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 center 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.

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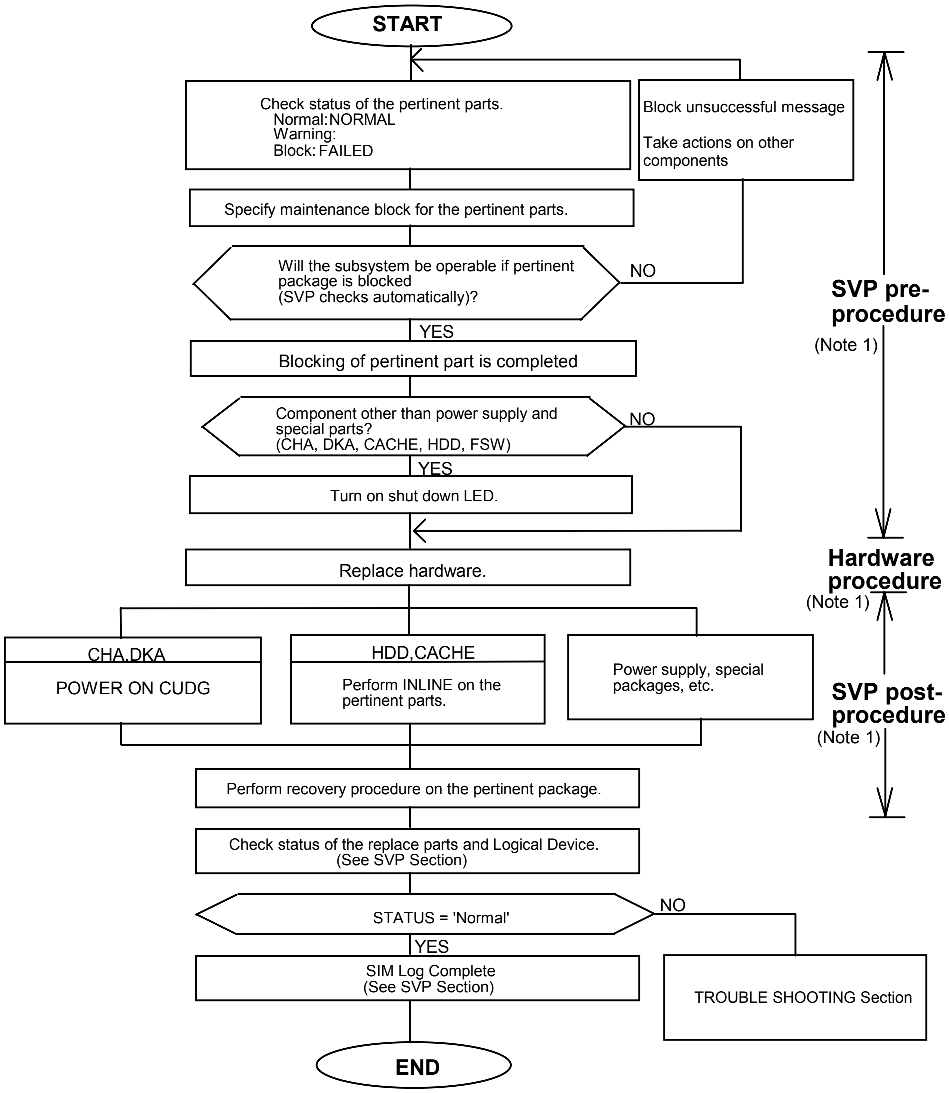
1 Hot Replace

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, FSW)
NO
YES
Turn on shut down LED.
Replace hardware.
CHA,DKA
POWER ON CUDG
HDD,CACHE
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 1)
Hardware procedure
(Note 1)
SVP post-procedure
(Note 1)

Note 1:

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.

Hard ware procedure: A process of removing a parts to be replaced (shut down LED on) and installing a maintenance package.

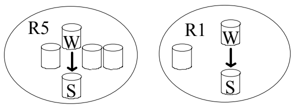
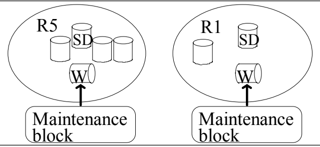
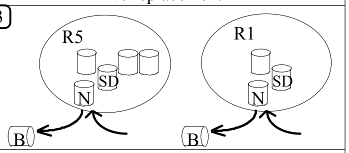
Be sure to wear your wrist strap, and attach to ground, prior to performing the following work.
This will insure that the IC and LSI on the PCB, are protected from static electricity.

