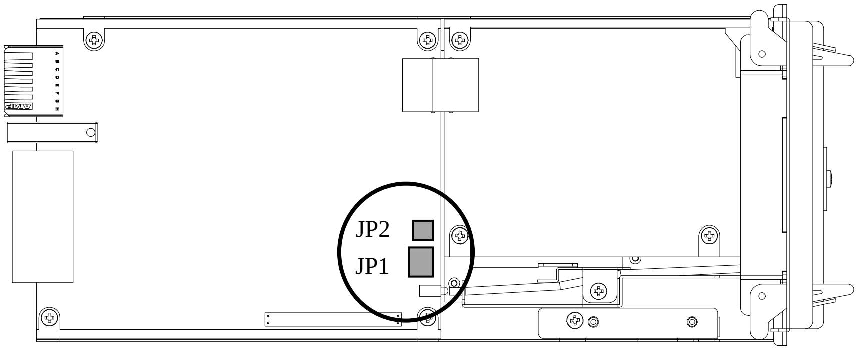


Front of SSVPMN

Fig. 3.17.2-1 Removal of SSVPMN

2-1-2. Set the Jumpers.

a. Set the jumpers (JP1 and JP2) in the spare SSVPMN. For jumper settings, refer to LOC06-160.

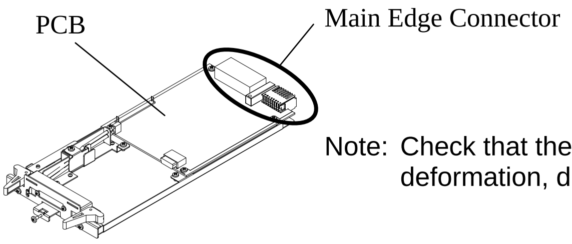


Top View of SSVPMN

Fig. 3.17.2-2 Jumper Setting of SSVPMN

2-1-3. Insert the SSVPMN.

a. Insert the spare SSVPMN PCB. (Refer to Fig. 3.17.2-1.).
b. Attach the fixed plate and tighten the screw.
c. Check that the REPLACE LED is off.



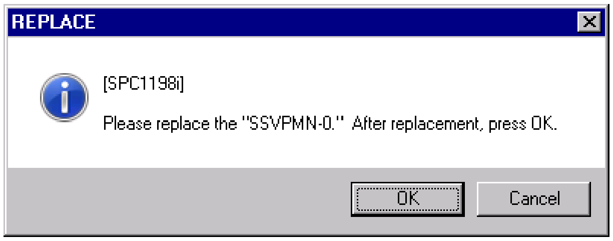
Note: Check that the main edge connector of the PCB has no deformation, damage or sticking of dust before installing the PCB.

2-1-4. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check replacement of SSVPMN>

Select (CL) [OK] in response to “Please replace the “SSVPMN-n.” After replacement, press OK.”.



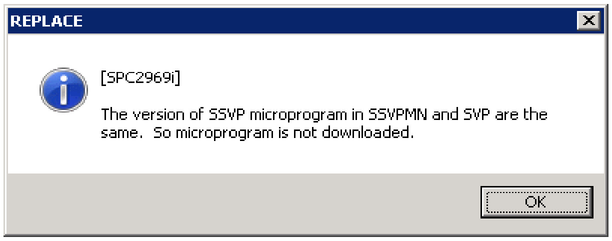
[SPC1198i]

Please replace the "SSVPMN-0." After replacement, press OK.

(Eg. SSVPMN-0)

3-2. <Warning message>

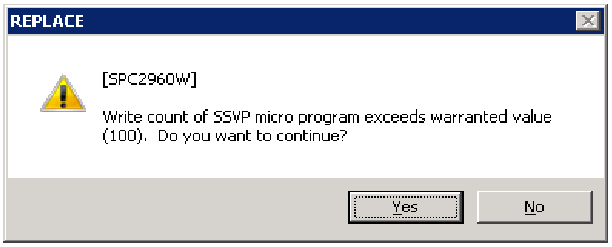
If the target is SSVPMN-1, go to Step 3-4.
When the versions of two microprograms, one is to be downloaded to the SSVPMN and the other is stored in an ROM of the SSVPMN, are the same, a message, “The version of SSVP microprogram in SSVPMN and SVP are the same. So microprogram is not downloaded.” is displayed.
Select (CL) [OK] and go to Step 3-4.



[SPC2969i]

The version of SSVP microprogram in SSVPMN and SVP are the same. So microprogram is not downloaded.

When the number of times of the SSVP microprogram downloading exceeds 100, a message, “Write count of SSVP micro program exceeds warranted value (100). Do you want to continue?” is displayed.
When you download the microprogram, select (CL) [Yes] and go to Step 3-3.
When you do not download the microprogram, select (CL) [No] and go to Step 3-4.



[SPC2960W]

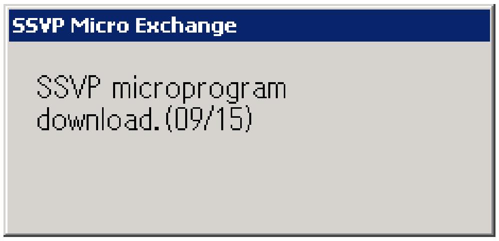
Write count of SSVP micro program exceeds warranted value (100). Do you want to continue?

⚠ CAUTION

When you download the microprogram, an entry of a password is requested. Contact the Technical Support Division to ask for an instruction.

3-3.

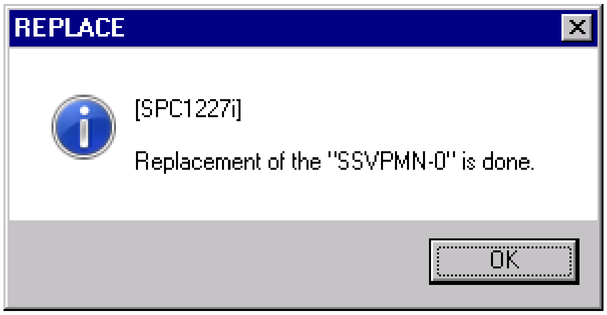
The message “SSVP microprogram download. (n/15)” is displayed.



SSVP microprogram download.(09/15)

3-4. <Check end of replacement>

Select (CL) [OK] in response to “Replacement of the “SSVPMN-n” is done.”.



[SPC1227i]

Replacement of the "SSVPMN-0" is done.

(Eg. SSVPMN-0)

3-5.

Go to POST-PROCEDURE [REP04-01-10].

[DKCFAN(60sq) REPLACEMENT PROCESSING - RTC3]

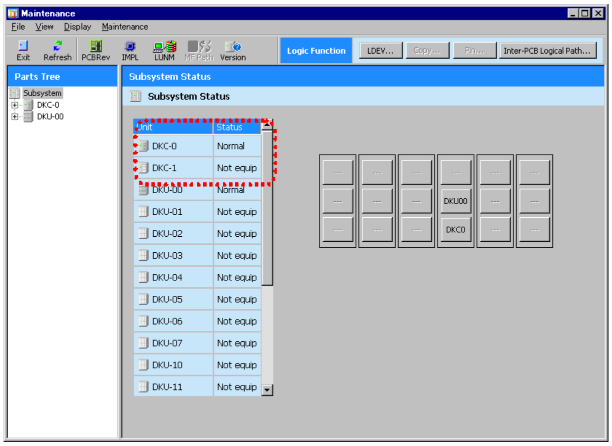
— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select DKCFAN(60sq) (status check)
    ② Stop environment monitor
    ③ Specify Replacement
    ④ Detach DKCFAN(60sq)
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Specify end of DKCFAN(60sq) replacement
    ② Reinstall related parts
    ③ Start environment monitor

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

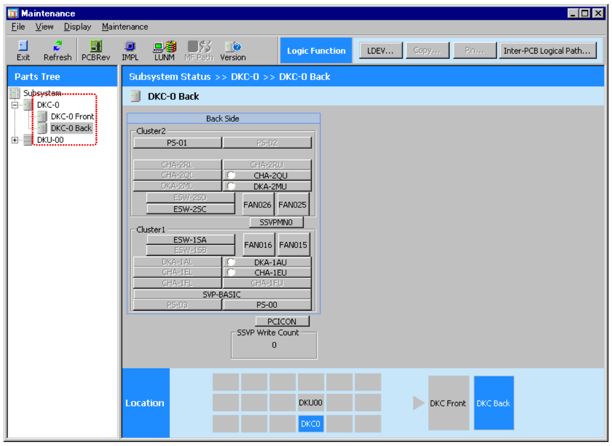
In the ‘Maintenance’ window, check and select (CL) [DKC-x] to be replaced.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Pin... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status
Subsystem Status
DKU00
DKC0

Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

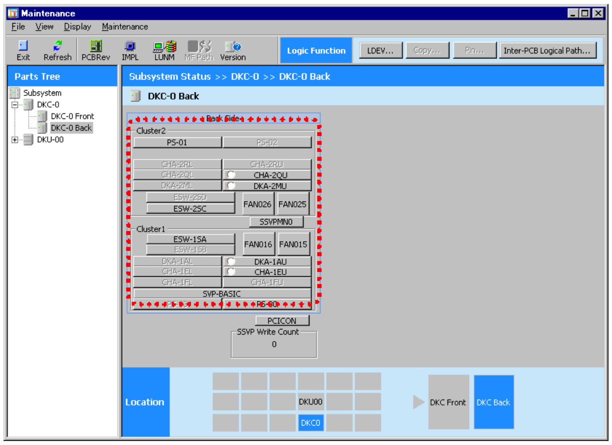
1-2. <Specify special part DKCFAN>

Select (CL) [DKC-x Back].



[DKC-x Back]

Select (CL) [FANnnn].



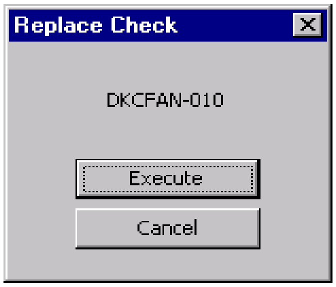
1-3. <Execute>

CAUTION

When the screen prompting an operator to input a password in order to prevent a multiple maintenance, contact the technical support division to ask for an instruction.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

A window shown on the right is displayed.
Select (CL) [Execute].

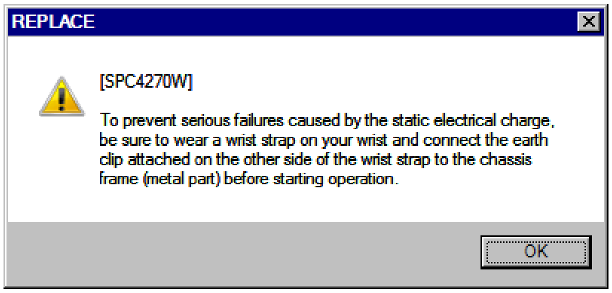


DKCFAN-010

(Eg. DKCFAN-010)

1-4. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

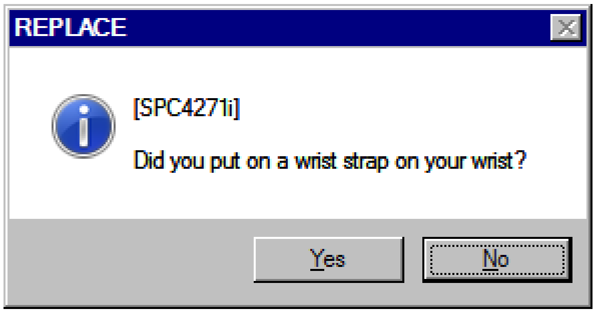


[SPC4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

select (CL) [Yes] and go to Step 1-5.

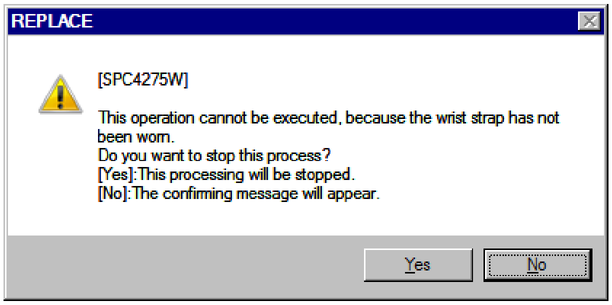


[SPC4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.”
is displayed.

When the processing will be stopped, select (CL) [Yes].

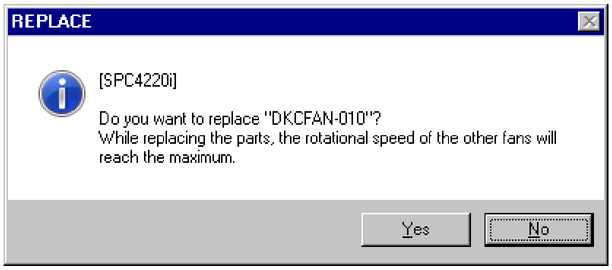


[SPC4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-5. <Check beginning of DKCFAN Replacement>

Select (CL) [Yes] in response to “Do you want to replace “DKCFAN-nnn”? While replacing the parts, the rotational speed of the other fans will reach the maximum.”.



[SPC4220i]

Do you want to replace "DKCFAN-010"?
While replacing the parts, the rotational speed of the other fans will reach the maximum.

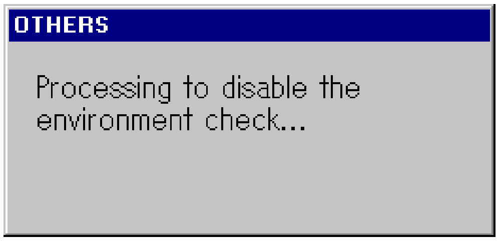
(Eg. DKCFAN -010)

1-6. <Checking the FAN>

The SVP automatically checks the DKC FAN to see if it is replaceable.

1-7. <Check environment monitor stopped state>

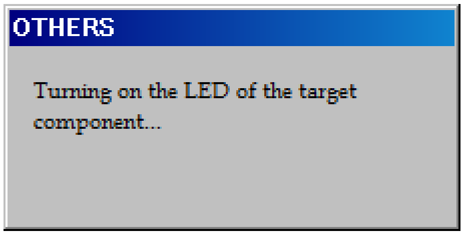
The message “Processing to disable the environment check...” is displayed.



Processing to disable the environment check...

1-8. <Processing before exchanges>

The message “Turning on the LED of the target component...” is displayed.

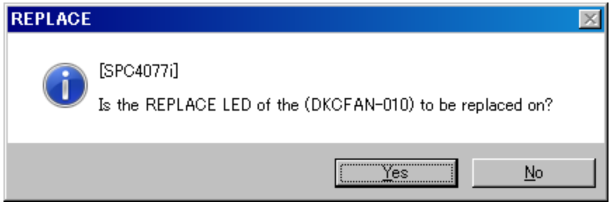


OTHERS

Turning on the LED of the target component...

1-9. <Checking lighting of the LED on the PCB to be pulled out>

The message “Is the REPLACE LED of the (DKCFAN-nnn) to be replaced on?” is displayed.
When the REPLACE LED on the component to be pulled out is on, select (CL) [Yes] and go to Step 1-11.
When the REPLACE LED on the component to be pulled out is kept off, select (CL) [No] and go to Step 1-10.



REPLACE

[SPC4077i]

Is the REPLACE LED of the (DKCFAN-010) to be replaced on?

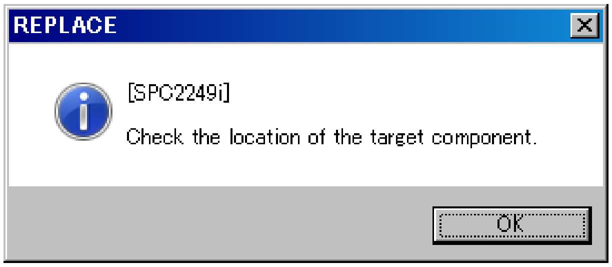
(Eg. DKCFAN-010)

1-10. <Making sure of the DKCFAN location>

The message “Check the location of the target component.” is displayed.

See the “2. HARDWARE REPLACEMENT PROCESSING”.

After making sure of the DKCFAN location, select (CL) [OK] and go to Step 1-11.



REPLACE

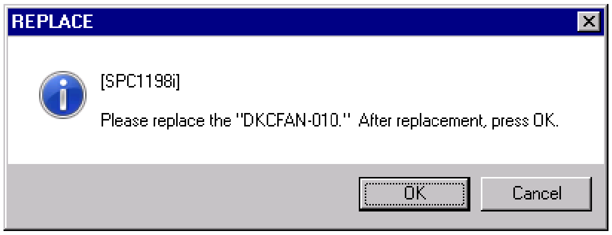
[SPC2249i]

Check the location of the target component.

1-11. <Check beginning of DKCFAN Replacement>

The message “Please replace the “DKCFAN-nnn.” After replacement, press OK.” is displayed.
(Reply with [OK] after replacing the special part.)

Go to “2. HARDWARE REPLACEMENT PROCESSING”.



REPLACE

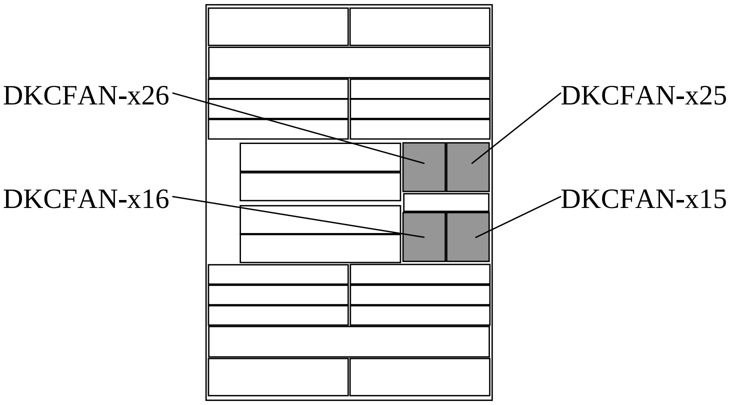
[SPC1198i]

Please replace the "DKCFAN-010." After replacement, press OK.

(Eg. DKCFAN-010)

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Rear of DKC	1	FAN (60sq) Assembly	



Rear View of
DKC

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 FAN (60sq) Assembly

⚠ CAUTION

Hazardous rotating mechanism:

Can cause injury if touched. Stay clear of it when machine is running.

2-1-1. Replace the FAN (60sq) Assembly.

a. Check that the REPLACE LED is on.
b. Loosen the screw and remove the failed FAN (60sq) Assembly.
c. Take time for 10 seconds from removing the FAN (60sq) Assembly to the installation.
d. Attach the spare FAN (60sq) Assembly and tighten the screw.
e. Make sure the replaced LED has been turned off after 30 seconds have passed since the FAN (60sq) Assembly was replaced.

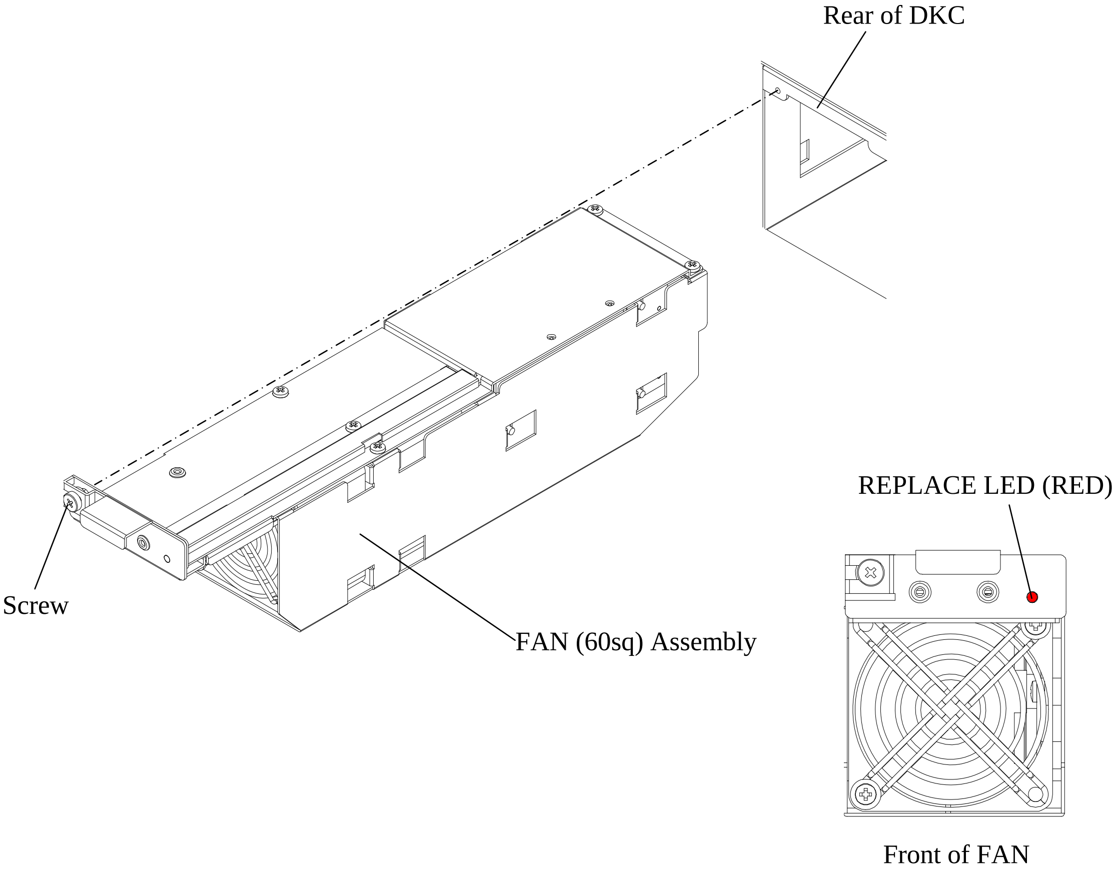


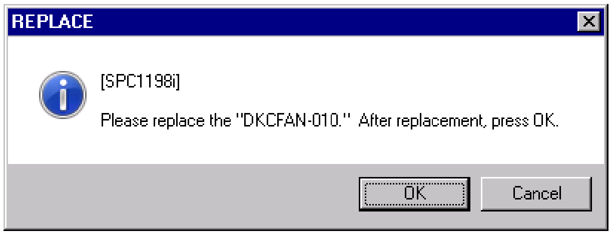
Fig. 3.18.2-1 Replacement of FAN (60sq) Assembly

2-1-2. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check replacement of DKCFAN>

Select (CL) [OK] in response to "Please replace the "DKCFAN-nnn." After replacement, press OK." After replacement, press OK.".



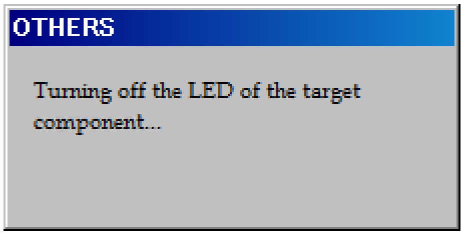
[SPC1198i]

Please replace the "DKCFAN-010." After replacement, press OK.

(Eg. DKCFAN-010)

3-2. <Processing after exchanges>

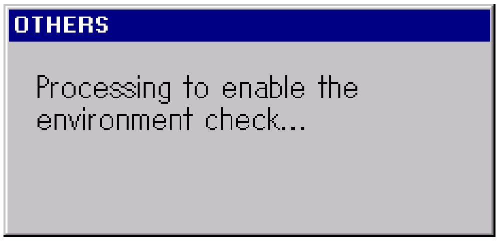
The message "Turning off the LED of the target component..." is displayed.
If the LED is lit, it turns off in this screen.



Turning off the LED of the target component...

3-3. <Check environment monitor start processing>

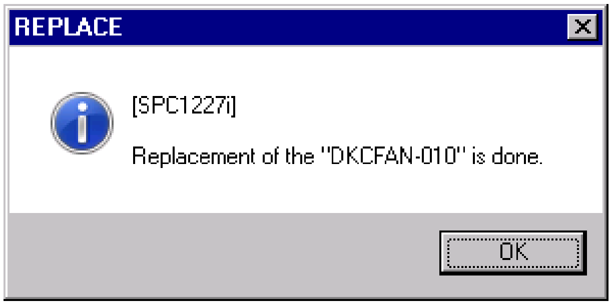
The message "Processing to enable the environment check..." is displayed.



Processing to enable the environment check...

3-4. <Check end of replacement>

Select (CL) [OK] in response to "Replacement of the "DKCFAN-nnn" is done.".



[SPC1227i]

Replacement of the "DKCFAN-010" is done.

(Eg. DKCFAN-010)

3-5. <Confirm status>

Confirm the status display.
If button is normal (The string is normally display), go to step 3-6.
If button is abnormal (The string is blinking), replace the target part again, or see TROUBLE SHOOTING SECTION.

3-6.

Go to POST-PROCEDURE [REP04-01-10].

[DKCFAN(80sq) REPLACEMENT PROCESSING - RTC4]

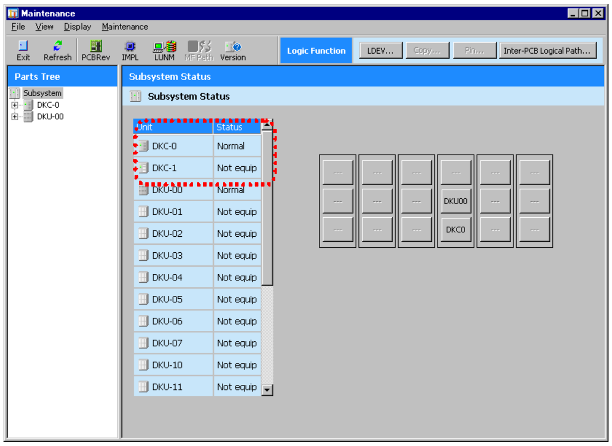
— OUTLINE —

1. PRE-PROCESSING of SVP
    - ① Select DKCFAN(80sq) (status check)
    - ② Stop environment monitor
    - ③ Specify Replacement
    - ④ Detach DKCFAN(80sq)
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    - ① Specify end of DKCFAN(80sq) replacement
    - ② Reinstall related parts
    - ③ Start environment monitor

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

In the ‘Maintenance’ window, check and select (CL) [DKC-x] to be replaced.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Pin... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status
DKU00
DKC0

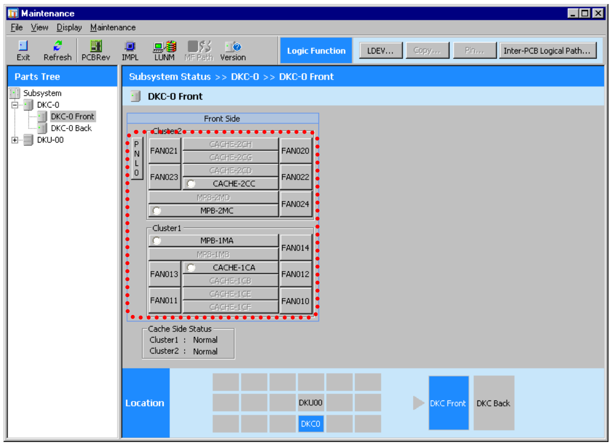
Subsystem Status

Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <Specify DKCFAN>

[DKC-x Front]

Select (CL) [FANnnn].



Cache Side Status
Cluster1 : Normal
Cluster2 : Normal

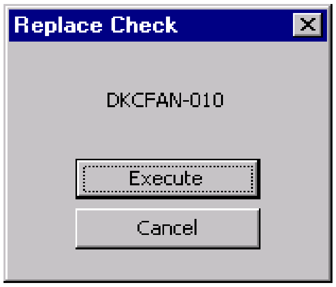
1-3. <Execute>

CAUTION

When the screen prompting an operator to input a password in order to prevent a multiple maintenance, contact the technical support division to ask for an instruction.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

A window shown on the right is displayed.
Select (CL) [Execute].

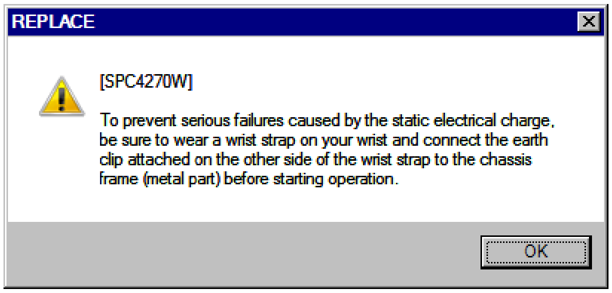


DKCFAN-010

(Eg. DKCFAN-010)

1-4. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

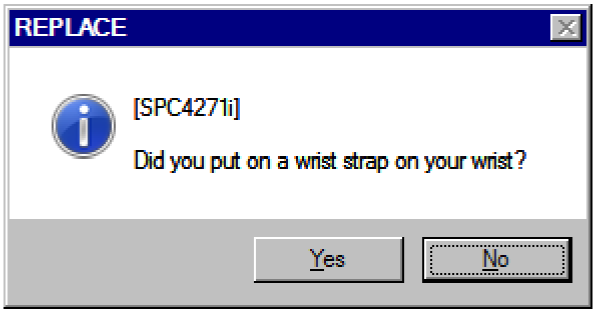


[SPC4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

select (CL) [Yes] and go to Step 1-5.

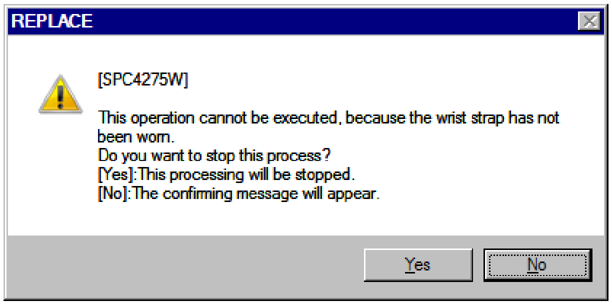


[SPC4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.” is displayed.

When the processing will be stopped, select (CL) [Yes].

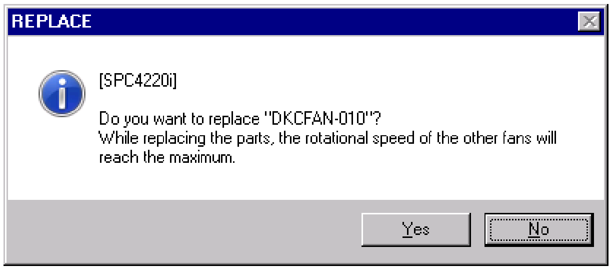


[SPC4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-5. <Check beginning of DKCFAN Replacement>

Select (CL) [Yes] in response to “Do you want to replace “DKCFAN-nnn”? While replacing the parts, the rotational speed of the other fans will reach the maximum.”.



[SPC4220i]

Do you want to replace "DKCFAN-010"?
While replacing the parts, the rotational speed of the other fans will reach the maximum.

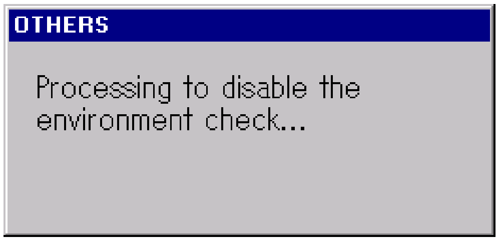
(Eg. DKCFAN -010)

1-6. <Checking the FAN>

The SVP automatically checks the DKC FAN to see if it is replaceable.

1-7. <Check environment monitor stopped state>

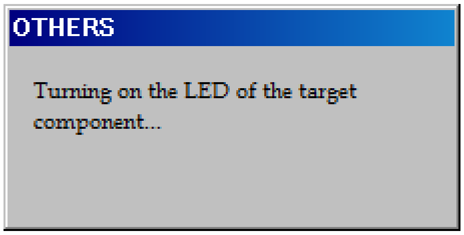
The message “Processing to disable the environment check...” is displayed.



Processing to disable the environment check...

1-8. <Processing before exchanges>

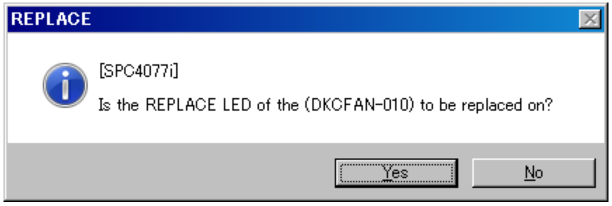
The message “Turning on the LED of the target component...” is displayed.



Turning on the LED of the target component...

1-9. <Checking lighting of the LED on the PCB to be pulled out>

The message “Is the REPLACE LED of the (DKCFAN-nnn) to be replaced on?” is displayed.
When the REPLACE LED on the component to be pulled out is on, select (CL) [Yes] and go to Step 1-11.
When the REPLACE LED on the component to be pulled out is kept off, select (CL) [No] and go to Step 1-10.



[SPC4077i]
Is the REPLACE LED of the (DKCFAN-010) to be replaced on?

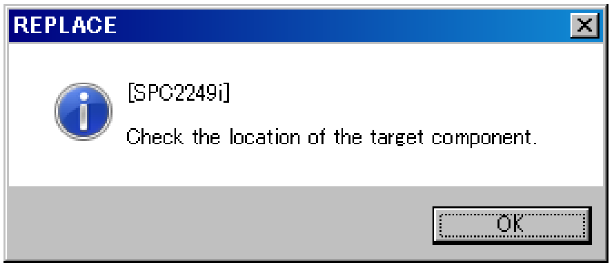
(Eg. DKCFAN-010)

1-10. <Making sure of the DKCFAN location>

The message “Check the location of the target component.” is displayed.

See the “2. HARDWARE REPLACEMENT PROCESSING”.

After making sure of the DKCFAN location, select (CL) [OK] and go to Step 1-11.

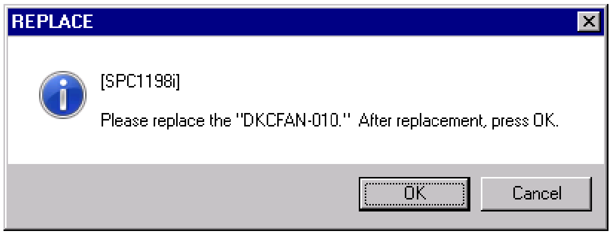


[SPC2249i]
Check the location of the target component.

1-11. <Check beginning of DKCFAN Replacement>

The message “Please replace the “DKCFAN-nnn.” After replacement, press OK.” is displayed.
(Reply with [OK] after replacing the special part.)

Go to “2. HARDWARE REPLACEMENT PROCESSING”.

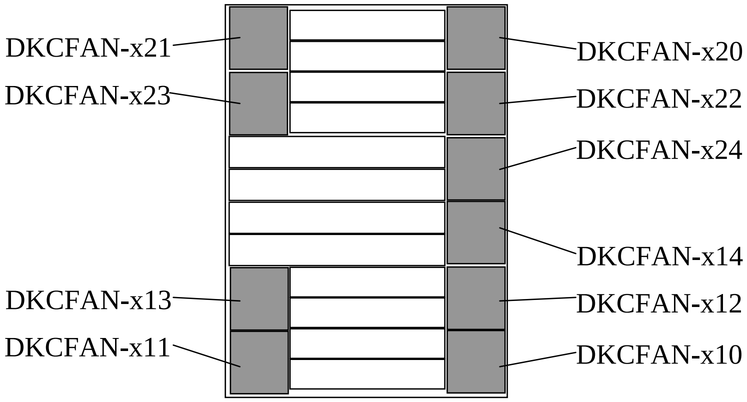


[SPC1198i]
Please replace the "DKCFAN-010." After replacement, press OK.

(Eg. DKCFAN-010)

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Front of DKC	1	FAN (80sq) Assembly	



Front View of DKC

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 FAN (80sq) Assembly

⚠ CAUTION

Hazardous rotating mechanism:
Can cause injury if touched. Stay clear of it when machine is running.

2-1-1. Replace the FAN (80sq) Assembly.

a. Check that the REPLACE LED is on.
b. Loosen the screw and remove the failed FAN (80sq) Assembly.
c. Take time for 10 seconds from removing the FAN (80sq) Assembly to the installation.
d. Attach the spare FAN (80sq) Assembly and tighten the screw.
e. Make sure the replaced LED has been turned off after 30 seconds have passed since the FAN (80sq) Assembly was replaced.

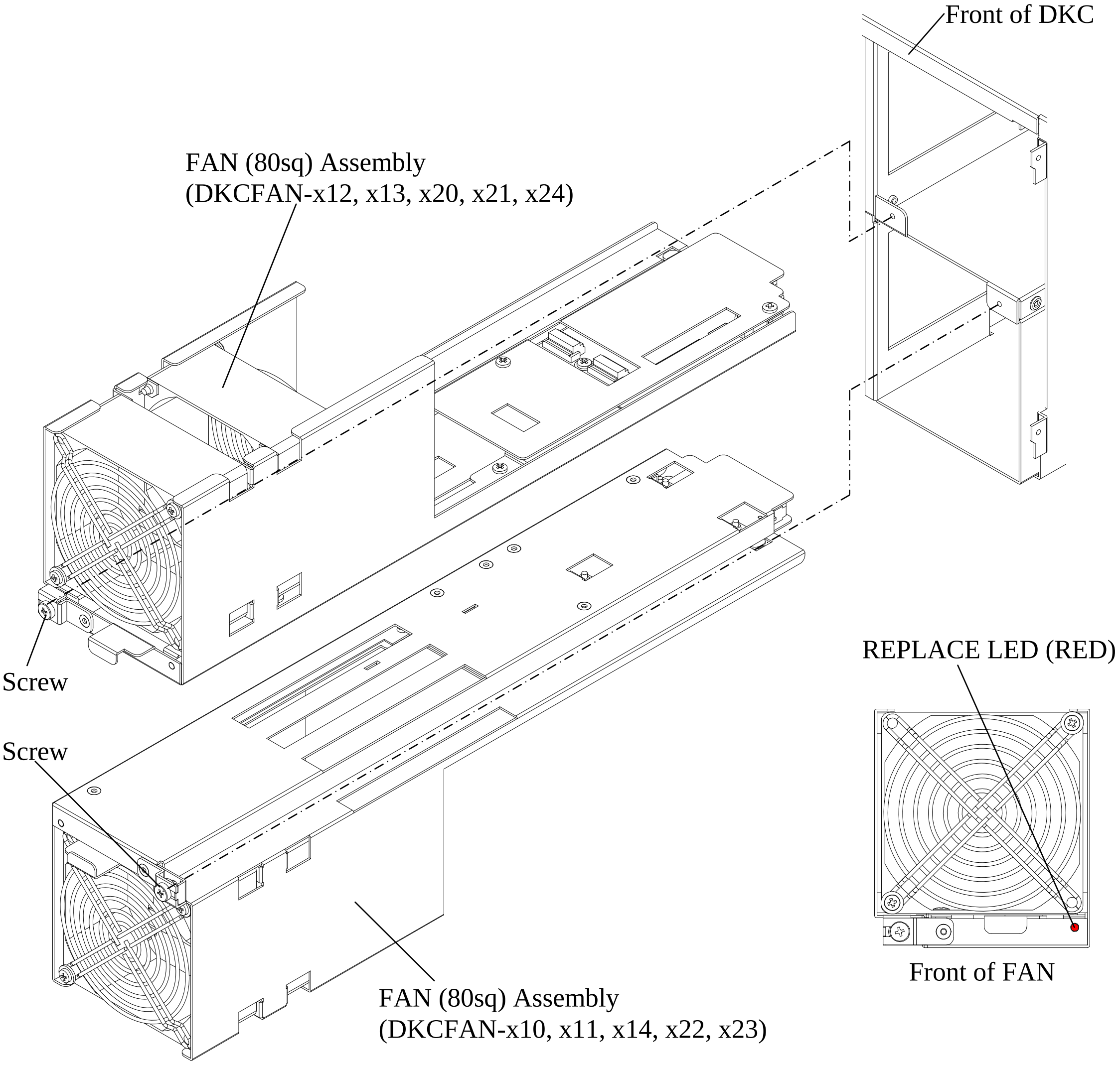


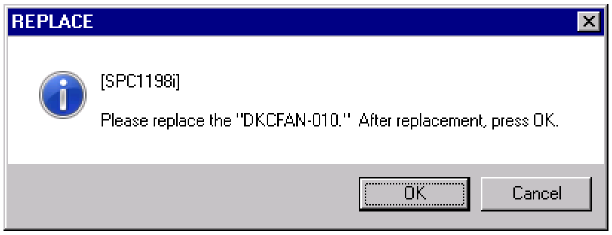
Fig. 3.19.2-1 Replacement of FAN (80sq) Assembly

2-1-2. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check replacement of DKCFAN>

Select (CL) [OK] in response to “Please replace the “DKCFAN-nnn.” After replacement, press OK.”.



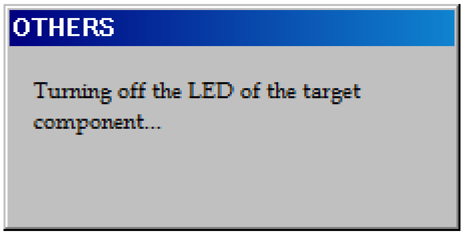
[SPC1198i]

Please replace the "DKCFAN-010." After replacement, press OK.

(Eg. DKCFAN-010)

3-2. <Processing after exchanges>

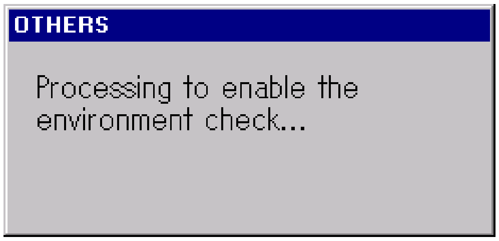
The message “Turning off the LED of the target component...” is displayed.
If the LED is lit, it turns off in this screen.



Turning off the LED of the target component...

3-3. <Check environment monitor start processing>

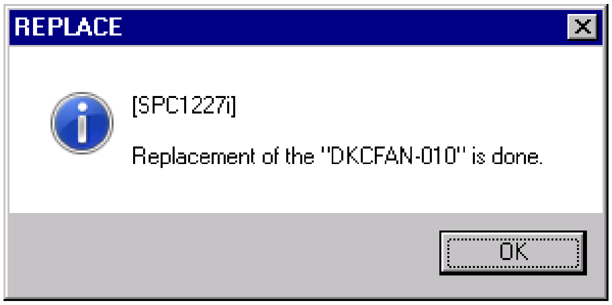
The message “Processing to enable the environment check...” is displayed.



Processing to enable the environment check...

3-4. <Check end of replacement>

Select (CL) [OK] in response to “Replacement of the “DKCFAN-nnn” is done.”.



[SPC1227i]

Replacement of the "DKCFAN-010" is done.

(Eg. DKCFAN-010)

3-5. <Confirm status>

Confirm the status display.

If button is normal (The string is normally display), go to step 3-6.

If button is abnormal (The string is blinking), replace the target part again, or see TROUBLE SHOOTING SECTION.

3-6.

Go to POST-PROCEDURE [REP04-01-10].

[SVP REPLACEMENT PROCESSING - RTC5]

— OUTLINE —

1. PRE-PROCESSING of SVP
   ① Select SVP (status check)
   ② Specify Replacement
   ③ Detach SVP
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
   ① SVP setting
   ② Config Backup

— Advance preparation—

OSS media
Micro program media
Backup Config media

**When SVP is not able to operate, start from “2. HARDWARE REPLACEMENT PROCESSING.
(When SVP High Reliability Kit is not installed.)**

1. PRE-PROCESSING of SVP

⚠ **CAUTION**

<When the parts to be replaced is the SVP>
When the Audit Log information which is not downloaded remains, ask the customer to download the Audit Log information as needed.

When the customer needed to download Performance Monitor of Web Console, ask the customer to download the Performance data.

When the customer uses original key and manifest file for SSL communication of Web Console, ask the customer to prepare these data, see “Hitachi Storage Navigator User Guide”.

When the SVP High Reliability Kit has been installed and an SVP fail over (SIM=7FF3XX) is detected, at first, take actions to resolve the failure (SIM=7FF3XX).

(1) <Operation Mode Change>
Change the mode to [Modify Mode].
Select (CL) the [Maintenance] button.

<When the SVP High Reliability Kit has been added. And [master svp] >
The SVP to be replaced must be a standby SVP. When the SVP to be replaced is a master SVP, replace it after switching its status to standby. Replace the master SVP only when the SVP status cannot be switched to standby.
Go to Step 1-1

<When the SVP High Reliability Kit has been not added. or [standby svp]>
Ask the customer to backup the user account information and the environment setting information of Web Console. Please refer to “Hitachi Storage Navigator User Guide” for the backup method.
Go to step 1-2

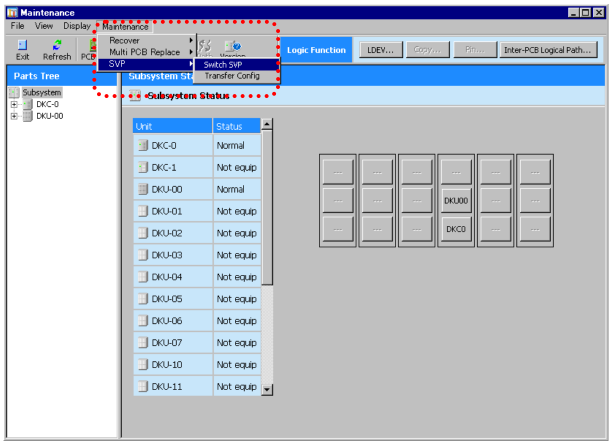
1-1. SVP Switching

This function is valid when the SVP High Reliability Kit is installed.

Notice: This operation needs that Standby SVP (IP Address: xxx.xxx.xxx.14) is a View mode.

Notice: When screen saver operates (60 minutes pass without operation) with a Standby SVP having been connected to the remote desktop, this operation fails.

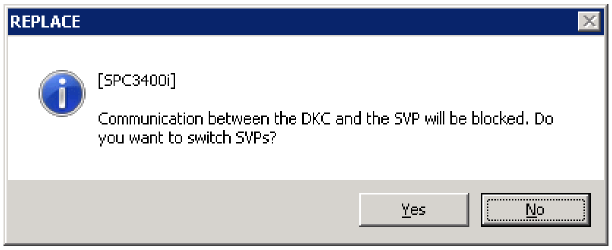
(1)
Select (CL) [Maintenance]-[SVP]-[Switch SVP] from the menu.



Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

---

(2) <Execution>
Execute switching.
Select (CL) [Yes].
* Switching takes about 20 minutes.



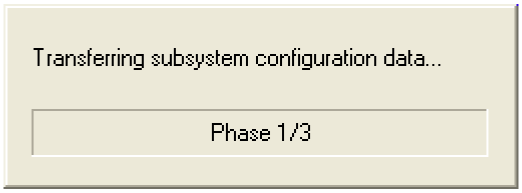
[SPC3400i]

Communication between the DKC and the SVP will be blocked. Do you want to switch SVPs?

---

(3) <Configuration Information Transfer>
The message “Transferring subsystem configuration data...” is displayed.

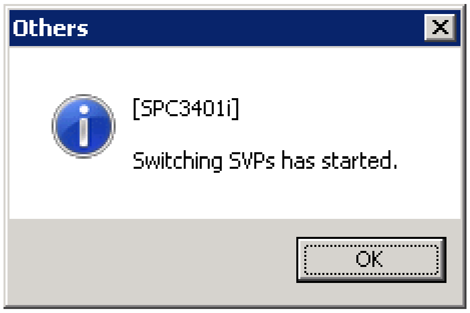
The SVP transfers the configuration information automatically to reflect the configuration information of the master SVP on the standby side SVP. Therefore, if the transfer processing of the configuration information overlaps, the actually transferred status display may be repeated.



Transferring subsystem configuration data...

Phase 1/3

(4) <SVP Switching Start Check>
The message “Switching SVPs has started.” is displayed.
The subsystem is automatically restarted and in the Standby status by SVP switching.
(SVP and Console PC are disconnected.)



[SPC3401i]

Switching SVPs has started.

---

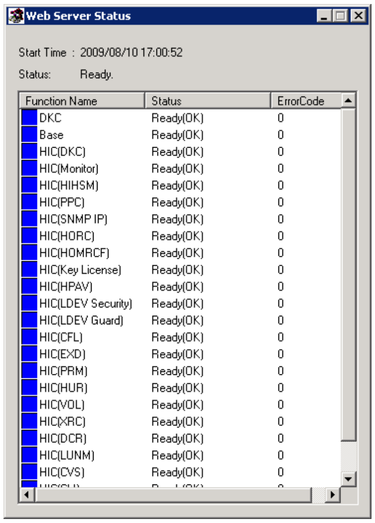
(5) <Connection to SVP after Switching Operation>
It waits for about 3 minutes until a change is completed.
After Standby SVP starts as Master SVP by the switching indication, use the connection utility connect Console PC and the switched SVP.
Select (CL) IP Address of SVP in the “SvpConnectUtility” window and select (CL) [Connect].
(IP Address is the same with that of SVP at the time of the SVP switching indication.)

---

(6) <Initial Window>
Press the “Web Server Status” button.

---

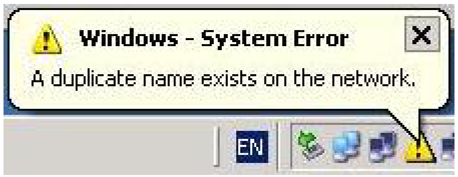
(7) <Web Server Status Window>
If all function’s Status displays Ready, switching is completed.



Start Time : 2009/08/10 17:00:52
Status: Ready.

Function Name	Status	ErrorCode
DKC	Ready(OK)	0
Base	Ready(OK)	0
HIC(DKC)	Ready(OK)	0
HIC(Monitor)	Ready(OK)	0
HIC(HIHSM)	Ready(OK)	0
HIC(PPC)	Ready(OK)	0
HIC(SNMP IP)	Ready(OK)	0
HIC(HORC)	Ready(OK)	0
HIC(HOMRCF)	Ready(OK)	0
HIC(Key License)	Ready(OK)	0
HIC(HPAV)	Ready(OK)	0
HIC(LDEV Security)	Ready(OK)	0
HIC(LDEV Guard)	Ready(OK)	0
HIC(CFL)	Ready(OK)	0
HIC(EXD)	Ready(OK)	0
HIC(PRM)	Ready(OK)	0
HIC(HUR)	Ready(OK)	0
HIC(VOL)	Ready(OK)	0
HIC(XRC)	Ready(OK)	0
HIC(DCR)	Ready(OK)	0
HIC(LUNM)	Ready(OK)	0
HIC(CVS)	Ready(OK)	0

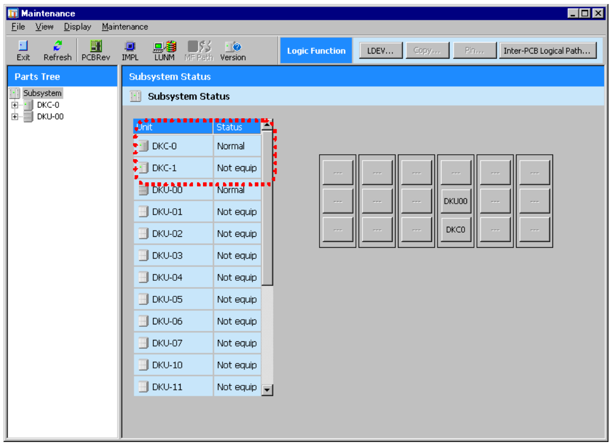
Note: The message “A duplicate name exists on the network.” may be displayed by network environment after a change. Although the message may be displayed, there is especially no problem.



A duplicate name exists on the network.

1-2. <Maintenance window>

In the ‘Maintenance’ window, check and select (CL) [DKC-x] to be replaced.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Pri... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status
DKU00
DKC0

Subsystem Status

Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

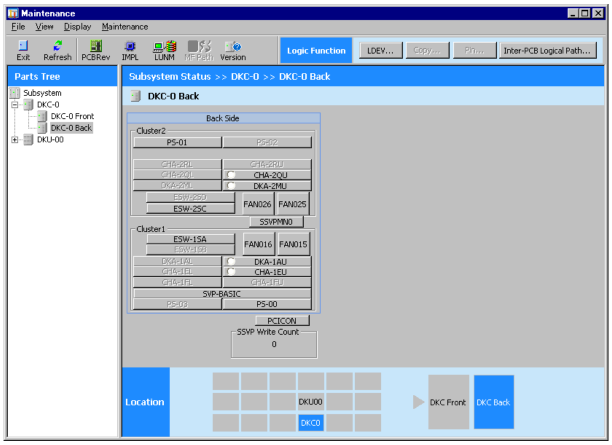
1-3. <Specify SVP>

Select (CL) the button to indicate the parts to be replaced.

[DKC-x Back]

· MASTER SVP -------- [SVP-BASIC]
1-3-1(REP03-20-60)

· STANDBY SVP ------ [SVP-OPTION]
1-3-2(REP03-20-110)



1-3-1. MASTER SVP

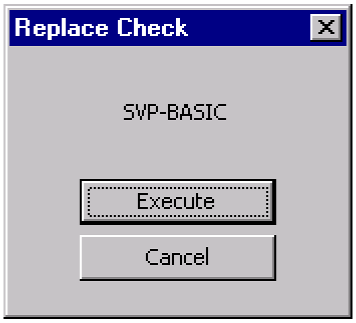
1-3-1.1. <Execute>

CAUTION

When the screen prompting an operator to input a password in order to prevent a multiple maintenance, contact the technical support division to ask for an instruction.

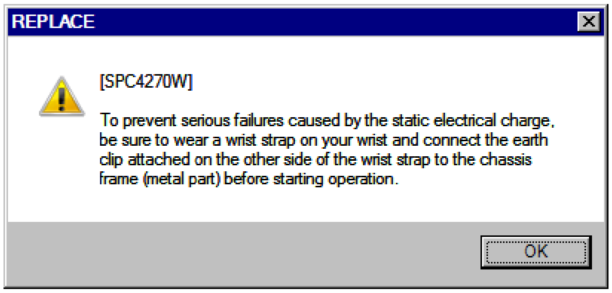
If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

A window shown on the right is displayed.
Select (CL) [Execute].
Go to Step 1-3-1.2.



1-3-1.2. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

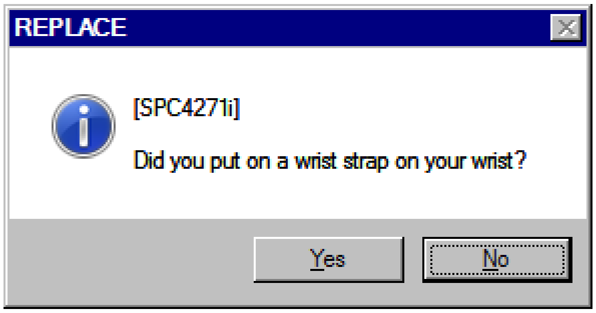


[SPC4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

select (CL) [Yes] and go to Step 1-3-1.3.

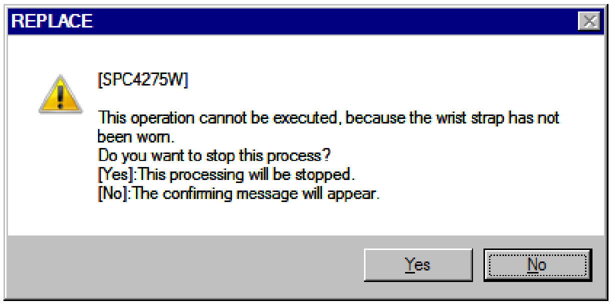


[SPC4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.”
is displayed.

When the processing will be stopped, select (CL) [Yes].



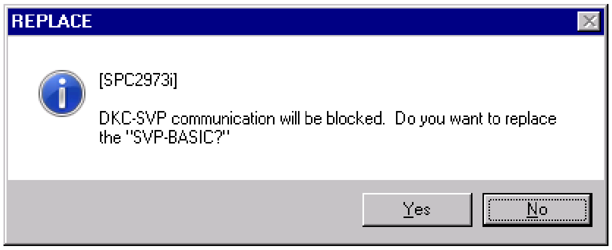
[SPC4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-3-1.3. <Check beginning of SVP Replacement>

<When the SVP High Reliability Support Kit has not been added>

The message, “DKC-SVP communication will be blocked. Do you want to replace the “SVP-BASIC?”” is displayed.
When you perform the replacement, select (CL) [Yes].
Go to Step 1-3-1.4.

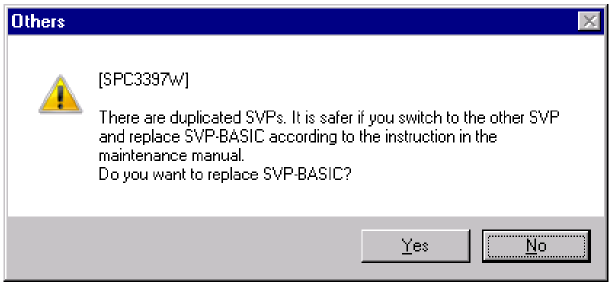


[SPC2973i]

DKC-SVP communication will be blocked. Do you want to replace the "SVP-BASIC?"

<When the SVP High Reliability Support Kit has been added>

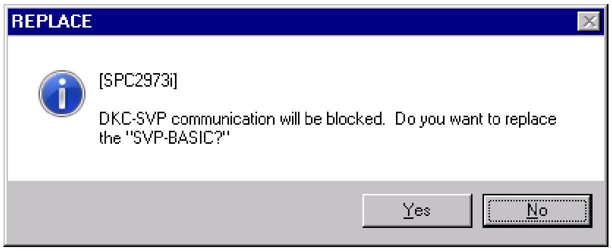
The message, “There are duplicated SVPs. It is safer if you switch to the other SVP and replace SVP-BASIC according to the instruction in the maintenance manual. Do you want to replace SVP-BASIC?” is displayed.
When you perform the replacement, select (CL) [Yes].



[SPC3397W]

There are duplicated SVPs. It is safer if you switch to the other SVP and replace SVP-BASIC according to the instruction in the maintenance manual.
Do you want to replace SVP-BASIC?

The message, “DKC-SVP communication will be blocked. Do you want to replace the “SVP-BASIC?”” is displayed.
When you perform the replacement, select (CL) [Yes].
Go to Step 1-3-1.4.

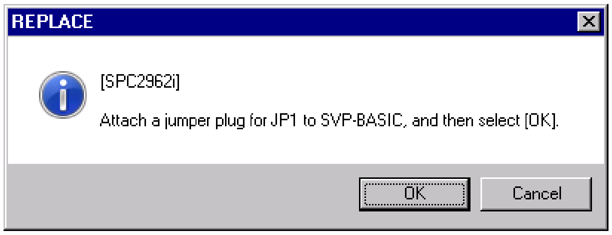


[SPC2973i]

DKC-SVP communication will be blocked. Do you want to replace the "SVP-BASIC?"

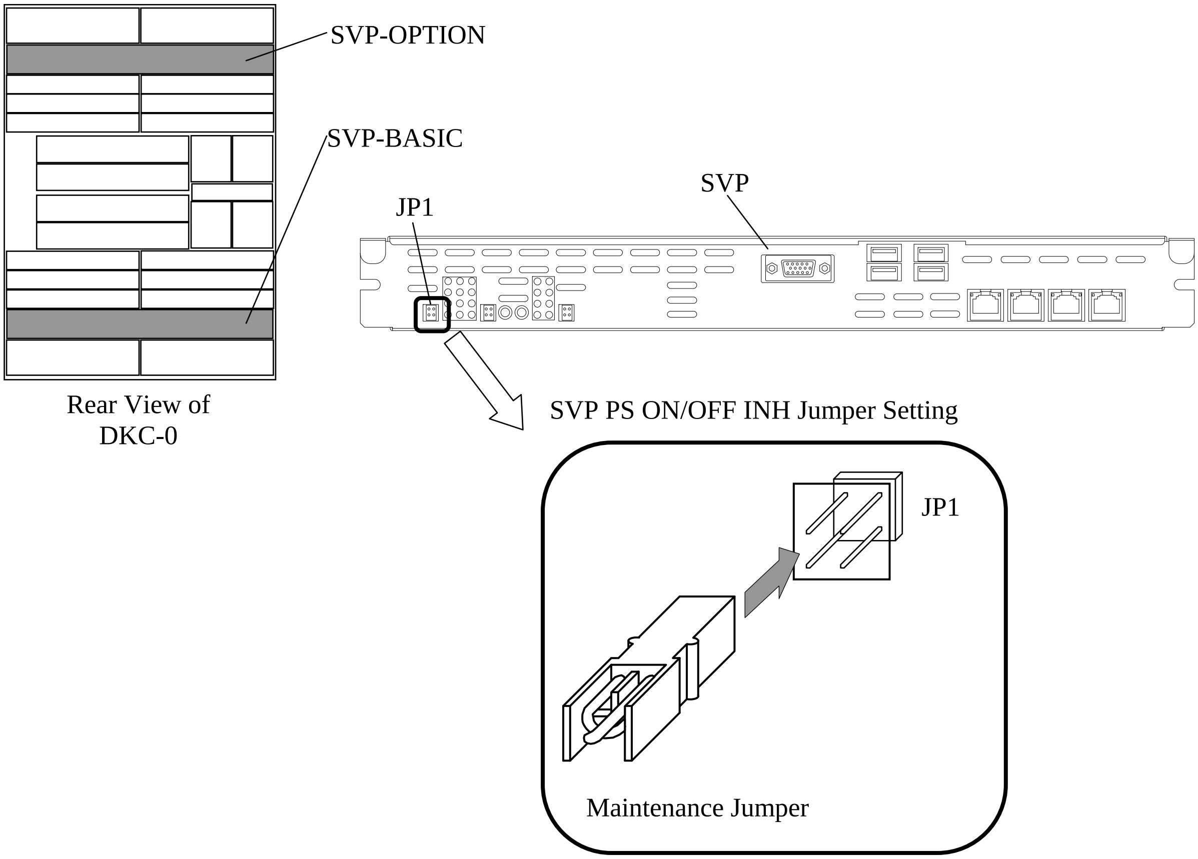
1-3-1.4. <Attaching a jumper plug>

Attach a maintenance jumper plug to the jumper pin JP1 of the SVP-BASIC to be replaced and select (CL) [OK] following the message, “Attach a jumper plug for JP1 to SVP-BASIC, and then select [OK].”


REPLACE

[SPC2962i]

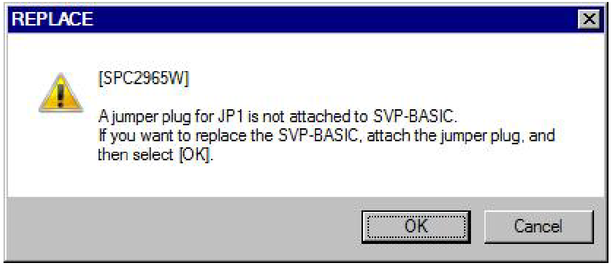
Attach a jumper plug for JP1 to SVP-BASIC, and then select [OK].



Go to Step 1-3-1.6.
When the maintenance jumper plug is not attached, go to Step 1-3-1.5.

1-3-1.5. <Checking re-attachment of the jumper plug>

When the jumper plug is not attached, the message, “A jumper plug for JP1 is not attached to SVP-BASIC. If you want to replace the SVP-BASIC, attach the jumper plug, and then select [OK].” is displayed.
Attach the jumper plug to the jumper pin JP1 of the SVP to be replaced and select (CL) [OK].
Go to Step 1-3-1.6.
When the jumper plug is not attached, re-execute Step 1-3-1.4.

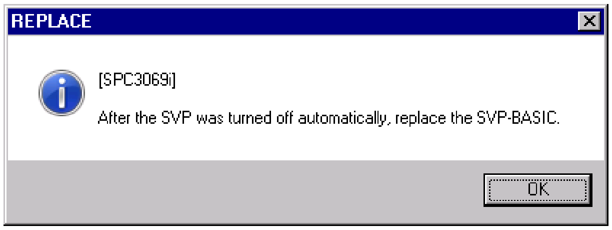


[SPC2965W]

A jumper plug for JP1 is not attached to SVP-BASIC.
If you want to replace the SVP-BASIC, attach the jumper plug, and then select [OK].

1-3-1.6. <Powering off the SVP>

The message, “After the SVP was turned off automatically, replace the SVP-BASIC.” is displayed.
Select (CL) [OK].

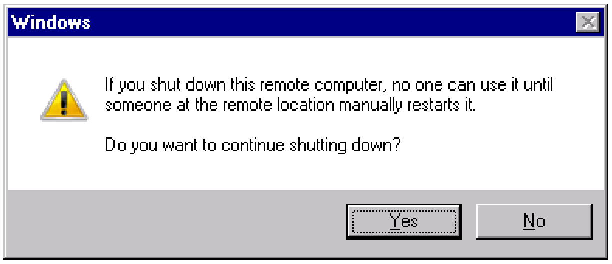


[SPC3069I]

After the SVP was turned off automatically, replace the SVP-BASIC.

1-3-1.7. <The check of Console PC shut down>

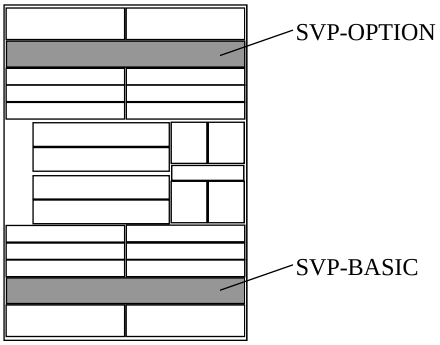
The message, “If you shut down this remote computer, no one can use it until someone at the remote location manually restart it. Do you want to continue shutting down?” is displayed.
Select (CL) [Yes].



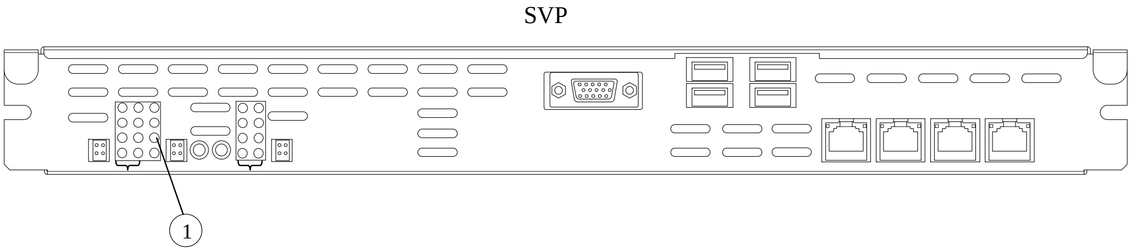
If you shut down this remote computer, no one can use it until someone at the remote location manually restarts it.

Do you want to continue shutting down?

1-3-1.8. <SVP power supply OFF confirmation>



Rear View of
DKC-0

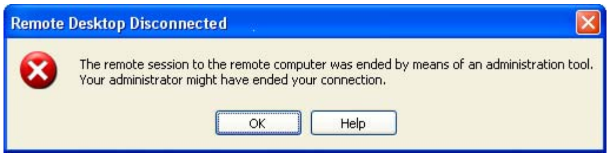


It is confirmed that SVP POWER LED(①) in front of the main body of SVP disappears.

1-3-1.9. <SVP replacement>

Replace the SVP.

The message, “The remote session to the remote computer was ended by means of an administration tool. Your administrator might have ended your connection.” is displayed.
Select (CL) [OK].


Remote Desktop Disconnected

The remote session to the remote computer was ended by means of an administration tool.
Your administrator might have ended your connection.

Go to “2. HARDWARE REPLACEMENT PROCESSING”. (REP03-20-140)

1-3-2. STANDBY SVP

1-3-2.1. <Execute>

CAUTION

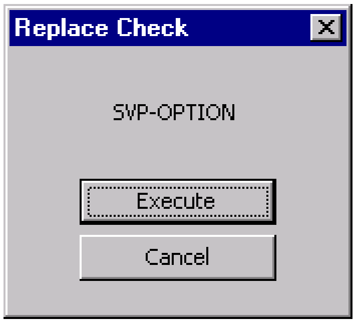
When the screen prompting an operator to input a password in order to prevent a multiple maintenance, contact the technical support division to ask for an instruction.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

<When the SVP High Reliability Support Kit has been added>

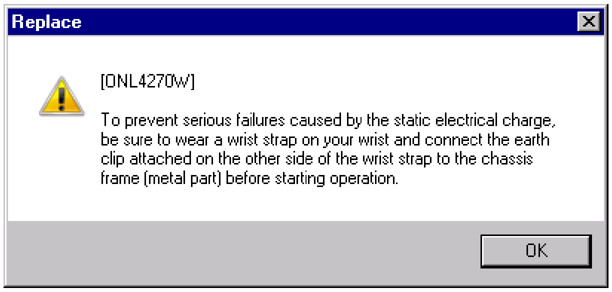
The SVP to be replaced must be a standby SVP. When the SVP to be replaced is a master SVP, replace it after switching its status to standby. (See step 1-1) Replace the master SVP only when the SVP status cannot be switched to standby.

A window shown on the right is displayed.
Select (CL) [Execute].
Go to Step 1-3-2.2.



1-3-2.2. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

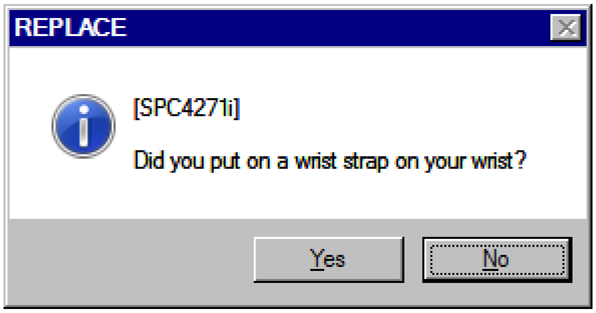


[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

select (CL) [Yes] and go to Step 1-3-2.3.

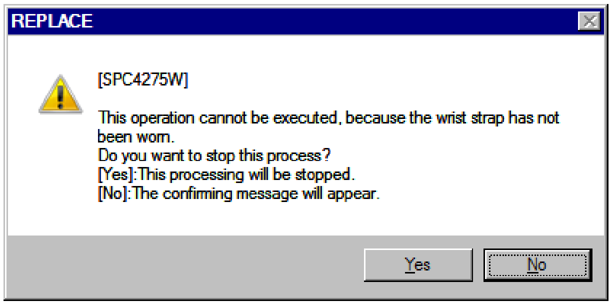


[SPC4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.”
is displayed.

When the processing will be stopped, select (CL) [Yes].

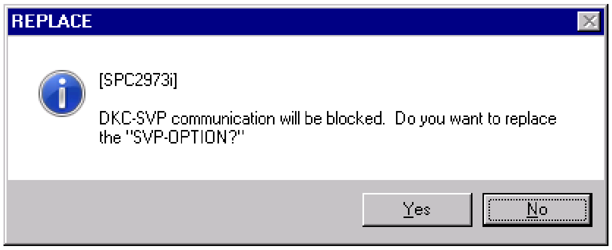


[SPC4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-3-2.3. <Check beginning of SVP Replacement>

The message, "DKC-SVP communication will be blocked. Do you want to replace the "SVP-OPTION?"" is displayed.
When you perform the replacement, select (CL) [Yes].
Go to Step 1-3-2.4.

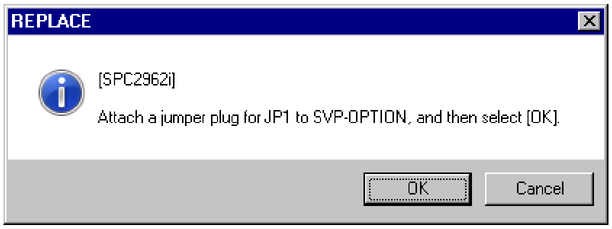

REPLACE

[SPC2973i]

DKC-SVP communication will be blocked. Do you want to replace the "SVP-OPTION?"

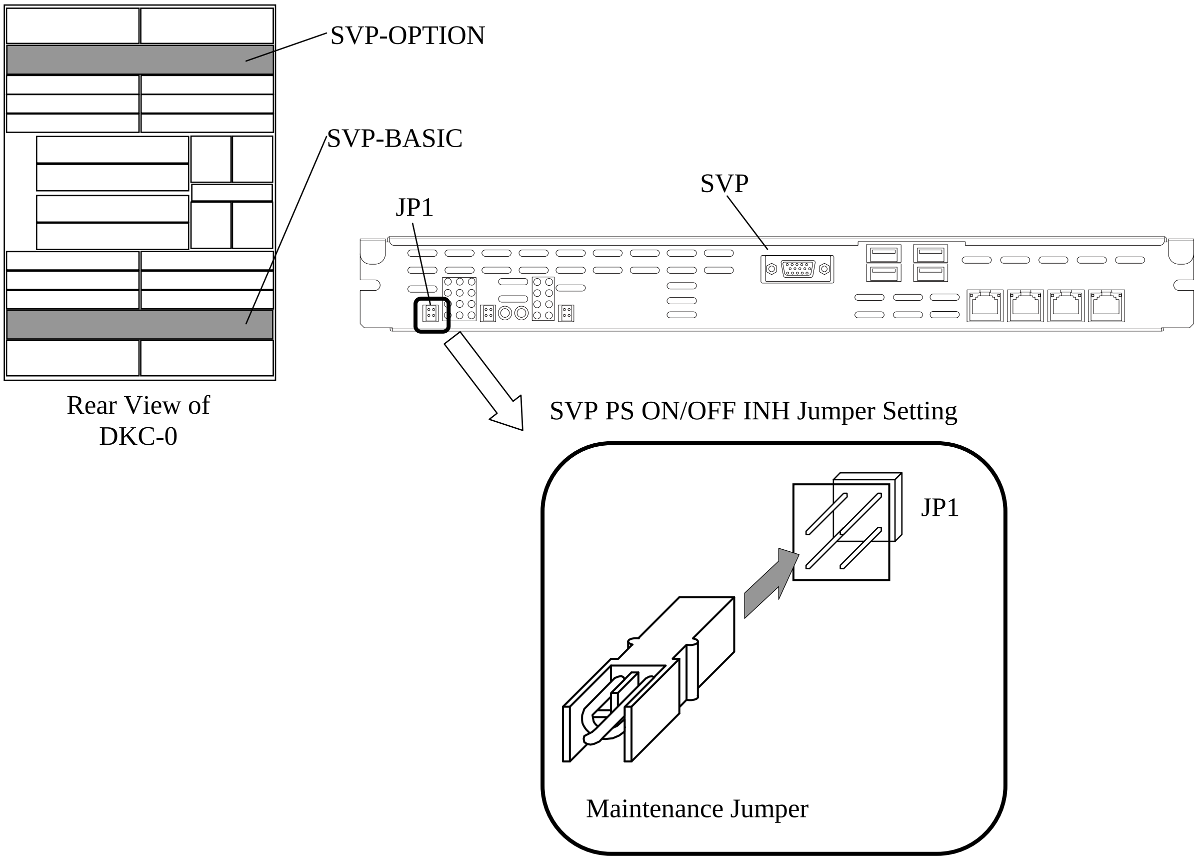
1-3-2.4. <Attaching a jumper plug>

Attach a maintenance jumper plug to the jumper pin JP1 of the SVP-OPTION to be replaced and select (CL) [OK] following the message, "Attach a jumper plug for JP1 to SVP-OPTION, and then select [OK]."


REPLACE

[SPC2962i]

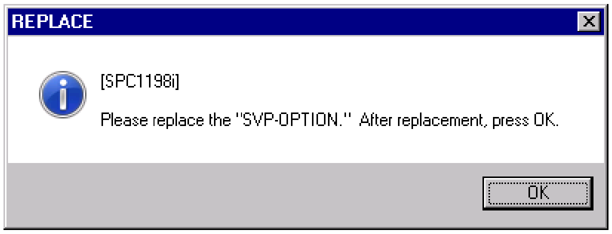
Attach a jumper plug for JP1 to SVP-OPTION, and then select [OK].



Go to Step 1-3-2.5.

1-3-2.5. <Check beginning of SVP Replacement>

The message “Please replace the “SVP-OPTION.” After replacement, press OK.” is displayed.
(Reply with [OK] after 3-13 Resetting the SSVP.)



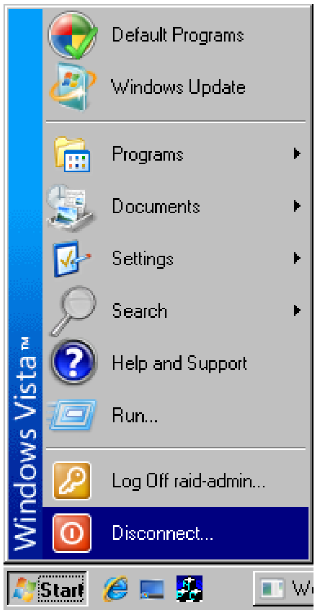
[SPC1198i]

Please replace the "SVP-OPTION." After replacement, press OK.

1-3-2.6. <Disconnecting the SVP>

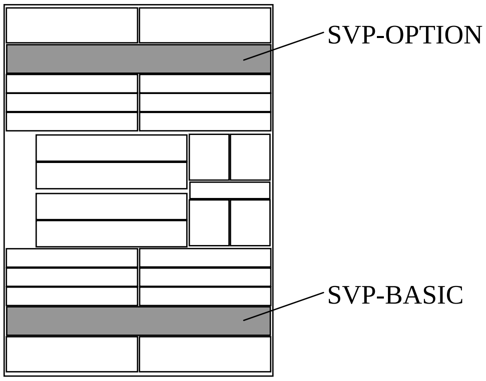
Select (CL) [Disconnect] from the [Start] menu.

Go to “2. HARDWARE REPLACEMENT PROCESSING”.
(REP03-20-140)



2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Rear of DKC	1	SVP	•



Rear View of
DKC-0

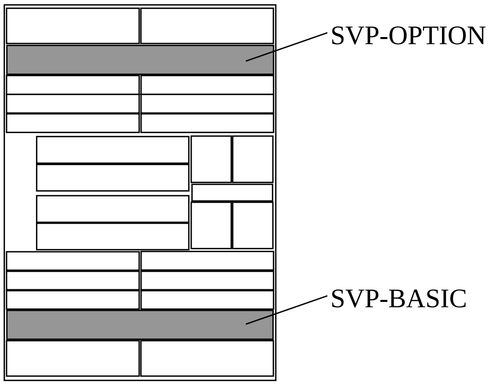
NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 SVP

2-1-1. SVP PS OFF

a. Check that the SVP POWER LED is off.
When the SVP POWER LED is still on, press the SVP PS OFF switch on the SVP and check if the SVP POWER LED is off.
When the SVP POWER LED is still on even if three minutes have passed since the SVP PS OFF switch was pressed, press the SVP PS OFF switch and the SVP PS ON switch on the SVP at the same time for five seconds or more (forced power off) and check if the SVP POWER LED is off.

b. Check that the SVP SHUT DOWN LED of the SVP is on.



Rear View of DKC-0

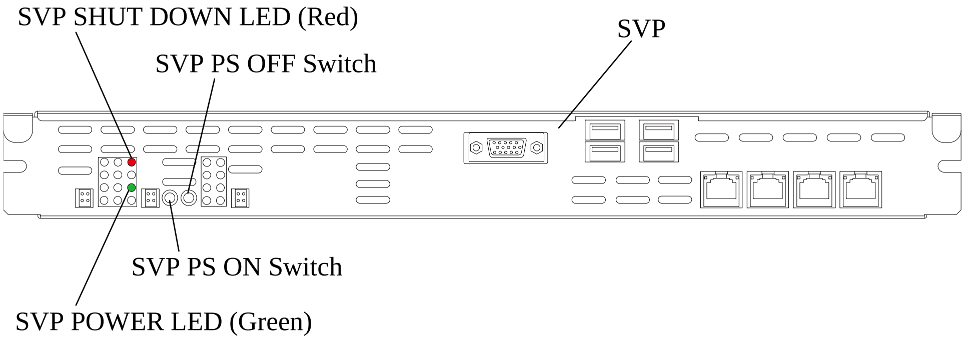
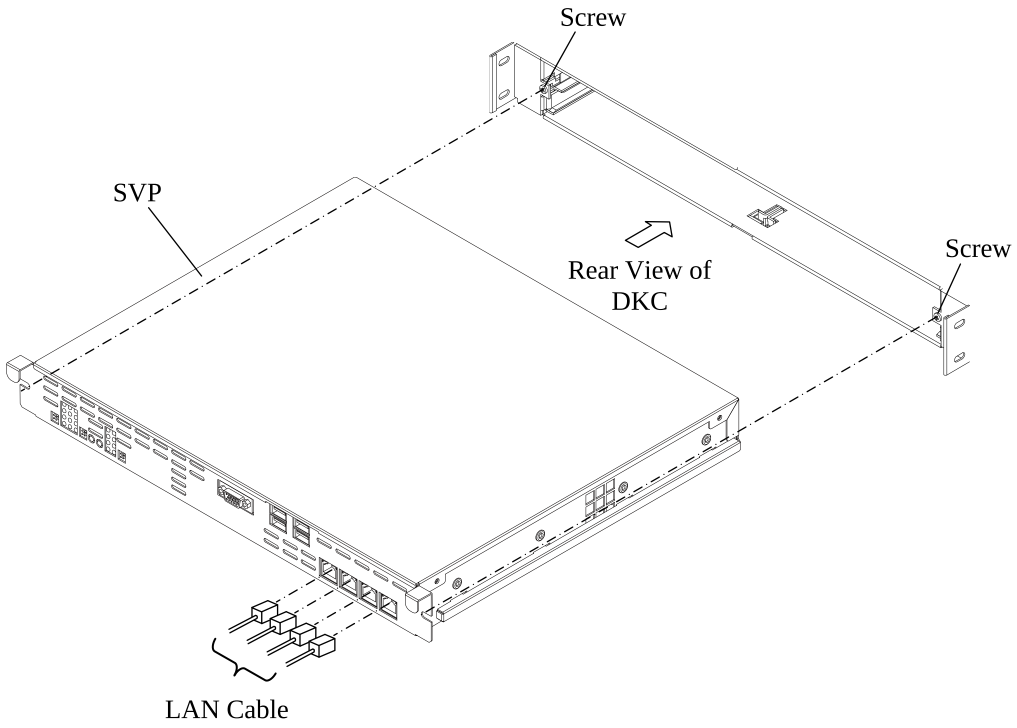


Fig. 3.20.2-1 SVP PS OFF

2-1-2. Remove the SVP

a. Disconnect all the cables from the failed SVP.

b. Loosen the two screws and remove the failed SVP.



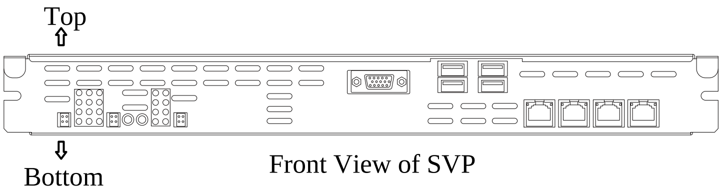


Fig. 3.20.2-2 Removal of SVP

2-1-3. Set the Jumper

a. When the maintenance jumper is inserted into the JP1 on the failed SVP, remove the maintenance jumper.

b. Insert the maintenance jumper into the JP1 on the spare SVP.

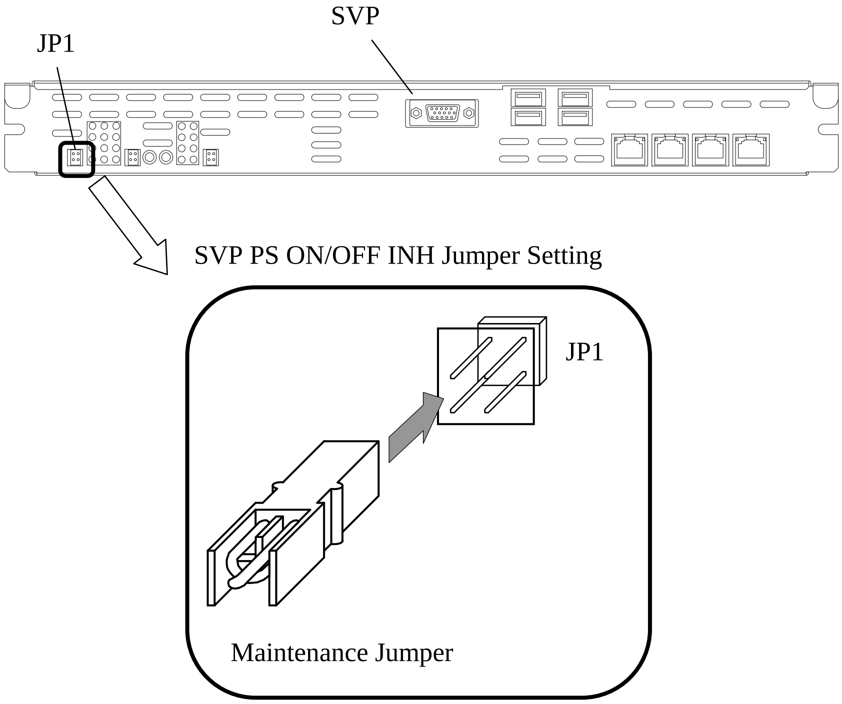


Fig. 3.20.2-3 Insertion of Maintenance Jumper

2-1-4. Install the spare SVP

a. Install the spare SVP and tighten the two screws. (Refer to Fig. 3.20.2-2.)

Note: Confirm the vertical direction of the SVP. If the direction was wrong, the SVP will not be ON.

b. Connect all the cables to the spare SVP.

2-1-5. SVP PS ON

a. Check that the SVP POWER LED of the SVP is on. (Refer to Fig. 3.20.2-1.)

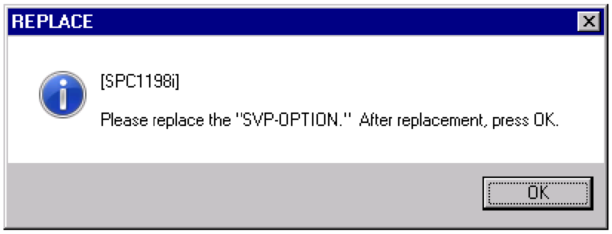
2-1-6. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

<Post operation of STANDBY SVP replace>

(1)

When SVP High Reliability Support Kit is set and replaced STANDBY SVP, switch to MASTER SVP (IP address: xxx.xxx.xxx.15), select (CL) the [OK] for “Please replace the “SVP-OPTION.” After replacement, press OK.”.



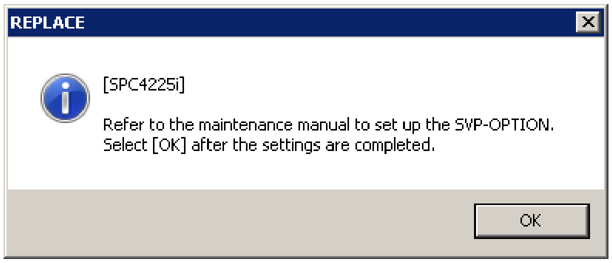
[SPC1198i]

Please replace the "SVP-OPTION." After replacement, press OK.

---

(2)

For a message “Refer to the maintenance manual to set up the SVP-OPTION. Select [OK] after the settings are completed.”, operate the following.



[SPC4225i]

Refer to the maintenance manual to set up the SVP-OPTION.
Select [OK] after the settings are completed.

3-1. Powering up the SVP

⚠ CAUTION

If the MESSAGE LED on DKCPANEL has lit on when power on SVP, please complete SIM before operation.
(When the SVP high-reliability kit is installed, SIM RC=BF85A3 (Basic SVP JP1 setting error), BF86A3 (Optional SVP JP1 setting error), BFE3A2 (SVP duplication setting defect) and 7FF201 (standby SVP failure detection) may occur but there is no problem because they occur in process of the SVP replacement.)

⚠ CAUTION

When an SSVP alarm is issued during replacement of the SVP, reset the SSVP.

⚠ CAUTION

If the message “Do you want to restart your computer now?” is displayed during the SVP reboot after replacement, select (CL) [Yes].

3-1-1. Connecting the Console PC

Connect the console PC to the SVP has been replaced using the utility for connection. Please refer to SVP01-60 for the usage of the utility for connection.
The login user is different by the presence of the microprogram.

[Connection destination] 126.255.255.15

Note: Keep the IP address of Console PC, and set it to 126.255.255.x (x is the available value which is 13 or less. For example 12.) before connection. Reset it after the SVP setup. The SVP and the Console PC communicate by the auto negotiation, 1Gbps or less (Depend on the specification of console PC).

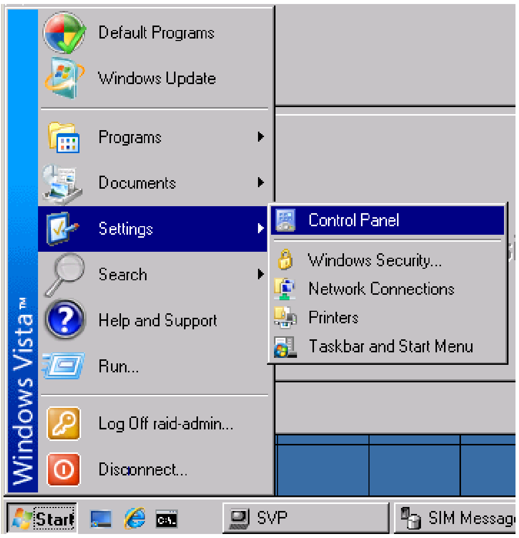
It waits for about 10 minutes the start.

In this section, using two user type to connect with the SVP. If you don't know the password, please contact with the technical support division. When there is no description, using “Installed User”.
After you input a user name and the password, input “Maintenance Password”. If you don’t know the “Maintenance Password”, please contact with the technical support division.

3-1-2. Setting the Data and Time

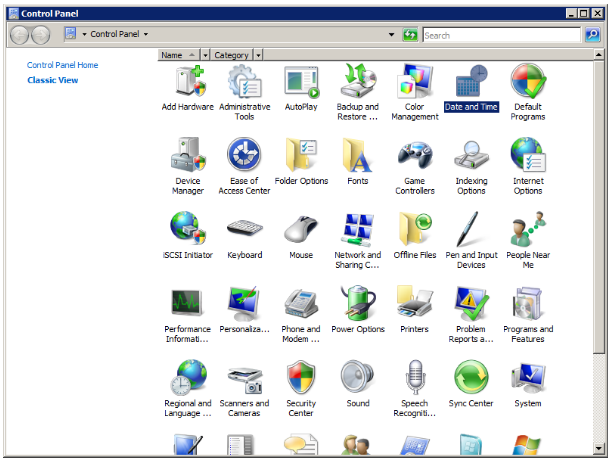
<Making sure of the setting of a time zone>

(1) Open the 'Control Panel' window.
Select (DR) [Settings]-[Control Panel] from the [Start] menu.



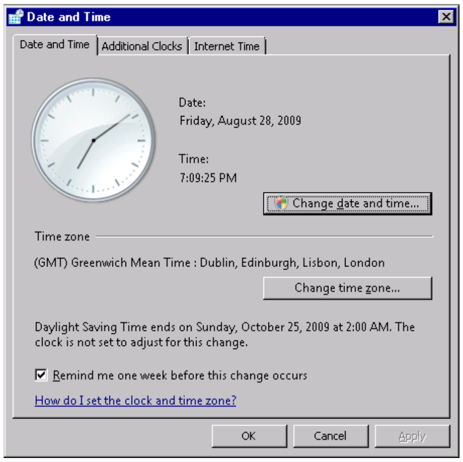
---

(2) Open the 'Date and Time' window.
Select (DC) [Date and Time] in the [Control Panel] window.



---

(3) Select [Change time zone].
Select (CL) [Change time zone...].



Date:
Friday, August 28, 2009

Time:
7:09:25 PM

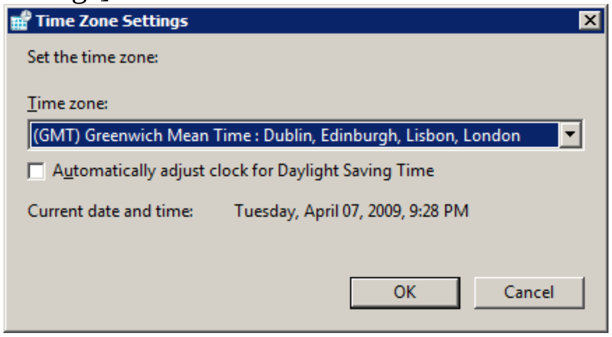
Time zone

(GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London

Daylight Saving Time ends on Sunday, October 25, 2009 at 2:00 AM. The clock is not set to adjust for this change.

☑ Remind me one week before this change occurs

(4) Make sure of the setting of the [Time Zone Settings].
Make sure that the [Time Zone Settings] is set as “[GMT] Greenwich Mean Time; Dublin, Edinburgh, Lisbon, London” irrespective of a place where the subsystem is installed.
Besides, make sure that the check box to the left of the statement, “Automatically adjust clock for Daylight Saving Time” is blank (not checked).



Set the time zone:

Time zone: (GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London

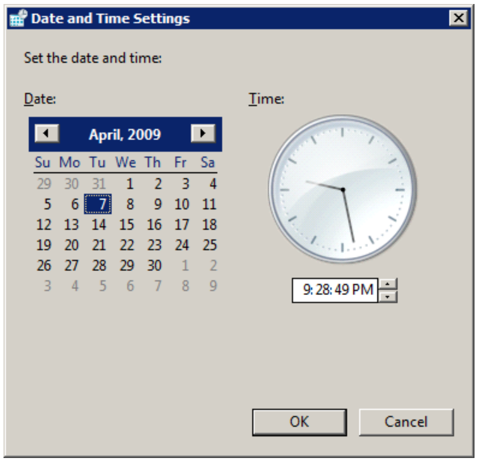
☐ Automatically adjust clock for Daylight Saving Time

Current date and time: Tuesday, April 07, 2009, 9:28 PM

Notice: When a setup of [Time Zone] and “Automatically adjust clock for daylight saving changes” are changed after installation of a SVP micro program, please be sure to reboot SVP after a setup.

---

(5) <Set the [Date and Time Settings]>
Check if the [Date and Time Settings] is set to the current time and date.
If not, reset it correctly. Then, select (CL) [OK].



Set the date and time:

Date: April, 2009

Su	Mo	Tu	We	Th	Fr	Sa
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	1	2
3	4	5	6	7	8	9

Time: 9:28:49 PM

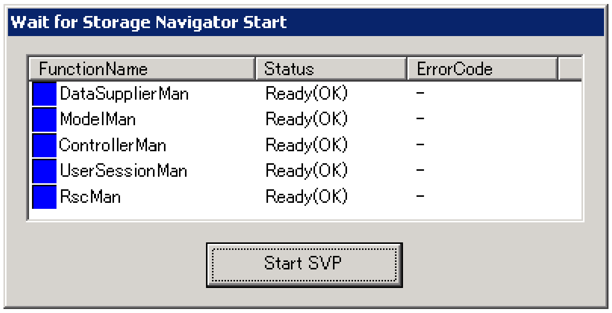
---

(6) Close the ‘Control Panel’ window.
Select (DR) [File] and [Close] in this order in the “Control Panel” window.

3-2. <Installing the Microprogram>

3-2-1. Preparation

When the Microprogram has already been installed in the SVP (when “Wait for Storage Navigator Start” is displayed in desktop window) in replaced SVP (service parts), perform the following operations. When the Microprogram is not installed, go to 3-2-2.



FunctionName	Status	ErrorCode
🟦 DataSupplierMan	Ready(OK)	-
🟦 ModelMan	Ready(OK)	-
🟦 ControllerMan	Ready(OK)	-
🟦 UserSessionMan	Ready(OK)	-
🟦 RscMan	Ready(OK)	-

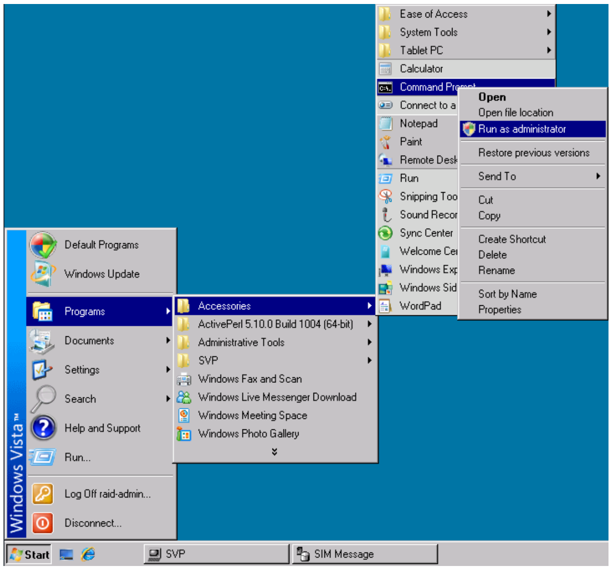
① Perform uninstalling Apache program. (Go to 3-2-1.1 Uninstalling Apache)
② Perform uninstalling Tomcat program. (Go to 3-2-1.2 Uninstalling Tomcat program)
③ Perform uninstalling SMI-S Provider program. (Go to 3-2-1.3 Uninstalling SMI-S Provider program)
④ Perform uninstalling Java program. (Go to 3-2-1.4 Uninstalling Java program)
⑤ Perform uninstalling Perl program. (Go to 3-2-1.5 Uninstalling Perl program)
⑥ Perform uninstalling Flash Player program. (Go to 3-2-1.6 Uninstalling Flash Player program)

3-2-1.1. Uninstalling Apache

(1) Mount the OSS media
Insert the OSS media (the second media) to the CD-ROM drive in the Console PC.

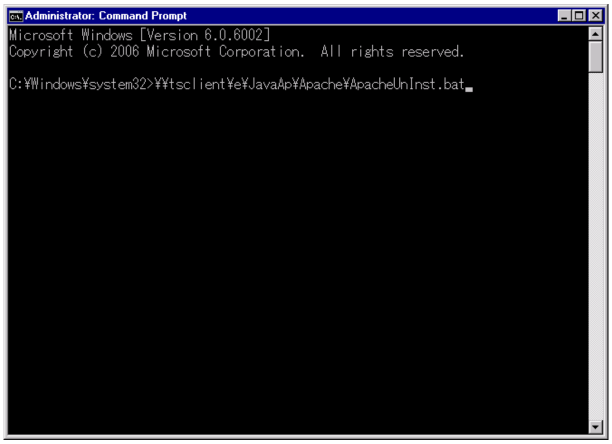
---

(2) Launch the Command Prompt as administrator
Select (CL) [Start]-[Programs]-[Accessories], and launch the Command Prompt with 'Run as administrator' in right-click menu.



---

(3) Launch the uninstallation batch
Enter "\\tsclient\e\JavaAp\Apache\ApacheUnInst.bat" into the Command Prompt, and press the Enter key.
At the end of this process, the Command Prompt will close automatically.



```
Microsoft Windows [Version 6.0.6002]
Copyright (c) 2006 Microsoft Corporation.  All rights reserved.

C:¥Windows¥system32>¥¥tsclient¥e¥JavaAp¥Apache¥ApacheUnInst.bat_
```

Note: The input value is the form of "\\tsclient\<drive letter>\ JavaAp\Apache\ApacheUnInst.bat".
A drive letter is made the drive which inserted the OSS media.

The above is a case where the CD-ROM drive is assigned a drive letter E.

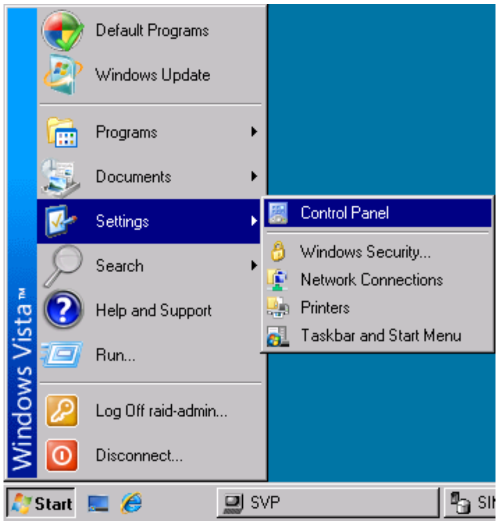
---

(4) Take out the OSS media
Take out the OSS media (the second media) from the CD-ROM drive in the Console PC.

3-2-1.2. Uninstalling Tomcat program

(1)

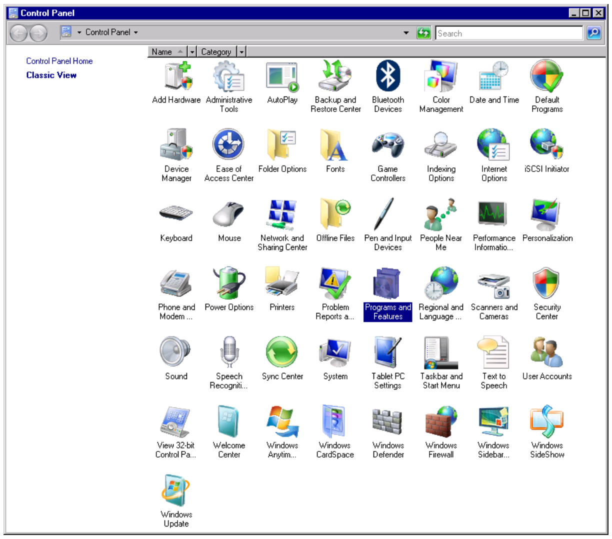
Select (CL) [Start]-[Settings]-[Control Panel].



---

(2)

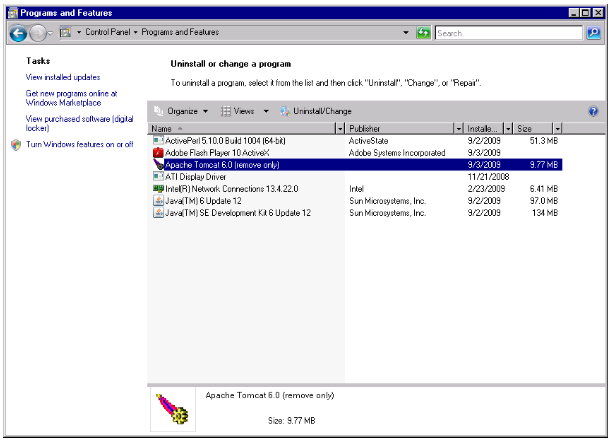
Select (DC) [Programs and Features].



---

(3)

Select (CL) [Apache Tomcat 6.0 (remove only)], and select (CL) [Uninstall/Change].
If there is no [Apache Tomcat 6.0 (remove only)] in the list, go to 3-2-1.3.


Programs and Features
Control Panel
Programs and Features
Search
Tasks
View installed updates
Get new programs online at Windows Marketplace
View purchased software (digital locker)
Turn Windows features on or off
Organize
Views
Uninstall/Change

Uninstall or change a program

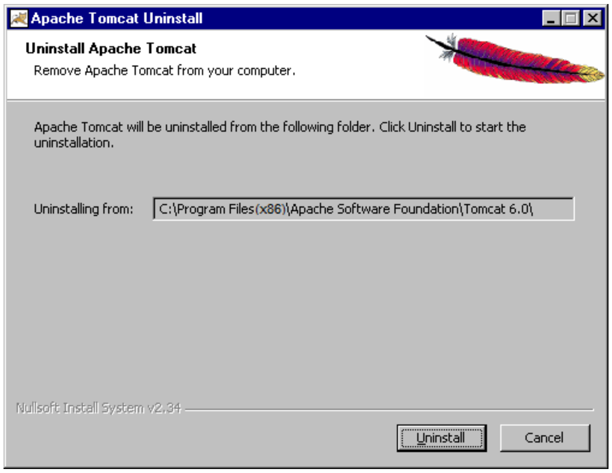
To uninstall a program, select it from the list and then click "Uninstall", "Change", or "Repair".

Name	Publisher	Installe...	Size
ActivePerl 5.10.0 Build 1004 (64-bit)	ActiveState	9/2/2009	51.3 MB
Adobe Flash Player 10 ActiveX	Adobe Systems Incorporated	9/3/2009	
Apache Tomcat 6.0 (remove only)		9/3/2009	9.77 MB
ATI Display Driver		11/21/2008	
Intel(R) Network Connections 13.4.22.0	Intel	2/23/2009	6.41 MB
Java(TM) 6 Update 12	Sun Microsystems, Inc.	9/2/2009	97.0 MB
Java(TM) SE Development Kit 6 Update 12	Sun Microsystems, Inc.	9/2/2009	134 MB

Apache Tomcat 6.0 (remove only)
Size: 9.77 MB

(4)

Select (CL) [Uninstall].



Apache Tomcat Uninstall

Uninstall Apache Tomcat

Remove Apache Tomcat from your computer.

Apache Tomcat will be uninstalled from the following folder. Click Uninstall to start the uninstallation.

Uninstalling from: C:\Program Files(x86)\Apache Software Foundation\Tomcat 6.0\

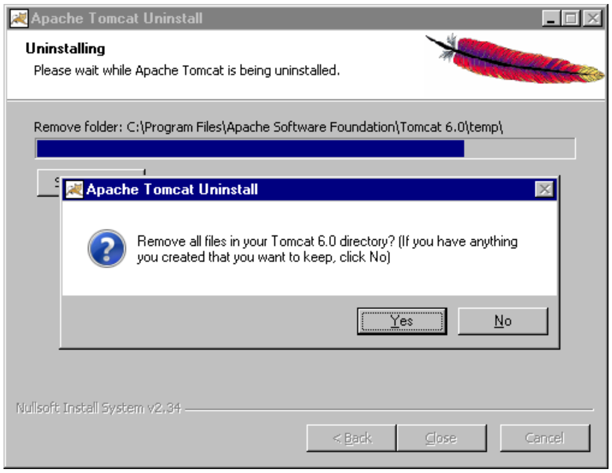
Nullsoft Install System v2.34

---

(5)

If the following message box is displayed, select (CL) [Yes].

If “Note: C:\Program Files (x86)\Apache Software Foundation\Tomcat 6.0 could not be removed.” is displayed, select (CL) [OK].



Apache Tomcat Uninstall

Uninstalling

Please wait while Apache Tomcat is being uninstalled.

Remove folder: C:\Program Files\Apache Software Foundation\Tomcat 6.0\temp\

Apache Tomcat Uninstall

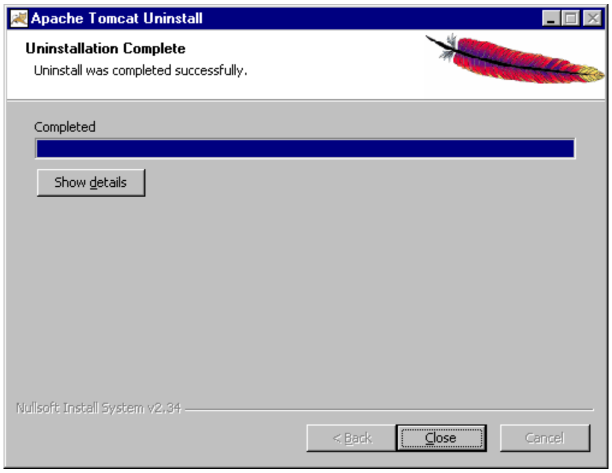
Remove all files in your Tomcat 6.0 directory? (If you have anything you created that you want to keep, click No)

Nullsoft Install System v2.34

---

(6)

When “Uninstallation Complete” dialogue box is displayed, select (CL) [Close].



Apache Tomcat Uninstall

Uninstallation Complete

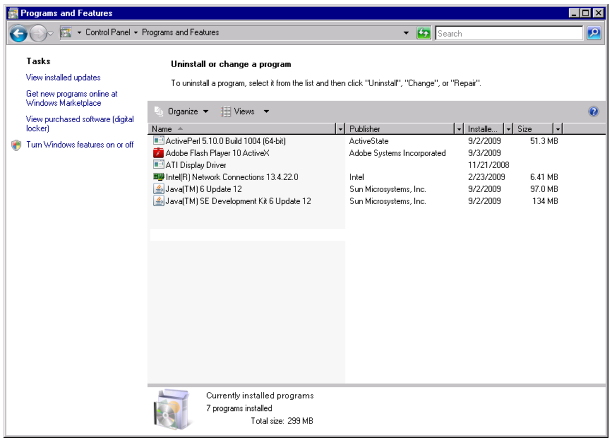
Uninstall was completed successfully.

Completed

Nullsoft Install System v2.34

(7)

[Apache Tomcat 6.0 (remove only)] in 'Programs and Features' window was deleted.
Close the window.


Programs and Features
Control Panel ▸ Programs and Features
Search
Tasks
View installed updates
Get new programs online at Windows Marketplace
View purchased software (digital locker)
Turn Windows features on or off
Organize
Views

Uninstall or change a program

To uninstall a program, select it from the list and then click "Uninstall", "Change", or "Repair".

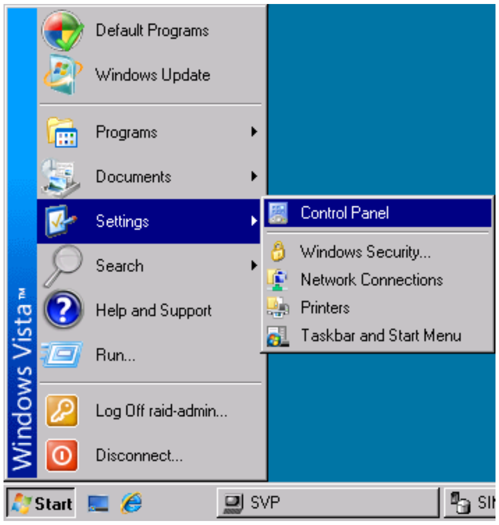
Name	Publisher	Installe...	Size
ActivePerl 5.10.0 Build 1004 (64-bit)	ActiveState	9/2/2009	51.3 MB
Adobe Flash Player 10 ActiveX	Adobe Systems Incorporated	9/3/2009	
ATI Display Driver		11/21/2008	
Intel(R) Network Connections 13.4.22.0	Intel	2/23/2009	6.41 MB
Java(TM) 6 Update 12	Sun Microsystems, Inc.	9/2/2009	97.0 MB
Java(TM) SE Development Kit 6 Update 12	Sun Microsystems, Inc.	9/2/2009	134 MB

Currently installed programs
7 programs installed
Total size: 299 MB

Notice: Until procedure 3-2-1 is finished, please don't logout or shutdown SVP.
If you do them, SVP may no longer work properly. If a shutdown request message is displayed, please don't shutdown.

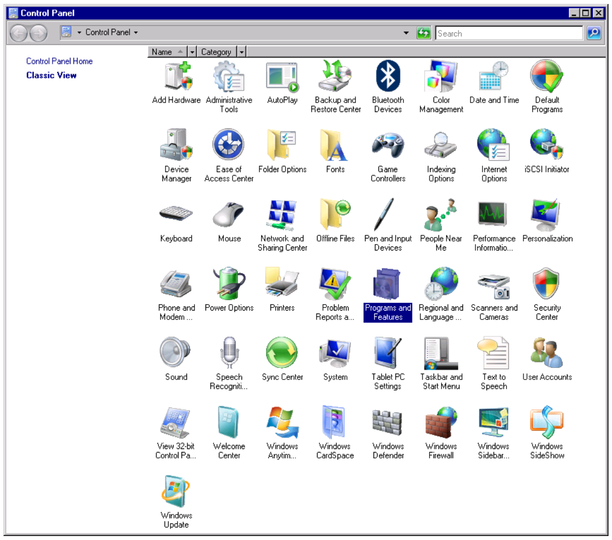
3-2-1.3. Uninstalling SMI-S Provider program

(1) Launch the Control Panel
Select (CL) [Start]-[Settings]-[Control Panel].



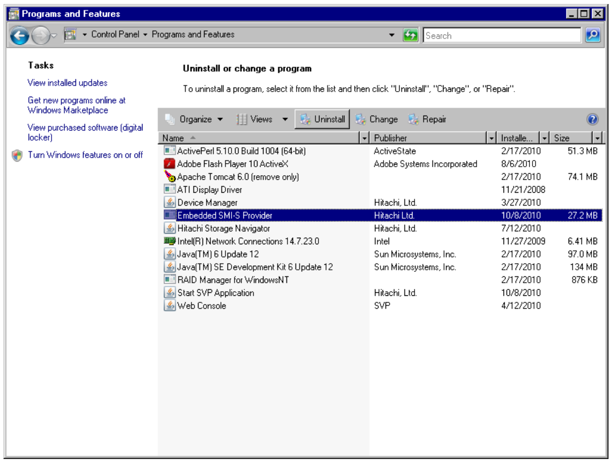
---

(2) Launch the Program and Features
Select (DC) [Programs and Features].



---

(3) Run uninstallation
Select (CL) [Embedded SMI-S Provider], and select (CL) [Uninstall] button.
If there is no [Embedded SMI-S Provider] in the list, go to 3-2-1.4.

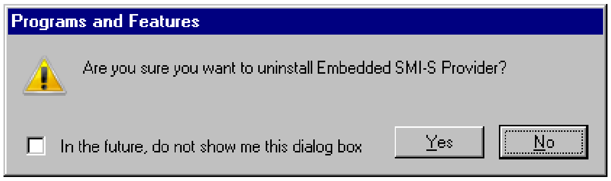


Uninstall or change a program

To uninstall a program, select it from the list and then click "Uninstall", "Change", or "Repair".

Name	Publisher	Installe...	Size
ActivePerl 5.10.0 Build 1004 (64-bit)	ActiveState	2/17/2010	51.3 MB
Adobe Flash Player 10 ActiveX	Adobe Systems Incorporated	8/6/2010	
Apache Tomcat 6.0 (remove only)		2/17/2010	74.1 MB
ATI Display Driver		11/21/2008	
Device Manager	Hitachi, Ltd.	3/27/2010	
Embedded SMI-S Provider	Hitachi Ltd.	10/8/2010	27.2 MB
Hitachi Storage Navigator	Hitachi, Ltd.	7/12/2010	
Intel(R) Network Connections 14.7.23.0	Intel	11/27/2009	6.41 MB
Java(TM) 6 Update 12	Sun Microsystems, Inc.	2/17/2010	97.0 MB
Java(TM) SE Development Kit 6 Update 12	Sun Microsystems, Inc.	2/17/2010	134 MB
RAID Manager for WindowsNT		2/17/2010	876 KB
Start SVP Application	Hitachi, Ltd.	10/8/2010	
Web Console	SVP	4/12/2010	

(4) Make sure the massage
If following message box is displayed, select (CL) [Yes].
"Are you sure you want to uninstall Embedded SMI-S Provider?"



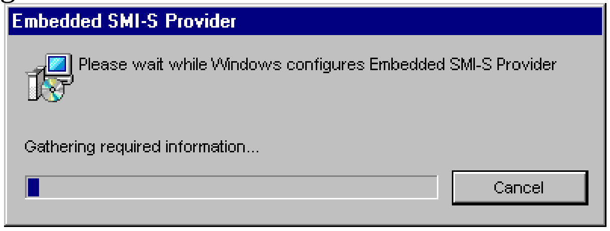
Programs and Features

Are you sure you want to uninstall Embedded SMI-S Provider?

☐ In the future, do not show me this dialog box

---

(5) The dialog box is displayed while processing the uninstallation.
At the end of this process, the dialog box will close automatically.



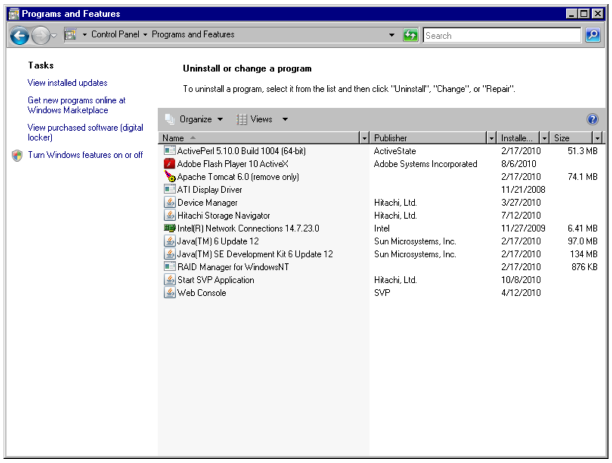
Embedded SMI-S Provider

Please wait while Windows configures Embedded SMI-S Provider

Gathering required information...

---

(6) Check the result and close the window.
[Embedded SMI-S Provider] in 'Programs and Features' window was deleted.
Close the window.



Programs and Features

Control Panel ▸ Programs and Features

Search
Tasks
View installed updates
Get new programs online at Windows Marketplace
View purchased software (digital locker)
Turn Windows features on or off
Organize
Views

Uninstall or change a program

To uninstall a program, select it from the list and then click "Uninstall", "Change", or "Repair".

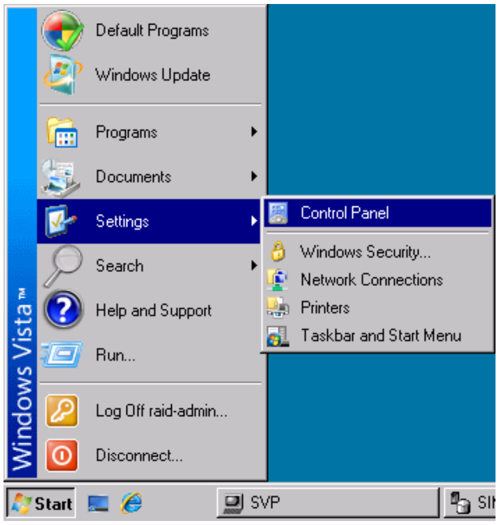
Name	Publisher	Installe...	Size
ActivePerl 5.10.0 Build 1004 (64-bit)	ActiveState	2/17/2010	51.3 MB
Adobe Flash Player 10 ActiveX	Adobe Systems Incorporated	8/6/2010	
Apache Tomcat 6.0 (remove only)		2/17/2010	74.1 MB
ATI Display Driver		11/21/2008	
Device Manager	Hitachi, Ltd.	3/27/2010	
Hitachi Storage Navigator	Hitachi, Ltd.	7/12/2010	
Intel(R) Network Connections 14.7.23.0	Intel	11/27/2009	6.41 MB
Java(TM) 6 Update 12	Sun Microsystems, Inc.	2/17/2010	97.0 MB
Java(TM) SE Development Kit 6 Update 12	Sun Microsystems, Inc.	2/17/2010	134 MB
RAID Manager for WindowsNT		2/17/2010	876 KB
Start SVP Application	Hitachi, Ltd.	10/8/2010	
Web Console	SVP	4/12/2010	

Notice: When the SVP High Reliability Kit is installed, you need to install it for the standby SVP in the same procedure.
About the switching SVP, refer to Post-Procedure "2.18. SVP Switching" in the "SVP SECTION".

3-2-1.4. Uninstalling Java program

(1)

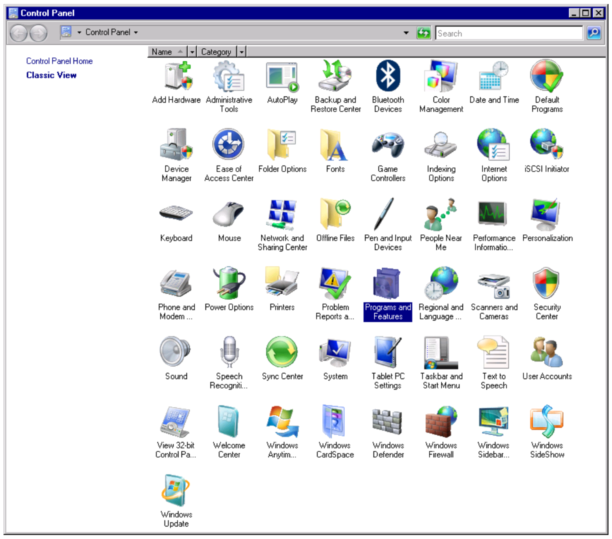
Select (CL) [Start]-[Settings]-[Control Panel] in this order.



---

(2)

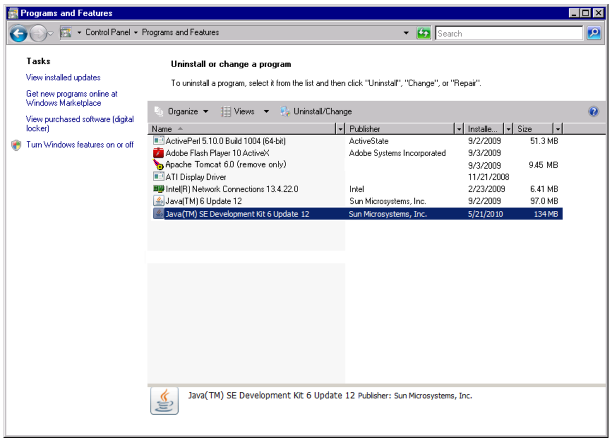
Select (DC) [Programs and Features].



---

(3)

Select [Java(TM) SE Development Kit 6 Update 12], and then select (CL) [Uninstall/Change].
If there is no [Java(TM) SE Development Kit 6 Update 12] in the list, go to (8).


Programs and Features
Control Panel
Programs and Features
Search
Tasks
View installed updates
Get new programs online at Windows Marketplace
View purchased software (digital locker)
Turn Windows features on or off
Organize
Views
Uninstall/Change

Uninstall or change a program

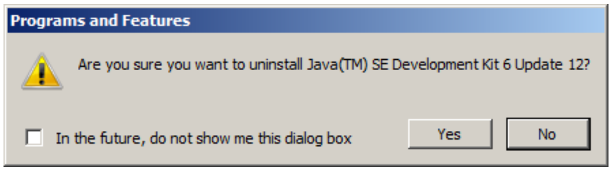
To uninstall a program, select it from the list and then click "Uninstall", "Change", or "Repair".

Name	Publisher	Installe...	Size
ActivePerl 5.10.0 Build 1004 (64-bit)	ActiveState	9/2/2009	51.3 MB
Adobe Flash Player 10 ActiveX	Adobe Systems Incorporated	9/3/2009	
Apache Tomcat 6.0 (remove only)		9/3/2009	9.45 MB
ATI Display Driver		11/21/2008	
Intel(R) Network Connections 13.4.22.0	Intel	2/23/2009	6.41 MB
Java(TM) 6 Update 12	Sun Microsystems, Inc.	9/2/2009	97.0 MB
Java(TM) SE Development Kit 6 Update 12	Sun Microsystems, Inc.	5/21/2010	134 MB

Java(TM) SE Development Kit 6 Update 12 Publisher: Sun Microsystems, Inc.

(4)

A message, “Are you sure you want to uninstall Java(TM) SE Development Kit 6 Update 12?” is displayed.
Select (CL) [Yes].


Programs and Features

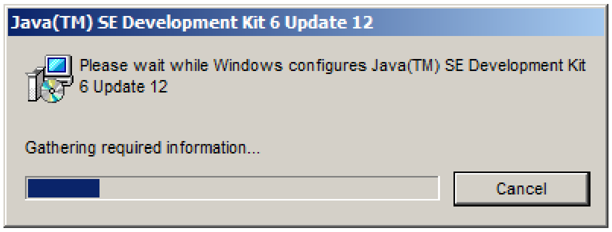
Are you sure you want to uninstall Java(TM) SE Development Kit 6 Update 12?

☐ In the future, do not show me this dialog box

---

(5)

Uninstallation of Java is started.


Java(TM) SE Development Kit 6 Update 12

Please wait while Windows configures Java(TM) SE Development Kit 6 Update 12

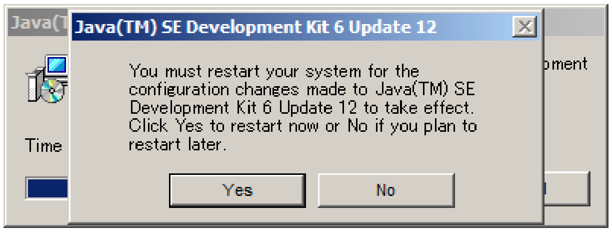
Gathering required information...

---

(6)

When this window is not displayed, go to (7).
When this window is displayed, select (CL) [No]. (*1)

Notice: Don’t select [Yes]. If you do them, SVP may no longer work properly.


Java(TM) SE Development Kit 6 Update 12

You must restart your system for the configuration changes made to Java(TM) SE Development Kit 6 Update 12 to take effect. Click Yes to restart now or No if you plan to restart later.

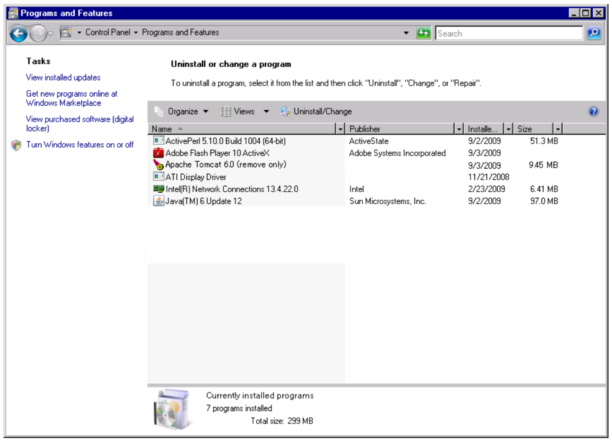
*1: If selecting (CL) [Yes], SVP will be rebooted. In this case, follow the procedures below.

- Login to SVP after rebooting.
  Refer to “3-1-1. Connecting the Console PC” (REP03-20-190) to choose login user name.
- When the following message is displayed, select (CL) [OK].
  “Unable to log into the SVP, because there is a problem with its system requirements. Reboot it, and then reconfigure the SVP.”
- Continue procedures from (8) after SVP rebooting.
  Refer to “3-1-1. Connecting the Console PC” (REP03-20-190). Please use “Preinstalled User”.

---

(7)

The [Java(TM) SE Development Kit 6 Update 12] is deleted from the ‘Programs and Features’ window.
Close the window by selecting (CL) the [×] button.


Programs and Features

Control Panel ▸ Programs and Features

Tasks
View installed updates
Get new programs online at Windows Marketplace
View purchased software (digital locker)
Turn Windows features on or off

Uninstall or change a program

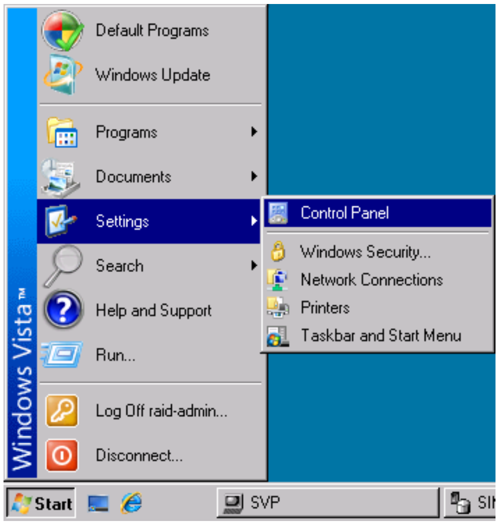
To uninstall a program, select it from the list and then click "Uninstall", "Change", or "Repair".

Name	Publisher	Installe...	Size
ActivePerl 5.10.0 Build 1004 (64-bit)	ActiveState	9/2/2009	51.3 MB
Adobe Flash Player 10 ActiveX	Adobe Systems Incorporated	9/3/2009	
Apache Tomcat 6.0 (remove only)		9/3/2009	9.45 MB
ATI Display Driver		11/21/2008	
Intel(R) Network Connections 13.4.22.0	Intel	2/23/2009	6.41 MB
Java(TM) 6 Update 12	Sun Microsystems, Inc.	9/2/2009	97.0 MB

Currently installed programs
7 programs installed
Total size: 299 MB

(8)

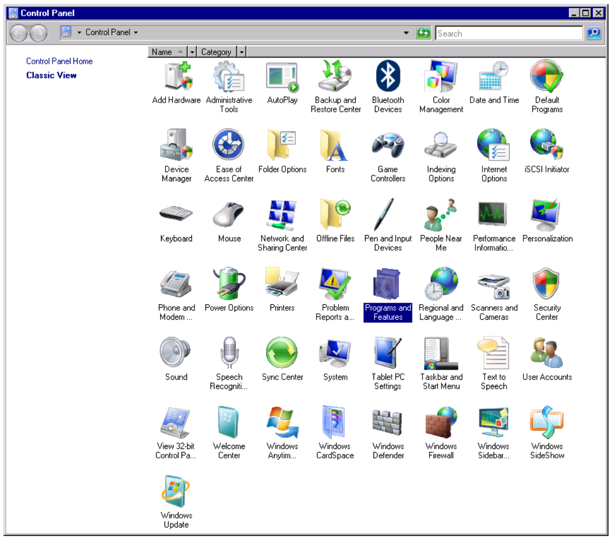
Select (CL) [Start] -[Settings]-[Control Panel] in this order.



---

(9)

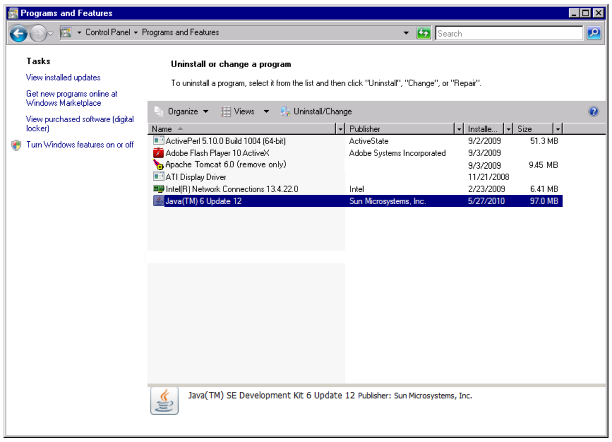
Select (DC) [Programs and Features].



---

(10)

Select [Java(TM) 6 Update 12], and then select (CL) [Uninstall/Change].
If there is no [Java(TM) 6 Update 12] in the list, go to 3-2-1.5.


Programs and Features
Control Panel
Programs and Features
Search
Tasks
View installed updates
Get new programs online at Windows Marketplace
View purchased software (digital locker)
Turn Windows features on or off
Organize
Views
Uninstall/Change

Uninstall or change a program

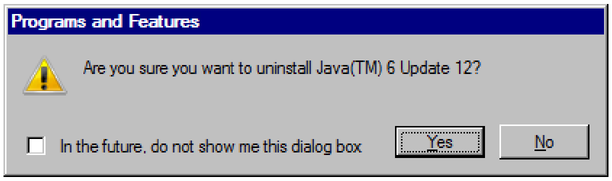
To uninstall a program, select it from the list and then click "Uninstall", "Change", or "Repair".

Name	Publisher	Installe...	Size
ActivePerl 5.10.0 Build 1004 (64-bit)	ActiveState	9/2/2009	51.3 MB
Adobe Flash Player 10 ActiveX	Adobe Systems Incorporated	9/3/2009	
Apache Tomcat 6.0 (remove only)		9/3/2009	9.45 MB
ATI Display Driver		11/21/2008	
Intel(R) Network Connections 13.4.22.0	Intel	2/23/2009	6.41 MB
Java(TM) 6 Update 12	Sun Microsystems, Inc.	5/27/2010	97.0 MB

Java(TM) SE Development Kit 6 Update 12 Publisher: Sun Microsystems, Inc.

(11)

A message, “Are you sure you want to uninstall Java(TM) 6 Update 12?” is displayed.
Select (CL) [Yes].



Programs and Features

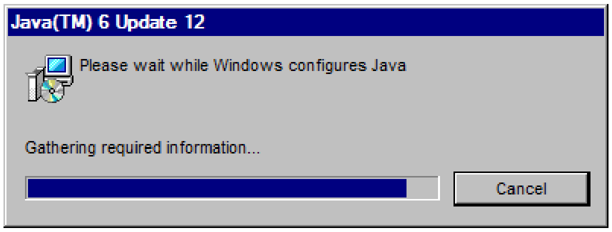
Are you sure you want to uninstall Java(TM) 6 Update 12?

☐ In the future, do not show me this dialog box

---

(12)

Uninstallation of Java is started.



Java(TM) 6 Update 12

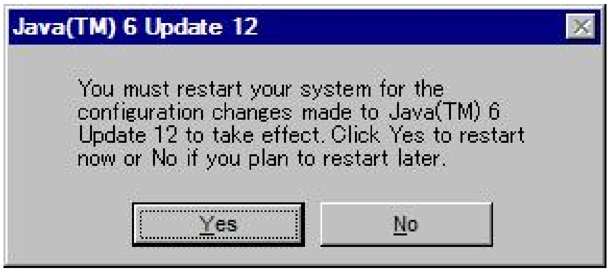
Please wait while Windows configures Java

Gathering required information...

(13)

When this window is not displayed, go to (14).
When this window is displayed, select (CL) [No]. (*1)

Notice: Don’t select [Yes]. If you do them, SVP may no longer work properly.



You must restart your system for the configuration changes made to Java(TM) 6 Update 12 to take effect. Click Yes to restart now or No if you plan to restart later.

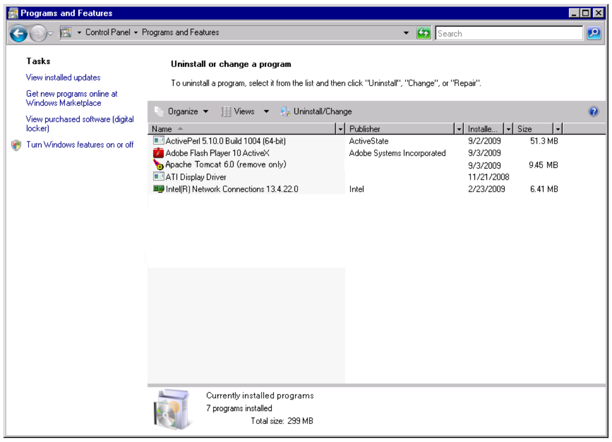
*1: If selecting (CL) [Yes], SVP will be rebooted. In this case, follow the procedures below.

- Login to SVP after rebooting.
  Refer to “3-1-1. Connecting the Console PC” (REP03-20-190) to choose login user name.
- When the following message is displayed, select (CL) [OK].
  “Unable to log into the SVP, because there is a problem with its system requirements. Reboot it, and then reconfigure the SVP.”
- Continue procedures from 3-2-1.5. after SVP rebooting.
  Refer to “3-1-1. Connecting the Console PC” (REP03-20-190). Please use “Preinstalled User”.

---

(14)

The [Java(TM) 6 Update 12] is deleted from the ‘Programs and Features’ window.
Close the window by selecting (CL) the [×] button.


Programs and Features
Control Panel ▸ Programs and Features
Search
Tasks
View installed updates
Get new programs online at Windows Marketplace
View purchased software (digital locker)
Turn Windows features on or off
Organize
Views
Uninstall/Change

Uninstall or change a program

To uninstall a program, select it from the list and then click "Uninstall", "Change", or "Repair".

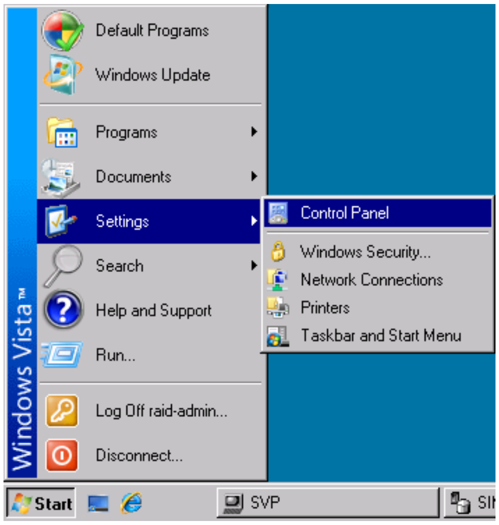
Name	Publisher	Installe...	Size
ActivePerl 5.10.0 Build 1004 (64-bit)	ActiveState	9/2/2009	51.3 MB
Adobe Flash Player 10 ActiveX	Adobe Systems Incorporated	9/3/2009	
Apache Tomcat 6.0 (remove only)		9/3/2009	9.45 MB
ATI Display Driver		11/21/2008	
Intel(R) Network Connections 13.4.22.0	Intel	2/23/2009	6.41 MB

Currently installed programs
7 programs installed
Total size: 299 MB

3-2-1.5. Uninstalling Perl program

(1)

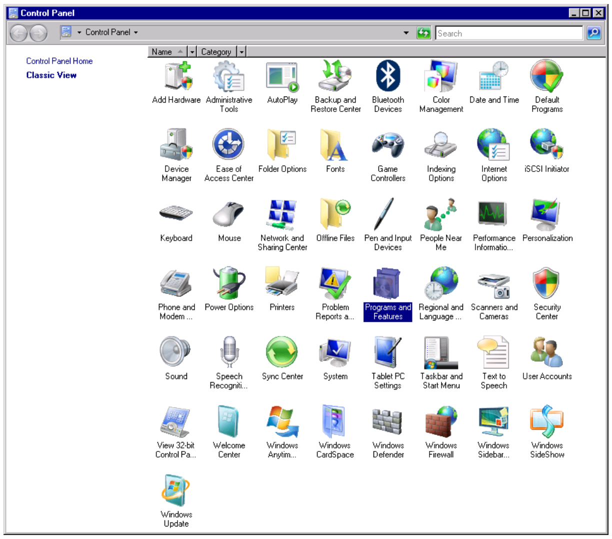
Select (CL) [Start] -[Settings]-[Control Panel] in this order.



---

(2)

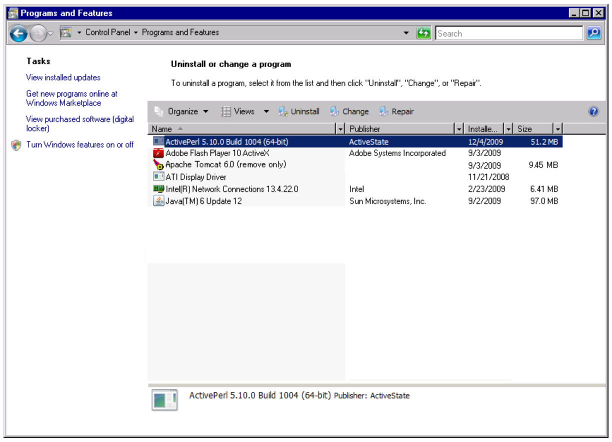
Select (DC) [Programs and Features].



---

(3)

Select [ActivePerl 5.10.0 Build 1004 (64-bit)], and then select (CL) [Uninstall].
If there is no [ActivePerl 5.10.0 Build 1004 (64-bit)] in the list, go to 3-2-1.6.



Uninstall or change a program

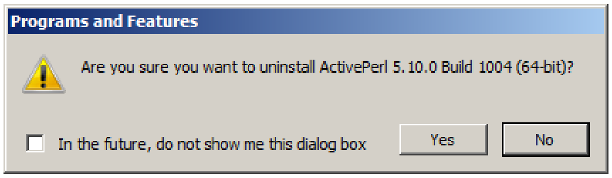
To uninstall a program, select it from the list and then click "Uninstall", "Change", or "Repair".

Name	Publisher	Installe...	Size
ActivePerl 5.10.0 Build 1004 (64-bit)	ActiveState	12/4/2009	51.2 MB
Adobe Flash Player 10 ActiveX	Adobe Systems Incorporated	9/3/2009	
Apache Tomcat 6.0 (remove only)		9/3/2009	9.45 MB
ATI Display Driver		11/21/2008	
Intel(R) Network Connections 13.4.22.0	Intel	2/23/2009	6.41 MB
Java(TM) 6 Update 12	Sun Microsystems, Inc.	9/2/2009	97.0 MB

ActivePerl 5.10.0 Build 1004 (64-bit) Publisher: ActiveState

(4)

A message, “Are you sure you want to uninstall ActivePerl 5.10.0 Build 1004 (64-bit)?” is displayed. Select (CL) [Yes].



Programs and Features

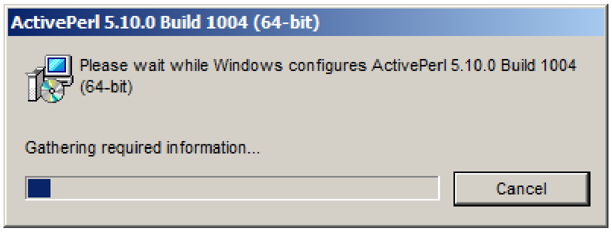
Are you sure you want to uninstall ActivePerl 5.10.0 Build 1004 (64-bit)?

☐ In the future, do not show me this dialog box

---

(5)

Uninstallation of Perl is started.



ActivePerl 5.10.0 Build 1004 (64-bit)

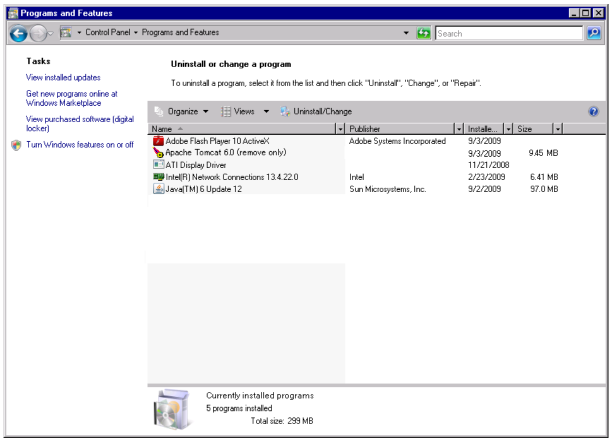
Please wait while Windows configures ActivePerl 5.10.0 Build 1004 (64-bit)

Gathering required information...

---

(6)

The [ActivePerl 5.10.0 Build 1004 (64-bit)] is deleted from the ‘Programs and Features’ window.
Close the window by selecting (CL) the [×] button.



Programs and Features

Control Panel ▸ Programs and Features
Search
Tasks
View installed updates
Get new programs online at Windows Marketplace
View purchased software (digital locker)
Turn Windows features on or off
Organize
Views
Uninstall/Change

Uninstall or change a program

To uninstall a program, select it from the list and then click "Uninstall", "Change", or "Repair".

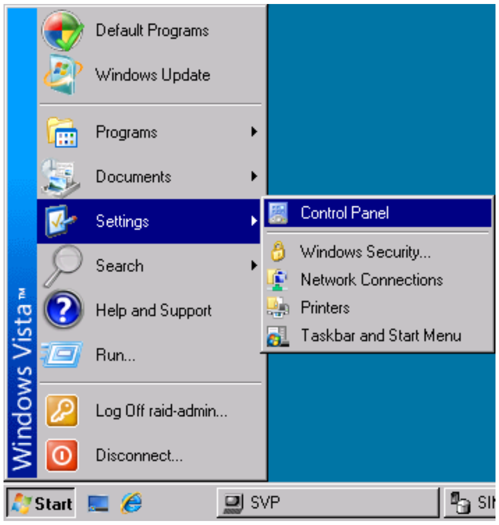
Name	Publisher	Installe...	Size
Adobe Flash Player 10 ActiveX	Adobe Systems Incorporated	9/3/2009	
Apache Tomcat 6.0 (remove only)		9/3/2009	9.45 MB
ATI Display Driver		11/21/2008	
Intel(R) Network Connections 13.4.22.0	Intel	2/23/2009	6.41 MB
Java(TM) 6 Update 12	Sun Microsystems, Inc.	9/2/2009	97.0 MB

Currently installed programs
5 programs installed
Total size: 299 MB

3-2-1.6. Uninstalling Flash Player program

(1)

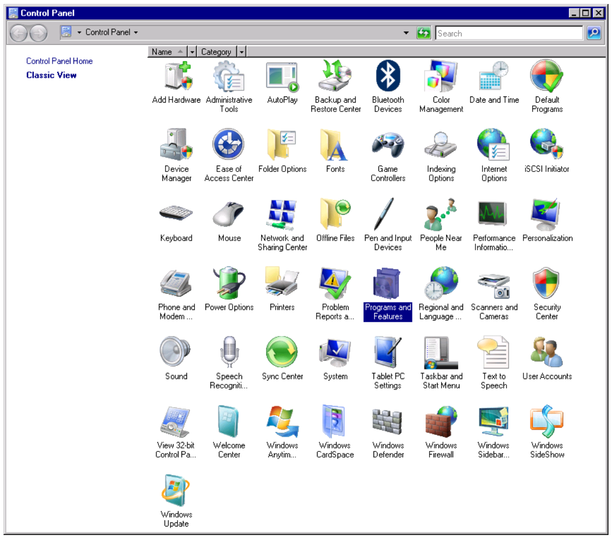
Select (CL) [Start] -[Settings]-[Control Panel] in this order.



---

(2)

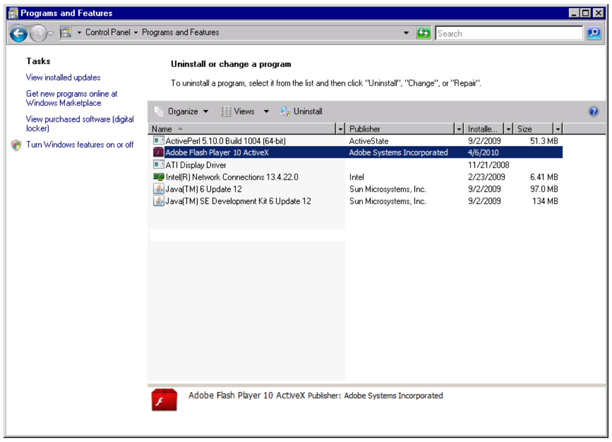
Select (DC) [Programs and Features].



---

(3)

Select [Adobe Flash Player 10 ActiveX], and then select (CL) [Uninstall].
If there is no [Adobe Flash Player 10 ActiveX] in the list, go to 3-2-2.


Programs and Features
Control Panel
Programs and Features
Search
Tasks
View installed updates
Get new programs online at Windows Marketplace
View purchased software (digital locker)
Turn Windows features on or off
Organize
Views
Uninstall

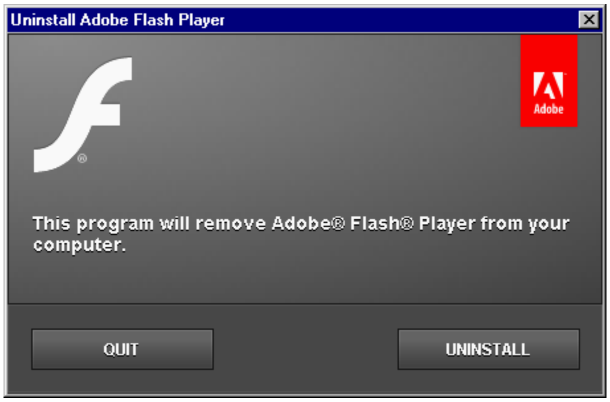
Uninstall or change a program

To uninstall a program, select it from the list and then click "Uninstall", "Change", or "Repair".

Name	Publisher	Installe...	Size
ActivePerl 5.10.0 Build 1004 (64-bit)	ActiveState	9/2/2009	51.3 MB
Adobe Flash Player 10 ActiveX	Adobe Systems Incorporated	4/6/2010	
ATI Display Driver		11/21/2008	
Intel(R) Network Connections 13.4.22.0	Intel	2/23/2009	6.41 MB
Java(TM) 6 Update 12	Sun Microsystems, Inc.	9/2/2009	97.0 MB
Java(TM) SE Development Kit 6 Update 12	Sun Microsystems, Inc.	9/2/2009	134 MB

Adobe Flash Player 10 ActiveX Publisher: Adobe Systems Incorporated

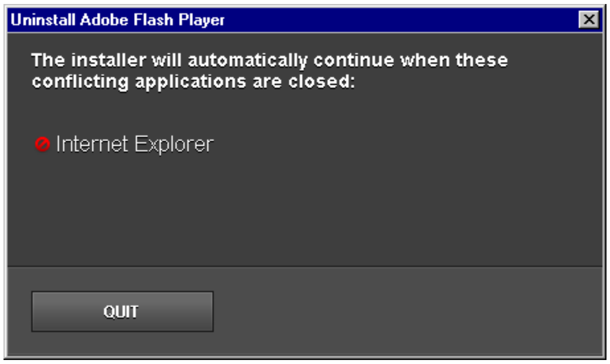
(4) Starting uninstallation
Select (CL) [UNINSTALL].



This program will remove Adobe® Flash® Player from your computer.

---

(5) Finishing application
If some applications were using Flash Player, the application name is displayed.
Please finish the applications.

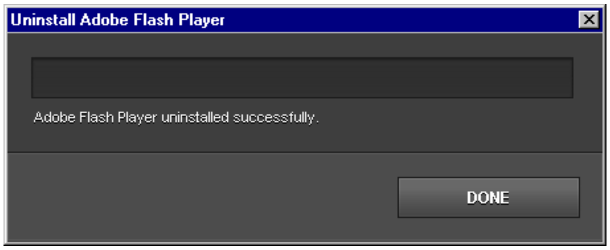


The installer will automatically continue when these conflicting applications are closed:

Internet Explorer

---

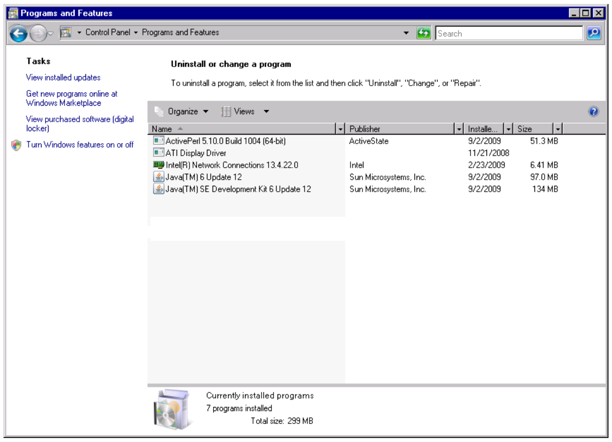
(6) Finishing uninstallation
Selecct (CL) [DONE].



Adobe Flash Player uninstalled successfully.

---

(7)
The [Adobe Flash Player 10 ActiveX] is deleted from the 'Programs and Features' window.
Close the window by selecting (CL) the [×] button.


Programs and Features
Control Panel
Programs and Features
Search
Tasks
View installed updates
Get new programs online at Windows Marketplace
View purchased software (digital locker)
Turn Windows features on or off
Organize
Views

Uninstall or change a program

To uninstall a program, select it from the list and then click "Uninstall", "Change", or "Repair".

Name	Publisher	Installe...	Size
ActivePerl 5.10.0 Build 1004 (64-bit)	ActiveState	9/2/2009	51.3 MB
ATI Display Driver		11/21/2008	
Intel(R) Network Connections 13.4.22.0	Intel	2/23/2009	6.41 MB
Java(TM) 6 Update 12	Sun Microsystems, Inc.	9/2/2009	97.0 MB
Java(TM) SE Development Kit 6 Update 12	Sun Microsystems, Inc.	9/2/2009	134 MB

Currently installed programs
7 programs installed
Total size: 299 MB

3-2-2. <Starting Installation>

① Insert a micro program media in the CD-ROM drive of Client PC and wait for one minutes or so.

② Select (CL) [RUN...] from the “Start” menu on SVP. Enter “\\tsclient\E\setup.exe” and select (CL) the [OK] button.

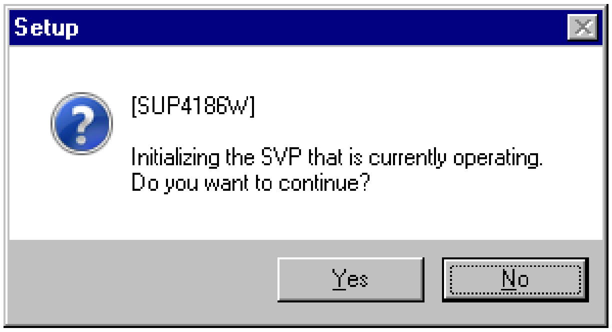
Notice1: Select the drive which inserted a CD-R in ②.

“\\tsclient\E\setup.exe”

E — Input the drive name of the CD-ROM drive of Client PC.

tsclient — Indicate Client PC. (This spelling is inputted.)

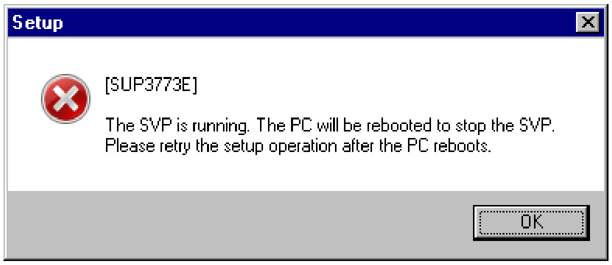
Notice: When the SVP is running, the message “Initializing the SVP that is currently operating. Do you want to continue?” is displayed. Select (CL) [Yes].



[SUP4186W]

Initializing the SVP that is currently operating.
Do you want to continue?

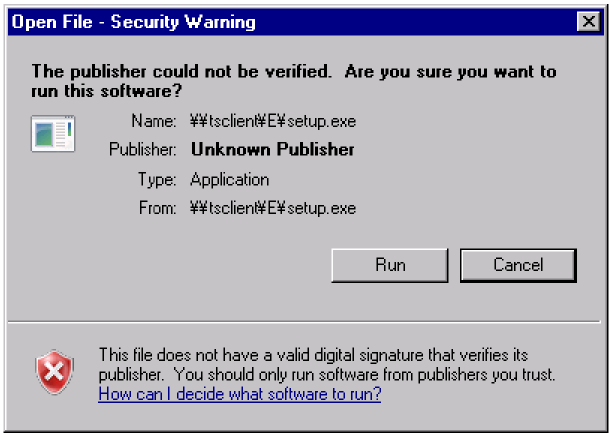
Then, the message “The SVP is running. The PC will be rebooted to stop the SVP. Please retry the setup operation after the PC reboots.” is displayed, and the SVP reboots if selecting (CL) [OK]. After waiting for about five minutes, install the microprogram again from 3-2-2② after rebooting the SVP.
Refer to “3-1-1. Connecting the Console PC” (REP03-20-190). Please use “Preinstalled User” to connect with SVP.



[SUP3773E]

The SVP is running. The PC will be rebooted to stop the SVP.
Please retry the setup operation after the PC reboots.

“The publisher could not be verified. Are you sure you want to run this software?” is displayed. Select (CL) [Yes].



The publisher could not be verified. Are you sure you want to run this software?

Name: ¥¥tsclient¥E¥setup.exe
Publisher: **Unknown Publisher**
Type: Application
From: ¥¥tsclient¥E¥setup.exe

This file does not have a valid digital signature that verifies its publisher. You should only run software from publishers you trust.
How can I decide what software to run?

3-3. <Using another media>

3-3-1. <Installing the Configuration Information>

(1)

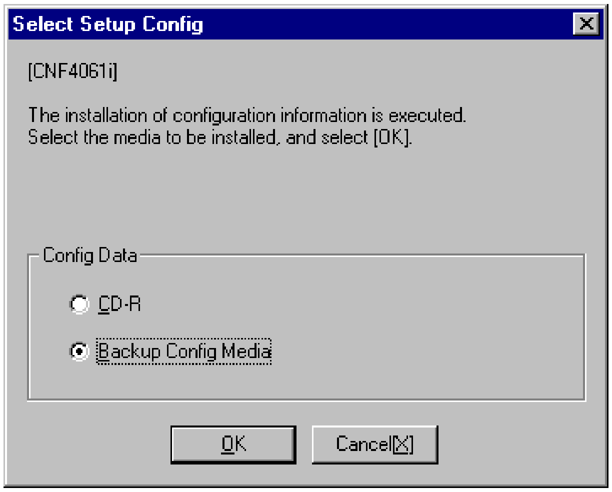
Prepare the Config media which did backup.

---

(2)

Select (CL) C in the ‘Select Setup Config’ window and select (CL) the [OK] button.

“CD-R” : Use Only With Technical Support Authorization.



Select Setup Config

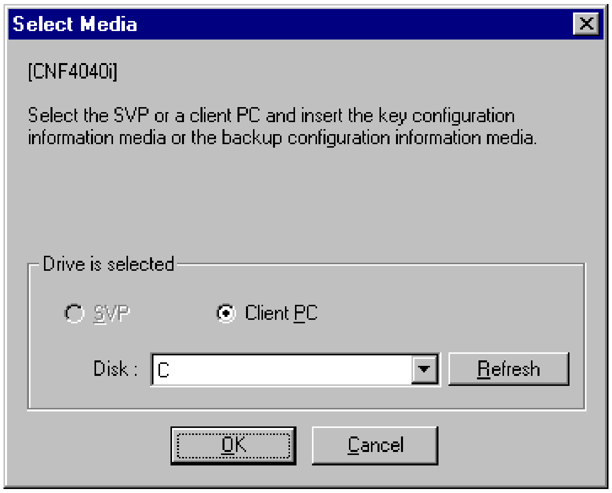
[CNF4061i]

The installation of configuration information is executed.
Select the media to be installed, and select [OK].

(3)

Select the drive which insert the Backup Config Media (prepared with step (1)), and select (CL) the [OK] button.

Select (CL) [Refresh] button, Disk is updated to the latest information.



[CNF4040i]

Select the SVP or a client PC and insert the key configuration information media or the backup configuration information media.

Drive is selected

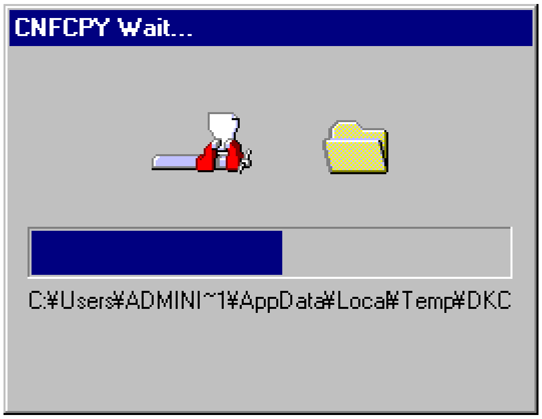
○ SVP ● Client PC

Disk : C

---

(4)

Perform copy processing of the configuration information from the Backup Config Media to the SVP.
The ‘CNFCPY Wait…’ window is displayed during this time.

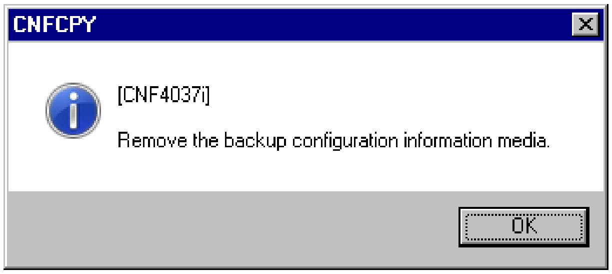


C:¥Users¥ADMINI~1¥AppData¥Local¥Temp¥DKC

---

(5)

Select (CL) the [OK] button after removing the configuration information media.



[CNF4037i]

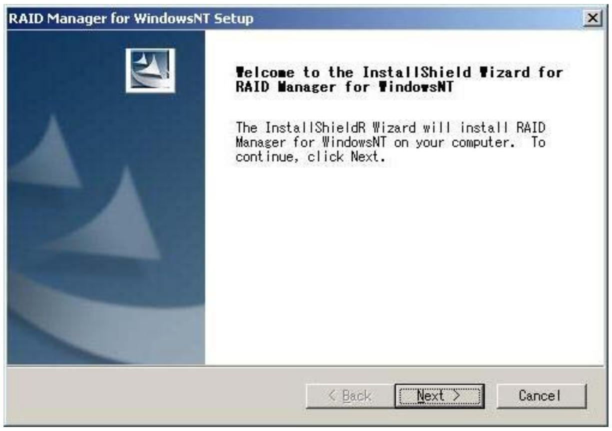
Remove the backup configuration information media.

Blank Sheet

3-3-2. <Installing the RAID Manager>

(1)

Select (CL) [Next>].



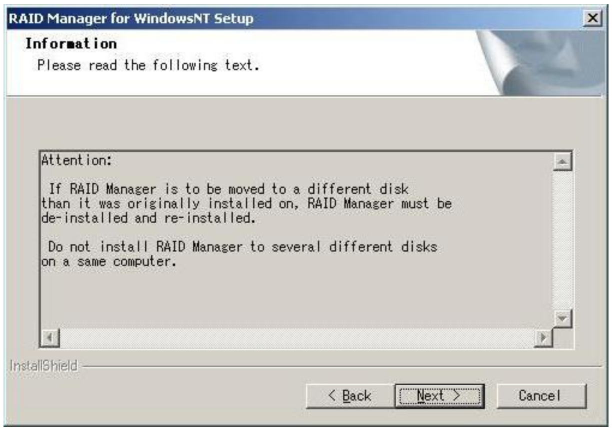
Welcome to the InstallShield Wizard for RAID Manager for WindowsNT

The InstallShieldR Wizard will install RAID Manager for WindowsNT on your computer. To continue, click Next.

---

(2)

Select (CL) [Next>].



Information

Please read the following text.

Attention:

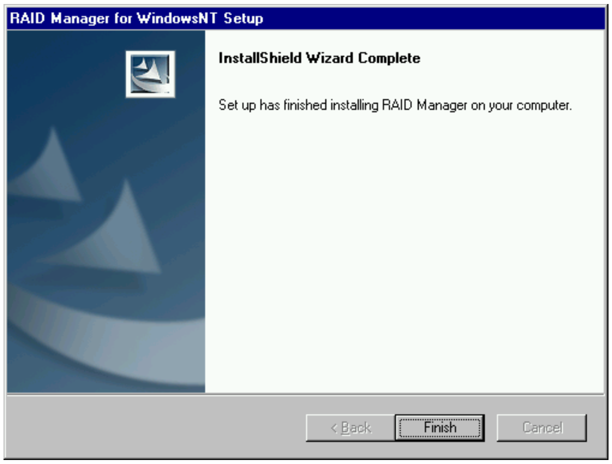
If RAID Manager is to be moved to a different disk than it was originally installed on, RAID Manager must be de-installed and re-installed.

Do not install RAID Manager to several different disks on a same computer.

---

(3)

Select (CL) [Finish].



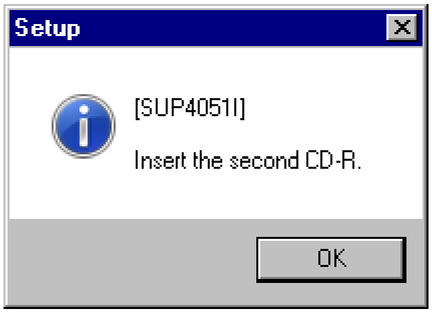
InstallShield Wizard Complete

Set up has finished installing RAID Manager on your computer.

3-3-3. <Installing the OSS media>

(1)

When the message of “Insert the second CD-R.” is displayed, replace it to the second media. Select (CL) [OK] after the replacement.



[SUP4051I]

Insert the second CD-R.

Installed versions of each OSS are different by OSS media versions. Installed versions of each OSS refer to following “Table 3.20.3-1 Installed OSS properties”.

Table 3.20.3-1 Installed OSS properties

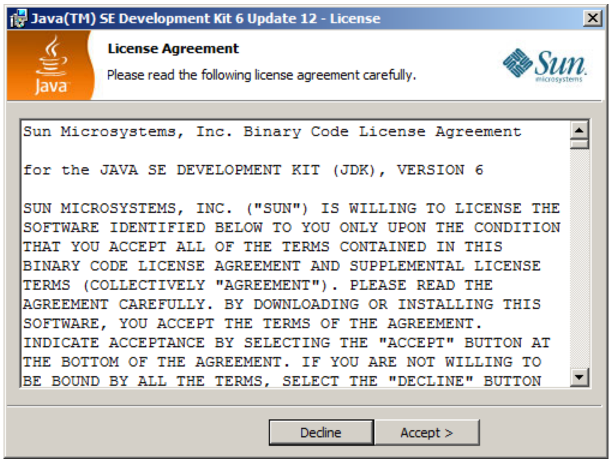
OSS media	Apache	Java	Tomcat	Flash	Perl
70-01-00/00 ~	Apache2.2.10 (0.9.8o)	6Update12	6.0.16	10.1	5.10.0.1004
70-06-05/xx ~	Apache2.2.27 (1.0.1h)	6Update12	6.0.41	10.1	5.10.0.1004

3-4. <Setting Up JAVA>

Perform setting up operation of Java.
When JAVA has already been installed, go to Section 3-5.

(1)

Select (CL)[Accept>].



License Agreement

Please read the following license agreement carefully.

Sun Microsystems, Inc. Binary Code License Agreement

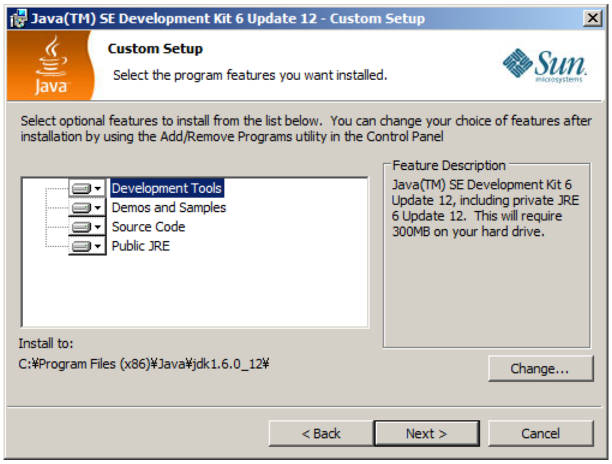
for the JAVA SE DEVELOPMENT KIT (JDK), VERSION 6

SUN MICROSYSTEMS, INC. ("SUN") IS WILLING TO LICENSE THE SOFTWARE IDENTIFIED BELOW TO YOU ONLY UPON THE CONDITION THAT YOU ACCEPT ALL OF THE TERMS CONTAINED IN THIS BINARY CODE LICENSE AGREEMENT AND SUPPLEMENTAL LICENSE TERMS (COLLECTIVELY "AGREEMENT"). PLEASE READ THE AGREEMENT CAREFULLY. BY DOWNLOADING OR INSTALLING THIS SOFTWARE, YOU ACCEPT THE TERMS OF THE AGREEMENT. INDICATE ACCEPTANCE BY SELECTING THE "ACCEPT" BUTTON AT THE BOTTOM OF THE AGREEMENT. IF YOU ARE NOT WILLING TO BE BOUND BY ALL THE TERMS, SELECT THE "DECLINE" BUTTON

---

(2)

Select (CL) [Next>].



Custom Setup

Select the program features you want installed.

Select optional features to install from the list below. You can change your choice of features after installation by using the Add/Remove Programs utility in the Control Panel

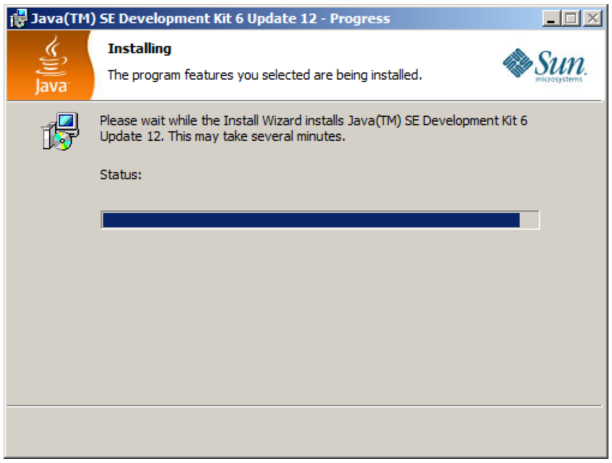
Feature Description: Java(TM) SE Development Kit 6 Update 12, including private JRE 6 Update 12. This will require 300MB on your hard drive.

Install to:
C:¥Program Files (x86)¥Java¥jdk1.6.0_12¥

---

(3)

Copying of the file is started.



Installing

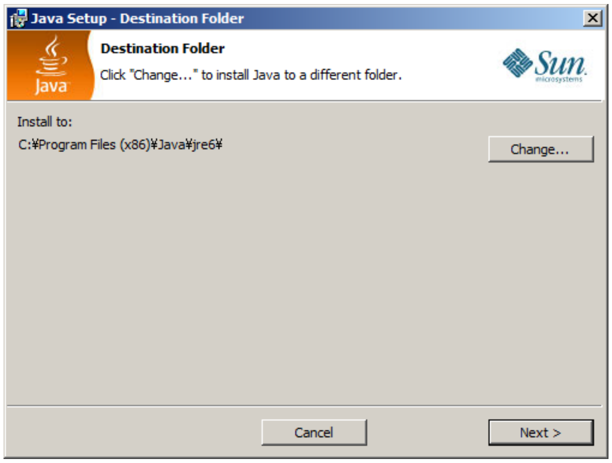
The program features you selected are being installed.

Please wait while the Install Wizard installs Java(TM) SE Development Kit 6 Update 12. This may take several minutes.

Status:

(4)

Select (CL) [Next>].



Java Setup - Destination Folder

Destination Folder

Click "Change..." to install Java to a different folder.

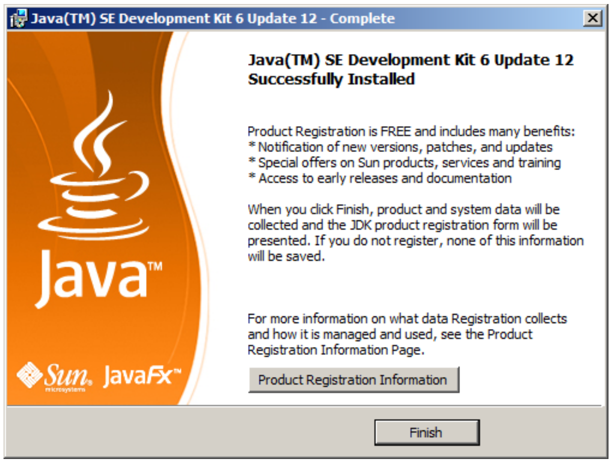
Install to:

C:¥Program Files (x86)¥Java¥jre6¥

---

(5)

Select (CL) [Finish].
If [Register your JDK] window opens, close it.



Java(TM) SE Development Kit 6 Update 12 - Complete

Java(TM) SE Development Kit 6 Update 12 Successfully Installed

Product Registration is FREE and includes many benefits:
* Notification of new versions, patches, and updates
* Special offers on Sun products, services and training
* Access to early releases and documentation

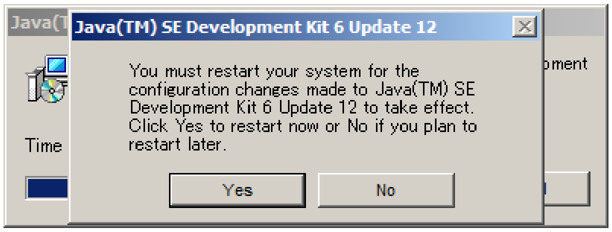
When you click Finish, product and system data will be collected and the JDK product registration form will be presented. If you do not register, none of this information will be saved.

For more information on what data Registration collects and how it is managed and used, see the Product Registration Information Page.

---

(6)

When this window is not displayed, go to Section 3-5.
When this window is displayed, select (CL) [No].



Java(TM) SE Development Kit 6 Update 12

You must restart your system for the configuration changes made to Java(TM) SE Development Kit 6 Update 12 to take effect. Click Yes to restart now or No if you plan to restart later.

Notice: Don’t select [Yes]. If you do them, SVP may no longer work properly.

Notice: Until SVP is shutdown in procedure 3-9, please don’t logout or shutdown SVP. If you do them, SVP may no longer work properly. If a shutdown request message is displayed, please don’t shutdown.

3-5. The Setting of Apache SSL communication

The things of default are set in the key creation for SSL communication and the certificate file.
When you install an SSL communication key and a certificate file responding to the customer’s request, see “Hitachi Storage Navigator User Guide”.
It advances to step 3-6 when setting it by default.

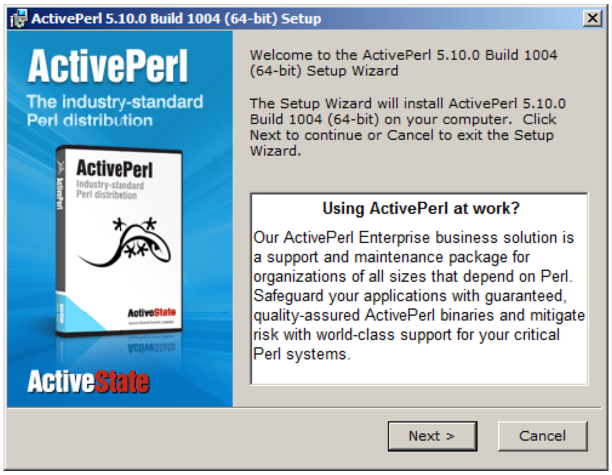
3-6. Setting Up of Perl

Perform setting up operation of Perl.

When Perl has already been installed, go to Section 3-7.

(1)

Select (CL) [Next>].


ActivePerl 5.10.0 Build 1004 (64-bit) Setup
ActivePerl
The industry-standard Perl distribution
ActiveState
Next >
Cancel

Welcome to the ActivePerl 5.10.0 Build 1004 (64-bit) Setup Wizard

The Setup Wizard will install ActivePerl 5.10.0 Build 1004 (64-bit) on your computer. Click Next to continue or Cancel to exit the Setup Wizard.

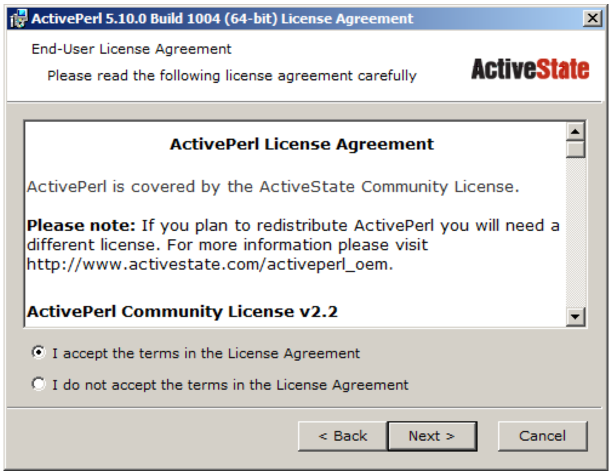
Using ActivePerl at work?

Our ActivePerl Enterprise business solution is a support and maintenance package for organizations of all sizes that depend on Perl. Safeguard your applications with guaranteed, quality-assured ActivePerl binaries and mitigate risk with world-class support for your critical Perl systems.

---

(2)

After selecting “I accept the terms in the License Agreement”, select (CL) [Next>].


ActivePerl 5.10.0 Build 1004 (64-bit) License Agreement
End-User License Agreement
Please read the following license agreement carefully
ActiveState
< Back
Next >
Cancel

ActivePerl License Agreement

ActivePerl is covered by the ActiveState Community License.

Please note: If you plan to redistribute ActivePerl you will need a different license. For more information please visit http://www.activestate.com/activeperl_oem.

ActivePerl Community License v2.2

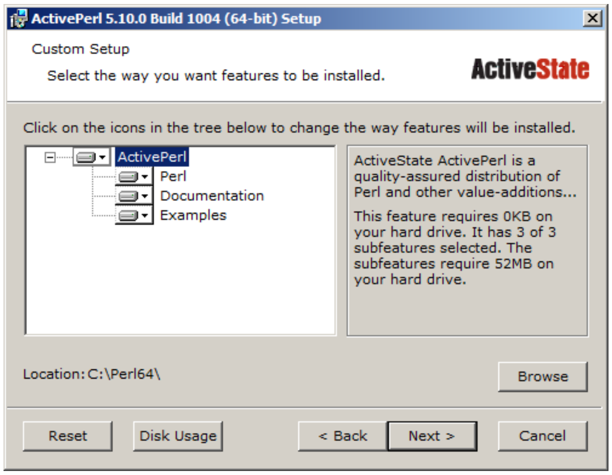
● I accept the terms in the License Agreement

○ I do not accept the terms in the License Agreement

---

(3)

Select (CL) [Next>].



Click on the icons in the tree below to change the way features will be installed.

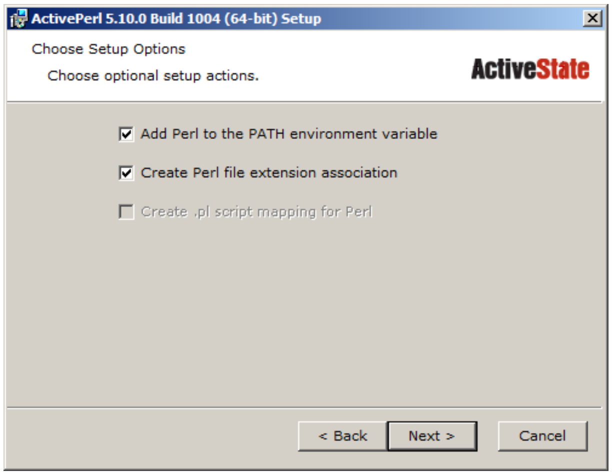
ActiveState ActivePerl is a quality-assured distribution of Perl and other value-additions...

This feature requires 0KB on your hard drive. It has 3 of 3 subfeatures selected. The subfeatures require 52MB on your hard drive.

Location: C:\Perl64\

(4)

Select (CL) [Next>].



Choose Setup Options

Choose optional setup actions.

☑ Add Perl to the PATH environment variable

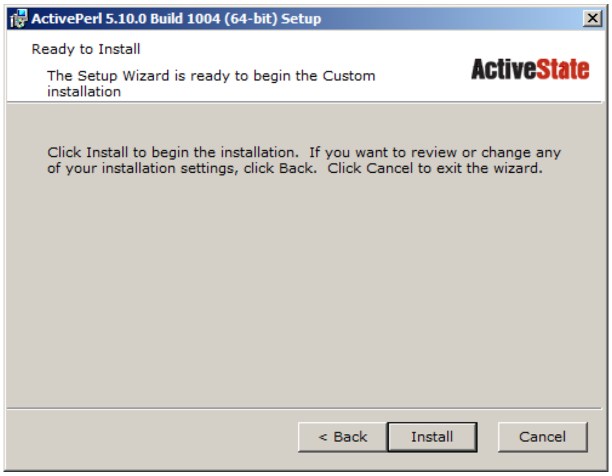
☑ Create Perl file extension association

☐ Create .pl script mapping for Perl

---

(5)

Select (CL) [Install].
Copying of the file is started.



Ready to Install

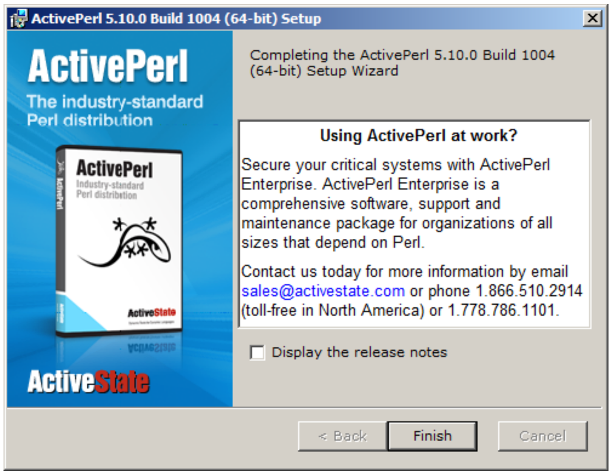
The Setup Wizard is ready to begin the Custom installation

Click Install to begin the installation. If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.

---

(6)

When the copying of the file is completed, this window is displayed. Remove the check mark from the left side check box of the "Display the release notes" and select (CL) [Finish].


ActivePerl 5.10.0 Build 1004 (64-bit) Setup
ActivePerl
The industry-standard Perl distribution
ActivePerl
Industry-standard Perl distribution
ActiveState
ActiveState
< Back
Finish
Cancel

Completing the ActivePerl 5.10.0 Build 1004 (64-bit) Setup Wizard

Using ActivePerl at work?

Secure your critical systems with ActivePerl Enterprise. ActivePerl Enterprise is a comprehensive software, support and maintenance package for organizations of all sizes that depend on Perl.

Contact us today for more information by email sales@activestate.com or phone 1.866.510.2914 (toll-free in North America) or 1.778.786.1101.

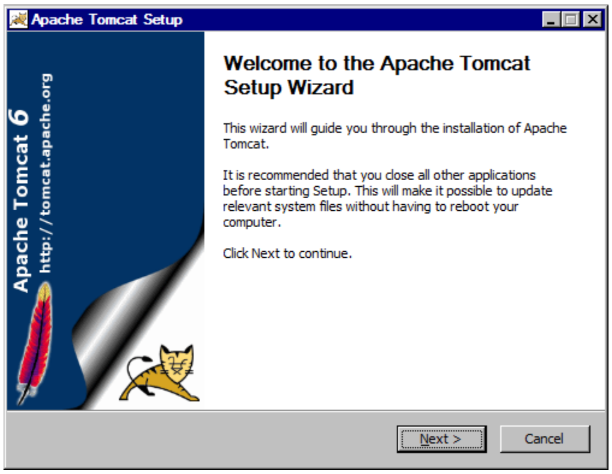
☐ Display the release notes

3-7. Setting Up of Tomcat

Perform setting up operation of Tomcat.
When Tomcat has already been installed, go to Section 3-8.

(1)

Select (CL) [Next>].



Welcome to the Apache Tomcat Setup Wizard

This wizard will guide you through the installation of Apache Tomcat.

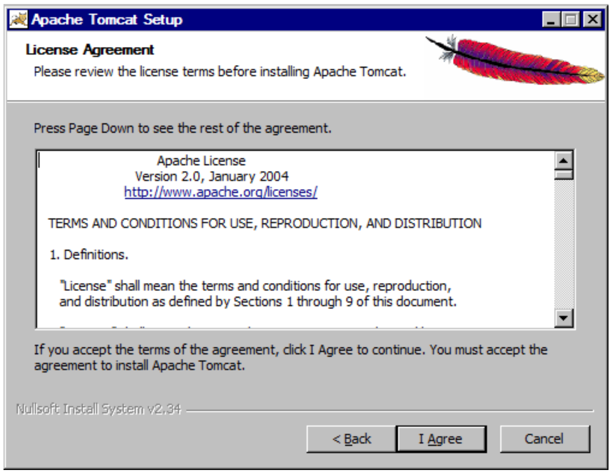
It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.

Click Next to continue.

---

(2)

Select (CL) [I Agree].



License Agreement

Please review the license terms before installing Apache Tomcat.

Press Page Down to see the rest of the agreement.

Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

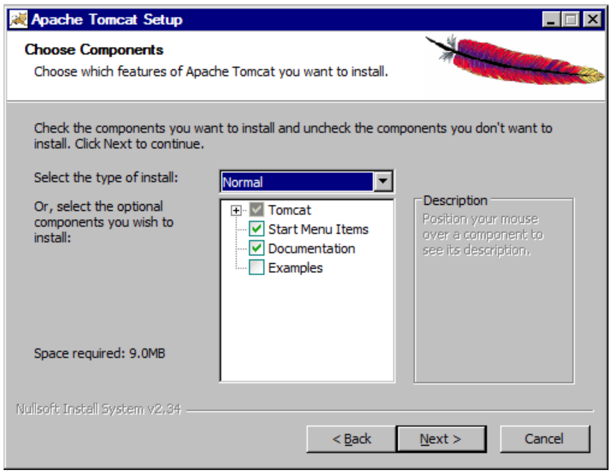
1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install Apache Tomcat.

(3)

Select (CL) [Next>].



Apache Tomcat Setup

Choose Components

Choose which features of Apache Tomcat you want to install.

Check the components you want to install and uncheck the components you don't want to install. Click Next to continue.

Select the type of install: Normal

Or, select the optional components you wish to install:

- ☑ Tomcat
- ☑ Start Menu Items
- ☑ Documentation
- ☐ Examples

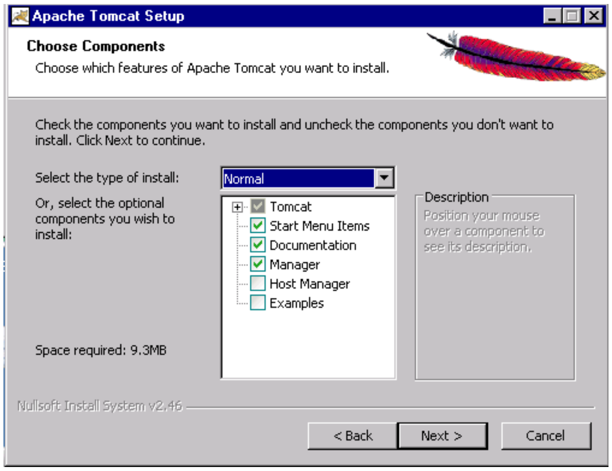
Description
Position your mouse over a component to see its description.

Space required: 9.0MB

Nullsoft Install System v2.34

This screen is displayed in OSS version 70-06-05/xx or later.

Select (CL) [Next>].



Apache Tomcat Setup

Choose Components

Choose which features of Apache Tomcat you want to install.

Check the components you want to install and uncheck the components you don't want to install. Click Next to continue.

Select the type of install: Normal

Or, select the optional components you wish to install:

- ☑ Tomcat
- ☑ Start Menu Items
- ☑ Documentation
- ☑ Manager
- ☐ Host Manager
- ☐ Examples

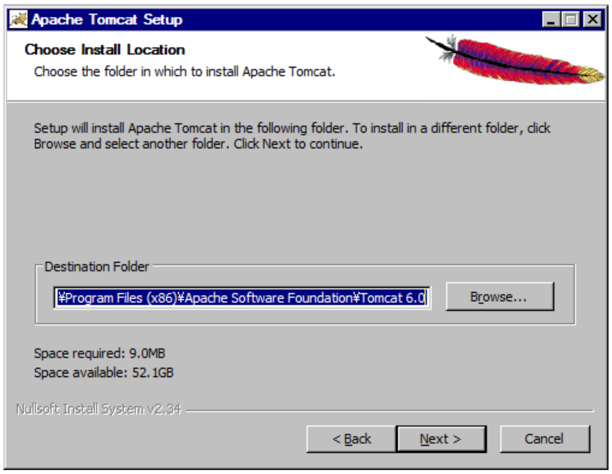
Description
Position your mouse over a component to see its description.

Space required: 9.3MB

Nullsoft Install System v2.46

(4)

Select (CL) [Next>].



Apache Tomcat Setup

Choose Install Location

Choose the folder in which to install Apache Tomcat.

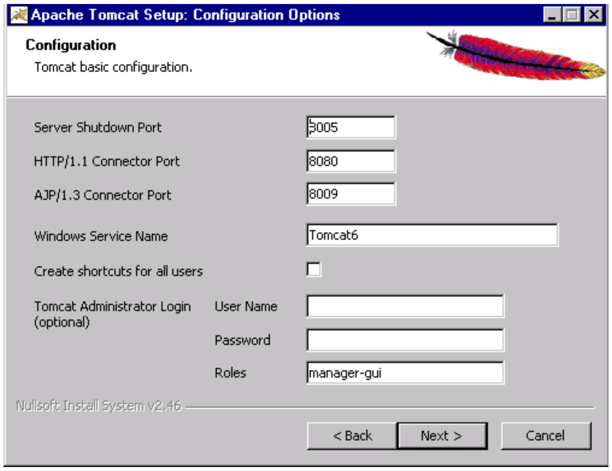
Setup will install Apache Tomcat in the following folder. To install in a different folder, click Browse and select another folder. Click Next to continue.

Destination Folder: ¥Program Files (x86)¥Apache Software Foundation¥Tomcat 6.0

Space required: 9.0MB
Space available: 52.1GB

This screen is displayed in OSS version 70-06-05/xx or later.

Select (CL) [Next>].



Apache Tomcat Setup: Configuration Options

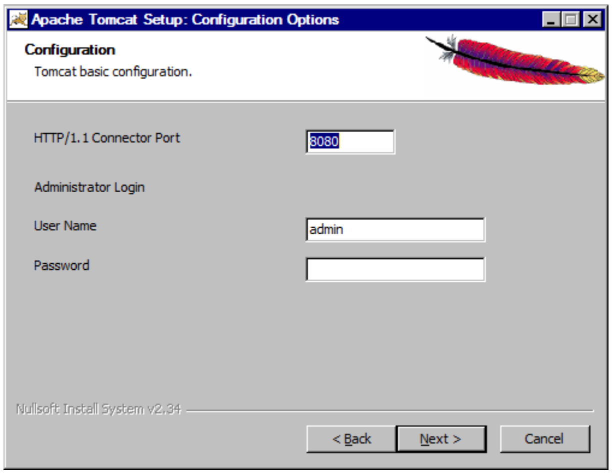
Configuration

Tomcat basic configuration.

Server Shutdown Port: 8005
HTTP/1.1 Connector Port: 8080
AJP/1.3 Connector Port: 8009
Windows Service Name: Tomcat6
Create shortcuts for all users: ☐
Tomcat Administrator Login (optional) User Name:
Password:
Roles: manager-gui

(5)

Select (CL) [Next>].



Apache Tomcat Setup: Configuration Options

Configuration

Tomcat basic configuration.

HTTP/1.1 Connector Port: 8080

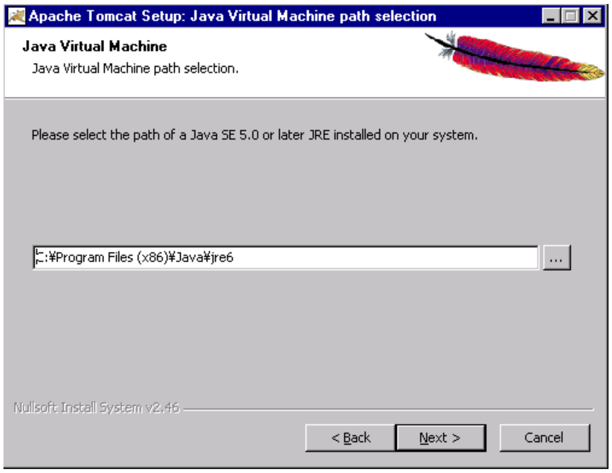
Administrator Login

User Name: admin

Password:

This screen is displayed in OSS version 70-06-05/xx or later.

Select (CL) [Next>].



Apache Tomcat Setup: Java Virtual Machine path selection

Java Virtual Machine

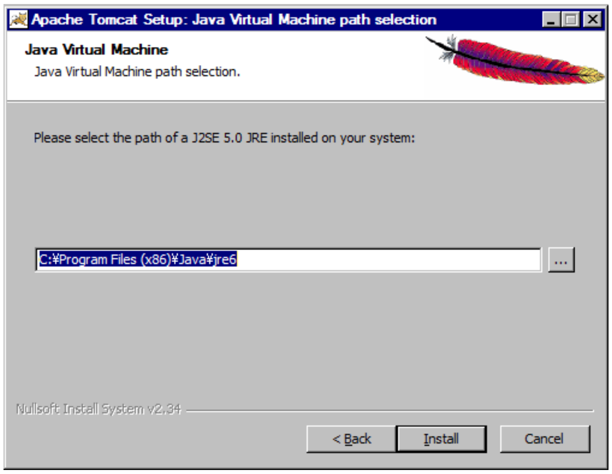
Java Virtual Machine path selection.

Please select the path of a Java SE 5.0 or later JRE installed on your system.

C:¥Program Files (x86)¥Java¥jre6

(6)

Select (CL) [Install].



Apache Tomcat Setup: Java Virtual Machine path selection

Java Virtual Machine

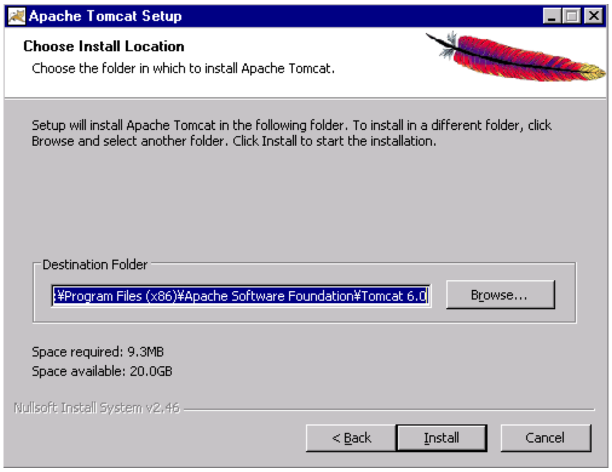
Java Virtual Machine path selection.

Please select the path of a J2SE 5.0 JRE installed on your system:

C:¥Program Files (x86)¥Java¥jre6

This screen is displayed in OSS version 70-06-05/xx or later.

Select (CL) [Install].



Apache Tomcat Setup

Choose Install Location

Choose the folder in which to install Apache Tomcat.

Setup will install Apache Tomcat in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.

Destination Folder

:¥Program Files (x86)¥Apache Software Foundation¥Tomcat 6.0

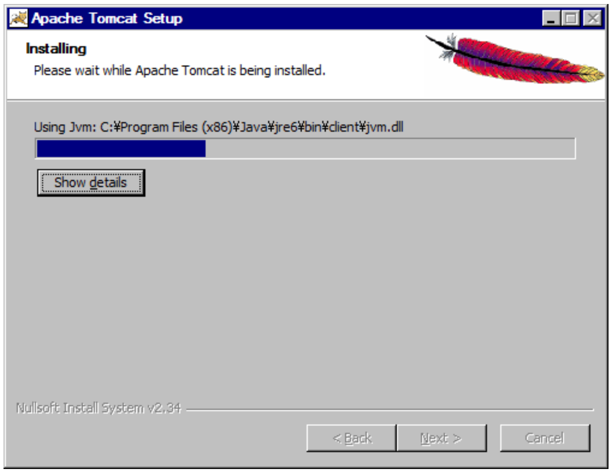
Space required: 9.3MB

Space available: 20.0GB

(7)

Wait while installing.

If the message, “The specified installation directory is not empty. Do you wish to continue?” is displayed, select (CL) [OK].



Apache Tomcat Setup

Installing

Please wait while Apache Tomcat is being installed.

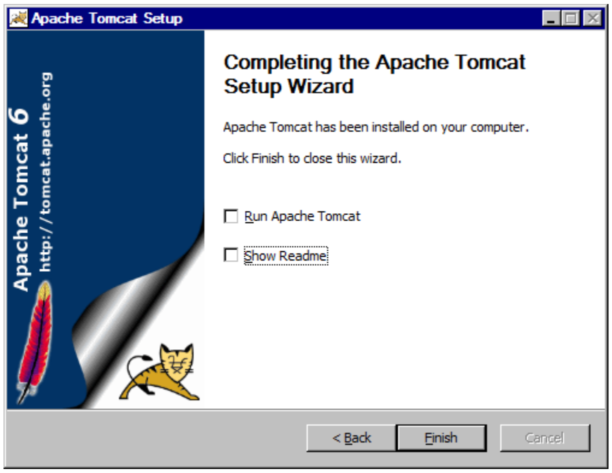
Using Jvm: C:¥Program Files (x86)¥Java¥jre6¥bin¥client¥jvm.dll

Nullsoft Install System v2.34

---

(8)

Uncheck all the checkboxes, and select (CL) [Finish].



Apache Tomcat Setup

Completing the Apache Tomcat Setup Wizard

Apache Tomcat has been installed on your computer.

Click Finish to close this wizard.

☐ Run Apache Tomcat

☐ Show Readme

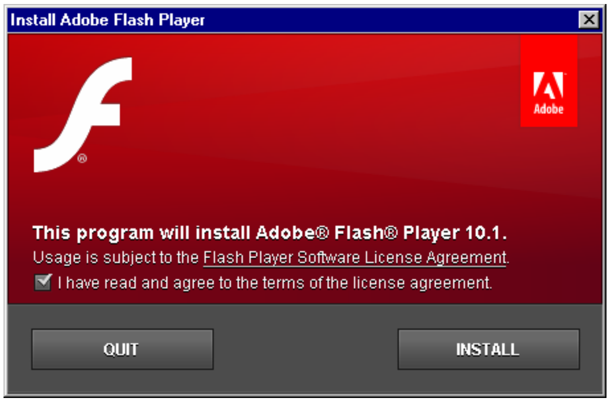
Notice:

- When installed Tomcat 6.0.41 (OSS versions 70-06-05/xx or later) in SVP, not downgrade SVP version less than 70-06-15/00.
  When downgrade SVP version less than 70-06-15/00, must install Tomcat version Tomcat 6.0.16 (OSS version less than 70-06-05/xx) before.
  (Refer to WEB CONSOLE SECTION “5.2.1 Uninstallation of Tomcat” (WEB05-30) and “5.2.2 Installation of Tomcat” (WEB05-61))
- If SVP is downgraded to less than 70-06-15/00 after installing Tomcat 6.0.41 (OSS media version 70-06-05/xx or later), SVP failure may occur.
  If SVP failure occurs, please refer to Technical Support Division.

3-8. Setting Up of Flash Player

Perform setting up operation of Flash Player.
When Flash Player has already been installed, go to Section 3-9.

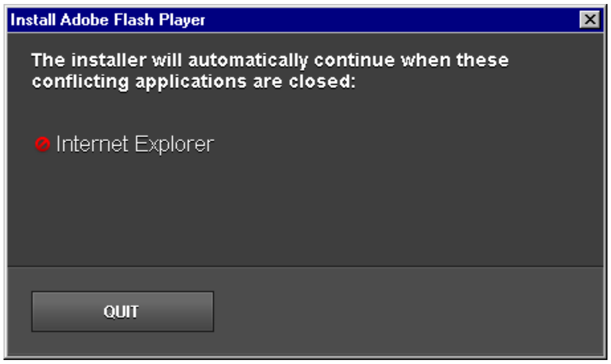
(1) Starting installation
Select (CL) [I have read and agree to the terms of the license agreement], and select (CL) [INSTALL].



This program will install Adobe® Flash® Player 10.1.
Usage is subject to the Flash Player Software License Agreement.
☑ I have read and agree to the terms of the license agreement.

---

(2) Finishing application
If some applications were using Flash Player, the application name is displayed.
Please finish the applications.

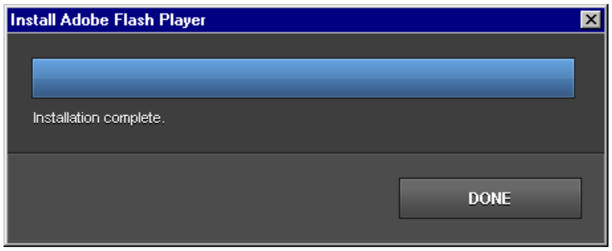


The installer will automatically continue when these conflicting applications are closed:

Internet Explorer

---

(3) Finishing installation
Select (CL) [DONE].

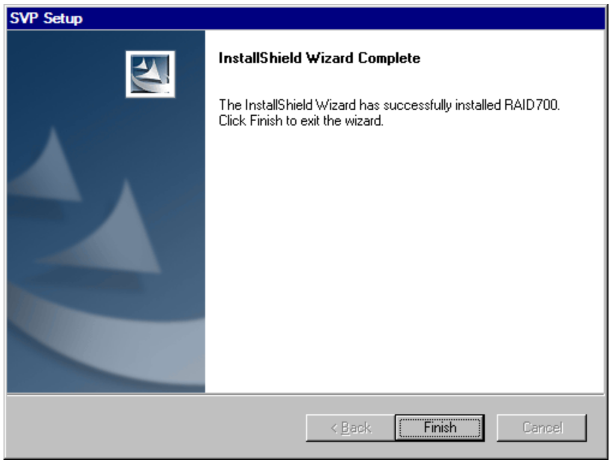


Installation complete.

3-9. <Restarting the SVP>

When the setting up is completed, the following window is displayed. Take out the CD-ROM and select (CL) [Finish]. The SVP is restarted (disconnected from the console PC).

After waiting for about five minutes, reconnect the console PC to the SVP that has been replaced.



InstallShield Wizard Complete

The InstallShield Wizard has successfully installed RAID700.
Click Finish to exit the wizard.

3-10. <Removing the JP1 Jumper>

When SVP High Reliability Support Kit is not set, remove the maintenance jumper that has been attached to the JP1 of the SVP.
When SVP High Reliability Support Kit is set go to the next step.

⚠ CAUTION

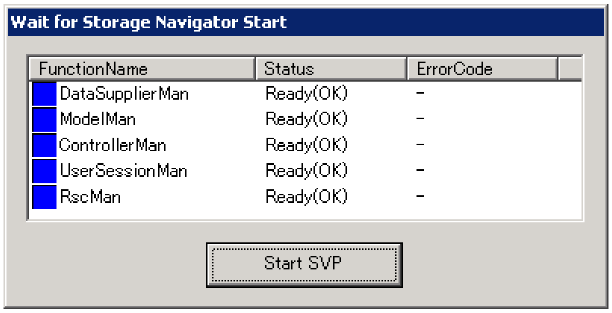
The SIM bf85a3, bf86a3 may be reported, however, it is not a problem because it is one of the normal processes of the SVP replacement.
Complete the SIM concerned.

3-11. <Setting the IP Address of the SVP>

(1) <Starting SVP program>

<When Web Console isn’t working>

Select (CL) [Start SVP].

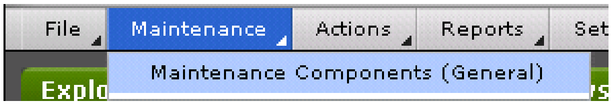


Wait for Storage Navigator Start

FunctionName	Status	ErrorCode
🟦 DataSupplierMan	Ready(OK)	-
🟦 ModelMan	Ready(OK)	-
🟦 ControllerMan	Ready(OK)	-
🟦 UserSessionMan	Ready(OK)	-
🟦 RscMan	Ready(OK)	-

<When Web Console is working>

Select (CL) [Maintenance]-[Maintenance Components (General)].

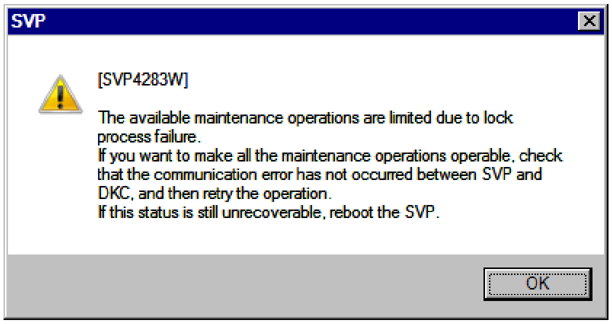


---

(2) <Mode change>

Select (CL) the [View Mode] of SVP main screen. When it becomes [Modify Mode (Unlocked)] and the next message is displayed, select (CL) the [OK] button and go to (3).

“The available maintenance operations are limited due to lock process failure. If you want to make all the maintenance operations operable, check that the communication error has not occurred between SVP and DKC, and then retry the operation. If this status is still unrecoverable, reboot the SVP.”.



SVP

[SVP4283W]

The available maintenance operations are limited due to lock process failure.
If you want to make all the maintenance operations operable, check that the communication error has not occurred between SVP and DKC, and then retry the operation.
If this status is still unrecoverable, reboot the SVP.

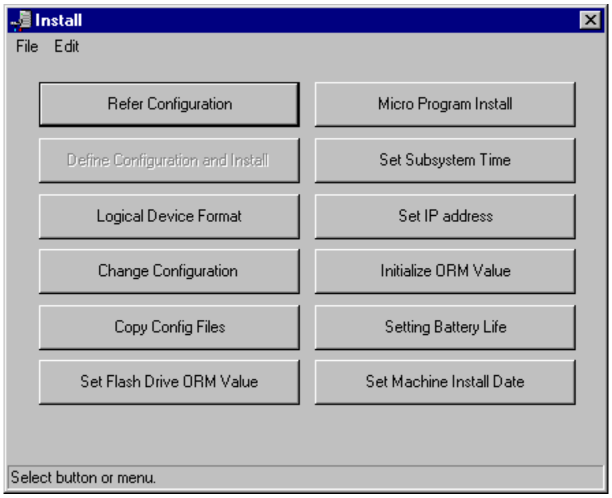
Select (CL) the [View Mode] of the SVP main screen. When it becomes to [Modify Mode] from [View Mode] too, select (CL) the [OK] button and go to (3).

---

(3) <Opening the ‘Install’ window>

Select (CL) [Install] in the [SVP] menu.

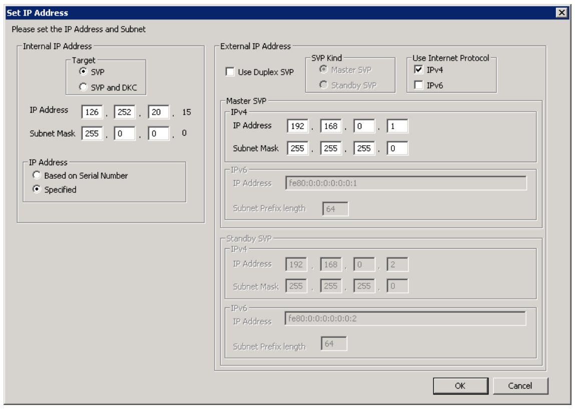
(4) <Selecting [Set SVP IP address]>
Select (CL) [Set IP address] in the 'Install' window.



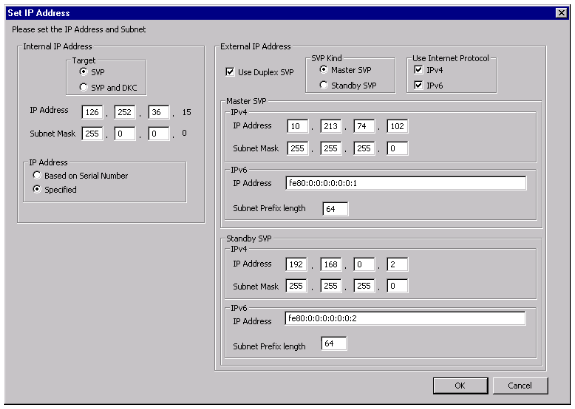
Note: Although it may be an error display if the Web Server Status window is displayed before the IP address setting work of SVP is completed, there is no problem because it is the one by the process of the SVP replacement.

(5) <Setting the IP address>
Select (CL) [SVP], make sure of the IP Address and Subnet Mask of the Internal IP Address and the External IP Address, and select (CL) the [OK] button.
When the “IP Address” and/or “Subnet Mask” are/is wrong, enter the correct one(s).