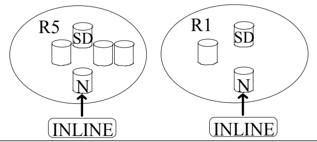
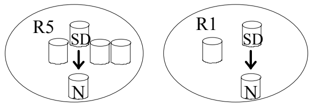
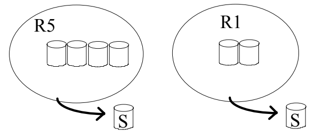
SVP post-procedure: An SVP (PC) process of making functional checks (CUDG and INLINE) on the replacement package and building it into the subsystem.

1.2 Concept of Drive Maintenance

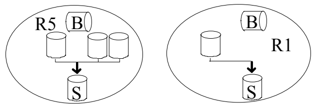
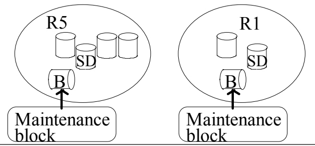
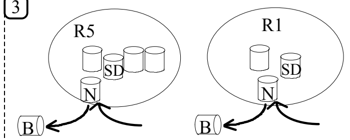
[Spare drive present]

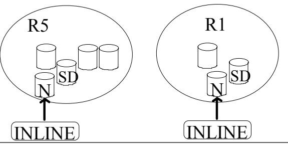
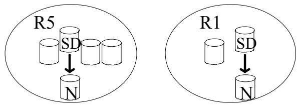
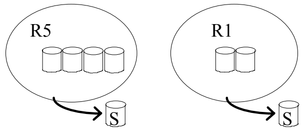
[Case 1]

Condition item		Condi-tion	Procedure		
			Pre-procedure B		Hardware-Procedure A
			Threshold value exceeded	Maintenance block	Drive replacement
Threshold value exceeded	Warning	○	1 Automatic spare save 	2  R5 SD W Maintenance block R1 SD W Maintenance block	3  R5 SD N B R1 SD N B
	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)		

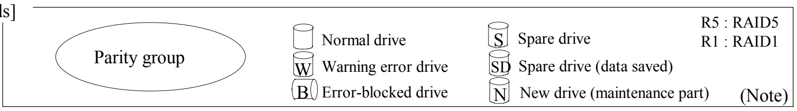
Procedure		
Post-procedure a		
INLINE	Copy back	Recover
4  R5 SD N INLINE R1 SD N INLINE	5  R5 SD N R1 SD N	6 
① Block new drive (case 8)	① Block source drive (case 9) ② Block destination (case 8)	

[Case 2]

Condition item		Condi-tion	Procedure		
			Pre-procedure B		Hardware-Procedure A
			Block one drive	Maintenance block	Drive replacement
Threshold value exceeded	Warning	-	1 Automatic correction copy 	2  R5 SD B Maintenance block R1 SD B Maintenance block	3  R5 SD N B R1 SD N B
	Block	○			
Other case (secondary measure)			① Block destination a) Unused spare present (case 10) b) Unused spare absent (case 11)		

Procedure		
Post-procedure a		
INLINE	Copy back	Recover
4  R5 SD N INLINE R1 SD N INLINE	5  R5 SD N R1 SD N	6 
① Block new drive (case 8)	① Block source drive (case 9) ② Block destination (case 8)	

[Legends]

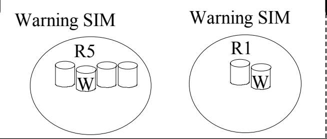
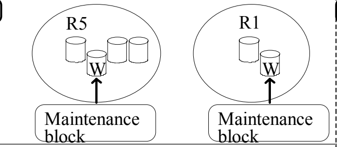
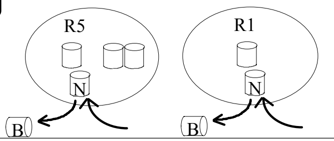


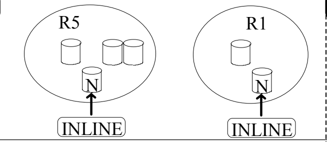
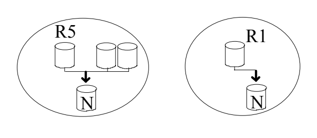
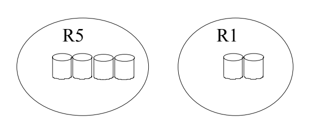
Parity group
Normal drive
W Warning error drive
B Error-blocked drive
S Spare drive
SD Spare drive (data saved)
N New drive (maintenance part)
R5 : RAID5
R1 : RAID1
(Note)

(Note) In RAID 1 method, Parity group consists of four drives.