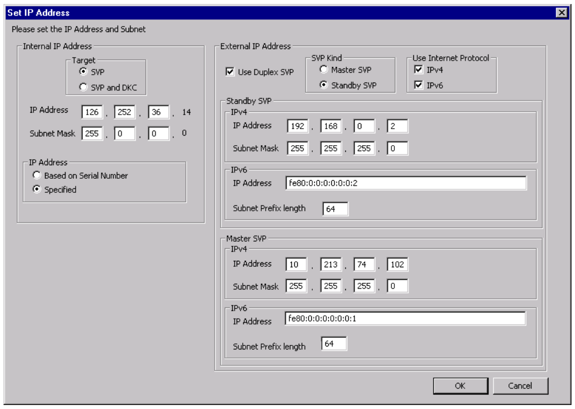
Note: Please select [OK] absolutely (CL). And, [Cancel] is not reflected in the setting.


Set IP Address
Please set the IP Address and Subnet
Internal IP Address
Target: ● SVP ○ SVP and DKC
IP Address 126 . 252 . 20 . 15
Subnet Mask 255 . 0 . 0 . 0
IP Address: ○ Based on Serial Number ● Specified
External IP Address
☐ Use Duplex SVP
SVP Kind: ● Master SVP ○ Standby SVP
Use Internet Protocol: ☑ IPv4 ☐ IPv6
Master SVP
IPv4
IP Address 192 . 168 . 0 . 1
Subnet Mask 255 . 255 . 255 . 0
IPv6
IP Address fe80:0:0:0:0:0:0:1
Subnet Prefix length 64
Standby SVP
IPv4
IP Address 192 . 168 . 0 . 2
Subnet Mask 255 . 255 . 255 . 0
IPv6
IP Address fe80:0:0:0:0:0:0:2
Subnet Prefix length 64

When SVP High Reliability Support Kit is not set


Set IP Address
Please set the IP Address and Subnet
Internal IP Address
Target: ● SVP ○ SVP and DKC
IP Address 126 . 252 . 36 . 15
Subnet Mask 255 . 0 . 0 . 0
IP Address: ○ Based on Serial Number ● Specified
External IP Address
☑ Use Duplex SVP
SVP Kind: ● Master SVP ○ Standby SVP
Use Internet Protocol: ☑ IPv4 ☑ IPv6
Master SVP
IPv4
IP Address 10 . 213 . 74 . 102
Subnet Mask 255 . 255 . 255 . 0
IPv6
IP Address fe80:0:0:0:0:0:0:1
Subnet Prefix length 64
Standby SVP
IPv4
IP Address 192 . 168 . 0 . 2
Subnet Mask 255 . 255 . 255 . 0
IPv6
IP Address fe80:0:0:0:0:0:0:2
Subnet Prefix length 64

When SVP High Reliability Support Kit is set
(in the Master SVP)

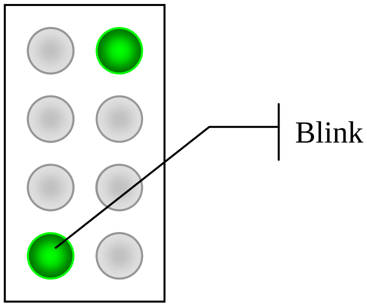

Set IP Address
Please set the IP Address and Subnet
Internal IP Address
Target: ● SVP ○ SVP and DKC
IP Address 126 . 252 . 36 . 14
Subnet Mask 255 . 0 . 0 . 0
IP Address: ○ Based on Serial Number ● Specified
External IP Address
☑ Use Duplex SVP
SVP Kind: ○ Master SVP ● Standby SVP
Use Internet Protocol: ☑ IPv4 ☑ IPv6
Standby SVP
IPv4
IP Address 192 . 168 . 0 . 2
Subnet Mask 255 . 255 . 255 . 0
IPv6
IP Address fe80:0:0:0:0:0:0:2
Subnet Prefix length 64
Master SVP
IPv4
IP Address 10 . 213 . 74 . 102
Subnet Mask 255 . 255 . 255 . 0
IPv6
IP Address fe80:0:0:0:0:0:0:1
Subnet Prefix length 64

When SVP High Reliability Support Kit is set
(in the Standby SVP)

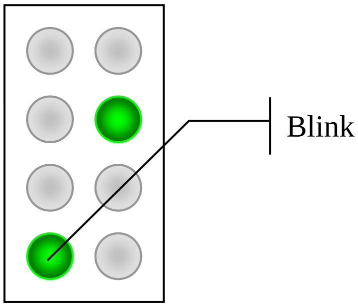
Note: When setting the High Reliability kit, select (CL) “Use Duplex SVP”.

You can use the LED of SVP to verify the SVP, which is in operation and is not to be replaced, whether it is the master one or the standby one and whether it is in operation or not (for more information, see section SVP).

State of LED at SVP usually

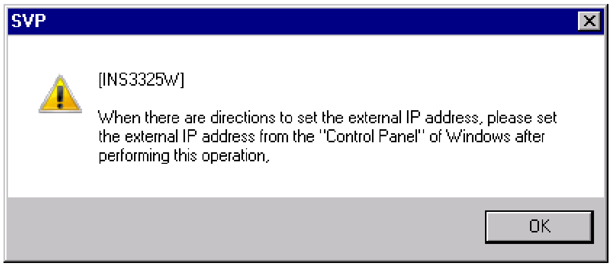


State of LED at standby



If the SVP, which is in operation, is a master one, select (CL) “Standby SVP” for the replaced SVP.
If the SVP, which is in operation, is a standby one, select (CL) “Master SVP” for the replaced SVP.

(6) <Making sure of the setting of the external IP address>
When a message, “When there are directions to set the external IP address, please set the external IP address from the “Control Panel” of Windows after performing this operation,” is displayed, select (CL) the [OK] button.

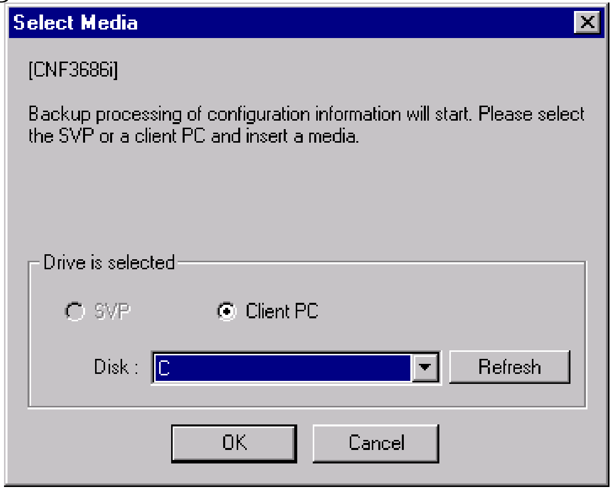


[INS3325W]

When there are directions to set the external IP address, please set the external IP address from the "Control Panel" of Windows after performing this operation.

---

(7) <Inserting the medium containing the configuration information>
Insert the medium containing the configuration information in the specified location and select (CL) the [OK] button.



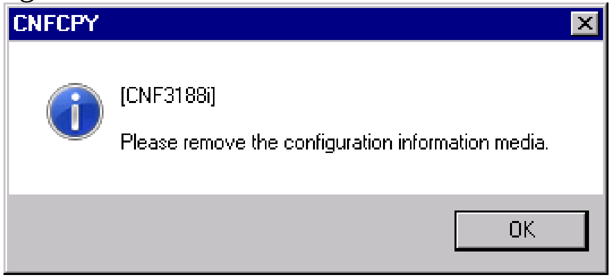
[CNF3686i]

Backup processing of configuration information will start. Please select the SVP or a client PC and insert a media.

Disk : C

---

(8) <Taking out the medium containing the configuration information>
When the copying of the configuration information is completed, a message, “Please remove the configuration information media.” is displayed.
Take out the medium containing the configuration information and select (CL) the [OK] button.

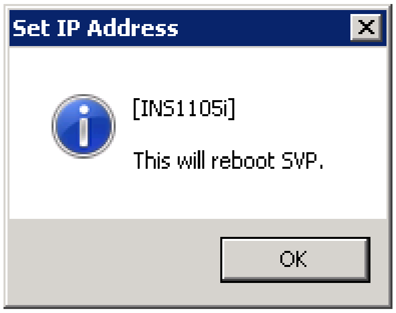


[CNF3188i]

Please remove the configuration information media.

(9) <Making sure of the restart of the SVP>
Select (CL) the [OK] button.

The SVP is disconnected from the console PC.
After waiting for about five minutes, reconnect the SVP that has been replaced to the console PC.

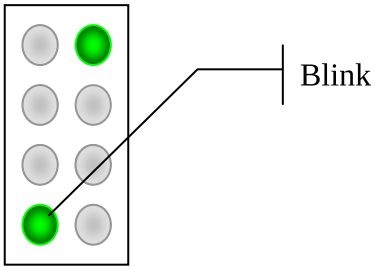


[INS1105i]

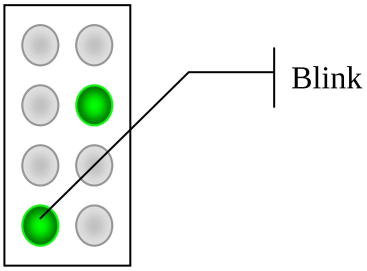
This will reboot SVP.

(10)< LED state confirmation of SVP >
It confirms it with LED of SVP. Please do over again from (2) when you turn off LED.

State of LED at SVPusually



State of LED at standby SVP



[Connection destination]

- When SVP High Reliability Support Kit is not set: xxx.xxx.xxx.15
- When SVP High Reliability Support Kit is set:
  When the Master SVP was replaced: xxx.xxx.xxx.15
  When the Standby SVP was replaced: xxx.xxx.xxx.14

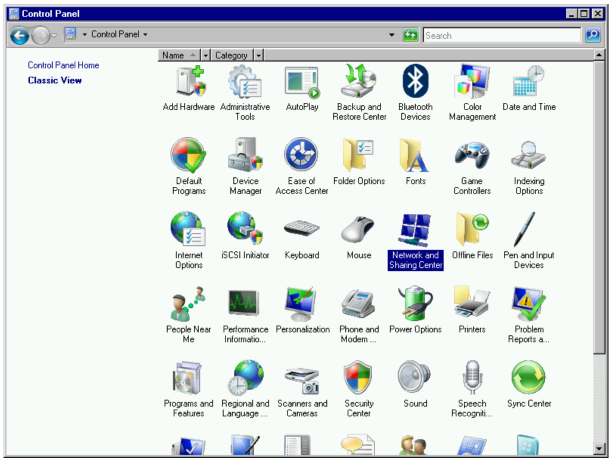
Note: If the IP address of the Console PC has been changed to 126.255.255.x, reset to the original IP address before connection.

When the SVP, which is an object of the operation, cannot be detected, retry the connection after a while (about one minute).

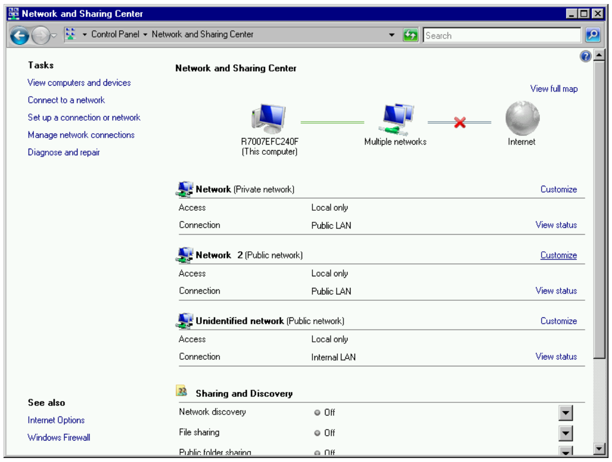
(11) <Setting the external IP address>

(a) <Opening the Control Panel window>
Select (DR) [Settings]-[Control Panel] from the [Start] menu.

(b) <Opening the Network and Sharing Center window>
Select (CL) [Network and Sharing Center] in the ‘Control Panel’ window.



(c) <Opening the Manage network connections window>
Select (CL) [Manage network connections] in the ‘Network and Sharing Center’ window.



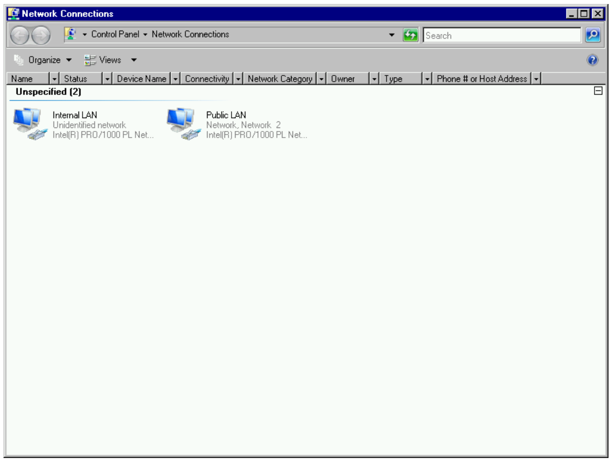
Network (Private network) Customize
Access Local only
Connection Public LAN View status

Network 2 (Public network) Customize
Access Local only
Connection Public LAN View status

Unidentified network (Public network) Customize
Access Local only
Connection Internal LAN View status

Sharing and Discovery
Network discovery ○ Off
File sharing ○ Off
Public folder sharing ○ Off

(d) <Opening the Public LAN Properties window>
Select (CL) [Public LAN] in the ‘Network Connections’ window and select (CL) [Properties] by clicking the right mouse button.

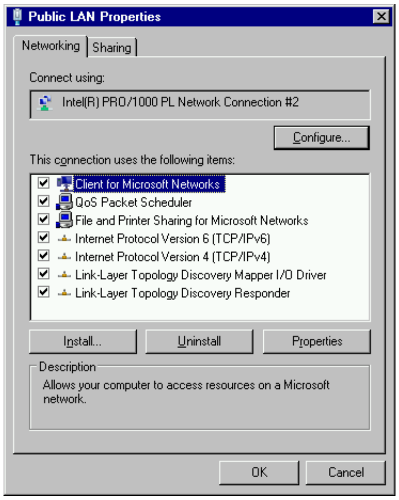


Internal LAN
Unidentified network
Intel(R) PRO/1000 PL Net...

Public LAN
Network, Network 2
Intel(R) PRO/1000 PL Net...

(e)

Select (CL) [Internet Protocol Version 4 (TCP/IPv4)] in the ‘Public LAN Properties’ window and select (CL) the [Properties] button.

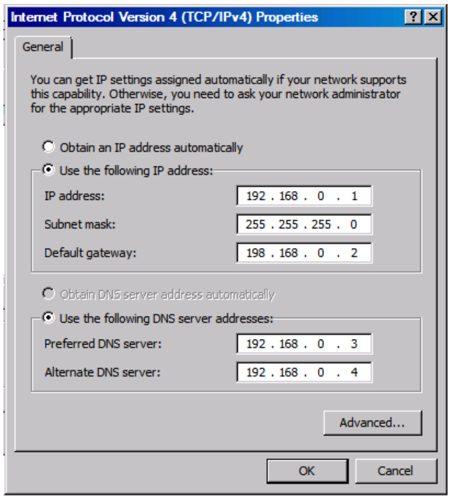

Public LAN Properties

Connect using:
Intel(R) PRO/1000 PL Network Connection #2

This connection uses the following items:
- ☑ Client for Microsoft Networks
- ☑ QoS Packet Scheduler
- ☑ File and Printer Sharing for Microsoft Networks
- ☑ Internet Protocol Version 6 (TCP/IPv6)
- ☑ Internet Protocol Version 4 (TCP/IPv4)
- ☑ Link-Layer Topology Discovery Mapper I/O Driver
- ☑ Link-Layer Topology Discovery Responder

Description
Allows your computer to access resources on a Microsoft network.

(f) <Setting the external IP address>
Set the “IP address”, “Subnet mask”, “Default gateway”, “Preferred DNS server” and “Alternate DNS server” and select (CL) the [OK] button.
When you do not set IPv6, go to step (i).


Internet Protocol Version 4 (TCP/IPv4) Properties

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically
● Use the following IP address:

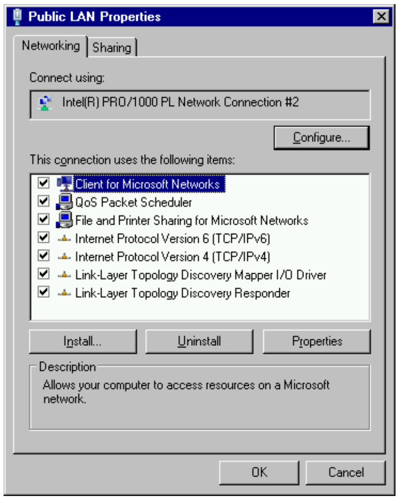
IP address:	192 . 168 . 0 . 1
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	198 . 168 . 0 . 2

○ Obtain DNS server address automatically
● Use the following DNS server addresses:

Preferred DNS server:	192 . 168 . 0 . 3
Alternate DNS server:	192 . 168 . 0 . 4

(g)

Select (CL) [Internet Protocol Version 6 (TCP/IPv6)] in the ‘Public LAN Properties’ window and select (CL) the [Properties] button.

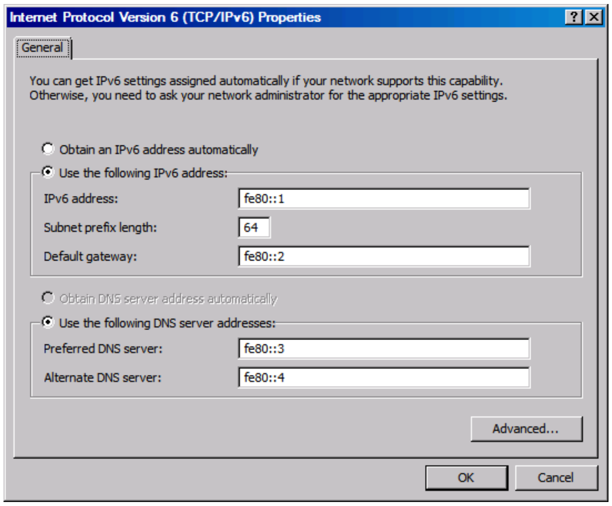

Public LAN Properties

Connect using:
Intel(R) PRO/1000 PL Network Connection #2

This connection uses the following items:
- ☑ Client for Microsoft Networks
- ☑ QoS Packet Scheduler
- ☑ File and Printer Sharing for Microsoft Networks
- ☑ Internet Protocol Version 6 (TCP/IPv6)
- ☑ Internet Protocol Version 4 (TCP/IPv4)
- ☑ Link-Layer Topology Discovery Mapper I/O Driver
- ☑ Link-Layer Topology Discovery Responder

Description
Allows your computer to access resources on a Microsoft network.

(h) <Setting the external IP address>
Set the
“IPv6 address”,
“Subnet prefix length” ,
“Default gateway”,
“Preferred DNS server” and
“Alternate DNS server” and select
(CL) the [OK] button.



You can get IPv6 settings assigned automatically if your network supports this capability.
Otherwise, you need to ask your network administrator for the appropriate IPv6 settings.

○ Obtain an IPv6 address automatically
● Use the following IPv6 address:

IPv6 address: fe80::1
Subnet prefix length: 64
Default gateway: fe80::2

○ Obtain DNS server address automatically
● Use the following DNS server addresses:

Preferred DNS server: fe80::3
Alternate DNS server: fe80::4

(i)
After the setting is completed, select (CL) the [OK] button in the “Public LAN Properties” window.
Close the ‘Manage network connections’ window.

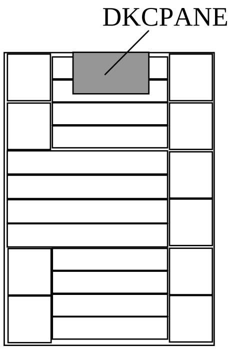
3-12. <Removing the JP1 Jumper and connection of cable (2)>

When SVP High Reliability Support Kit is set, remove the maintenance jumper that has been attached to the JP1 of the SVP.
When SVP High Reliability Support Kit is not set, go to 3-17.

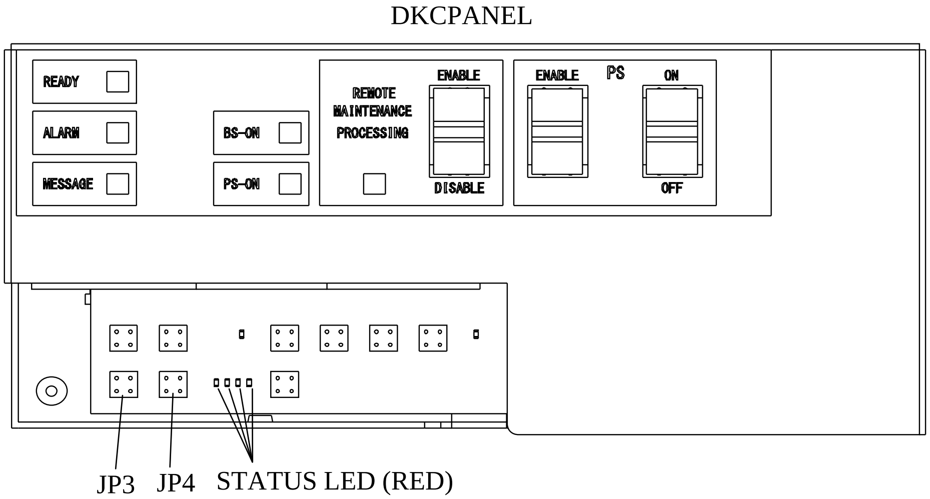
3-13. <Resetting the SSVP>

When the SVP high-reliability kit is set, insert the maintenance jumper into SSVP ALARM RESET jumper (JP3) on the DKCPANEL more than one second. And then, remove the maintenance jumper. Confirm that four SSVP STATUS LED of DKCPANEL turns on and turns off the light.

When a dump is necessary, carry it out earlier than SSVP reset.
Please set the maintenance jumper in JP4 of DKC PANEL, and remove the jumper. (Refer to LOC06-40)

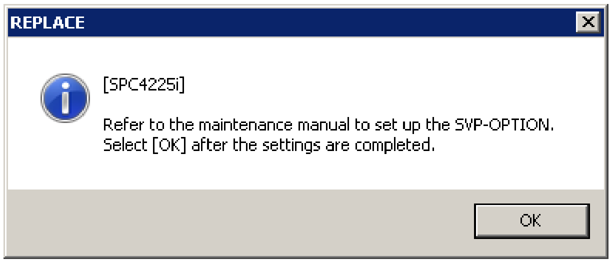


Front view of DKC



3-14. <Post operation of STANDBY SVP replace>

When SVP High Reliability Support Kit is set and replaced STANDBY SVP, switch to MASTER SVP (IP address: xxx.xxx.xxx.15), select (CL) the [OK] for “Refer to the maintenance manual to set up the SVP-OPTION. Select [OK] after the settings are completed.” after setting the SVP.

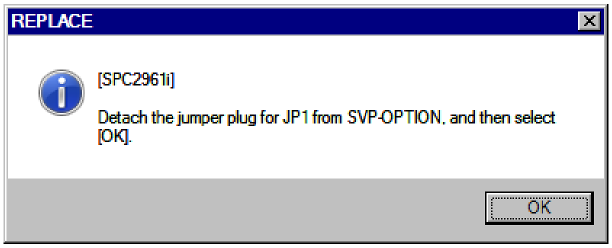


[SPC4225i]

Refer to the maintenance manual to set up the SVP-OPTION.
Select [OK] after the settings are completed.

3-14-1. <Detach the JP1>

Confirm that the JP1 was detached and select (CL) the [OK].

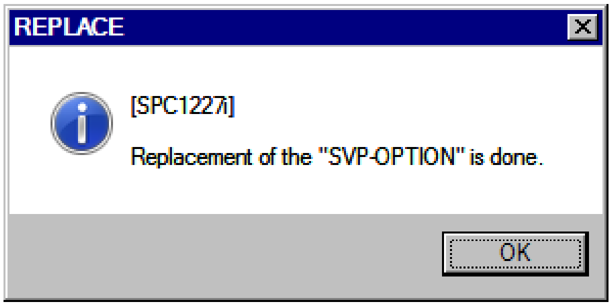


[SPC2961i]

Detach the jumper plug for JP1 from SVP-OPTION, and then select [OK].

3-14-2. <Replacement of the SVP PC is done>

Select (CL) the [OK] for “Replacement of the “SVP-XXXXX” is done.”.



[SPC1227i]

Replacement of the "SVP-OPTION" is done.

3-15. <Transferring the Configuration Information>

When SVP High Reliability Support Kit is set, transfer the configuration information. (When the Master SVP has been replaced, do the same in order to make sure of the setting of the Master SVP.)

Perform the following operation for the Master SVP (IP address: xxx.xxx.xxx.15)

When the SVP, which is an object of the operation, cannot be detected, retry the connection after a while (about one minute).

3-15-1. <Configuration Information Transfer>

This function is valid when the SVP High Reliability Kit is installed.

Notice: This operation needs that Standby SVP is a View mode.

Notice: When screen saver operates (60 minutes pass without operation) with a Standby SVP having been connected to the remote desktop, this operation fails.

Execute the following operation for Master SVP.

---

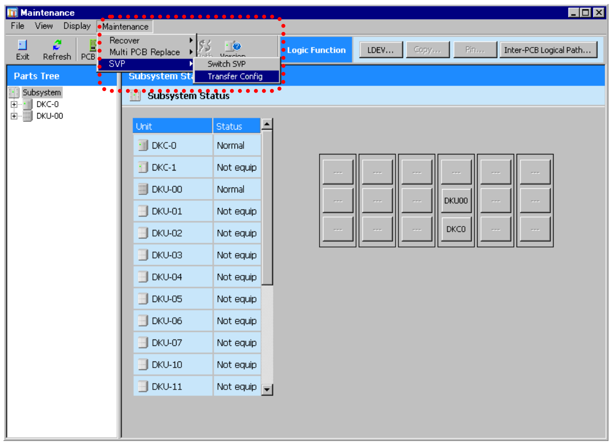
(1) <Execute Maintenance>

When the Master SVP was replaced, change the mode to [Modify Mode].
Select (CL) the [Maintenance] button.
When the Standby SVP was replaced, go to (2).

---

(2)

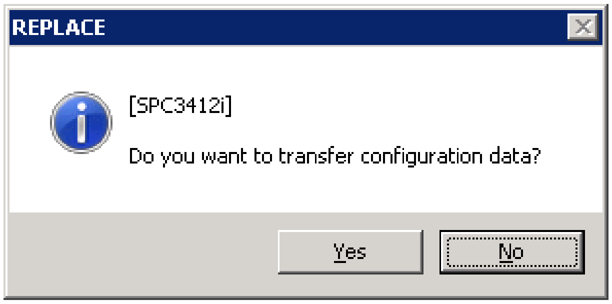
Select (CL) [Maintenance]-[SVP]-[Transfer Config] from the menu.



Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

(3)

Select (CL) [Yes] for the message “Do you want to transfer configuration data?”.



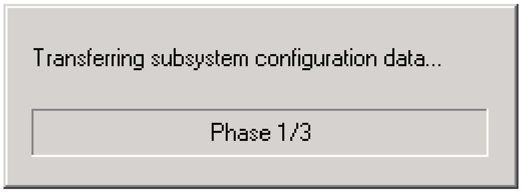
[SPC3412i]

Do you want to transfer configuration data?

---

(4)

The message “Transferring subsystem configuration data...” is displayed.



Transferring subsystem configuration data...

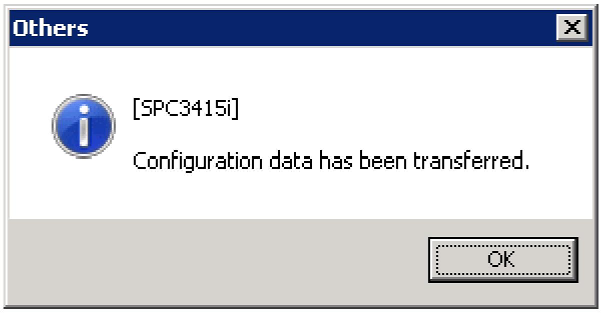
Phase 1/3

The SVP transfers the configuration information automatically to reflect the configuration information of the master SVP on the standby side SVP. Therefore, if the transfer processing of the configuration information overlaps, the actually transferred status display may be repeated.

---

(5)

When configuration data has been transferred, the message “Configuration data has been transferred.” is displayed. Select (CL) [OK].
If errors occur on the way, check the problems of connection and setting of the replaced SVP (Standby).



[SPC3415i]

Configuration data has been transferred.

---

(6)

Close the “Maintenance” window.

---

(7)

Change the SVP mode to [View Mode].

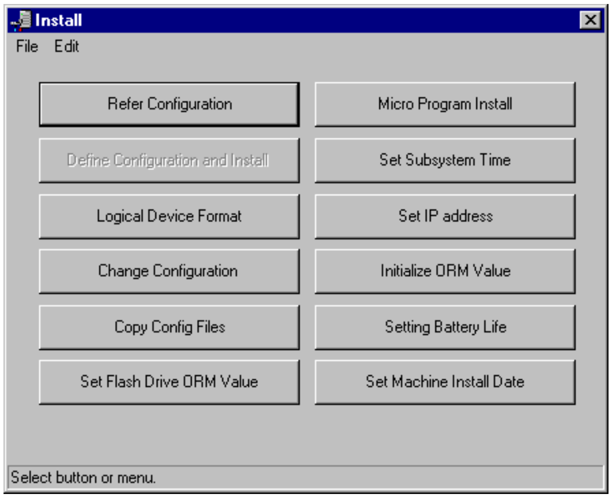
3-16. <Setting the TOD>

When SVP High Reliability Support Kit is not set or Master SVP is replaced after SVP High Reliability Support Kit is set, set the TOD after the message, “Loading SVP Program... SVP requests to DKC cannot be performed presently. Please wait...” disappears.
When SVP High Reliability Support Kit is set, go to the next step.

(1) <Changing the mode>
Change the mode to Modify Mode.

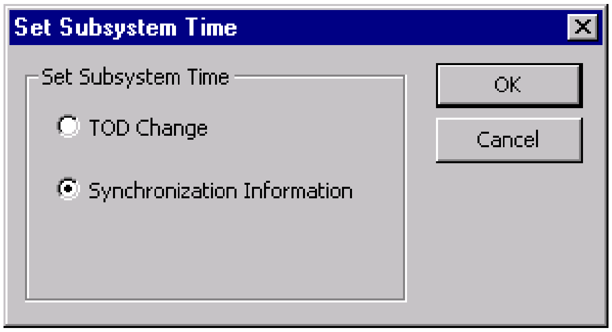
(2) <Opening the ‘Install’ window>
Select (CL) [Install] in the [SVP] menu.

(3) <Selecting [Set Subsystem Time] >
Select (CL) [Set Subsystem Time] in the ‘Install’ window.



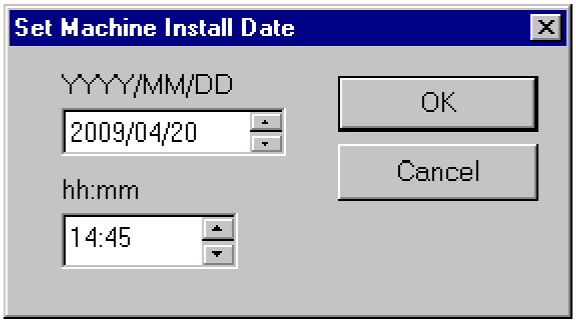
Select button or menu.

(4)
Select (CL) [TOD Change] in the ‘Set Subsystem Time’ window, and then select (CL) [OK].



(5)

Enter a date (year, month, and day) and time (hours, minutes, and seconds), and then select (CL) the [OK] button.



---

(6)

Close the 'Install' window.

3-17. <Loading the configuration information from the SM to an HDD of the SVP>

When SVP High Reliability Support Kit is not set, load the configuration information from the SM to an HDD of the SVP.

When SVP High Reliability Support Kit is set, go to the next step.

---

(1) <Opening the 'Maintenance' window>

Select (CL) [Maintenance] from the "SVP" window.

---

(2)

Make sure that the message, "Connection error occurred SVP-DKC," is not displayed.

If the above message is displayed, refer to page TRBL05-80.

---

(3) <Selecting [Exit]>

Select (CL) [File] from the 'Maintenance' window.

Select (CL) the [Exit] button.

3-18. <Setting the Web Console>

If the customer don't use Web Console (Storage Navigator), 3-18-3 and 3-18-4 are not required.

If the customer uses neither Web Console nor SNMP Agent, 3-18-1,2,3 and 3-18-4 are not required.

3-18-1. <Setting the Web Console>

3-18-1.1. Setting IP Address and Network

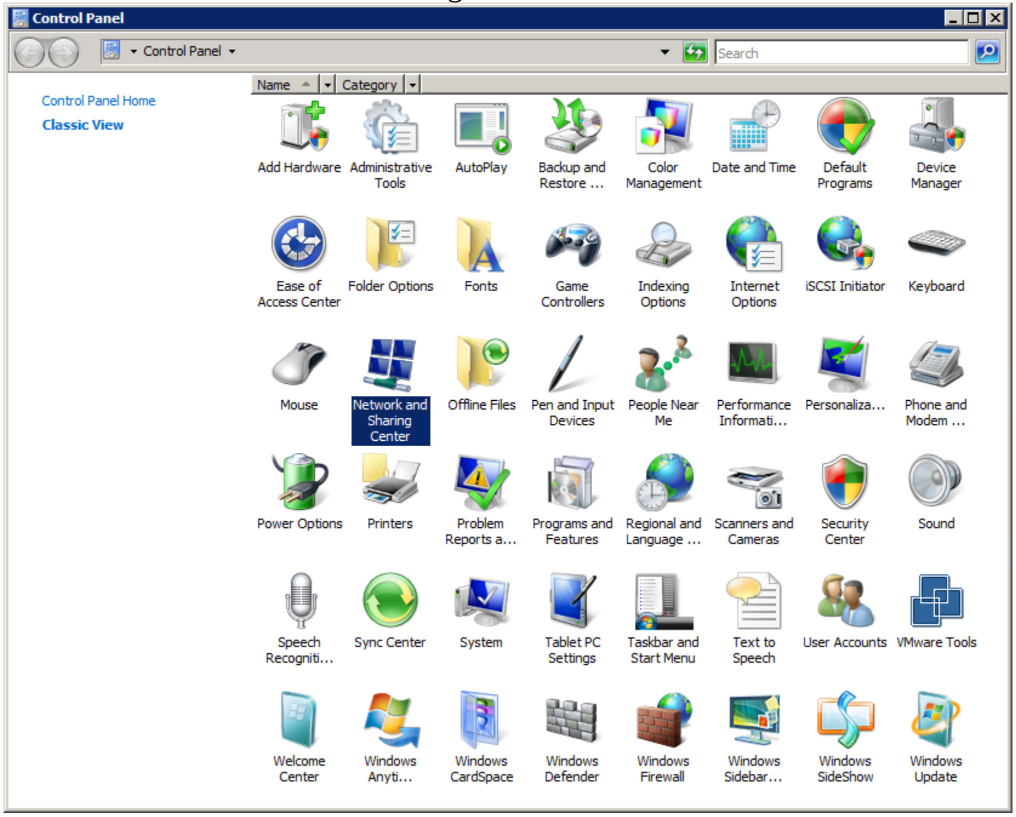
When using Web Console from a remote personal computer or using the SNMP Agent function, a connection to an external LAN and a setting of a network is required (See LOC04-70).
Please setup according to the worksheet which the user’s administrator indicated at the time of a new Installation.
Please setup the contents which took the duplicate from a set up on SVP before REPLACE.

Note: Don’t change connection name. If you do so, Web Console will not work.

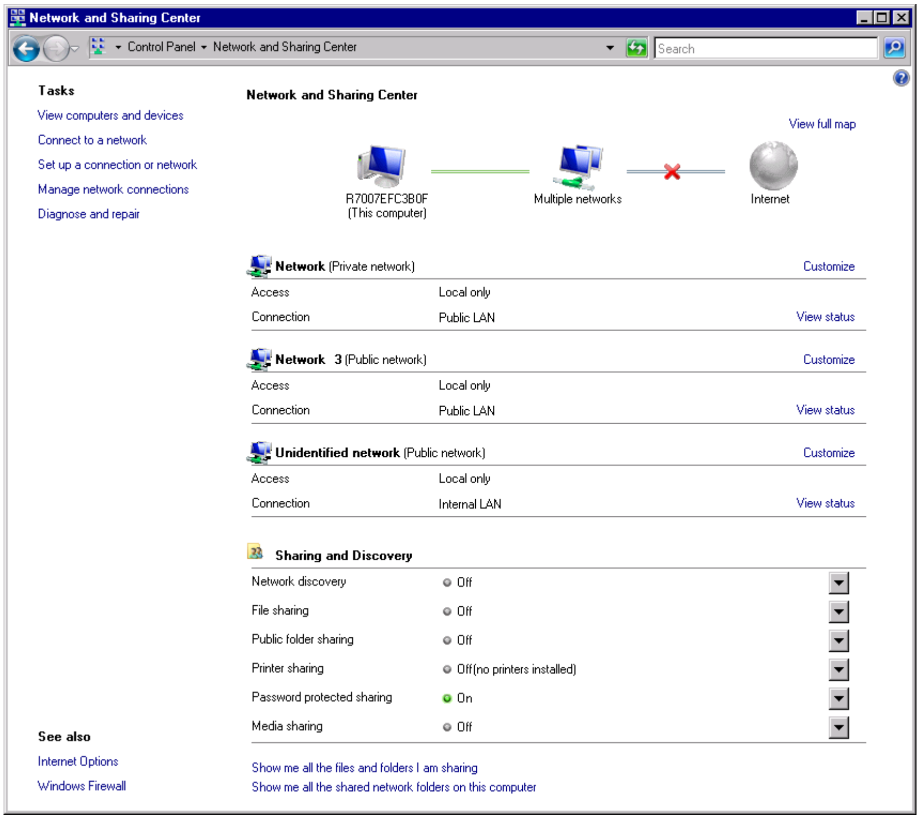
(1) <Setting IP address>

(a) Opening the Control Panel window
Select (CL) [Control Panel] from the [Start]-[Settings] menu.

(b) Opening the Network and Sharing Center window
Double-click [Network and Sharing Center] in the ‘Control Panel’ window.



(c) Opening the Manage network connections window
Select (CL) [Manage network connections] in the left side of ‘Network and Sharing Center’ window.


Network and Sharing Center
Control Panel ▸ Network and Sharing Center
Search
Tasks
View computers and devices
Connect to a network
Set up a connection or network
Manage network connections
Diagnose and repair
See also
Internet Options
Windows Firewall
View full map
R7007EFC3B0F
(This computer)
Multiple networks
Internet
Customize
View status
Show me all the files and folders I am sharing
Show me all the shared network folders on this computer

Network and Sharing Center

Network (Private network)

Access	Local only
Connection	Public LAN

Network 3 (Public network)

Access	Local only
Connection	Public LAN

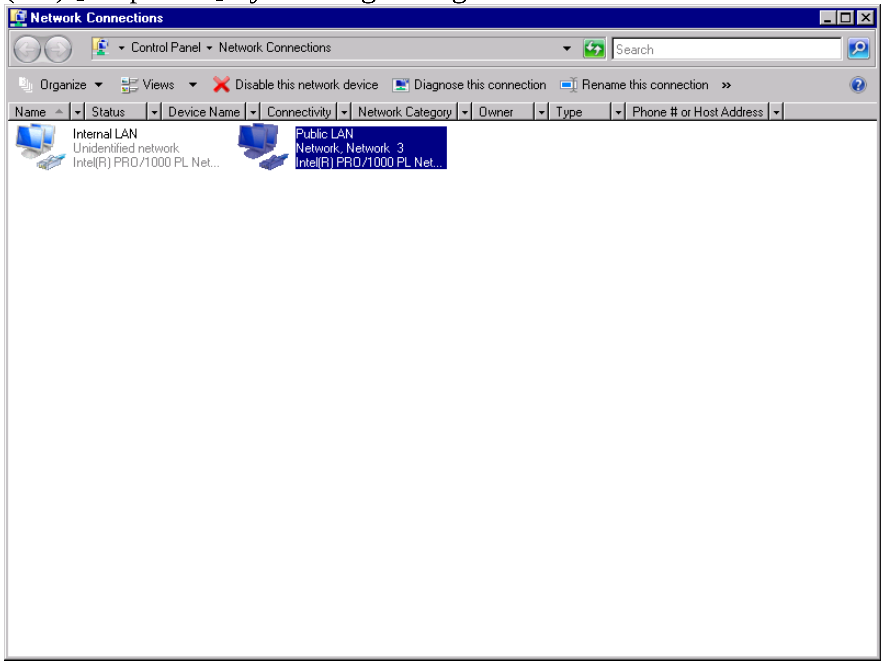
Unidentified network (Public network)

Access	Local only
Connection	Internal LAN

Sharing and Discovery

Network discovery	○ Off
File sharing	○ Off
Public folder sharing	○ Off
Printer sharing	○ Off(no printers installed)
Password protected sharing	● On
Media sharing	○ Off

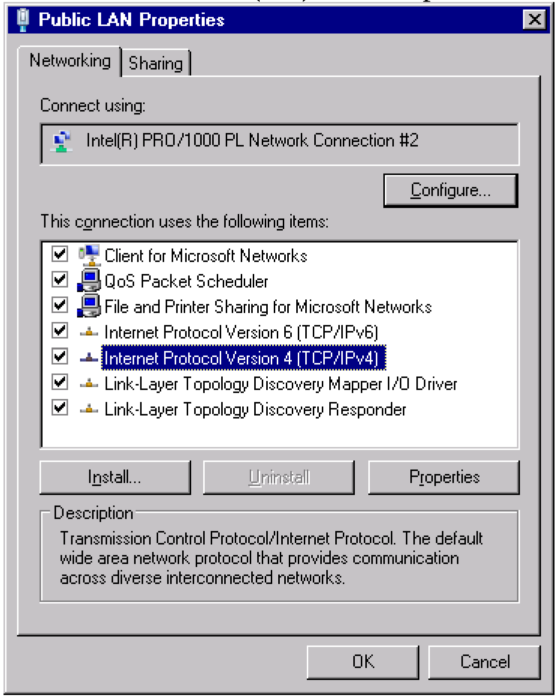
(d) Opening the Public LAN Properties window
Select (CL) [Public LAN Properties] in the ‘Network Connections’ window and select (CL) [Properties] by clicking the right mouse button.



Internal LAN
Unidentified network
Intel(R) PRO/1000 PL Net...

Public LAN
Network, Network 3
Intel(R) PRO/1000 PL Net...

(e) Opening the Internet Protocol Version 4 (TCP/IPv4) Properties window
Select (CL) [Internet Protocol Version 4 (TCP/IPv4)] in the ‘Public LAN Properties’ window and select (CL) the [Properties] button.

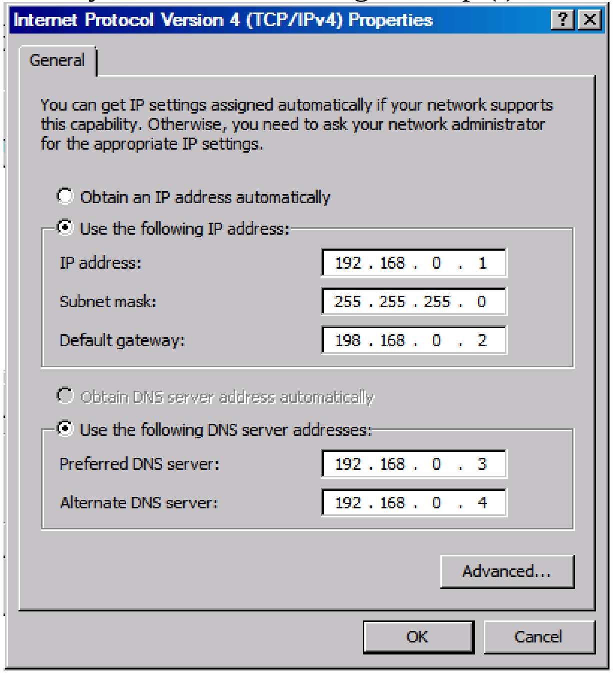

Public LAN Properties

Connect using:
Intel(R) PRO/1000 PL Network Connection #2

This connection uses the following items:
- ☑ Client for Microsoft Networks
- ☑ QoS Packet Scheduler
- ☑ File and Printer Sharing for Microsoft Networks
- ☑ Internet Protocol Version 6 (TCP/IPv6)
- ☑ Internet Protocol Version 4 (TCP/IPv4)
- ☑ Link-Layer Topology Discovery Mapper I/O Driver
- ☑ Link-Layer Topology Discovery Responder

Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

(f) Setting the external IP address
Set the “IP address”, “Subnet mask”, “Default gateway”, “Preferred DNS server” and “Alternate DNS server” and select (CL) the [OK] button.
When you do not set IPv6, go to step (i).


Internet Protocol Version 4 (TCP/IPv4) Properties

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

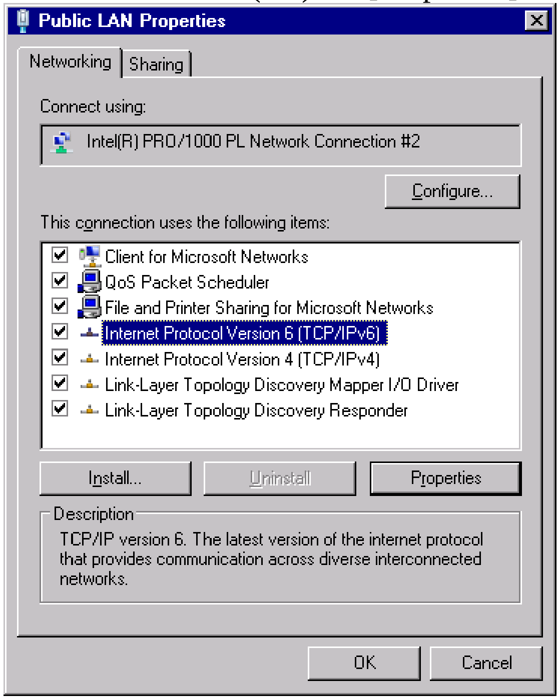
○ Obtain an IP address automatically
● Use the following IP address:

IP address: 192 . 168 . 0 . 1
Subnet mask: 255 . 255 . 255 . 0
Default gateway: 198 . 168 . 0 . 2

○ Obtain DNS server address automatically
● Use the following DNS server addresses:

Preferred DNS server: 192 . 168 . 0 . 3
Alternate DNS server: 192 . 168 . 0 . 4

(g) Opening the Internet Protocol Version 6 (TCP/IPv6) Properties window
Select (CL) [Internet Protocol Version 6 (TCP/IPv6)] in the ‘Public LAN Properties’ window and select (CL) the [Properties] button.

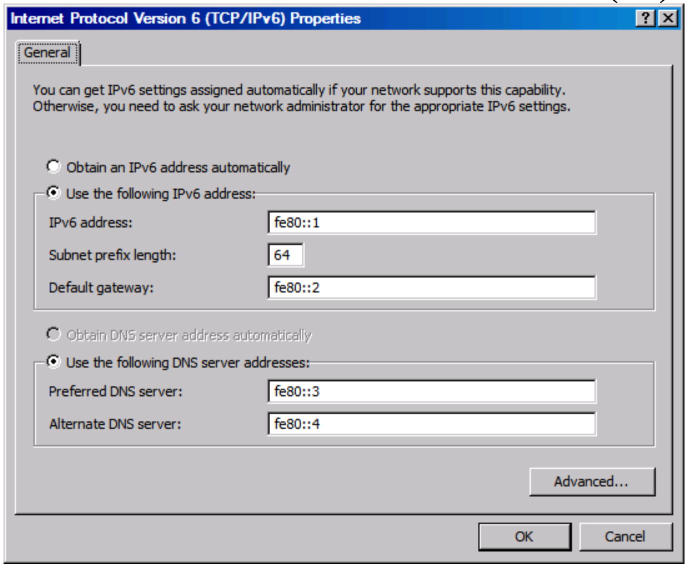


Connect using:
Intel(R) PRO/1000 PL Network Connection #2

This connection uses the following items:
- ☑ Client for Microsoft Networks
- ☑ QoS Packet Scheduler
- ☑ File and Printer Sharing for Microsoft Networks
- ☑ Internet Protocol Version 6 (TCP/IPv6)
- ☑ Internet Protocol Version 4 (TCP/IPv4)
- ☑ Link-Layer Topology Discovery Mapper I/O Driver
- ☑ Link-Layer Topology Discovery Responder

Description
TCP/IP version 6. The latest version of the internet protocol that provides communication across diverse interconnected networks.

(h) Setting the external IP address
Set the “IPv6 address”, “Subnet prefix length”, “Default gateway”, “Preferred DNS server” and “Alternate DNS server” and select (CL) the [OK] button.



You can get IPv6 settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IPv6 settings.

○ Obtain an IPv6 address automatically
● Use the following IPv6 address:
IPv6 address: fe80::1
Subnet prefix length: 64
Default gateway: fe80::2

○ Obtain DNS server address automatically
● Use the following DNS server addresses:
Preferred DNS server: fe80::3
Alternate DNS server: fe80::4

(i) Closing the window
After the setting is completed, select (CL) the [OK] button in the “Public LAN Properties” window.
Close the ‘Manage network connections’ window.

(2) <Setting Network Connection Properties>
Checking whether the setting of the network (setting of Config) must be changed or not. Ask the customer about the setting of the switch (HUB) connected to the SVP. When the case is not the above, terminate the operation by selecting (CL) the [OK] button.

There is a case where the setting must be changed depending on the customer's environment. The case where the change is required is as follows.

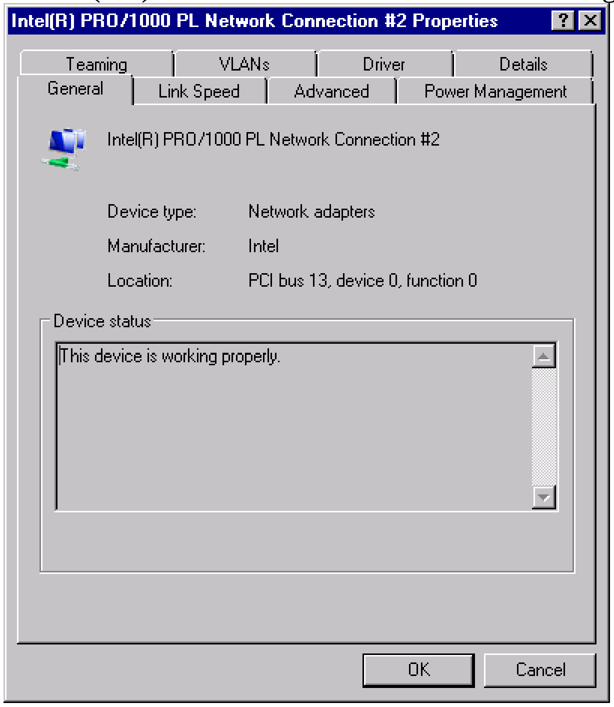
(Normally, no setting change is required.)

When the switch (HUB), setting of which is fixed as '100M Full Duplex', is connected to the PC of the SVP.

Note: The setting of the SVP made is "Auto Negotiation".

(a) Opening the configuration windows
Select (CL) the [Configure] button in the window for Step (1) (d), Step (1) (g).

(b) Switching the tab
After the [Configure] button is pressed, the following window is displayed.
Select (CL) the 'Advanced' tab in the following window.

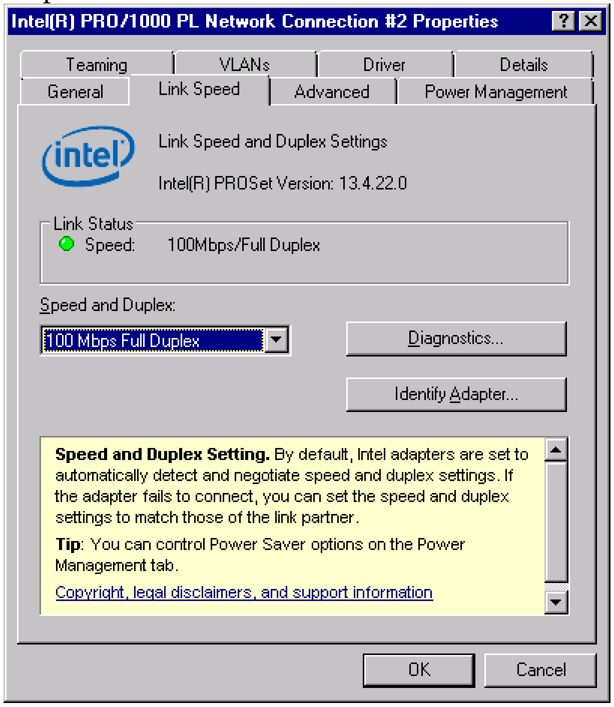


Intel(R) PRO/1000 PL Network Connection #2

Device type: Network adapters
Manufacturer: Intel
Location: PCI bus 13, device 0, function 0

This device is working properly.

(c) Setting the Connection Properties
After the ‘Advanced’ tab is selected, the following window is displayed.
Change the value of ‘Speed and Duplex’ from ‘Auto Detect’ to ‘100Mbps Full Duplex’.



Link Speed and Duplex Settings

Intel(R) PROSet Version: 13.4.22.0

Link Status
Speed: 100Mbps/Full Duplex

Speed and Duplex: 100 Mbps Full Duplex

Speed and Duplex Setting. By default, Intel adapters are set to automatically detect and negotiate speed and duplex settings. If the adapter fails to connect, you can set the speed and duplex settings to match those of the link partner.

Tip: You can control Power Saver options on the Power Management tab.

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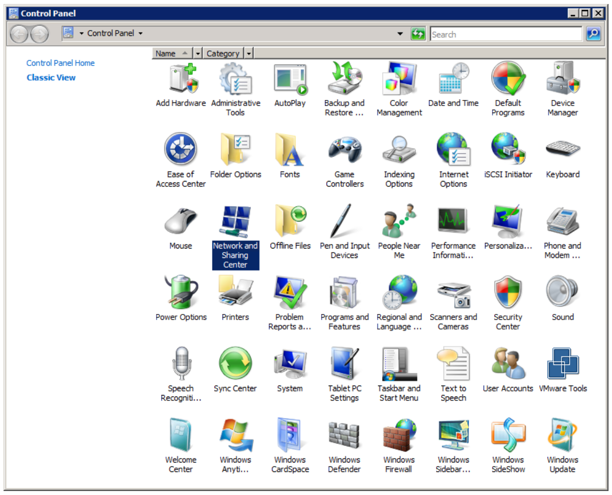
(d) Applying the settings and closing the window
Return the window to ‘Public LAN Properties’ by pressing (CL) the [OK] button and close the window by pressing the [OK] button.

When you use Web Console only with the IPv6 connection, set it referring to next step.

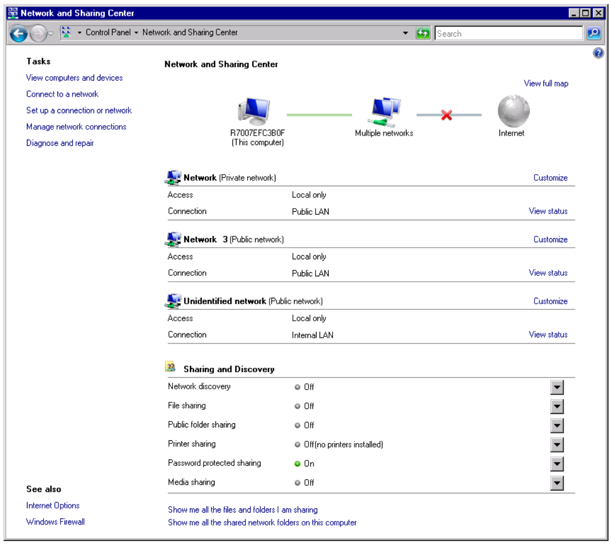
Perform the following when using Web Console only with IPv6.

(1) Launch the Network and Sharing Center
Select (CL) [Start]-[Settings]-[Control Panel] and launch (double-click) the "Network and Sharing Center".



---

(2) Launch the Network Connections
Select (CL) "Manage network connections".



Network and Sharing Center

Network (Private network)
Access Local only
Connection Public LAN

Network 3 (Public network)
Access Local only
Connection Public LAN

Unidentified network (Public network)
Access Local only
Connection Internal LAN

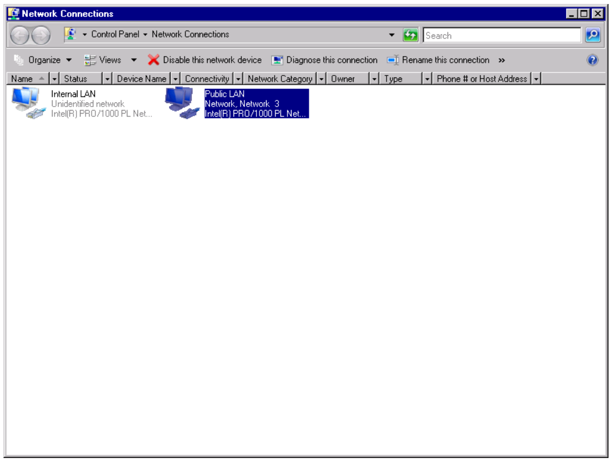
Sharing and Discovery

Network discovery	○ Off
File sharing	○ Off
Public folder sharing	○ Off
Printer sharing	○ Off(no printers installed)
Password protected sharing	● On
Media sharing	○ Off

Show me all the files and folders I am sharing
Show me all the shared network folders on this computer

---

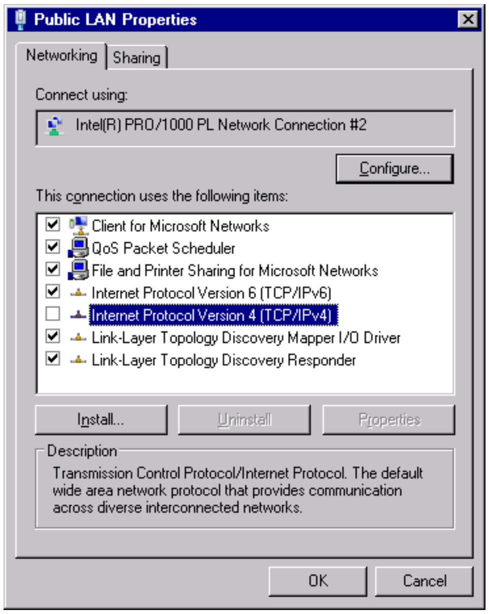
(3) Open the Connection Properties window
Right-click on the icon of "Public LAN" and select "Properties" from the displayed popup menu. Select (CL) "Continue" when the confirmation window is displayed.



Internal LAN
Unidentified network
Intel(R) PRO/1000 PL Net...

Public LAN
Network, Network 3
Intel(R) PRO/1000 PL Net...

(4) Set properties
When the property is displayed, uncheck the checkbox of “Internet Protocol Version 4 (TCP/IPv4)” in the list. Select (CL) [OK] and close the window.



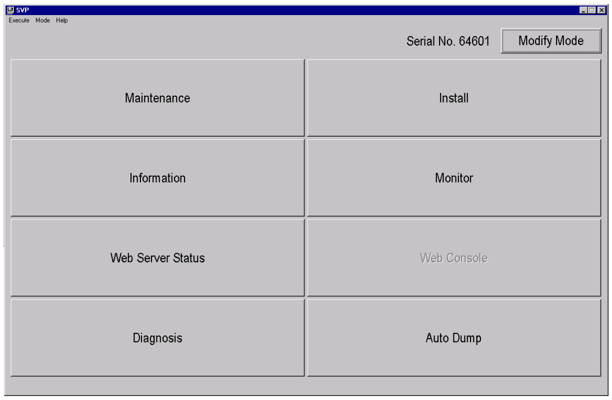
Connect using:
Intel(R) PRO/1000 PL Network Connection #2

This connection uses the following items:
- ☑ Client for Microsoft Networks
- ☑ QoS Packet Scheduler
- ☑ File and Printer Sharing for Microsoft Networks
- ☑ Internet Protocol Version 6 (TCP/IPv6)
- ☐ Internet Protocol Version 4 (TCP/IPv4)
- ☑ Link-Layer Topology Discovery Mapper I/O Driver
- ☑ Link-Layer Topology Discovery Responder

Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

---

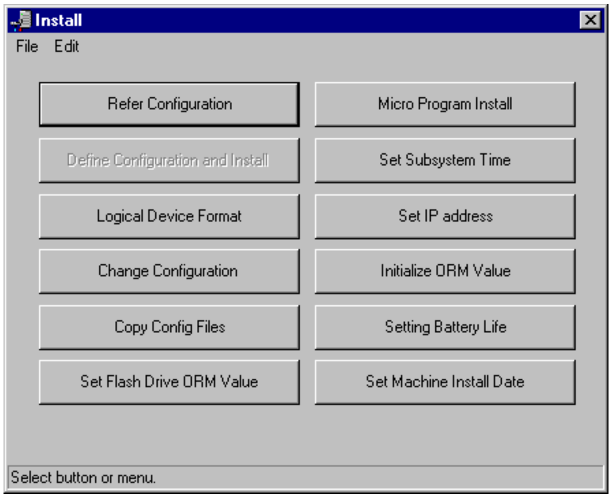
(5) Operate SVP window
Change to [Modify Mode].



Serial No. 64601

---

(6) Open Install window
Select (CL) [Install] from [SVP].

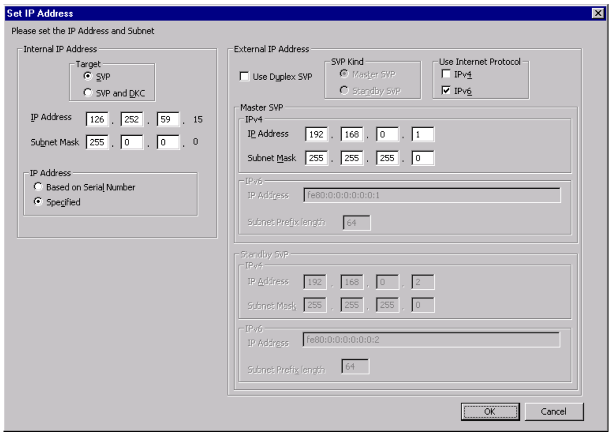


Select button or menu.

(7) Set SVP properties
Select (CL) [Set IP address] from the 'Install' window.
Check the checkbox of IPv4 of "Use Internet Protocol".
Uncheck the checkbox of IPv4 of "Use Internet Protocol".

Select (CL) the [OK] button.

Note: Please select [OK] absolutely (CL). And, [Cancel] is not reflected in the setting.



Set IP Address

Please set the IP Address and Subnet

Internal IP Address
Target: ● SVP ○ SVP and DKC
IP Address 126 . 252 . 59 . 15
Subnet Mask 255 . 0 . 0 . 0
IP Address: ○ Based on Serial Number ● Specified

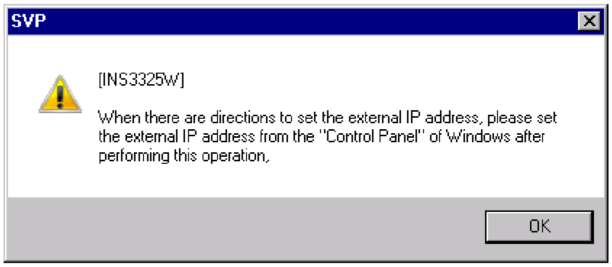
External IP Address
☐ Use Duplex SVP
SVP Kind: ● Master SVP ○ Standby SVP
Use Internet Protocol: ☐ IPv4 ☑ IPv6

Master SVP
IPv4
IP Address 192 . 168 . 0 . 1
Subnet Mask 255 . 255 . 255 . 0
IPv6
IP Address fe80:0:0:0:0:0:0:1
Subnet Prefix length 64

Standby SVP
IPv4
IP Address 192 . 168 . 0 . 2
Subnet Mask 255 . 255 . 255 . 0
IPv6
IP Address fe80:0:0:0:0:0:0:2
Subnet Prefix length 64

---

(8) <Making sure of the setting of the external IP address>
When a message, "When there are directions to set the external IP address, please set the external IP address from the "Control Panel" of Windows after performing this operation," is displayed, select (CL) the [OK] button.



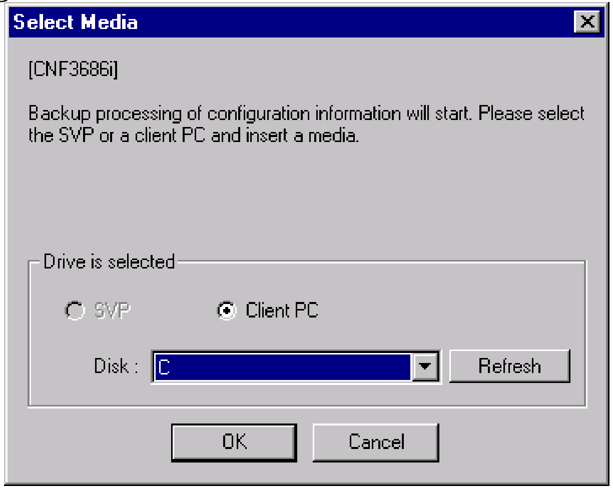
SVP

[INS3325W]

When there are directions to set the external IP address, please set the external IP address from the "Control Panel" of Windows after performing this operation.

---

(9) <Inserting the medium containing the configuration information>
Insert the medium containing the configuration information in the specified location and select (CL) the [OK] button.



Select Media

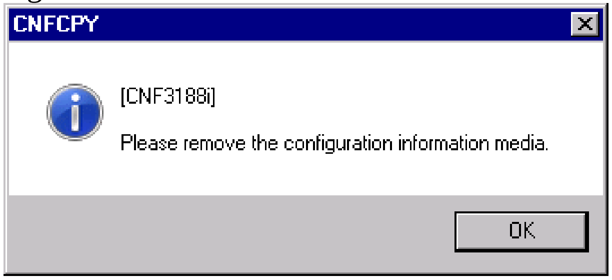
[CNF3686I]

Backup processing of configuration information will start. Please select the SVP or a client PC and insert a media.

Drive is selected
○ SVP ● Client PC
Disk : C

(10) <Taking out the medium containing the configuration information>

When the copying of the configuration information is completed, a message, “Please remove the configuration information media.” is displayed.
Take out the medium containing the configuration information and select (CL) the [OK] button.



[CNF3188i]

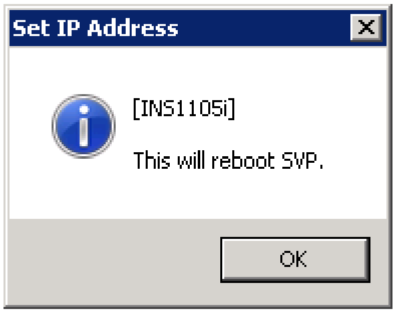
Please remove the configuration information media.

---

(11) <Making sure of the restart of the SVP>

Select (CL) the [OK] button.

The SVP is disconnected from the console PC.
After waiting for about five minutes, reconnect the SVP that has been replaced to the console PC.



[INS1105i]

This will reboot SVP.

3-18-1.2. Check of Configuring Web Console over a Firewall

When you connect Web Console and the SVP over a firewall, make sure to connect them through the following TCP/IP port numbers to configure the firewall:

- FTP (File Transfer Protocol): 21 (TCP)
- HTTP (Hypertext Transfer Protocol): 80 (TCP)
- SNMP (Simple Network Management Protocol): 161 (UDP)
- SLP (Service Location Protocol): 427 (TCP)
- HTTPs (Hypertext Transfer Protocol over Secure Socket Layer): 443 (TCP)
- RMI (Remote Method Invocation): 1099 (TCP)
- SMI-S: 5989 (TCP)
- RMI: 51099 (TCP)
- RMI: 51100 (TCP)

Ask the customer to configure network setting as necessary.

Notice: If the operating system of your Web Console computer is Windows Vista, you must configure a firewall so that Web Console and the SVP can communicate through these ports because Windows Vista uses a firewall by default.

3-18-2. <Setting SNMP>

① Please perform the following procedure, when you use SNMP Agent.

1. Select (CL) the following menu item on Web Console.
   [Settings]-[Environmental Setting]-[SNMP Information...]
2. Select (CL) [mode change] button to change from View mode into Modify mode.
3. Select (CL) [Apply] button after checking Extension SNMP.

② Please perform the following procedure, when you don’t use SNMP Agent.

1. Select (CL) the following menu item on Web Console.
   [Settings]-[Environmental Setting]-[SNMP Information...]
2. Select (CL) [mode change] button to change from View mode into Modify mode.
3. Select (CL) [Apply] button after un-checking Extension SNMP.
4. Select (CL) [Edit Storage System] button on Web Console.
5. Set Name / Contact / Location again and then select (CL) [Apply] button after your confirmation.

Refer to “Hitachi SNMP Agent User Guide” “The operation of SNMP” to know how to setting.

3-18-3. <Setting the user account information and the environment setting information>

(The setting is not required if the SVP High Reliability Support Kit is set.)
Ask the customer to restore the user account information and the environment setting information of Web Console using the backup which he/she is keeping.
If the backup is not kept, ask him/her to reset it.
Please refer to “Hitachi Storage Navigator User Guide” “New Users”, “Environment Parameters”, and “Restoring Backups of Configuration Files” for the restoration method and the setting method.

3-18-4. <Setting Audit Log>

When the customer is using the Syslog function of Audit Log or the FTP transfer function, request the customer to restore it by using the backup that he/she is keeping.
If the backup is not kept, ask him/her to reset it.
Please refer to “Hitachi Audit Log User Guide” “Transferring audit log files to FTP servers”, “Transferring audit log files to syslog servers”, and “Hitachi Storage Navigator User Guide” “Restoring Backups of the Configuration Files” for the restoration method and the setting method.

3-19. <Backing Up the Configuration Information>

In the case where SVP High Reliability Support Kit is not set and where SVP High Reliability Support Kit is set and the Master SVP has been replaced, make a backup of the configuration information (See “3-19-1 Config Backup”).
In the case where SVP High Reliability Support Kit is set and the Standby SVP has been replaced, go to 3-20.

3-19-1. <Config Backup>

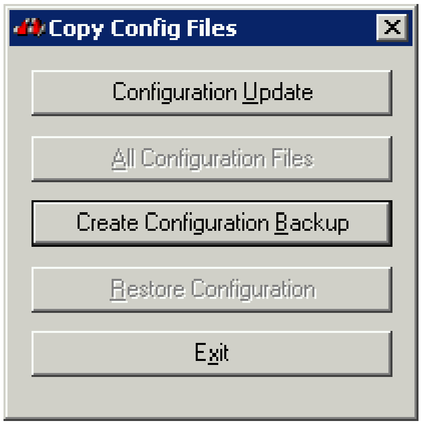
(1)

Select (CL) [Install] in the 'SVP' window and select (CL) [Copy Config Files] in the 'Install'.

---

(2)

Select (CL) [Create Configuration Backup] in the 'Copy Config Files'.

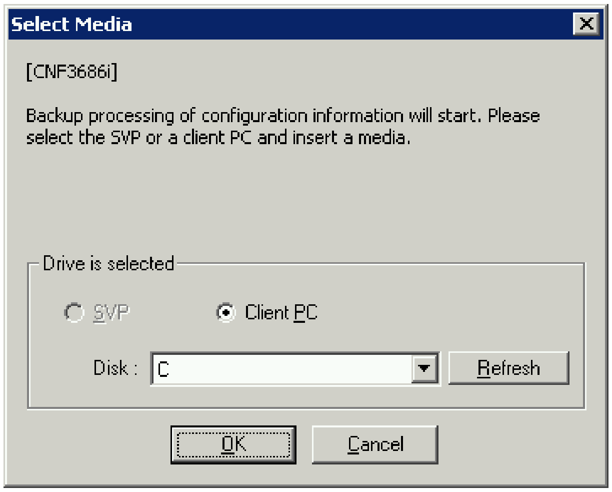


---

(3)

Execute an operation for backing up the configuration information.
Prepare the removable media for backup and insert the media.
Please select (CL) the [Refresh] button, and update drive information.
Select (CL) the drive and the PC in which the media was inserted. Select (CL) the [OK] button.

Note: For the procedure of backing up the configuration information to a CD-R, see step 3-19-2.



[CNF3686i]

Backup processing of configuration information will start. Please select the SVP or a client PC and insert a media.

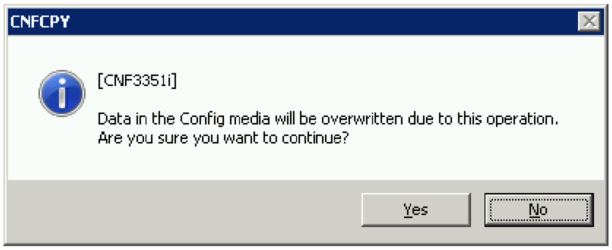
○ SVP ● Client PC

Disk : C

---

(4)

When you want to continue the process, select the [Yes] button. When the backup to the Config media is not necessary, select the [No] button.

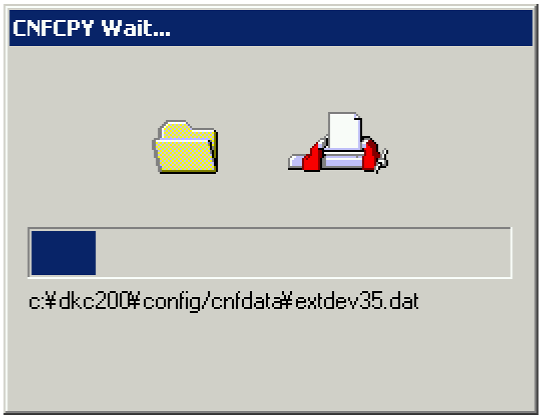


[CNF3351i]

Data in the Config media will be overwritten due to this operation.
Are you sure you want to continue?

(5)

Backup the configuration information to the Config media for backup. While this operation is being done, the 'CNFCPY Wait...' window is displayed.

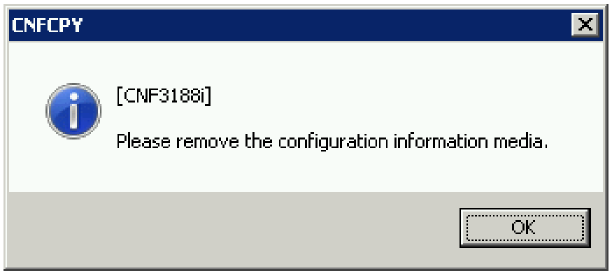


c:¥dkc200¥config/cnfdata¥extdev35.dat

---

(6)

After the Config media is pulled out, select (CL) the [OK] in response to the message "Please remove the configuration information media.".



[CNF3188i]

Please remove the configuration information media.

---

(7)

Select (CL) [Exit] of the 'Copy Config Files' to finish this operation.

3-19-2. <Storing a backup of configuration information (config) to a CD-R>

(1)

To store a backup of the config, prepare a blank CD-R.

---

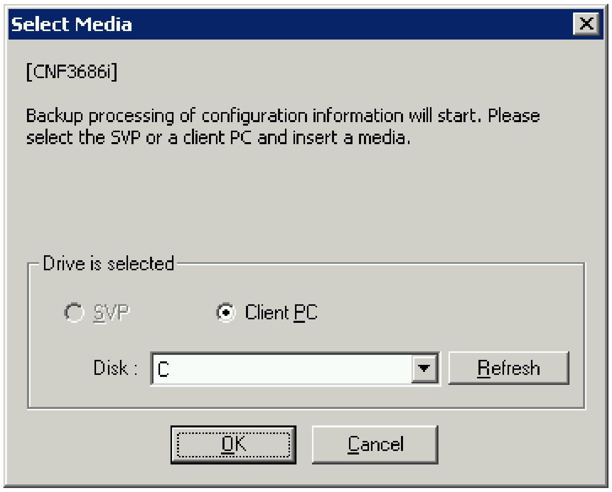
(2)

If the DKC200 directory exists in the root of the hard disk (C drive) of the client PC to which the backup of the config is stored temporarily, delete the DKC200 directory.

---

(3)

Perform the backup processing of the config.
Select the drive (C drive) prepared in (2).



[CNF3686i]

Backup processing of configuration information will start. Please select the SVP or a client PC and insert a media.

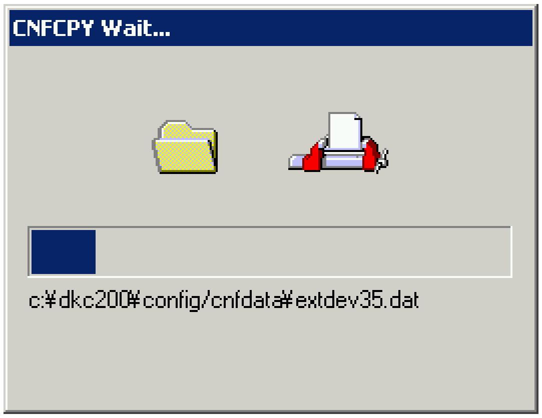
○ SVP ● Client PC

Disk : C

---

(4)

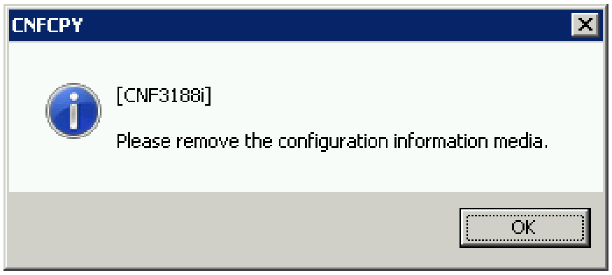
The backup processing is performed. The ‘CNFCPY Wait...’ window appears.



c:¥dkc200¥config/cnfdata¥extdev35.dat

(5)

Select (CL) the [OK] button.



[CNF3188i]

Please remove the configuration information media.

---

(6)

The DKC200 directory exists in the root of the drive (C drive) specified in (3). Use the CD writing tool to copy the DKC200 directory to the root directory of the CD-R, which was prepared in (1).

3-20.

Go to POST-PROCEDURE [REP04-01-10].

[HUBBOX REPLACEMENT PROCESSING - RTC6]

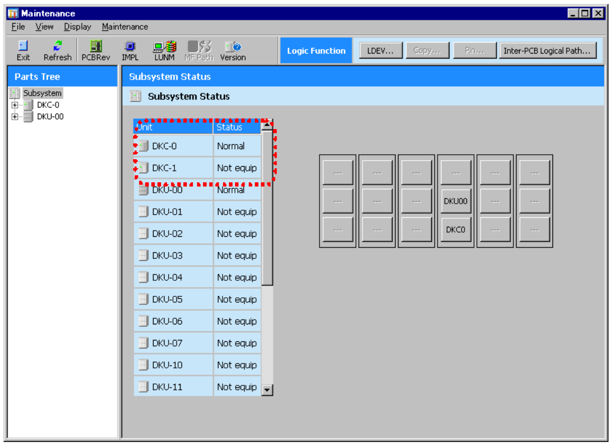
— OUTLINE —

1. PRE-PROCESSING of SVP
    - ① Select HUBBOX (status check)
    - ② Specify Replacement
    - ③ Detach HUBBOX
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    - ① Specify end of HUBBOX replacement
    - ② Reinstall related parts
    - ③ Start environment monitor

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

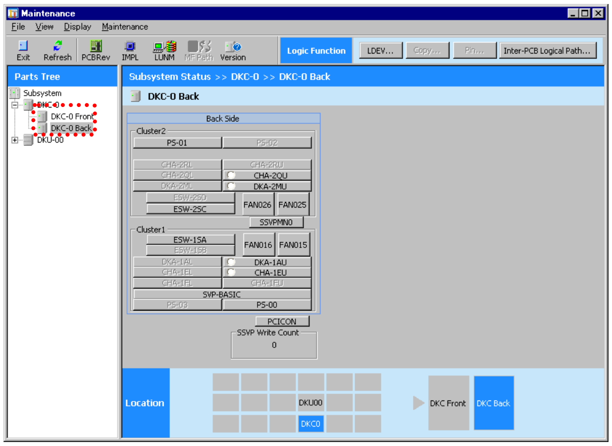
In the ‘Maintenance’ window, check and select (CL) [DKC-x] to be replaced.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Pin... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status
Subsystem Status
DKU00
DKC0

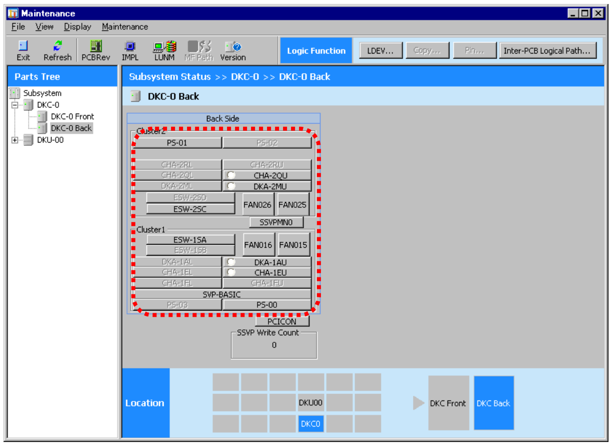
Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <Specify HUB BOX>

Select (CL) [DKC-x Back].
[DKC-x Front]



[DKC-x Back]
Select (CL) [HUBBOX-nn].



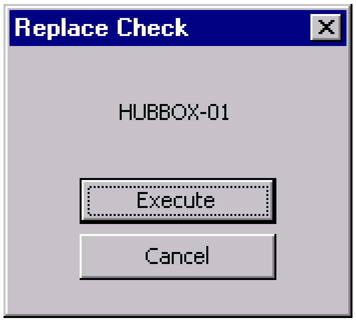
1-3. <Execute>

CAUTION

When the screen prompting an operator to input a password in order to prevent a multiple maintenance, contact the technical support division to ask for an instruction.

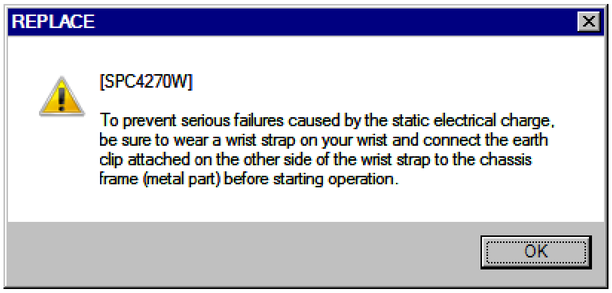
If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

A window shown on the right is displayed.
Select (CL) [Execute].



1-4. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

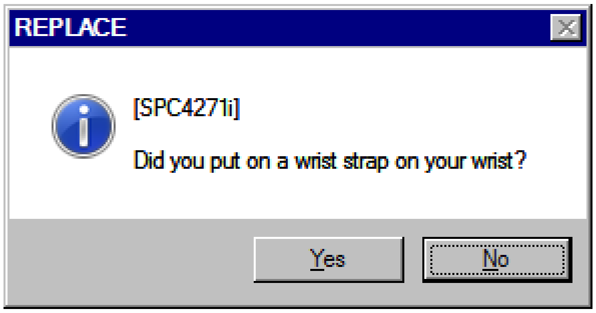


[SPC4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

select (CL) [Yes] and go to Step 1-5.

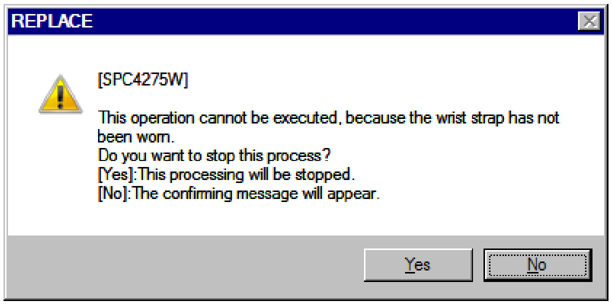


[SPC4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.” is displayed.

When the processing will be stopped, select (CL) [Yes].

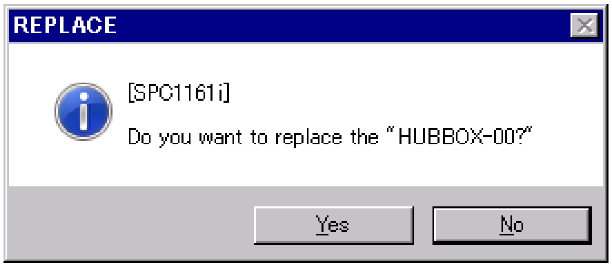


[SPC4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-5. <Check beginning of HUBBOX Replacement>

(HUBBOX-00)
Select (CL) [Yes] in response to “Do you want to replace the “HUBBOX-00?””.

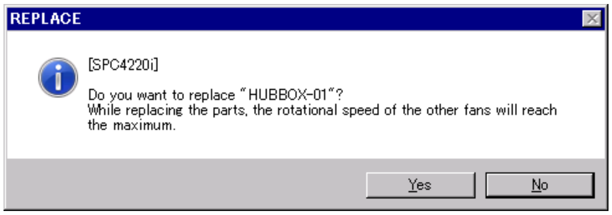


[SPC1161i]

Do you want to replace the "HUBBOX-00?"

(Eg. HUBBOX-00)

(HUBBOX-01, HUBBOX-02)
Select (CL) [Yes] in response to “Do you want to replace “HUBBOX-nn”? While replacing the parts, the rotational speed of the other fans will reach the maximum.”.



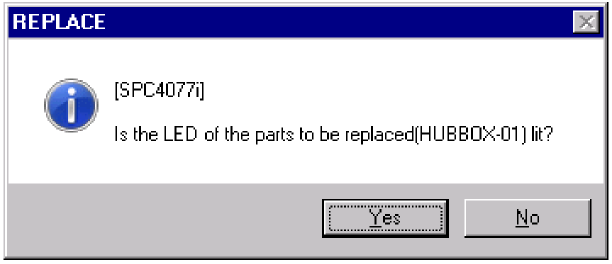
[SPC4220i]

Do you want to replace "HUBBOX-01"?
While replacing the parts, the rotational speed of the other fans will reach the maximum.

(Eg. HUBBOX-01)

1-6. <Checking lighting of the LED on the PCB to be pulled out>

The message “Is the LED of the parts to be replaced(HUBBOX-nn) lit?” is displayed.
When the LED on the PCB to be pulled out is on, select (CL) [Yes] and go to Step 1-8.
When the LED on the PCB to be pulled out is kept off, select (CL) [No] and go to Step 1-7.



[SPC4077i]

Is the LED of the parts to be replaced(HUBBOX-01) lit?

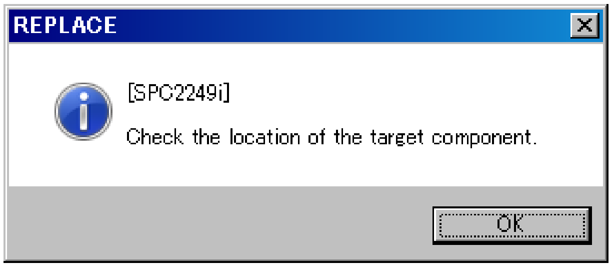
(Eg. HUBBOX-01)

1-7. <Making sure of the HUBBOX location>

The message “Check the location of the target component.” is displayed.

See the “2. HARDWARE REPLACEMENT PROCESSING”.

After making sure of the HUBBOX location, select (CL) [OK] and go to Step 1-8.

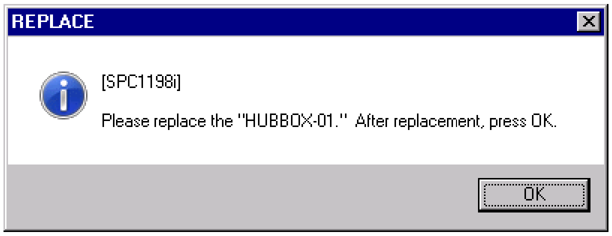


[SPC2249i]

Check the location of the target component.

1-8. <Check beginning of HUB BOX Replacement>

The message "Please replace the "HUBBOX-nn." After replacement, press OK." is displayed.
(Reply with [OK] after replacing the special part.)



[SPC1198i]

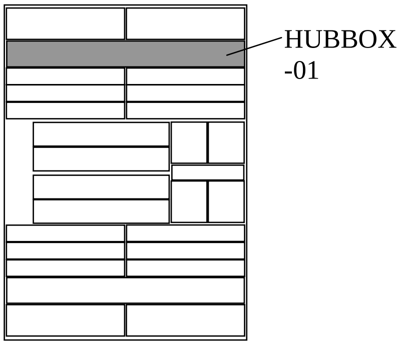
Please replace the "HUBBOX-01." After replacement, press OK.

(Eg. HUBBOX-01)

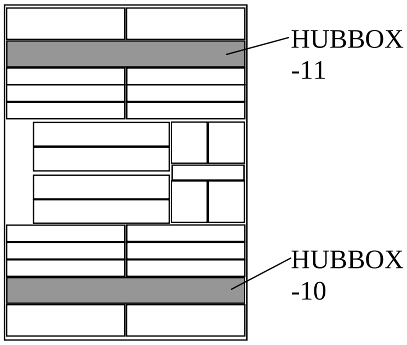
Go to "2. HARDWARE REPLACEMENT PROCESSING".

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Rear of DKC	1	HUBBOX	



Rear View of
DKC-0



Rear View of
DKC-1

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 Replacement of HUBBOX

2-1-1. Replace the HUBBOX.

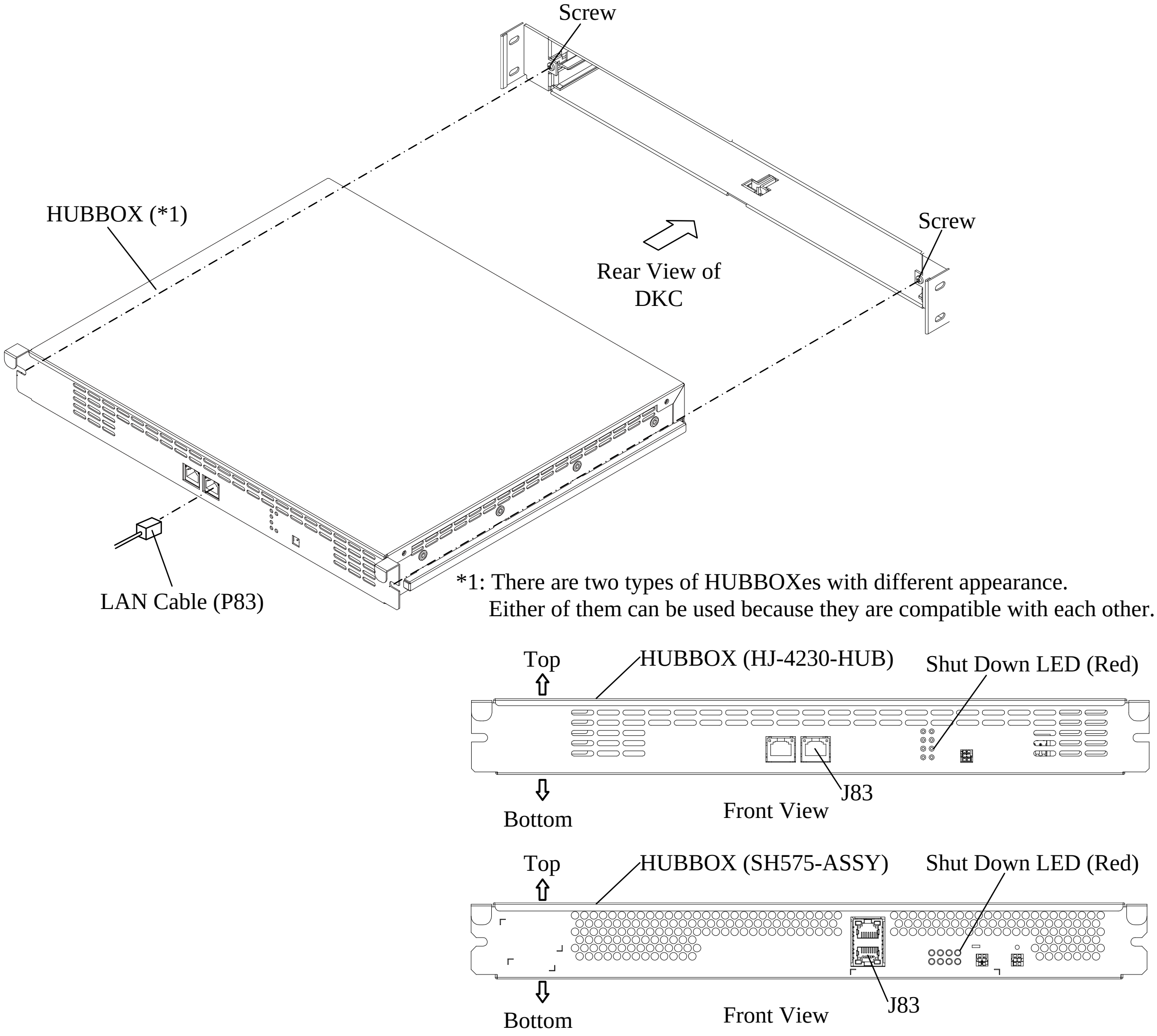
a. Check that the Shut Down LED is on.

b. In case that the replacing HUBBOX is the HUBBOX-10, remove the LAN cable (P83).
In case that the replacing HUBBOX is other than the HUBBOX-10, go to the procedure c.

c. Loosen the two screws and remove the failed HUBBOX.

d. Install the spare HUBBOX and tighten the two screws.
Note: Confirm the vertical direction of the HUBBOX. If the direction was wrong, the HUBBOX will not be ON.

e. If the LAN cable was removed in the procedure b, connect the LAN cable to the HUBBOX.



*1: There are two types of HUBBOXes with different appearance.
Either of them can be used because they are compatible with each other.

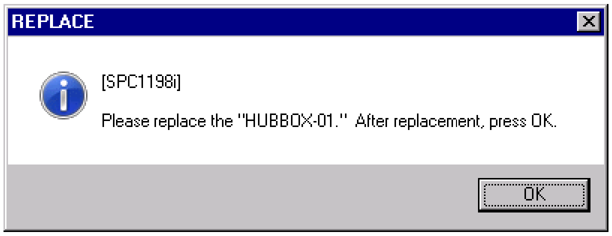
Fig. 3.21.2-1 Replacement of HUBBOX

2-1-2. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check replacement of HUBBOX>

Select (CL) [OK] in response to “Please replace the “HUBBOX-nn.” After replacement, press OK.”.



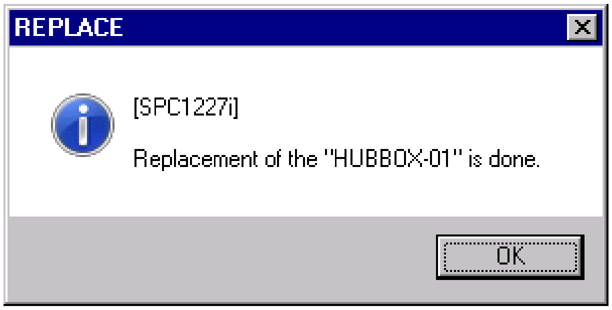
[SPC1198i]

Please replace the "HUBBOX-01." After replacement, press OK.

(Eg. HUBBOX-01)

3-2. <Check end of replacement>

Select (CL) [OK] in response to “Replacement of the “HUBBOX-nn” is done.”



[SPC1227i]

Replacement of the "HUBBOX-01" is done.

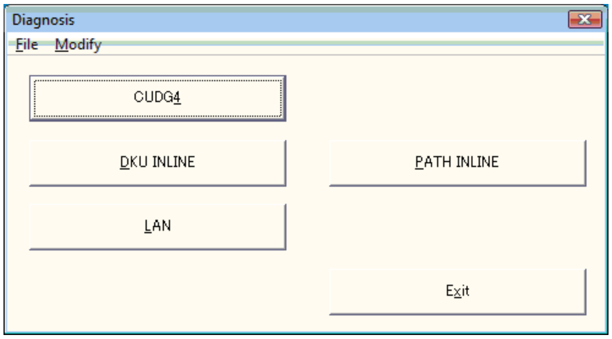
(Eg. HUBBOX-01)

3-3. <Operation mode change>

Select (CL) [Diagnosis].

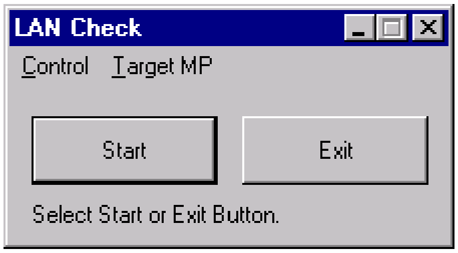
3-4. <Activating LAN>

Select (CL) [LAN].
(The screen is changed to the LAN Check menu screen.)



3-5. <Starting LAN Check>

Select (CL) [Start] in the ‘LAN Check’ window.



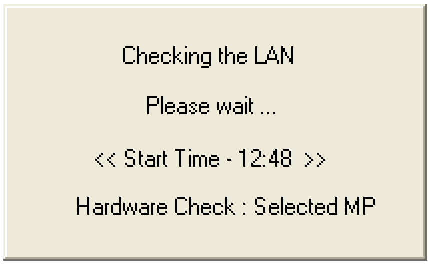
Select Start or Exit Button.

<Supplementary explanation>
Although an installed processor is set to be default to execute a hardware diagnosis, all processors can be selected.

Installed processor : Select (CL) [Target MP] and then select (DR) [Equipped MP].
All processors : Select (CL) [Target MP] and then select (DR) [All MP].

3-6. <Displaying Wait message>

The Wait message is displayed. The screen will change to the result display screen in a few minutes.



Checking the LAN

Please wait ...

<< Start Time - 12:48 >>

Hardware Check : Selected MP

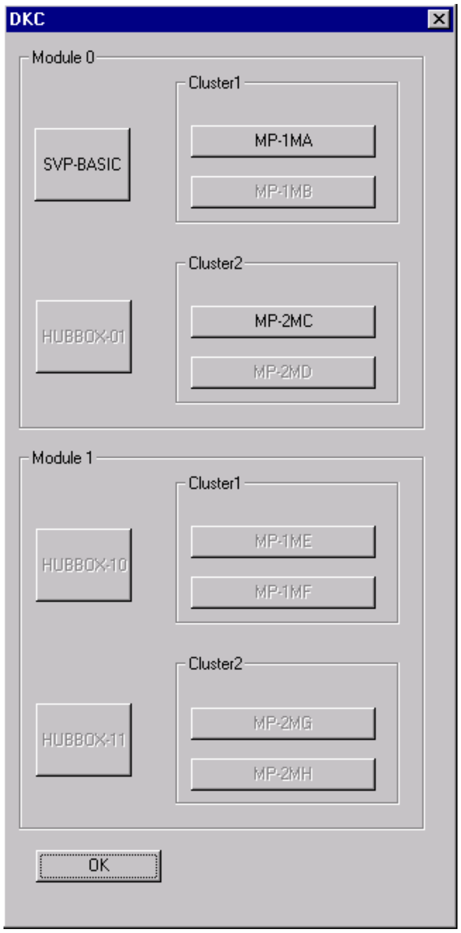
3-7. <Displaying result>

(1) Adapter status display

When the Adapter button is selected, the screen is changed to the MP status screen.
The screen is returned to the LAN Check menu screen by selecting (CL) [OK].

[Explanation on statuses]
The status is shown by the appearance of the button as follows:

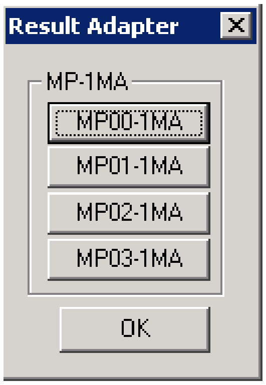
Black : The test object is normal.
Blinking : The test object is abnormal.
Gray : The test object is not installed.



(2) MP status display

When the MP button is selected, the screen is changed to the detailed status screen.

The screen is returned to the adapter status screen by selecting (CL) [OK].



[Explanation on statuses]

The status is shown by the appearance of the MP button as follows:

Black : The concerning MP is normal.

Blinking : The test object is abnormal. However, for the MP which was normal at the time of an FF-Ping, “#” is indicated in front of the MP name.

Gray : The test object is not installed.

[Supplemental explanation]

When the test object is not installed in the state that the hardware is abnormal:
The concerning MP is indicated in gray.

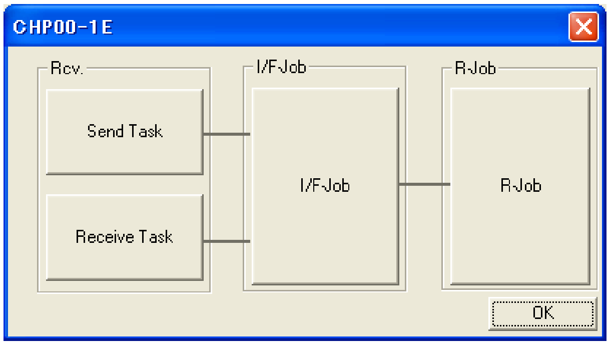
When the test object is not installed in the state that the hardware is normal:
The indication of the concerning MP is grayed and blinks.

When the test object is installed by an FF-Ping:
A character “#” is indicated in front of the MP name, and the name indication blinks.

When the test object is connected by an FF-Ping but not installed:
A character “#” is indicated in front of the MP name, and the name indication is grayed and blinks.

(3) Detailed status display

Detailed information on the concerning MP is displayed.
The screen is returned to the MP status screen by selecting (CL) [OK].



[Explanation on statuses]
The test result is shown by the appearance of the Task button as follows:

Black : The MP is normal from the viewpoint of software.
Blinking : The blinking part has a problem.
Gray : Not diagnosed yet.

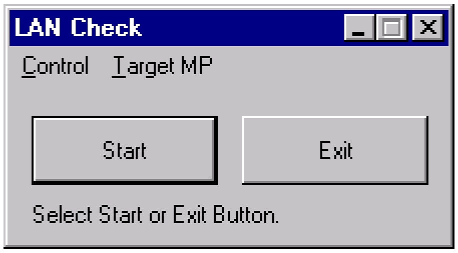
[Supplemental explanation]
There are five types of status as shown below:

When the hardware is abnormal : Rcv., I/F-JOB, and R-JOB are indicated in gray.
When the software is normal : Rcv., I/F-JOB, and R-JOB are indicated in black.
When the Rcv. is abnormal : Rcv. indication blinks, and I/F-JOB and R-JOB are indicated in gray.
When the I/F-JOB is abnormal : Rcv. is indicated in black, I/F-JOB indication blinks, and R-JOB is indicated in gray.
When the R-JOB is abnormal : Rcv. and I/F JOB are indicated in black and R-JOB indication blinks.

3-8. <Exiting from LAN Check>

Select (CL) [Exit] in the ‘LAN Check’ window.

Go to POST-PROCEDURE [REP04-01-10].



Select Start or Exit Button.

[Battery REPLACEMENT PROCESSING - RTC7]

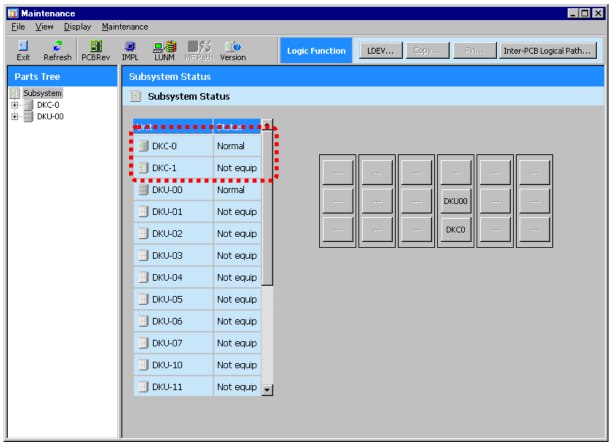
— OUTLINE —

1. PRE-PROCESSING of SVP
    - ① Check beginning of Battery Replacement
    - ② Check battery charge opposite cluster
    - ③ Enter the password
    - ④ Check with battery storage period
    - ⑤ Check the LED blinks
    - ⑥ Replacement
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    - ① Check beginning of CACHE Battery Replacement
    - ② Check the battery status
    - ③ Setting Battery Life
    - ④ Check end of replacement

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

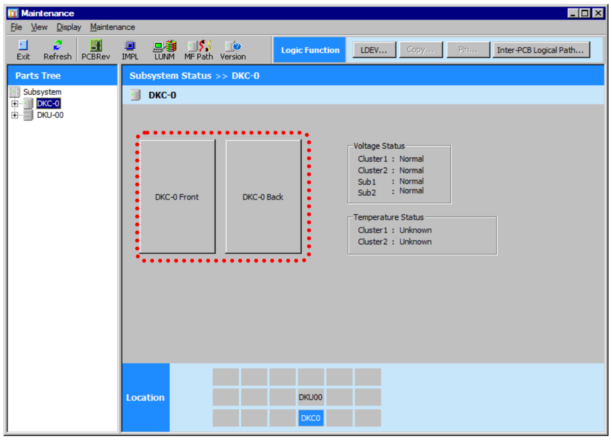
Select (CL) [DKC-n] in the ‘Maintenance’ window.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Pin... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status
Subsystem Status
DKU00
DKC0

DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <DKC window>

Select (CL) [DKC-n Front] in the ‘DKC’ window.

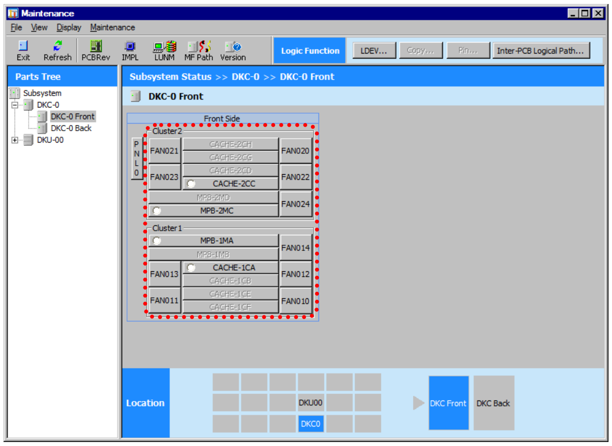

Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Pin... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status >> DKC-0
DKC-0
DKC-0 Front
DKC-0 Back
Location
DKU00
DKC0

Voltage Status
Cluster1 : Normal
Cluster2 : Normal
Sub1 : Normal
Sub2 : Normal

Temperature Status
Cluster1 : Unknown
Cluster2 : Unknown

1-3. <Select Cache>

Select (CL) Cache.



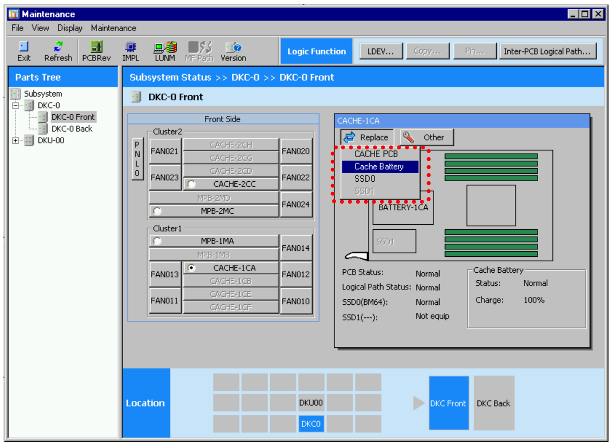
1-4. <Specify replacement of cache>

CAUTION

When the screen appears prompting the operator to input a password to prevent multiple maintenance or for executing a pin check, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

Check status display.
Select (CL) [Replace], and select (CL) [Cache Battery].

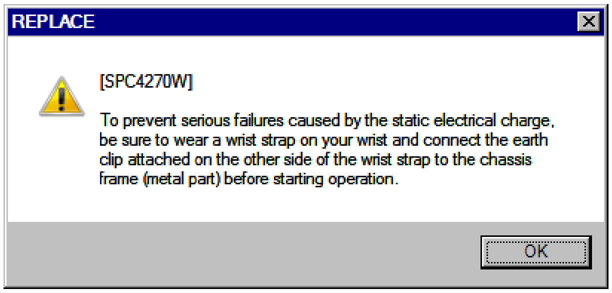


PCB Status: Normal
Logical Path Status: Normal
SSD0(BM64): Normal
SSD1(---): Not equip

Cache Battery
Status: Normal
Charge: 100%

1-5. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

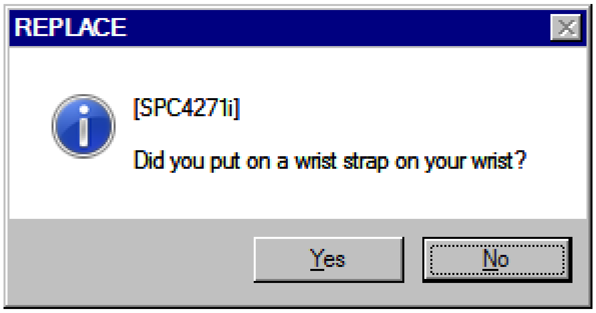


[SPC4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

select (CL) [Yes] and go to Step 1-6.

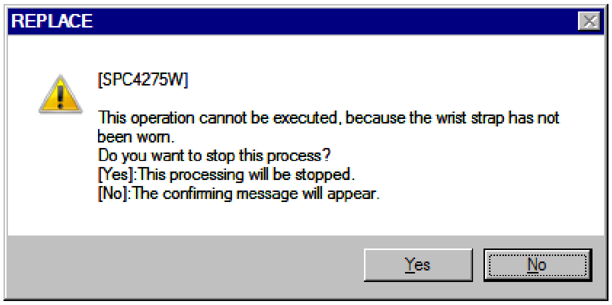


[SPC4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.” is displayed.

When the processing will be stopped, select (CL) [Yes].

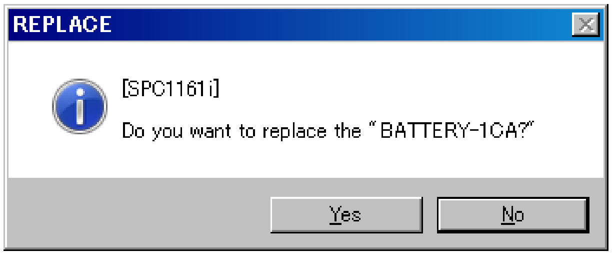


[SPC4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-6. <Check beginning of Battery Replacement>

Start battery replacement.
Select (CL) [Yes] in response to “Do you want to replace the “BATTERY-nnn”?”.



[SPC1161i]

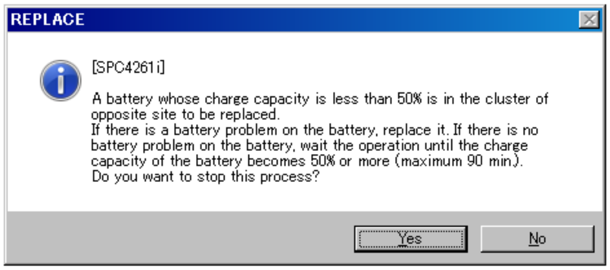
Do you want to replace the “BATTERY-1CA?”

(Eg. BATTERY-1CA)

1-7. <Check battery charge opposite cluster>

Automatically, the battery's charge is measured in the opposite cluster.

- More than 50% charge capacity, or "being measured", go to Step 1-9.



[SPC4261i]

A battery whose charge capacity is less than 50% is in the cluster of opposite site to be replaced.
If there is a battery problem on the battery, replace it. If there is no battery problem on the battery, wait the operation until the charge capacity of the battery becomes 50% or more (maximum 90 min.).
Do you want to stop this process?

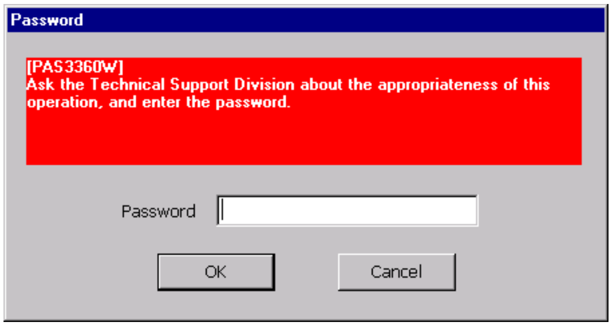
Charge capacity of less than 50%, the following message “A battery whose charge capacity is less than 50% is in the cluster of opposite site to be replaced. If there is a battery problem on the battery, replace it. If there is no battery problem on the battery, wait the operation until the charge capacity of the battery becomes 50% or more (maximum 90 min.). Do you want to stop this process?” is displayed.

If you stop for battery replacement, select (CL) [Yes], go to Step 3-4.

To continue the replacement battery, select (CL) [No], go to Step 1-8.

1-8. <Enter the password>

Corresponding to the following message, enter the password and select (CL) the [OK] button.
“Ask the Technical Support Division about the appropriateness of this operation, and enter the password.”



[PAS3360W]
Ask the Technical Support Division about the appropriateness of this operation, and enter the password.

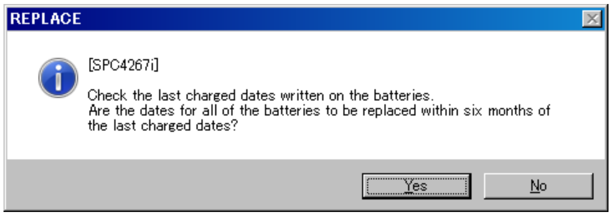
Go to Step 1-9.

If you stop for a replacement, [Cancel].
Go to Step 1-7.

1-9. <Check with battery storage period>

Check the date that is mentioned in the final charge to replace the battery.

"Check the last charged dates written on the batteries. Are the dates for all of the batteries to be replaced within six months of the last charged dates?" is displayed.

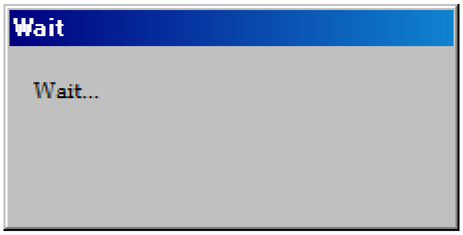


[SPC4267i]

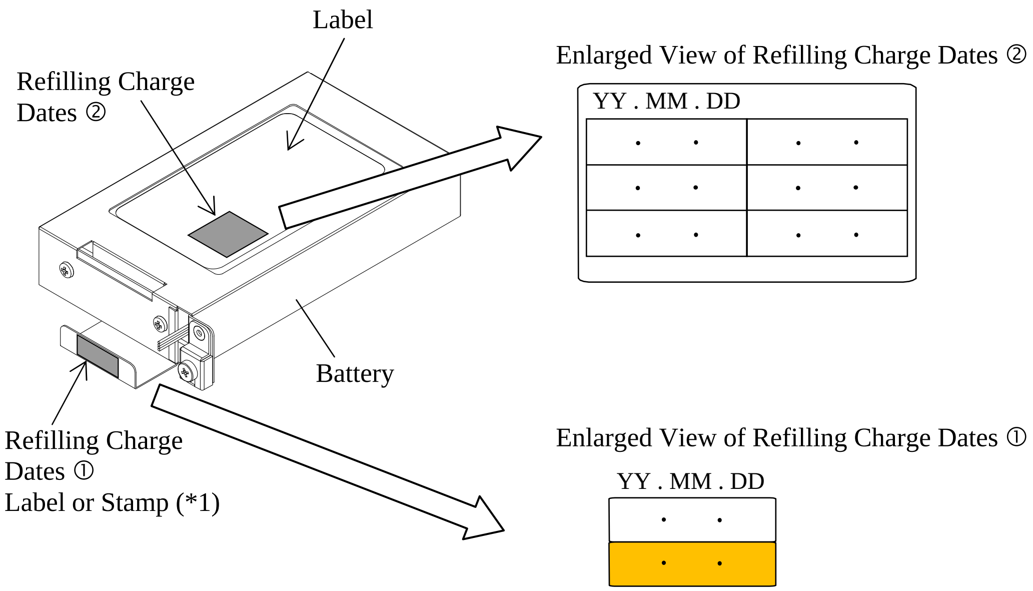
Check the last charged dates written on the batteries.
Are the dates for all of the batteries to be replaced within six months of the last charged dates?

- Within six months from the date when the final charge, select (CL) [Yes].
- When more than 6 months from the date of the last charge, select (CL) [No].

And Processing. Go to Step 1-10.



Wait...



[Check of refilling charge dates]
When refilling charge dates ① are written, check them.
When refilling charge dates ① are not written, check refilling charge dates ②.

*1: Some batteries don't have the label for refilling charge dates ①.

Fig.3.22.1-1 Check of Refilling Charge Dates

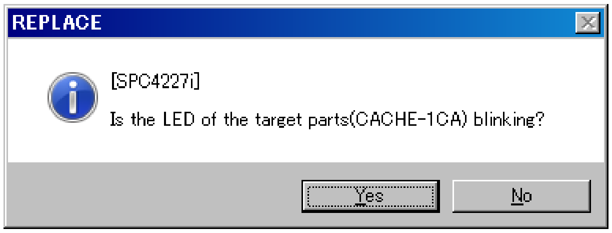
1-10. <Check the LED blinks>

Before replacing the battery, LED blinks to confirm.

"Is the LED of the target parts(CACHE-nnn) blinking?" is displayed.

If the LED is blinking, select (CL) [Yes].

Go to Step 1-11.



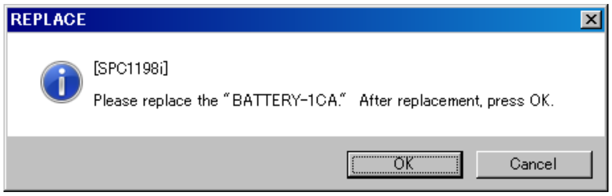
[SPC4227i]
Is the LED of the target parts(CACHE-1CA) blinking?

(Eg. CACHE-1CA)

1-11. <Replacement>

The message "Please replace the "BATTERY-nnn" After replacement, press OK." is displayed.
Reply with [OK] after replacing the special part.

Go to "2. HARDWARE REPLACEMENT PROCESSING"

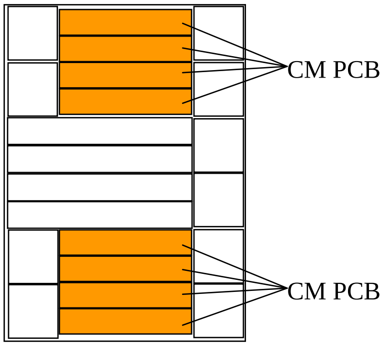


[SPC1198i]
Please replace the "BATTERY-1CA." After replacement, press OK.

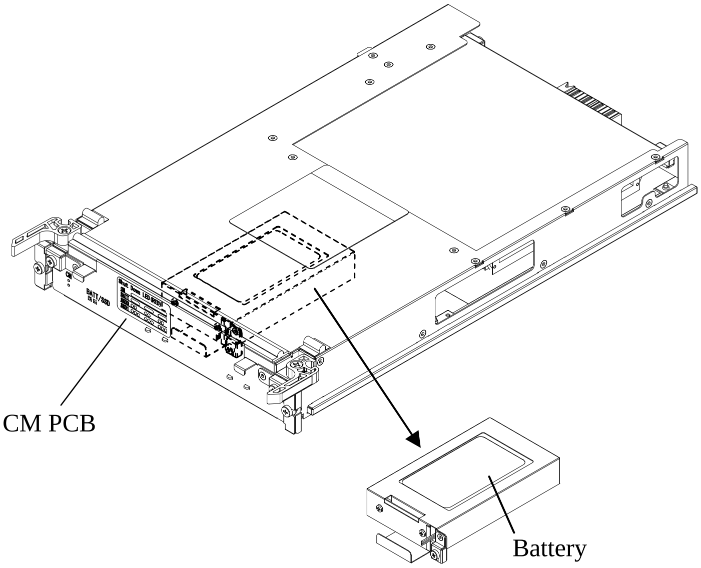
(Eg. BATTERY-1CA)

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Inside of CM PCB	1	Battery	



Front View of DKC



NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 Replacement of Battery

CAUTION

Watching for short-circuits:

A Short-circuit may cause a fire.
Never insert metal or the like into the battery box connector or a short-circuit may occur.

2-1-1. Replacement of Battery

a. Open the DKCPANEL when the removing CM PCB locations are CACHE-2CD, 2CG, 2CH, 2CM, 2CQ or 2CR.
For the CM PCB location other than the above, go to the procedure c.

b. Loosen the screw, slide the DKCPANEL to the far right, and open the DKCPANEL.

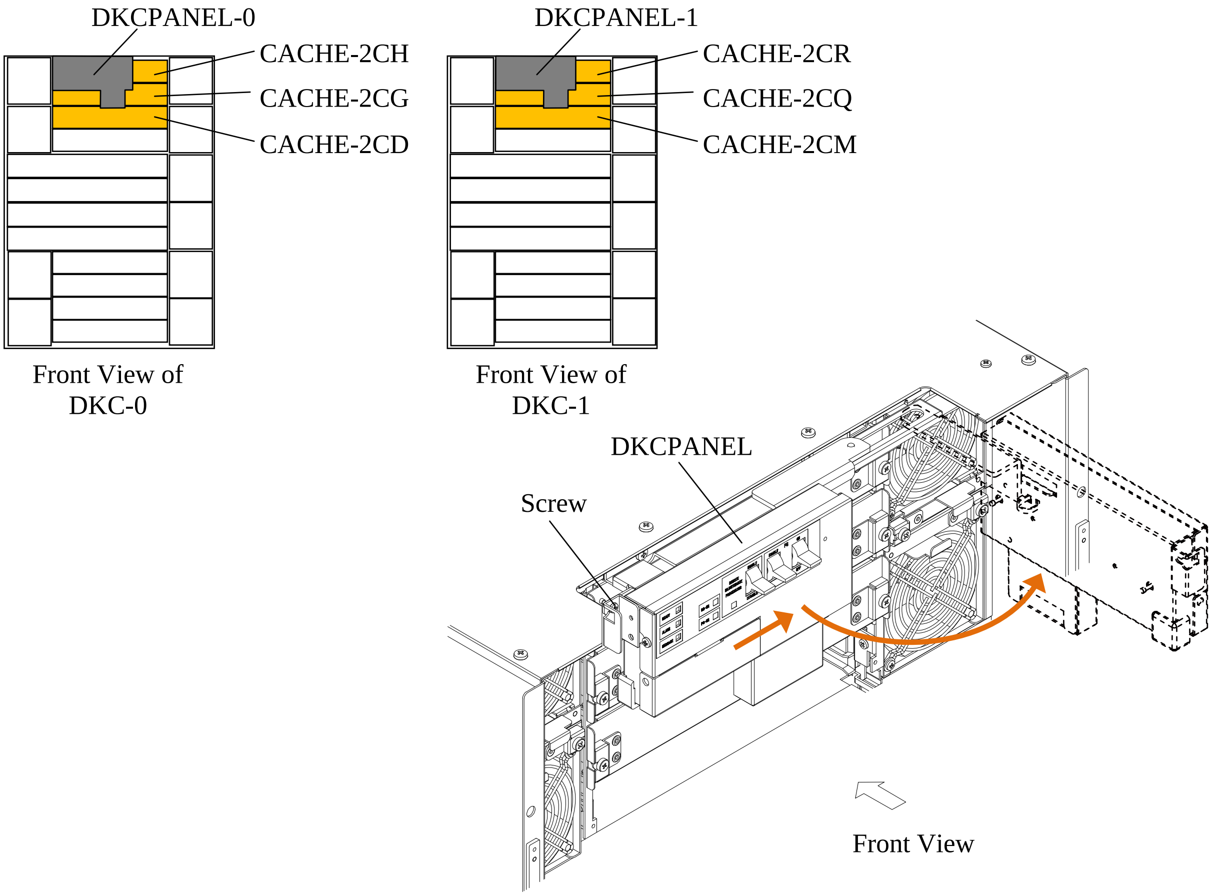


Fig. 3.22.2-1 Shifting of DKCPANEL

c. Loosen the two screws and remove the plate from the target CM PCB.

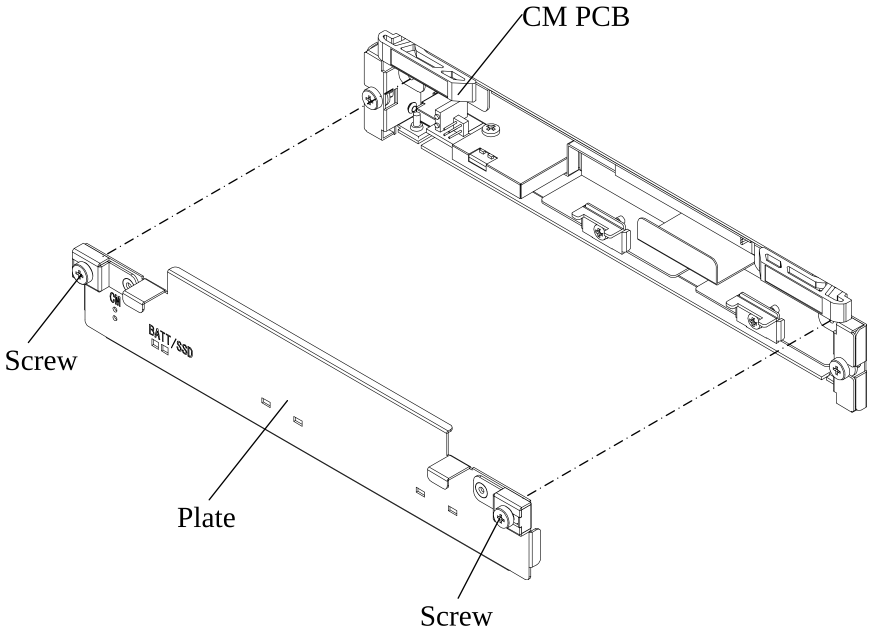


Fig. 3.22.2-2 Removal of Plate

d. Disconnect the battery cable from the CM PCB.

e. Loosen the screw and remove the battery.

f. Insert the spare battery and tighten the screw.

g. Connect the battery cable to the CM PCB.

h. Attach the plate to the CM PCB and tighten the two screws. (Refer to Fig. 3.22.2-2.)

i. Replace the DKCPANEL and secure it with the screws if the DKCPANEL is opened. (Refer to Fig. 3.22.2-1.)

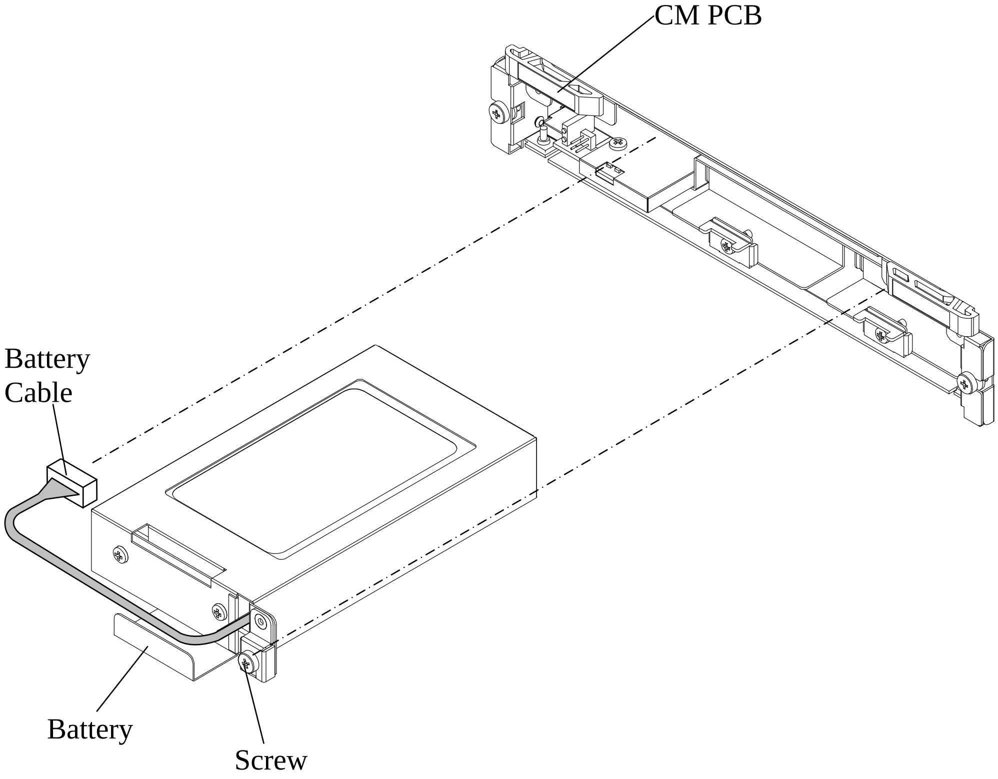


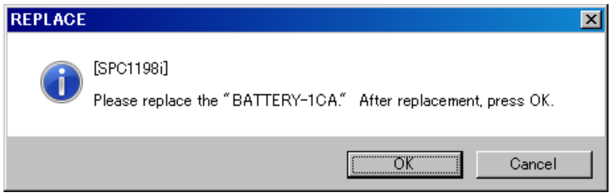
Fig. 3.22.2-3 Replacement of Battery

2-1-2. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check beginning of CACHE Battery Replacement>

Select (CL) [OK] in response to “Please replace the “BATTERY-nnn.” After replacement, press OK.”



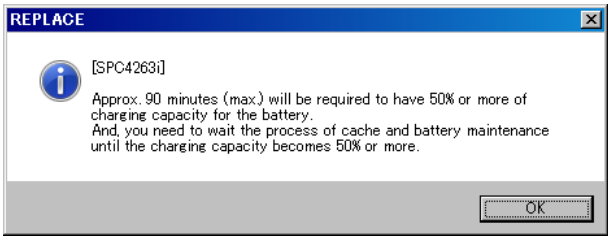
[SPC1198i]

Please replace the “BATTERY-1CA.” After replacement, press OK.

(Eg. BATTERY-1CA)

3-2. <Check the battery status>

Automatically check the status of the battery replacement.
Select (CL) [OK] after you confirmed the content.



[SPC4263i]

Approx. 90 minutes (max.) will be required to have 50% or more of charging capacity for the battery.
And, you need to wait the process of cache and battery maintenance until the charging capacity becomes 50% or more.

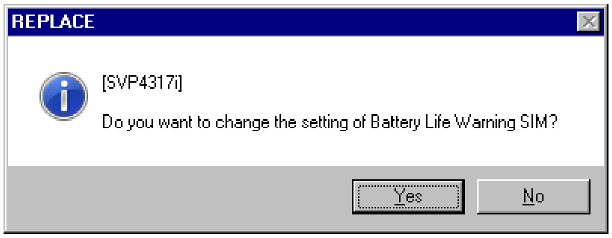
If more than six months from the date of the final charge the battery storage period, “Approx. 90 minutes (max.) will be required to have 50% or more of charging capacity for the battery. And you need to wait the process of cache and battery maintenance until the charging capacity becomes 50% or more.” is displayed.

Go to Step 3-3.

If the display of Battery Life Warning SIM is disabled, go to step 3-5.

3-3.

In response to a message, “Do you want to change the setting of Battery Life Warning SIM?”.
Select [Yes] when you exchange CM Battery.
Go to step 3-4.



[SVP4317i]

Do you want to change the setting of Battery Life Warning SIM?

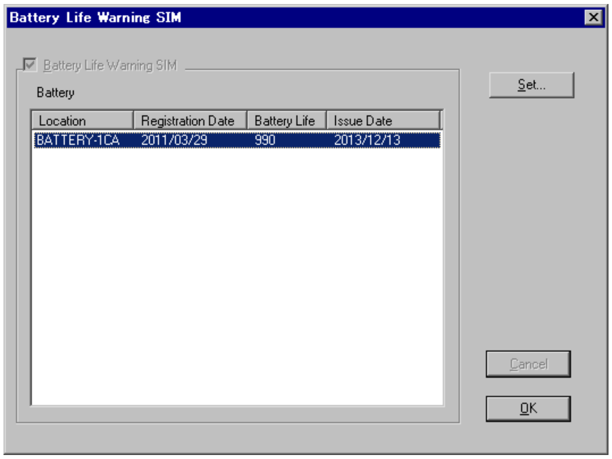
Select [No] when you use existing CM Battery.
Go to step 3-5.

3-4. <Setting Battery Life>

(1)
Select (CL) the target CM Battery in the ‘Battery Life Warning SIM’ screen, and then select (CL) [Set...].
Go to step (2).

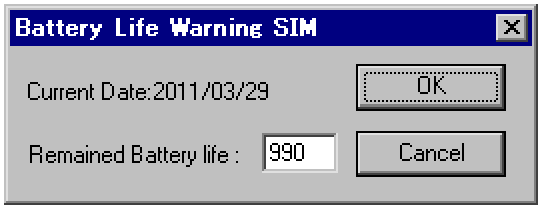
Make sure that the all input items are correct and select (CL) [OK].

Note: If the date is displayed as “****/**/**”, follow step (2) to set the date.



Location	Registration Date	Battery Life	Issue Date
BATTERY-1CA	2011/03/29	990	2013/12/13

(2)
Select (CL) [OK] after inputting the remainder days until Warning SIM is reported.
Return to step (1).



Current Date:2011/03/29
Remained Battery life : 990

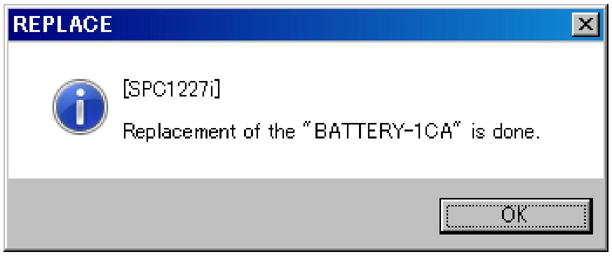
Note: After executing the periodical exchange of a battery, set 33 month (990 days).

Note: Default value is 33 month (990 days), which is 3 month earlier than the lifetime of a battery (3 years).
Determine the number of days remained based on your maintenance plan.

Note: The input ranges of “Remained Battery life” are from 1 to 3650.

3-5. <Check end of replacement>

Select (CL) [OK] in response to “Replacement of the “BATTERY-nnn” is done.”



[SPC1227i]
Replacement of the “BATTERY-1CA” is done.

(Eg. BATTERY-1CA)

3-6.

Go to POST-PROCEDURE [REP04-01-10].

[DKCPS REPLACEMENT PROCESSING - RTC8]

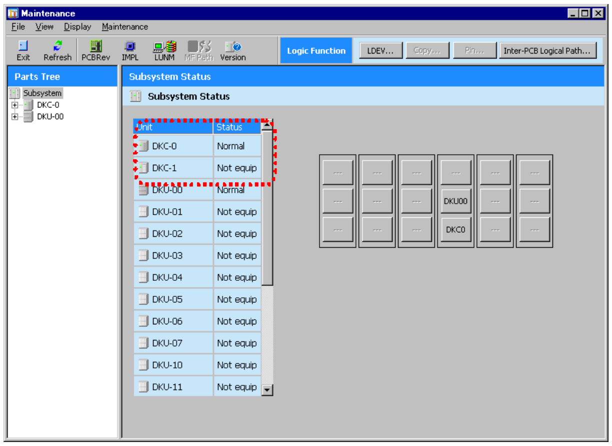
— OUTLINE —

1. PRE-PROCESSING of SVP
   - ① Select DKCPS (status check)
   - ② Specify Replacement
   - ③ Detach DKCPS
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
   - ① Specify end of DKCPS replacement
   - ② Reinstall related parts

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

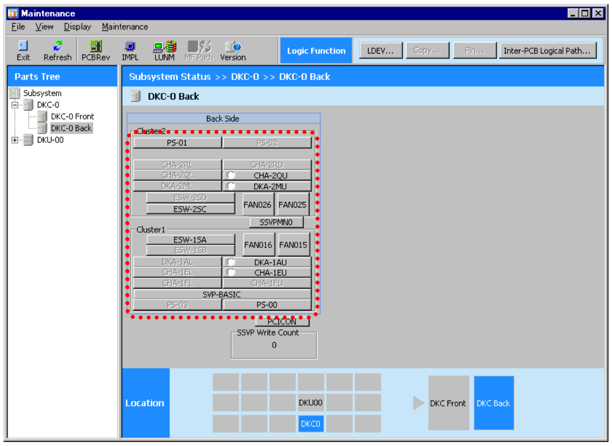
In the ‘Maintenance’ window, check and select (CL) [DKC-x] to be replaced.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Pin... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status
Subsystem Status
DKU00
DKC0

Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

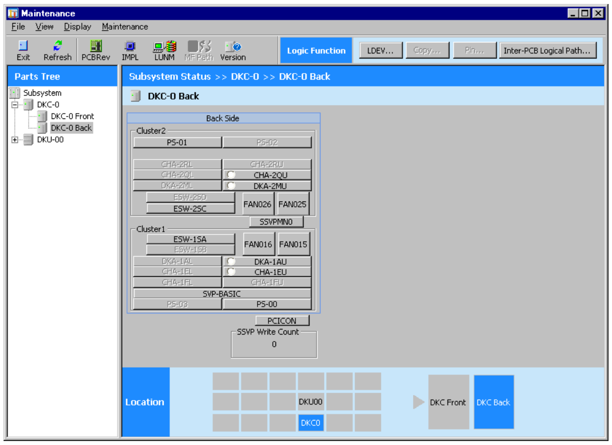
1-2. <Specify DKCPS>

Select (CL) [DKC PS Box Back].



Please select replaced parts after selecting the button.

[DKC-x Back]
Select (CL) [PS-nn].



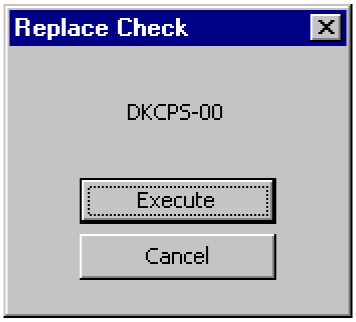
1-3. <Execute>

CAUTION

When the screen prompting an operator to input a password in order to prevent a multiple maintenance, contact the technical support division to ask for an instruction.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

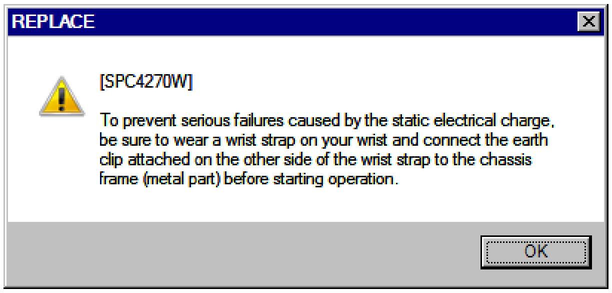
A window shown on the right is displayed.
Select (CL) [Execute].



(Eg. DKCPS-00)

1-4. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

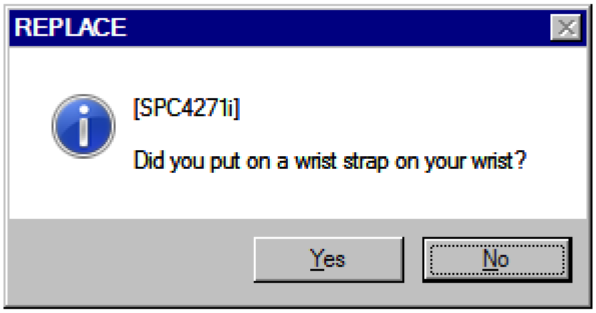

REPLACE

[SPC4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

select (CL) [Yes] and go to Step 1-5.

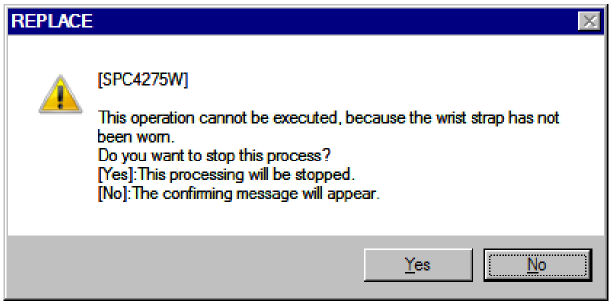

REPLACE

[SPC4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.”
is displayed.

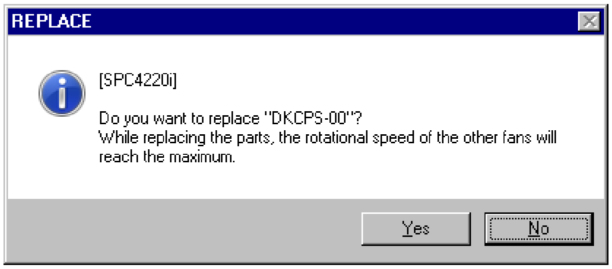
When the processing will be stopped, select (CL) [Yes].


REPLACE

[SPC4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-5. <Check beginning of DKCPS Replacement>
Select (CL) [Yes] in response to “Do you want to replace “DKCPS-nn”? While replacing the parts, the rotational speed of the other fans will reach the maximum.”.



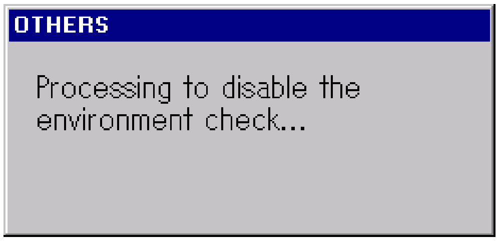
[SPC4220i]

Do you want to replace "DKCPS-00"?
While replacing the parts, the rotational speed of the other fans will reach the maximum.

(Eg. DKCPS-00)

1-6. <Checking power supply>
The SVP automatically checks the DKC PS to see if it is replaceable.

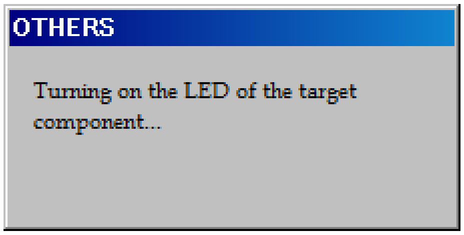
1-7. <Check environment monitor stopped state>
The message “Processing to disable the environment check...” is displayed.



Processing to disable the environment check...

1-8. <Processing before exchanges>

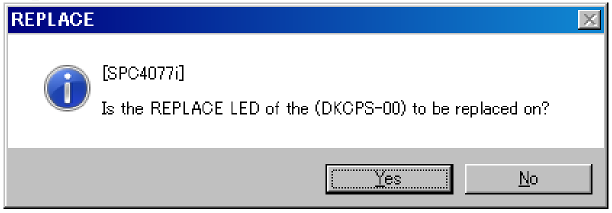
The message “Turning on the LED of the target component...” is displayed.



Turning on the LED of the target component...

1-9. <Checking lighting of the LED on the PCB to be pulled out>

The message “Is the REPLACE LED of the (DKCPS-nn) to be replaced on?” is displayed.
When the REPLACE LED on the component to be pulled out is on, select (CL) [Yes] and go to Step 1-11.
When the REPLACE LED on the component to be pulled out is kept off, select (CL) [No] and go to Step 1-10.



[SPC4077i]
Is the REPLACE LED of the (DKCPS-00) to be replaced on?

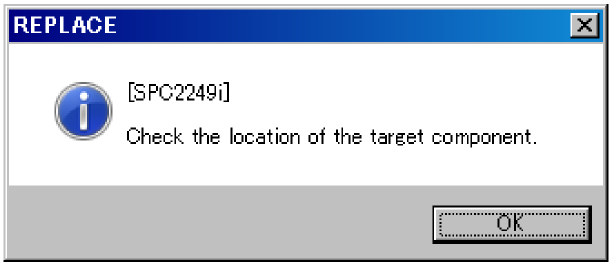
(Eg. DKCPS-00)

1-10. <Making sure of the DKCPS location>

The message “Check the location of the target component.” is displayed.

See the “2. HARDWARE REPLACEMENT PROCESSING”.

After making sure of the DKCPS location, select (CL) [OK] and go to Step 1-11.

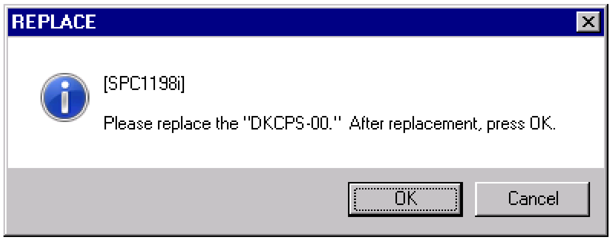


[SPC2249i]
Check the location of the target component.

1-11. <Check beginning of DKCPS Replacement>

The message “Please replace the “DKCPS-nn.” After replacement, press OK.” is displayed.
(Reply with [OK] after replacing the special part.)

Go to “2. HARDWARE REPLACEMENT PROCESSING”.

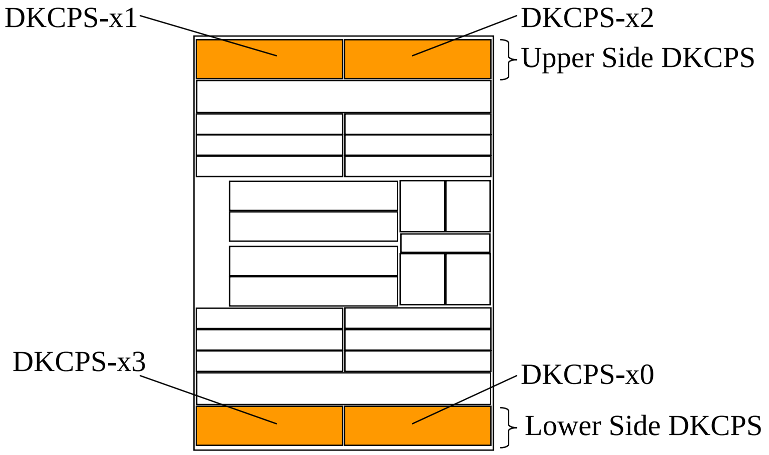


[SPC1198i]
Please replace the "DKCPS-00." After replacement, press OK.

(Eg. DKCPS-00)

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Rear of DKC	1	DKCPS	



Rear View of DKC

Caution: Reverse the lower side DKCPS (DKCPS-x0, x3) insertion direction with upper side DKCPS insertion direction.
Therefore, deserve close attention to the direction when the replacement of DKCPS.

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 Replacement of DKCPS

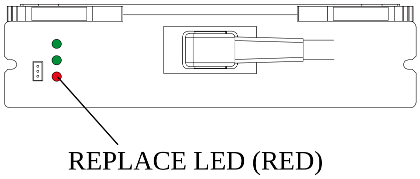
2-1-1. Replacement of DKCPS

a. Check that the REPLACE LED is on.

⚠ CAUTION

A system down may be caused by a replacement of the DKCPS other than that to be replaced. Make sure that it is a DKCPS to be replaced.

DKCPS-x1/x2



DKCPS-x0/x3

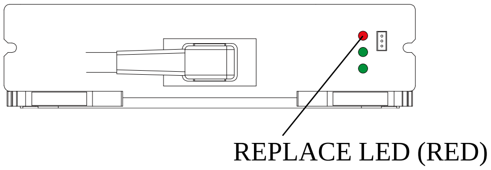


Fig. 3.23.2-1 Confirmation of REPLACE LED

b. Remove the stopper on the failed DKCPS and disconnect the cable.

CAUTION

Watching for short-circuits:

A Short-circuit may cause a fire.
Never insert metal or the like into the cable connector or a short-circuit may occur.

c. Loosen the two screws. Operate the levers and remove the DKCPS.
d. Operate the levers and attach the spare DKCPS. Tighten the screws.
e. Connect the cable and secure it with the stopper.
f. Check that the REPLACE LED is off. (Refer to Fig. 3.23.2-1.)

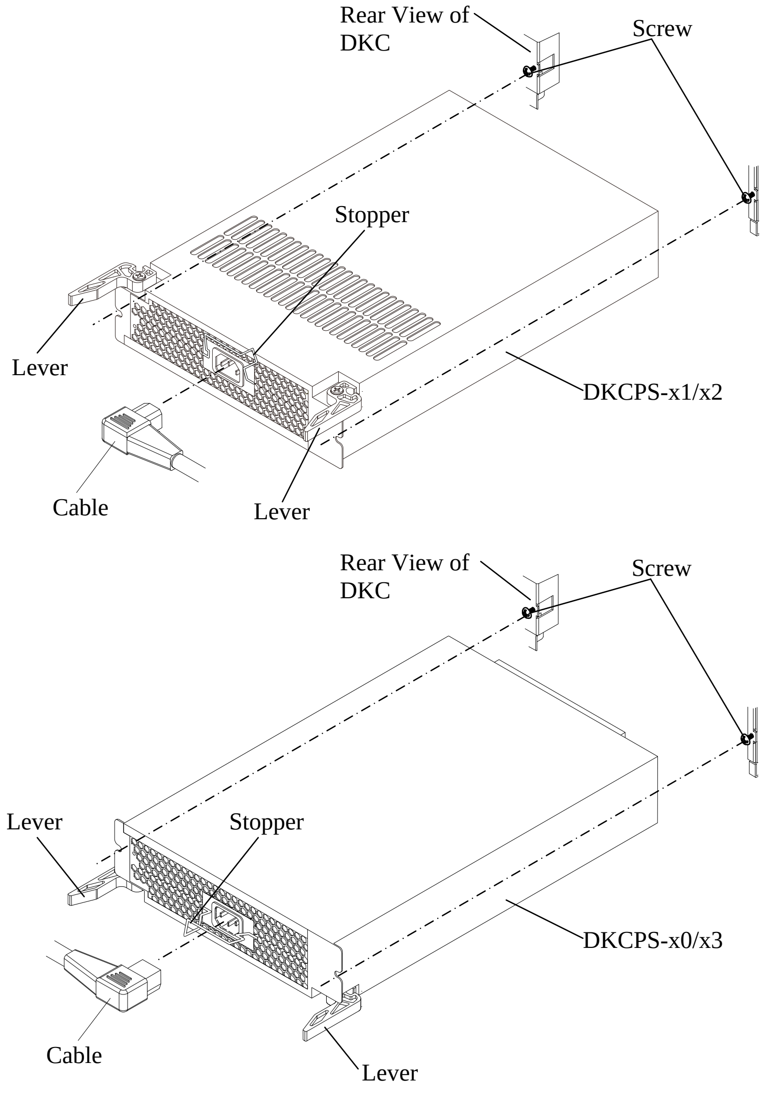


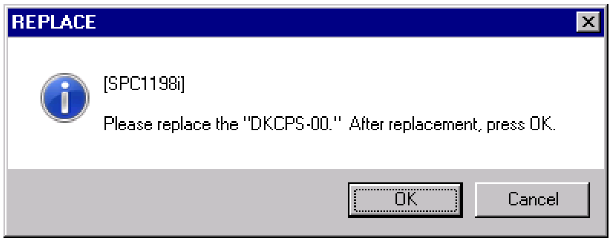
Fig. 3.23.2-1 Replacement of DKCPS

2-1-2. Go to “3.POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check replacement of DKCPS>

Select (CL) [OK] in response to “Please replace the “DKCPS-nn.” After replacement, press OK.”.



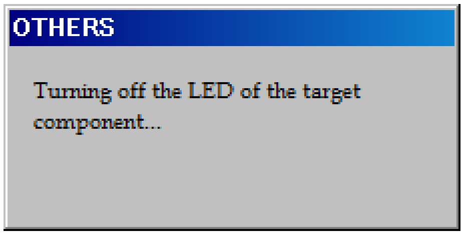
[SPC1198i]

Please replace the "DKCPS-00." After replacement, press OK.

(Eg. DKCPS-00)

3-2. <Processing after exchanges>

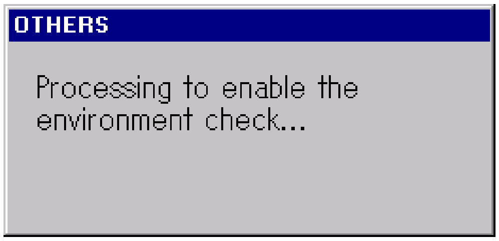
The message “Turning off the LED of the target component...” is displayed.
If the LED is lit, it turns off in this screen.



Turning off the LED of the target component...

3-3. <Check environment monitor start processing>

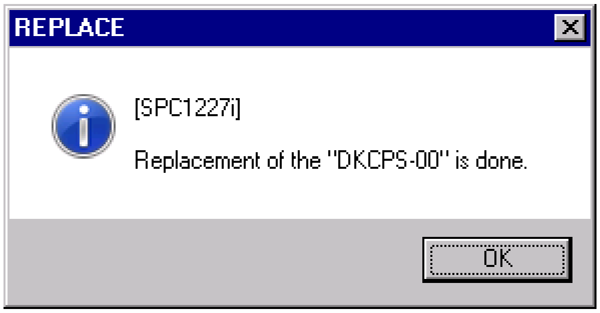
The message “Processing to enable the environment check...” is displayed.



Processing to enable the environment check...

3-4. <Check end of replacement>

Select (CL) [OK] in response to “Replacement of the “DKCPS-nn” is done.”.



[SPC1227i]

Replacement of the "DKCPS-00" is done.

(Eg. DKCPS-00)

3-5. <Confirm status>

Confirm the status display.
If button is normal (The string is normally display), go to step 3-6.
If button is abnormal (The string is blinking), replace the target part again, or see TROUBLE SHOOTING SECTION.

3-6.

Go to POST-PROCEDURE [REP04-01-10].

[SFP REPLACEMENT PROCESSING - RTC9]

— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select Port (SFP information check)
    ② Specify Replacement
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Check the port Wave information

1. PRE-PROCESSING of SVP

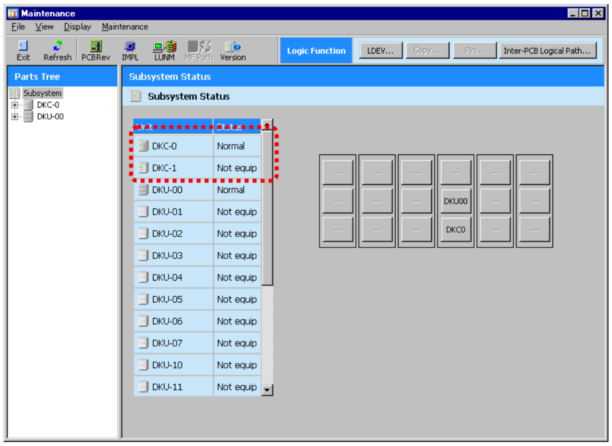
1-1. <Set path offline>

CAUTION

The path to be placed offline is that connected with the CHA concerned.

1-2. <Maintenance window>

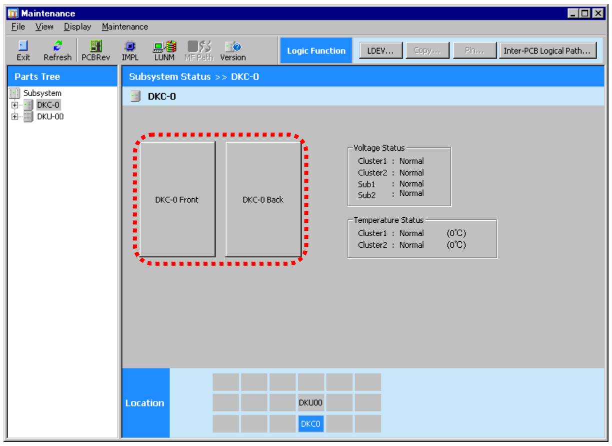
Select (CL) [DKC-n] in the 'Maintenance' window.



Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-3. <DKC window>

Select (CL) [DKC-n Back] in the 'DKC' window.

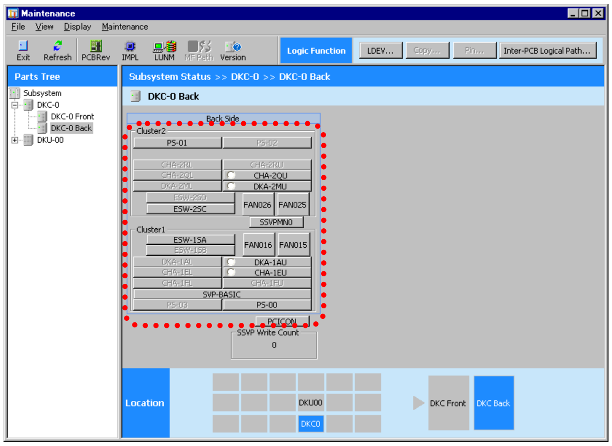


Voltage Status
Cluster1 : Normal
Cluster2 : Normal
Sub1 : Normal
Sub2 : Normal

Temperature Status
Cluster1 : Normal (0℃)
Cluster2 : Normal (0℃)

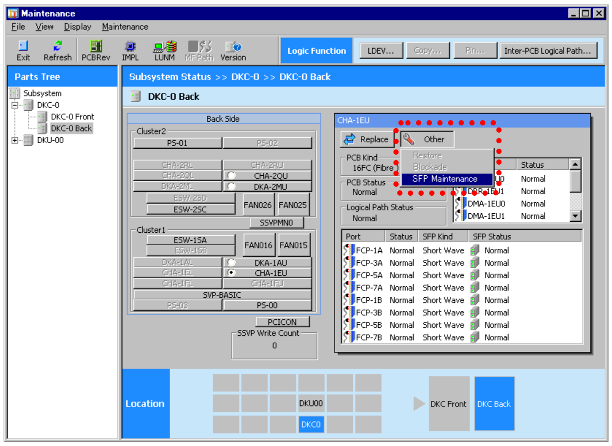
1-4. <Selecting CHA>

Select (CL) the target CHA.



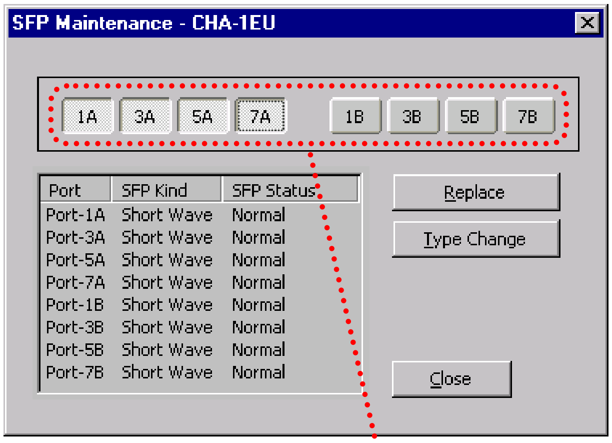
1-5. <SFP Maintenance window is displayed>

Select (CL) [Other]-[SFP Maintenance].


Maintenance
Subsystem Status >> DKC-0 >> DKC-0 Back
DKC-0 Back
CHA-1EU
Replace
Other
Restore
Blockade
SFP Maintenance
PCB Kind
16FC (Fibre)
PCB Status
Normal
Logical Path Status
Normal
Status
DMA-1EU0 Normal
DMA-1EU1 Normal
Port Status SFP Kind SFP Status
FCP-1A Normal Short Wave Normal
FCP-3A Normal Short Wave Normal
FCP-5A Normal Short Wave Normal
FCP-7A Normal Short Wave Normal
FCP-1B Normal Short Wave Normal
FCP-3B Normal Short Wave Normal
FCP-5B Normal Short Wave Normal
FCP-7B Normal Short Wave Normal
Location
DKC Front DKC Back

1-6. <Specify SFP replacement>

Select the button of the port for which the SFP is to be replaced and select (CL) the [Replace] button.
(The plural can be selected.)

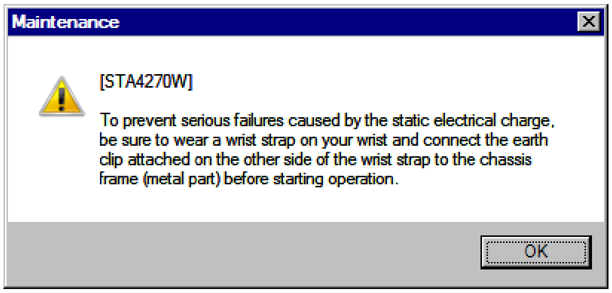


Port	SFP Kind	SFP Status
Port-1A	Short Wave	Normal
Port-3A	Short Wave	Normal
Port-5A	Short Wave	Normal
Port-7A	Short Wave	Normal
Port-1B	Short Wave	Normal
Port-3B	Short Wave	Normal
Port-5B	Short Wave	Normal
Port-7B	Short Wave	Normal

port button

1-7. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

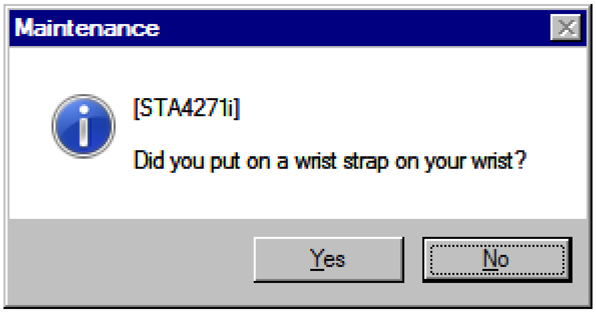


[STA4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

select (CL) [Yes] and go to Step 1-8.

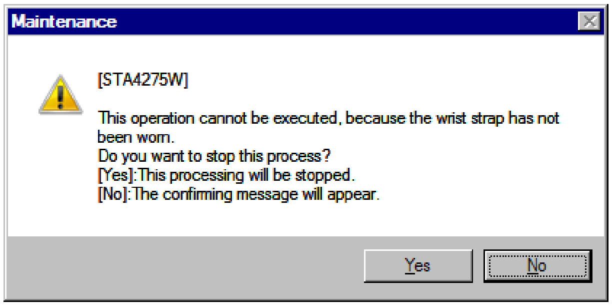


[STA4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.”
is displayed.

When the processing will be stopped, select (CL) [Yes].



[STA4275W]

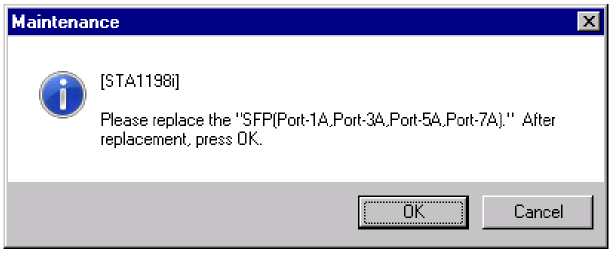
This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-8. <Replacing the SFP>

A message, “Please replace the “SFP(Port-nn, ...).” After replacement, press OK.” is displayed.

(Select (CL) [OK] after replacing the SFP.)

Go to “2. HARDWARE REPLACEMENT PROCESSING”.

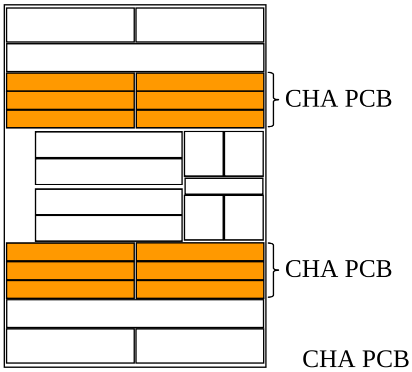


[STA1198i]

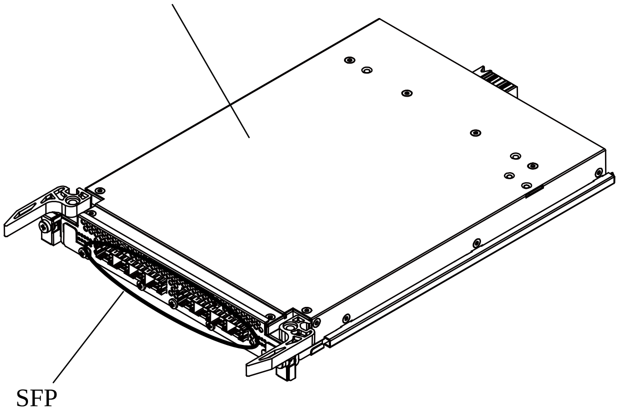
Please replace the "SFP(Port-1A,Port-3A,Port-5A,Port-7A)." After replacement, press OK.

2. HARDWARE REPLACEMENT PROCESSING

Location		Function Name of Component	Part Name
Rear of DKC	1	SFP (4Gbps) (DKC-F710I-16MFS/16MFL)	• SFP (SHORT) • SFP (LONG)
	2	SFP (8Gbps) (Non-RoHS2 compliant part) (DKC-F710I-8UFC/16UFC/16MUS/16MUL)	• SFP (SHORT) (1US)
		SFP (8Gbps) (RoHS2 compliant part) (DKC-F710I-8UFC/8UFCR/16UFC/16CFCR/16MUS/16MUSR/16MUL)	• SFP (SHORT) (1USR) • SFP (LONG) (1UL)
	3	SFP (10Gbps) (DKC-F710I-8FOE)	• SFP (SHORT)



Rear View of DKC


CHA PCB
(DKC-F710I-16MFS/16MFL/8UFC/8UFCR/16UFC/16UFCR/16MUS/16MUSR/16MUL/8FOE)
SFP

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 SFP

2-1-1. Replacement of SFP

a. Make sure of the CHA and Port Locations of the SFP to be replaced. (Refer to pages LOC04-10 through LOC04-62.)

CAUTION

If the SFP of a wrong port is removed, a system down may be caused. Make sure that the location of the SFP to be replaced is correct.

b. Disconnect the optical fibre cable from the SFP to be replaced.

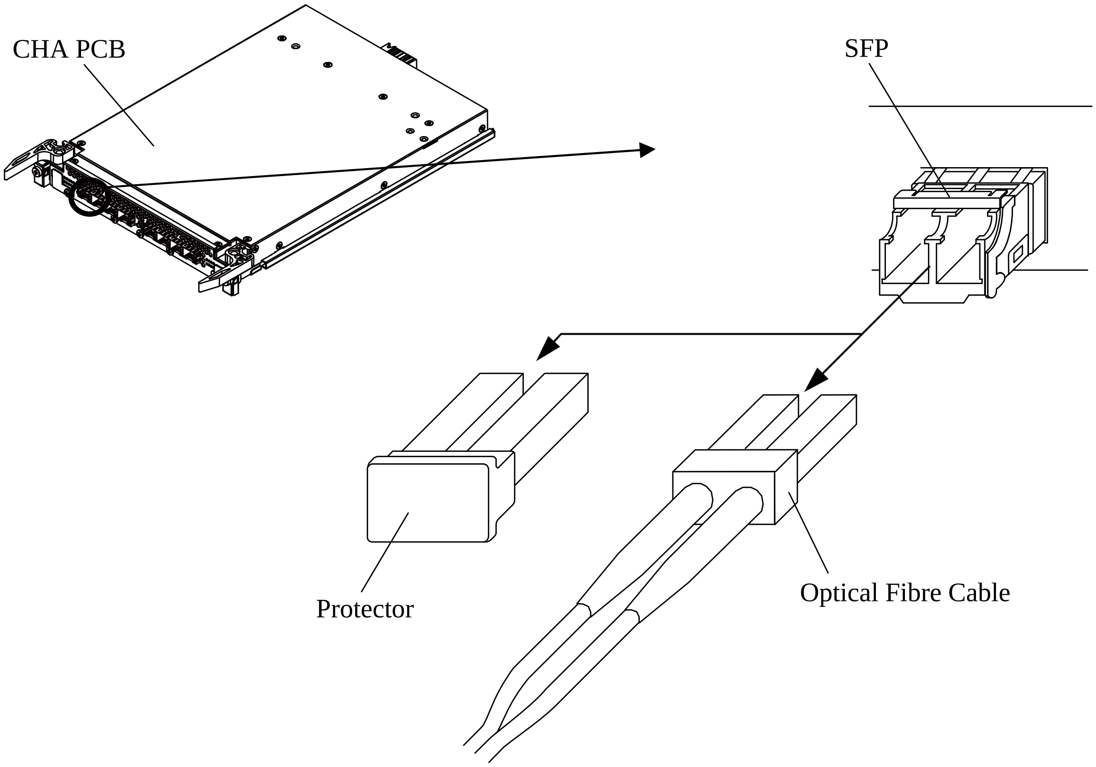


Fig. 3.24.2-1 Disconnection of Cable

c. Pull the lever to the front and remove the SFP.

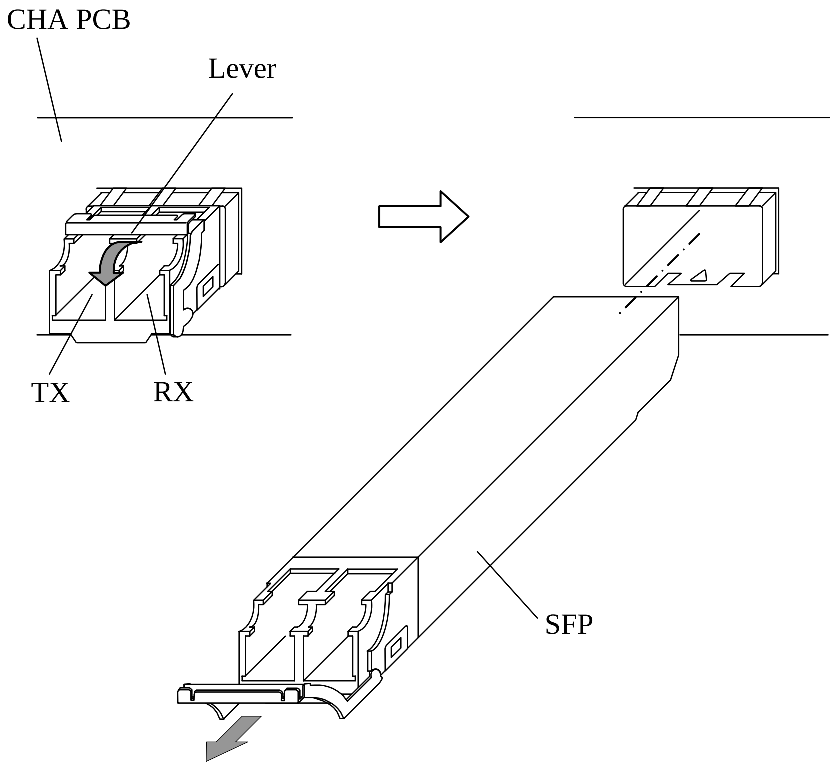


Fig. 3.24.2-2 Removal of SFP

d. Insert the spare SFP to the CHA PCB.
e. Connect the optical fibre cable to the SFP.

How to distinguish between SFP (SHORT) and SFP (LONG)

The whole or a part of the lever is a black for the SFP (SHORT).
The whole or a part of the lever is a blue for the SFP (LONG).

[Example]

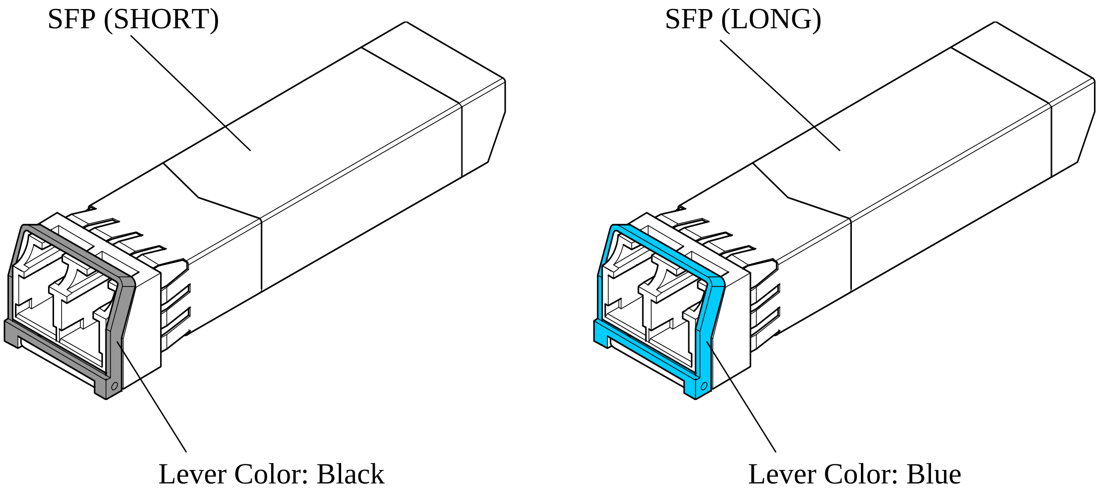


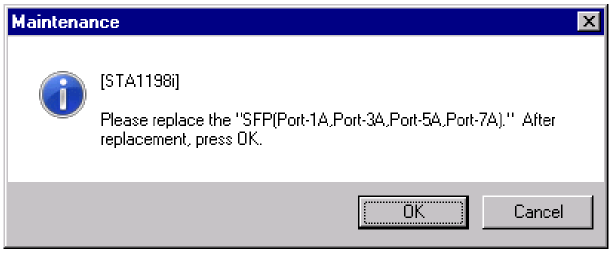
Fig. 3.24.2-3 How to distinguish between SFP(SHORT) and SFP(LONG)

2-1-2. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Replacing the SFP>

Select (CL) [OK] in response to “Please replace the “SFP(Port-nn, ...).” After replacement, press OK.”.

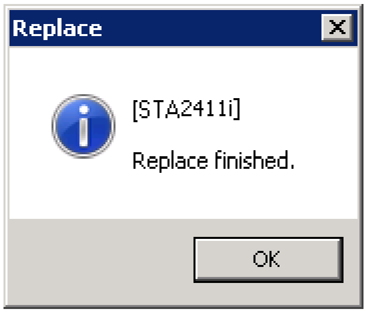


[STA1198i]

Please replace the "SFP(Port-1A,Port-3A,Port-5A,Port-7A)." After replacement, press OK.

3-2. <Check the end of SFP replace>

Select (CL) [OK] in response to “Replace finished.”.

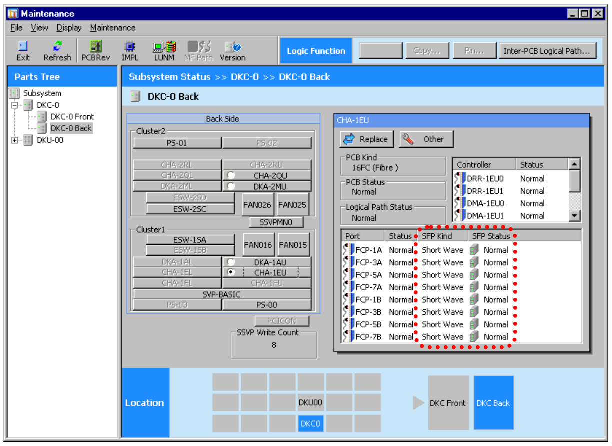


[STA2411i]

Replace finished.

3-3. <Confirming SFP type information>

Confirm that the SFP type information on the port information list.



PCB Kind: 16FC (Fibre)
PCB Status: Normal
Logical Path Status: Normal

Controller	Status
DRR-1EU0	Normal
DRR-1EU1	Normal
DMA-1EU0	Normal
DMA-1EU1	Normal

Port	Status	SFP Kind	SFP Status
FCP-1A	Normal	Short Wave	Normal
FCP-3A	Normal	Short Wave	Normal
FCP-5A	Normal	Short Wave	Normal
FCP-7A	Normal	Short Wave	Normal
FCP-1B	Normal	Short Wave	Normal
FCP-3B	Normal	Short Wave	Normal
FCP-5B	Normal	Short Wave	Normal
FCP-7B	Normal	Short Wave	Normal

3-4.

Go to POST-PROCEDURE [REP04-01-10].

[2.5 inch SSW REPLACEMENT PROCESSING - RU21]

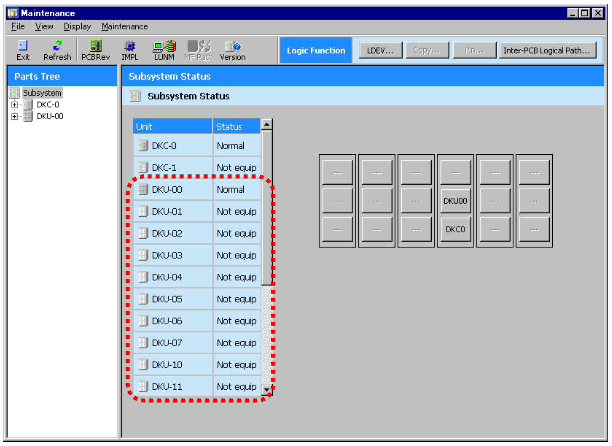
— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select SSW
    ② Specify Replacement
    ③ Place SSW into unpluggable state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Specify recovery of DKA Port connected to SSW

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

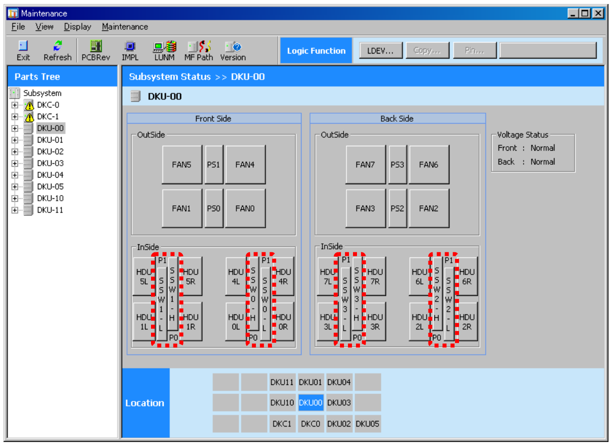
Select (CL) the DKU information [DKU-nn] of the DKU which installs the SSW to be replaced in the 'Maintenance' window.



Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <Select SSW>

Check and select (CL) [SSWn-X] to be replaced.



Voltage Status
Front : Normal
Back : Normal

1-3. <Specify replacement>

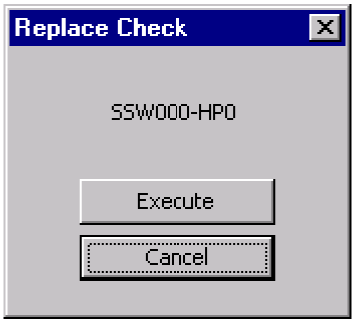
CAUTION

When the screen requests an operator to input a password in order to prevent multiple maintenance, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

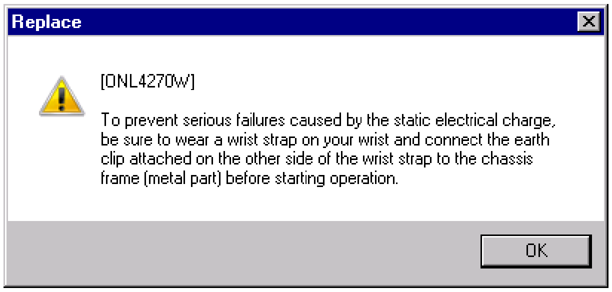
Select (CL) [Execute].

Selecting (CL) [Cancel] returns you to Step 1-2.



1-4. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.



[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

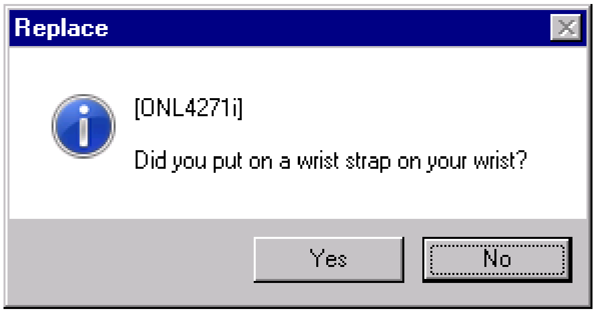
(1) <Confirm wearing wrist strap>

In response to a message, “Did you put on a wrist strap on your wrist?”.

Select (CL) [Yes] when wrist strap is on your wrist.

Select (CL) [No] when there is no wrist strap on your wrist.

When [No] is selected (CL), go to Step (2).



[ONL4271i]

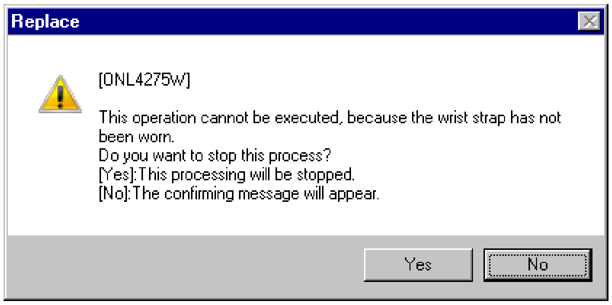
Did you put on a wrist strap on your wrist?

(2)

In response to a message, “This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?

[Yes]: This processing will be stopped.

[No]: The confirming message will appear.”



[ONL4275W]

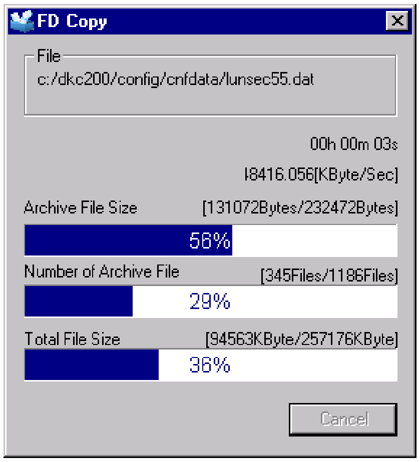
This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

When [Yes] is selected (CL), returned to Step 1-2.

When [No] is selected (CL), returned to Step 1-4.

1-5. <Compression of the error information>

The error information is compressed.
The dialog of FD Copy is displayed.



File
c:/dkc200/config/cnfdata/lunsec55.dat

00h 00m 03s
18416.056[KByte/Sec]

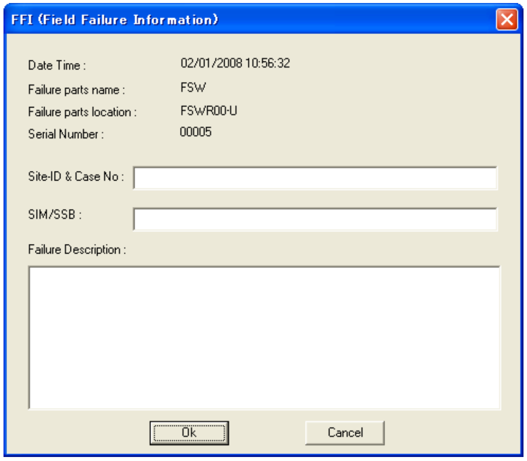
Archive File Size [131072Bytes/232472Bytes]
56%

Number of Archive File [345Files/1186Files]
29%

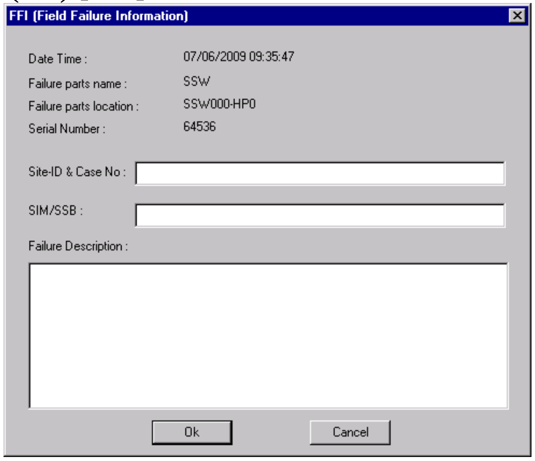
Total File Size [94563KByte/257176KByte]
36%

1-6. <Get the error information>

Input the Field Failure Information, and select (CL) [OK].

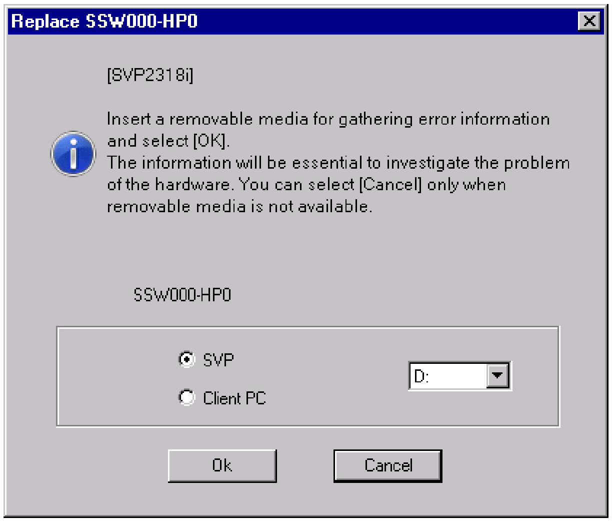


Date Time : 02/01/2008 10:56:32
Failure parts name : FSW
Failure parts location : FSWR00-U
Serial Number : 00005
Site-ID & Case No :
SIM/SSB :
Failure Description :



Date Time : 07/06/2009 09:35:47
Failure parts name : SSW
Failure parts location : SSW000-HP0
Serial Number : 64536
Site-ID & Case No :
SIM/SSB :
Failure Description :

“Insert a removable media for gathering error information and select [OK]. The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.” is displayed.
Trouble information is preserved in console PC connected with SVP.
Please select the Client PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu. The drive letter becomes the drive letter of console PC connected with SVP.



[SVP2318i]

Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.

SSW000-HP0

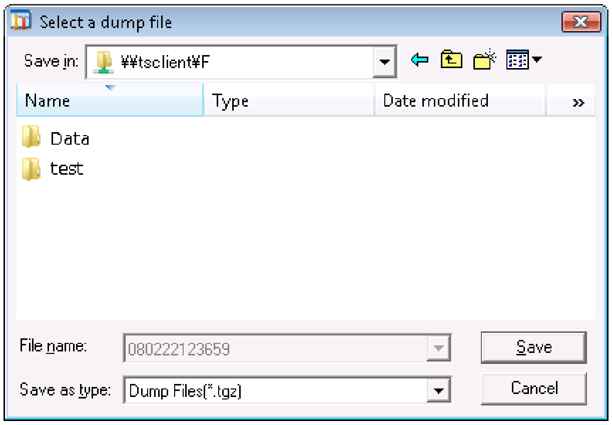
● SVP
○ Client PC

D:

A Primary copy is always placed on the SVP HD in the “c:\dkc200\others\pcbinfo\” directory with the following file name format “SH528_YYMMDDhhmmss.tgz”.
(YY denotes Year, MM denotes Month, DD denotes Day, hh denotes Hour, mm denotes Minute, and ss denotes Second)

When Client PC is selected, the directory selection dialog is displayed.
Please select an arbitrary directory if necessary.

Console PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of console PC.



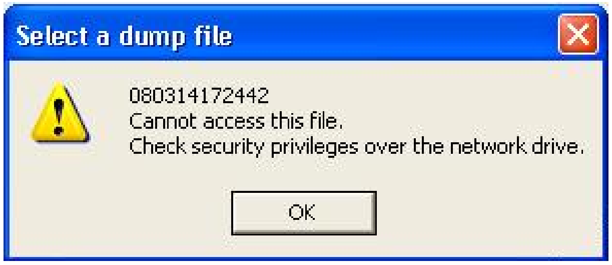
Save in: ¥¥tsclient¥F
File name: 080222123659
Save as type: Dump Files(*.tgz)

Select (CL) [Save] when saving a file in a specified directory.
It returns to the drive selection screen when [Cancel] is selected (CL).

Note: The message is displayed two or more times. Please only operate the SSW selected by 1-3. <Specify replacement>.

- When the destination media is write-protected.

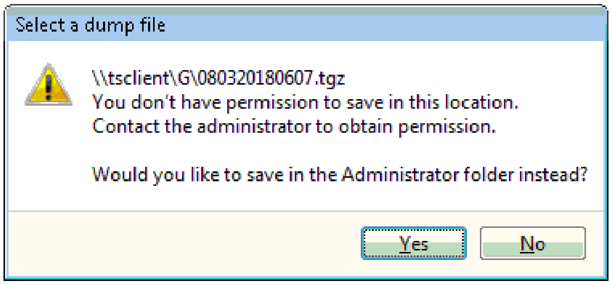
<For Windows XP>



080314172442
Cannot access this file.
Check security privileges over the network drive.

<For Windows Vista>

Selecting (CL) [Yes] displays the “C:\users\Administrator” folder of SVP.
Selecting (CL) [No] displays the folder selected with the Client PC.



\\tsclient\G\080320180607.tgz
You don't have permission to save in this location.
Contact the administrator to obtain permission.

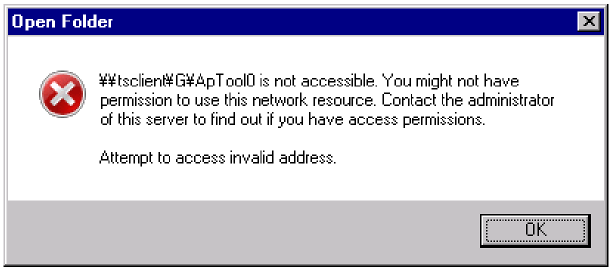
Would you like to save in the Administrator folder instead?

Please appoint another destination whether you remove write protect when you save it and carry it out.

- When dialog of the destination drive specified with the Client PC is open, the media is removed, and then select (CL) [Save].

- When the memory in the destination drive specified with the Client PC is corrupted. The dialog remains displayed after selecting (CL) [OK].

  At the time of the above operation completion, the information collection is not carried out.
  Please choose another directory again after having closed a system message whether you reconnect the drive that you removed when you save it and carry it out.

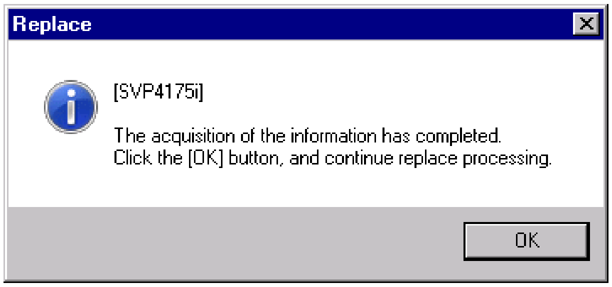


Open Folder

¥¥tsclient¥G¥ApTool0 is not accessible. You might not have permission to use this network resource. Contact the administrator of this server to find out if you have access permissions.

Attempt to access invalid address.

Select (CL) [OK] in response to “The acquisition of the information has completed. Click the [OK] button, and continue replace processing.”.

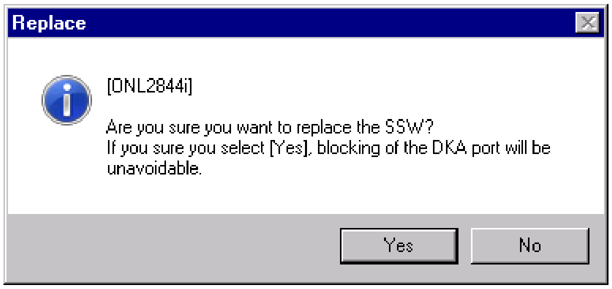


Replace

[SVP4175i]

The acquisition of the information has completed.
Click the [OK] button, and continue replace processing.

1-7. <Check beginning of DKA Port blocking>
Select (CL) [Yes] in response to “Are you sure you want to replace the SSW? If you select [Yes], blocking of the DKA port will be unavoidable.”.



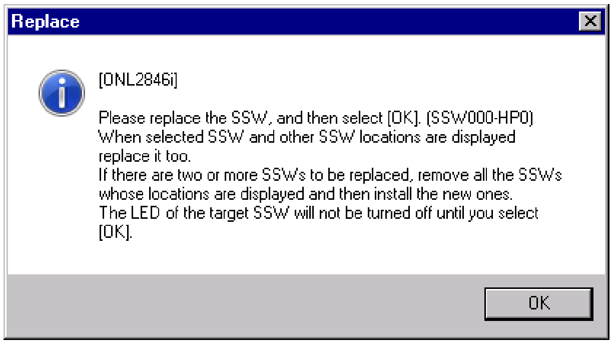
[ONL2844i]

Are you sure you want to replace the SSW?
If you sure you select [Yes], blocking of the DKA port will be unavoidable.

1-8. <Check DKA Port blocking>
“The DKA Port is being blocked...” is displayed.

1-9. <Replace SSW>

"Please replace the SSW, and then select [OK]. (SSWnnn-xxx)
When selected SSW and other SSW locations are displayed replace it too.
If there are two or more SSWs to be replaced, remove all the SSWs whose locations are displayed and then install the new ones.
The LED of the target SSW will not be turned off until you select [OK]." is displayed.



[ONL2846i]

Please replace the SSW, and then select [OK]. (SSW000-HP0)
When selected SSW and other SSW locations are displayed replace it too.
If there are two or more SSWs to be replaced, remove all the SSWs whose locations are displayed and then install the new ones.
The LED of the target SSW will not be turned off until you select [OK].

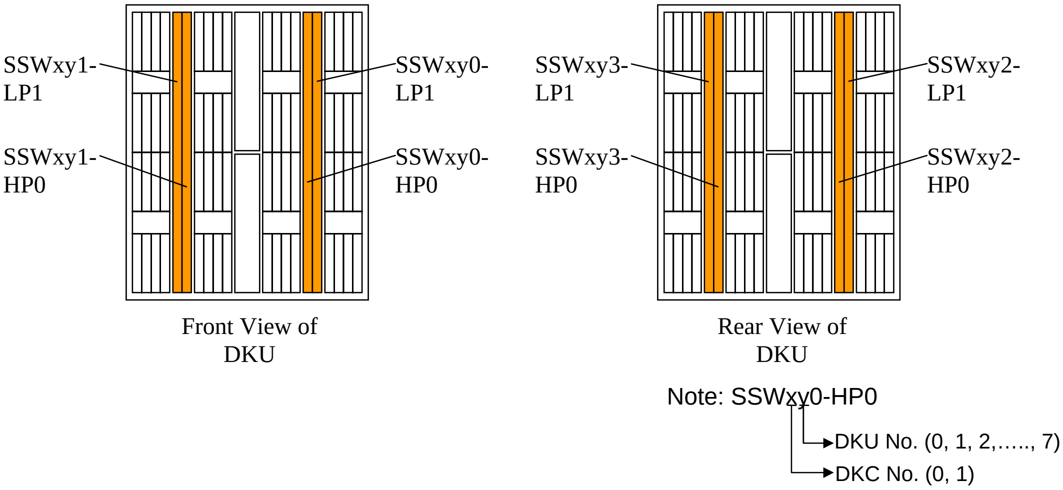
Make sure of the SSW PCB location is displayed, select (CL) the [OK] button after replaced target SSW PCB.
If the SSW LED is not turned on, please replace SSW PCB.

Go to "2. HARDWARE REPLACEMENT PROCESSING".

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Front or Rear of DKU	1	SSW	• SH528-A

DKU for 2.5 inch Drive



NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 Replacement of SSW

2-1-1. Open the FAN door.

a. Put the stopper of the FAN door into the openable and closable state. (Refer to the INST03-01-160.)

b. Loosen the two screws and open the FAN door.

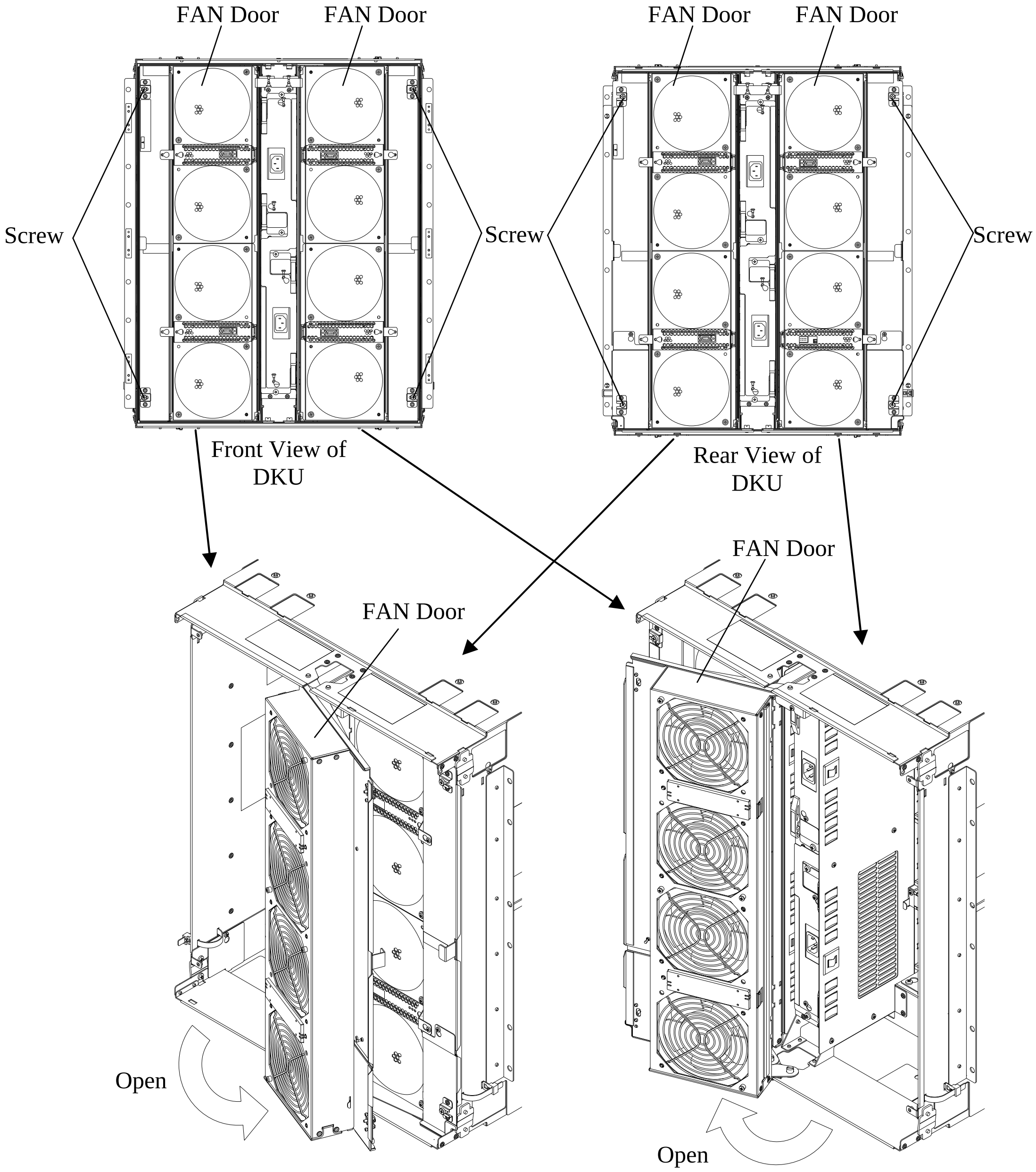


Fig. 3.26.2-1 Opening of FAN Door

2-1-2. Replace the SSW PCB.

a. Check Shut Down LED on the SSW PCB.

CAUTION: A system down is caused by a replacement of the SSW PCB other than that to be replaced. Make sure that it is the SSW PCB to be replaced.

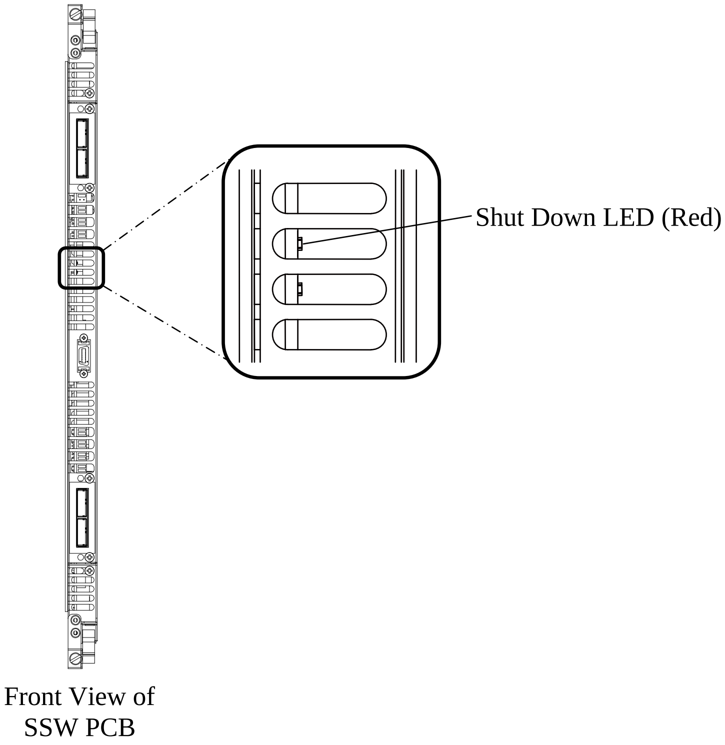
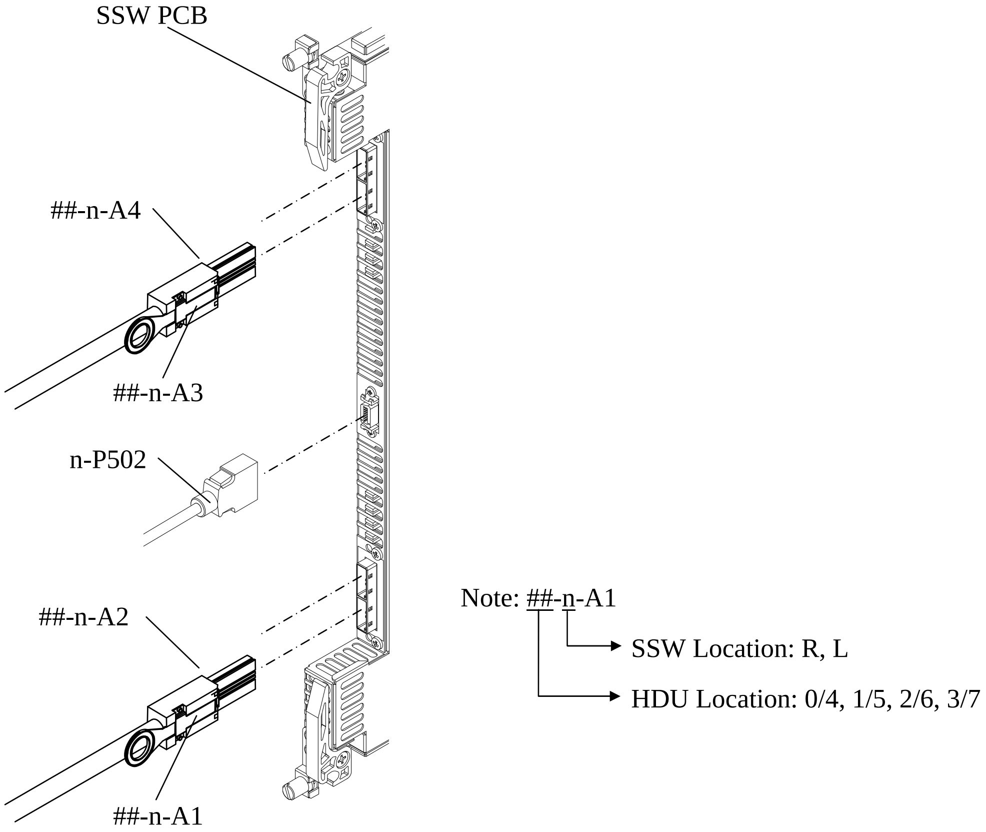


Fig. 3.26.2-2 Confirmation of Shut Down LED

b. Disconnect the cables from the SSW PCB.



Note: ##-n-A1
SSW Location: R, L
HDU Location: 0/4, 1/5, 2/6, 3/7

Fig. 3.26.2-3 Disconnection of Cables

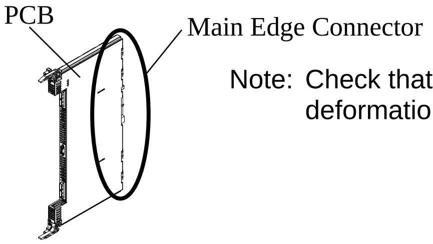
c. Loosen the two screws and remove the SSW PCB.

d. Set the jumpers of the spare SSW PCB. For jumper settings, refer to LOC06-50 through 130.

Note: Use the insulated radio pliers of the maintenance tools when setting the SSW jumpers.

e. Take time for 10 seconds or more from removing the PCB to the installation.

f. Attach the spare SSW PCB and tighten the two screws.



Note: Check that the main edge connector of the PCB has no deformation, damage or sticking of dust before installing the PCB.

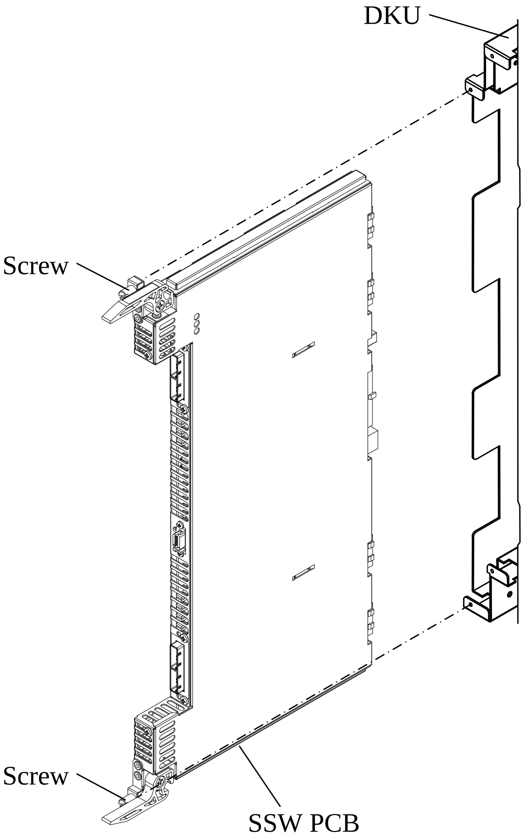


Fig. 3.26.2-4 Insertion of SSW PCB

g. Connect the cables to the SSW PCB after checking “3.1.7 Notes when connecting the DEV interface cable” (INST03-01-180). (Refer to Fig. 3.26.2-3.)

h. Close the FAN door and tighten the screws. (Refer to Fig. 3.26.2-1.)

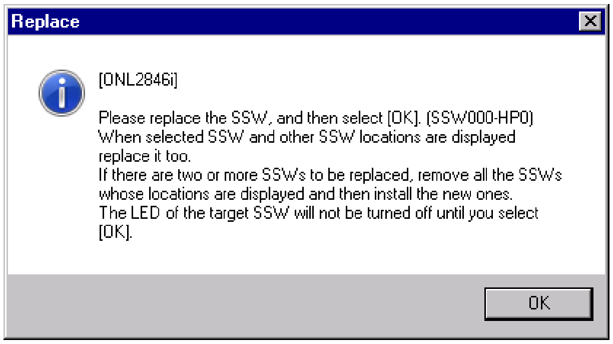
i. Put the FAN door stopper into the neutral state.

2-1-3. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check replacement of SSW>

Select (CL) [OK] in response to "Please replace the SSW, and then select [OK]. (SSWnnn-xxx)
When selected SSW and other SSW locations are displayed replace it too.
If there are two or more SSWs to be replaced, remove all the SSWs whose locations are displayed and then install the new ones.
The LED of the target SSW will not be turned off until you select [OK]." After replacement, press OK.



[ONL2846i]

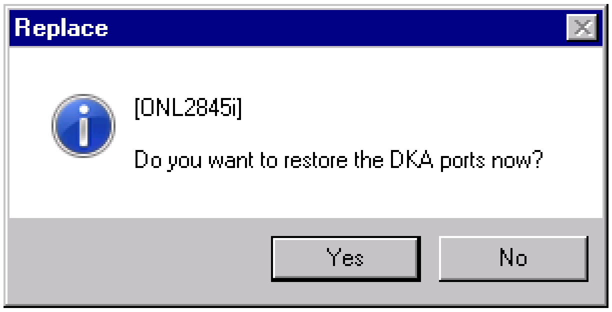
Please replace the SSW, and then select [OK]. (SSW000-HP0)
When selected SSW and other SSW locations are displayed replace it too.
If there are two or more SSWs to be replaced, remove all the SSWs whose locations are displayed and then install the new ones.
The LED of the target SSW will not be turned off until you select [OK].

Make sure that the SSW PCB location is displayed, select (CL) the [OK] button after replacing target SSW PCBs.
Even if the SSW LED is not turned on, please replace the SSW PCBs.

Notice: The LED lights up also for an SSW connected with the same SAS interface cable as that of the specified SSW. The light turns off if you select (CL) on the [OK] button.

3-2. <Check the beginning of DKA Port recovery>

Select (CL) [Yes] in response to "Do you want to restore the DKA ports now?".



[ONL2845i]

Do you want to restore the DKA ports now?

3-3. <DKU PATH INLINE>

"DKU PATH INLINE is now running..." is displayed.

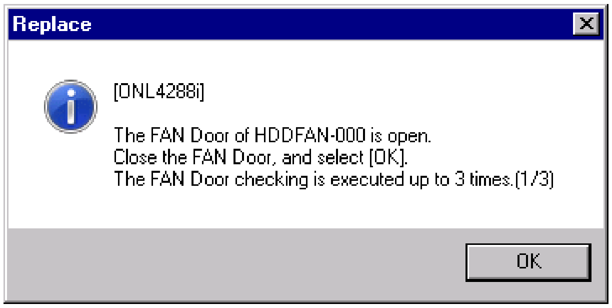
⚠ CAUTION

When a failure is found during DKU PATH INLINE, the DKA Port connected to the loop are blocked.
Confirm the Diagnosis Log and solve the problem.

3-4. <Check DKA Port recovery processing>
"Restoring the DKA Port..." is displayed.

(1)

"The FAN Door of HDDFAN-xxx is open.
Close the FAN Door, and select [OK].
The FAN Door checking is executed up to 3 times. (n/3)" is displayed.
After the FAN door is closed, select (CL) [OK] in response to this message.



[ONL4288i]

The FAN Door of HDDFAN-000 is open.
Close the FAN Door, and select [OK].
The FAN Door checking is executed up to 3 times.(1/3)

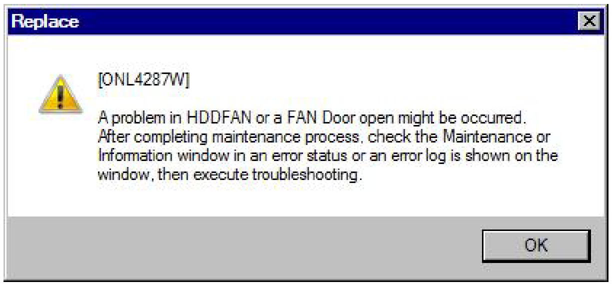
It returns to (1) when HDDFAN doors of the object are not closed.
It goes to 3-5 when HDDFAN doors of the object are closed.

Note: It goes to (2) when it cannot be confirmed that the FAN doors are closed in the three times FAN door check.

---

(2)

"A problem in HDDFAN or a FAN Door open might be occurred.
After completing the maintenance process, check the Maintenance or Information window in an error status or an error log is shown on the window, then execute troubleshooting." is displayed.
Select (CL) [OK] in response to this message.

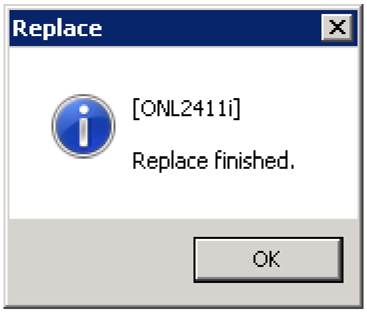


[ONL4287W]

A problem in HDDFAN or a FAN Door open might be occurred.
After completing maintenance process, check the Maintenance or Information window in an error status or an error log is shown on the window, then execute troubleshooting.

3-5. <Check the end of SSW replace>

Select (CL) [OK] in response to “Replace finished.”.



[ONL2411i]

Replace finished.

3-6.

Go to POST-PROCEDURE [REP04-01-10].

[3.5 inch SSW REPLACEMENT PROCESSING - RU31]

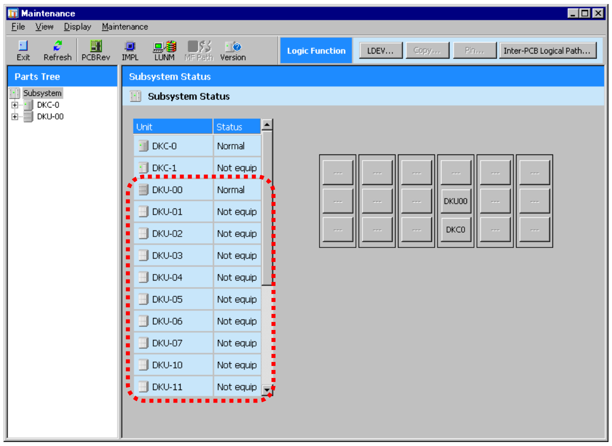
— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select SSW
    ② Specify Replacement
    ③ Place SSW into unpluggable state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Specify recovery of DKA Port connected to SSW

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

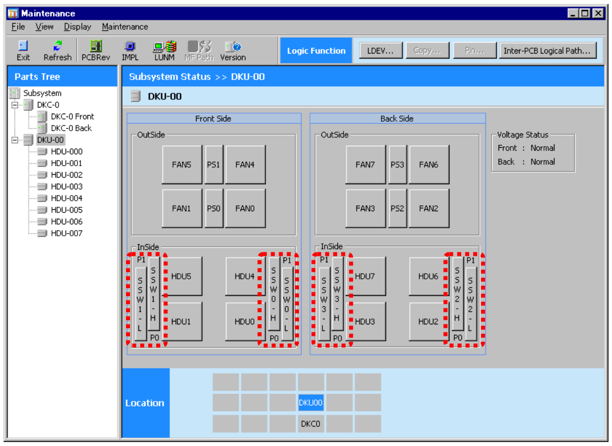
Select (CL) the DKU information [DKU-nn] of the DKU which installs the SSW to be replaced in the 'Maintenance' window.



Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <Select SSW>

Check and select (CL) [SSWn-X] to be replaced.



Voltage Status
Front : Normal
Back : Normal

1-3. <Specify replacement>

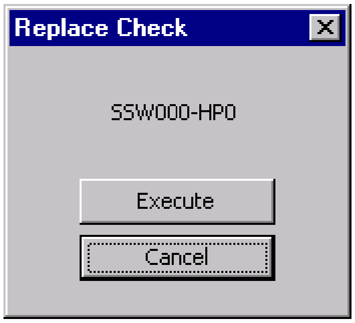
CAUTION

When the screen requests an operator to input a password in order to prevent multiple maintenance, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

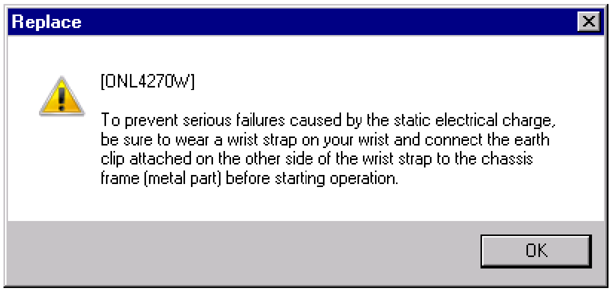
Select (CL) [Execute].

Selecting (CL) [Cancel] returns you to Step 1-2.



1-4. <Wear a wrist strap>

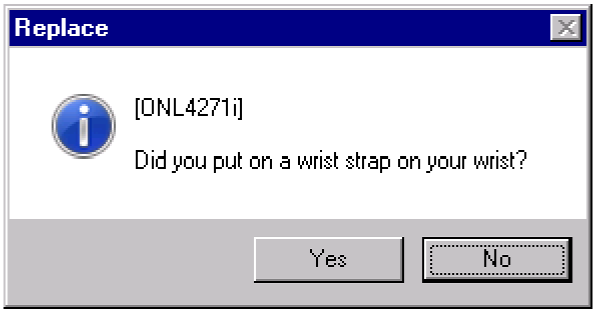
Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.



[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

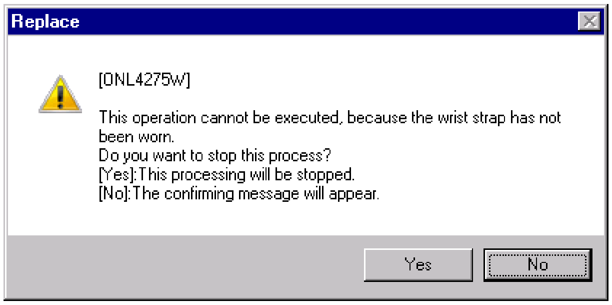
(1) <Confirm wearing wrist strap>
In response to a message, “Did you put on a wrist strap on your wrist?”.
Select (CL) [Yes] when wrist strap is on your wrist.
Select (CL) [No] when there is no wrist strap on your wrist.
When [No] is selected (CL), go to Step (2).



[ONL4271i]

Did you put on a wrist strap on your wrist?

(2)
In response to a message, “This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?
[Yes]: This processing will be stopped.
[No]: The confirming message will appear.”



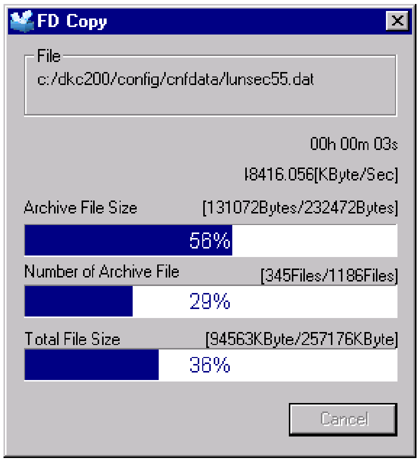
[ONL4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

When [Yes] is selected (CL), returned to Step 1-2.
When [No] is selected (CL), returned to Step 1-4.

1-5. <Compression of the error information>

The error information is compressed.
The dialog of FD Copy is displayed.



c:/dkc200/config/cnfdata/lunsec55.dat

00h 00m 03s

8416.056[KByte/Sec]

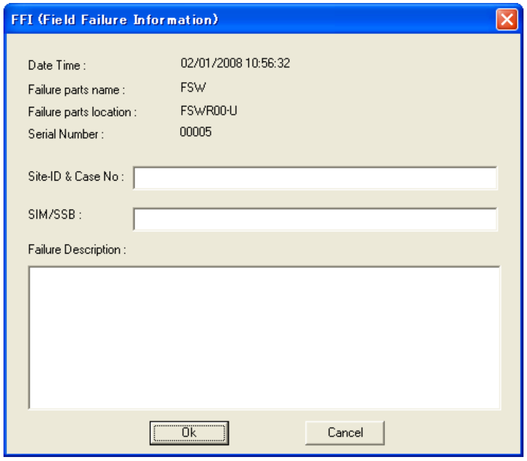
Archive File Size [131072Bytes/232472Bytes] 56%

Number of Archive File [345Files/1186Files] 29%

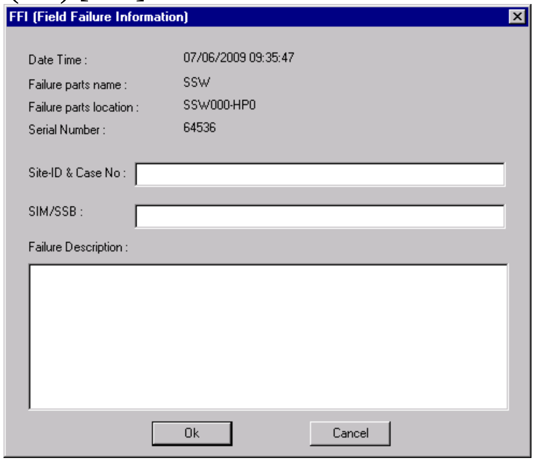
Total File Size [94563KByte/257176KByte] 36%

1-6.<Get the error information>

Input the Field Failure Information, and select (CL) [OK].

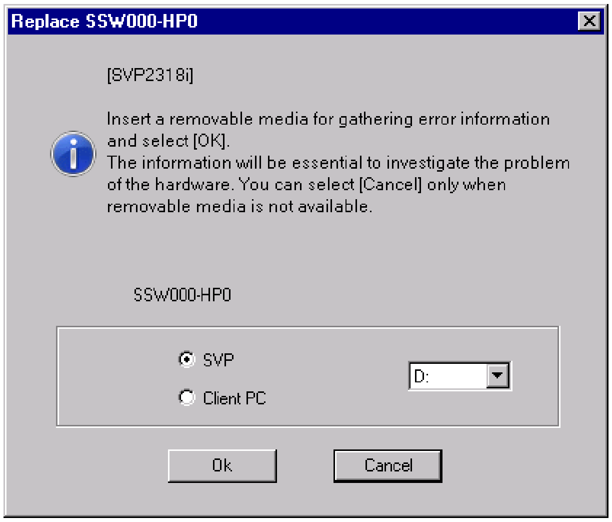


Date Time : 02/01/2008 10:56:32
Failure parts name : FSW
Failure parts location : FSWR00-U
Serial Number : 00005



Date Time : 07/06/2009 09:35:47
Failure parts name : SSW
Failure parts location : SSW000-HP0
Serial Number : 64536

“Insert a removable media for gathering error information and select [OK]. The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.” is displayed.
Trouble information is preserved in console PC connected with SVP.
Please select the Client PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu. The drive letter becomes the drive letter of console PC connected with SVP.



[SVP2318i]

Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.

SSW000-HP0

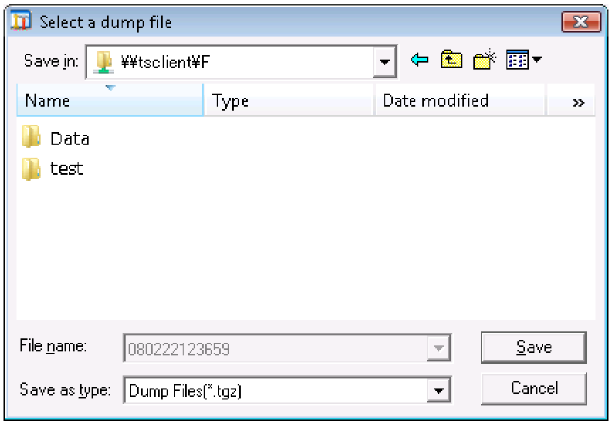
● SVP
○ Client PC

D:

A Primary copy is always placed on the SVP HD in the “c:\dkc200\others\pcbinfo\” directory with the following file name format “SH528_YYMMDDhhmmss.tgz”.
(YY denotes Year, MM denotes Month, DD denotes Day, hh denotes Hour, mm denotes Minute, and ss denotes Second)

When Client PC is selected, the directory selection dialog is displayed.
Please select an arbitrary directory if necessary.

Console PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of console PC.



Select a dump file

Save in: ¥¥tsclient¥F

Name	Type	Date modified
Data		
test		

File name: 080222123659

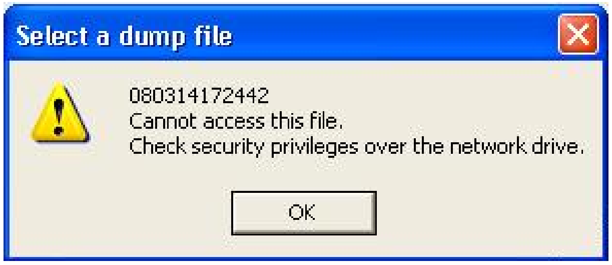
Save as type: Dump Files(*.tgz)

Select (CL) [Save] when saving a file in a specified directory.
It returns to the drive selection screen when [Cancel] is selected (CL).

Note: The message is displayed two or more times. Please only operate the SSW selected by 1-3. <Specify replacement>.

- When the destination media is write-protected.

<For Windows XP>

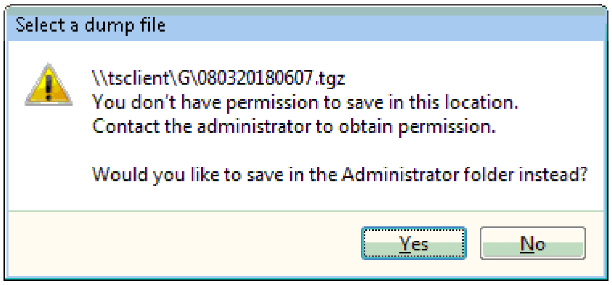


Select a dump file

080314172442
Cannot access this file.
Check security privileges over the network drive.

<For Windows Vista>

Selecting (CL) [Yes] displays the "C:\users\Administrator" folder of SVP.
Selecting (CL) [No] displays the folder selected with the Client PC.



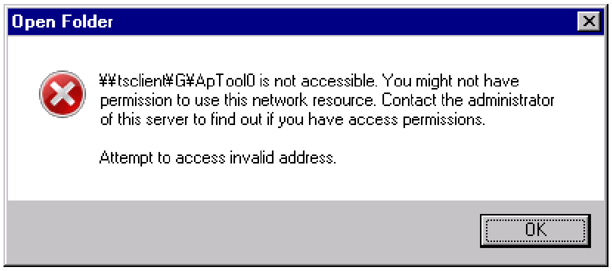
Select a dump file

\\tsclient\G\080320180607.tgz
You don't have permission to save in this location.
Contact the administrator to obtain permission.

Would you like to save in the Administrator folder instead?

Please appoint another destination whether you remove write protect when you save it and carry it out.

- When dialog of the destination drive specified with the Client PC is open, the media is removed, and then select (CL) [Save].



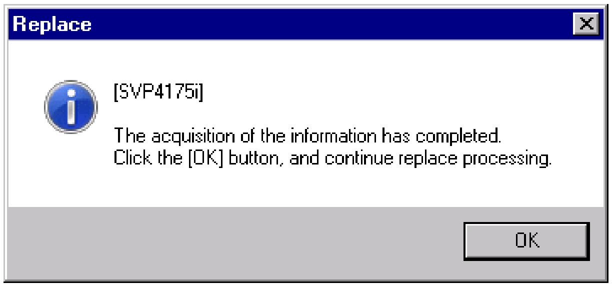
¥¥tsclient¥G¥ApTool0 is not accessible. You might not have permission to use this network resource. Contact the administrator of this server to find out if you have access permissions.

Attempt to access invalid address.

- When the memory in the destination drive specified with the Client PC is corrupted. The dialog remains displayed after selecting (CL) [OK].

  At the time of the above operation completion, the information collection is not carried out.
  Please choose another directory again after having closed a system message whether you reconnect the drive that you removed when you save it and carry it out.

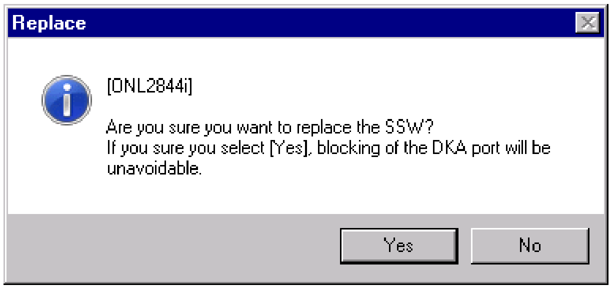
Select (CL) [OK] in response to “The acquisition of the information has completed. Click the [OK] button, and continue replace processing.”.



[SVP4175i]

The acquisition of the information has completed.
Click the [OK] button, and continue replace processing.

1-7. <Check beginning of DKA Port blocking>
Select (CL) [Yes] in response to “Are you sure you want to replace the SSW? If you select [Yes], blocking of the DKA port will be unavoidable.”.



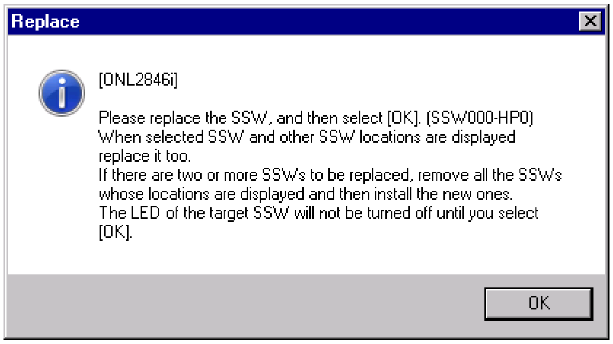
[ONL2844i]

Are you sure you want to replace the SSW?
If you sure you select [Yes], blocking of the DKA port will be unavoidable.

1-8. <Check DKA Port blocking>
“The DKA Port is being blocked...” is displayed.

1-9. <Replace SSW>

"Please replace the SSW, and then select [OK]. (SSWnnn-xxx)
When selected SSW and other SSW locations are displayed replace it too.
If there are two or more SSWs to be replaced, remove all the SSWs whose locations are displayed and then install the new ones.
The LED of the target SSW will not be turned off until you select [OK]." is displayed.



[ONL2846i]

Please replace the SSW, and then select [OK]. (SSW000-HP0)
When selected SSW and other SSW locations are displayed
replace it too.
If there are two or more SSWs to be replaced, remove all the SSWs
whose locations are displayed and then install the new ones.
The LED of the target SSW will not be turned off until you select
[OK].

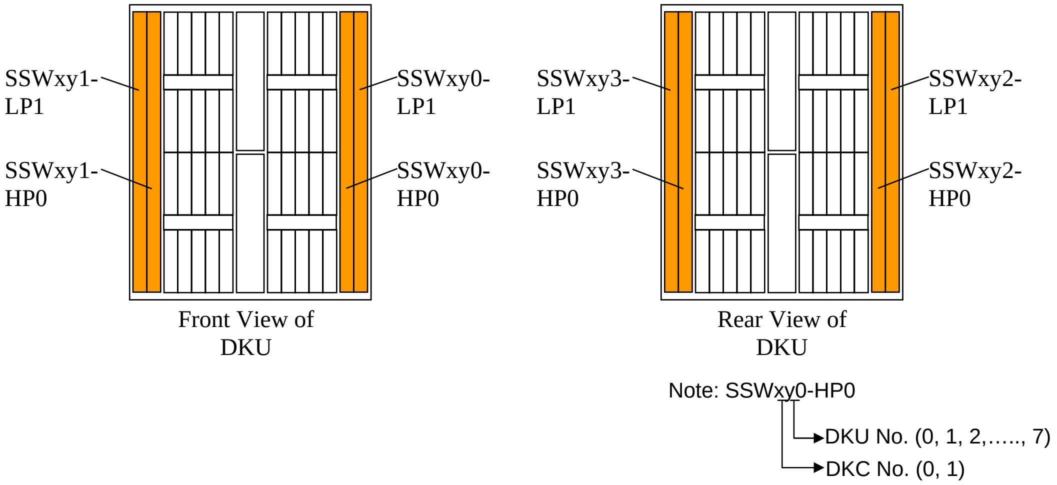
Make sure of the SSW PCB location is displayed, select (CL) the [OK] button after replaced target SSW PCB.
If the SSW LED is not turned on, please replace SSW PCB.

Go to "2. HARDWARE REPLACEMENT PROCESSING".

2. HARDWARE REPLACEMENT PROCESSING

Location		Function Name of Component	Part Name
Front or Rear of DKU	1	SSW	• SH528-A

DKU for 3.5 inch Drive



NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

.

2-1 Replacement of SSW

2-1-1. Open the FAN door.

a. Put the stopper of the FAN door into the openable and closable state. (Refer to the INST03-01-160.)

b. Loosen the two screws and open the FAN door.

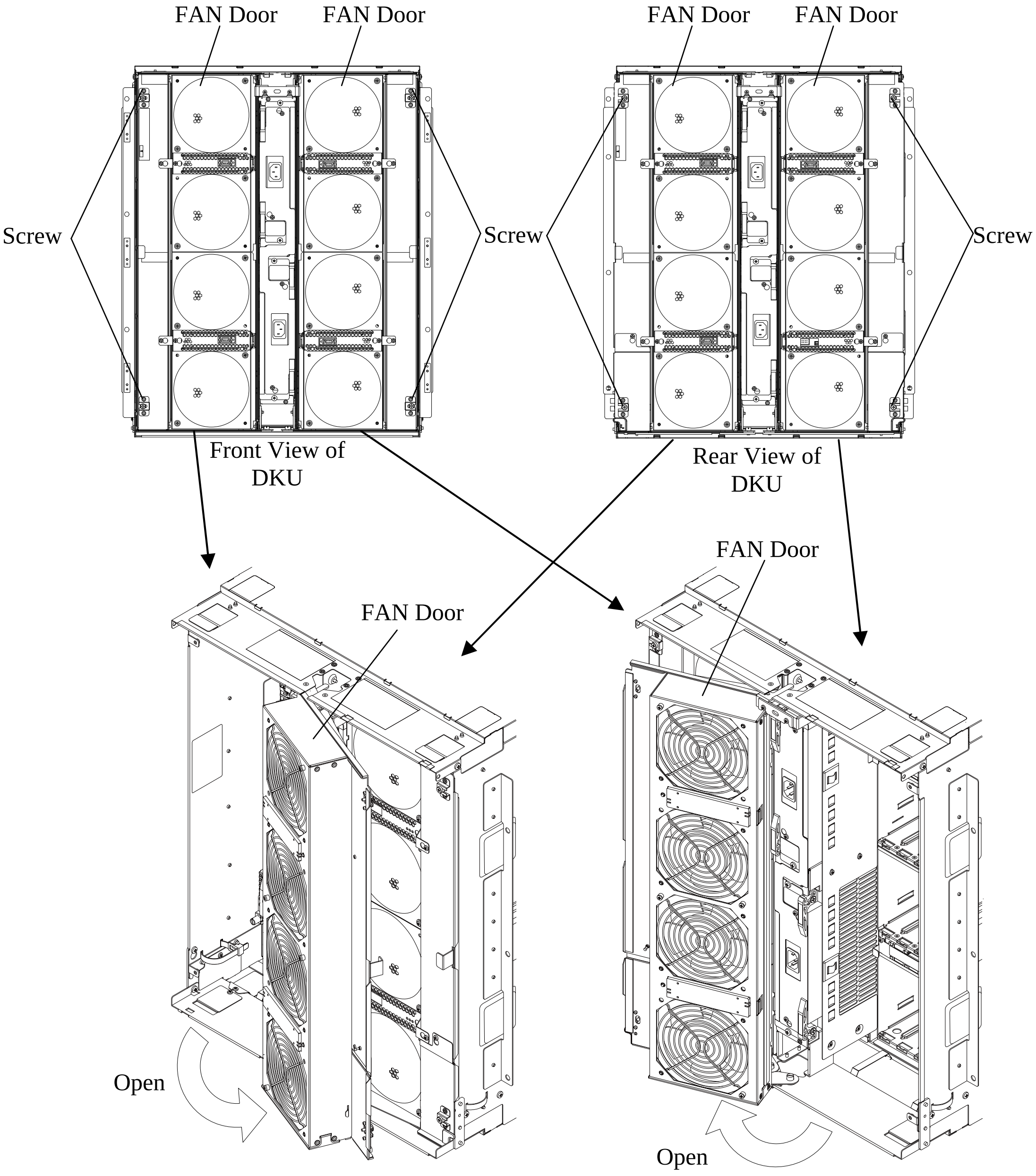


Fig. 3.27.2-1 Opening of FAN Door

2-1-2. When the SSW installed on the right side of the DKU is replaced, take out the jig from the Pocket ASSY.

When the SSW installed on the left side of the DKU is replaced, proceed to the step 2-1-3.

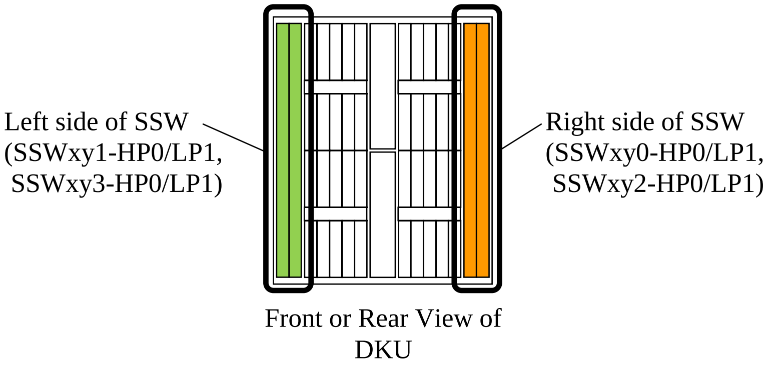


Fig. 3.27.2-2 SSW Position

a. Remove the pocket ASSY from the front of the RACK-x0.
b. Take the jig out from the pocket ASSY.
c. Install the pocket ASSY in the front of the frame.

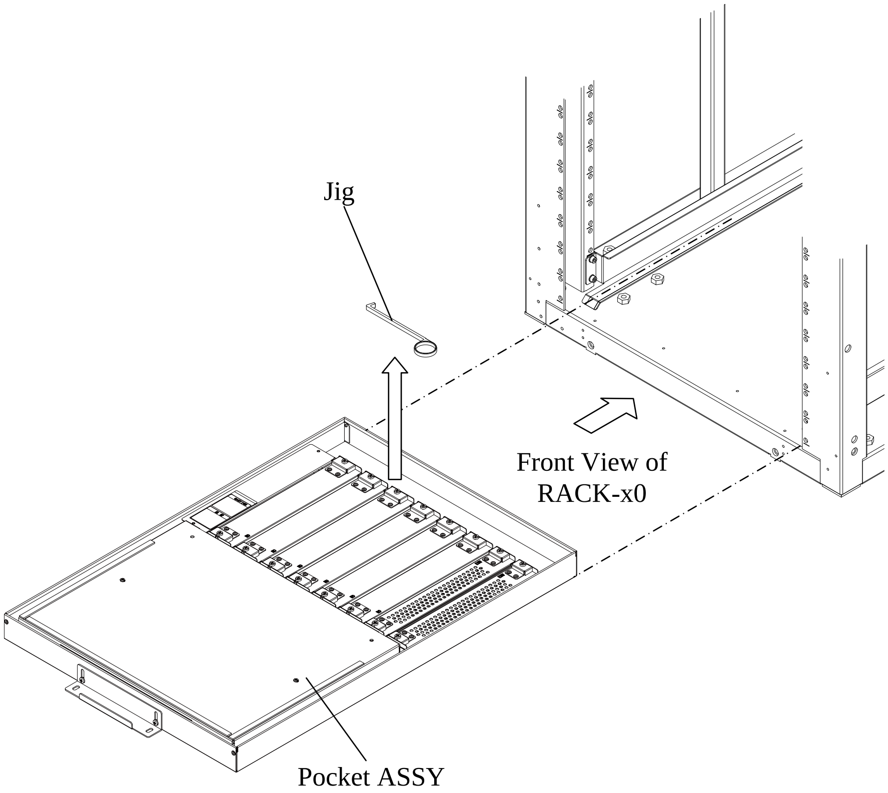


Fig. 3.27.2-3 Removal of Jig

2-1-3. Replace the SSW PCB.

a. Check Shut Down LED on the SSW PCB.

CAUTION:	A system down is caused by a replacement of the SSW PCB other than that to be replaced. Make sure that it is the SSW PCB to be replaced.

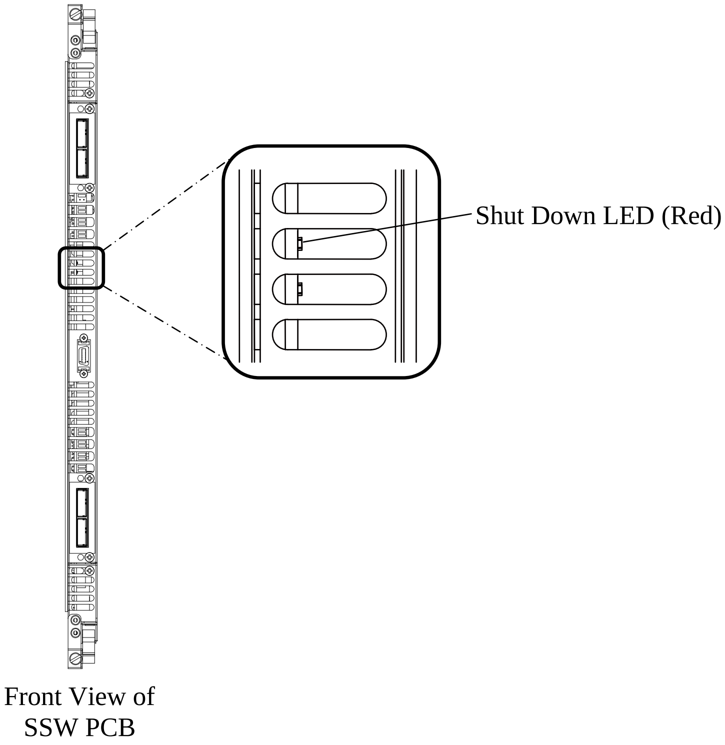
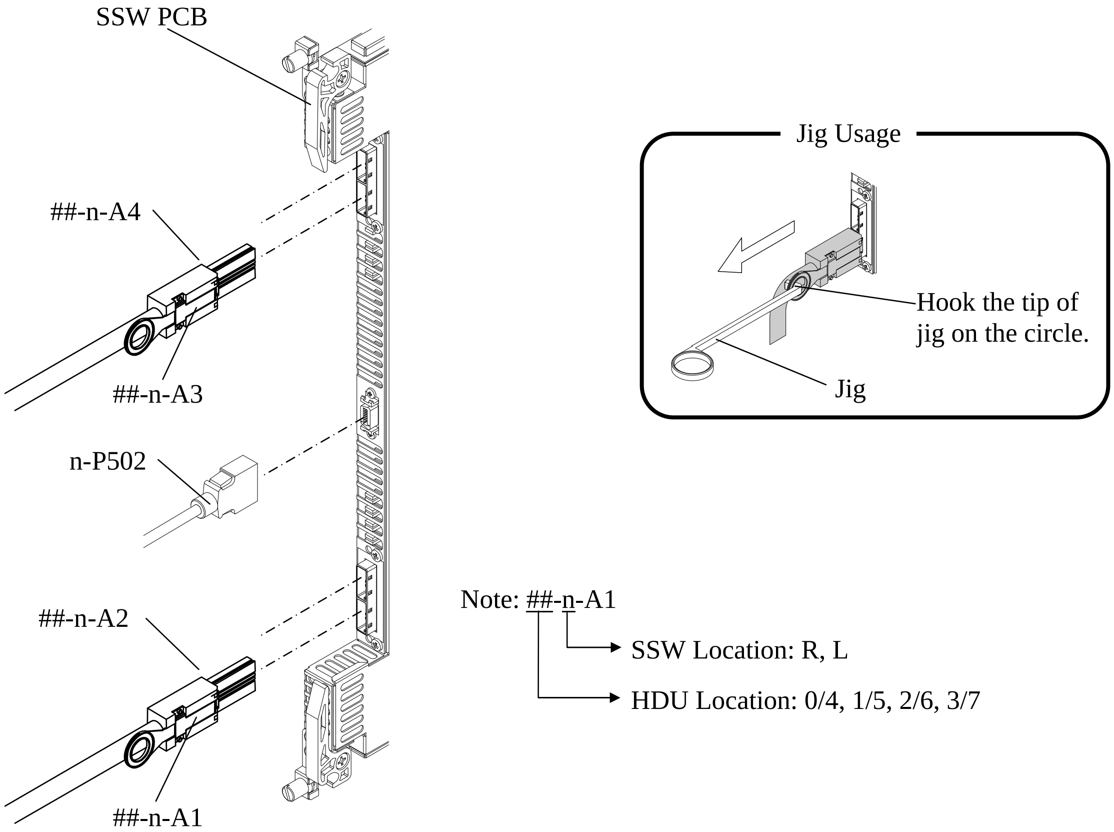


Fig. 3.27.2-4 Confirmation of Shut Down LED

b. Disconnect the cables from the SSW PCB.
Use the jig when the SSW installed on the right side of the DKU is replaced.



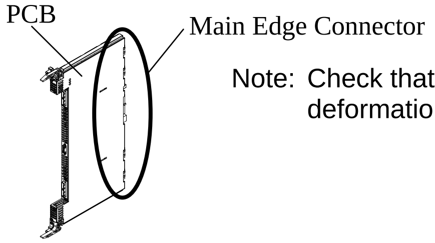
Note: ##-n-A1
→ SSW Location: R, L
→ HDU Location: 0/4, 1/5, 2/6, 3/7

Fig. 3.27.2-5 Disconnection of Cables

c. Loosen the two screws and remove the SSW PCB.
d. Set the jumpers of the spare SSW PCB. For jumper settings, refer to LOC06-50 through 130.

Note: Use the insulated radio pliers of the maintenance tools when setting the SSW jumpers.

e. Take time for 10 seconds or more from removing the PCB to the installation.
f. Attach the spare SSW PCB and tighten the two screws.



Note: Check that the main edge connector of the PCB has no deformation, damage or sticking of dust before installing the PCB.

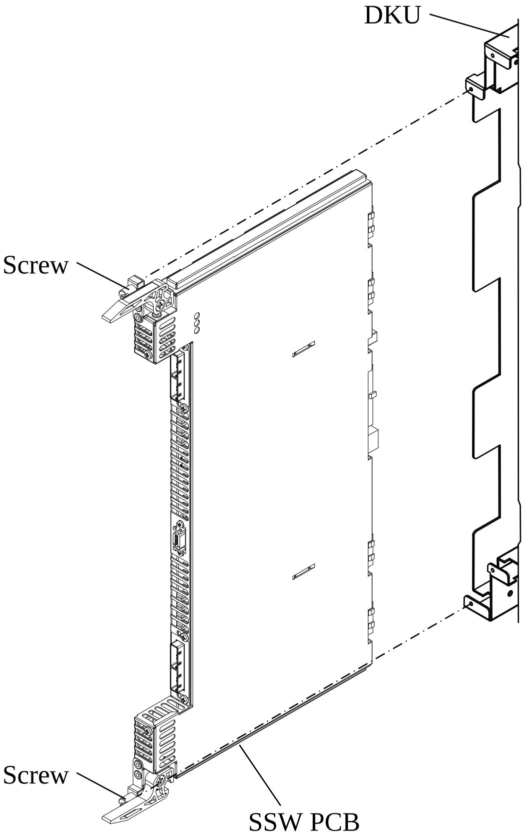


Fig. 3.27.2-6 Insertion of SSW PCB

g. Connect the cables to the SSW PCB after checking “3.1.7 Notes when connecting the DEV interface cable” (INST03-01-180). (Refer to Fig. 3.27.2-5.)
h. Close the FAN door and tighten the screws. (Refer to Fig. 3.27.2-1.)
i. Put the FAN door stopper into the neutral state.

2-1-4. When the jig was used, put the jig back to the pocket ASSY.

Proceed to the step 2-1-5 if the jig is not used.

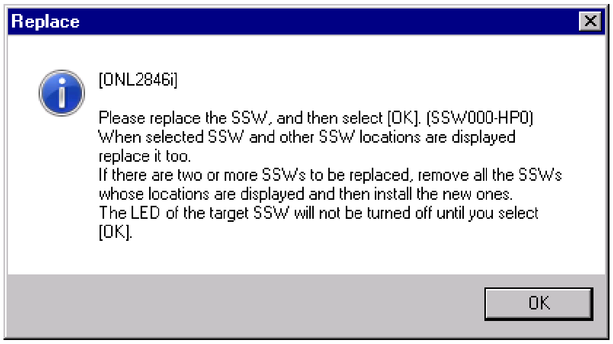
a. Remove the pocket ASSY from the front of the RACK-x0. (Refer to Fig. 3.27.2-3.)
b. Put the jig back to the pocket ASSY.
c. Install the pocket ASSY in the front of the frame.

2-1-5. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check replacement of SSW>

Select (CL) [OK] in response to “Please replace the SSW, and then select [OK]. (SSWnnn-xxx)
When selected SSW and other SSW locations are displayed replace it too.
If there are two or more SSWs to be replaced, remove all the SSWs whose locations are displayed and then install the new ones.
The LED of the target SSW will not be turned off until you select [OK].” After replacement, press OK.



[ONL2846i]

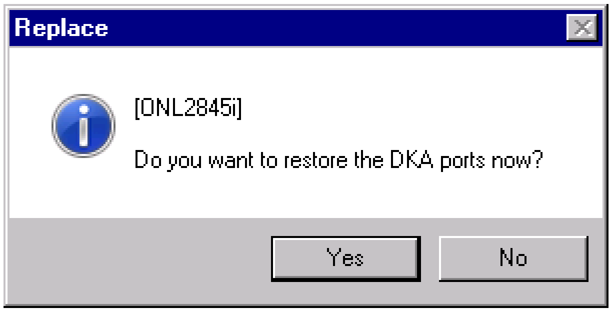
Please replace the SSW, and then select [OK]. (SSW000-HP0)
When selected SSW and other SSW locations are displayed
replace it too.
If there are two or more SSWs to be replaced, remove all the SSWs
whose locations are displayed and then install the new ones.
The LED of the target SSW will not be turned off until you select
[OK].

Make sure that the SSW PCB location is displayed, select (CL) the [OK] button after replacing target SSW PCBs.
Even if the SSW LED is not turned on, please replace the SSW PCBs.

Notice: The LED lights up also for an SSW connected with the same SAS interface cable as that of the specified SSW. The light turns off if you select (CL) on the [OK] button.

3-2. <Check the beginning of DKA Port recovery>

Select (CL) [Yes] in response to “Do you want to restore the DKA ports now?”.



[ONL2845i]

Do you want to restore the DKA ports now?

3-3. <DKU PATH INLINE>

“DKU PATH INLINE is now running...” is displayed.

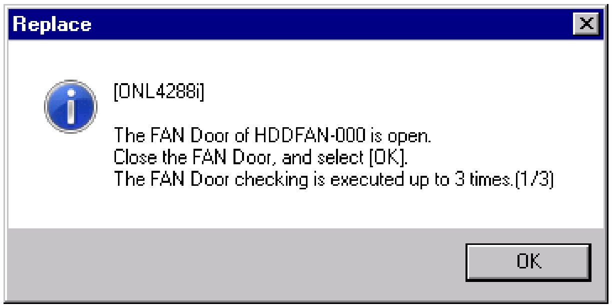
⚠ **CAUTION**

When a failure is found during DKU PATH INLINE, the DKA Port connected to the loop are blocked.
Confirm the Diagnosis Log and solve the problem.

3-4. <Check DKA Port recovery processing>
"Restoring the DKA Port..." is displayed.

(1)

"The FAN Door of HDDFAN-xxx is open.
Close the FAN Door, and select [OK].
The FAN Door checking is executed up to 3 times. (n/3)" is displayed.
After the FAN door is closed, select (CL) [OK] in response to this message.



[ONL4288i]

The FAN Door of HDDFAN-000 is open.
Close the FAN Door, and select [OK].
The FAN Door checking is executed up to 3 times.(1/3)

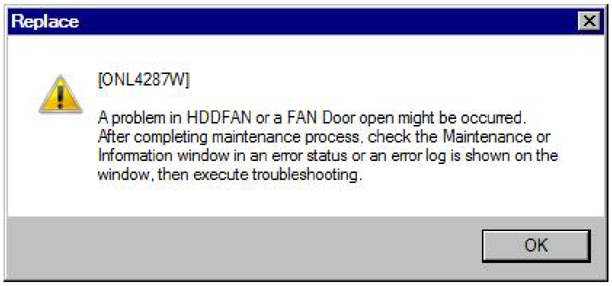
It returns to (1) when HDDFAN doors of the object are not closed.
It goes to 3-5 when HDDFAN doors of the object are closed.

Note: It goes to (2) when it cannot be confirmed that the FAN doors are closed in the three times FAN door check.

---

(2)

"A problem in HDDFAN or a FAN Door open might be occurred.
After completing the maintenance process, check the Maintenance or Information window in an error status or an error log is shown on the window, then execute troubleshooting." is displayed.
Select (CL) [OK] in response to this message.

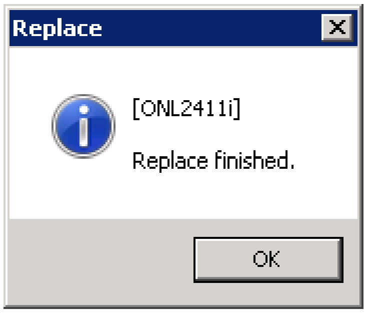


[ONL4287W]

A problem in HDDFAN or a FAN Door open might be occurred.
After completing maintenance process, check the Maintenance or Information window in an error status or an error log is shown on the window, then execute troubleshooting.

3-5. <Check the end of SSW replace>

Select (CL) [OK] in response to “Replace finished.”.



[ONL2411i]

Replace finished.

3-6.

Go to POST-PROCEDURE [REP04-01-10].

[2.5 inch HDDPWR REPLACEMENT PROCESSING - RU22]

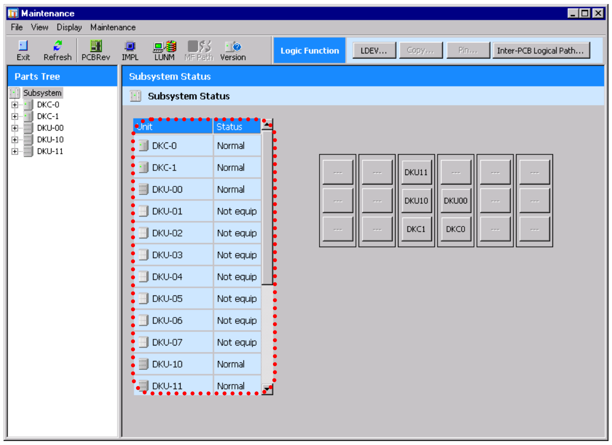
— OUTLINE —

1. PRE-PROCESSING of SVP
   ① Select 2.5 inch HDDPWR (status check)
   ② Specify Replacement
   ③ Detach 2.5 inch HDDPWR
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
   ① Specify end of 2.5 inch HDDPWR replacement
   ② Reinstall related parts
   ③ Start environment monitor

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

Select (CL) [Disk Unit – DKU-XX] in the ‘Maintenance’ window.

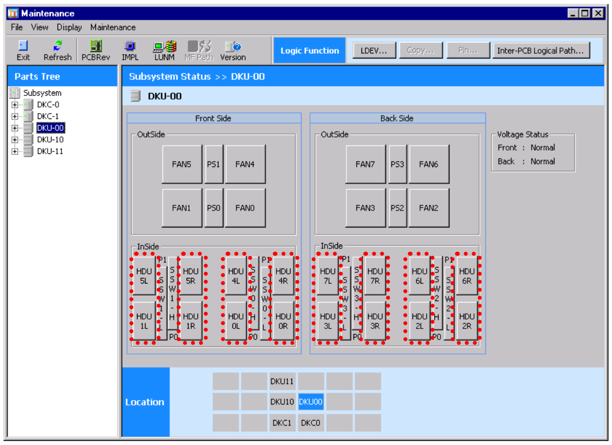

Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Prt... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKC-1
DKU-00
DKU-10
DKU-11
Subsystem Status
DKU11 DKU10 DKU00 DKC1 DKC0

Subsystem Status

Unit	Status
DKC-0	Normal
DKC-1	Normal
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Normal
DKU-11	Normal

1-2. <Specify HDU>

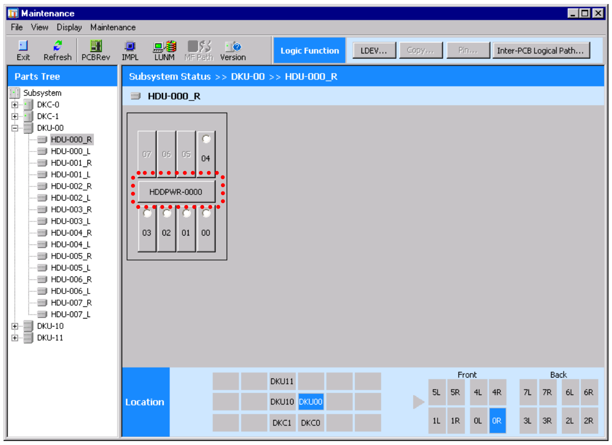
Select (CL) [DKUnx].


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Prt... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKC-1
DKU-00
DKU-10
DKU-11
Subsystem Status >> DKU-00
DKU-00
Front Side
Back Side
OutSide
FAN5 PS1 FAN4
FAN1 PS0 FAN0
FAN7 PS3 FAN6
FAN3 PS2 FAN2
InSide
HDU 5L HDU 5R HDU 4L HDU 4R
HDU 1L HDU 1R HDU 0L HDU 0R
HDU 7L HDU 7R HDU 6L HDU 6R
HDU 3L HDU 3R HDU 2L HDU 2R
Location
DKU11 DKU10 DKU00 DKC1 DKC0

Voltage Status
Front : Normal
Back : Normal

1-3. <Specify HDDPWR>

Select (CL) [HDDPWR-nnnn].



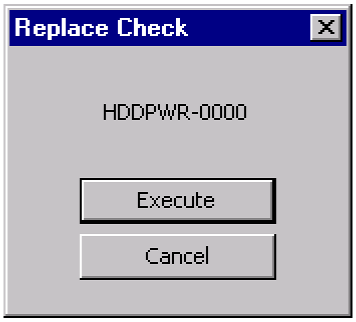
1-4. <Execute>

CAUTION

When the screen prompting an operator to input a password in order to prevent a multiple maintenance, contact the technical support division to ask for an instruction.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

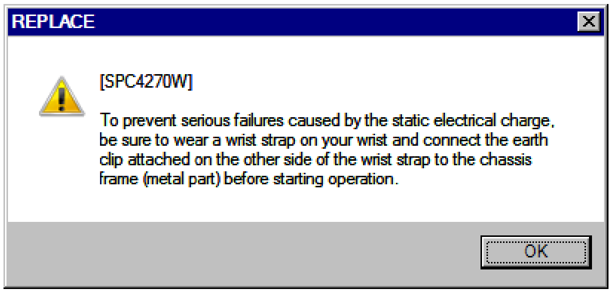
A window shown on the right is displayed.
Select (CL) [Execute].



HDDPWR-0000

1-5. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

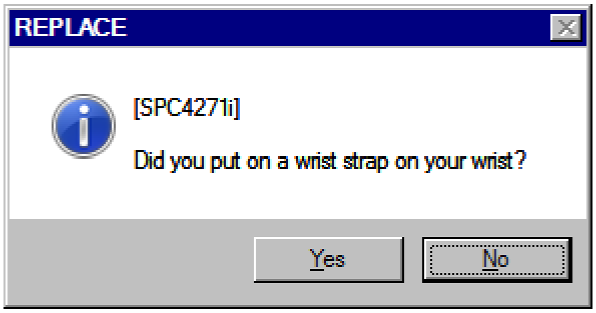


[SPC4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

select (CL) [Yes] and go to Step 1-6.

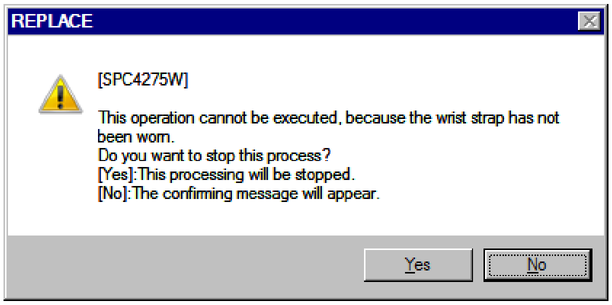


[SPC4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.”
is displayed.

When the processing will be stopped, select (CL) [Yes].

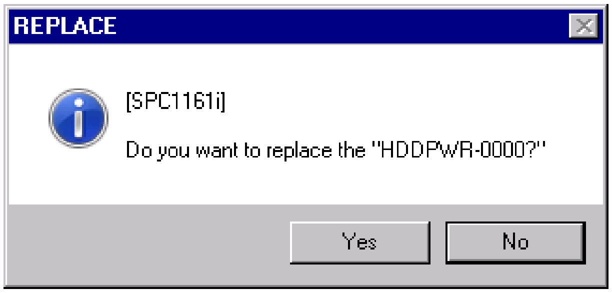


[SPC4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-6. <Check beginning of HDDPWR replacement>

Select (CL) [Yes] in response to “Do you want to replace the “HDDPWR-nnnn?””

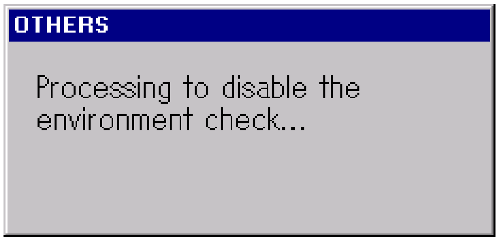


[SPC1161i]

Do you want to replace the "HDDPWR-0000?"

1-7. <Check environment monitor stopped state>

The message “Processing to disable the environment check...” is displayed.

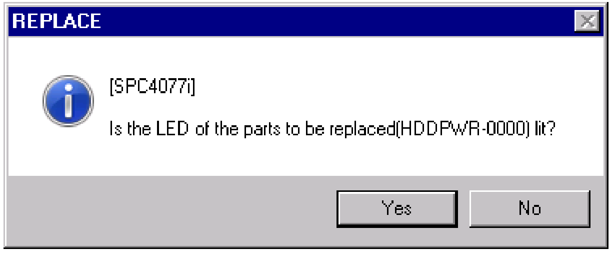


Processing to disable the environment check...

1-8. <Checking lighting of the LED on the PCB to be pulled out>

The message “Is the LED of the parts to be replaced (HDDPWR-nnnn) lit?” is displayed.

When the LED on the PCB to be pulled out is on, select (CL) [Yes] and go to Step 1-10.
When the LED on the PCB to be pulled out is kept off, select (CL) [No] and go to Step 1-9.



[SPC4077i]

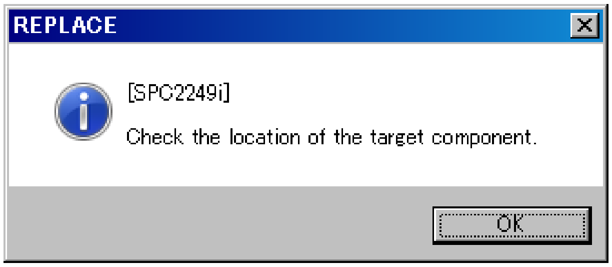
Is the LED of the parts to be replaced(HDDPWR-0000) lit?

1-9. <Making sure of the HDDPWR location>

The message “Check the location of the target component.” is displayed.

See “2. HARDWARE REPLACEMENT PROCESSING”.

After making sure of the HDDPWR location, select (CL) [OK] and go to Step 1-10.

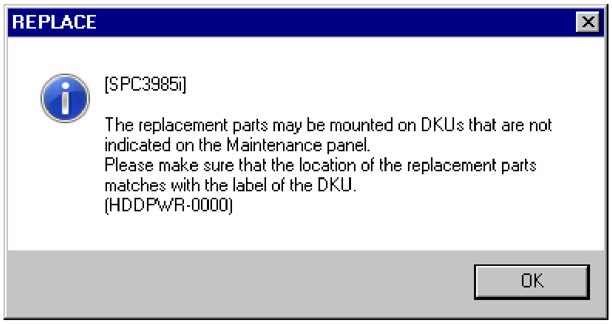


[SPC2249i]

Check the location of the target component.

1-10. <Check beginning of HDDPWR replacement>

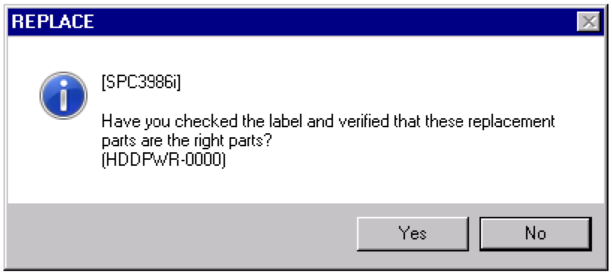
The message “The replacement parts may be mounted on DKUs that are not indicated on the Maintenance panel. Please make sure that the location of the replacement parts matches with the label of the DKU. (HDDPWR-nnnn)” is displayed.
Select (CL) [OK] after you confirmed the content.



[SPC3985i]

The replacement parts may be mounted on DKUs that are not indicated on the Maintenance panel.
Please make sure that the location of the replacement parts matches with the label of the DKU.
(HDDPWR-0000)

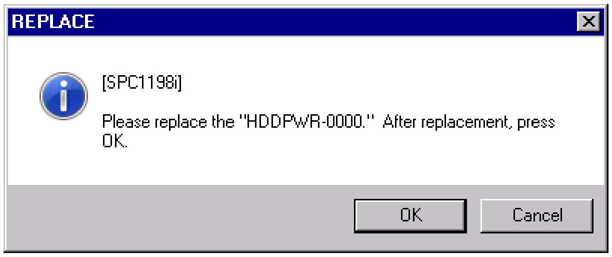
The message “Have you checked the label and verified that these replacement parts are the right parts? (HDDPWR-nnnn)” is displayed.
Select (CL) [Yes] after you confirmed the content.



[SPC3986i]

Have you checked the label and verified that these replacement parts are the right parts?
(HDDPWR-0000)

The message “Please replace the “HDDPWR-nnnn.” After replacement, press OK.” is displayed.
Reply with [OK] after replacing the special part.



[SPC1198i]

Please replace the "HDDPWR-0000." After replacement, press OK.

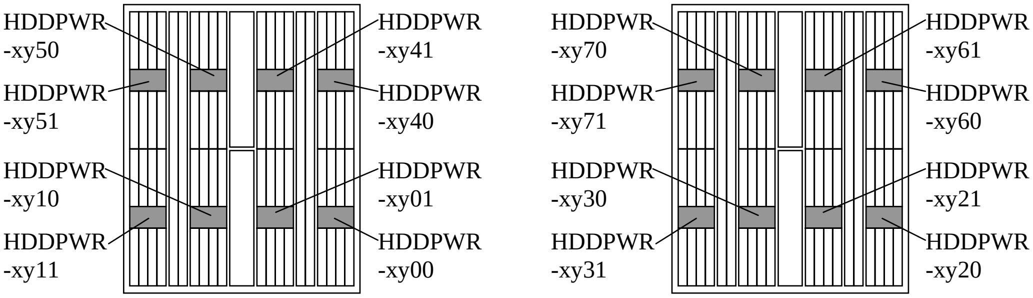
(Eg. HDDPWR-0000)

Go to “2. HARDWARE REPLACEMENT PROCESSING”.

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Front or Rear of DKU for 2.5 inch Drive	1	HDDPWR	· SH499-A

DKU for 2.5 inch Drive



Front View of DKU

Rear View of DKU

Note: HDDPWR-xyz0
- z → HDU No. (0, 1, 2,….., 7)
- y → DKU No. (0, 1, 2,….., 7)
- x → DKC No. (0, 1)

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 Replacement of HDDPWR

2-1-1. Open the FAN door.

a. Put the stopper of the FAN door into the openable and closable state. (Refer to the INST03-01-160.)

b. Loosen the two screws and open the FAN door.

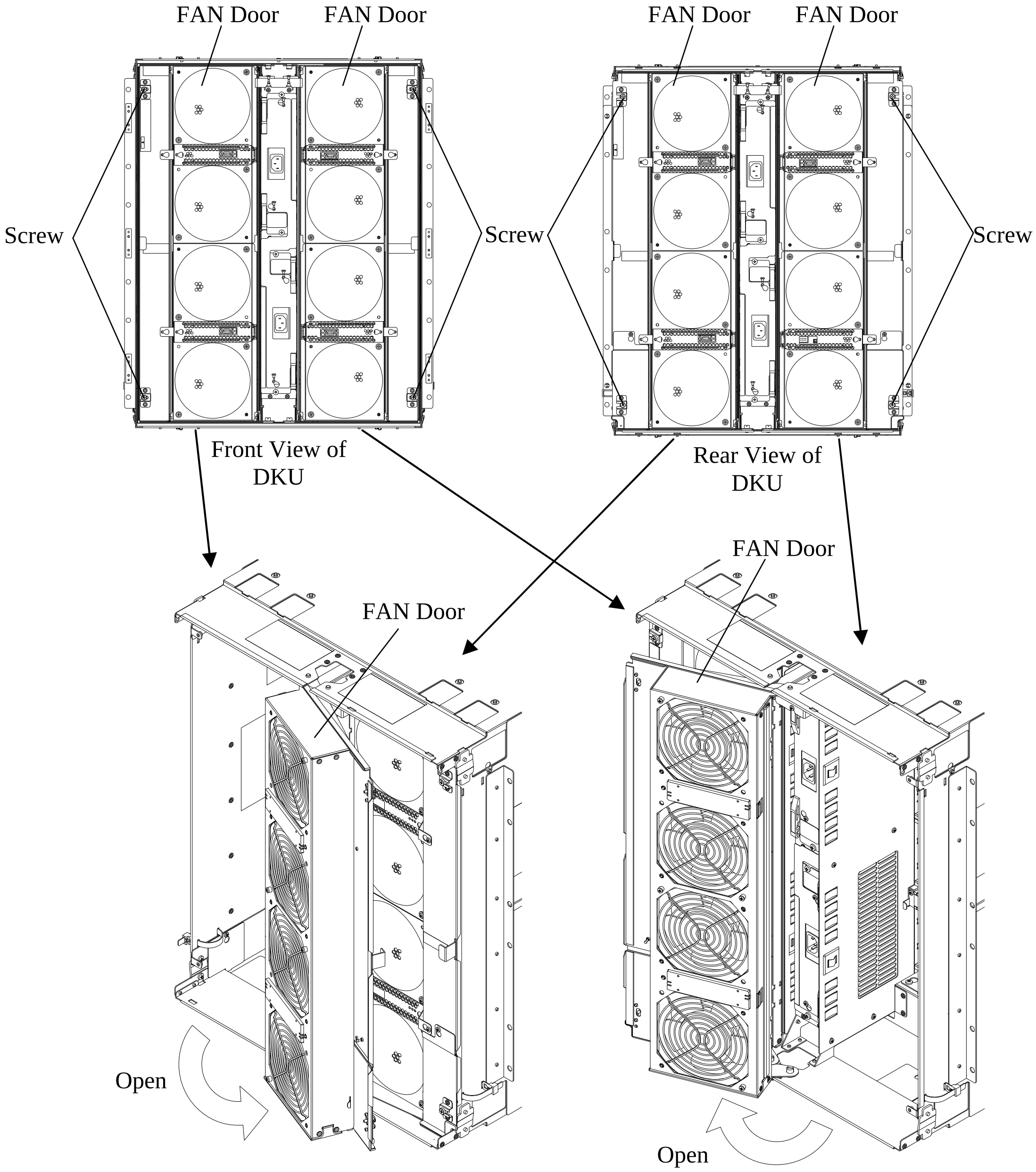


Fig. 3.28.2-1 Opening of FAN Door

2-1-2. Replacement of HDDPWR

a. Check that the Shut Down LED is on.

b. Loosen the screw and remove the HDDPWR from the DKU.

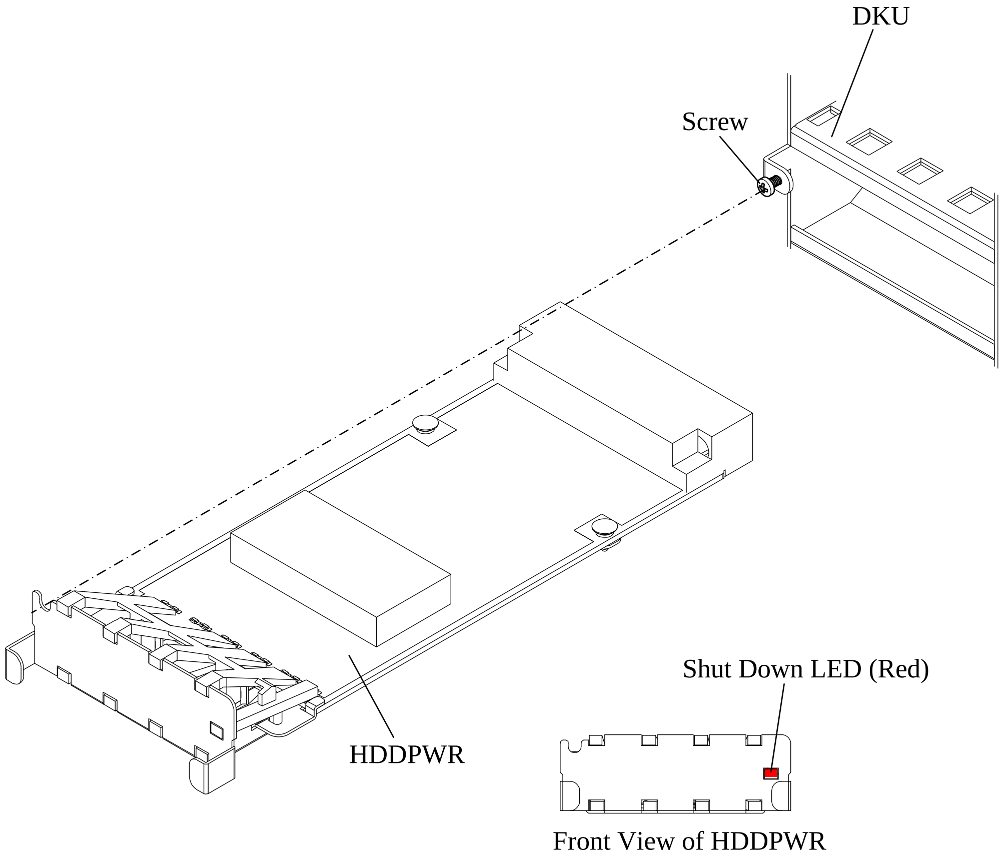


Fig. 3.28.2-2 Replacement of HDDPWR

c. Remove the two push rivets and remove the HDDPWR PCB from the bracket.
d. Fit the HDDPWR PCB of the maintenance parts into the guides of the bracket.
e. Secure the HDDPWR PCB with the two push rivets of the maintenance parts.

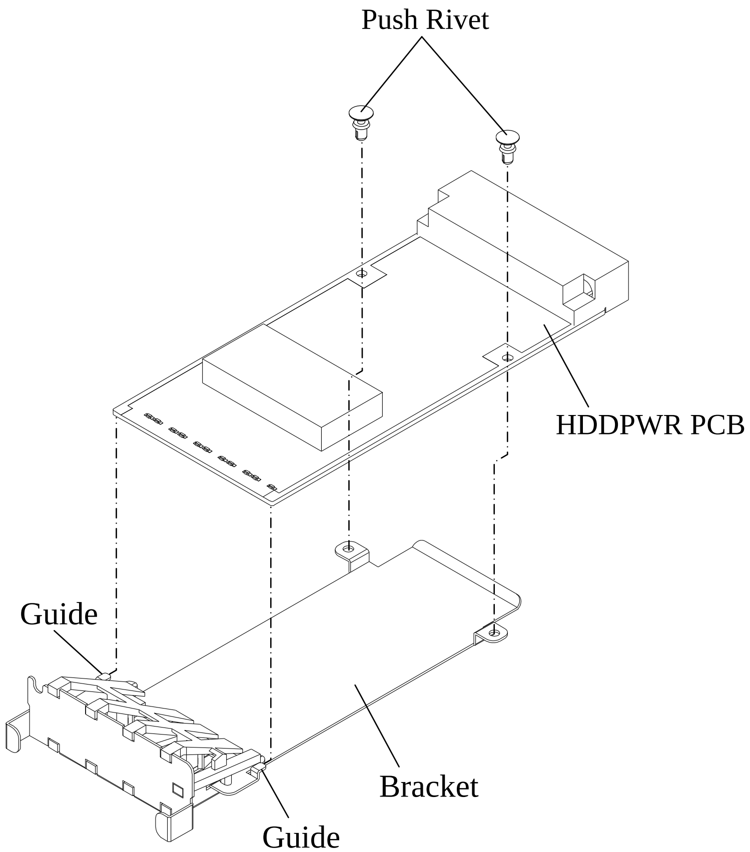
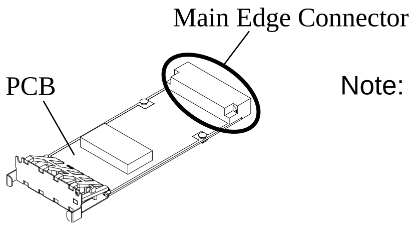


Fig. 3.28.2-3 Replacement of PCB

f. Attach the spare HDDPWR. (Refer to Fig. 3.28.2-2.)



Note: Check that the main edge connector of the PCB has no deformation, damage or sticking of dust before installing the PCB.

g. Tighten the screw while holding down the right side of the HDD PWR with fingers.

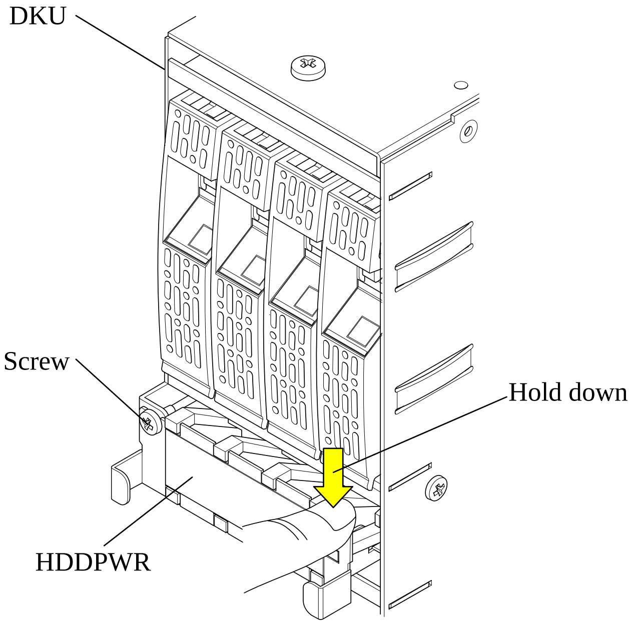


Fig. 3.28.2-4 Securing of HDDPWR

h. Close the FAN door and tighten the screws. (Refer to Fig. 3.28.2-1.)

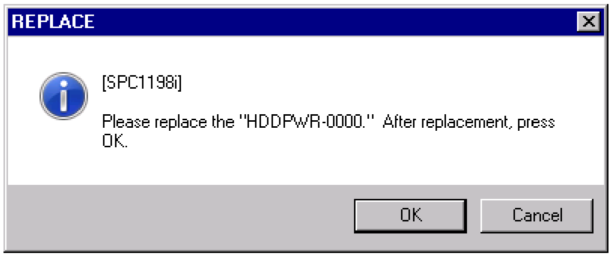
i. Put the FAN door stopper into the neutral state.

2-1-3. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check beginning of HDDPWR Replacement>

Select (CL) [OK] in response to “Please replace the “HDDPWR-nnnn.” After replacement, press OK.”



REPLACE

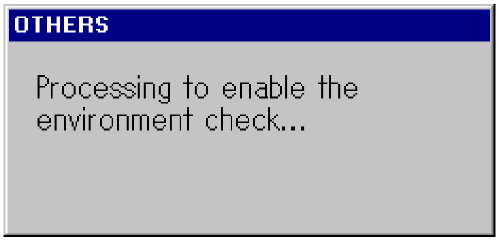
[SPC1198i]

Please replace the "HDDPWR-0000." After replacement, press OK.

(Eg. HDDPWR-0000)

3-2. <Check environment monitor start processing>

The message “Processing to enable the environment check...” is displayed.

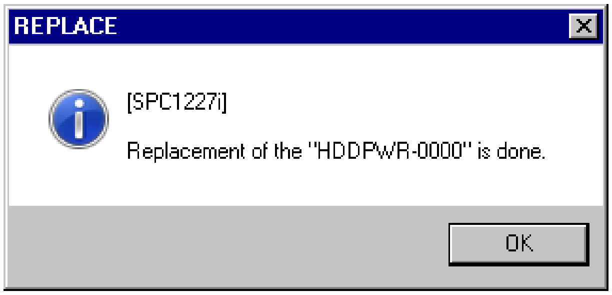


OTHERS

Processing to enable the environment check...

3-3. <Check end of replacement>

Select (CL) [OK] in response to “Replacement of the “HDDPWR-nnnn” is done.”



REPLACE

[SPC1227i]

Replacement of the "HDDPWR-0000" is done.

(Eg. HDDPWR-0000)

3-4. <Confirm status>

Confirm the status display.
If button is normal (The string is normally display), go to Step 3-5.
If button is abnormal (The string is blinking), replace the target part again, or see TROUBLE SHOOTING SECTION.

3-5.

Go to POST-PROCEDURE [REP04-01-10].

[3.5 inch HDDPWR REPLACEMENT PROCESSING - RU32]

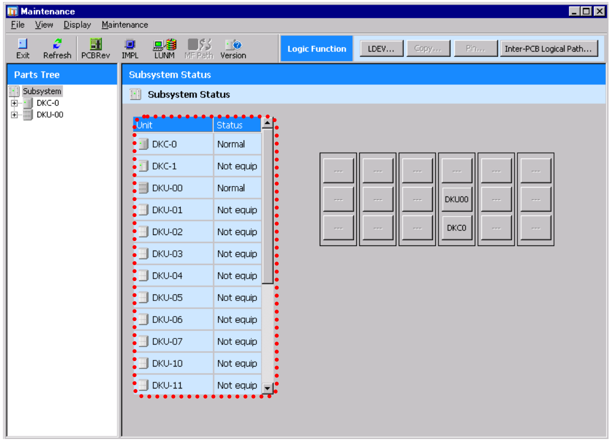
— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select 3.5 inch HDDPWR (status check)
    ② Specify Replacement
    ③ Detach 3.5 inch HDDPWR
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Specify end of 3.5 inch HDDPWR replacement
    ② Reinstall related parts
    ③ Start environment monitor

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

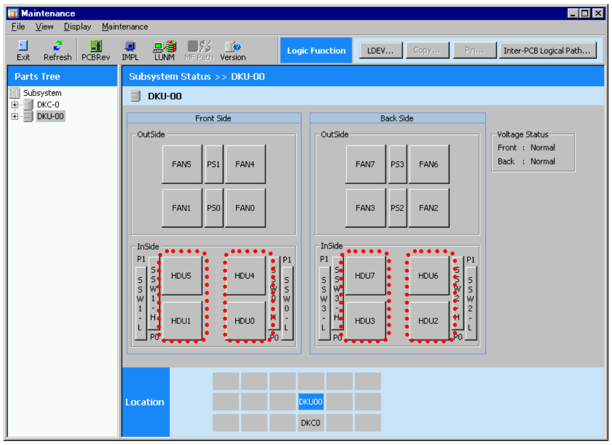
Select (CL) [Disk Unit – DKU-XX] in the ‘Maintenance’ window.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Pin... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status
Subsystem Status
DKU00
DKC0

Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <Specify HDU>

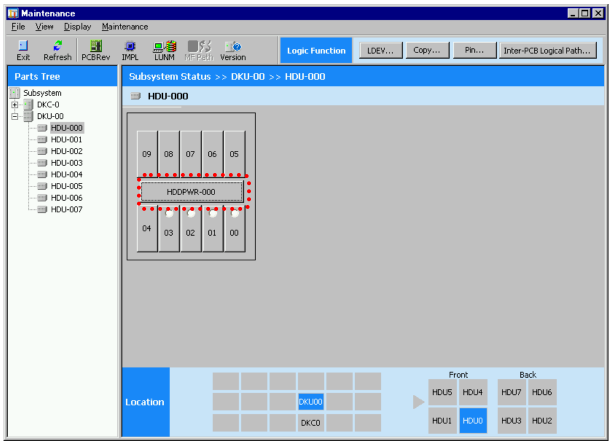
Select (CL) [HDUnx].



Voltage Status
Front : Normal
Back : Normal

1-3. <Specify HDDPWR>

Select (CL) [HDDPWR-nnn].



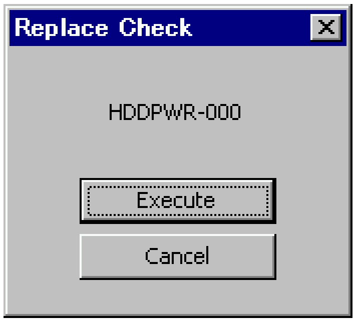
1-4. <Execute>

⚠ CAUTION

When the screen prompting an operator to input a password in order to prevent a multiple maintenance, contact the technical support division to ask for an instruction.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

A window shown on the right is displayed.
Select (CL) [Execute].

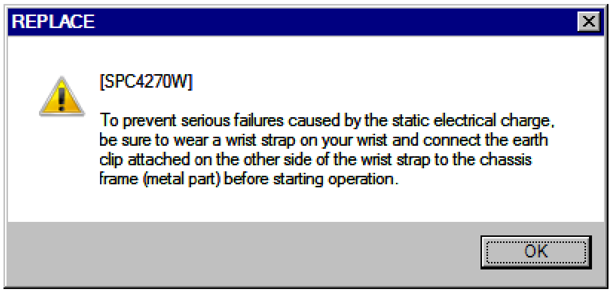


1-5. <Checking HDDPWR>

The SVP automatically checks the HDDPWR to see if it is replaceable.

1-6. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

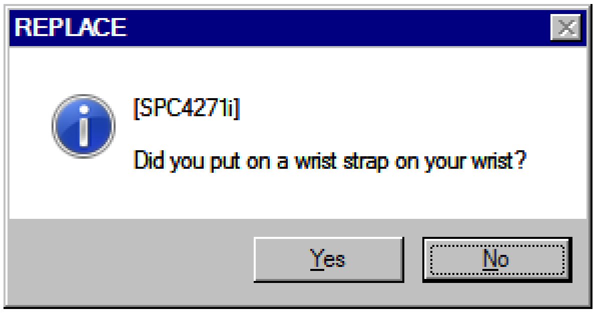


[SPC4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

select (CL) [Yes] and go to Step 1-7.

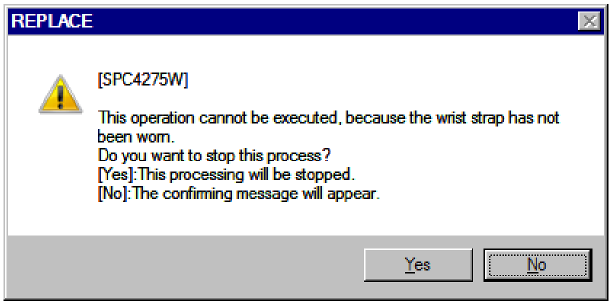


[SPC4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.” is displayed.

When the processing will be stopped, select (CL) [Yes].

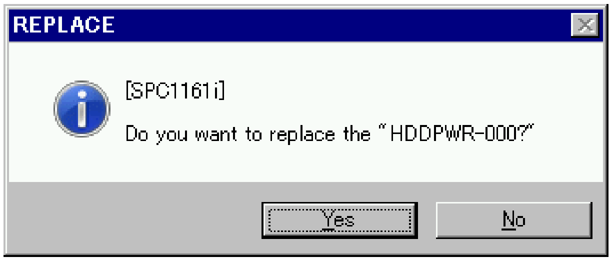


[SPC4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-7. <Check beginning of HDDPWR replacement>

Select (CL) [Yes] in response to “Do you want to replace the “HDDPWR-nnn?””

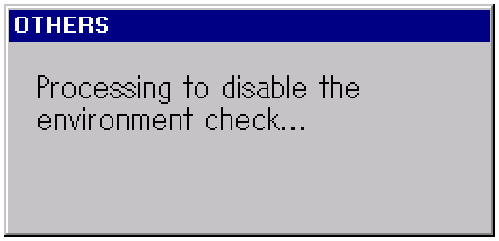


[SPC1161i]

Do you want to replace the “HDDPWR-000?”

1-8. <Check environment monitor stopped state>

The message “Processing to disable the environment check...” is displayed.

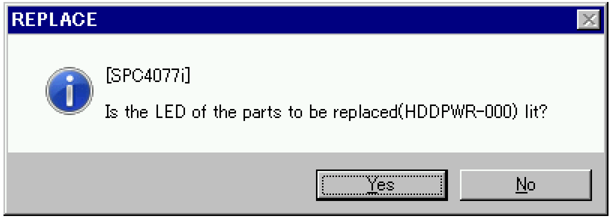


Processing to disable the environment check...

1-9. <Checking lighting of the LED on the PCB to be pulled out>

The message “Is the LED of the parts to be replaced (HDDPWR-nnn) lit?” is displayed.

When the LED on the PCB to be pulled out is on, select (CL) [Yes] and go to Step 1-11.
When the LED on the PCB to be pulled out is kept off, select (CL) [No] and go to Step 1-10.



[SPC4077i]

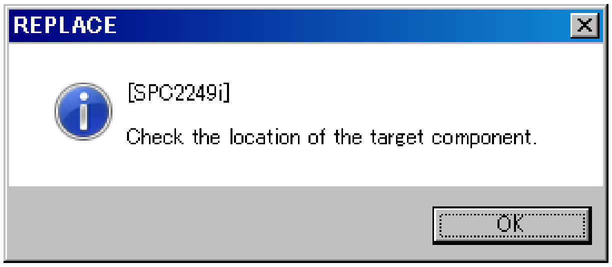
Is the LED of the parts to be replaced(HDDPWR-000) lit?

1-10. <Making sure of the HDDPWR location>

The message “Check the location of the target component.” is displayed.

See “2. HARDWARE REPLACEMENT PROCESSING”.

After making sure of the HDDPWR location, select (CL) [OK] and go to Step 1-11.



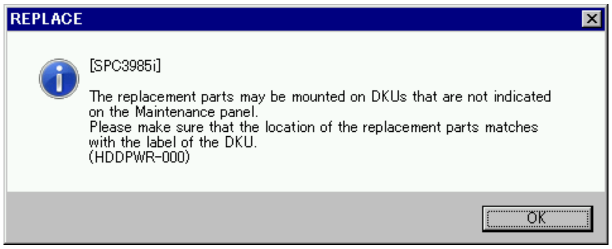
[SPC2249i]

Check the location of the target component.

1-11. <Check beginning of HDDPWR replacement>

The message “The replacement parts may be mounted on DKUs that are not indicated on the Maintenance panel. Please make sure that the location of the replacement parts matches with the label of the DKU. (HDDPWR-nnn)” is displayed.

Select (CL) [OK] after you confirmed the content.

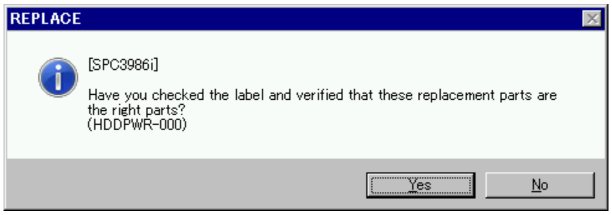


[SPC3985i]

The replacement parts may be mounted on DKUs that are not indicated on the Maintenance panel.
Please make sure that the location of the replacement parts matches with the label of the DKU.
(HDDPWR-000)

The message “Have you checked the label and verified that these replacement parts are the right parts? (HDDPWR-nnn)” is displayed.

Select (CL) [Yes] after you confirmed the content.

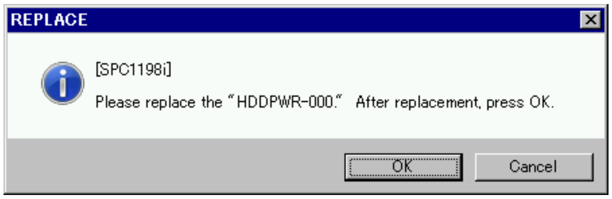


[SPC3986i]

Have you checked the label and verified that these replacement parts are the right parts?
(HDDPWR-000)

The message “Please replace the “HDDPWR-nnn.” After replacement, press OK.” is displayed.

Reply with [OK] after replacing the special part.



[SPC1198i]

Please replace the “HDDPWR-000.” After replacement, press OK.

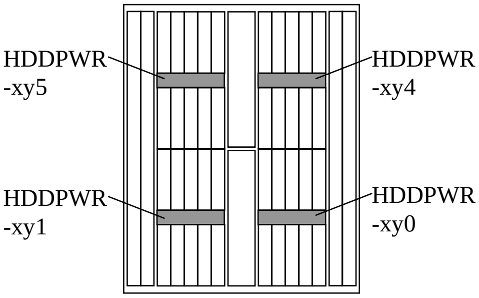
(Eg. HDDPWR-000)

Go to “2. HARDWARE REPLACEMENT PROCESSING”.

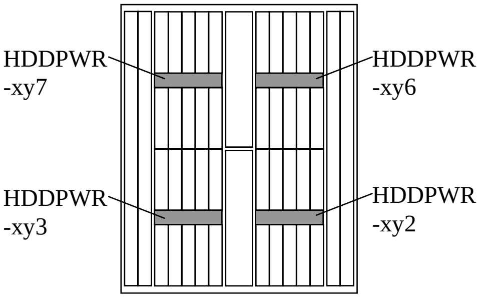
2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Front or Rear of DKU for 3.5 inch Drive	1	HDDPWR	· SH499-A

DKU for 3.5 inch Drive



Front View of
DKU



Rear View of
DKU

Note: HDDPWR-xyz
→HDU No. (0, 1, 2,….., 7)
→DKU No. (0, 1, 2,….., 7)
→DKC No. (0, 1)

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

1	Replacement of HDDPWR

2-1-1. Open the FAN door.

a. Put the stopper of the FAN door into the openable and closable state. (Refer to the INST03-01-160.)

b. Loosen the two screws and open the FAN door.

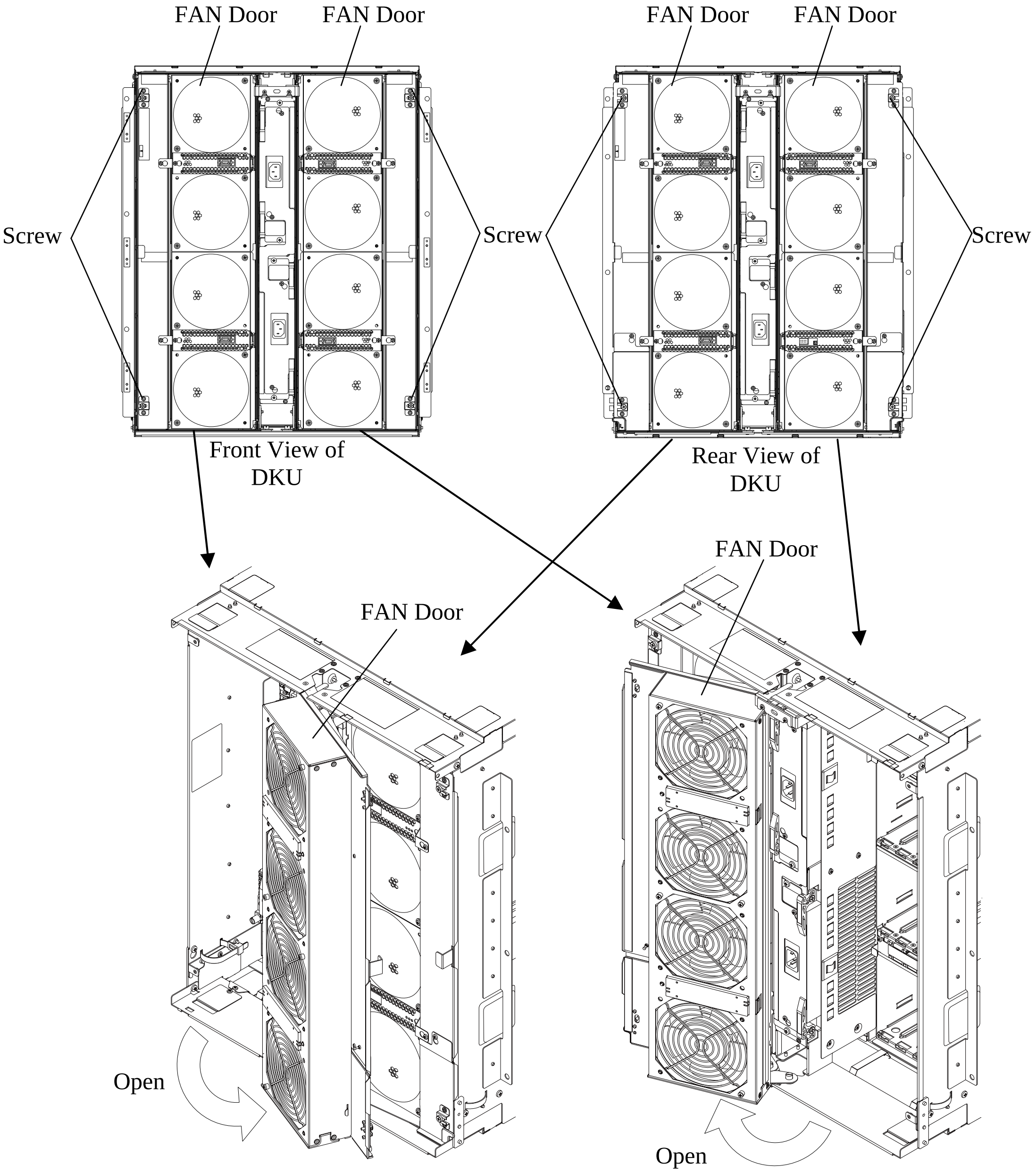
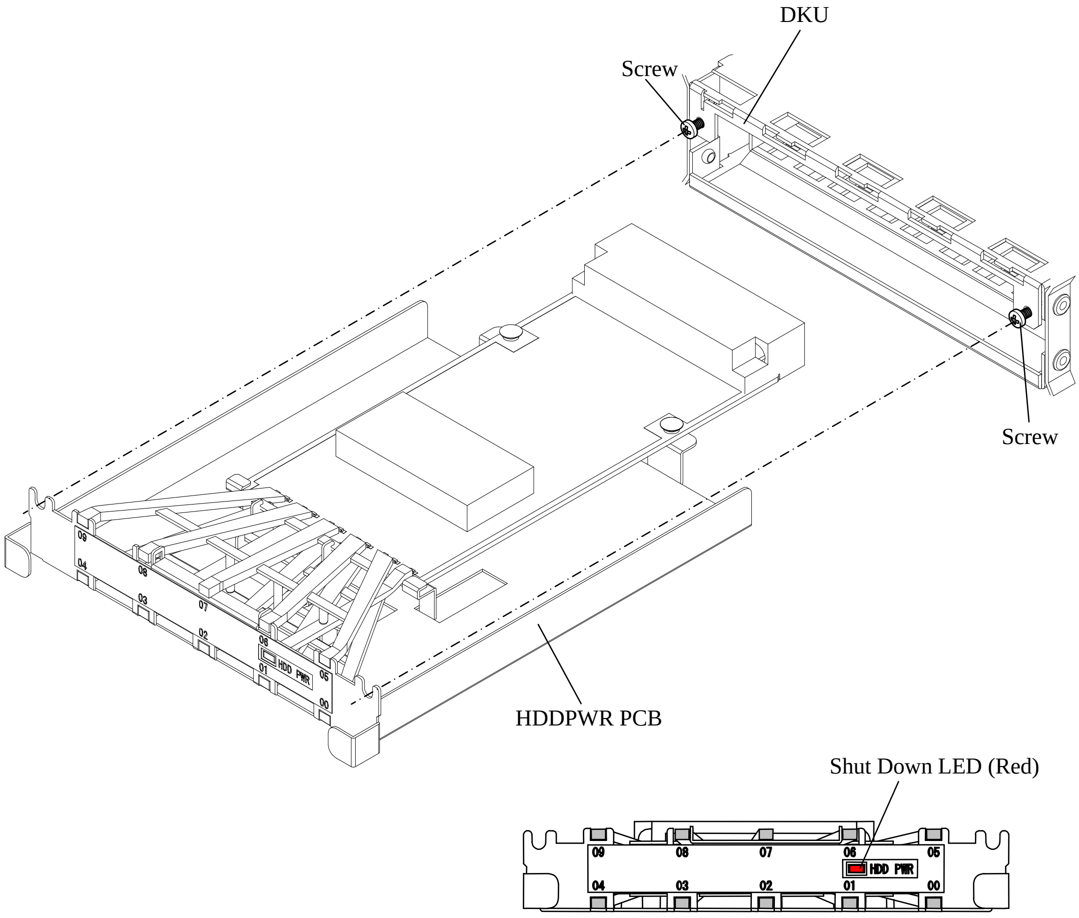


Fig. 3.29.2-1 Opening of FAN Door

2-1-2. Replacement of HDDPWR

a. Check that the Shut Down LED is on.

b. Loosen the two screws and remove the HDDPWR from the DKU.



Front View of HDDPWR

Fig. 3.29.2-2 Replacement of HDDPWR

c. Remove the two push rivets and remove the HDDPWR PCB from the bracket.
d. Fit the spare HDD PWR PCB into the guides of the bracket.
e. Secure the HDDPWR PCB with the two push rivets of the spare parts.

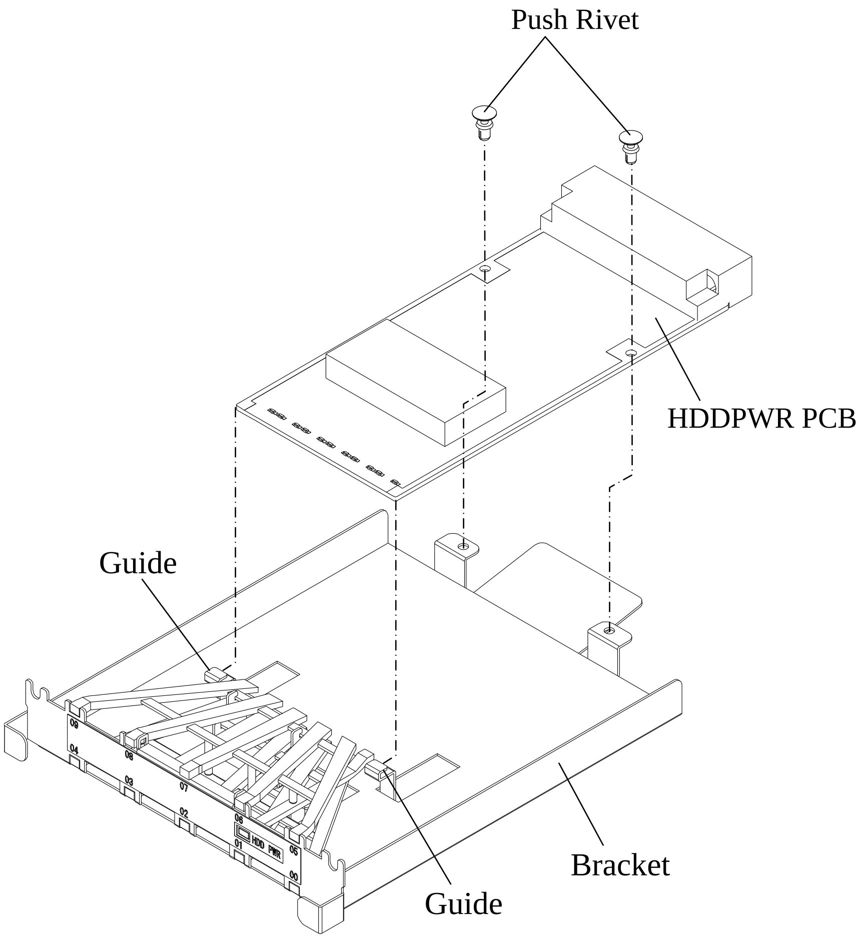
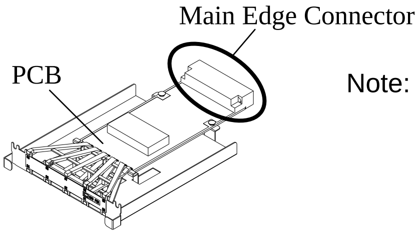


Fig. 3.29.2-3 Replacement of PCB

f. Attach the spare HDDPWR and tighten the two screws. (Refer to Fig. 3.29.2-2.)



Note: Check that the main edge connector of the PCB has no deformation, damage or sticking of dust before installing the PCB.

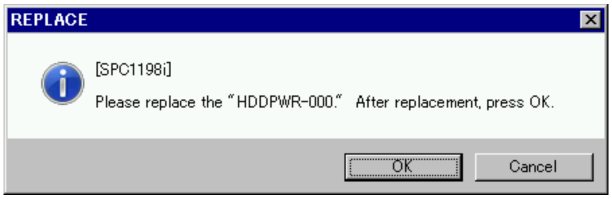
g. Close the FAN door and tighten the screws. (Refer to Fig. 3.29.2-1.)
h. Put the FAN door stopper into the neutral state.

2-1-3. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check beginning of HDDPWR Replacement>

Select (CL) [OK] in response to “Please replace the “HDDPWR-nnn.” After replacement, press OK.”



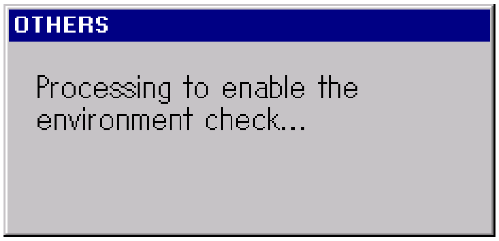
[SPC1198i]

Please replace the “HDDPWR-000.” After replacement, press OK.

(Eg. HDDPWR-000)

3-2. <Check environment monitor start processing>

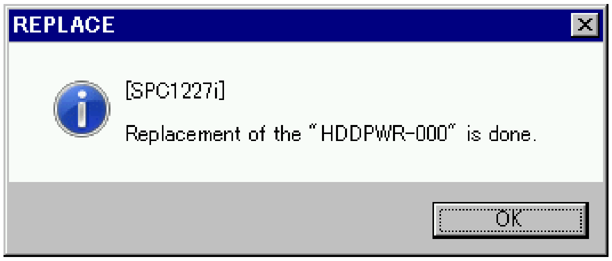
The message “Processing to enable the environment check...” is displayed.



Processing to enable the environment check...

3-3. <Check end of replacement>

Select (CL) [OK] in response to “Replacement of the “HDDPWR-nnn” is done.”



[SPC1227i]

Replacement of the “HDDPWR-000” is done.

3-4. <Confirm status>

Confirm the status display.
If button is normal (The string is normally display), go to Step 3-5.
If button is abnormal (The string is blinking), replace the target part again, or see TROUBLE SHOOTING SECTION.

3-5.

Go to POST-PROCEDURE [REP04-01-10].

[2.5 inch DKUPS REPLACEMENT PROCESSING - RU23]

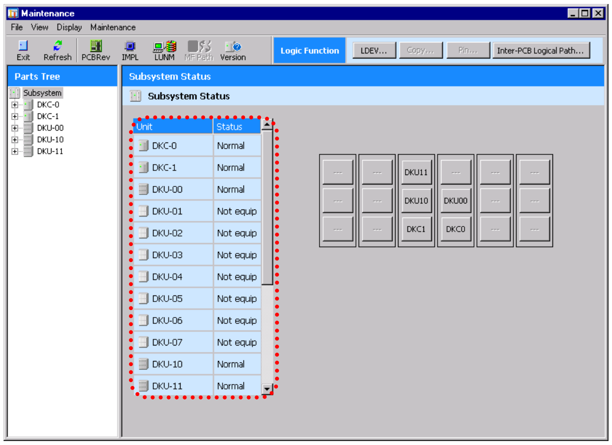
— OUTLINE —

1. PRE-PROCESSING of SVP
    - ① Select 2.5 inch DKUPS (status check)
    - ② Specify Replacement
    - ③ Detach 2.5 inch DKUPS
    - ④ Place part into unpluggable state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    - ① Specify end of 2.5 inch DKUPS replacement
    - ② Reinstall related parts
    - ③ Start environment monitor

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

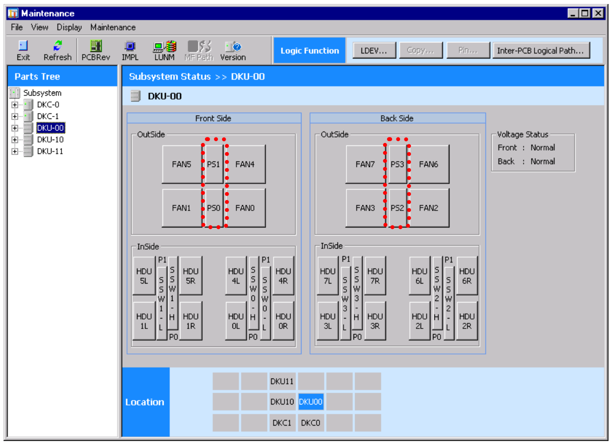
Select (CL) [DKU-XX] in the ‘Maintenance’ window.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Prt... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKC-1
DKU-00
DKU-10
DKU-11
Subsystem Status
Subsystem Status
DKU11
DKU10 DKU00
DKC1 DKC0

Unit	Status
DKC-0	Normal
DKC-1	Normal
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Normal
DKU-11	Normal

1-2. <Specify DKUPS>

Select (CL) [PSn].



Voltage Status
Front : Normal
Back : Normal

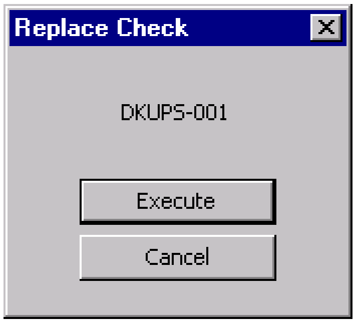
1-3. <Execute>

CAUTION

When the screen prompting an operator to input a password in order to prevent a multiple maintenance, contact the technical support division to ask for an instruction.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

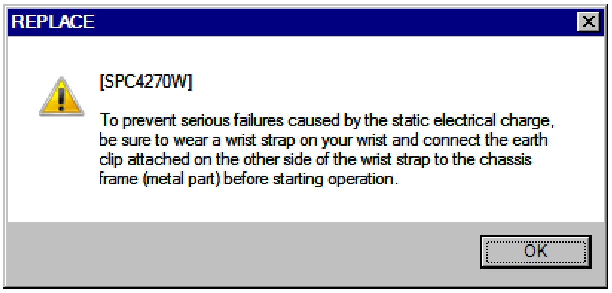
A window shown on the right is displayed.
Select (CL) [Execute].



DKUPS-001

1-4. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

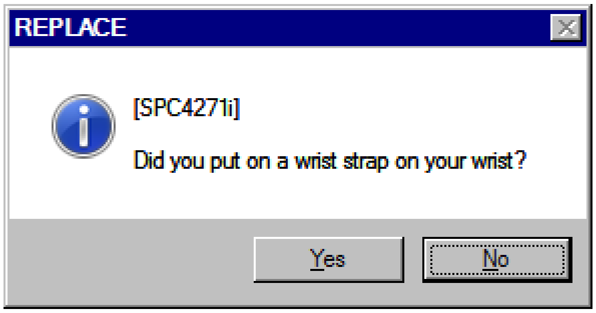


[SPC4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

select (CL) [Yes] and go to Step 1-5.

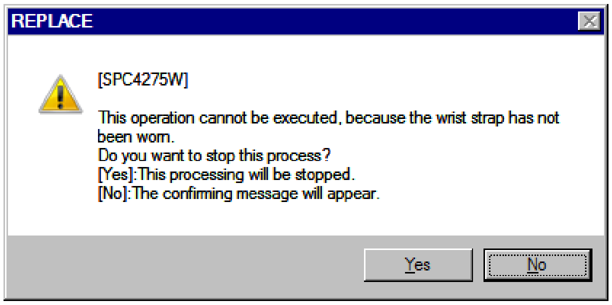


[SPC4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.” is displayed.

When the processing will be stopped, select (CL) [Yes].

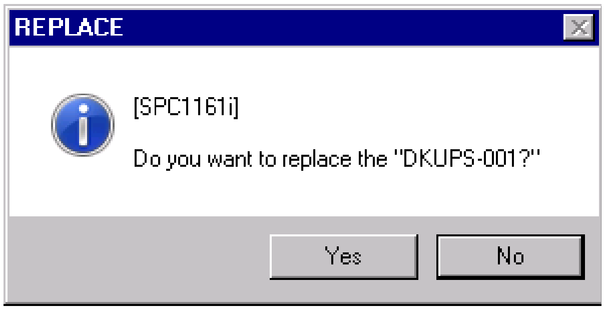


[SPC4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-5. <Check beginning of DKUPS Replacement>

Select (CL) [Yes] in response to “Do you want to replace the “DKUPS-nnn?””.



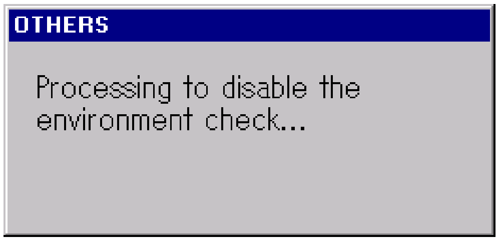
[SPC1161i]

Do you want to replace the "DKUPS-001?"

(Eg. DKUPS-001)

1-6. <Check environment monitor stopped state>

The message “Processing to disable the environment check...” is displayed.

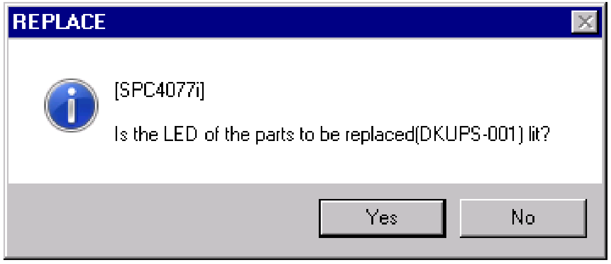


Processing to disable the environment check...

1-7. <Checking lighting of the LED on the PCB to be pulled out>

The message “Is the LED of the parts to be replaced (DKUPS-nnn) lit?” is displayed.

When the LED on the PCB to be pulled out is on, select (CL) [Yes] and go to Step 1-9.
When the LED on the PCB to be pulled out is kept off, select (CL) [No] and go to Step 1-8.



[SPC4077i]

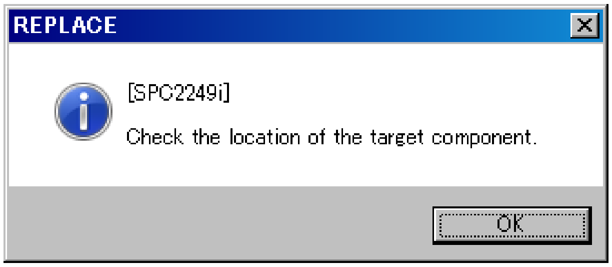
Is the LED of the parts to be replaced(DKUPS-001) lit?

1-8. <Making sure of the DKUPS location>

The message “Check the location of the target component.” is displayed.

See “2. HARDWARE REPLACEMENT PROCESSING”.

After making sure of the DKUPS location, select (CL) [OK] and go to Step 1-9.

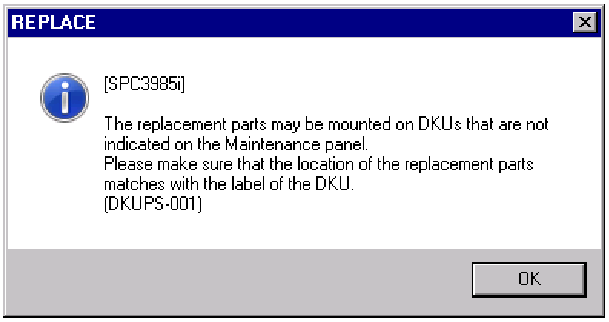


[SPC2249i]

Check the location of the target component.

1-9. <Check beginning of DKUPS replacement>

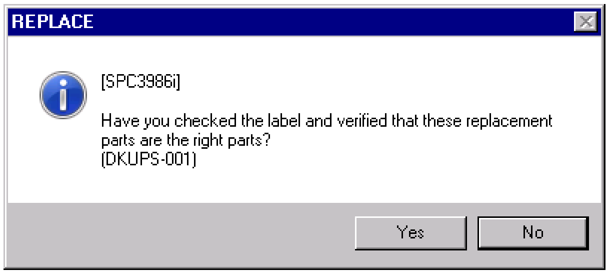
The message “The replacement parts may be mounted on DKUs that are not indicated on the Maintenance panel. Please make sure that the location of the replacement parts matches with the label of the DKU. (DKUPS-nnn)” is displayed.
Select (CL) [OK] after you confirmed the content.



[SPC3985i]

The replacement parts may be mounted on DKUs that are not indicated on the Maintenance panel.
Please make sure that the location of the replacement parts matches with the label of the DKU.
(DKUPS-001)

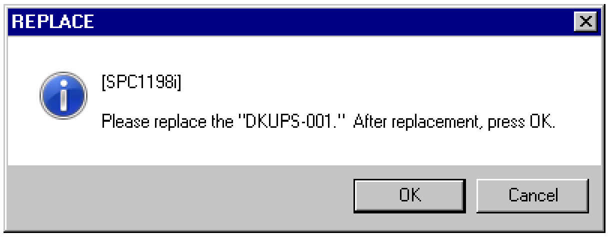
The message “Have you checked the label and verified that these replacement parts are the right parts? (DKUPS-nnn)” is displayed.
Select (CL) [Yes] after you confirmed the content.



[SPC3986i]

Have you checked the label and verified that these replacement parts are the right parts?
(DKUPS-001)

The message “Please replace the “DKUPS-nnn.” After replacement, press OK.” is displayed.
Reply with [OK] after replacing the special part.



[SPC1198i]

Please replace the "DKUPS-001." After replacement, press OK.

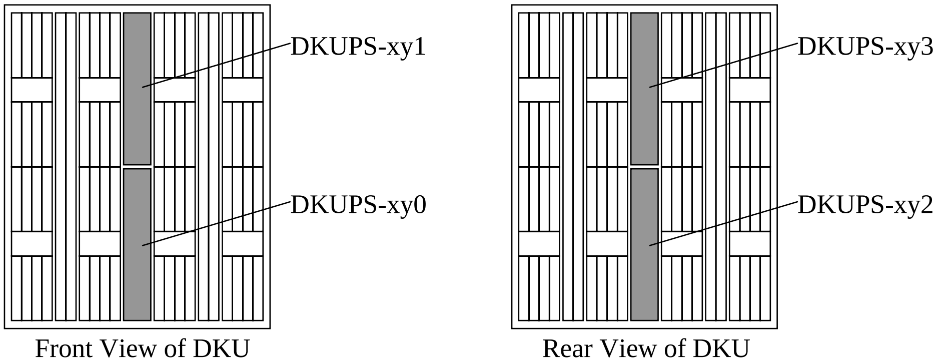
(Eg. DKUPS-001)

Go to “2. HARDWARE REPLACEMENT PROCESSING”.

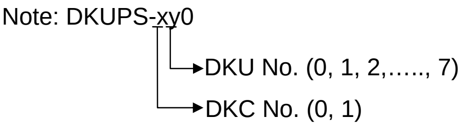
2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Front or Rear of DKU	1	DKUPS	

DKU for 2.5 inch Drive



Front View of DKU Rear View of DKU



NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 Replacement of DKUPS

1. Replacement of DKUPS
   a. Check that the REPLACE LED is on.

CAUTION

A system down may be caused by a replacement of the DKUPS other than that to be replaced. Make sure that it is a DKUPS to be replaced.

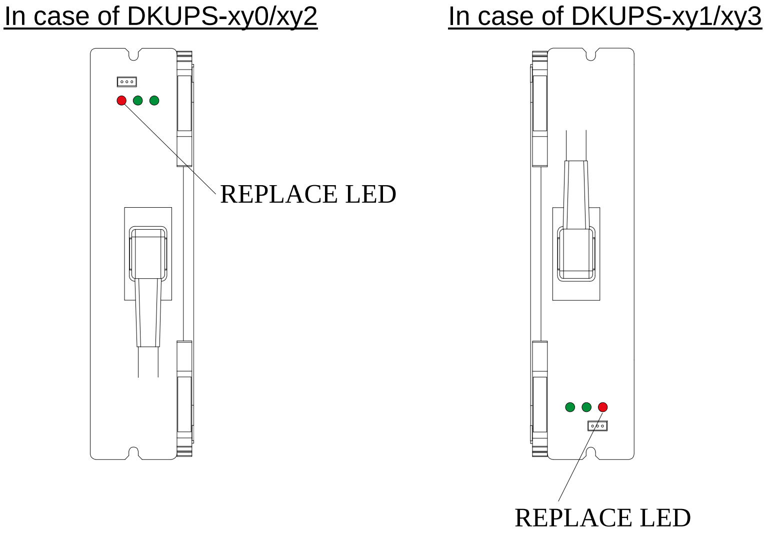


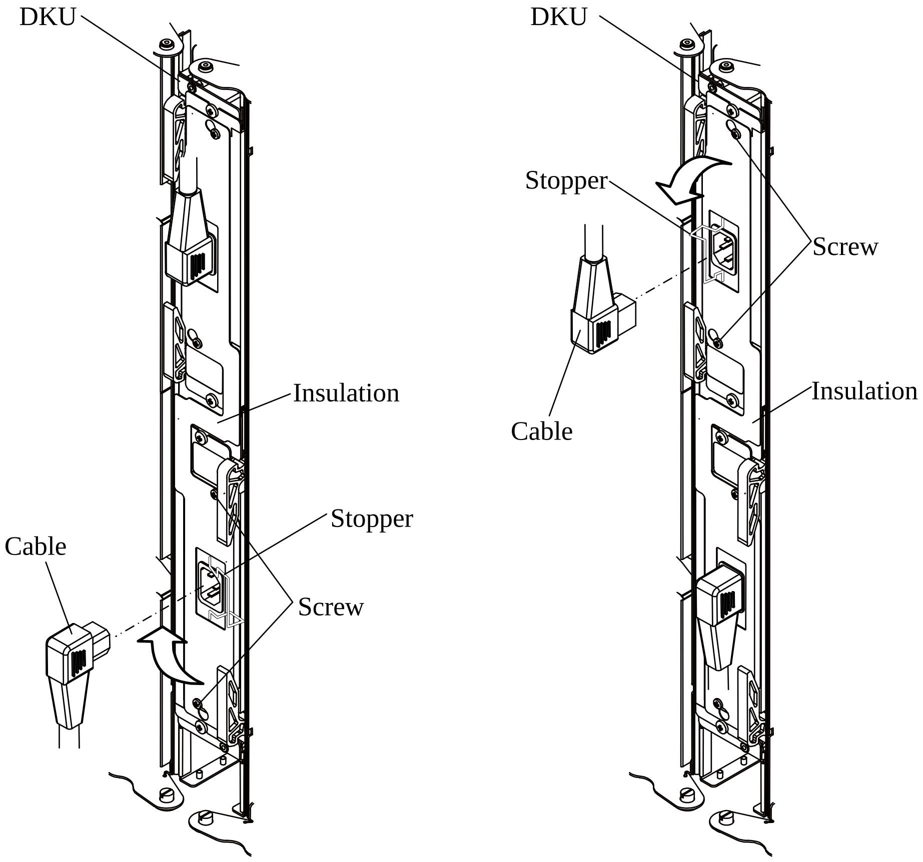
Fig. 3.30.2-1 Check of REPLACE LED

b. Remove the stopper on the failed DKUPS and disconnect the cable.

⚠ CAUTION

Watching for short-circuits:
A Short-circuit may cause a fire.
Never insert metal or the like into the cable connector or a short-circuit may occur.

c. Loosen the two screws and remove the insulation from the screws.



In case of DKUPS-xy0/xy2

In case of DKUPS-xy1/xy3

Fig. 3.30.2-2 Disconnection of Cable

d. Loosen the two screws and remove the DKUPS turning over the insulation.
e. Attach the spare DKUPS turning over the insulation and tighten the screws.
f. Return the insulation to original position and tighten the screws. (Refer to Fig. 3.30.2-2.)
g. Connect the cable and secure it with the stopper.

Note: When connecting the cable to DKUPS-xy2, run the cable through the through hole.

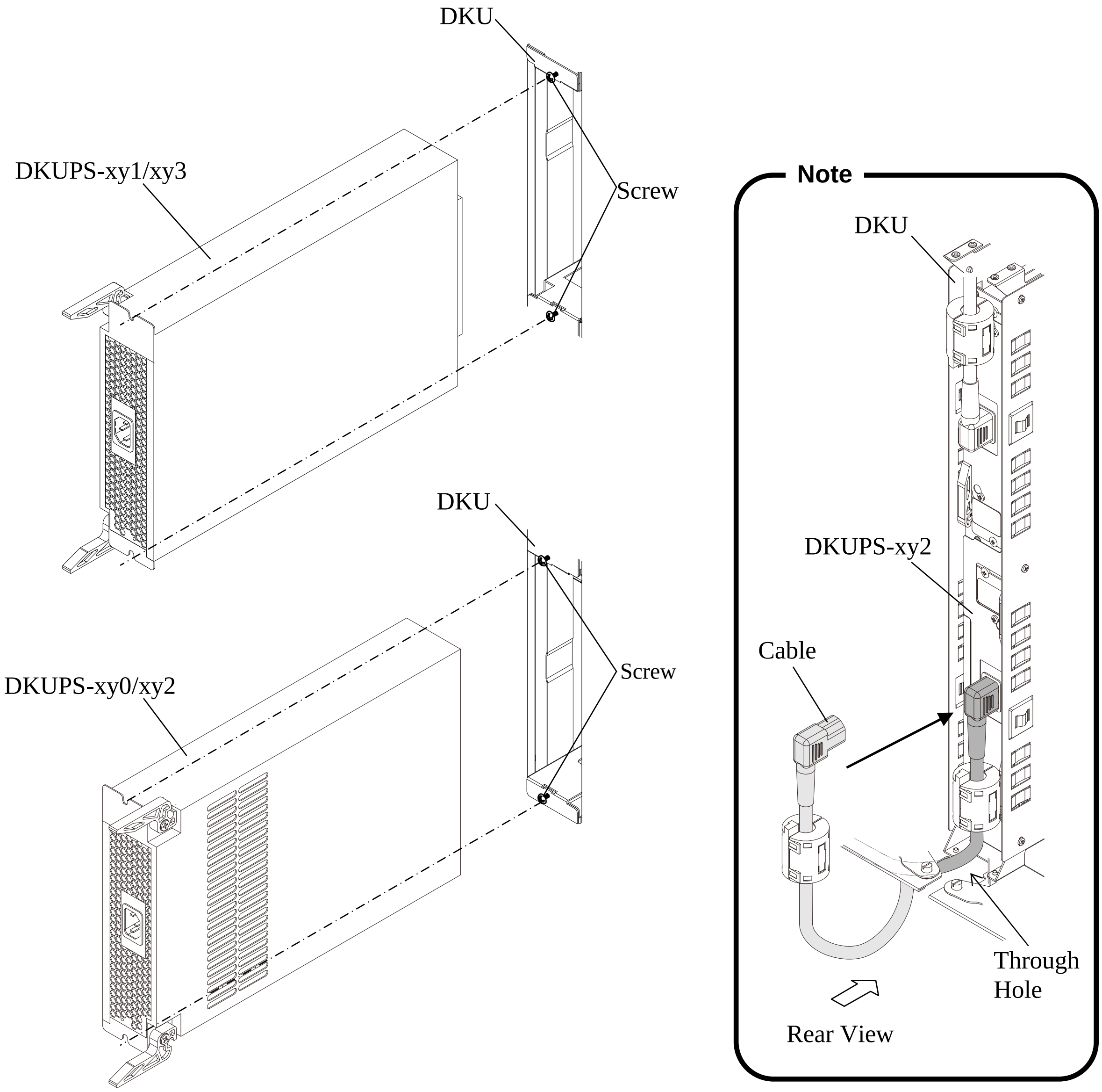


Fig. 3.30.2-3 Replacement of DKUPS

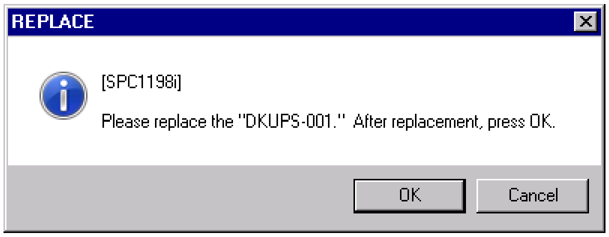
---

2. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check beginning of DKUPS Replacement>

Select (CL) [OK] in response to “Please replace the “DKUPS-nnn.” After replacement, press OK.”



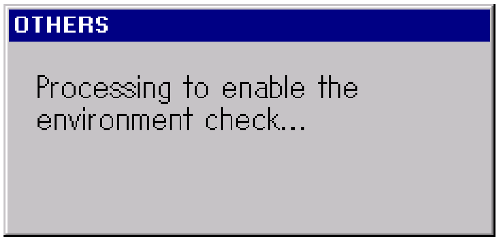
[SPC1198i]

Please replace the "DKUPS-001." After replacement, press OK.

(Eg. DKUPS-001)

3-2. <Check environment monitor start processing>

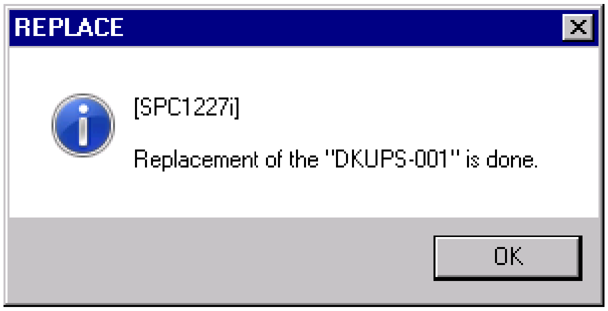
The message “Processing to enable the environment check...” is displayed.



Processing to enable the environment check...

3-3. <Check end of replacement>

Select (CL) [OK] in response to “Replacement of the “DKUPS-nnn” is done.”



[SPC1227i]

Replacement of the "DKUPS-001" is done.

(Eg. DKUPS-001)

3-4. <Confirm status>

Confirm the status display.
If button is normal (The string is normally display), go to Step 3-5.
If button is abnormal (The string is blinking), replace the target part again, or see TROUBLE SHOOTING SECTION.

3-5.

Go to POST-PROCEDURE [REP04-01-10].

[3.5 inch DKUPS REPLACEMENT PROCESSING - RU33]

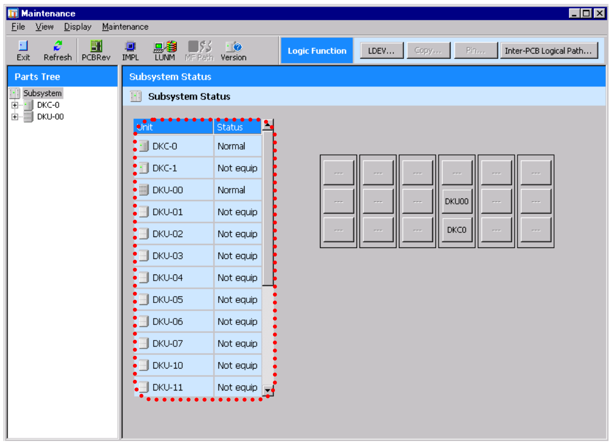
— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select 3.5 inch DKUPS (status check)
    ② Specify Replacement
    ③ Detach 3.5 inch DKUPS
    ④ Place part into unpluggable state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Specify end of 3.5 inch DKUPS replacement
    ② Reinstall related parts
    ③ Start environment monitor

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

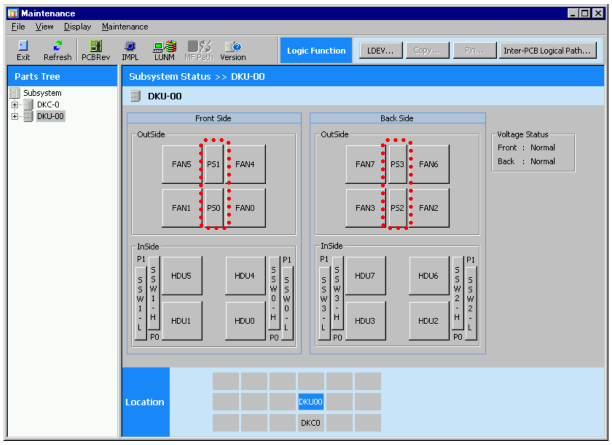
Select (CL) [DKU-XX] in the ‘Maintenance’ window.



Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <Specify DKUPS>

Select (CL) [PSn].



Voltage Status
Front : Normal
Back : Normal

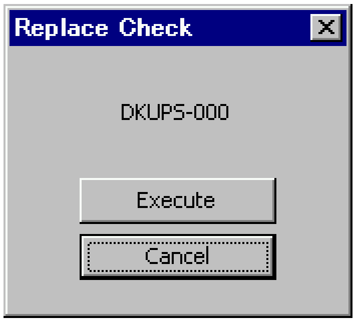
1-3. <Execute>

⚠ CAUTION

When the screen prompting an operator to input a password in order to prevent a multiple maintenance, contact the technical support division to ask for an instruction.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

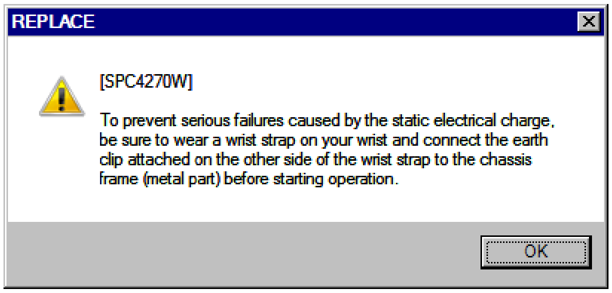
A window shown on the right is displayed.
Select (CL) [Execute].



DKUPS-000

1-4. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

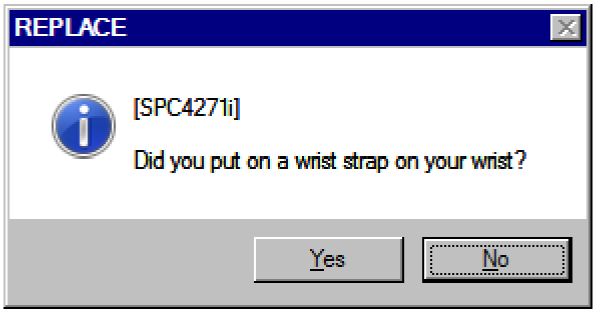


[SPC4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

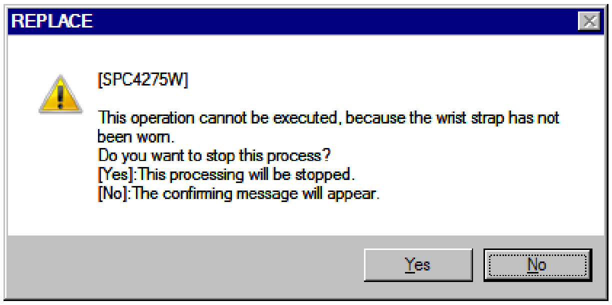
select (CL) [Yes] and go to Step 1-5.



[SPC4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.”
is displayed.

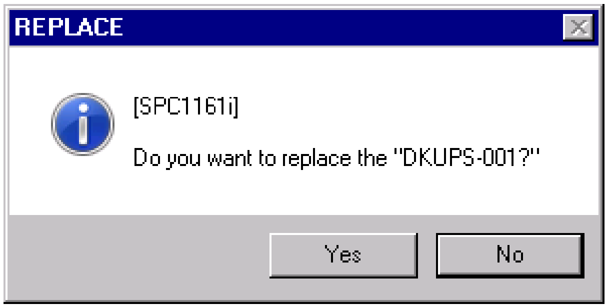


[SPC4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

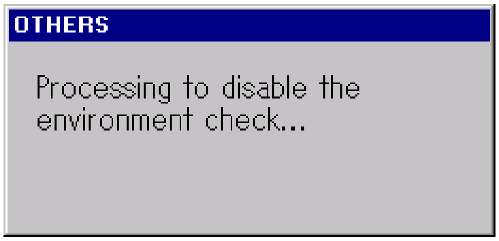
When the processing will be stopped, select (CL) [Yes].

1-5. <Check beginning of DKUPS Replacement>
Select (CL) [Yes] in response to “Do you want to replace the “DKUPS-nnn”?”


REPLACE
[SPC1161i]
Do you want to replace the "DKUPS-001?"

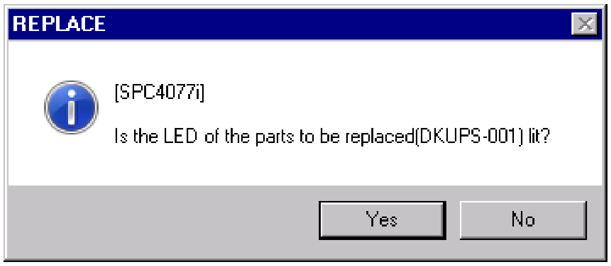
(Eg. DKUPS-001)

1-6. <Check environment monitor stopped state>
The message “Processing to disable the environment check...” is displayed.


OTHERS
Processing to disable the environment check...

1-7. <Checking lighting of LED on the PCB to be pulled out>
The message “Is the LED of the parts to be replaced (DKUPS-nnn) lit?” is displayed.

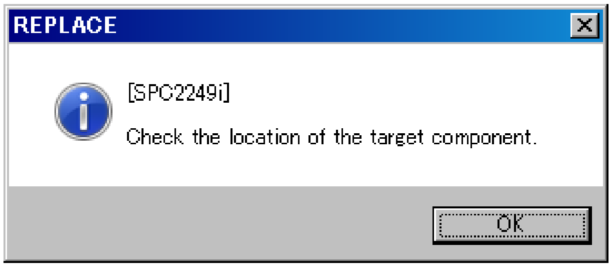
When the LED on the PCB to be pulled out is on, select (CL) [Yes] and go to Step 1-9.
When the LED on the PCB to be pulled out is kept off, select (CL) [No] and go to Step 1-8.


REPLACE
[SPC4077i]
Is the LED of the parts to be replaced(DKUPS-001) lit?

1-8. <Making sure of the DKUPS location>
The message “Check the location of the target component.” is displayed.

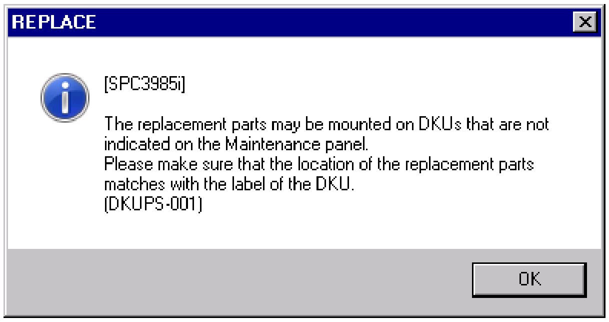
See “2. HARDWARE REPLACEMENT PROCESSING”.

After making sure of the DKUPS location, select (CL) [OK] and go to Step 1-9.


REPLACE
[SPC2249i]
Check the location of the target component.

1-9. <Check beginning of DKUPS Replacement>

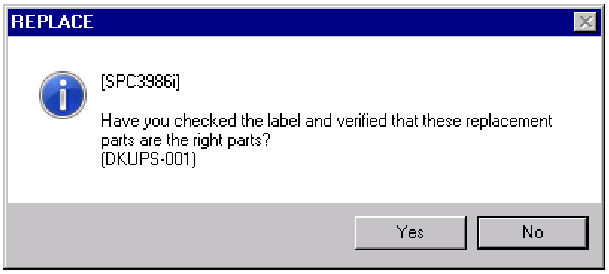
The message “The replacement parts may be mounted on DKUs that are not indicated on the Maintenance panel. Please make sure that the location of the replacement parts matches with the label of the DKU. (DKUPS-nnn)” is displayed.
Select (CL) [OK] after you confirmed the content.



[SPC3985i]

The replacement parts may be mounted on DKUs that are not indicated on the Maintenance panel.
Please make sure that the location of the replacement parts matches with the label of the DKU.
(DKUPS-001)

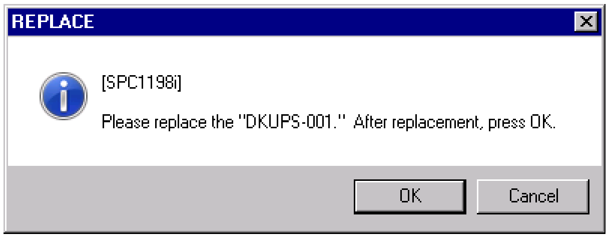
The message “Have you checked the label and verified that these replacement parts are the right parts? (DKUPS-nnn)” is displayed.
Select (CL) [Yes] after you confirmed the content.



[SPC3986i]

Have you checked the label and verified that these replacement parts are the right parts?
(DKUPS-001)

The message “Please replace the “DKUPS-nnn.” After replacement, press OK.” is displayed.
Reply with [OK] after replacing the special part.



[SPC1198i]

Please replace the "DKUPS-001." After replacement, press OK.

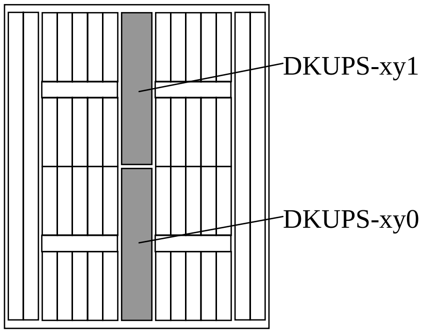
(Eg. DKUPS-001)

Go to “2. HARDWARE REPLACEMENT PROCESSING”.

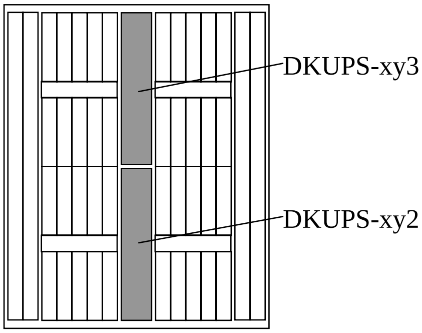
2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Front or Rear of DKU	1	DKUPS	

DKU for 3.5 inch Drive



Front View of DKU



Rear View of DKU

Note: DKUPS-xy0

→DKU No. (0, 1, 2,….., 7)

→DKC No. (0, 1)

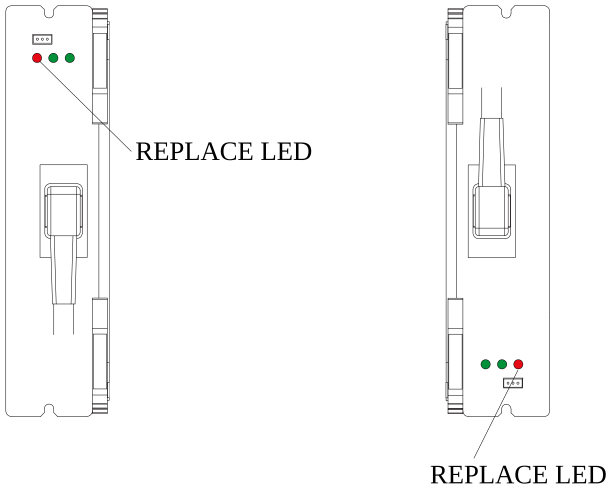
NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 Replacement of DKUPS

1. Replacement of DKUPS
   a. Check that the REPLACE LED is on.

CAUTION

A system down may be caused by a replacement of the DKUPS other than that to be replaced. Make sure that it is a DKUPS to be replaced.



In case of DKUPS-xy0/xy2 In case of DKUPS-xy1/xy3

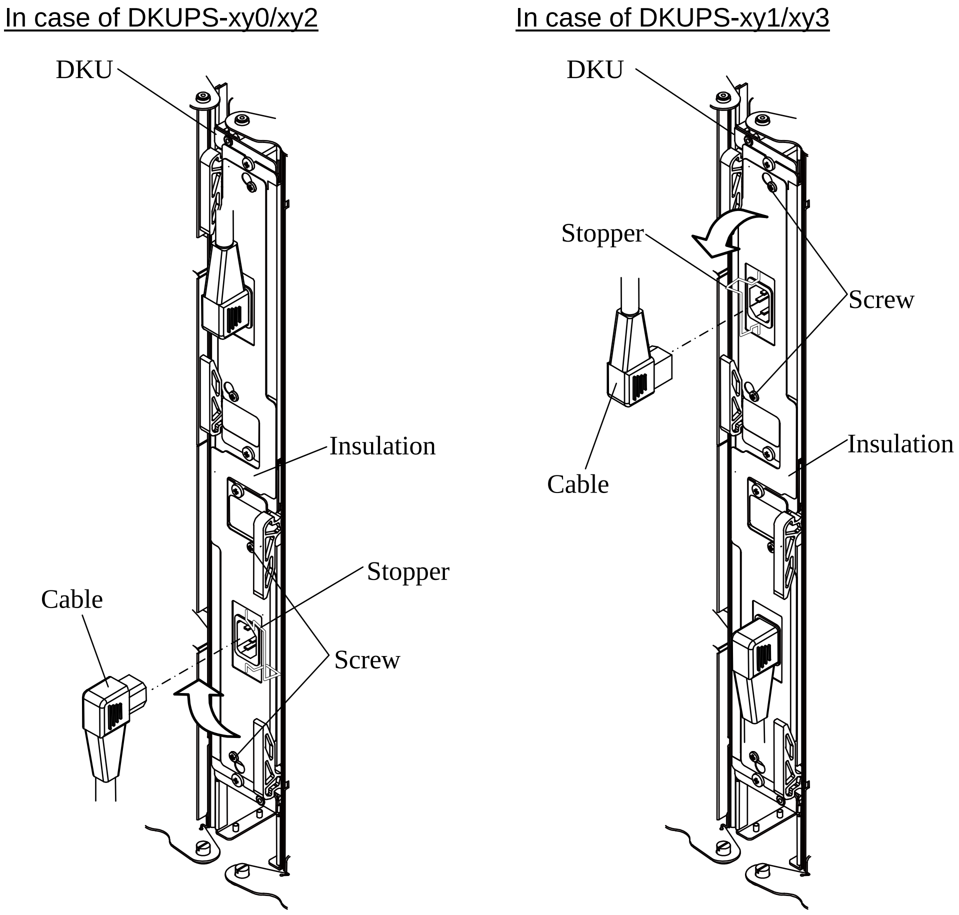
Fig. 3.31.2-1 Check of REPLACE LED

b. Remove the stopper on the failed DKUPS and disconnect the cable.

⚠ CAUTION

Watching for short-circuits:
A Short-circuit may cause a fire.
Never insert metal or the like into the cable connector or a short-circuit may occur.

c. Loosen the two screws and remove the insulation from the screws.


In case of DKUPS-xy0/xy2

In case of DKUPS-xy1/xy3

Fig. 3.31.2-2 Disconnection of Cable

d. Loosen the two screws and remove the DKUPS turning over the insulation.
e. Attach the spare DKUPS turning over the insulation and tighten the screws.
f. Return the insulation to original position and tighten the screws. (Refer to Fig. 3.31.2-2.)
g. Connect the cable and secure it with the stopper.

Note: When connecting the cable to DKUPS-xy2, run the cable through the through hole.

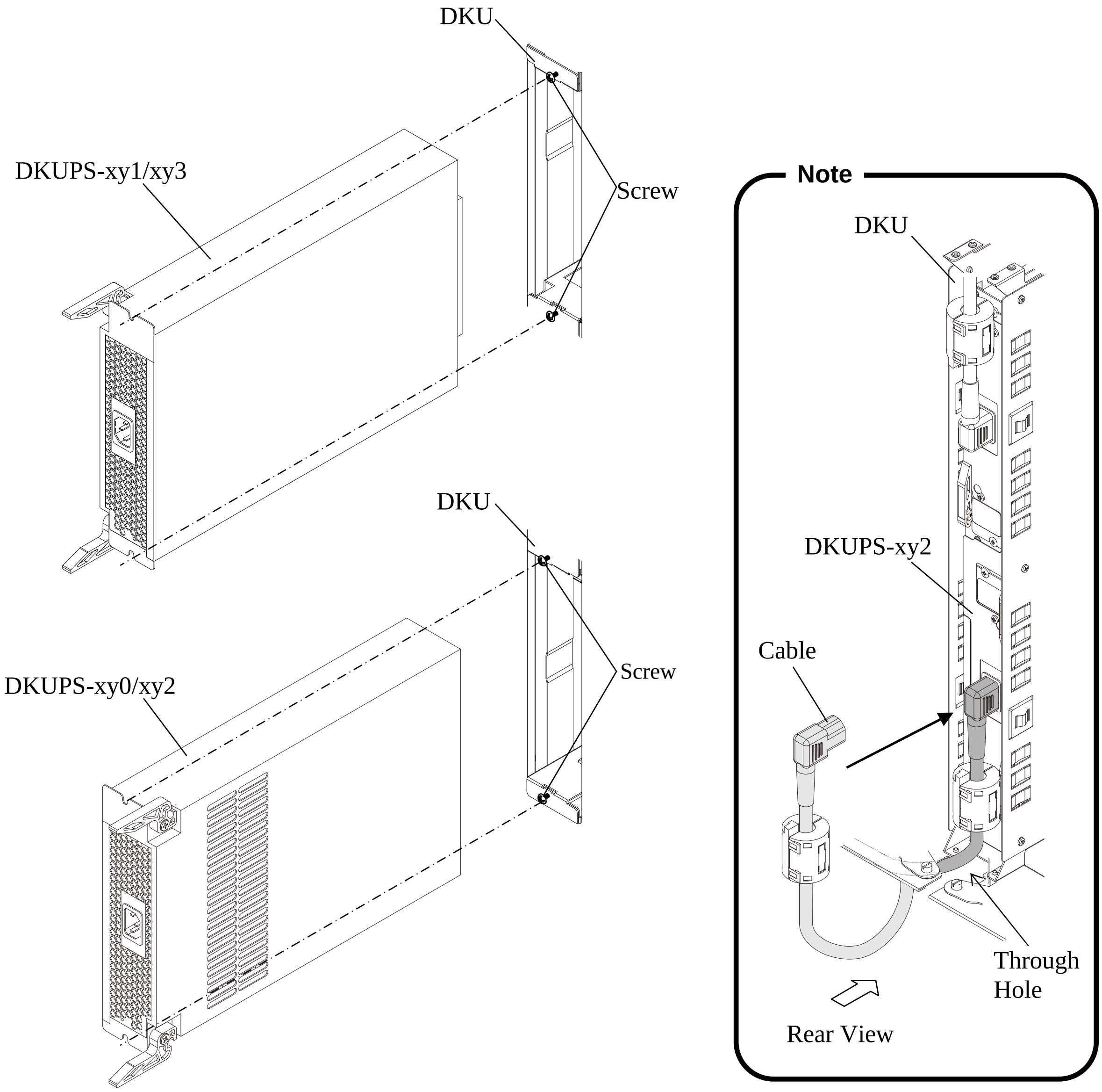


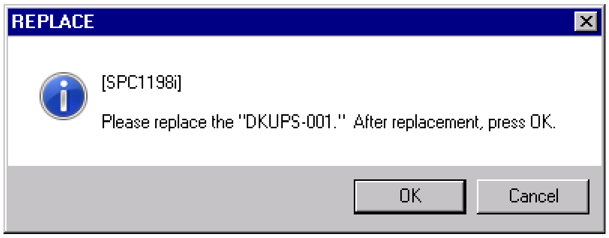
Fig. 3.31.2-3 Replacement of DKUPS

2. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check beginning of DKUPS Replacement>

Select (CL) [OK] in response to "Please replace the "DKUPS-nnn." After replacement, press OK."



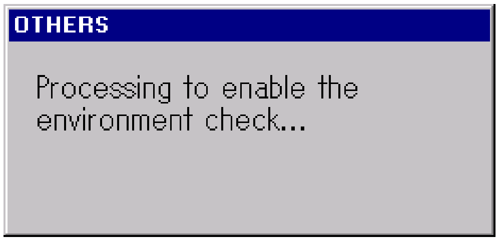
[SPC1198i]

Please replace the "DKUPS-001." After replacement, press OK.

(Eg. DKUPS-001)

3-2. <Check environment monitor start processing>

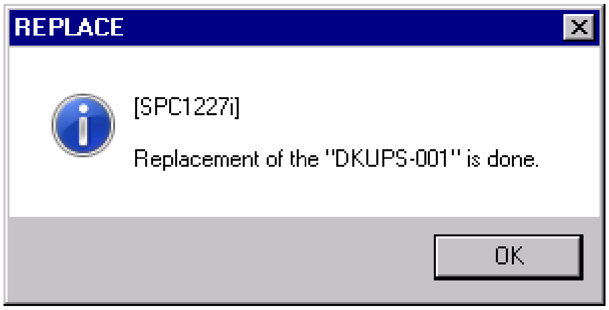
The message "Processing to enable the environment check..." is displayed.



Processing to enable the environment check...

3-3. <Check end of replacement>

Select (CL) [OK] in response to "Replacement of the "DKUPS-nnn" is done."



[SPC1227i]

Replacement of the "DKUPS-001" is done.

(Eg. DKUPS-001)

3-4. <Confirm status>

Confirm the status display.
If button is normal (The string is normally display), go to Step 3-5.
If button is abnormal (The string is blinking), replace the target part again, or see TROUBLE SHOOTING SECTION.

3-5.

Go to POST-PROCEDURE [REP04-01-10].

[2.5 inch HDDFAN REPLACEMENT PROCESSING - RU24]

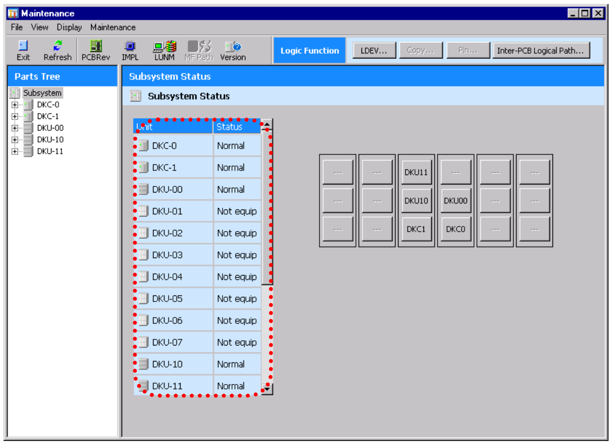
— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select 2.5 inch HDDFAN (status check)
    ② Specify Replacement
    ③ Detach 2.5 inch HDDFAN
    ④ Place part into unpluggable state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Specify end of 2.5 inch HDDFAN replacement
    ② Reinstall related parts
    ③ Start environment monitor

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

Select (CL) [DKU-XX] in the ‘Maintenance’ window.

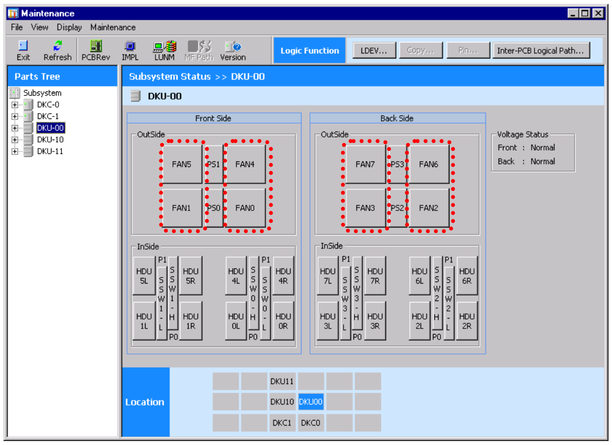

Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Pin... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKC-1
DKU-00
DKU-10
DKU-11
Subsystem Status
DKU11 DKU10 DKU00 DKC1 DKC0

Subsystem Status

Unit	Status
DKC-0	Normal
DKC-1	Normal
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Normal
DKU-11	Normal

1-2. <Specify HDDFAN>

Select (CL) [FANn].


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Pin... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKC-1
DKU-00
DKU-10
DKU-11
Subsystem Status >> DKU-00
DKU-00
Front Side
OutSide
FAN5 PS1 FAN4
FAN1 PS0 FAN0
InSide
HDU 5L HDU 5R HDU 4L HDU 4R
HDU 1L HDU 1R HDU 0L HDU 0R
P1 P0
SSW1-L SSW1-H SSW0-H SSW0-L
Back Side
OutSide
FAN7 PS3 FAN6
FAN3 PS2 FAN2
InSide
HDU 7L HDU 7R HDU 6L HDU 6R
HDU 3L HDU 3R HDU 2L HDU 2R
SSW3-L SSW3-H SSW2-H SSW2-L
Location
DKU11 DKU10 DKU00 DKC1 DKC0

Voltage Status
Front : Normal
Back : Normal

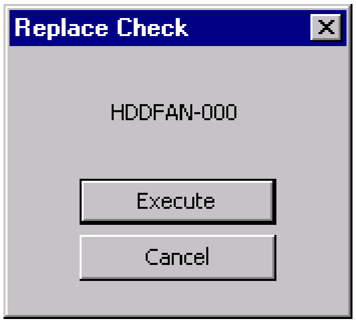
1-3. <Execute>

CAUTION

When the screen prompting an operator to input a password in order to prevent a multiple maintenance, contact the technical support division to ask for an instruction.

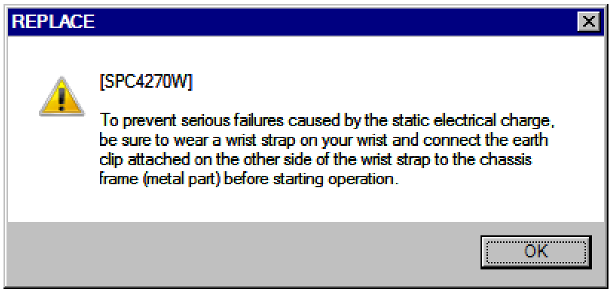
If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

A window shown on the right is displayed.
Select (CL) [Execute].



1-4. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

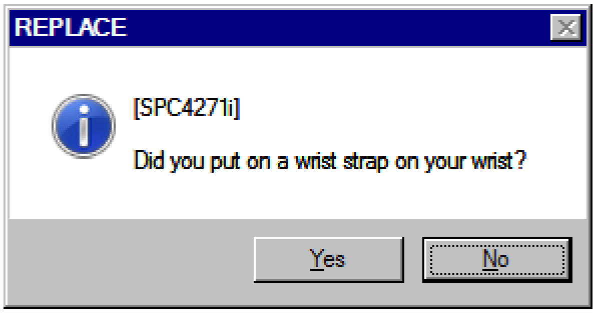


[SPC4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

select (CL) [Yes] and go to Step 1-5.

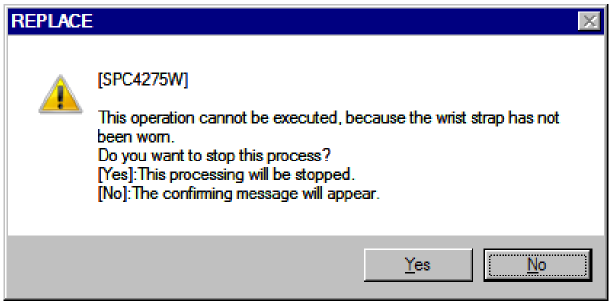


[SPC4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.”
is displayed.

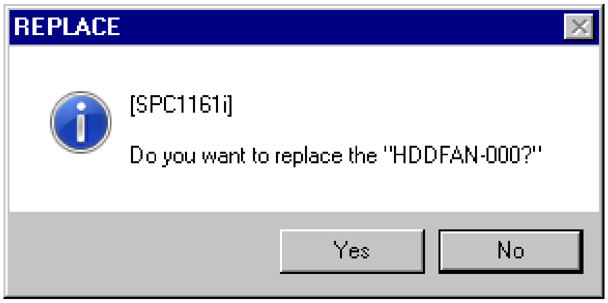
When the processing will be stopped, select (CL) [Yes].



[SPC4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

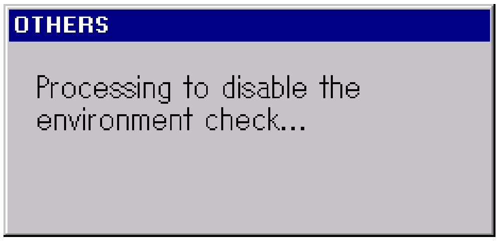
1-5. <Check beginning of HDDFAN Replacement>
Select (CL) [Yes] in response to "Do you want to replace the "HDDFAN-nnn?""



[SPC1161i]
Do you want to replace the "HDDFAN-000?"

(Eg. HDDFAN-000)

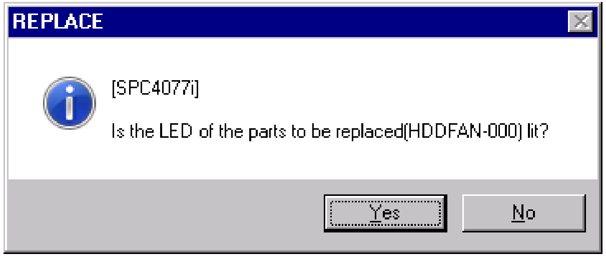
1-6. <Check environment monitor stopped state>
The message "Processing to disable the environment check..." is displayed.



Processing to disable the environment check...

1-7. <Checking lighting of the LED on the PCB to be pulled out>
The message "Is the LED of the parts to be replaced (HDDFAN-000) lit?" is displayed.

When the LED on the PCB to be pulled out is on, select (CL) [Yes] and go to Step 1-9.
When the LED on the PCB to be pulled out is kept off, select (CL) [No] and go to Step 1-8.



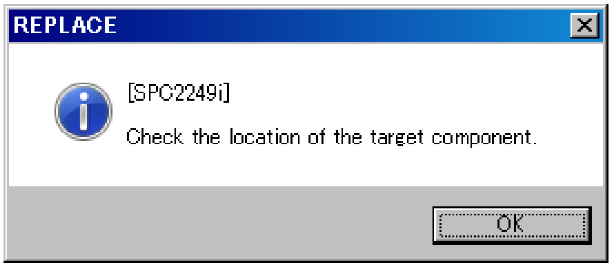
[SPC4077i]
Is the LED of the parts to be replaced(HDDFAN-000) lit?

(Eg. HDDFAN-000)

1-8. <Making sure of the HDDFAN location>
The message "Check the location of the target component." is displayed.

See "2. HARDWARE REPLACEMENT PROCESSING".

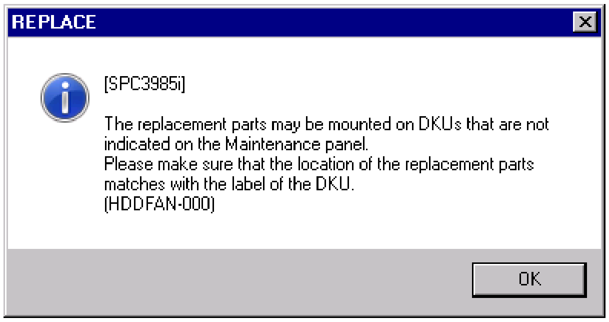
After making sure of the HDDFAN location, select (CL) [OK] and go to Step 1-9.



[SPC2249i]
Check the location of the target component.

1-9. <Check beginning of HDDFAN Replacement>

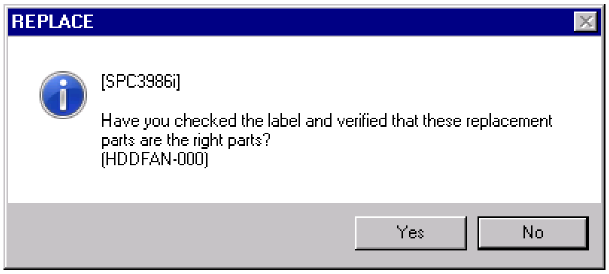
The message “The replacement parts may be mounted on DKUs that are not indicated on the Maintenance panel. Please make sure that the location of the replacement parts matches with the label of the DKU. (HDDFAN-nnn)” is displayed.
Select (CL) [OK] after you confirmed the content.



[SPC3985i]

The replacement parts may be mounted on DKUs that are not indicated on the Maintenance panel.
Please make sure that the location of the replacement parts matches with the label of the DKU.
(HDDFAN-000)

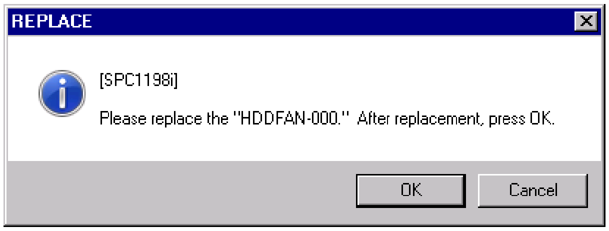
The message “Have you checked the label and verified that these replacement parts are the right parts? (HDDFAN-nnn)” is displayed.
Select (CL) [Yes] after you confirmed the content.



[SPC3986i]

Have you checked the label and verified that these replacement parts are the right parts?
(HDDFAN-000)

The message “Please replace the “HDDFAN-nnn.” After replacement, press OK.” is displayed.
Reply with [OK] after replacing the special part.



[SPC1198i]

Please replace the "HDDFAN-000." After replacement, press OK.

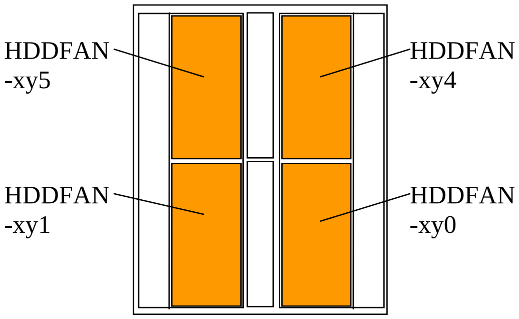
(Eg. HDDFAN-000)

Go to “2. HARDWARE REPLACEMENT PROCESSING”.

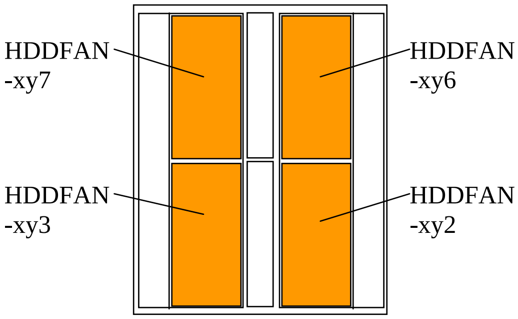
2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Front of DKU	1	FAN (front) Assembly	HDDFAN
Rear of DKU	2	FAN (rear) Assembly	HDDFAN

DKU for 2.5 inch Drive



Front View of DKU



Rear View of DKU

Note: HDDFAN-xy0
→DKU No. (0, 1, 2,….., 7)
→DKC No. (0, 1)

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 Replacement of HDDFAN (FAN (front/rear) Assembly)

⚠ CAUTION

Hazardous rotating mechanism:

Can cause injury if touched. Stay clear of it when machine is running.

2-1-1. Replace the HDDFAN (FAN Assembly).

a. Put the stopper of the FAN door into the openable and closable state. (Refer to INST03-01-160.)

b. Loosen the two screws and open the FAN door.

c. Disconnect the cable (#-P502) from the SSW PCB.

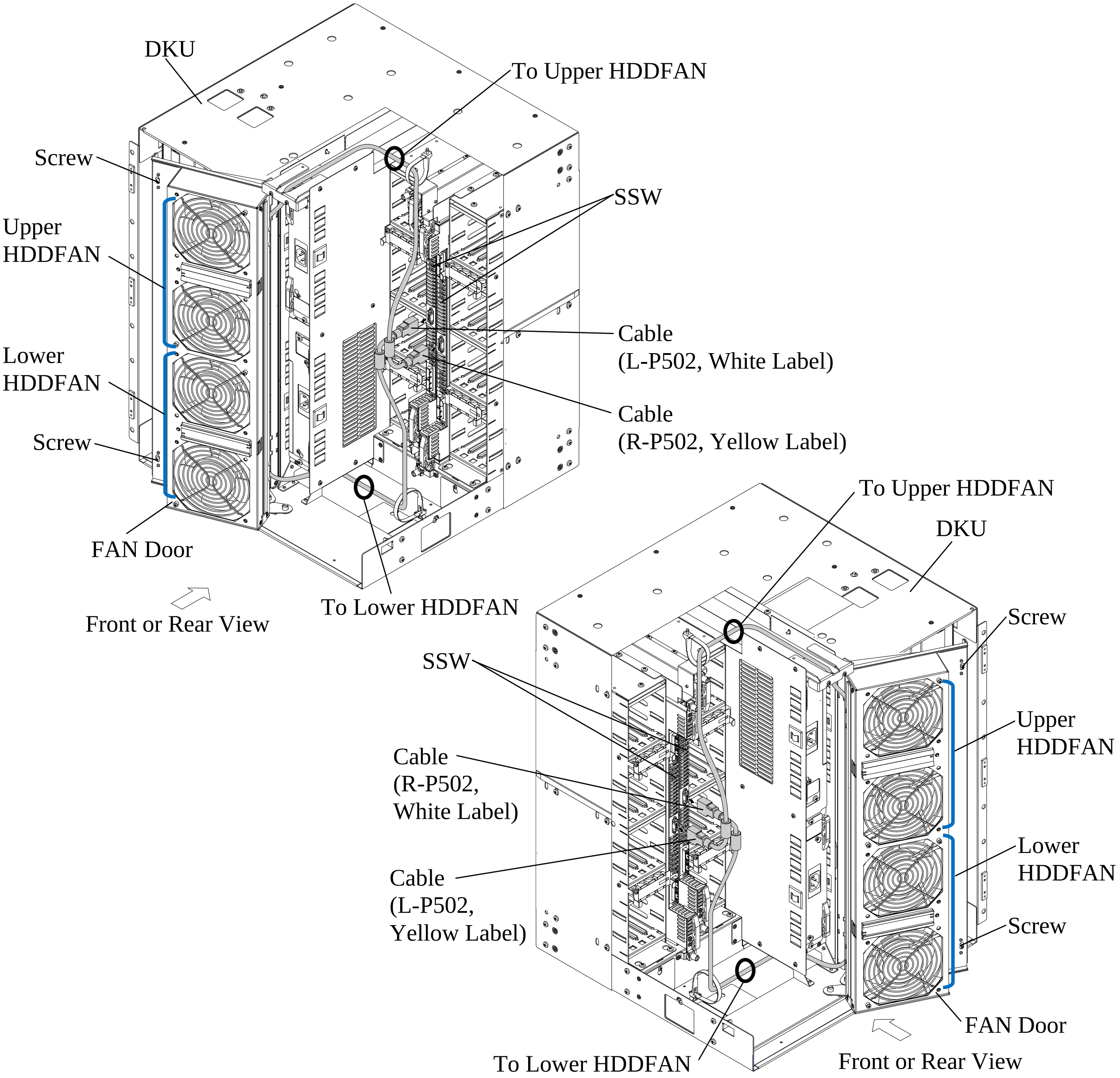


Fig. 3.32.2-1 Disconnection of Cable

d. Loosen the two screws and remove the cover from the failed HDDFAN.

e. Disconnect the cable (#-P601) from the HDDFAN.

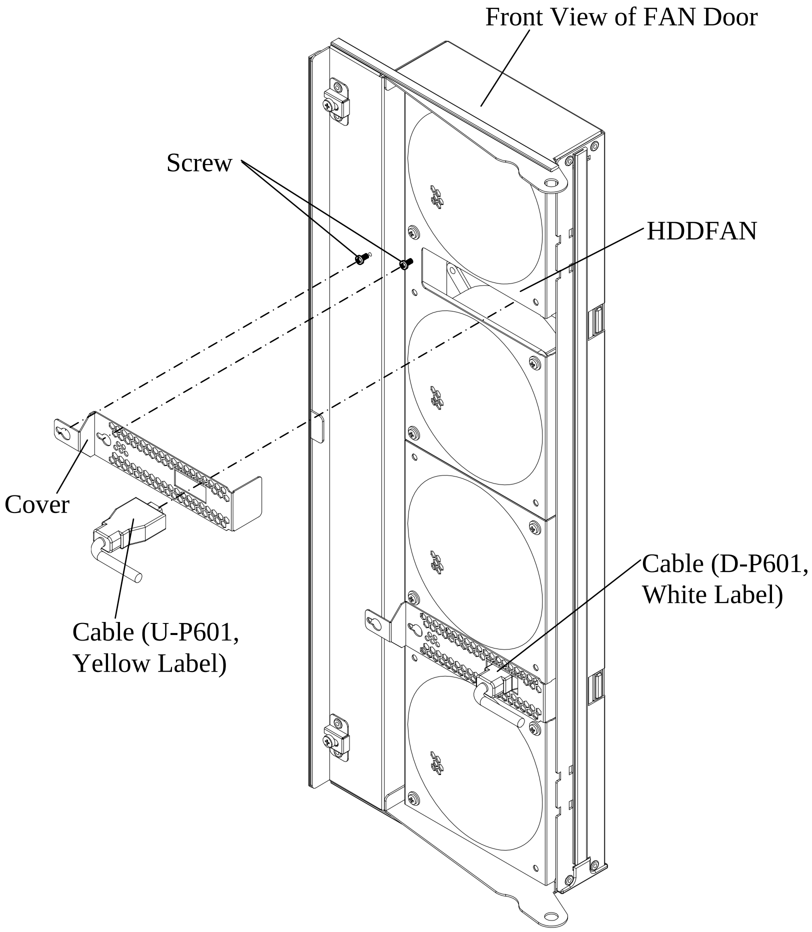


Fig. 3.32.2-2 Removal of Cable

f. Loosen the two screws at the rear view of the FAN door.

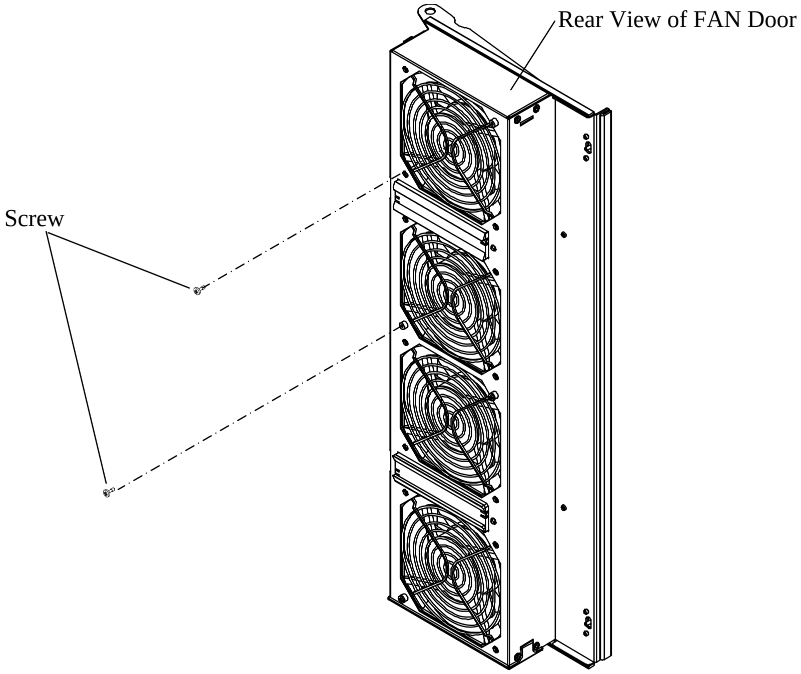


Fig. 3.32.2-3 Removal of Screw

g. Remove the failed HDDFAN from the front side of the FAN door.
h. Attach the spare HDDFAN.
i. Fasten the two screws at the rear view of the FAN door. (Refer to Fig. 3.32.2-3.)

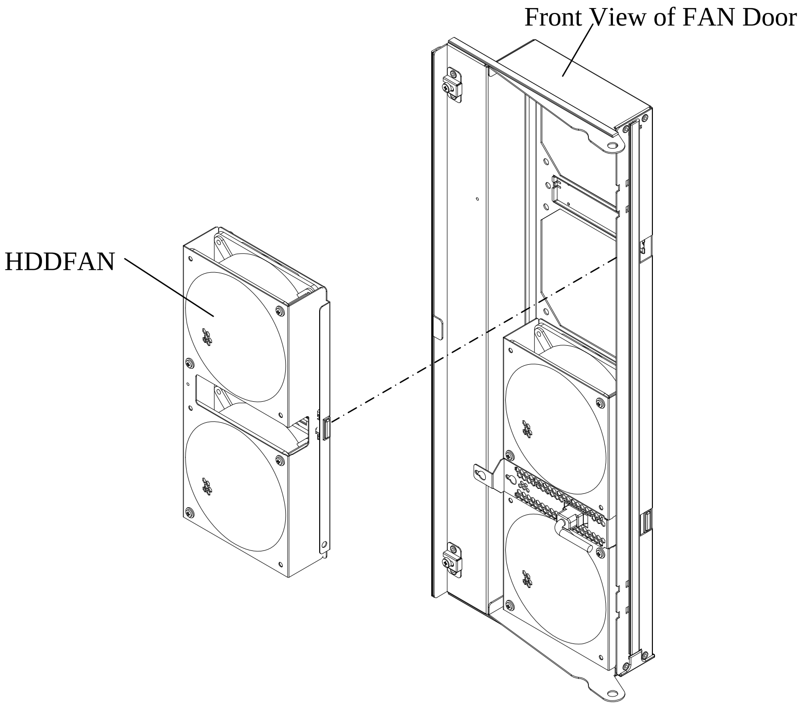


Fig. 3.32.2-4 Replacement of HDDFAN

2-1-2. Replace the cable.

a. Loosen the repeat binder, and remove the cable from the DKU.

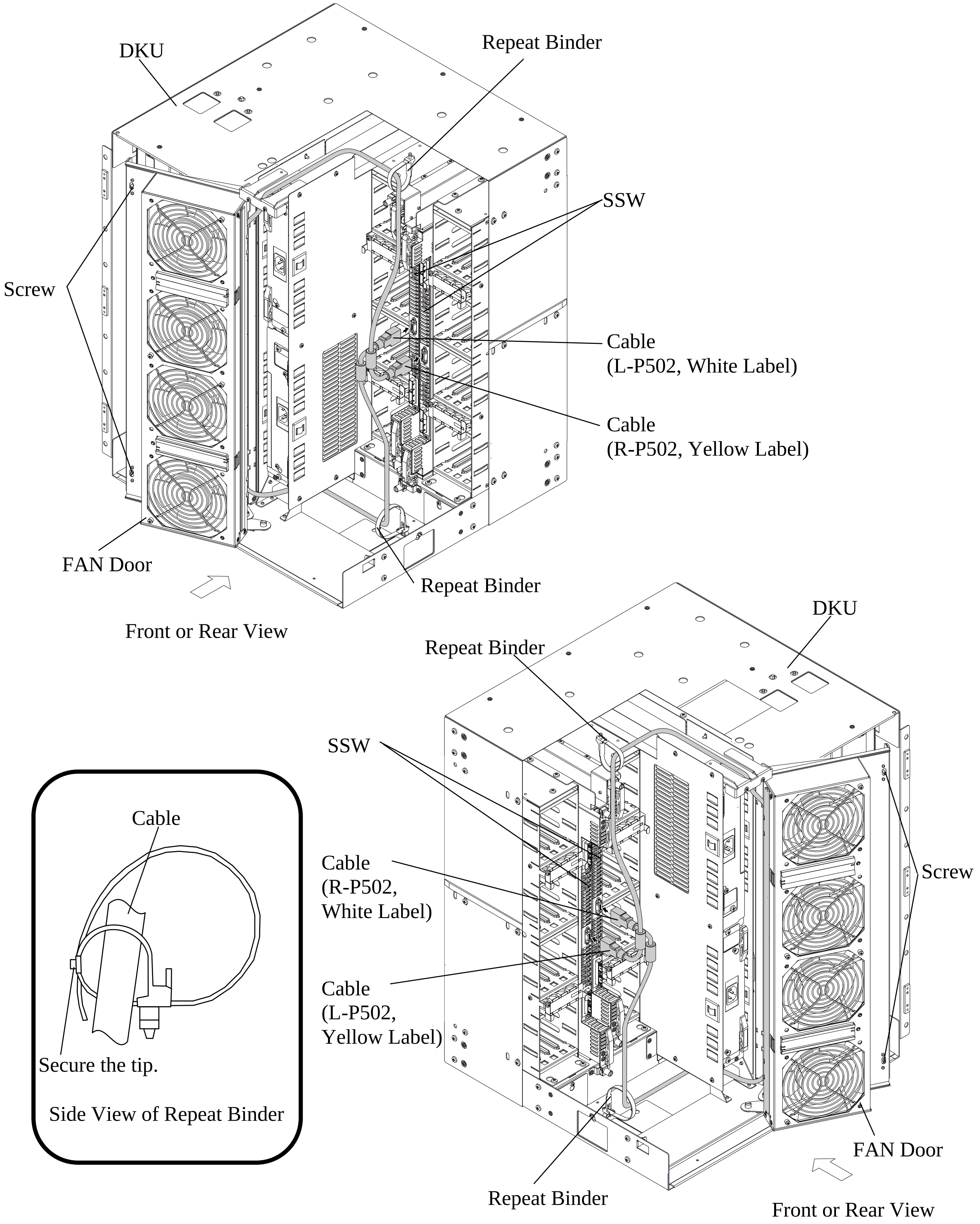
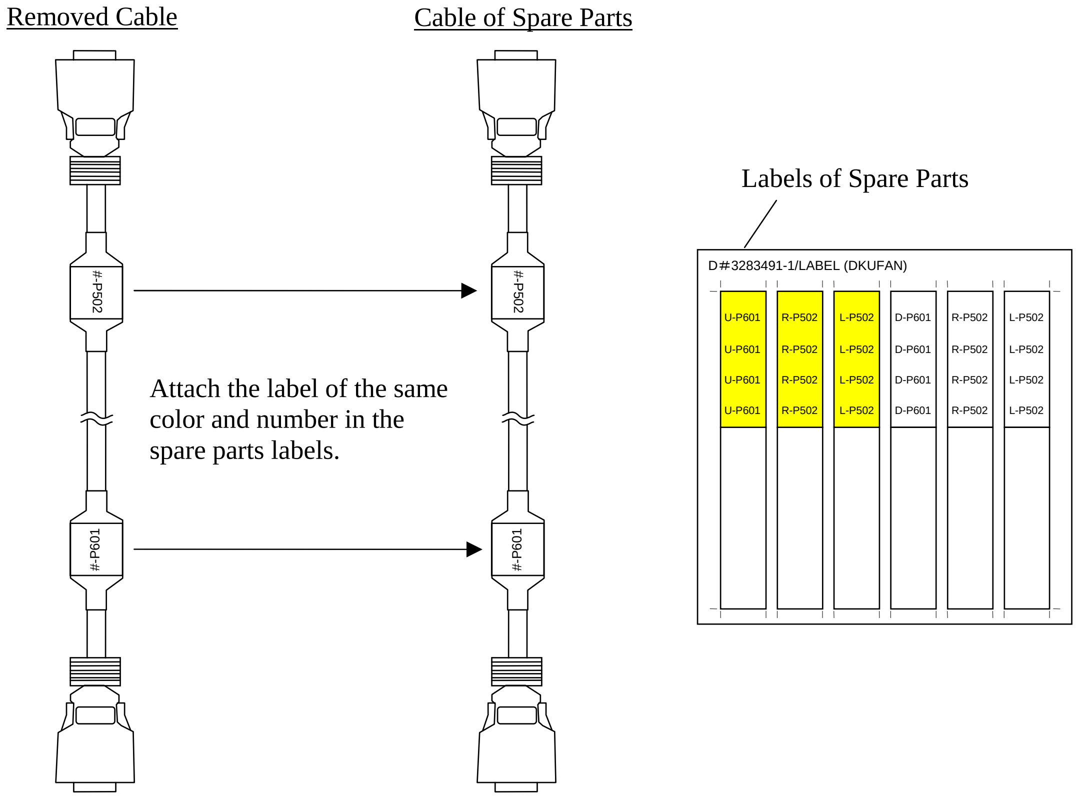


Fig. 3.32.2-5 Removal of Cable

b. Attach the label of the same color and number as the removed cable to the cable in the spare parts.



Attach the label of the same color and number in the spare parts labels.

Fig. 3.32.2-6 Attaching Label

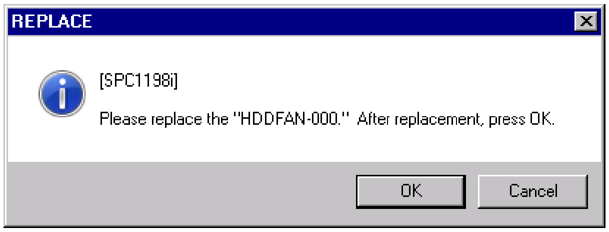
c. Attach the cover to the HDDFAN and tighten the two screws. (Refer to Fig. 3.32.2-2.)
d. Connect the cable (#-P601) to the HDDFAN.
e. Wire the cable in the spare parts in the same route as the removed cable. (Refer to Fig. 3.32.2-5.)
f. Connect the cable (#-P502) to the SSW PCB.
g. Secure the tip of the repeat binder to avoid contact with the FAN door.
h. Close the FAN door and tighten the two screws.
i. Put the FAN door stopper into the neutral state.

2-1-3. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check beginning of HDDFAN Replacement>

Select (CL) [Yes] in response to “Please replace the “HDDFAN-nnn.” After replacement, press OK.”



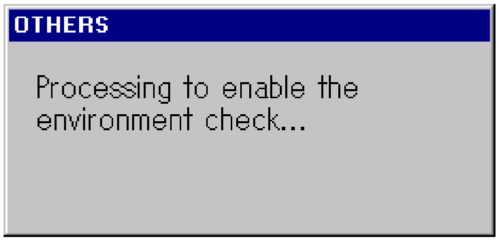
[SPC1198i]

Please replace the "HDDFAN-000." After replacement, press OK.

(Eg. HDDFAN-000)

3-2. <Check environment monitor start processing>

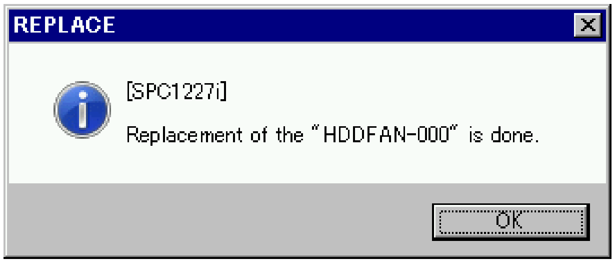
The message “Processing to enable the environment check...” is displayed.



Processing to enable the environment check...

3-3. <Check end of replacement>

Select (CL) [OK] in response to “Replacement of the “HDDFAN-nnn” is done.”



[SPC1227i]

Replacement of the “HDDFAN-000” is done.

(Eg. HDDFAN-000)

3-4. <Confirm status>

Confirm the status display.
If button is normal (The string is normally display), go to Step 3-5.
If button is abnormal (The string is blinking), replace the target part again, or see TROUBLE SHOOTING SECTION.

3-5.

Go to POST-PROCEDURE [REP04-01-10].

[3.5 inch HDDFAN REPLACEMENT PROCESSING - RU34]

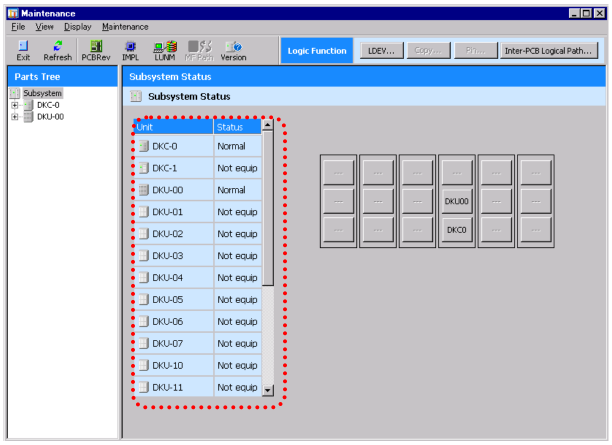
— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select 3.5 inch HDDFAN (status check)
    ② Specify Replacement
    ③ Detach 3.5 inch HDDFAN
    ④ Place part into unpluggable state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Specify end of 3.5 inch HDDFAN replacement
    ② Reinstall related parts
    ③ Start environment monitor

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

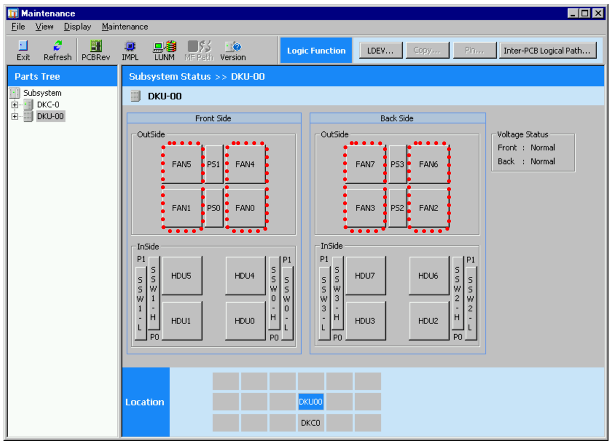
Select (CL) [DKU-XX] in the ‘Maintenance’ window.



Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <Specify HDDFAN>

Select (CL) [FANn].



Voltage Status
Front : Normal
Back : Normal

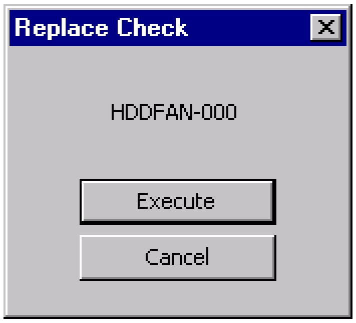
1-3. <Execute>

CAUTION

When the screen appears prompting the operator to input a password to prevent multiple maintenance or for executing a pin check, contact the technical support division to ask for instructions.

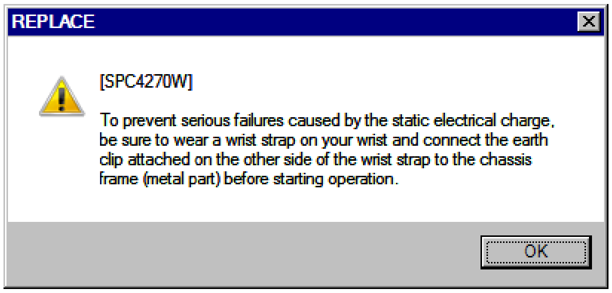
If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

A window shown on the right is displayed.
Select (CL) [Execute].



1-4. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

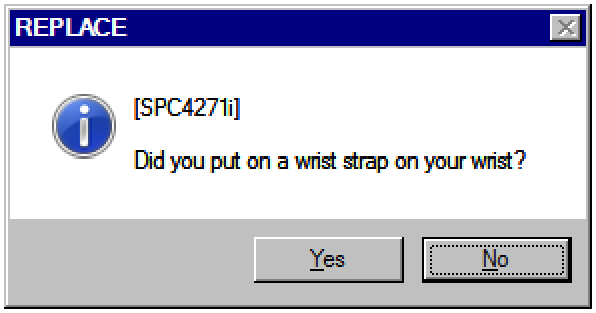


[SPC4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

select (CL) [Yes] and go to Step 1-5.

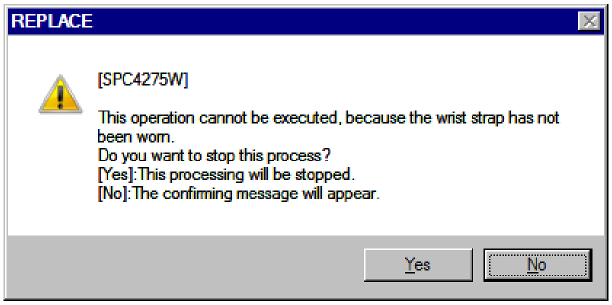


[SPC4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.”
is displayed.

When the processing will be stopped, select (CL) [Yes].

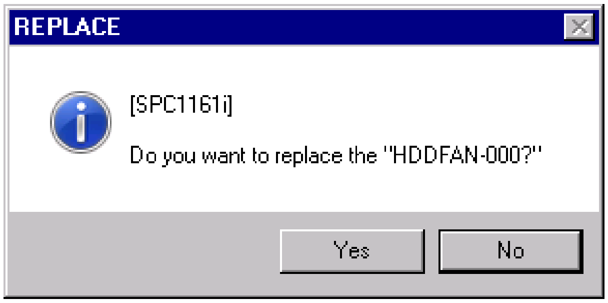


[SPC4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-5. <Check beginning of HDDFAN Replacement>

Select (CL) [Yes] in response to "Do you want to replace the "HDDFAN-nnn?"".



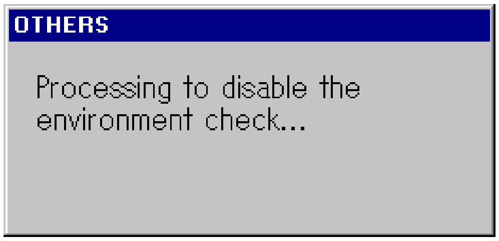
[SPC1161i]

Do you want to replace the "HDDFAN-000?"

(Eg. HDDFAN-000)

1-6. <Check environment monitor stopped state>

The message "Processing to disable the environment check..." is displayed.

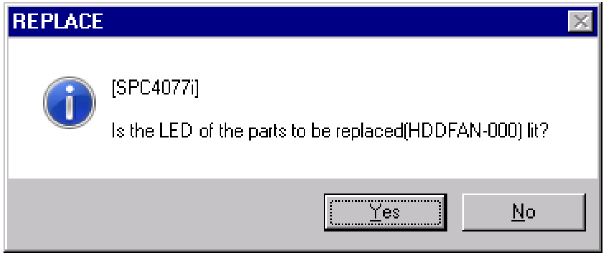


Processing to disable the environment check...

1-7. <Checking lighting of the LED on the PCB to be pulled out>

The message "Is the LED of the parts to be replaced (HDDFAN-nnn) lit?" is displayed.

When the LED on the PCB to be pulled out is on, select (CL) [Yes] and go to Step 1-9.
When the LED on the PCB to be pulled out is kept off, select (CL) [No] and go to Step 1-8.



[SPC4077i]

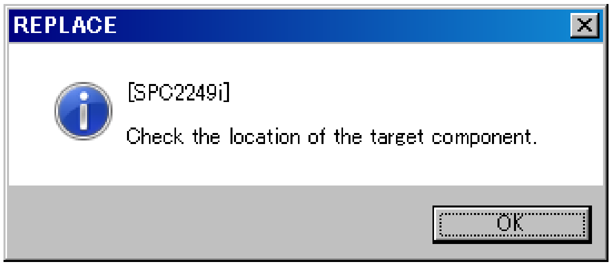
Is the LED of the parts to be replaced(HDDFAN-000) lit?

1-8. <Making sure of the HDDFAN location>

The message "Check the location of the target component." is displayed.

See "2. HARDWARE REPLACEMENT PROCESSING".

After making sure of the HDDFAN location, select (CL) [OK] and go to Step 1-9.

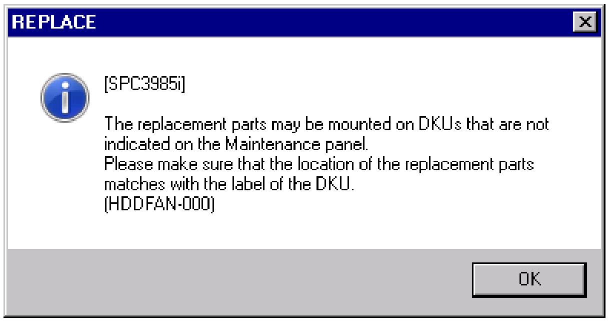


[SPC2249i]

Check the location of the target component.

1-9. <Check beginning of HDDFAN Replacement>

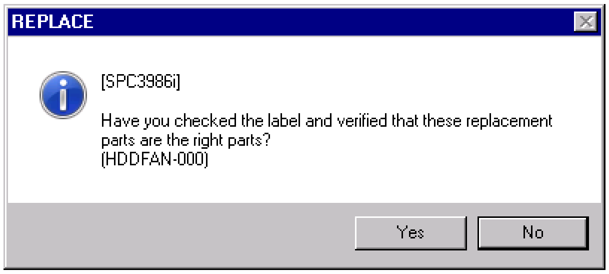
The message “The replacement parts may be mounted on DKUs that are not indicated on the Maintenance panel. Please make sure that the location of the replacement parts matches with the label of the DKU. (HDDFAN-nnn)” is displayed.
Select (CL) [OK] after you confirmed the content.



[SPC3985i]

The replacement parts may be mounted on DKUs that are not indicated on the Maintenance panel.
Please make sure that the location of the replacement parts matches with the label of the DKU.
(HDDFAN-000)

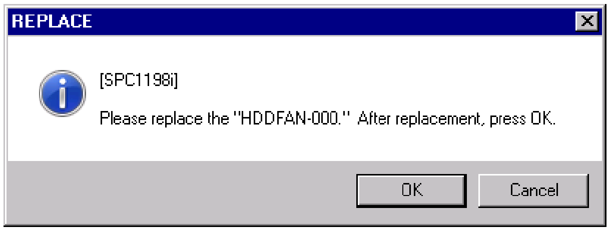
The message “Have you checked the label and verified that these replacement parts are the right parts? (HDDFAN-nnn)” is displayed.
Select (CL) [Yes] after you confirmed the content.



[SPC3986i]

Have you checked the label and verified that these replacement parts are the right parts?
(HDDFAN-000)

The message “Please replace the “HDDFAN-nnn.” After replacement, press OK.” is displayed.
Reply with [OK] after replacing the special part.



[SPC1198i]

Please replace the "HDDFAN-000." After replacement, press OK.

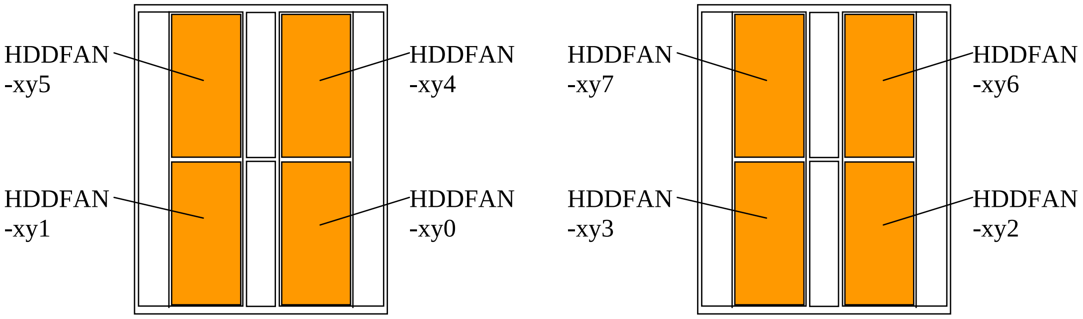
(Eg. HDDFAN-000)

Go to “2. HARDWARE REPLACEMENT PROCESSING”.

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Front of DKU	1	FAN (front) Assembly	HDDFAN
Rear of DKU	2	FAN (rear) Assembly	HDDFAN

DKU for 3.5 inch Drive



Front View of DKU

Rear View of DKU

Note: HDDFAN-xy0

→DKU No. (0, 1, 2,….., 7)

→DKC No. (0, 1)

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 Replacement of HDDFAN (FAN (front/rear) Assembly)

CAUTION

Hazardous rotating mechanism:

Can cause injury if touched. Stay clear of it when machine is running.

2-1-1. Replace the HDDFAN (FAN Assembly).

a. Put the stopper of the FAN door into the openable and closable state. (Refer to INST03-01-160.)

b. Loosen the two screws and open the FAN door.

c. Disconnect the cable (#-P502) from the SSW PCB.

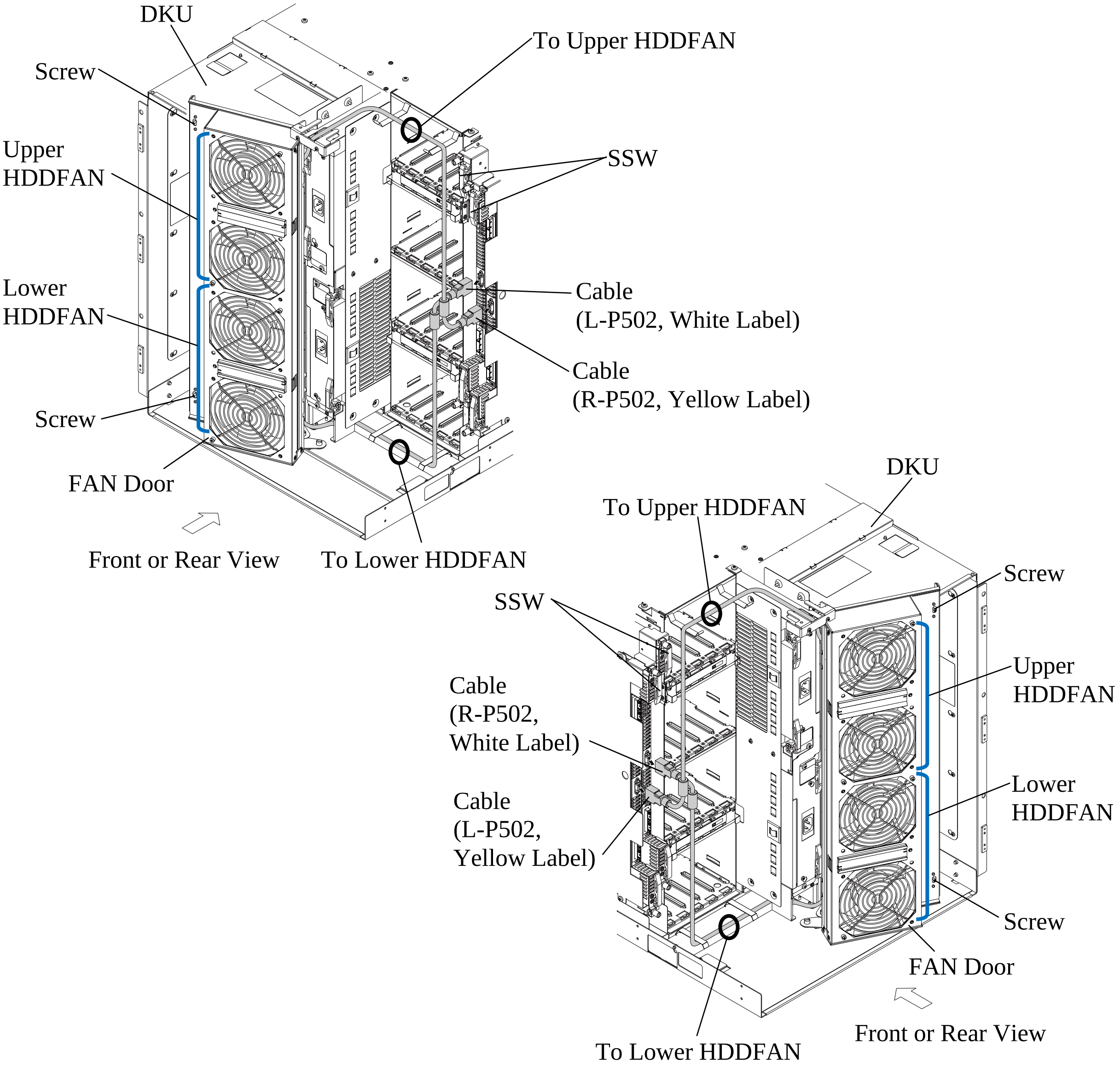


Fig. 3.33.2-1 Disconnection of Cable

d. Loosen the two screws and remove the cover from the failed HDDFAN.
e. Disconnect the cable (#-P601) from the HDDFAN.

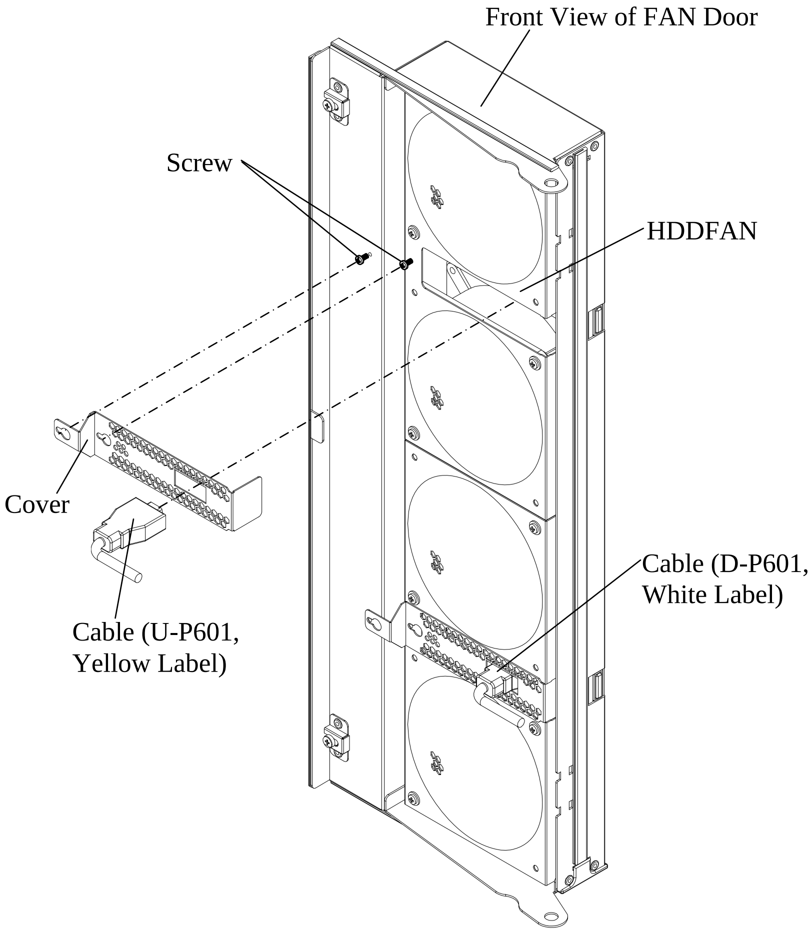


Fig. 3.33.2-2 Removal of Cable

f. Loosen the two screws at the rear view of the FAN door.

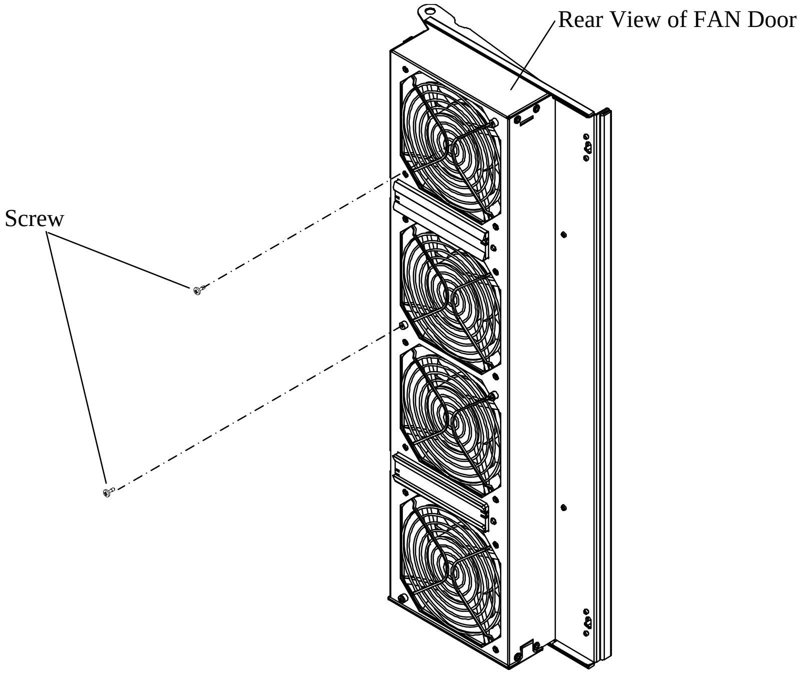


Fig. 3.33.2-3 Removal of Screw

g. Remove the failed HDDFAN from the front side of the FAN door.
h. Attach the spare HDDFAN.
i. Fasten the two screws at the rear view of the FAN door. (Refer to Fig. 3.33.2-3.)

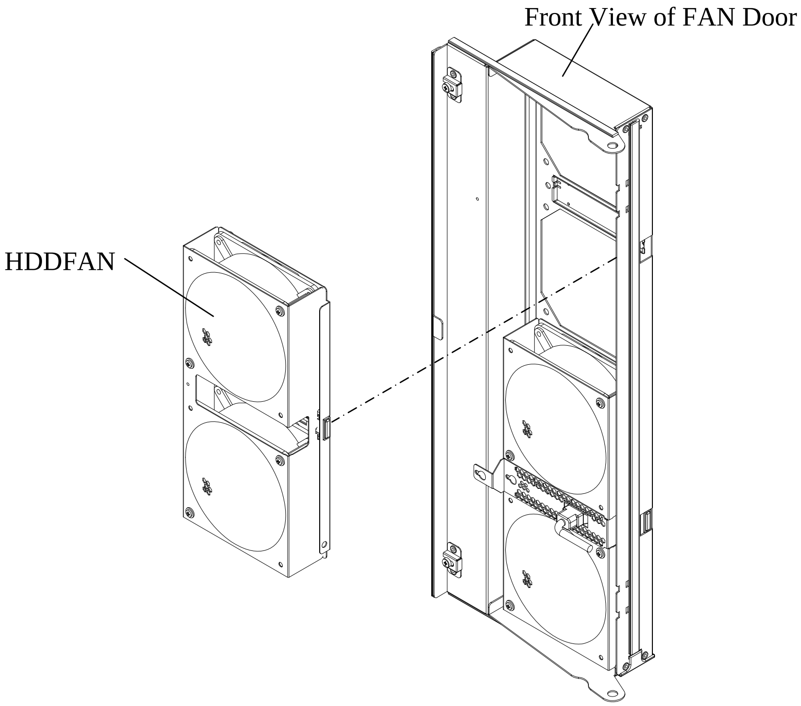


Fig. 3.33.2-4 Replacement of HDDFAN

2-1-2. Replace the cable.

a. Remove the two hangers, and remove the cable from the DKU.

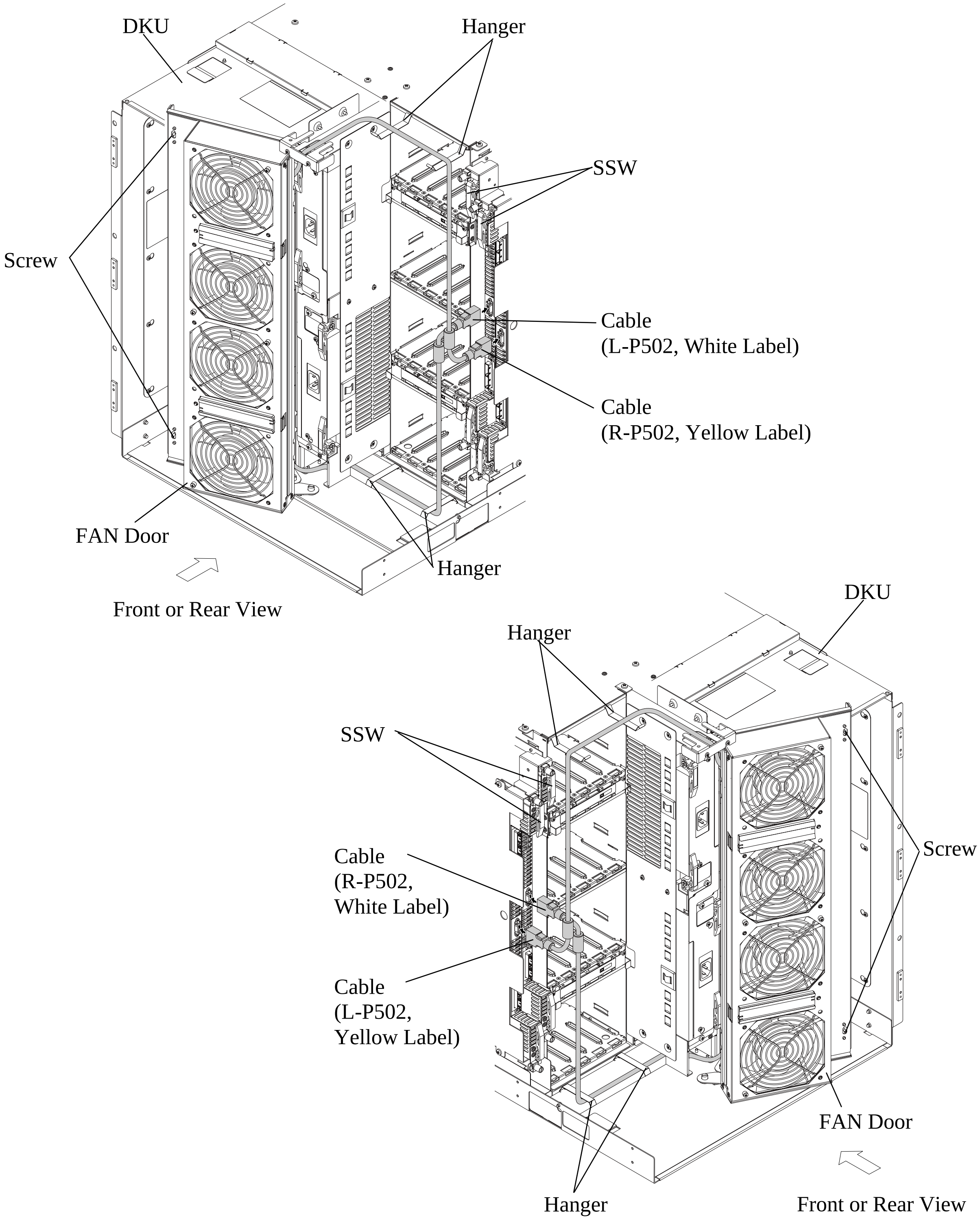


Fig. 3.33.2-5 Removal of Cable

b. Attach the label of the same color and number as the removed cable to the cable in the spare parts.

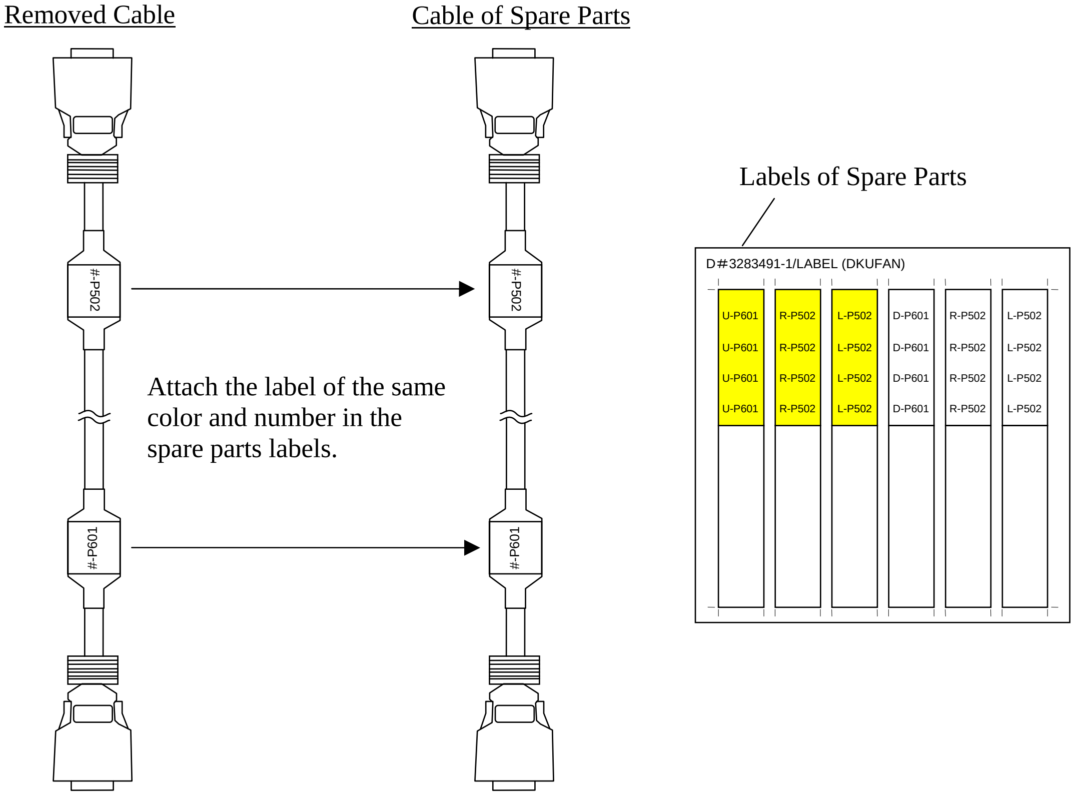


Fig. 3.33.2-6 Attaching Label

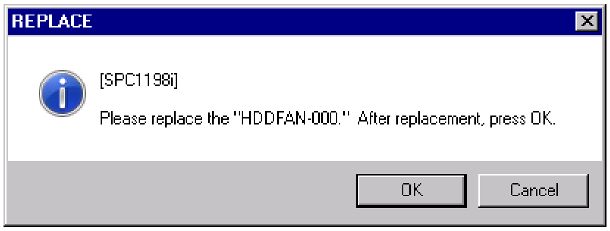
c. Attach the cover to the HDDFAN and tighten the two screws. (Refer to Fig. 3.33.2-2.)
d. Connect the cable (#-P601) to the HDDFAN.
e. Wire the cable in the spare parts in the same route as the removed cable. (Refer to Fig. 3.33.2-5.)
f. Connect the cable (#-P502) to the SSW PCB.
g. Install the two hangers.
h. Close the FAN door and tighten the two screws.
i. Put the FAN door stopper into the neutral state.

2-1-3. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check beginning of HDDFAN Replacement>

Select (CL) [OK] in response to “Please replace the “HDDFAN-nnn.” After replacement, press OK.”


REPLACE

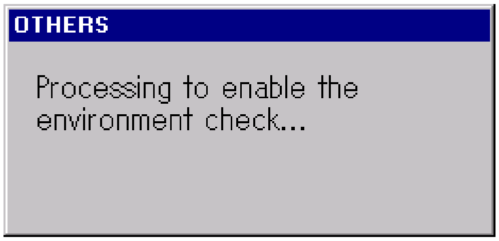
[SPC1198i]

Please replace the "HDDFAN-000." After replacement, press OK.

(Eg. HDDFAN-000)

3-2. <Check environment monitor start processing>

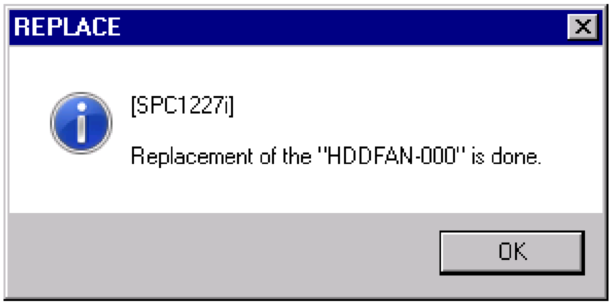
The message “Processing to enable the environment check...” is displayed.


OTHERS

Processing to enable the environment check...

3-3. <Check end of replacement>

Select (CL) [OK] in response to “Replacement of the “HDDFAN-nnn” is done.”


REPLACE

[SPC1227i]

Replacement of the "HDDFAN-000" is done.

(Eg. HDDFAN-000)

3-4. <Confirm status>

Confirm the status display.
If button is normal (The string is normally display), go to Step 3-5.
If button is abnormal (The string is blinking), replace the target part again, or see TROUBLE SHOOTING SECTION.

3-5.

Go to POST-PROCEDURE [REP04-01-10].

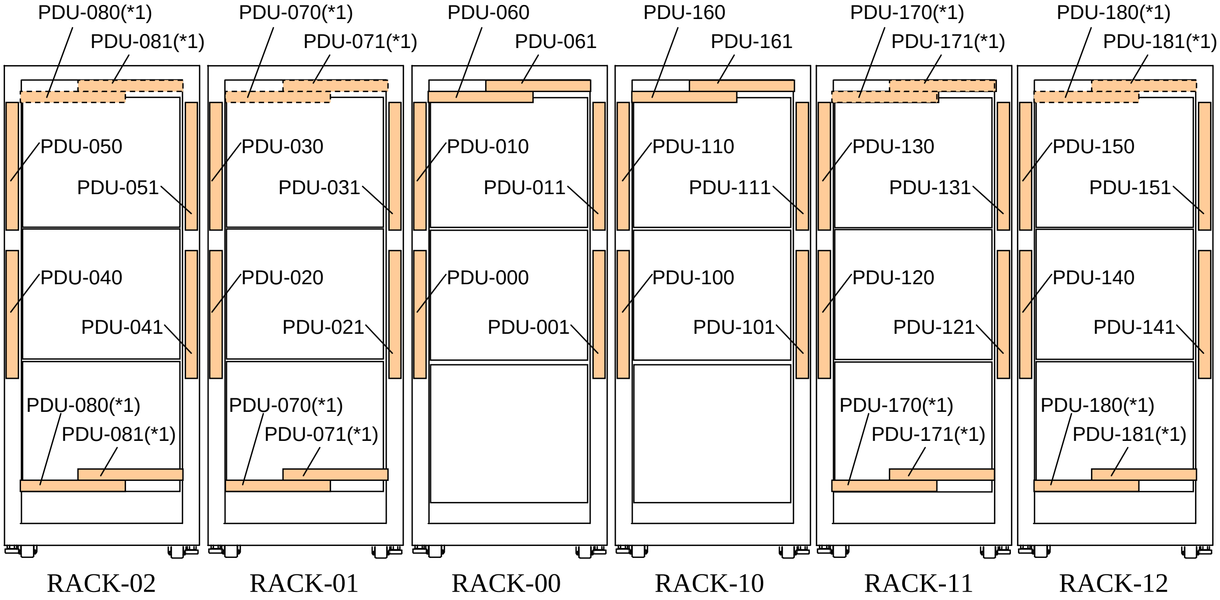
[PDU REPLACEMENT PROCESSING]

— OUTLINE —

1. HARDWARE REPLACEMENT PROCESSING

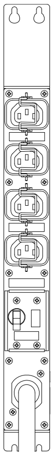
1. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Rear of RACK	1	PDU30 (Longitudinal installation)	
	2	PDU30 (Lateral installation)	

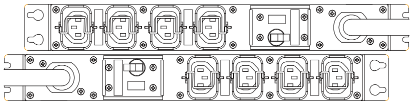


Rear View

*1: Two PDUs are installed in the top or bottom of the rack depending on rack configuration.



Front View of PDU30
(Longitudinal installation)



Front View of PDU30
(Lateral installation)

NOTICE:

- Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.
- Other devices may be connected to PDU.
  When it is replaced, check the notes on the connected devices, and then replace it.

1 Replacement of PDU30 (Longitudinal installation)

⚠ WARNING

Hazardous voltage:
Contact could cause electric shock or burn. Turn off all related breakers and discharge residual voltage, as shown below. (Follow next procedures.)

⚠ CAUTION

The device may be powered off when turning off the breakers not shown below.

1-1. Power Off the Component to be replaced

a. Turn off the breaker for the PDU to be replaced.

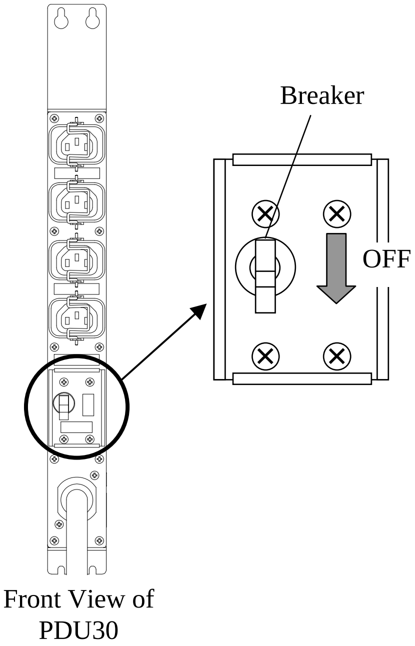


Fig. 3.34.1-1 Turn off the Breaker

b. Turn off the circuit breaker on the power distribution panel in the plant that is connected to the PDU to be replaced.

c. The circuit has residual voltage after turning off the breakers, so wait for one minute.

1-2. Removal of Power Cable

When wiring for the power cables from the round opening of the top cover

a. Disconnect the power cable from the power distribution panel.

b. Open the clamp tapes on the rear side of the rack, and remove the power cable.

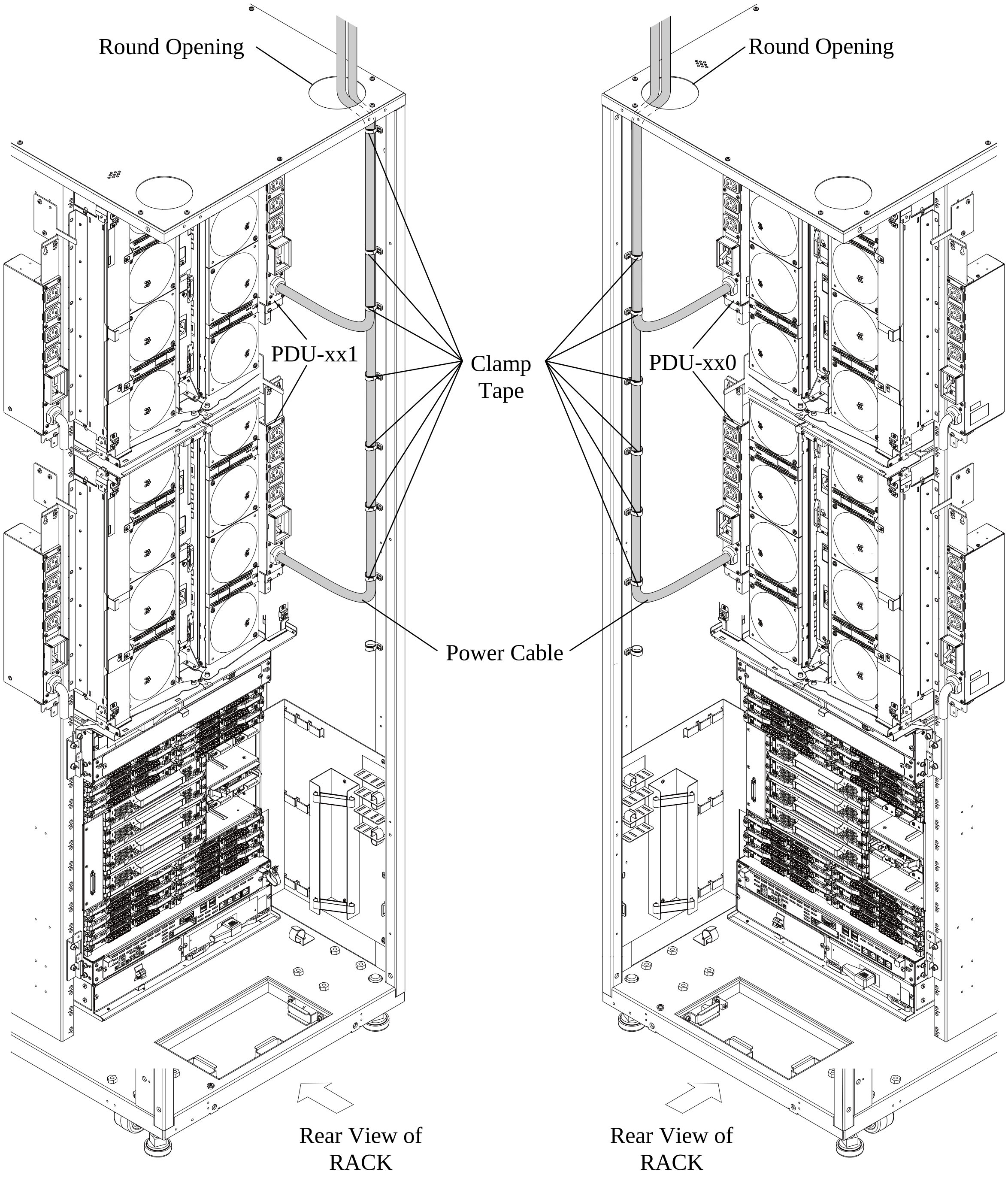


Fig. 3.34.1-2 Removal of Power Cable (Round Opening)

When wiring for the power cables from the window opening of the top cover

a. Disconnect the power cable from the power distribution panel.

b. Loosen the two screws of the top cover, and slide the window opening toward the front side.

c. Open the clamp tapes on the rear side of the rack, and remove the power cable.

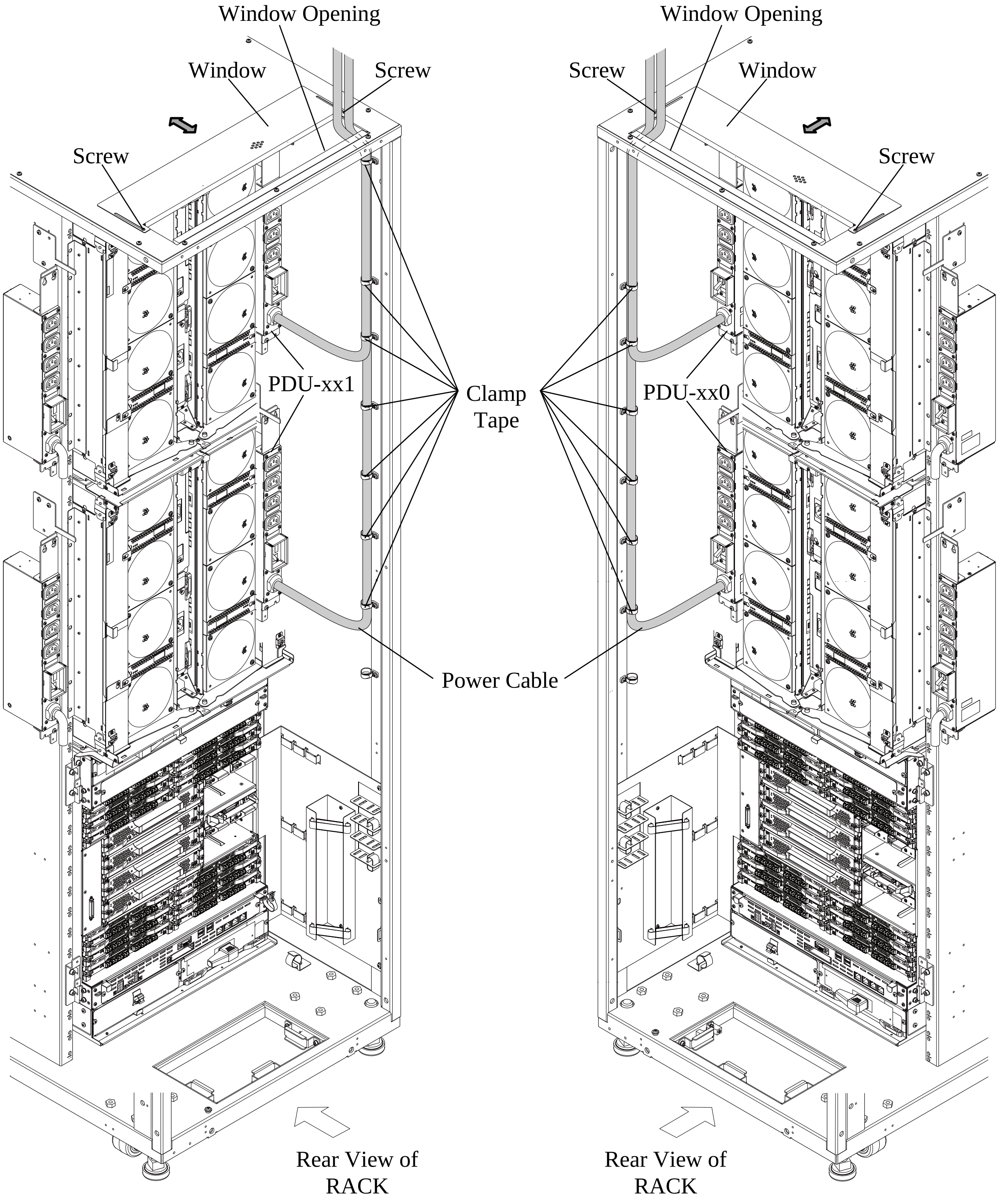


Fig. 3.34.1-3 Removal of Power Cable (Window Opening)

1-3. Replacement of PDU30

a. Open the stoppers and disconnect the cables.

b. Loosen the two screws and remove the failed PDU30.
Do not remove the screw when remove the failed PDU. There is a possibility that the failed PDU falls.

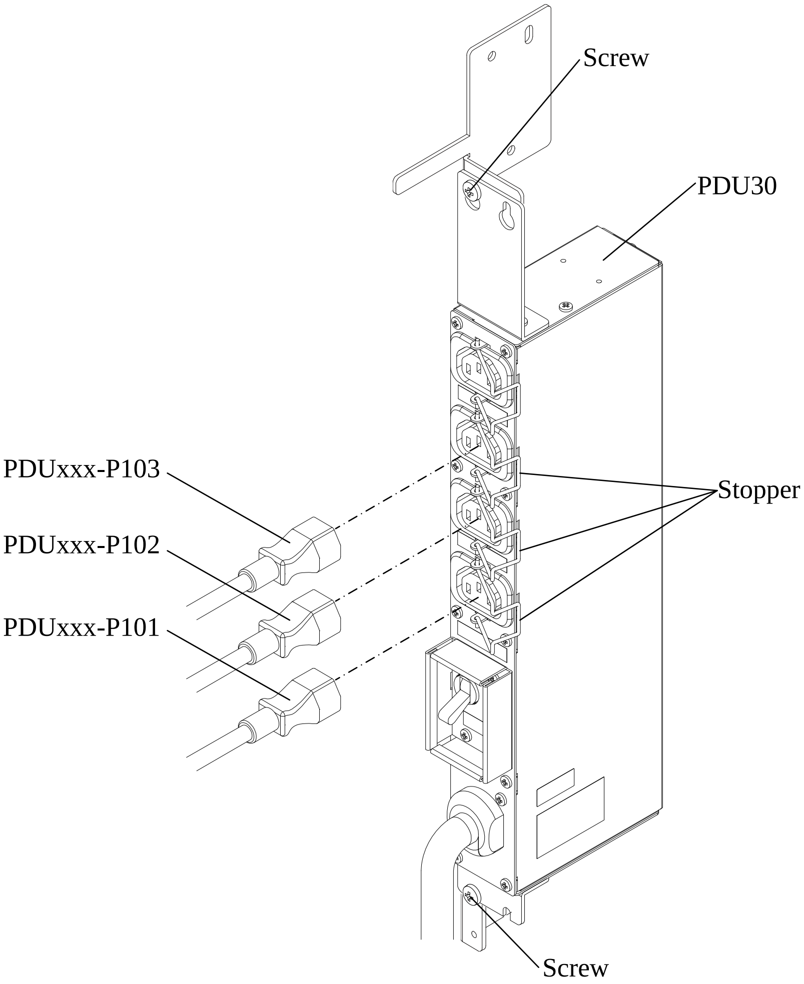


Fig. 3.34.1-4 Removal of PDU

c. Remove the four screws of the PDU30, and remove the two brackets.
d. Attach the two brackets to the spare PDU30, and fix them with the four screws.
e. Attach the spare PDU30 with the two screws. (Refer to Fig. 3.34.1-4.)
f. Connect the cables to the PDU30, and fix them with the stoppers.

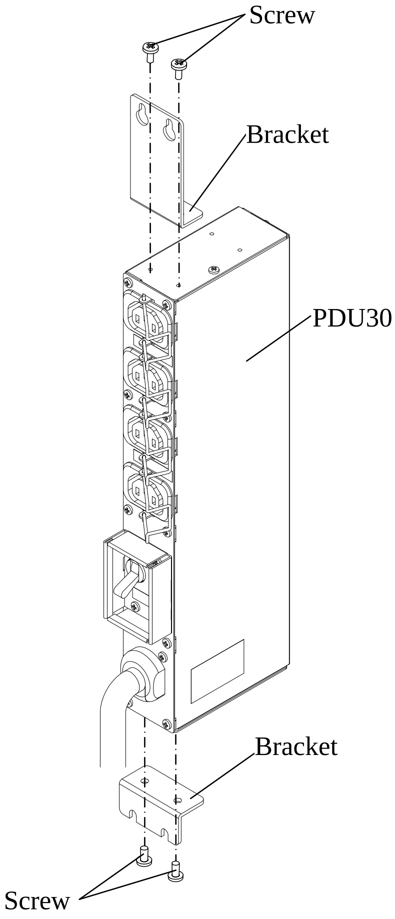


Fig. 3.34.1-5 Removal of Brackets

1-4. Attachment of Power Cable

When wiring for the power cables from the round opening of the top cover

a. Wire the power cable of the PDU30, and secure it with the clamp tapes. (Refer to Fig. 3.34.1-2.)
b. Connect the power cable to the power distribution panel.

When wiring for the power cables from the window opening of the top cover

a. Wire the power cable of the PDU30, and secure it with the clamp tapes. (Refer to Fig. 3.34.1-3.)
b. Slide the window to close the opening, and retighten it with the two screws.
c. Connect the power cable to the power distribution panel.

1-5. Power On the replacement component

a. Turn on the breaker on the power distribution panel that is connected to PDU.
b. Turn on the breaker on the PDU.

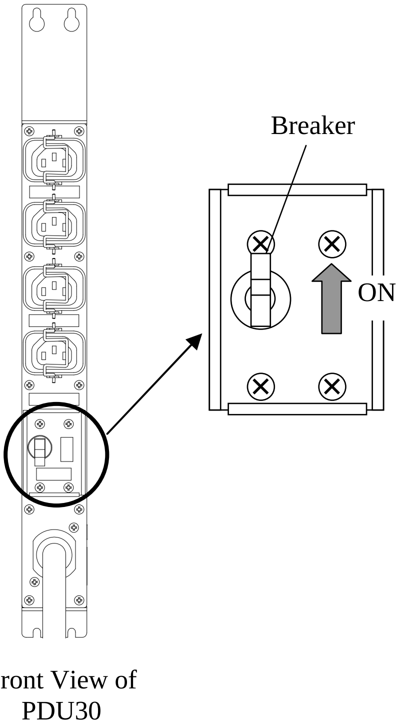


Fig. 3.34.1-6 Turn on the Breaker

1-6. Go to POST-PROCEDURE [REP04-01-10].

2 Replacement of PDU30 (Lateral installation)

⚠ WARNING

Hazardous voltage:
Contact could cause electric shock or burn. Turn off all related breakers and discharge residual voltage, as shown below. (Follow next procedures.)

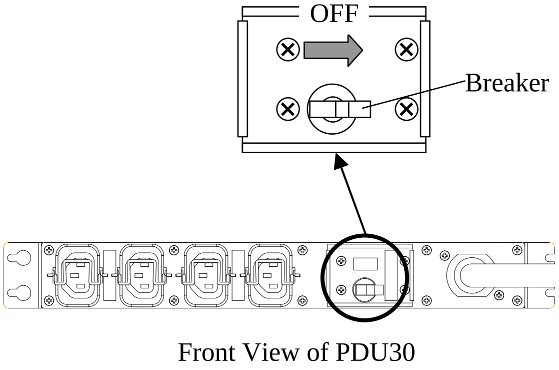
⚠ CAUTION

The device may be powered off when turning off the breakers not shown below.

2-1. Power Off the Component to be replaced

a. Turn off the breaker for the PDU to be replaced.

In case of PDU-x61/x71/x81



In case of PDU-x60/x70/x80

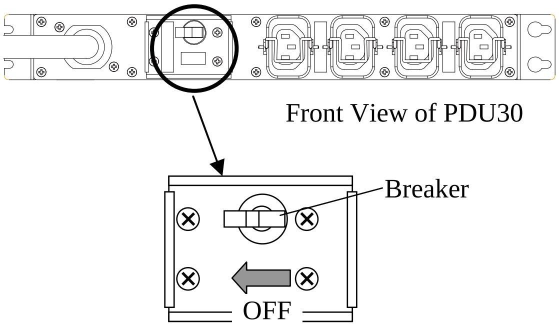


Fig. 3.34.2-1 Turn off the Breaker

b. Turn off the circuit breaker on the power distribution panel in the plant that is connected to the PDU to be replaced.

c. The circuit has residual voltage after turning off the breakers, so wait for one minute.

2-2. Removal of Power Cable

When wiring for the power cables from the round opening of the top cover

a. Disconnect the power cable from the power distribution panel.

b. Open the clamp tapes on the rear side of the rack, and remove the power cable. (Refer to Fig. 3.34.2-2 or Fig. 3.34.2-3.)

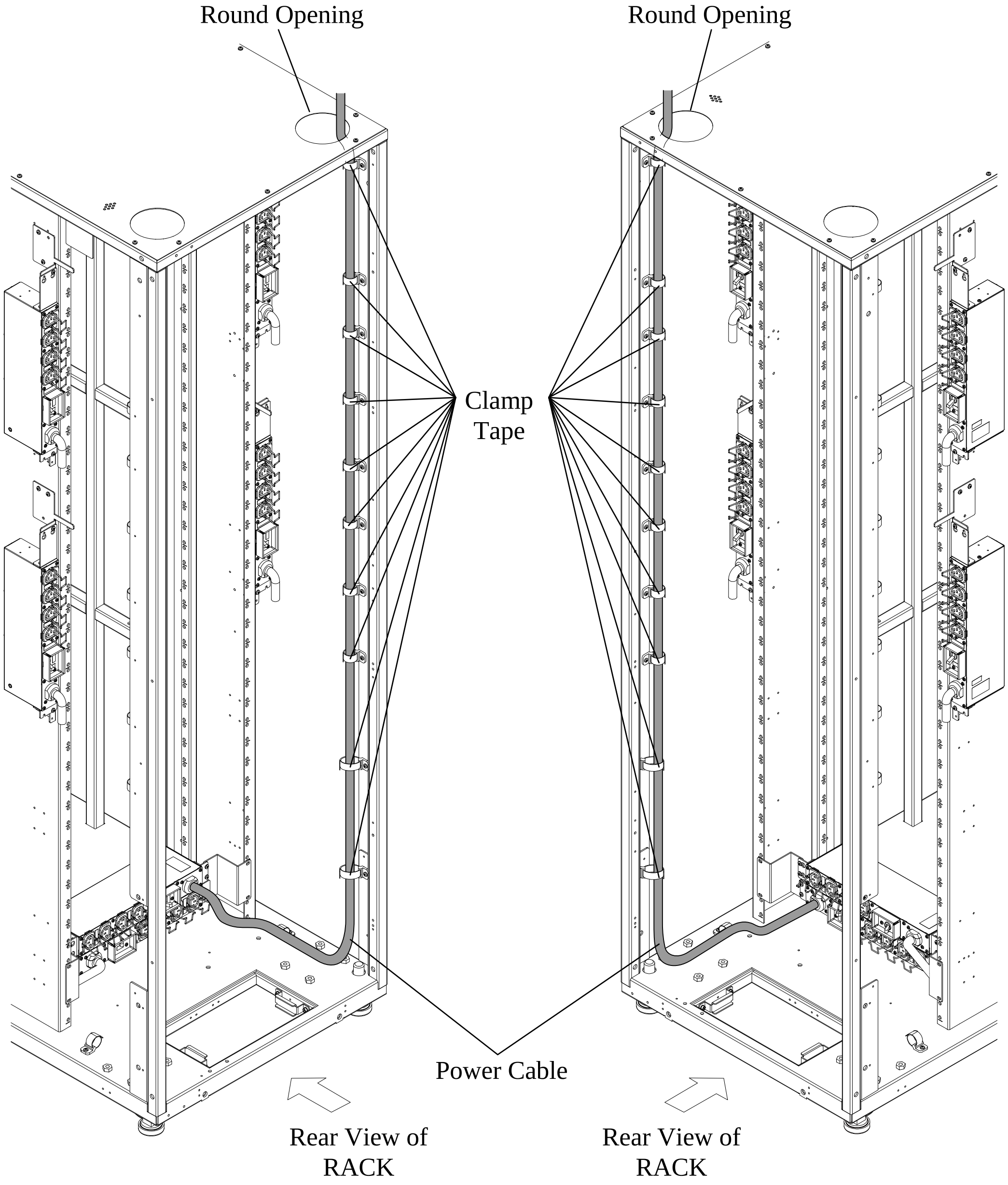


Fig. 3.34.2-2 Removal of Power Cable (When PDU30 installed in the Bottom of Rack)

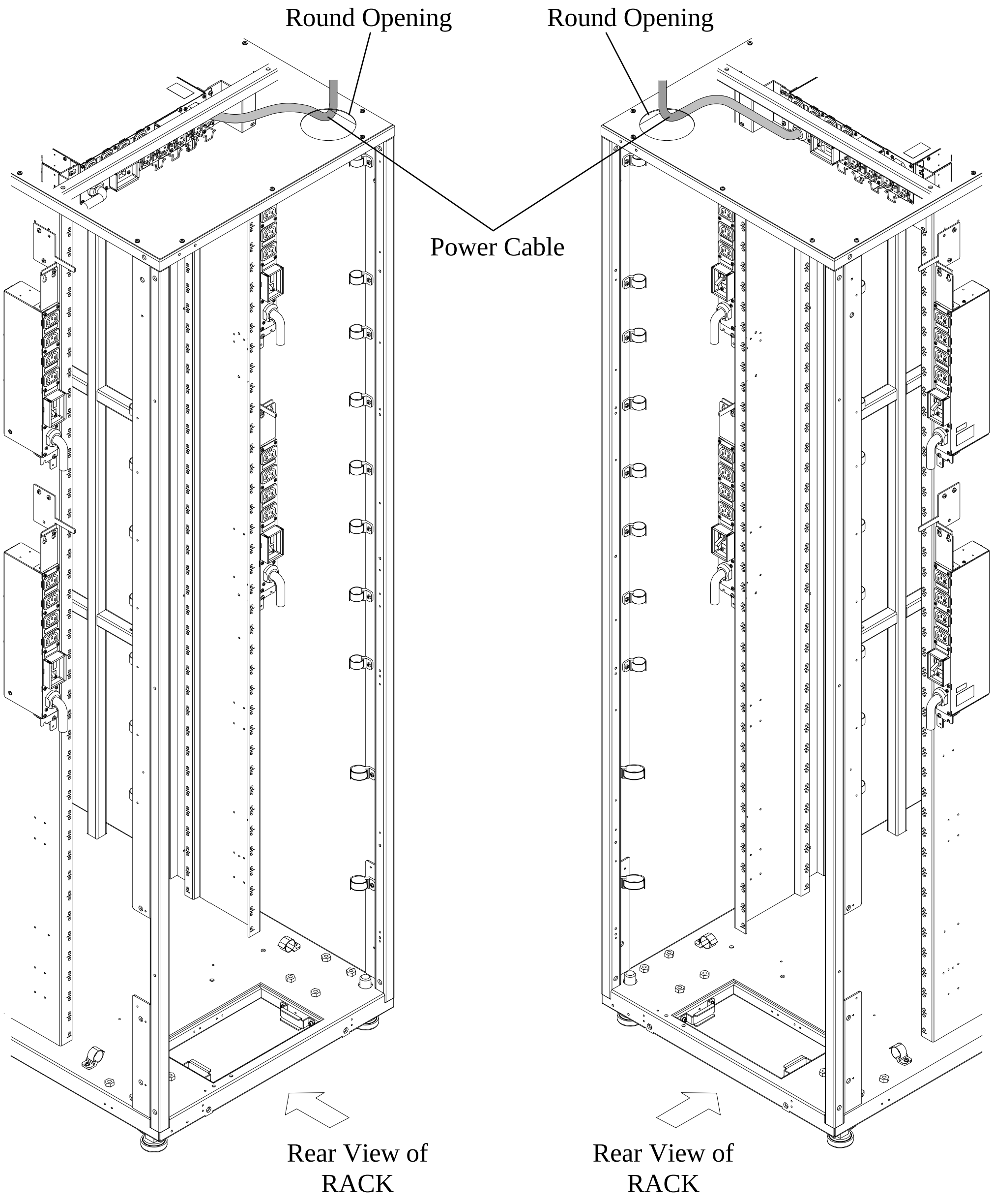


Fig. 3.34.2-3 Removal of Power Cable (When PDU30 Installed in the Top of Rack)

When wiring for the power cables from the window opening of the top cover

a. Disconnect the power cable from the power distribution panel.
b. Loosen the two screws of the top cover, and slide the window opening toward the front side. (Refer to Fig. 3.34.2-4 or Fig. 3.34.2-5.)
c. Open the clamp tapes on the rear side of the rack, and remove the power cable.

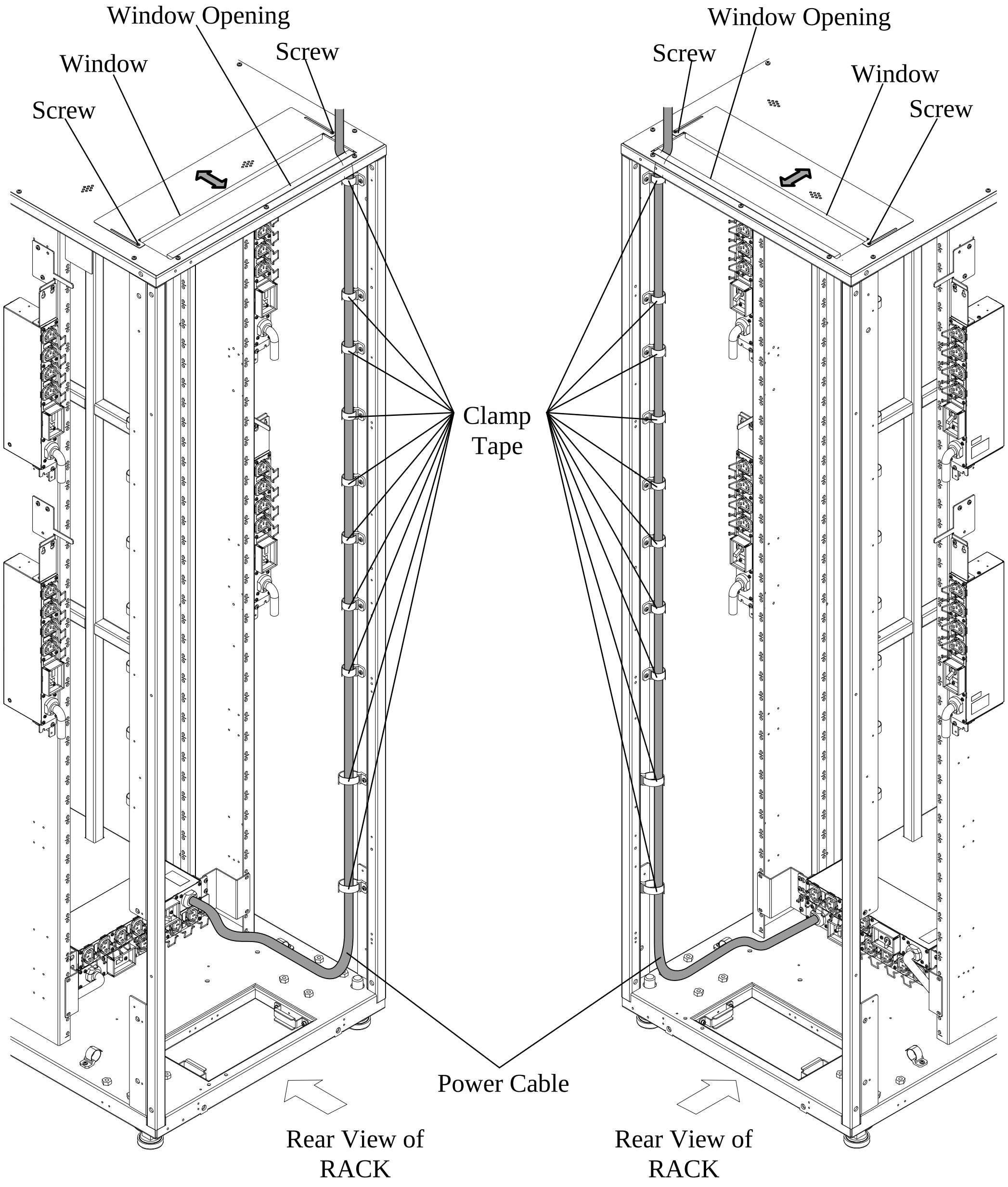


Fig. 3.34.2-4 Removal of Power Cable (When PDU30 Installed in the Bottom of Rack)

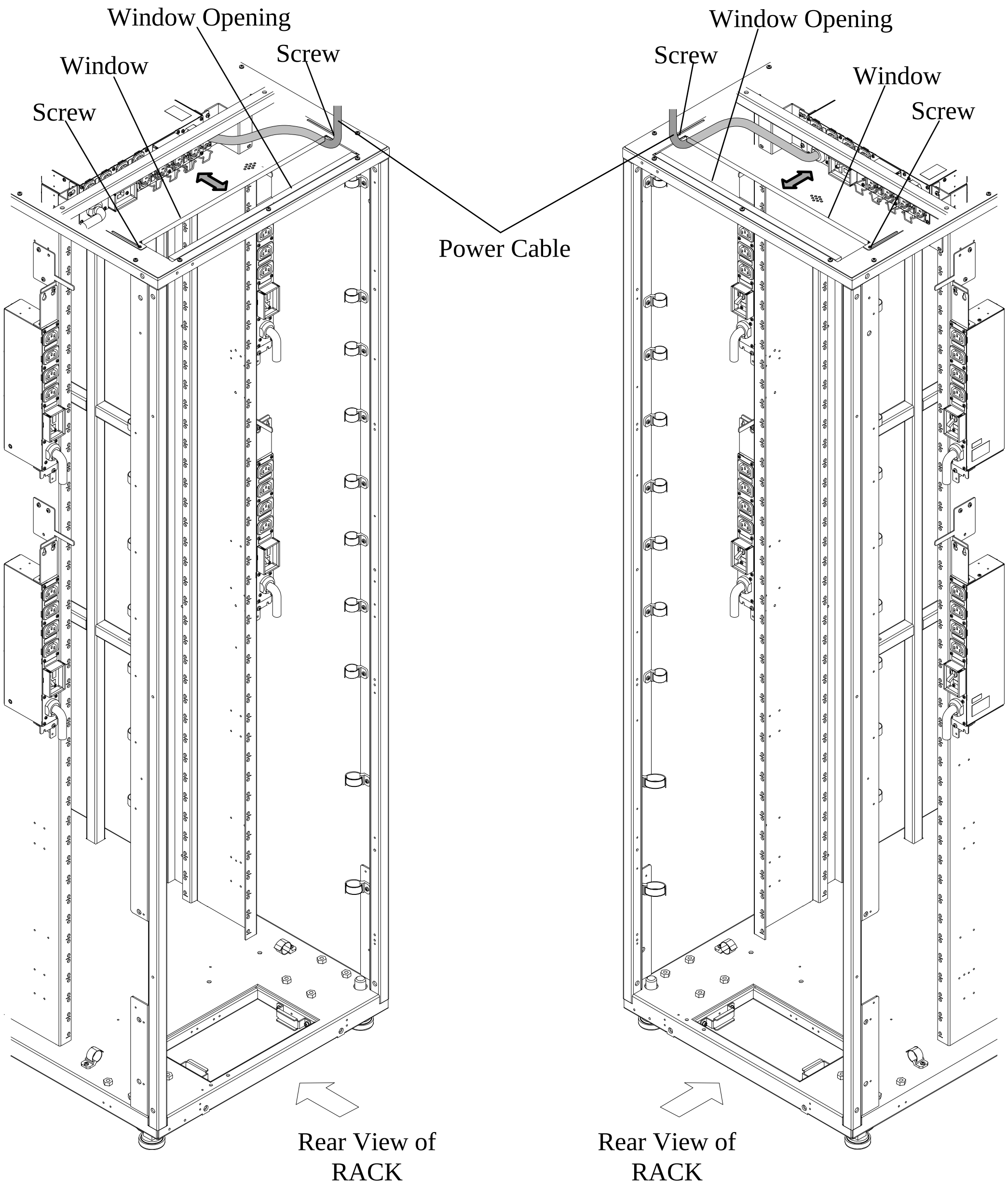


Fig. 3.34.2-5 Removal of Power Cable (When PDU30 Installed in the Top of Rack)

2-3. Replacement of PDU30

a. Open the stoppers and disconnect the power cables.

b. Loosen the four screws and remove the failed PDU30.
Do not remove the screw when remove the failed PDU. There is a possibility that the failed PDU falls.

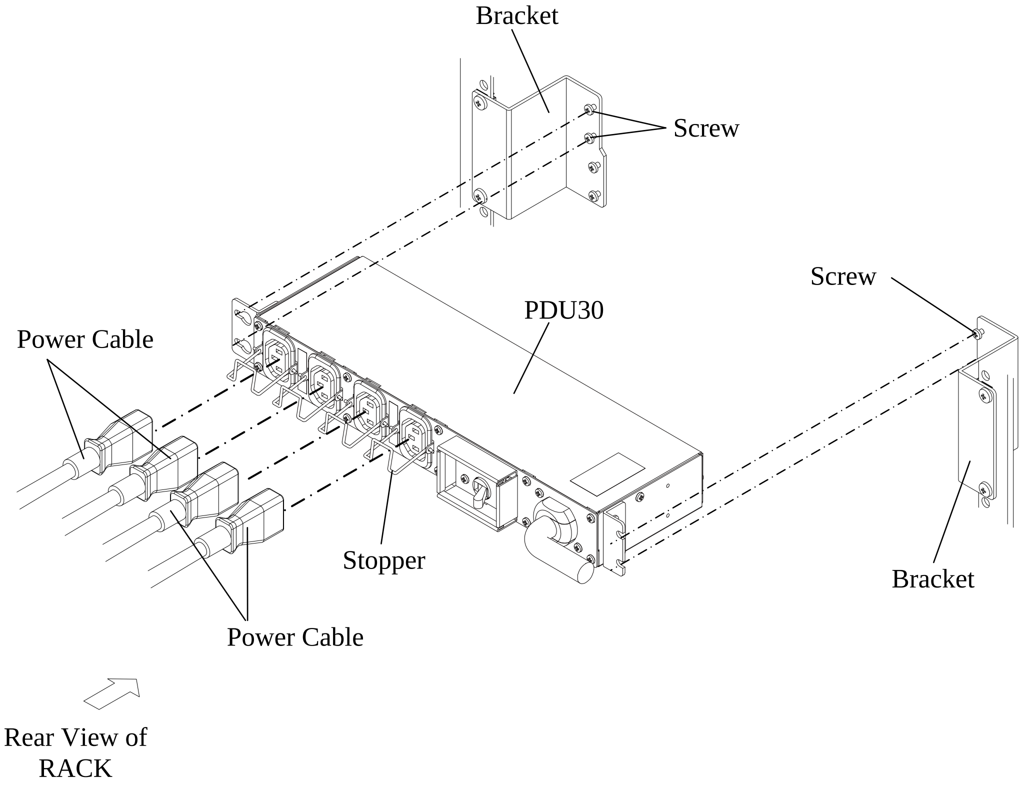


Fig. 3.34.2-6 Removal of PDU

c. Remove the four screws of the PDU30, and remove the two brackets.
d. Attach the two brackets to the spare PDU30, and fix them with the four screws.
e. Attach the spare PDU30 with the four screws. (Refer to Fig. 3.34.2-6.)
f. Connect the power cables to the PDU30, and fix them with the stoppers.

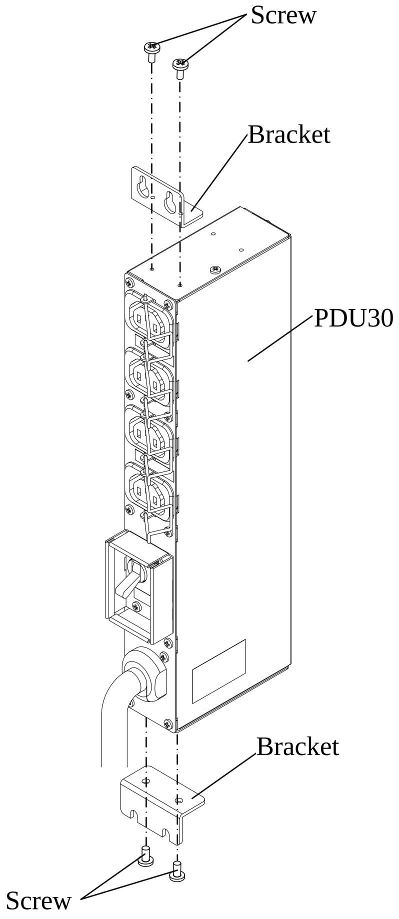


Fig. 3.34.2-7 Removal of Brackets

2-4. Attachment of Power Cable

When wiring for the power cables from the round opening of the top cover

a. Wire the power cable of the PDU30, and secure it with the clamp tapes. (Refer to Fig. 3.34.2-2 or Fig. 3.34.2-3.)
b. Connect the power cable to the power distribution panel.

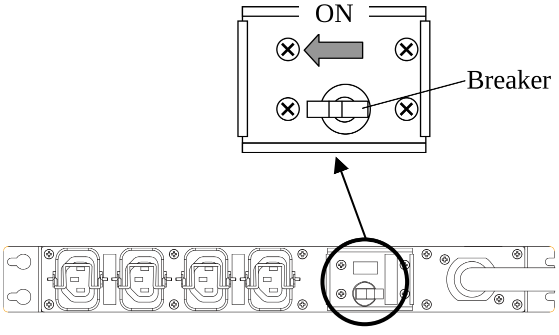
When wiring for the power cables from the window opening of the top cover

a. Wire the power cable of the PDU30, and secure it with the clamp tapes. (Refer to Fig. 3.34.2-4 or Fig. 3.34.2-5.)
b. Slide the window to close the opening, and retighten it with the two screws.
c. Connect the power cable to the power distribution panel.

2-5. Power On the replacement component

a. Turn on the breaker on the power distribution panel that is connected to PDU.
b. Turn on the breaker on the PDU.

In case of PDU-x61/x71/x81



In case of PDU-x60/x70/x80

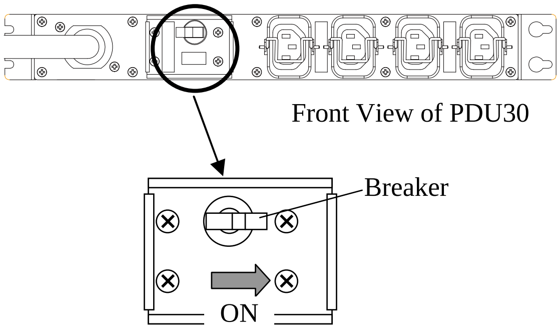


Fig. 3.34.2-8 Turn on the Breaker

2-6. Go to POST-PROCEDURE [REP04-01-10].

[FCoE CHA REPLACEMENT PROCESSING - RCH3]

— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select CHA (status check)
    ② Specify Replacement
    ③ Place PCB into blocked state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Specify recovery for CHA
    ② Path online (for CHA)

1. PRE-PROCESSING of SVP

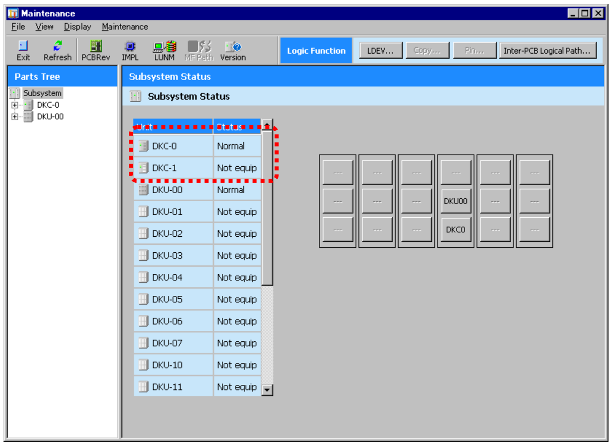
1-1. <Set path offline or switch of channel path>

⚠ CAUTION

For Mainframe, the path to be placed offline is that connected with the CHA concerned.
For Open host, the switch to the alternate channel path or host shutdown is that connected with the CHA concerned.
As for other channel path, switching to the alternate channel path or host shutdown is unnecessary.
However, the host must be shut down when the Pinned track in CHA connected port.

1-2. <Maintenance window>

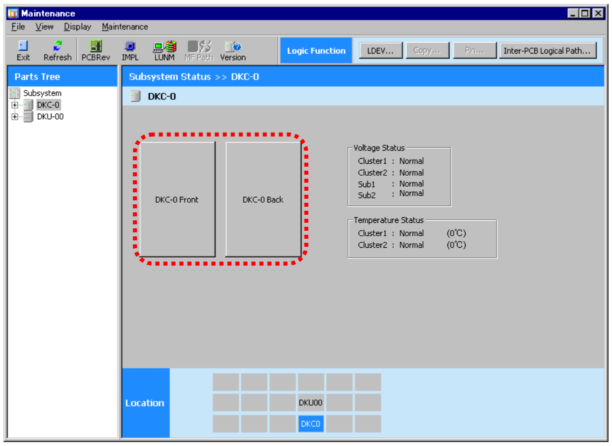
Select (CL) [DKC-n] in the ‘Maintenance’ window.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function
LDEV... Copy... Pin... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status
DKU00
DKC0

DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-3. <DKC window>

Select (CL) [DKC-n Back] in the ‘DKC’ window.

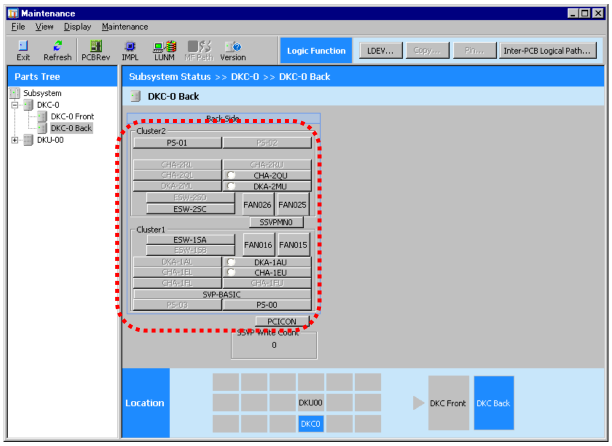

Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function
LDEV... Copy... Pin... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status >> DKC-0
DKC-0
DKC-0 Front
DKC-0 Back
Location
DKU00
DKC0

Voltage Status
Cluster1 : Normal
Cluster2 : Normal
Sub1 : Normal
Sub2 : Normal

Temperature Status
Cluster1 : Normal (0℃)
Cluster2 : Normal (0℃)

1-4. <Select CHA>

Select (CL) CHA.



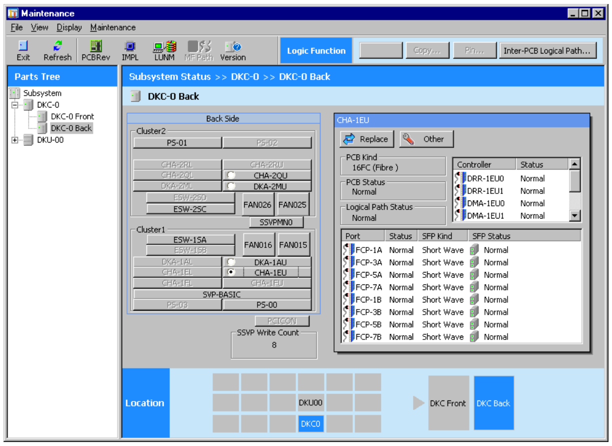
1-5. <Specify Replacement of CHA>

CAUTION

- When the path to the PCB to be replaced is online, ask the customer to place it offline. (For CHA replacement)
- For Open host, switch to the alternate channel path or shut down the host. However, the host must be shut down when the Pinned track in CHA connected port.
- When the screen requests an operator to input a password in order to prevent multiple maintenance, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

Make sure that the status is WARNING.
Select (CL) [Replace].



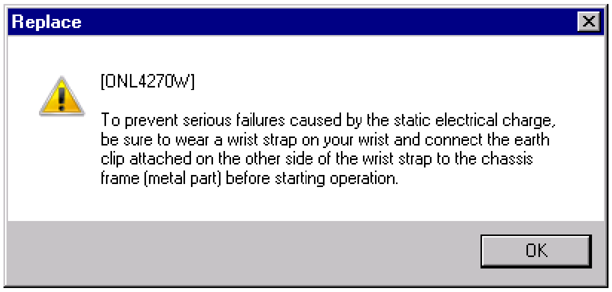
PCB Kind: 16FC (Fibre)
PCB Status: Normal
Logical Path Status: Normal

Controller	Status
DRR-1EU0	Normal
DRR-1EU1	Normal
DMA-1EU0	Normal
DMA-1EU1	Normal

Port	Status	SFP Kind	SFP Status
FCP-1A	Normal	Short Wave	Normal
FCP-3A	Normal	Short Wave	Normal
FCP-5A	Normal	Short Wave	Normal
FCP-7A	Normal	Short Wave	Normal
FCP-1B	Normal	Short Wave	Normal
FCP-3B	Normal	Short Wave	Normal
FCP-5B	Normal	Short Wave	Normal
FCP-7B	Normal	Short Wave	Normal

1-6. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

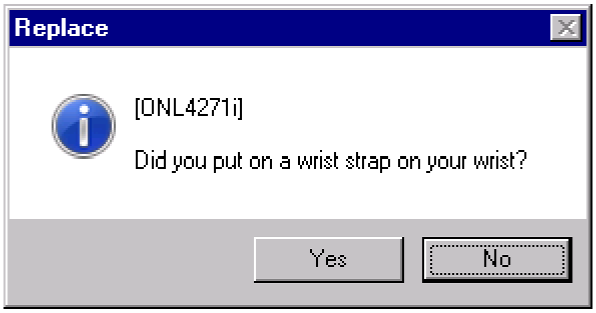


[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

(1) <Confirm wearing wrist strap>

In response to a message, “Did you put on a wrist strap on your wrist?”.
Select (CL) [Yes] when wrist strap is on your wrist.
Select (CL) [No] when there is no wrist strap on your wrist.
When [No] is selected (CL), go to Step (2).



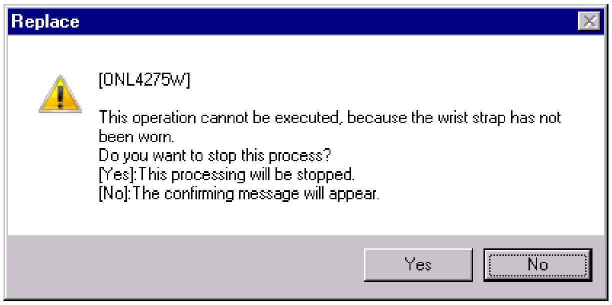
[ONL4271i]

Did you put on a wrist strap on your wrist?

(2)

In response to a message, “This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?
[Yes]: This processing will be stopped.
[No]: The confirming message will appear.”

When [Yes] is selected (CL), returned to Step 1-5.
When [No] is selected (CL), returned to Step 1-6.

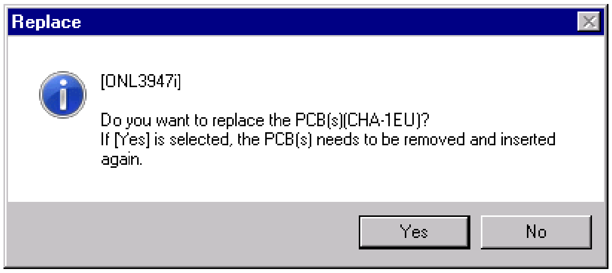


[ONL4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-7.<CHA replace>

Select (CL) [Yes] in response to:
“Do you want to replace the PCB(s)(CHA-nnn)? If [Yes] is selected, the PCB(s) needs to be removed and inserted again.”.



[ONL3947i]

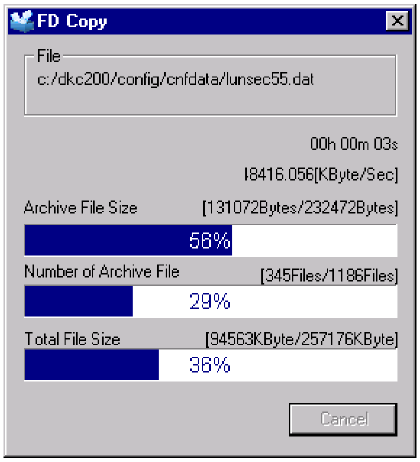
Do you want to replace the PCB(s)(CHA-1EU)?
If [Yes] is selected, the PCB(s) needs to be removed and inserted again.

(Eg. CHA)

1-8. <Compression of the error information>

The error information is compressed.

The dialog of FD Copy is displayed.



File
c:/dkc200/config/cnfdata/lunsec55.dat

00h 00m 03s

18416.056[KByte/Sec]

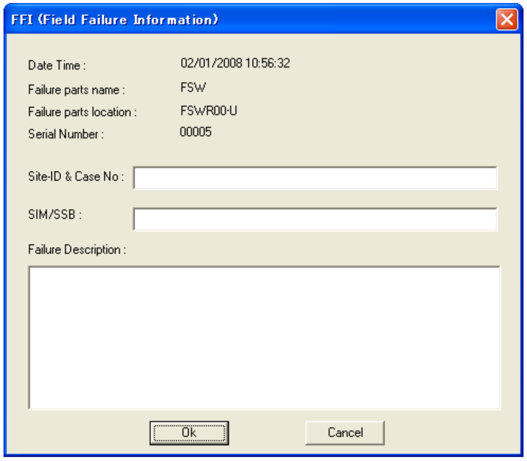
Archive File Size [131072Bytes/232472Bytes]
56%

Number of Archive File [345Files/1186Files]
29%

Total File Size [94563KByte/257176KByte]
36%

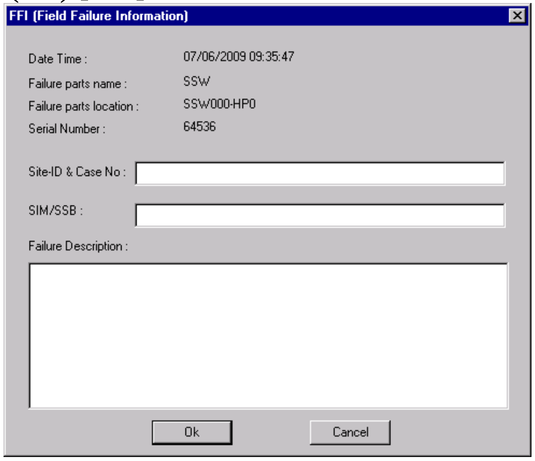
1-9. <Get the error information>

Input the Field Failure Information, and select (CL) [OK].


FFI (Field Failure Information)

Date Time : 02/01/2008 10:56:32
Failure parts name : FSW
Failure parts location : FSWR00-U
Serial Number : 00005

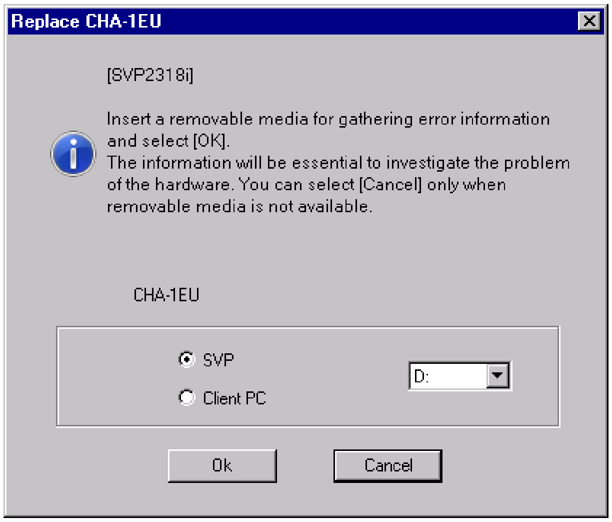
Site-ID & Case No :
SIM/SSB :
Failure Description :


FFI (Field Failure Information)

Date Time : 07/06/2009 09:35:47
Failure parts name : SSW
Failure parts location : SSW000-HP0
Serial Number : 64536

Site-ID & Case No :
SIM/SSB :
Failure Description :

"Insert a removable media for gathering error information and select [OK]. The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available." is displayed.
Trouble information is preserved in console PC connected with SVP.
Please select the Client PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu. The drive letter becomes the drive letter of console PC connected with SVP.


Replace CHA-1EU

[SVP2318i]

Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.

CHA-1EU

● SVP
○ Client PC

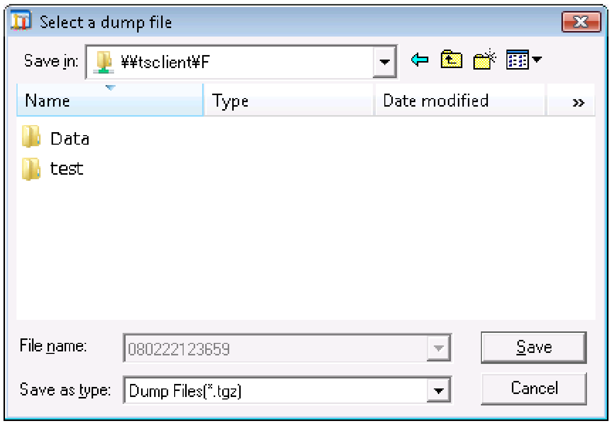
D:

A Primary copy is always placed on the SVP HD in the "c:\dkc200\others\pcbinfo\" directory with the following file name format "[factory_cd]_[Pcb_type]_[Pcb_SerialNo]_YYMMDDhhmmss.tgz".
(YY denotes Year, MM denotes Month, DD denotes Day, hh denotes Hour, mm denotes Minute, and ss denotes Second)

When Client PC is selected, the directory selection dialog is displayed.
Please select an arbitrary directory if necessary.

Console PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of console PC.

Select (CL) [Save] when saving a file in a specified directory.
It returns to the drive selection screen when [Cancel] is selected (CL).



Select a dump file

Save in: ¥¥tsclient¥F

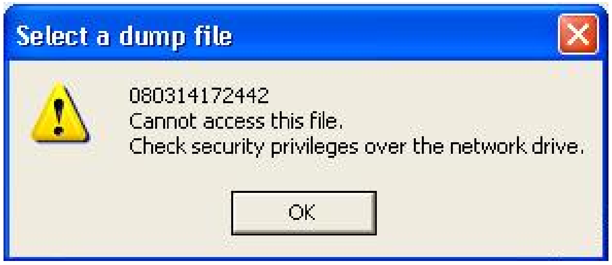
Name	Type	Date modified
Data		
test		

File name: 080222123659

Save as type: Dump Files(*.tgz)

- When the destination media is write-protected.

<For Windows XP>

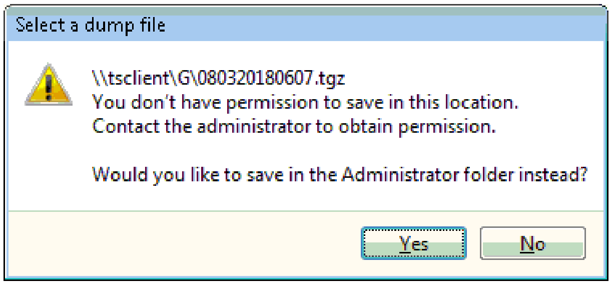


Select a dump file

080314172442
Cannot access this file.
Check security privileges over the network drive.

<For Windows Vista>

Selecting (CL) [Yes] displays the “C:\users\Administrator” folder of SVP.
Selecting (CL) [No] displays the folder selected with the Client PC.



Select a dump file

\\tsclient\G\080320180607.tgz
You don't have permission to save in this location.
Contact the administrator to obtain permission.

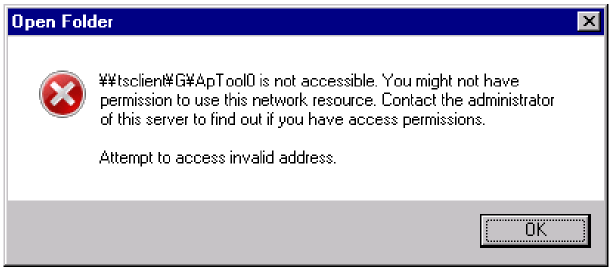
Would you like to save in the Administrator folder instead?

Please appoint another destination whether you remove write protect when you save it and carry it out.

- When dialog of the destination drive specified with the Client PC is open, the media is removed, and then select (CL) [Save].

- When the memory in the destination drive specified with the Client PC is corrupted. The dialog remains displayed after selecting (CL) [OK].

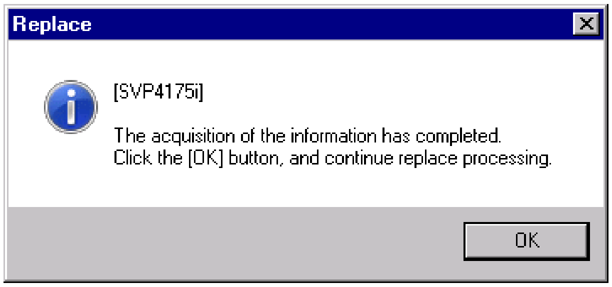
  At the time of the above operation completion, the information collection is not carried out.
  Please choose another directory again after having closed a system message whether you reconnect the drive that you removed when you save it and carry it out.



¥¥tsclient¥G¥ApTool0 is not accessible. You might not have permission to use this network resource. Contact the administrator of this server to find out if you have access permissions.

Attempt to access invalid address.

Select (CL) [OK] in response to “The acquisition of the information has completed. Click the [OK] button, and continue replace processing.”.

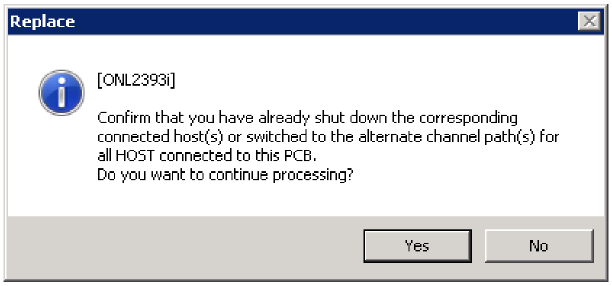


[SVP4175i]

The acquisition of the information has completed.
Click the [OK] button, and continue replace processing.

1-10. <Confirm Channel Path offline>
Select (CL) [Yes] in response to following message.

For Fiber CHA:
“Confirm that you have already shut down the corresponding connected host(s) or switched to the alternate channel path(s) for all HOST connected to this PCB. Do you want to continue processing?”.



[ONL2393i]

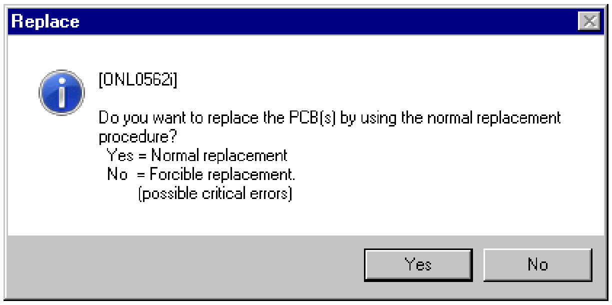
Confirm that you have already shut down the corresponding connected host(s) or switched to the alternate channel path(s) for all HOST connected to this PCB.
Do you want to continue processing?

1-11. <Caution message for system down>

CAUTION

Select (CL) [Yes] in response to the message below.

“Do you want to replace the PCB(s) by using the normal replacement procedure?
Yes = Normal replacement
No = Forcible replacement.
(Possible critical errors)”.



[ONL0562I]

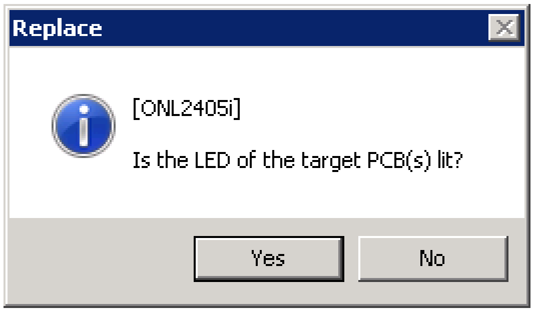
Do you want to replace the PCB(s) by using the normal replacement procedure?
Yes = Normal replacement
No = Forcible replacement.
(possible critical errors)

1-12. <CHA blocking>

"CHA-xxx is being blocked... Usually, several minutes (maximum 15 minutes)"
"CHA-xxx is lighting the LED..."

1-13. <Check shut down LED>

Select (CL)
* [Yes] if LED is on
* [No] if LED is off
in response to "Is the LED of the target PCB(s) lit?".

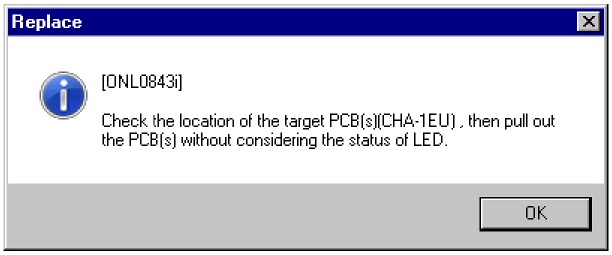


[ONL2405i]

Is the LED of the target PCB(s) lit?

If [No] is selected:
Select (CL) [OK] in response to "Check the location of the target PCB(s)(CHA-nnn), then pull out the PCB(s) without considering the status of LED.". (Refer to "2. HARDWARE REPLACEMENT PROCESSING")

Note: Select (CL) [OK] after pulling out the PCB.



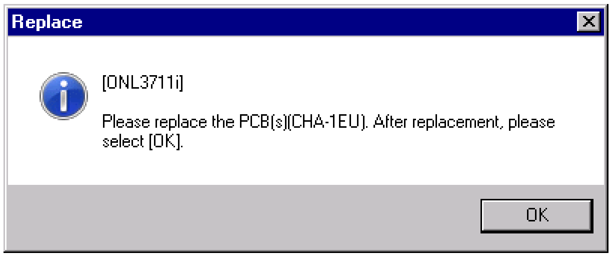
[ONL0843i]

Check the location of the target PCB(s)(CHA-1EU) , then pull out the PCB(s) without considering the status of LED.

Go to Step 1-14.

1-14. <Beginning of CHA replacement>

"Please replace the PCB(s)(CHA-nnn). After replacement, please select [OK]." is displayed.
Select (CL) [OK] after replacing the CHA.



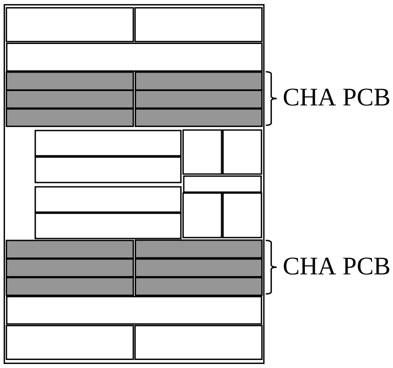
[ONL3711i]

Please replace the PCB(s)(CHA-1EU). After replacement, please select [OK].

Go to "2. HARDWARE REPLACEMENT PROCESSING".

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Rear View of DKC	1	CHA PCB for FCoE (10Gbps) (CHG 4P 10Gbps Assembly)	• WP713-A (8FOE)



Rear View of
DKC

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1. Remove the Channel Adapter PCB.

a. Check that the Shut Down LED is on. (only hot replace)

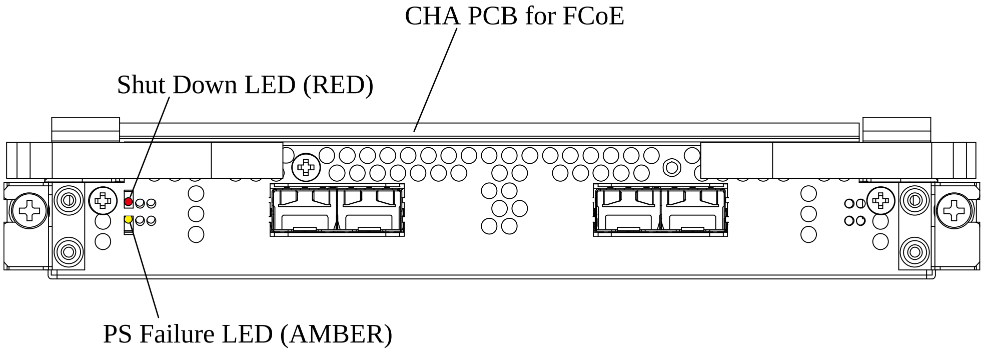
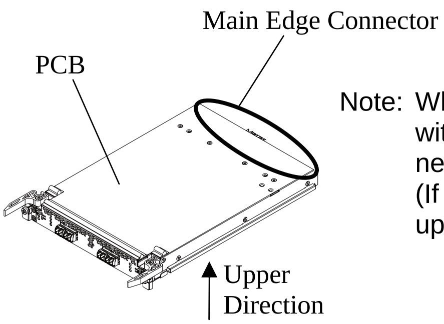


Fig. 3.35.2-1 Confirmation of Shut Down LED

b. Disconnect the optical fibre cables from the failed Channel Adapter PCB.

c. Remove the two screws and remove the failed PCB.



Note: When removing the PCB, hold the right and left of the PCB with both hands, and pull it out straight not to contact the neighboring PCB.
(If it thinks that it is hard to extract, raise and extract a little upwards.)

Note: After removing the PCB, install the spare PCB immediately.
If the PCB is kept removed for a long time, the wind doesn’t flow among installed PCBs, causing the PCBs’ temperature rise which may result in temperature warning or temperature alarm.

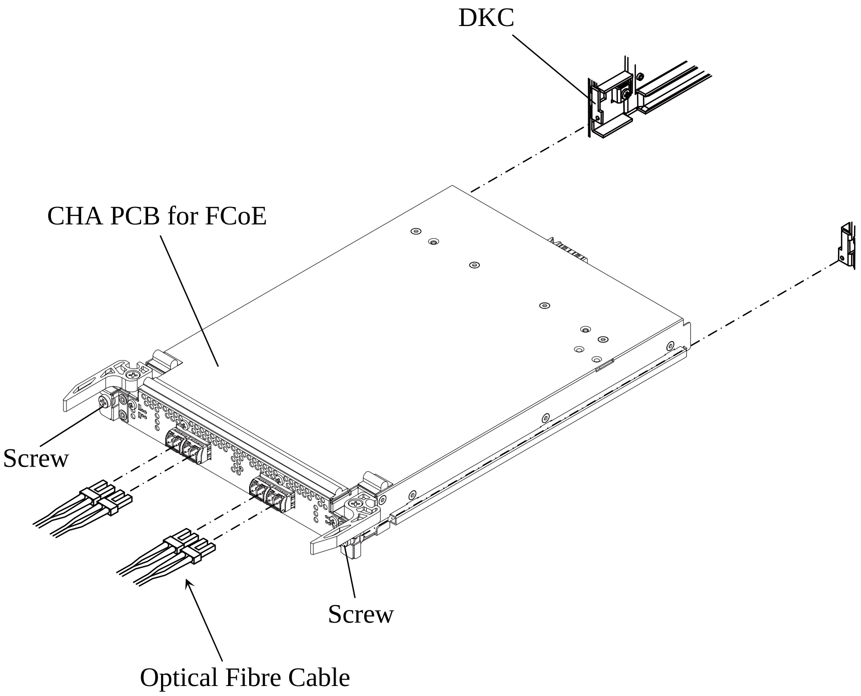
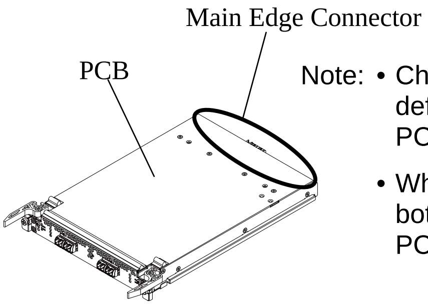


Fig. 3.35.2-2 Removal of PCB

2-2. Insert the spare PCB.

a. Insert the spare PCB to the correct location and tighten the screws.



Note:
- Check that the main edge connector of the PCB has no deformation, damage or sticking of dust before installing the PCB. (See INST03-01-70.)
- When installing the PCB, hold the right and left of the PCB with both hands, and insert it straight not to contact the neighboring PCB.

2-3. Cleaning the fibre cable connectors.

For the tools needed for the cleaning, refer to the tool list on page PARTS06-10.

a. Blow compressed gas against the connector using an air sprayer (for about five seconds).
b. Wipe the connector lightly with a piece of cut gauze wet with ethyl alcohol.
c. Blow compressed air again and check the result of the cleaning. (None of dust, sticking of foreign matter, and dirt must be observed.)

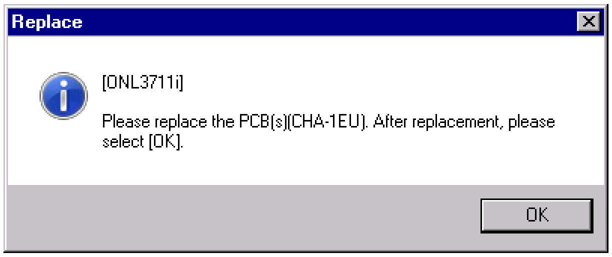
2-4. Connect the optical fibre cables to the spare PCB.

2-5. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Beginning of CHA Replacement>

Select (CL) [OK] in response to “Please replace the PCB(s)(CHA-nnn). After replacement, please select [OK].” after replacement.



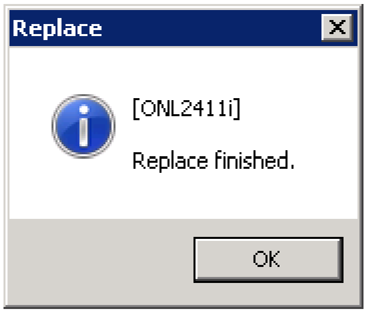
Replace

[ONL3711i]

Please replace the PCB(s)(CHA-1EU). After replacement, please select [OK].

3-2. <Check the end of CHA recovery>

Select (CL) [OK] in response to “Replace finished.”.



Replace

[ONL2411i]

Replace finished.

3-3. <Path on-line when CHA is replaced>

When a CHA is replaced, set the path (from the host) on the replaced CHA to ONLINE by your customer.

3-4.

Go to POST-PROCEDURE [REP04-01-10].

[SSD REPLACEMENT PROCESSING - RSS1]

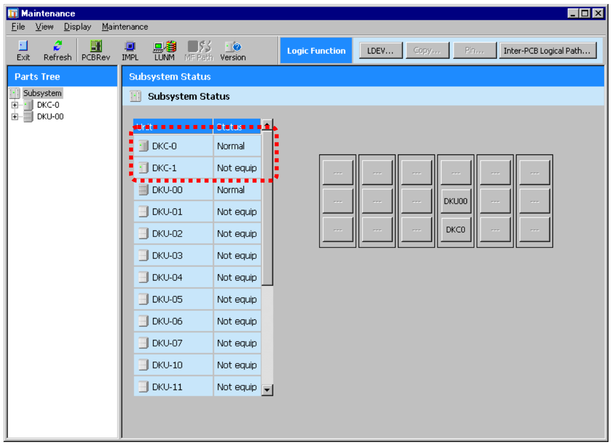
— OUTLINE —

1. PRE-PROCESSING of SVP
    - ① Select SSD (status check)
    - ② Specify Replacement
    - ③ Place PCB into blocked state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    - ① Execute CUDG on SSD
    - ② Specify recovery

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

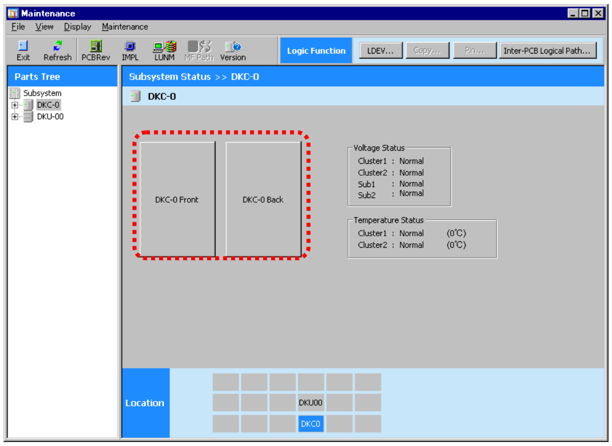
Select (CL) [DKC-n] in the 'Maintenance' window.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Prt... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status
Subsystem Status
DKU00
DKC0

DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <DKC window>

Select (CL) [DKC-n Front] in the 'DKC' window.

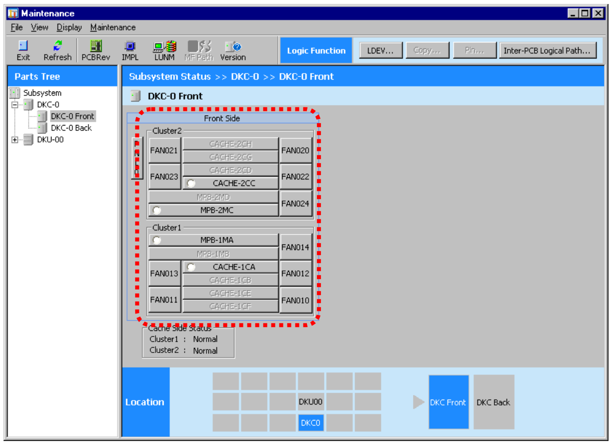

Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Prt... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status >> DKC-0
DKC-0
DKC-0 Front
DKC-0 Back
Location
DKU00
DKC0

Voltage Status
Cluster1 : Normal
Cluster2 : Normal
Sub1 : Normal
Sub2 : Normal

Temperature Status
Cluster1 : Normal (0℃)
Cluster2 : Normal (0℃)

1-3. <Select Cache>

Select (CL) Cache.



Cache Side Status
Cluster1 : Normal
Cluster2 : Normal

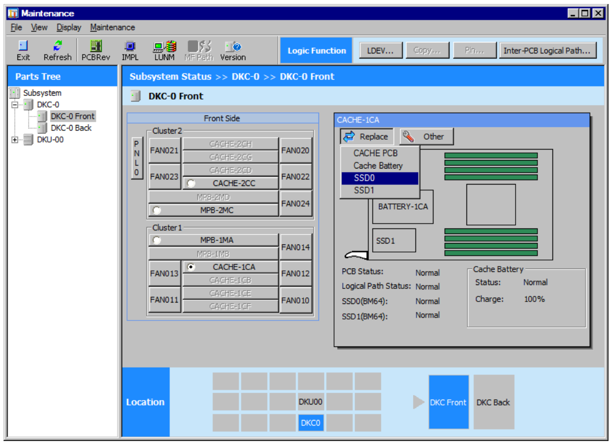
1-4. <Specify replacement of cache>

CAUTION

When the screen appears prompting the operator to input a password to prevent multiple maintenance or for executing a pin check, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

Select (CL) [Replace], and select (CL) [SSDx].

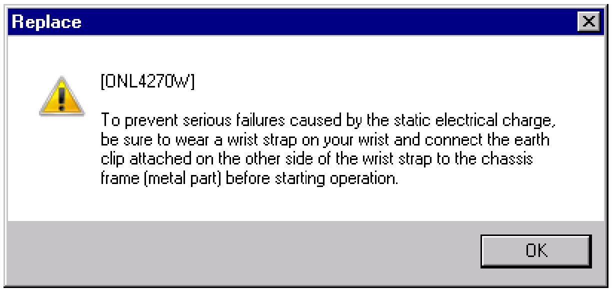


PCB Status: Normal
Logical Path Status: Normal
SSD0(BM64): Normal
SSD1(BM64): Normal

Cache Battery
Status: Normal
Charge: 100%

1-5. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.



[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

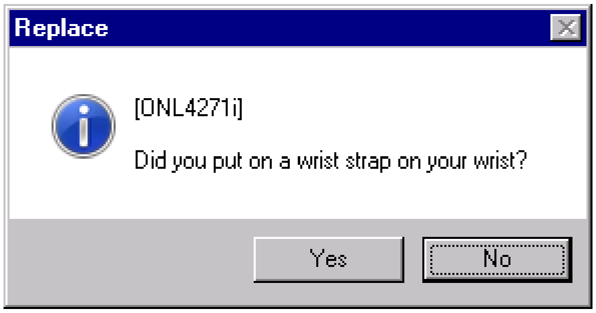
(1) <Confirm wearing wrist strap>

In response to a message, “Did you put on a wrist strap on your wrist?”.

Select (CL) [Yes] when wrist strap is on your wrist.

Select (CL) [No] when there is no wrist strap on your wrist.

When [No] is selected (CL), go to Step (2).



[ONL4271i]

Did you put on a wrist strap on your wrist?

---

(2)

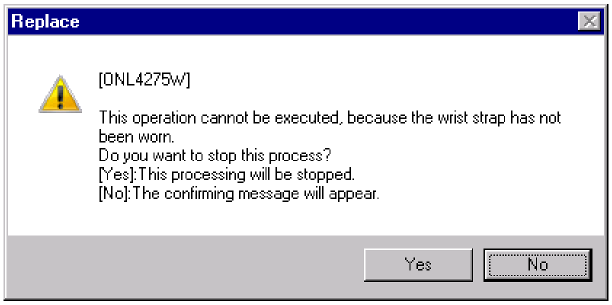
In response to a message, “This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?

[Yes]: This processing will be stopped.

[No]: The confirming message will appear.”

When [Yes] is selected (CL), returned to Step 1-4.

When [No] is selected (CL), returned to Step 1-5.

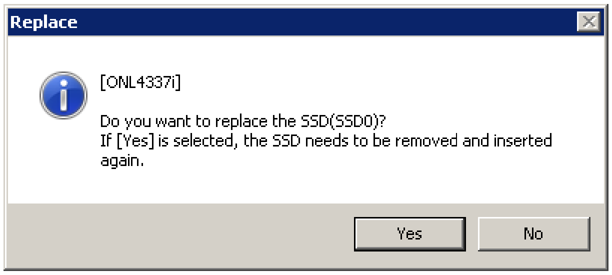


[ONL4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-6. <Check the beginning of cache replace>

Select (CL) [Yes] after making sure that the package to be replaced is correct in response to “Do you want to replace the SSD(SSDn)? If [Yes] is selected, the SSD needs to be removed and inserted again.”.

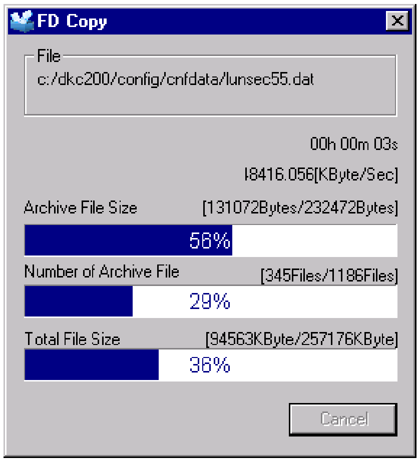


[ONL4337i]

Do you want to replace the SSD(SSD0)?
If [Yes] is selected, the SSD needs to be removed and inserted again.

1-7. <Compression of the error information>

The error information is compressed.
The dialog of FD Copy is displayed.



File
c:/dkc200/config/cnfdata/lunsec55.dat

00h 00m 03s
18416.056[KByte/Sec]

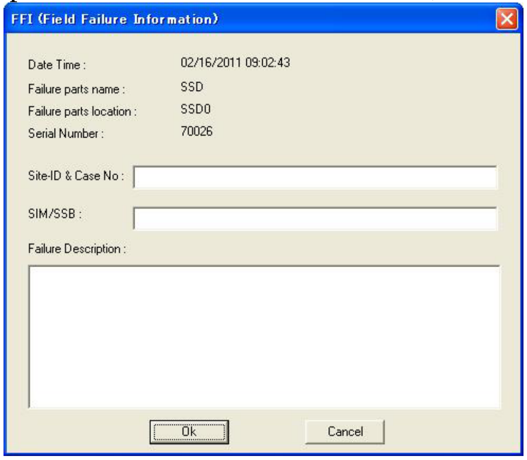
Archive File Size [131072Bytes/232472Bytes]
56%

Number of Archive File [345Files/1186Files]
29%

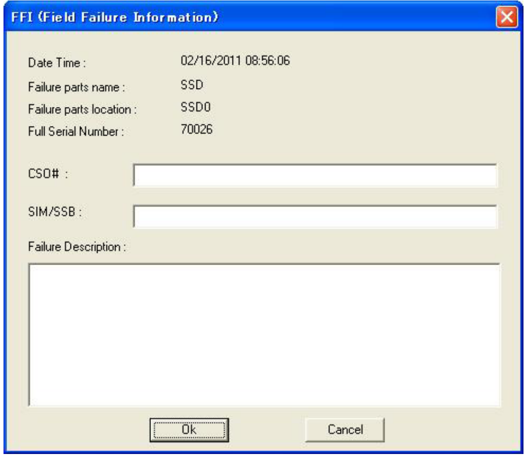
Total File Size [94563KByte/257176KByte]
36%

1-8. <Get the error information>

Input the Field Failure Information, and select (CL) [OK].

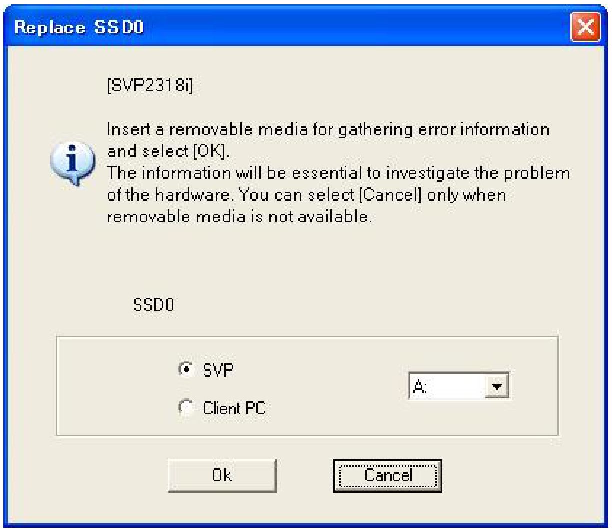


Date Time : 02/16/2011 09:02:43
Failure parts name : SSD
Failure parts location : SSD0
Serial Number : 70026
Site-ID & Case No :
SIM/SSB :
Failure Description :



Date Time : 02/16/2011 08:56:06
Failure parts name : SSD
Failure parts location : SSD0
Full Serial Number : 70026
CSO# :
SIM/SSB :
Failure Description :

“Insert a removable media for gathering error information and select [OK]. The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.” is displayed.
Trouble information is preserved in console PC connected with SVP.
Please select the Client PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu. The drive letter becomes the drive letter of console PC connected with SVP.



[SVP2318i]

Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.

SSD0

● SVP
○ Client PC

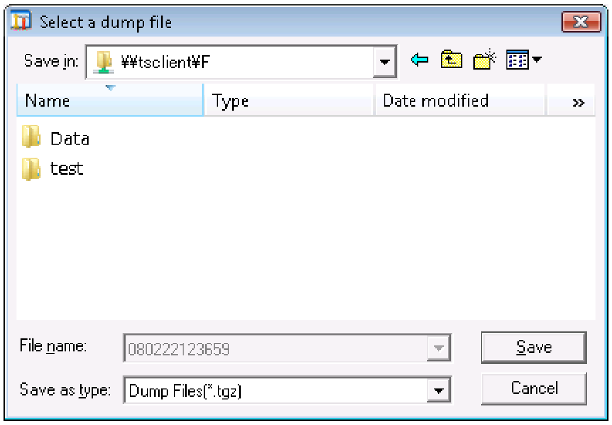
A:

A Primary copy is always placed on the SVP HD in the “c:\dkc200\others\pcbinfo\” directory with the following file name format “SHSSD_YYMMDDhhmmss.tgz”.
(YY denotes Year, MM denotes Month, DD denotes Day, hh denotes Hour, mm denotes Minute, and ss denotes Second

When Client PC is selected, the directory selection dialog is displayed.
Please select an arbitrary directory if necessary.

Console PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of console PC.

Select (CL) [Save] when saving a file in a specified directory.
It returns to the drive selection screen when [Cancel] is selected (CL).



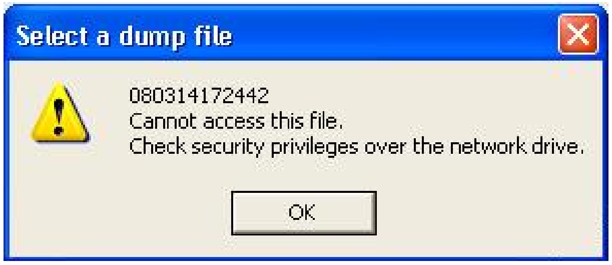
Save in: ¥¥tsclient¥F

File name: 080222123659

Save as type: Dump Files(*.tgz)

- When the destination media is write-protected.

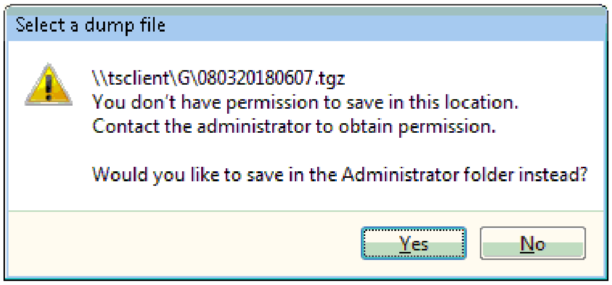
<For Windows XP>



080314172442
Cannot access this file.
Check security privileges over the network drive.

<For Windows Vista>

Selecting (CL) [Yes] displays the "C:\users\Administrator" folder of SVP.
Selecting (CL) [No] displays the folder selected with the Client PC.



\\tsclient\G\080320180607.tgz
You don't have permission to save in this location.
Contact the administrator to obtain permission.

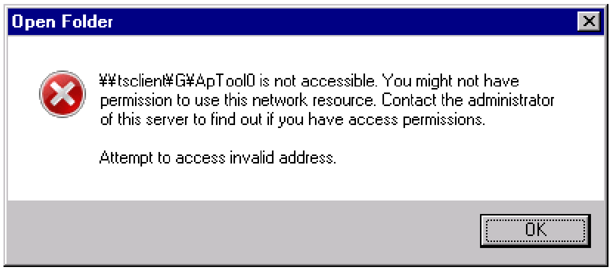
Would you like to save in the Administrator folder instead?

Please appoint another destination whether you remove write protect when you save it and carry it out.

- When dialog of the destination drive specified with the Client PC is open, the media is removed, and then select (CL) [Save].

- When the memory in the destination drive specified with the Client PC is corrupted.
  The dialog remains displayed after selecting (CL) [OK].

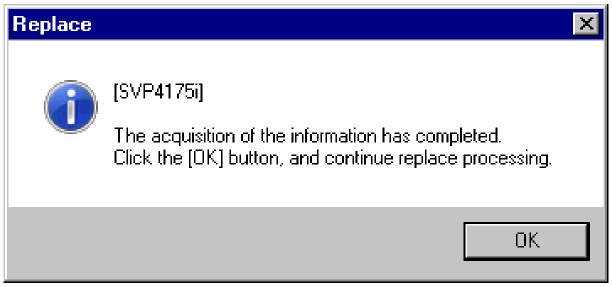
  At the time of the above operation completion, the information collection is not carried out.
  Please choose another directory again after having closed a system message whether you reconnect the drive that you removed when you save it and carry it out.



¥¥tsclient¥G¥ApTool0 is not accessible. You might not have permission to use this network resource. Contact the administrator of this server to find out if you have access permissions.

Attempt to access invalid address.

Select (CL) [OK] in response to "The acquisition of the information has completed. Click the [OK] button, and continue replace processing.".

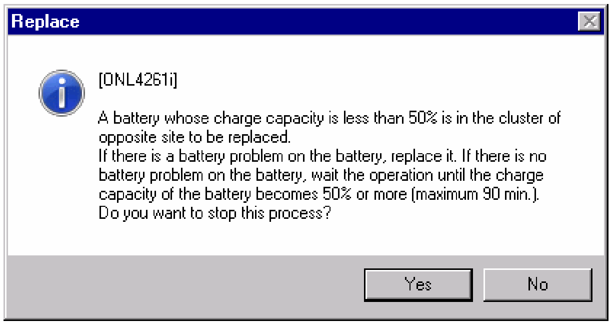


[SVP4175i]

The acquisition of the information has completed.
Click the [OK] button, and continue replace processing.

1-9. <Confirmation of amount of opposite cluster battery charge>

(1)



[ONL4261i]

A battery whose charge capacity is less than 50% is in the cluster of opposite site to be replaced.
If there is a battery problem on the battery, replace it. If there is no battery problem on the battery, wait the operation until the charge capacity of the battery becomes 50% or more (maximum 90 min.).
Do you want to stop this process?

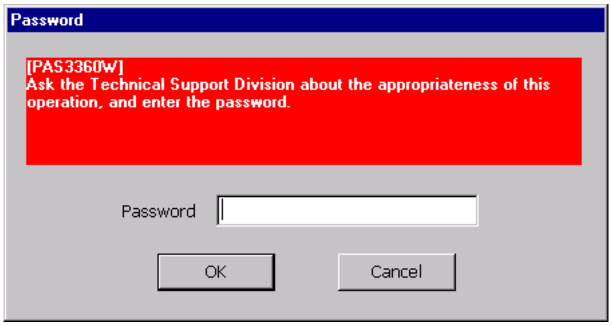
- When there is PCB whose amount of battery charge is less than 50% in the opposite cluster:
  “A battery whose charge capacity is less than 50% is in the cluster of opposite site to be replaced. If there is a battery problem on the battery, replace it. If there is no battery problem on the battery, wait the operation until the charge capacity of the battery becomes 50% or more (maximum 90 min.). Do you want to stop this process?”.

  When [Yes] is selected (CL), returned to Step 1-4.
  When [No] is selected (CL), go to Step (2)

- When there is no PCB whose amount of charge of the Cache battery is less than 50%: go to Step 1-10.

---

(2) <Input password>
Enter the password and select (CL) [OK].



[PAS3360W]
Ask the Technical Support Division about the appropriateness of this operation, and enter the password.

Notice: This is a special (exceptional) operation that can cause a serious failure such as a system down or a data loss if a wrong part to be removed is selected, and requires an input of a password. Ask the technical support division about the appropriateness of the operation, and input the password after getting an approval of executing the operation.

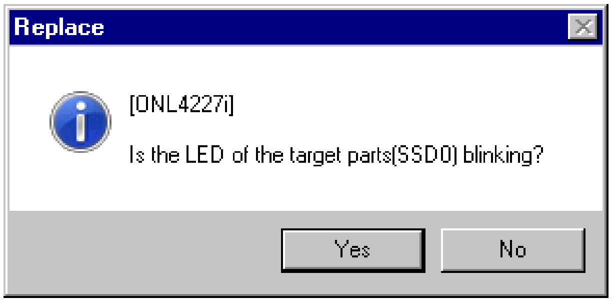
1-10. <SSD blocking>

“The SSD (SSDn) is being blocked.” is displayed.

1-11. <Check shut down LED>

(1)

Select (CL)
* [Yes] if LED is blinking
* [No] if LED is off
in response to “Is the LED of the target parts(SSDn) blinking?”.



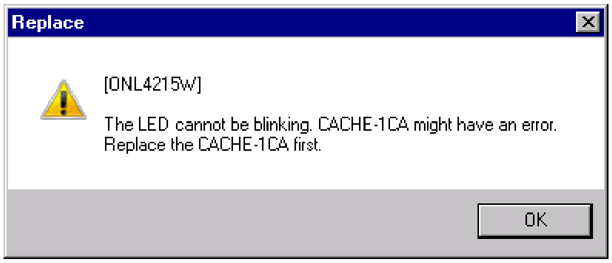
[ONL4227i]

Is the LED of the target parts(SSD0) blinking?

---

(2)

“The LED cannot be blinking. CACHE-nnn might have an error. Replace the CACHE-nnn first.” is displayed.
Select (CL) [OK] after replacing the PCB.
Returned to Step 1-4.

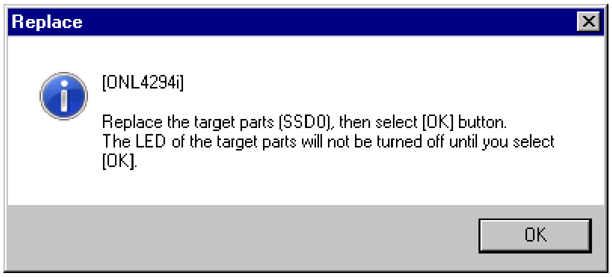


[ONL4215W]

The LED cannot be blinking. CACHE-1CA might have an error.
Replace the CACHE-1CA first.

1-12. <Cache Replacement>

“Replace the target parts (SSDn), then select [OK] button. The LED of the target parts will not be turned off until you select [OK].” is displayed.



[ONL4294i]

Replace the target parts (SSD0), then select [OK] button.
The LED of the target parts will not be turned off until you select [OK].

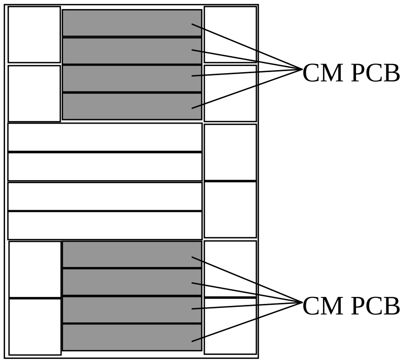
1-13. <Replace cache PCB>

Replace cache.

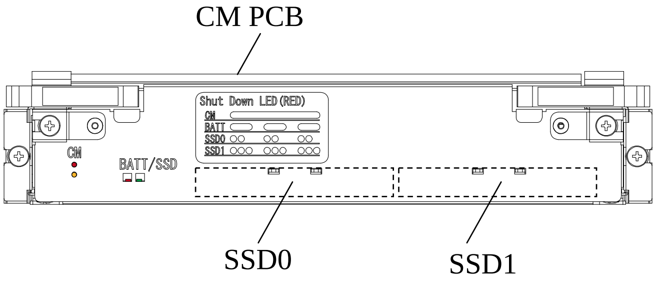
Go to “2. HARDWARE REPLACEMENT PROCESSING”.

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Front View of DKC	1	SSD (Cache SSD)	• 32GB SSD(BM64) • 64GB SSD(BM128)



Front View of DKC



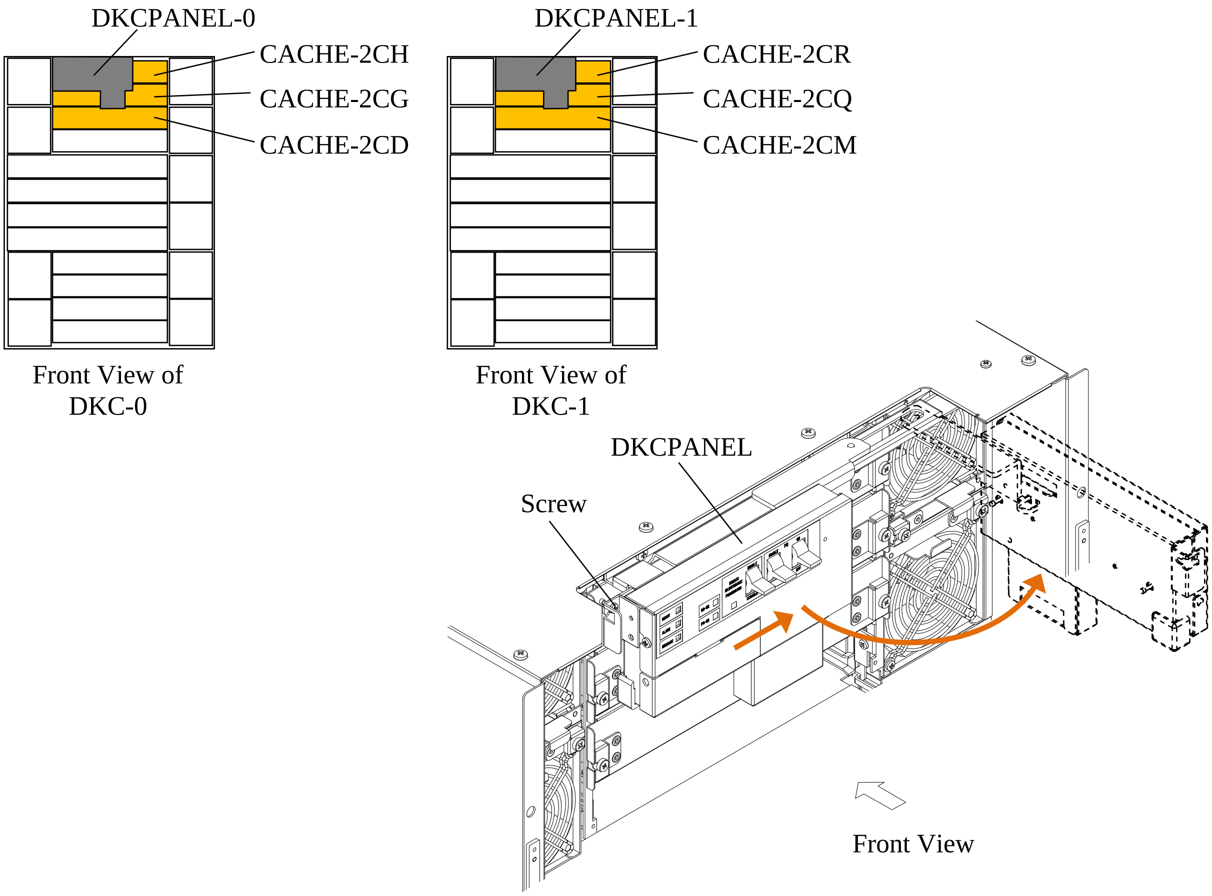
NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 SSD

2-1-1. Check that the Shut Down LED blinks.

a. Open the DKCPANEL when the target CM PCB locations are CACHE-2CD, 2CG, 2CH, 2CM, 2CQ or 2CR.
   For the CM PCB location other than the above, go to the procedure c.

b. Loosen the screw, slide the DKCPANEL to the far right, and open the DKCPANEL.



Front View of DKC-0

Front View of DKC-1

Fig. 3.36.2.1-1 Shifting of DKCPANEL

c. Check the Shut Down LED on the target CM PCB in the DKC to see that it blinks. (only hot replace)
When the SSD that intends to replace is the SSD0, the Shut Down LED blinks twice per two seconds. (ON: twice in about 0.6 seconds, OFF: about 1.4 seconds)
When the SSD that intends to replace is the SSD1, the Shut Down LED blinks three times per two seconds. (ON: three times in about one second. OFF: about one second)

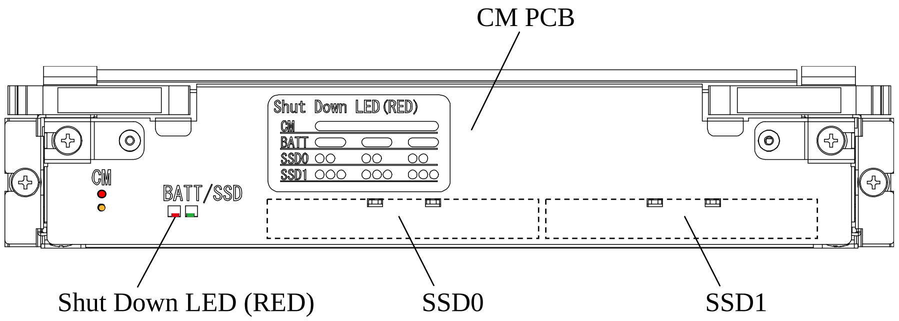


Fig. 3.36.2.1-2 Confirmation of Shut Down LED

2-1-2. Replace the SSD.

a. Loosen the two screws in the front side of the CM PCB, and remove the cover.

b. Remove the replaced SSD from the CM PCB after loosen the screw and put the stopper up.

c. Install the spare SSD in the CM PCB, and put the stopper down, and then secure it with the screw.

d. Install the cover that is removed in procedure a. to the front side of the CM PCB, and secure it with the two screws.

e. Replace the DKCPANEL and secure it with the screw if the DKCPANEL is opened. (Refer to Fig. 3.36.2.1-1.)

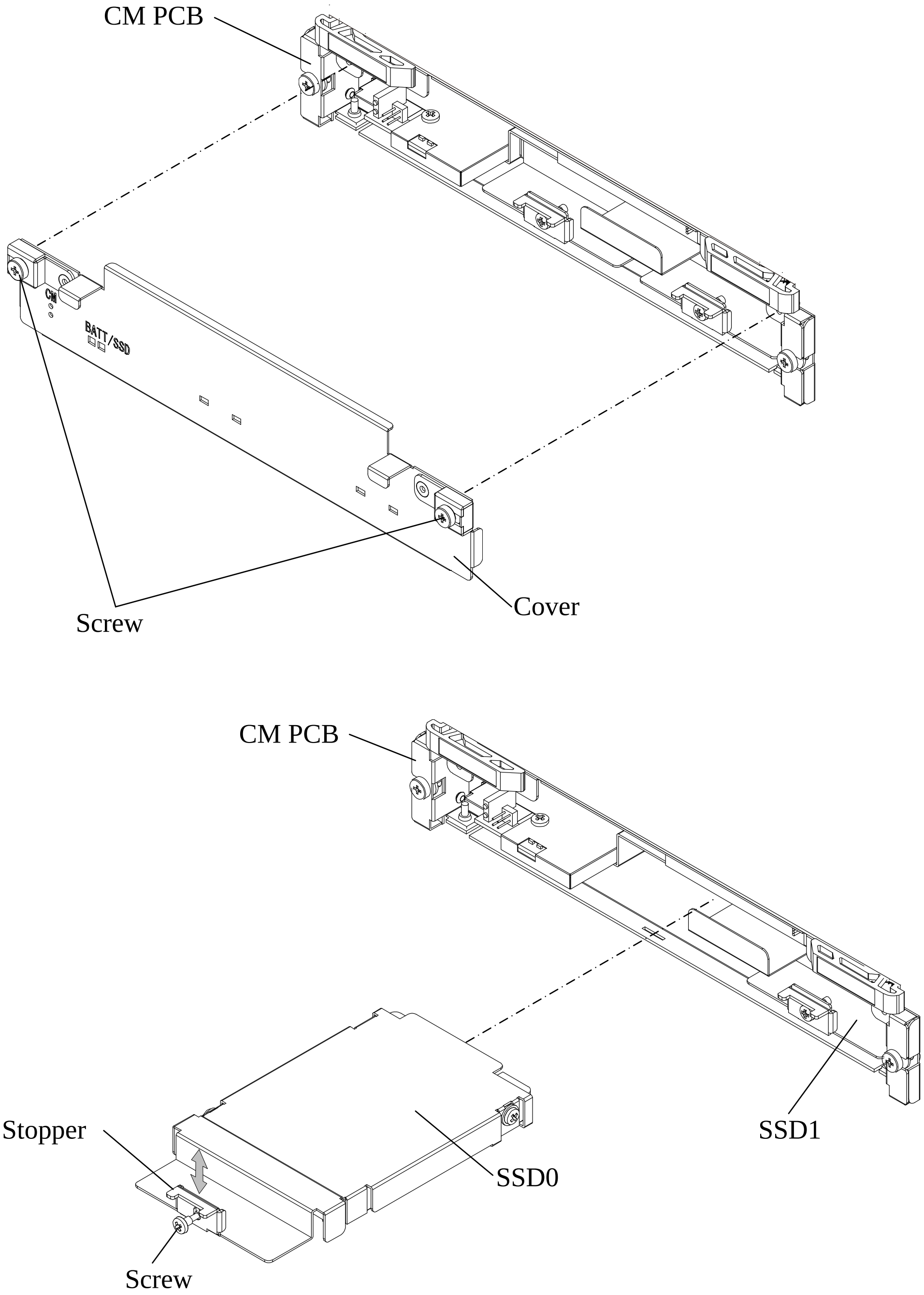


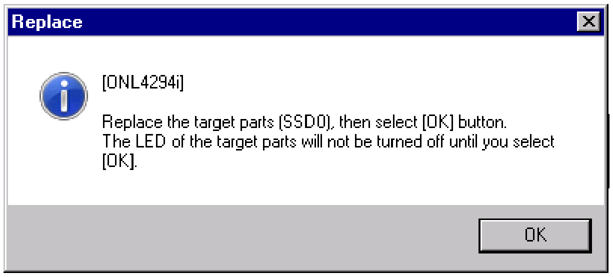
Fig. 3.36.2.1-3 Replacement of SSD

2-1-3. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Cache Replacement>

“Replace the target parts (SSDn), then select [OK] button. The LED of the target parts will not be turned off until you select [OK].” is displayed.
Select (CL) [OK] after replacing the PCB.



[ONL4294i]

Replace the target parts (SSD0), then select [OK] button.
The LED of the target parts will not be turned off until you select [OK].

3-2. <INLINE CUDG>

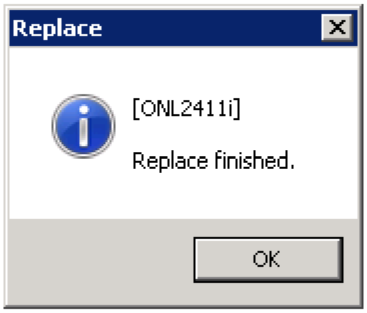
“INLINE CUDG is now running...” is displayed.

3-3. <Restore the SSD>

“Restoring the SSD...” is displayed.

3-4. <Check the end of Cache recovery>

Select (CL) [OK] in response to “Replace finished.”.



[ONL2411i]

Replace finished.

3-5.

Go to POST-PROCEDURE [REP04-01-10].

[FBX SSW REPLACEMENT PROCESSING - RUF1]

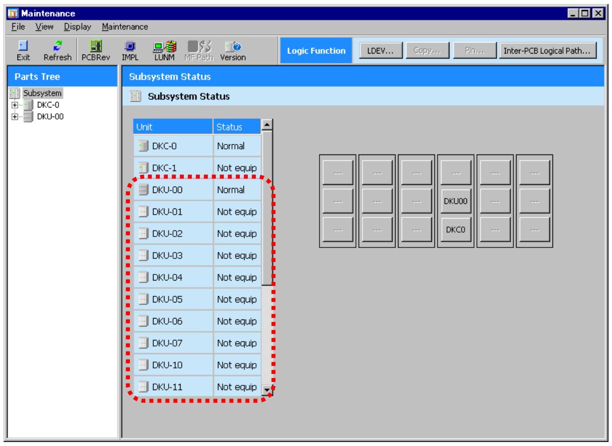
— OUTLINE —

1. PRE-PROCESSING of SVP
    - ① Select SSW
    - ② Specify Replacement
    - ③ Place SSW into unpluggable state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    - ① Specify recovery of DKA Port connected to SSW

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

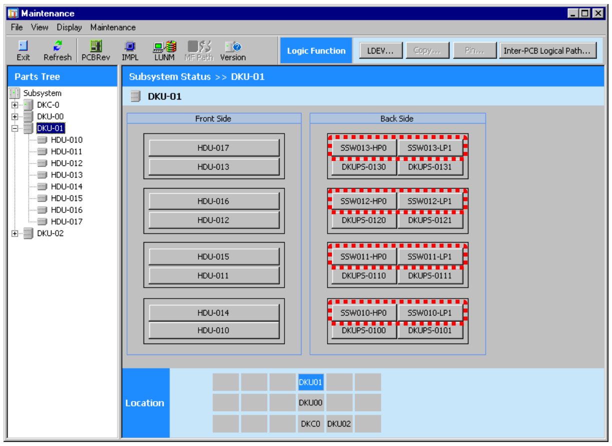
Select (CL) the DKU information [DKU-nn] of the DKU which installs the SSW to be replaced in the 'Maintenance' window.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Pr... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status
Subsystem Status
DKU00
DKC0

Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <Select SSW>

Check and select (CL) [SSWn-X] to be replaced.



1-3. <Specify replacement>

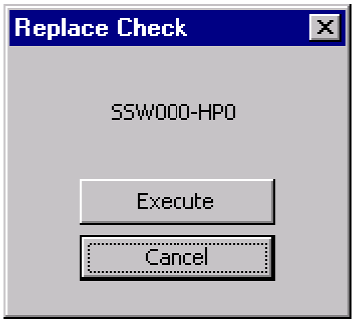
CAUTION

When the screen requests an operator to input a password in order to prevent multiple maintenance, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

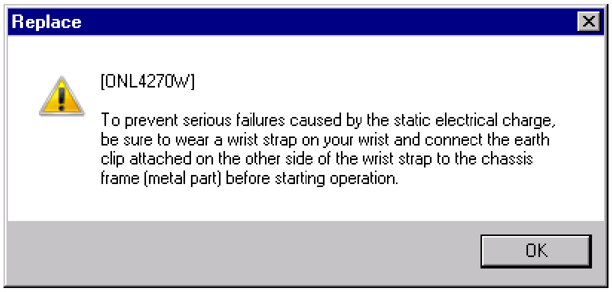
Select (CL) [Execute].

Selecting (CL) [Cancel] returns you to Step 1-2.



1-4. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.



[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

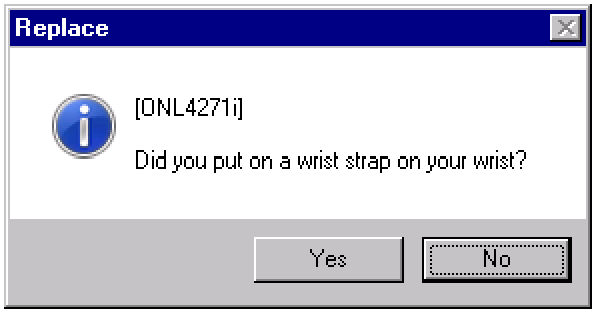
(1) <Confirm wearing wrist strap>

In response to a message, “Did you put on a wrist strap on your wrist?”.

Select (CL) [Yes] when wrist strap is on your wrist.

Select (CL) [No] when there is no wrist strap on your wrist.

When [No] is selected (CL), go to Step (2).



[ONL4271i]

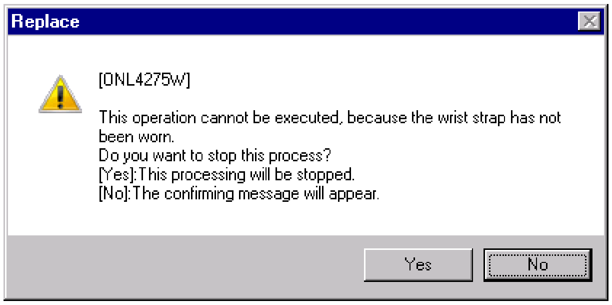
Did you put on a wrist strap on your wrist?

(2)

In response to a message, “This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?

[Yes]: This processing will be stopped.

[No]: The confirming message will appear.”



[ONL4275W]

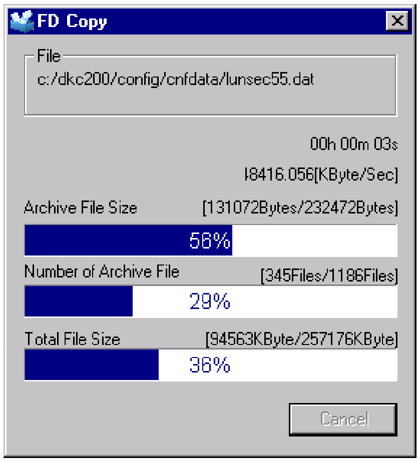
This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

When [Yes] is selected (CL), returned to Step 1-2.

When [No] is selected (CL), returned to Step 1-4.

1-5. <Compression of the error information>

The error information is compressed.
The dialog of FD Copy is displayed.



File
c:/dkc200/config/cnfdata/lunsec55.dat

00h 00m 03s
18416.056[KByte/Sec]

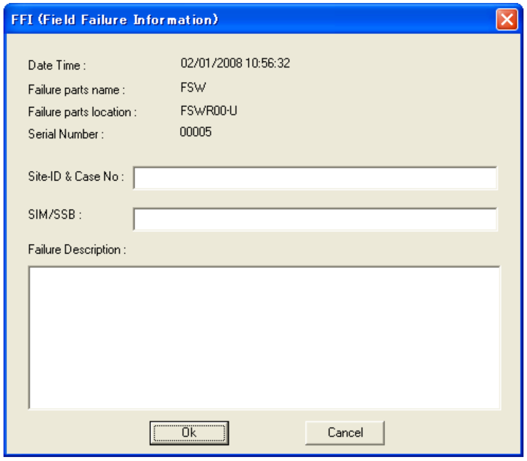
Archive File Size [131072Bytes/232472Bytes]
56%

Number of Archive File [345Files/1186Files]
29%

Total File Size [94563KByte/257176KByte]
36%

1-6. <Get the error information>

Input the Field Failure Information, and select (CL) [OK].

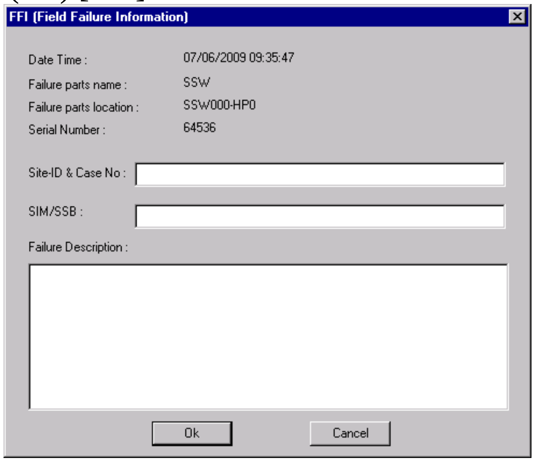


Date Time : 02/01/2008 10:56:32
Failure parts name : FSW
Failure parts location : FSWR00-U
Serial Number : 00005

Site-ID & Case No :

SIM/SSB :

Failure Description :



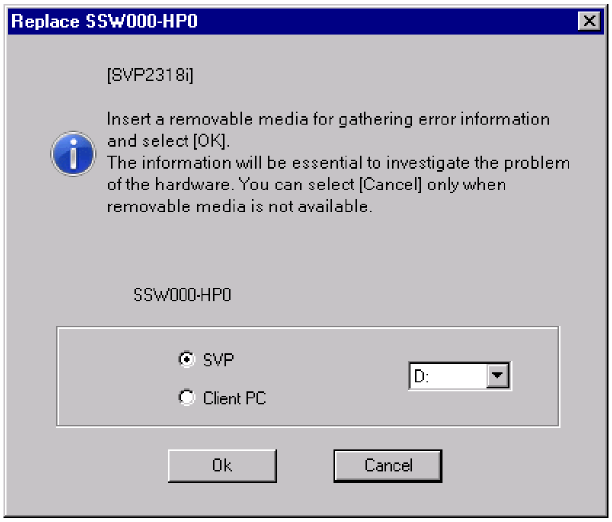
Date Time : 07/06/2009 09:35:47
Failure parts name : SSW
Failure parts location : SSW000-HP0
Serial Number : 64536

Site-ID & Case No :

SIM/SSB :

Failure Description :

“Insert a removable media for gathering error information and select [OK]. The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.” is displayed.
Trouble information is preserved in console PC connected with SVP.
Please select the Client PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu. The drive letter becomes the drive letter of console PC connected with SVP.



Replace SSW000-HP0

[SVP2318i]

Insert a removable media for gathering error information and select [OK].
The information will be essential to investigate the problem of the hardware. You can select [Cancel] only when removable media is not available.

SSW000-HP0

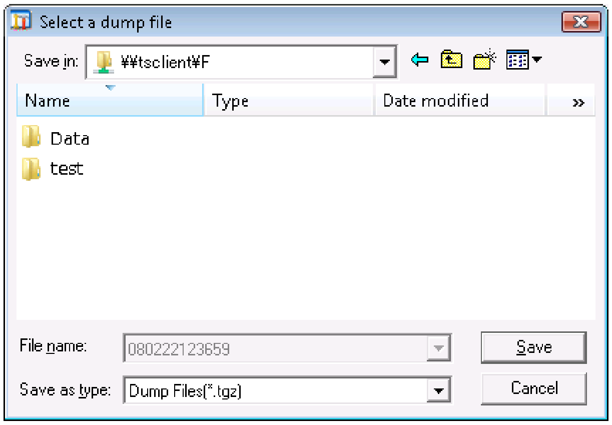
● SVP
○ Client PC

D:

A Primary copy is always placed on the SVP HD in the “c:\dkc200\others\pcbinfo\” directory with the following file name format “SH528_YYMMDDhhmmss.tgz”.
(YY denotes Year, MM denotes Month, DD denotes Day, hh denotes Hour, mm denotes Minute, and ss denotes Second)

When Client PC is selected, the directory selection dialog is displayed.
Please select an arbitrary directory if necessary.

Console PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of console PC.



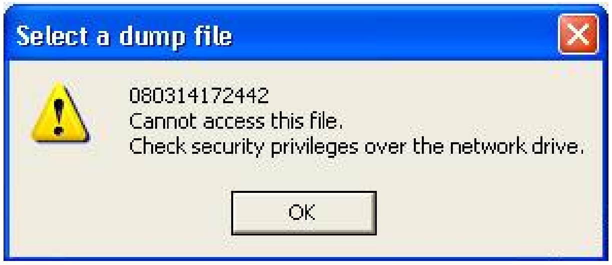
Save in: ¥¥tsclient¥F
File name: 080222123659
Save as type: Dump Files(*.tgz)

Select (CL) [Save] when saving a file in a specified directory.
It returns to the drive selection screen when [Cancel] is selected (CL).

Note: The message is displayed two or more times. Please only operate the SSW selected by 1-3. <Specify replacement>.

- When the destination media is write-protected.

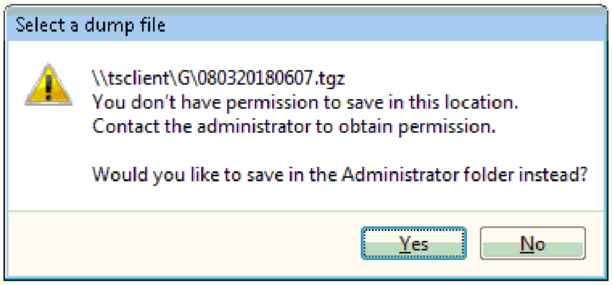
<For Windows XP>



080314172442
Cannot access this file.
Check security privileges over the network drive.

<For Windows Vista>

Selecting (CL) [Yes] displays the "C:\users\Administrator" folder of SVP.
Selecting (CL) [No] displays the folder selected with the Client PC.



\\tsclient\G\080320180607.tgz
You don't have permission to save in this location.
Contact the administrator to obtain permission.

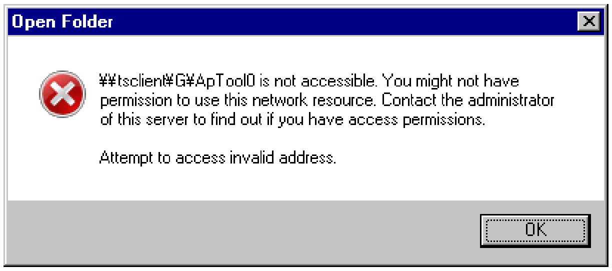
Would you like to save in the Administrator folder instead?

Please appoint another destination whether you remove write protect when you save it and carry it out.

- When dialog of the destination drive specified with the Client PC is open, the media is removed, and then select (CL) [Save].

- When the memory in the destination drive specified with the Client PC is corrupted. The dialog remains displayed after selecting (CL) [OK].

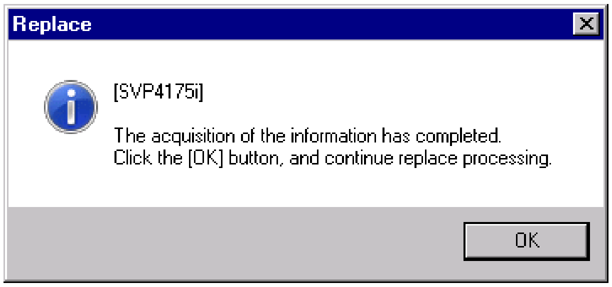
  At the time of the above operation completion, the information collection is not carried out.
  Please choose another directory again after having closed a system message whether you reconnect the drive that you removed when you save it and carry it out.



¥¥tsclient¥G¥ApTool0 is not accessible. You might not have permission to use this network resource. Contact the administrator of this server to find out if you have access permissions.

Attempt to access invalid address.

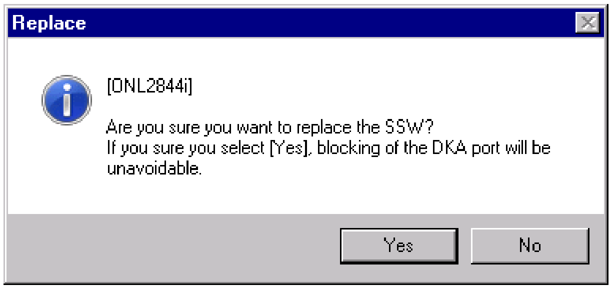
Select (CL) [OK] in response to “The acquisition of the information has completed. Click the [OK] button, and continue replace processing.”.



[SVP4175i]

The acquisition of the information has completed.
Click the [OK] button, and continue replace processing.

1-7. <Check beginning of DKA Port blocking>
Select (CL) [Yes] in response to “Are you sure you want to replace the SSW? If you select [Yes], blocking of the DKA port will be unavoidable.”.



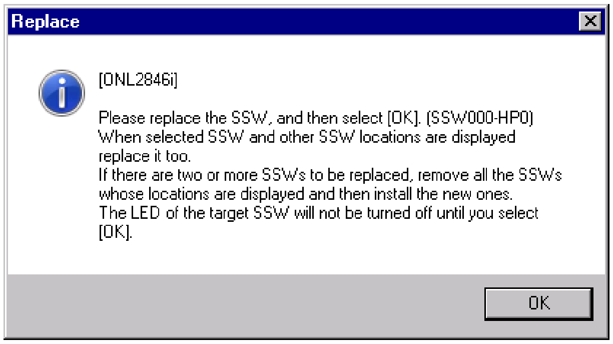
[ONL2844i]

Are you sure you want to replace the SSW?
If you sure you select [Yes], blocking of the DKA port will be unavoidable.

1-8. <Check DKA Port blocking>
“The DKA Port is being blocked...” is displayed.

1-9. <Replace SSW>

"Please replace the SSW, and then select [OK]. (SSWnnn-xxx)
When selected SSW and other SSW locations are displayed replace it too.
If there are two or more SSWs to be replaced, remove all the SSWs whose locations are displayed and then install the new ones.
The LED of the target SSW will not be turned off until you select [OK]." is displayed.



[ONL2846i]

Please replace the SSW, and then select [OK]. (SSW000-HP0)
When selected SSW and other SSW locations are displayed replace it too.
If there are two or more SSWs to be replaced, remove all the SSWs whose locations are displayed and then install the new ones.
The LED of the target SSW will not be turned off until you select [OK].

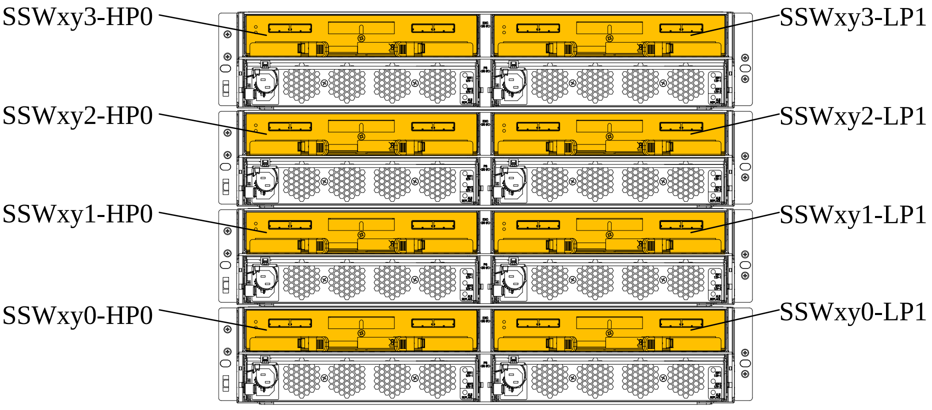
Make sure of the SSW PCB location is displayed, select (CL) the [OK] button after replaced target SSW PCB.
If the SSW LED is not turned on, please replace SSW PCB.

Go to "2. HARDWARE REPLACEMENT PROCESSING".

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Rear of FBX DKU	1	SSW	

DKU for FMD



Rear View of
FBX DKU

Note: SSWxy0-HP0
→DKU No. (0, 1, 2, ..., 7)
→DKC No. (0, 1)

> NOTICE:
> Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1 Replacement of SSW

2-1-1. Replace the SSW.

a. Check Shut Down LED on the SSW.

CAUTION: A system down is caused by a replacement of the SSW PCB other than that to be replaced. Make sure that it is the SSW PCB to be replaced.

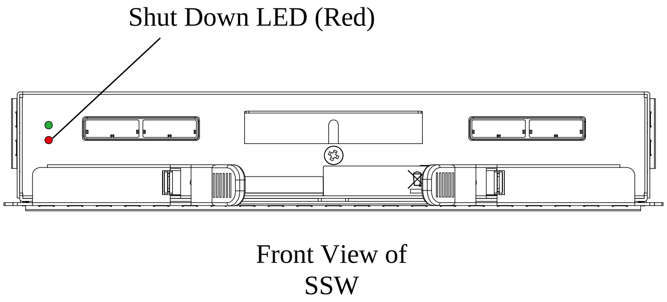
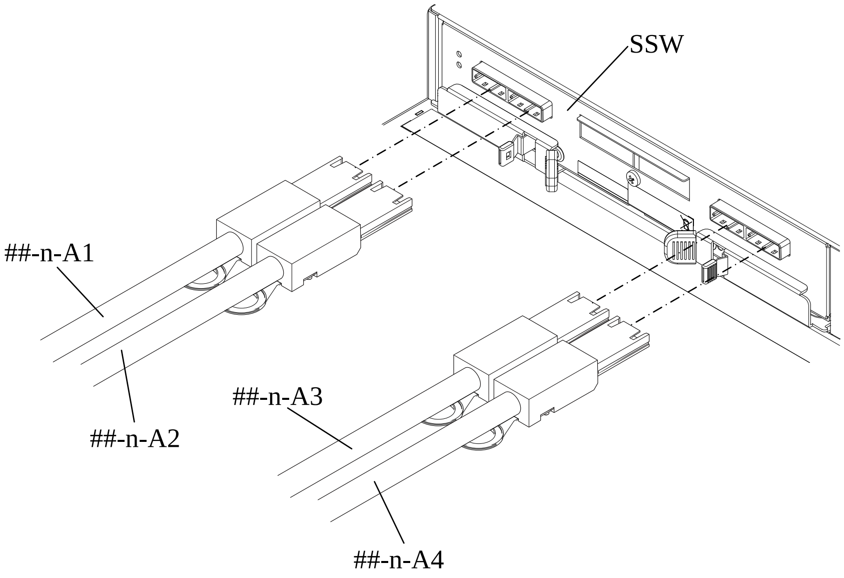


Fig. 3.37.2-1 Confirmation of Shut Down LED

b. Disconnect the cables from the SSW.



Note: ##-n-A1
→ SSW Location: R, L
→ HDU Location: 0/4, 1/5, 2/6, 3/7

Fig. 3.37.2-2 Disconnection of Cables

c. Press the latches of the SSW inward to unlock the levers.
d. Pull the levers of the SSW toward you and remove the SSW from the FBX DKU.

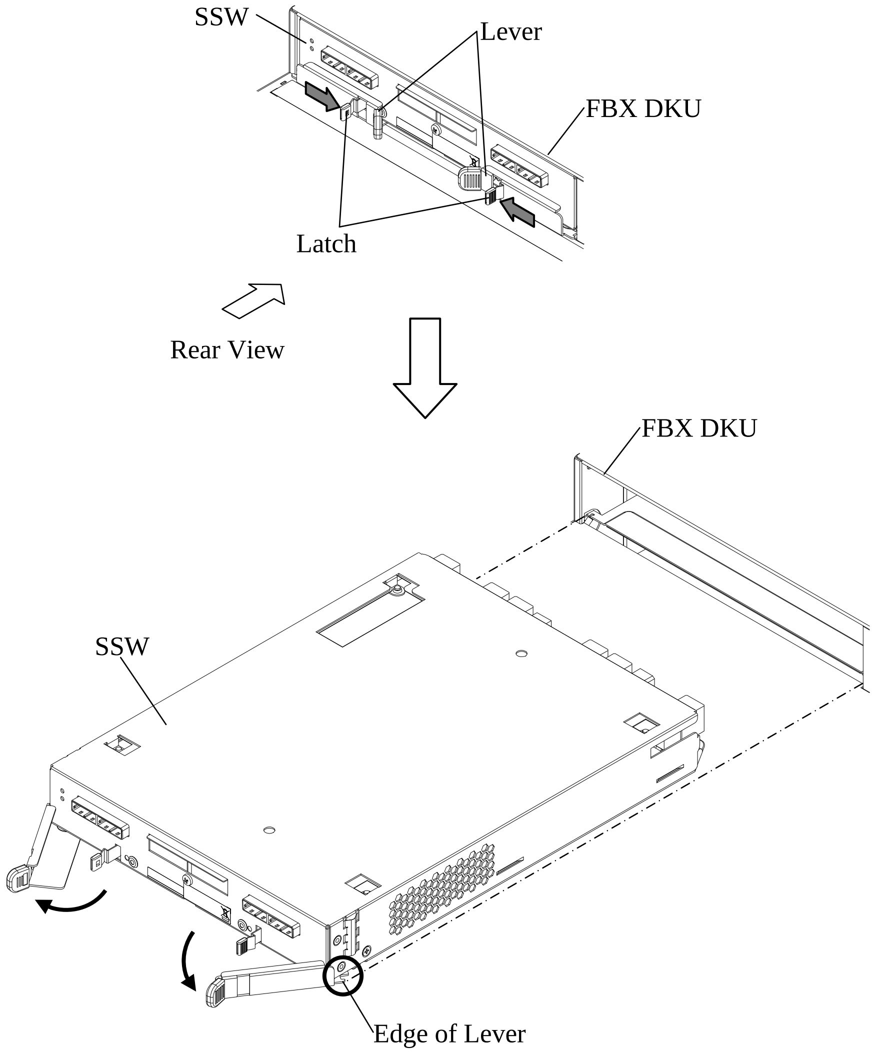


Fig. 3.37.2-3 Removal of SSW PCB

2-1-2. Set the SSW jumpers.

a. Loosen the screw on the spare SSW and open the cover.

b. Set the jumpers of the spare SSW. For jumper settings, refer to LOC06-170 through 250.

Note: Use the insulated radio pliers of the maintenance tools when setting the SSW jumpers.

c. Close the cover of the spare SSW and tighten the screw.

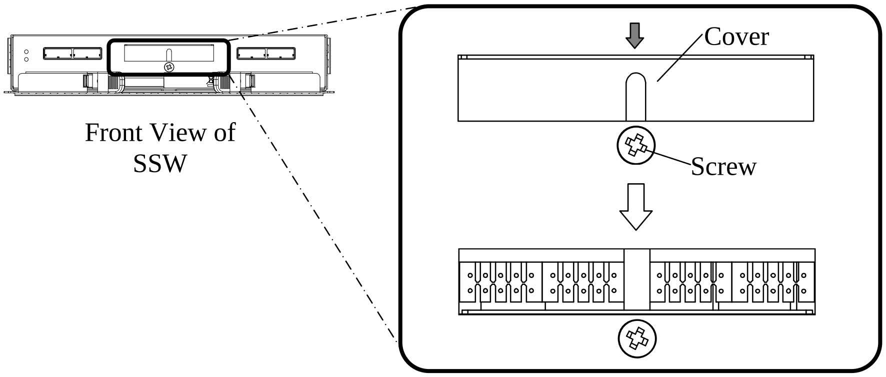
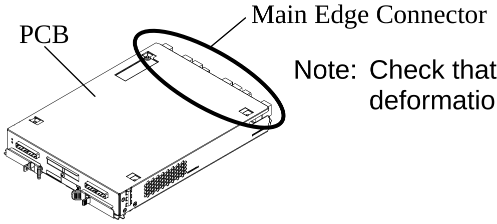


Fig. 3.37.2-4 Opening Cover

2-1-3. Insert the spare SSW.

a. Fully open the levers of the spare SSW. (Refer to Fig. 3.37.2-3.)

b. Insert the SSW until the edge of the levers comes in contact with the FBX DKU.



Note: Check that the main edge connector of the PCB has no deformation, damage or sticking of dust before installing the PCB.

c. Close the levers and completely insert the SSW. Then confirm that the latches hold the levers.

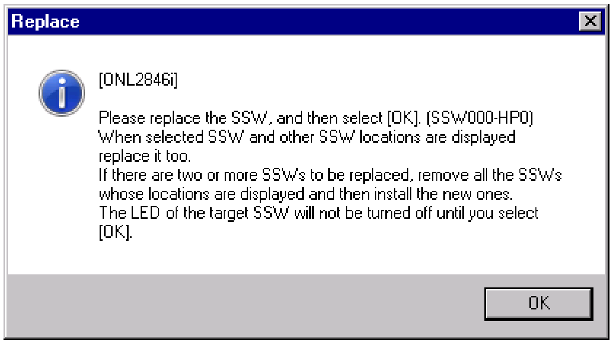
d. Connect the cables to the SSW after checking “3.1.7 Notes when connecting the DEV interface cable” (INST03-01-180). (Refer to Fig. 3.37.2-2.)

2-1-4. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check replacement of SSW>

Select (CL) [OK] in response to “Please replace the SSW, and then select [OK]. (SSWnnn-xxx)
When selected SSW and other SSW locations are displayed replace it too.
If there are two or more SSWs to be replaced, remove all the SSWs whose locations are displayed and then install the new ones.
The LED of the target SSW will not be turned off until you select [OK].” After replacement, press OK.



[ONL2846i]

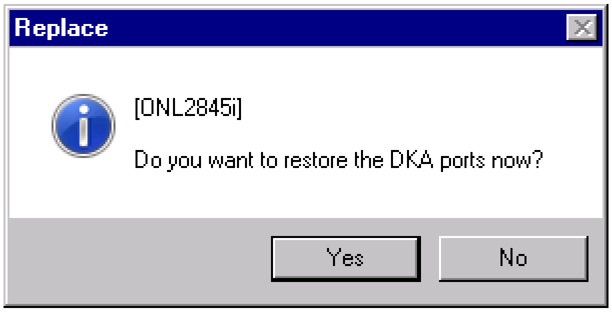
Please replace the SSW, and then select [OK]. (SSW000-HP0)
When selected SSW and other SSW locations are displayed replace it too.
If there are two or more SSWs to be replaced, remove all the SSWs whose locations are displayed and then install the new ones.
The LED of the target SSW will not be turned off until you select [OK].

Please only replace the SSW selected by 1-3. <Specify replacement>. Make sure that the SSW PCB location is displayed, select (CL) the [OK] button after replacing target SSW PCBs.
Even if the SSW LED is not turned on, please replace the SSW PCBs.

Notice: The LED lights up also for an SSW connected with the same SAS interface cable as that of the specified SSW. The light turns off if you select (CL) on the [OK] button.

3-2. <Check the beginning of DKA Port recovery>

Select (CL) [Yes] in response to “Do you want to restore the DKA ports now?”.



[ONL2845i]

Do you want to restore the DKA ports now?

3-3. <DKU PATH INLINE>

“DKU PATH INLINE is now running...” is displayed.

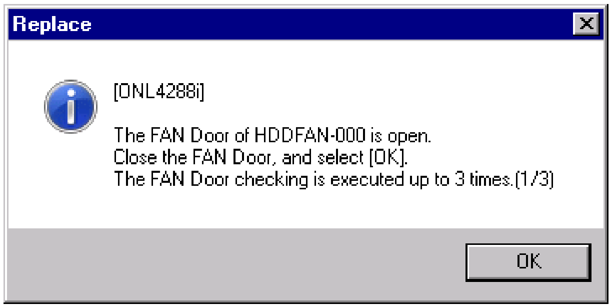
⚠ CAUTION

When a failure is found during DKU PATH INLINE, the DKA Port connected to the loop are blocked.
Confirm the Diagnosis Log and solve the problem.

3-4. <Check DKA Port recovery processing>
“Restoring the DKA Port...” is displayed.

(1)

“The FAN Door of HDDFAN-xxx is open. Close the FAN Door, and select [OK]. The FAN Door checking is executed up to 3 times. (n/3)” is displayed.
After the FAN door is closed, select (CL) [OK] in response to this message.



[ONL4288I]

The FAN Door of HDDFAN-000 is open.
Close the FAN Door, and select [OK].
The FAN Door checking is executed up to 3 times.(1/3)

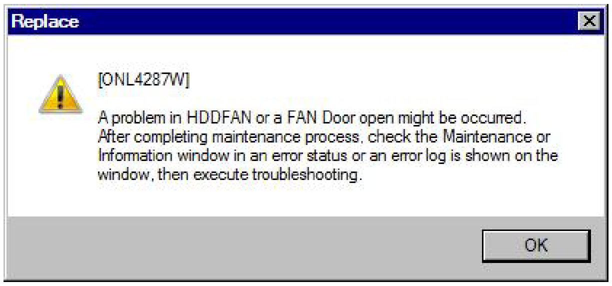
It returns to (1) when HDDFAN doors of the object are not closed.
It goes to 3-5 when HDDFAN doors of the object are closed.

Note: It goes to (2) when it cannot be confirmed that the FAN doors are closed in the three times FAN door check.

---

(2)

“A problem in HDDFAN or a FAN Door open might be occurred. After completing the maintenance process, check the Maintenance or Information window in an error status or an error log is shown on the window, then execute troubleshooting.” is displayed.
Select (CL) [OK] in response to this message.

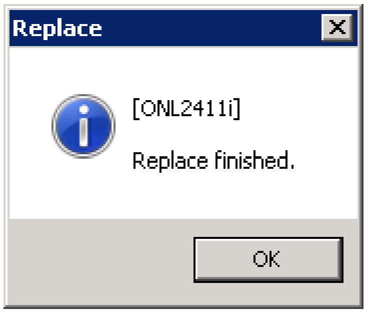


[ONL4287W]

A problem in HDDFAN or a FAN Door open might be occurred.
After completing maintenance process, check the Maintenance or Information window in an error status or an error log is shown on the window, then execute troubleshooting.

3-5. <Check the end of SSW replace>

Select (CL) [OK] in response to “Replace finished.”.



Replace

[ONL2411i]

Replace finished.

3-6.

Go to POST-PROCEDURE [REP04-01-10].

[FBX DKUPS REPLACEMENT PROCESSING - RUF3]

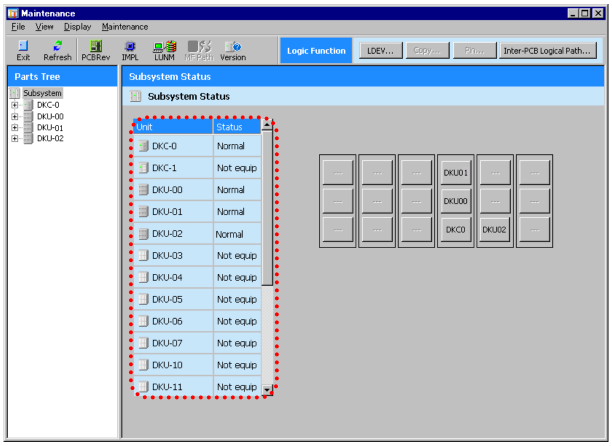
— OUTLINE —

1. PRE-PROCESSING of SVP
    ① Select FBX DKUPS (status check)
    ② Specify Replacement
    ③ Detach FBX DKUPS
    ④ Place part into unpluggable state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    ① Specify end of FBX DKUPS replacement
    ② Reinstall related parts
    ③ Start environment monitor

1. PRE-PROCESSING of SVP

1-1. <Maintenance window>

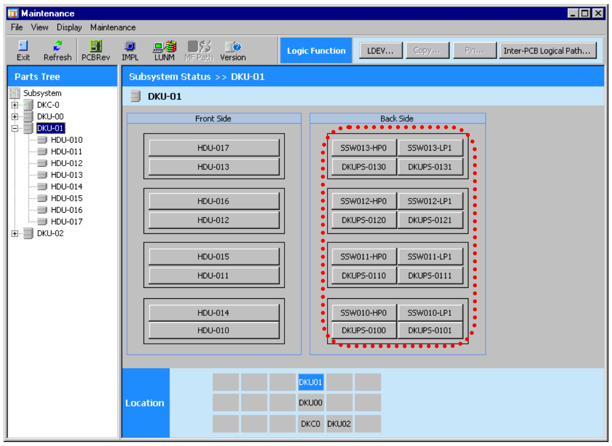
Select (CL) [DKU-XX] in the ‘Maintenance’ window.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function LDEV... Copy... Prt... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
DKU-01
DKU-02
Subsystem Status
Subsystem Status
DKU01
DKU00
DKC0
DKU02

Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Normal
DKU-02	Normal
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-2. <Specify DKUPS>

Select (CL) [DKUPS-nnnn].



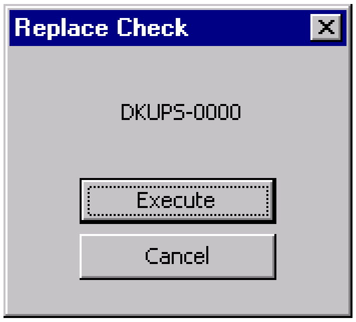
1-3. <Execute>

CAUTION

When the screen prompting an operator to input a password in order to prevent a multiple maintenance, contact the technical support division to ask for an instruction.

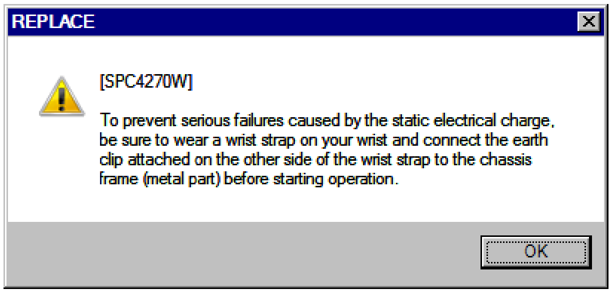
If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

A window shown on the right is displayed.
Select (CL) [Execute].



1-4. <Wear a wrist strap>

Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.

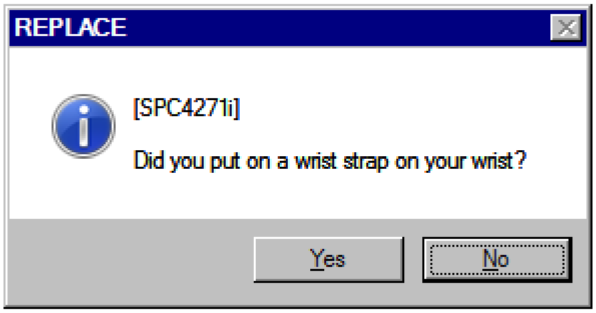


[SPC4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

“Did you put on a wrist strap on your wrist?” is displayed.

select (CL) [Yes] and go to Step 1-5.

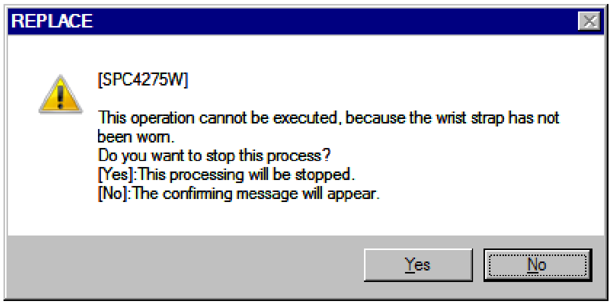


[SPC4271i]

Did you put on a wrist strap on your wrist?

“This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes] : This processing will be stopped.
[No] : The confirming message will appear.”
is displayed.

When the processing will be stopped, select (CL) [Yes].

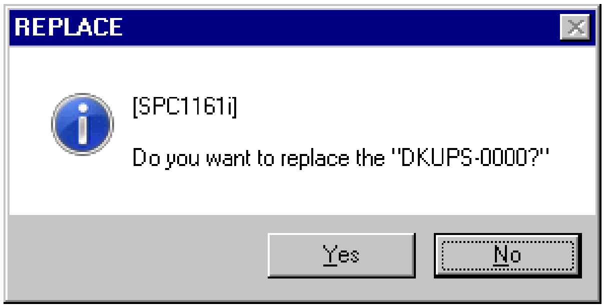


[SPC4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-5. <Check beginning of DKUPS Replacement>

Select (CL) [Yes] in response to “Do you want to replace the “DKUPS-nnnn?””.



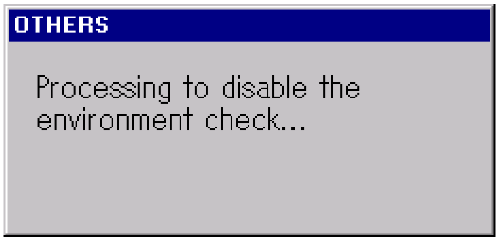
[SPC1161i]

Do you want to replace the "DKUPS-0000?"

(Eg. DKUPS-0000)

1-6. <Check environment monitor stopped state>

The message “Processing to disable the environment check...” is displayed.

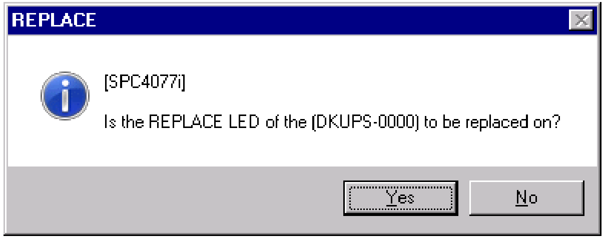


Processing to disable the environment check...

1-7. <Checking lighting of the LED on the PCB to be pulled out>

The message “Is the REPLACE LED of the (DKUPS-nnnn) to be replaced on?” is displayed.

When the LED on the PCB to be pulled out is on, select (CL) [Yes] and go to Step 1-9.
When the LED on the PCB to be pulled out is kept off, select (CL) [No] and go to Step 1-8.



[SPC4077i]

Is the REPLACE LED of the (DKUPS-0000) to be replaced on?

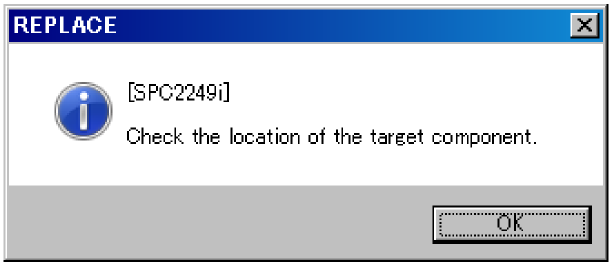
(Eg. DKUPS-0000)

1-8. <Making sure of the DKUPS location>

The message “Check the location of the target component.” is displayed.

See “2. HARDWARE REPLACEMENT PROCESSING”.

After making sure of the DKUPS location, select (CL) [OK] and go to Step 1-9.

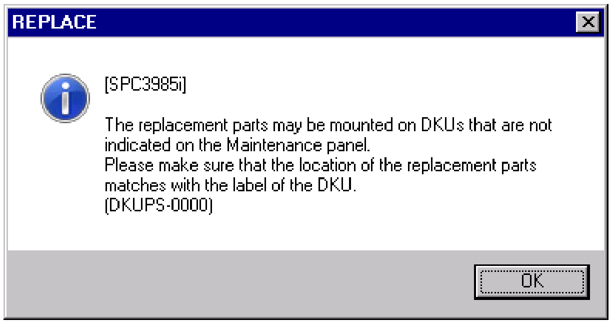


[SPC2249i]

Check the location of the target component.

1-9. <Check beginning of DKUPS replacement>

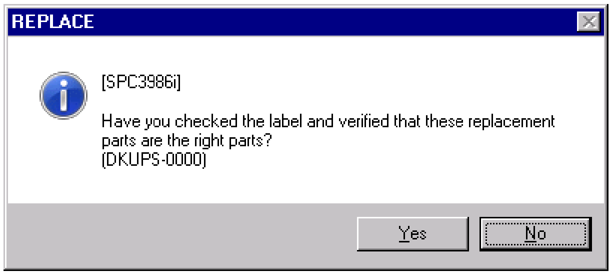
The message “The replacement parts may be mounted on DKUs that are not indicated on the Maintenance panel. Please make sure that the location of the replacement parts matches with the label of the DKU. (DKUPS-nnnn)” is displayed.
Select (CL) [OK] after you confirmed the content.



[SPC3985i]

The replacement parts may be mounted on DKUs that are not indicated on the Maintenance panel.
Please make sure that the location of the replacement parts matches with the label of the DKU.
(DKUPS-0000)

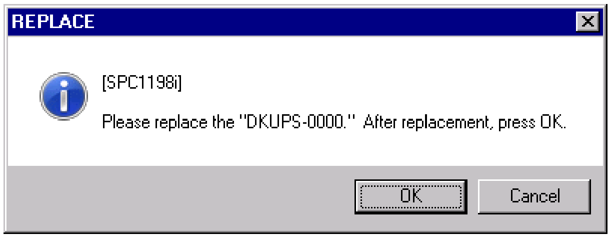
The message “Have you checked the label and verified that these replacement parts are the right parts? (DKUPS-nnnn)” is displayed.
Select (CL) [Yes] after you confirmed the content.



[SPC3986i]

Have you checked the label and verified that these replacement parts are the right parts?
(DKUPS-0000)

The message “Please replace the “DKUPS-nnnn.” After replacement, press OK.” is displayed.
Reply with [OK] after replacing the special part.



[SPC1198i]

Please replace the "DKUPS-0000." After replacement, press OK.

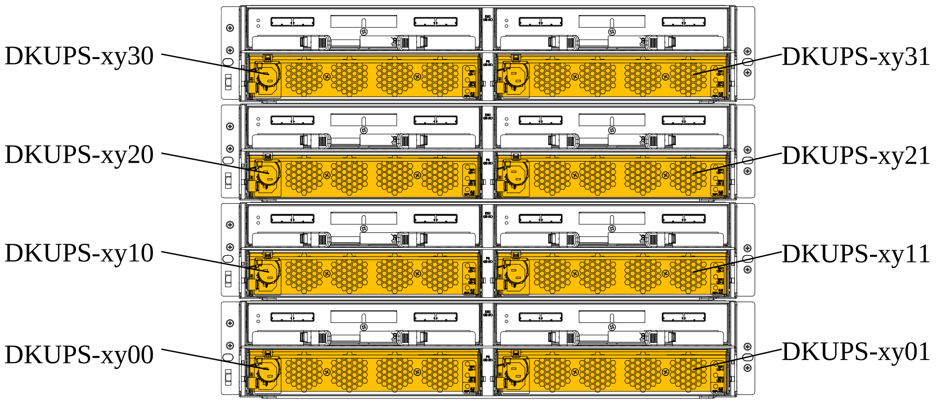
(Eg. DKUPS-0000)

Go to “2. HARDWARE REPLACEMENT PROCESSING”.

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Rear of FBX DKU	1	DKUPS	

DKU for FMD



Rear View of
FBX DKU

Note: DKUPS-xy01
→DKU No. (0, 1, 2, ..., 7)
→DKC No. (0, 1)

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

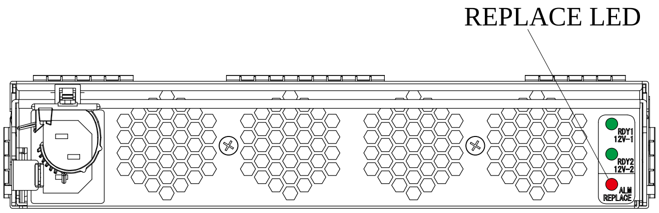
2-1 Replacement of DKUPS

2-1-1. Replacement of DKUPS

a. Check that the REPLACE LED is on.

⚠ CAUTION

A system down may be caused by a replacement of the DKUPS other than that to be replaced. Make sure that it is a DKUPS to be replaced.



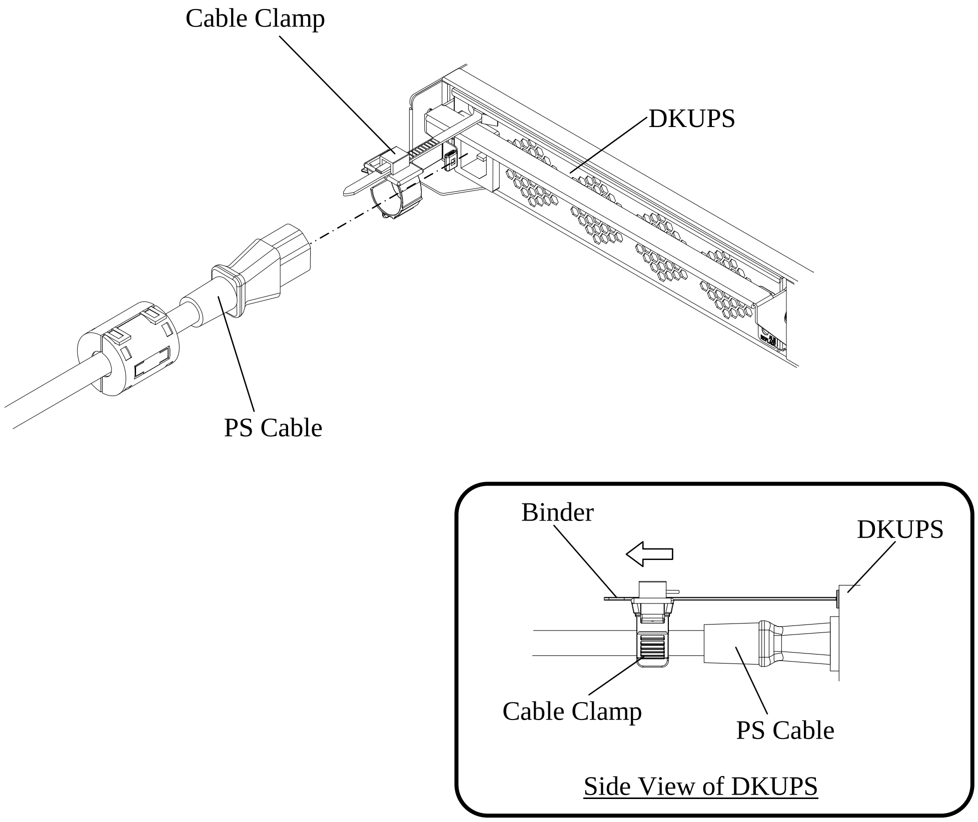
Front View of DKUPS

Fig. 3.38.2-1 Check of REPLACE LED

b. Pull and open the cable clamp.
c. Disconnect the PS cable from the DKUPS.

⚠ **CAUTION**

Watching for short-circuits:
A Short-circuit may cause a fire.
Never insert metal or the like into the cable connector or a short-circuit may occur.



Side View of DKUPS

Fig. 3.38.2-2 Disconnection of PS Cable

d. Have the handle down (②) while pressing the latches of the DKUPS to the right (①).
e. Pull the handle and detach the DKUPS from the FBX DKU.
f. Open the handle on the spare DKUPS.
g. Insert the spare DKUPS until the pin on it comes into contact with the mounting portion of the FBX DKU.
h. Push up the handle and fully insert the spare DKUPS. Then confirm that the latches hold the handle.
i. Connect the PS cable to the DKUPS and fix the PS cable with the cable clamp.
j. Push the cable clamp toward the DKUPS.

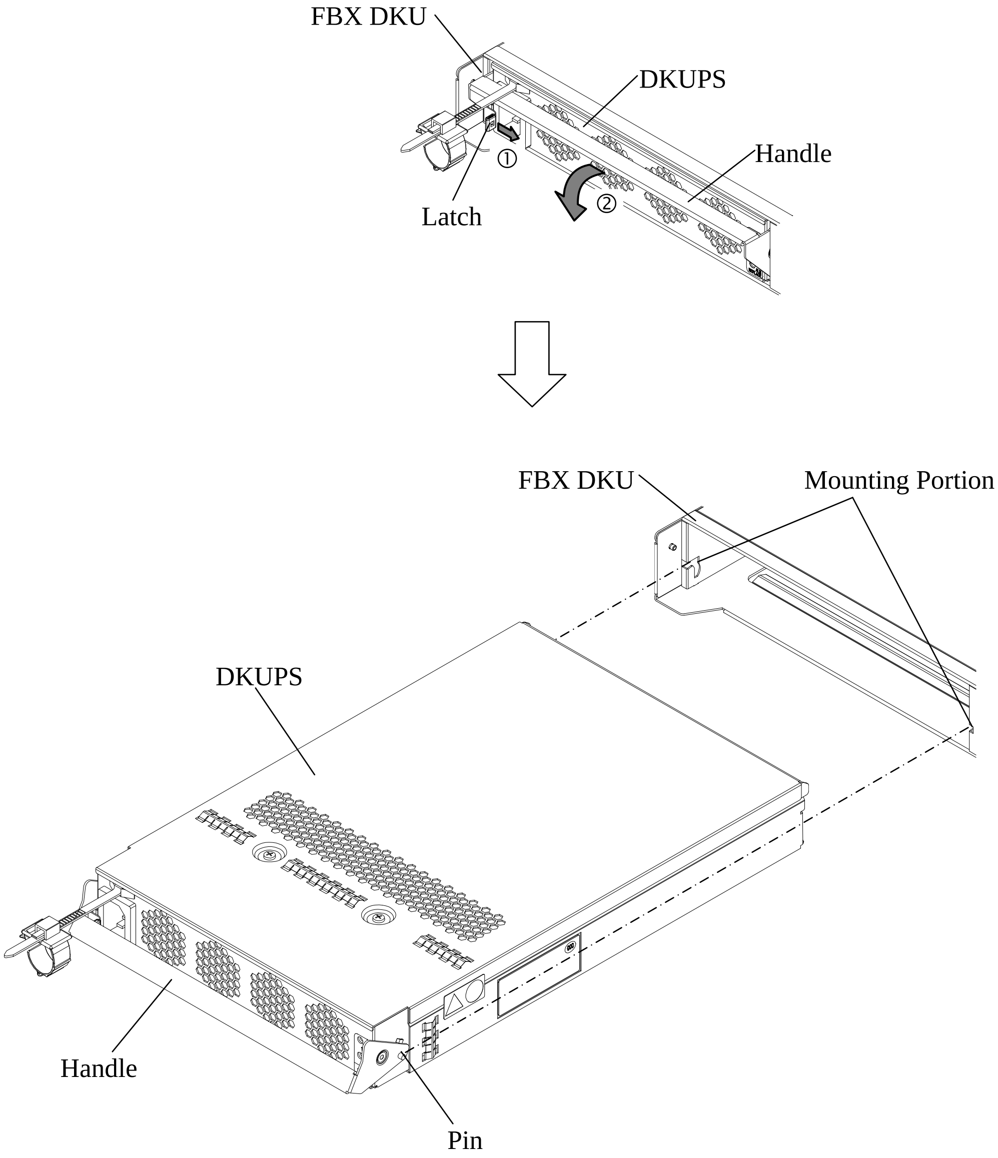


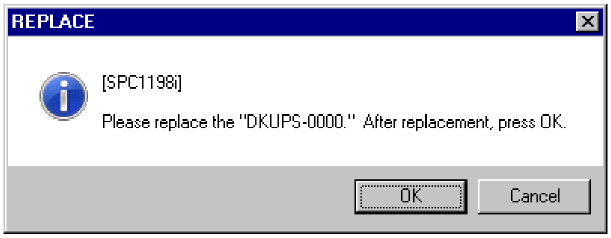
Fig. 3.38.2-3 Replacement of DKUPS

2-1-2. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Check beginning of DKUPS Replacement>

Select (CL) [OK] in response to "Please replace the "DKUPS-nnnn." After replacement, press OK."



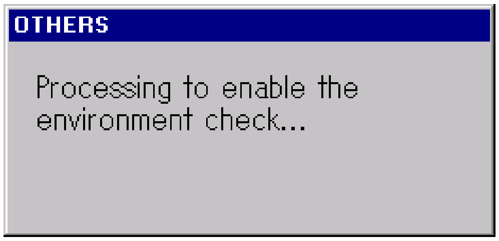
[SPC1198i]

Please replace the "DKUPS-0000." After replacement, press OK.

(Eg. DKUPS-0000)

3-2. <Check environment monitor start processing>

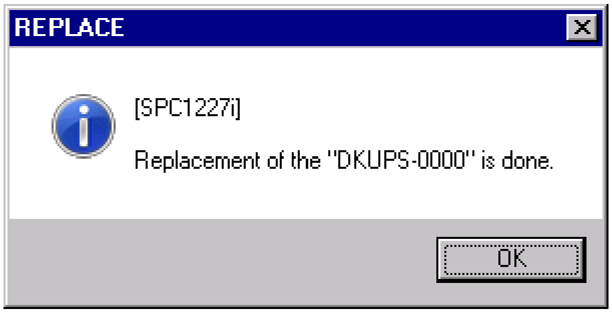
The message "Processing to enable the environment check..." is displayed.



Processing to enable the environment check...

3-3. <Check end of replacement>

Select (CL) [OK] in response to "Replacement of the "DKUPS-nnnn" is done."



[SPC1227i]

Replacement of the "DKUPS-0000" is done.

(Eg. DKUPS-0000)

3-4. <Confirm status>

Confirm the status display.
If button is normal (The string is normally display), go to Step 3-5.
If button is abnormal (The string is blinking), replace the target part again, or see TROUBLE SHOOTING SECTION.

3-5.

Go to POST-PROCEDURE [REP04-01-10].

[Fibre CHA Dummy REPLACEMENT PROCESSING - RCD1]

— OUTLINE —

1. PRE-PROCESSING of SVP
    - ① Select CHA (status check)
    - ② Specify Replacement
    - ③ Place PCB into blocked state
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
    - ① Specify recovery for CHA
    - ② Path online (for CHA)

1. PRE-PROCESSING of SVP

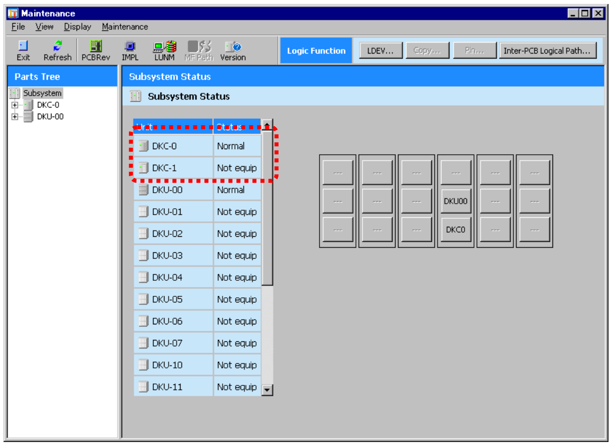
1-1. <Set path offline or switch of channel path>

⚠ CAUTION

For Mainframe, the path to be placed offline is that connected with the CHA concerned.
For Open host, the switch to the alternate channel path or host shutdown is that connected with the CHA concerned.
As for other channel path, switching to the alternate channel path or host shutdown is unnecessary.
However, the host must be shut down when the Pinned track in CHA connected port.

1-2. <Maintenance window>

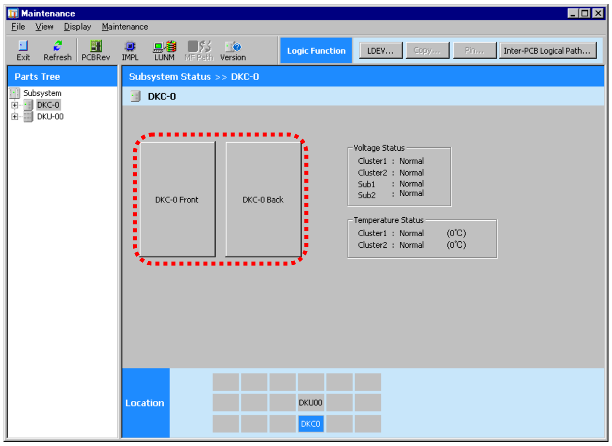
Select (CL) [DKC-n] in the ‘Maintenance’ window.


Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function
LDEV... Copy... Pin... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status
Subsystem Status
DKU00
DKC0

Unit	Status
DKC-0	Normal
DKC-1	Not equip
DKU-00	Normal
DKU-01	Not equip
DKU-02	Not equip
DKU-03	Not equip
DKU-04	Not equip
DKU-05	Not equip
DKU-06	Not equip
DKU-07	Not equip
DKU-10	Not equip
DKU-11	Not equip

1-3. <DKC window>

Select (CL) [DKC-n Back] in the ‘DKC’ window.

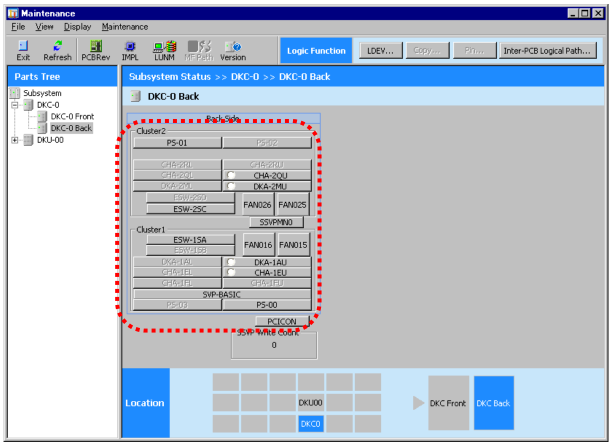

Maintenance
File View Display Maintenance
Exit Refresh PCBRev IMPL LUNM MF Path Version
Logic Function
LDEV... Copy... Pin... Inter-PCB Logical Path...
Parts Tree
Subsystem
DKC-0
DKU-00
Subsystem Status >> DKC-0
DKC-0
DKC-0 Front
DKC-0 Back
Location
DKU00
DKC0

Voltage Status
Cluster1 : Normal
Cluster2 : Normal
Sub1 : Normal
Sub2 : Normal

Temperature Status
Cluster1 : Normal (0˚C)
Cluster2 : Normal (0˚C)

1-4. <Select CHA>

Select (CL) CHA.



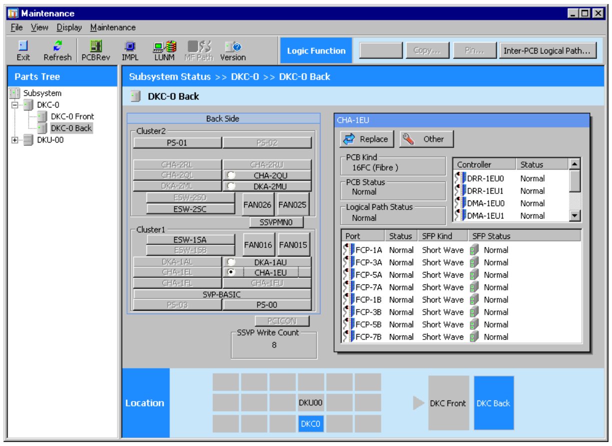
1-5. <Specify Replacement of CHA>

CAUTION

- When the path to the PCB to be replaced is online, ask the customer to place it offline. (For CHA replacement)
- For Open host, switch to the alternate channel path or shut down the host. However, the host must be shut down when the Pinned track in CHA connected port.
- When the screen requests an operator to input a password in order to prevent multiple maintenance, contact the technical support division to ask for instructions.

If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION (SVPMSG00-00).

Make sure that the status is WARNING.
Select (CL) [Replace].



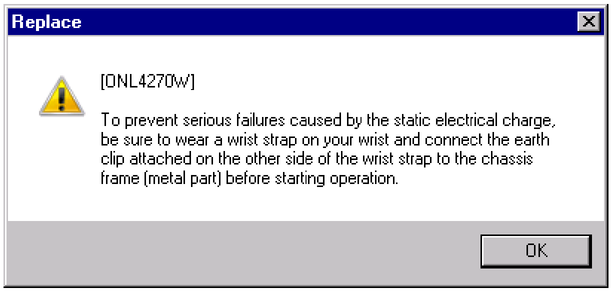
PCB Kind: 16FC (Fibre)
PCB Status: Normal
Logical Path Status: Normal

Controller	Status
DRR-1EU0	Normal
DRR-1EU1	Normal
DMA-1EU0	Normal
DMA-1EU1	Normal

Port	Status	SFP Kind	SFP Status
FCP-1A	Normal	Short Wave	Normal
FCP-3A	Normal	Short Wave	Normal
FCP-5A	Normal	Short Wave	Normal
FCP-7A	Normal	Short Wave	Normal
FCP-1B	Normal	Short Wave	Normal
FCP-3B	Normal	Short Wave	Normal
FCP-5B	Normal	Short Wave	Normal
FCP-7B	Normal	Short Wave	Normal

1-6. <Wear a wrist strap>

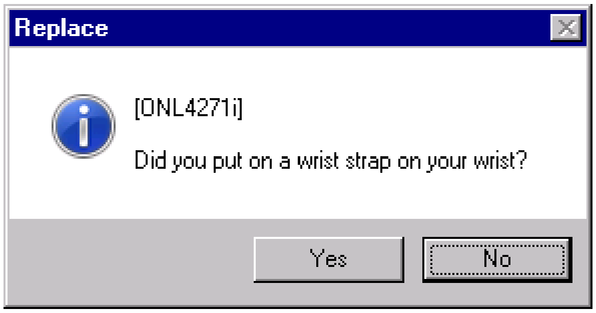
Select (CL) [OK] in response to “To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.”.



[ONL4270W]

To prevent serious failures caused by the static electrical charge, be sure to wear a wrist strap on your wrist and connect the earth clip attached on the other side of the wrist strap to the chassis frame (metal part) before starting operation.

(1) <Confirm wearing wrist strap>
In response to a message, “Did you put on a wrist strap on your wrist?”.
Select (CL) [Yes] when wrist strap is on your wrist.
Select (CL) [No] when there is no wrist strap on your wrist.
When [No] is selected (CL), go to Step (2).

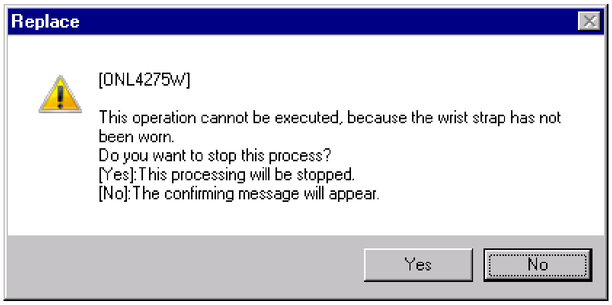


[ONL4271i]

Did you put on a wrist strap on your wrist?

(2)
In response to a message, “This operation cannot be executed, because the wrist strap has not been worn. Do you want to stop this process?
[Yes]: This processing will be stopped.
[No]: The confirming message will appear.”

When [Yes] is selected (CL), returned to Step 1-5.
When [No] is selected (CL), returned to Step 1-6.

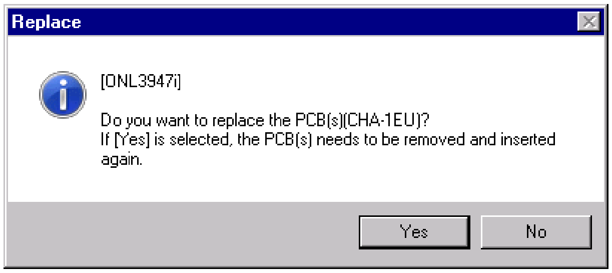


[ONL4275W]

This operation cannot be executed, because the wrist strap has not been worn.
Do you want to stop this process?
[Yes]:This processing will be stopped.
[No]:The confirming message will appear.

1-7.<CHA replace>

Select (CL) [Yes] in response to:
“Do you want to replace the PCB(s)(CHA-nnn)? If [Yes] is selected, the PCB(s) needs to be removed and inserted again.”.



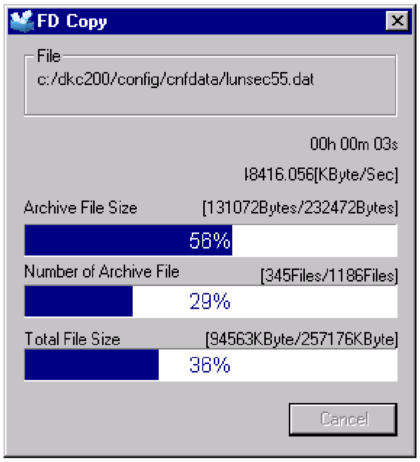
[ONL3947i]

Do you want to replace the PCB(s)(CHA-1EU)?
If [Yes] is selected, the PCB(s) needs to be removed and inserted again.

(Eg. CHA)

1-8. <Compression of the error information>

The error information is compressed.
The dialog of FD Copy is displayed.



File
c:/dkc200/config/cnfdata/lunsec55.dat

00h 00m 03s
18416.056[KByte/Sec]

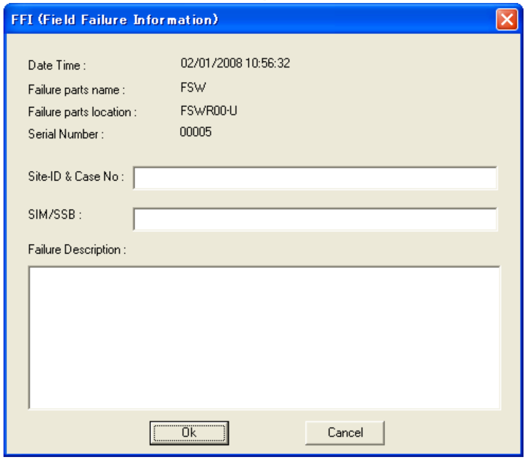
Archive File Size [131072Bytes/232472Bytes]
56%

Number of Archive File [345Files/1186Files]
29%

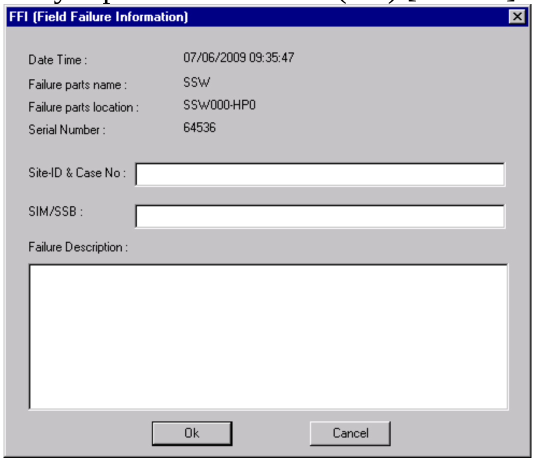
Total File Size [94563KByte/257176KByte]
36%

1-9. <Get the error information>

There is no need to get error information in dummy replacement. Select (CL) [Cancel].



Date Time : 02/01/2008 10:56:32
Failure parts name : FSW
Failure parts location : FSWR00-U
Serial Number : 00005
Site-ID & Case No :
SIM/SSB :
Failure Description :

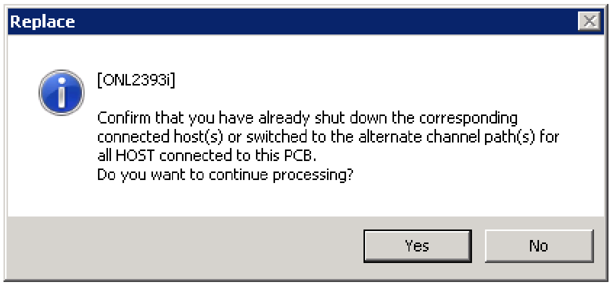


Date Time : 07/06/2009 09:35:47
Failure parts name : SSW
Failure parts location : SSW000-HP0
Serial Number : 64536
Site-ID & Case No :
SIM/SSB :
Failure Description :

1-10. <Confirm Channel Path offline>

Select (CL) [Yes] in response to following message.

For Fiber CHA:
"Confirm that you have already shut down the corresponding connected host(s) or switched to the alternate channel path(s) for all HOST connected to this PCB. Do you want to continue processing?".



[ONL2393i]

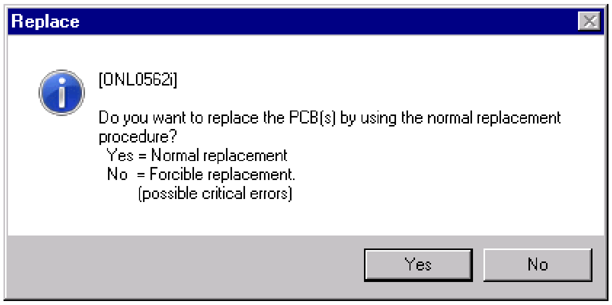
Confirm that you have already shut down the corresponding connected host(s) or switched to the alternate channel path(s) for all HOST connected to this PCB.
Do you want to continue processing?

1-11. <Caution message for system down>

CAUTION

Select (CL) [Yes] in response to the message below.

"Do you want to replace the PCB(s) by using the normal replacement procedure?
Yes = Normal replacement
No = Forcible replacement.
(Possible critical errors)".



[ONL0562i]

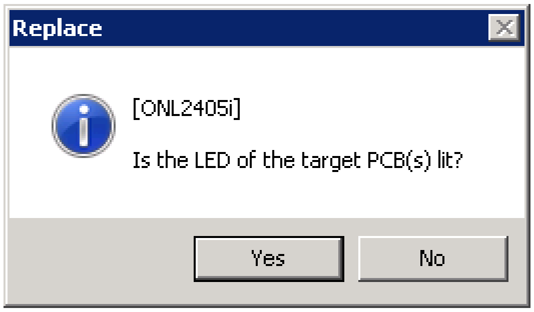
Do you want to replace the PCB(s) by using the normal replacement procedure?
Yes = Normal replacement
No = Forcible replacement.
(possible critical errors)

1-12. <CHA blocking>

"CHA-xxx is being blocked... Usually, several minutes (maximum 15 minutes)"
"CHA-xxx is lighting the LED..."

1-13. <Check shut down LED>

Select (CL)
* [Yes] if LED is on
* [No] if LED is off
in response to "Is the LED of the target PCB(s) lit?".

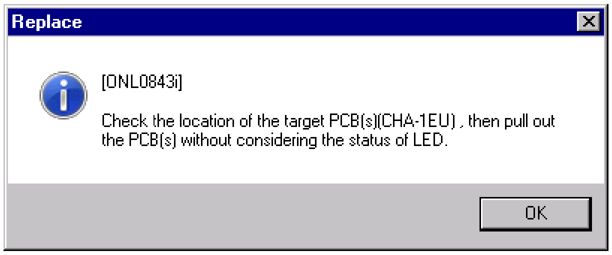


[ONL2405i]

Is the LED of the target PCB(s) lit?

If [No] is selected:
Select (CL) [OK] in response to "Check the location of the target PCB(s)(CHA-nnn), then pull out the PCB(s) without considering the status of LED.". (Refer to "2. HARDWARE REPLACEMENT PROCESSING")

Note: Select (CL) [OK] after pulling out the PCB.



[ONL0843i]

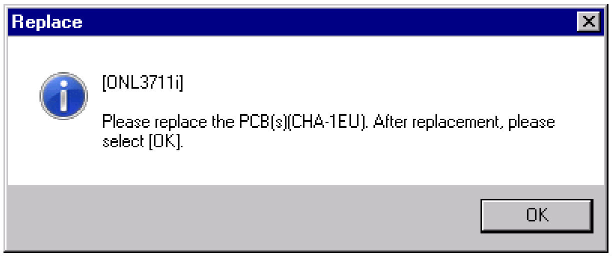
Check the location of the target PCB(s)(CHA-1EU) , then pull out the PCB(s) without considering the status of LED.

Go to Step 1-14.

1-14. <Beginning of CHA replacement>

"Please replace the PCB(s)(CHA-nnn). After replacement, please select [OK]." is displayed.
Select (CL) [OK] after replacing the CHA.

Go to "2. HARDWARE REPLACEMENT PROCESSING".

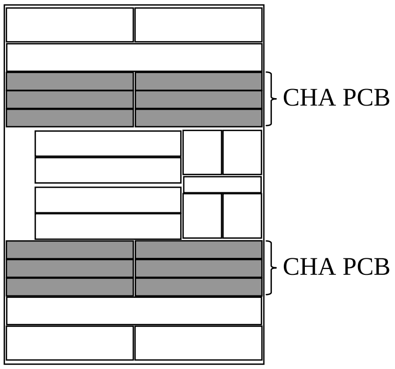


[ONL3711i]

Please replace the PCB(s)(CHA-1EU). After replacement, please select [OK].

2. HARDWARE REPLACEMENT PROCESSING

Location	Function Name of Component		Part Name
Rear View of DKC	1	CHA (Channel Adapter) PCB for Fibre (8Gbps) (Fibre 4-port Adapter PCB) (Non-RoHS2 compliant part)	• WP712-B (8UFC)
		CHA PCB for Fibre (8Gbps) (Fibre 4-port Adapter PCB) (RoHS2 compliant part)	• WP712-D (8UFCR)
	2	CHA PCB for Fibre (8Gbps) (Fibre 8-port Adapter PCB) (Non-RoHS2 compliant part)	• WP712-A (16UFC)
		CHA PCB for Fibre (8Gbps) (Fibre 8-port Adapter PCB) (RoHS2 compliant part)	• WP712-C (16UFCR)



Rear View of
DKC

NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

2-1. Remove the Channel Adapter PCB.

a. Check that the Shut Down LED is on. (only hot replace)

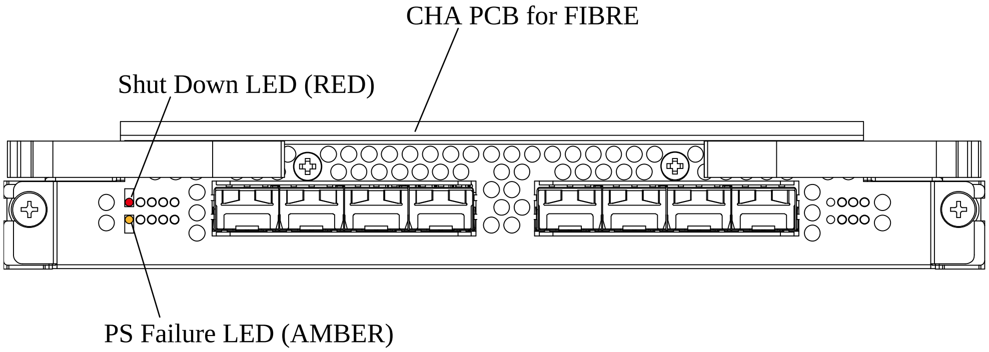
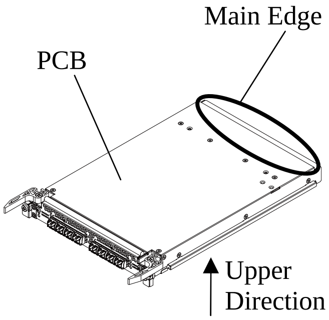


Fig. 3.39.2-1 Confirmation of Shut Down LED

b. Disconnect the optical fibre cables from the Channel Adapter PCB.
c. Remove the two screws and remove the PCB.



Note: When removing the PCB, hold the right and left of the PCB with both hands, and pull it out straight not to contact the neighboring PCB.
(If it thinks that it is hard to extract, raise and extract a little upwards.)

Note: After removing the PCB, install the PCB immediately.
If the PCB is kept removed for a long time, the wind doesn't flow among installed PCBs, causing the PCBs' temperature rise which may result in temperature warning or temperature alarm.

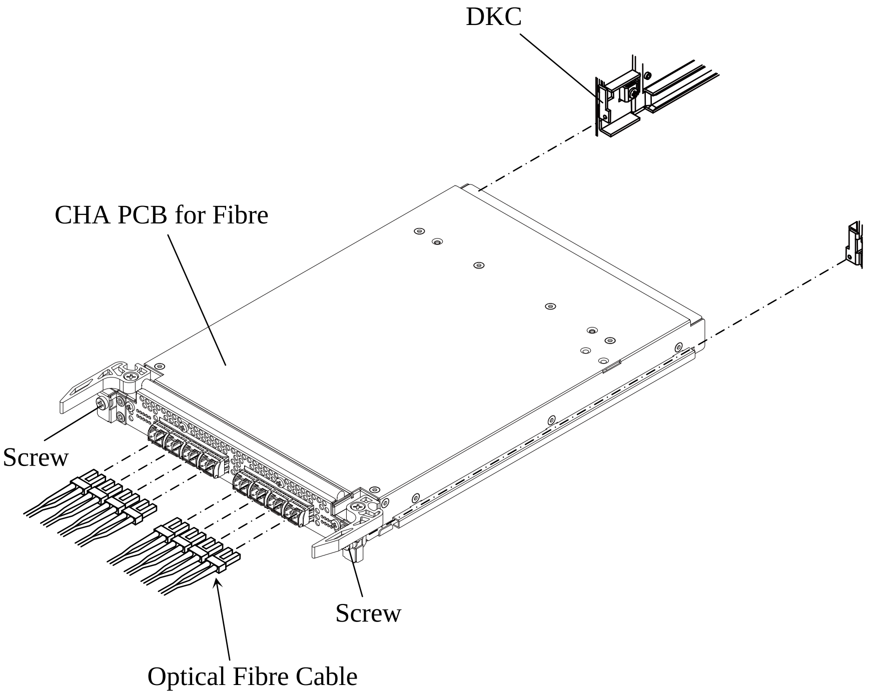
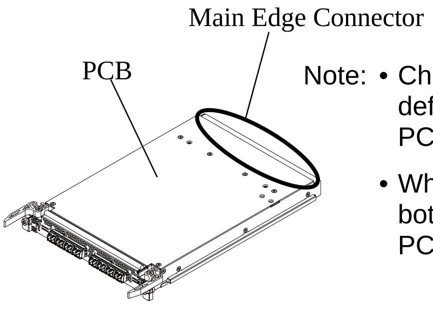


Fig. 3.39.2-2 Removal of PCB

2-2. Insert the PCB.

a. Insert the PCB to the correct location and tighten the screws.



Note:
- Check that the main edge connector of the PCB has no deformation, damage or sticking of dust before installing the PCB. (See INST03-01-70.)
- When installing the PCB, hold the right and left of the PCB with both hands, and insert it straight not to contact the neighboring PCB.

2-3. Cleaning the fibre cable connectors.

For the tools needed for the cleaning, refer to the tool list on page PARTS06-10.

a. Blow compressed gas against the connector using an air sprayer (for about five seconds).
b. Wipe the connector lightly with a piece of cut gauze wet with ethyl alcohol.
c. Blow compressed air again and check the result of the cleaning. (None of dust, sticking of foreign matter, and dirt must be observed.)

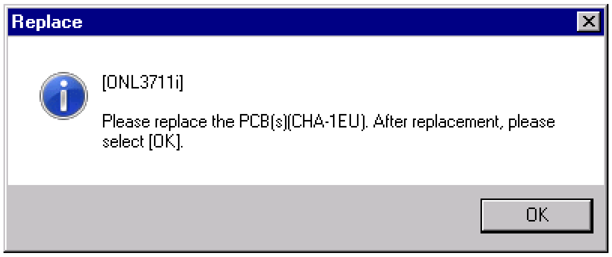
2-4. Connect the optical fibre cables to the spare PCB.

2-5. Go to “3. POST-PROCESSING of SVP”.

3. POST-PROCESSING of SVP

3-1. <Beginning of CHA Replacement>

Select (CL) [OK] in response to “Please replace the PCB(s)(CHA-nnn). After replacement, please select [OK].” after replacement.

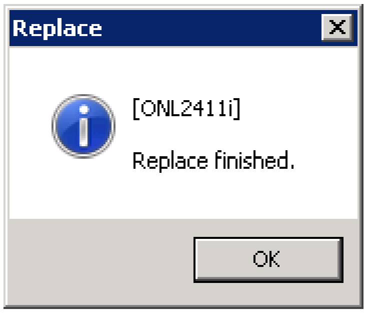


[ONL3711i]

Please replace the PCB(s)(CHA-1EU). After replacement, please select [OK].

3-2. <Check the end of CHA recovery>

Select (CL) [OK] in response to “Replace finished.”.



[ONL2411i]

Replace finished.

3-3. <Path on-line when CHA is replaced>

When a CHA is replaced, set the path (from the host) on the replaced CHA to ONLINE by your customer.

3-4.

Go to POST-PROCEDURE [REP04-01-10].

[POST-PROCEDURE]

— OUTLINE —

① SIM Log Complete
② Change the SVP operation mode
③ Maintenance Window

1. SIM Log Complete

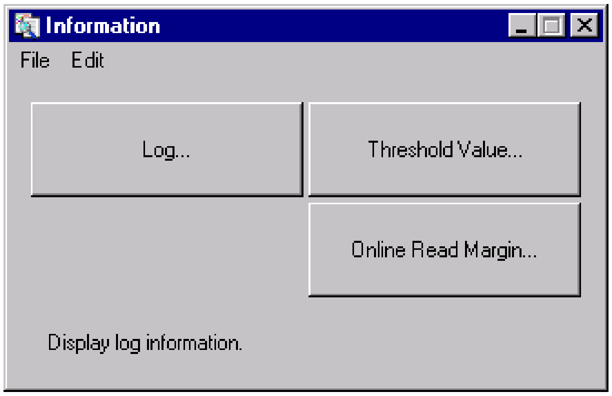
(1)

Change the mode from [View Mode] to [Modify Mode].
Select (CL) [Information].

---

(2)

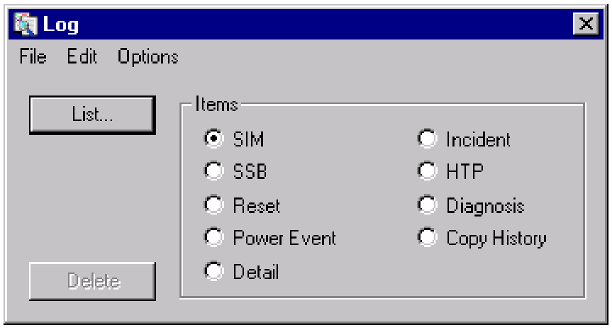
Select (CL) [Log...] in the ‘Information’ dialog box.



Display log information.

(3)

Select (CL) [SIM] and [List...] in the ‘Log’.

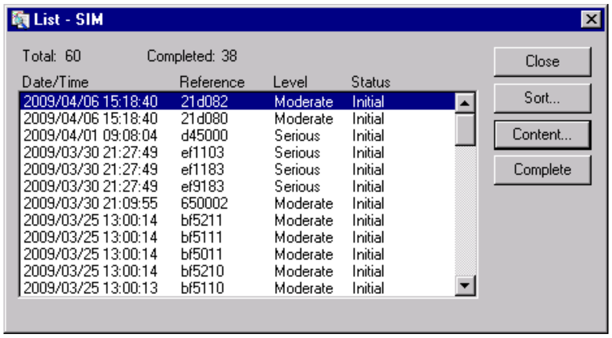


Items

● SIM
○ SSB
○ Reset
○ Power Event
○ Detail
○ Incident
○ HTP
○ Diagnosis
○ Copy History

(4)

Select (CL) data to be completed in the ‘List-SIM’ dialog box and select (CL) [Complete].

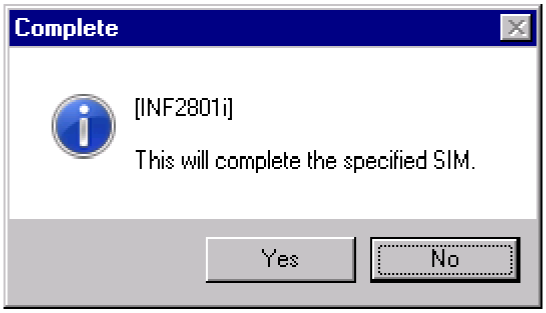


Total: 60 Completed: 38

Date/Time	Reference	Level	Status
2009/04/06 15:18:40	21d082	Moderate	Initial
2009/04/06 15:18:40	21d080	Moderate	Initial
2009/04/01 09:08:04	d45000	Serious	Initial
2009/03/30 21:27:49	ef1103	Serious	Initial
2009/03/30 21:27:49	ef1183	Serious	Initial
2009/03/30 21:27:49	ef9183	Serious	Initial
2009/03/30 21:09:55	650002	Moderate	Initial
2009/03/25 13:00:14	bf5211	Moderate	Initial
2009/03/25 13:00:14	bf5111	Moderate	Initial
2009/03/25 13:00:14	bf5011	Moderate	Initial
2009/03/25 13:00:14	bf5210	Moderate	Initial
2009/03/25 13:00:13	bf5110	Moderate	Initial

(5)

Select (CL) [Yes] in the ‘Complete’ dialog box.



Complete

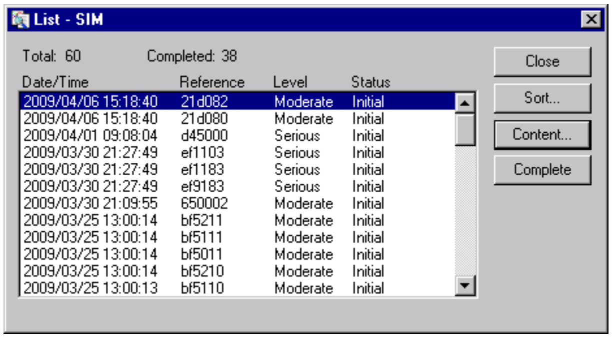
[INF2801i]

This will complete the specified SIM.

---

(6)

In the ‘List-SIM’ dialog box, make sure that “Completed” is displayed in the Status.



Total: 60 Completed: 38

Date/Time	Reference	Level	Status
2009/04/06 15:18:40	21d082	Moderate	Initial
2009/04/06 15:18:40	21d080	Moderate	Initial
2009/04/01 09:08:04	d45000	Serious	Initial
2009/03/30 21:27:49	ef1103	Serious	Initial
2009/03/30 21:27:49	ef1183	Serious	Initial
2009/03/30 21:27:49	ef9183	Serious	Initial
2009/03/30 21:09:55	650002	Moderate	Initial
2009/03/25 13:00:14	bf5211	Moderate	Initial
2009/03/25 13:00:14	bf5111	Moderate	Initial
2009/03/25 13:00:14	bf5011	Moderate	Initial
2009/03/25 13:00:14	bf5210	Moderate	Initial
2009/03/25 13:00:13	bf5110	Moderate	Initial

---

(7)

Select (CL) [Close] in the ‘List-SIM’ dialog box.
Close the ‘Log’ dialog box and close the ‘Information’ window.
Change the mode from [Modify Mode] to [View Mode].

Note: Even if SIM Complete was performed, the MESSAGE of the Operator Panel may be on. Display all the SIMs to make sure they are completed. If not, please wait for 5 minutes and operate SIM Log Complete again.

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2. <Maintenance window>
In the ‘Maintenance’ window, check the status of subsystem.
Recover the parts if the other parts are blocked.
Close the ‘Maintenance’ window if there is no problem.

---

3. <Changing the SVP operation mode>
In the ‘SVP’ window, change the mode to [View Mode].

Please up-load trouble information gathered in console PC to the server by using OnlineDumpTool. (SVP02-1900)