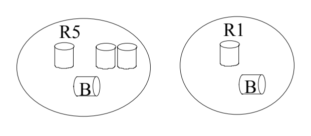
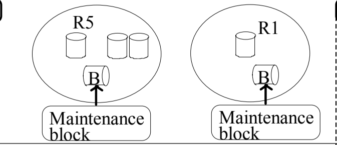
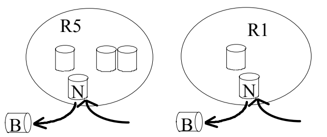
[Spare drive absent]

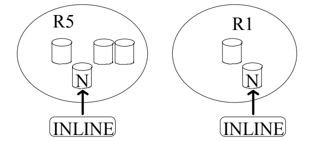
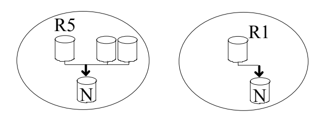
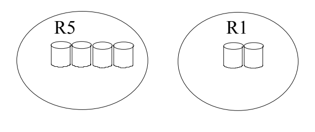
[Case 3]

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

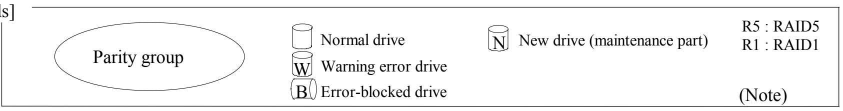
Procedure		
Post-procedure b		
INLINE	Correction copy	Recover
4  R5 N INLINE R1 N INLINE	5 	6 
① Block new drive (case 5)	① Block destination (case 5)	

[Case 4]

Condition item		Condi-tion	Procedure		
			Pre-procedure D		Hardware-Procedure A
			Block one drive	Maintenance block	Drive replacement
Threshold value exceeded	Warning	-	1 	2  R5 B Maintenance block R1 B Maintenance block	3 
	Block	○			
Other case (secondary measure)					

Procedure		
Post-procedure b		
INLINE	Correction copy	Recover
4  R5 N INLINE R1 N INLINE	5 	6 
① Block new drive (case 5)	① Block destination (case 5)	

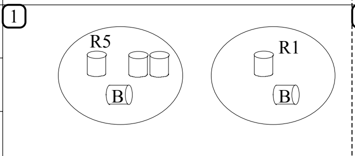
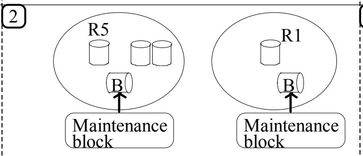
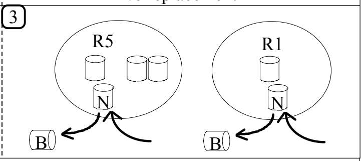
[Legends]

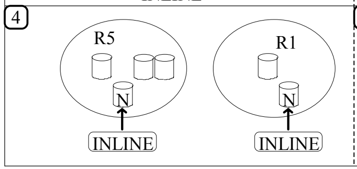
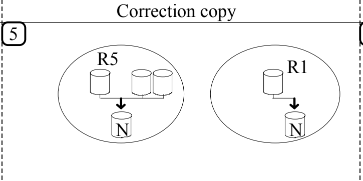
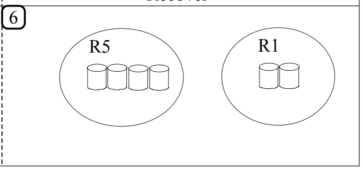

Parity group
Normal drive
W Warning error drive
B Error-blocked drive
N New drive (maintenance part)
R5 : RAID5
R1 : RAID1
(Note)

(Note) In RAID 1 method, Parity group consists of two drives.

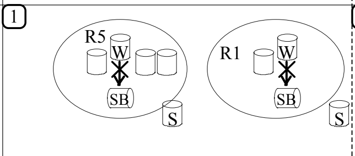
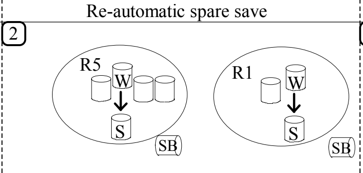
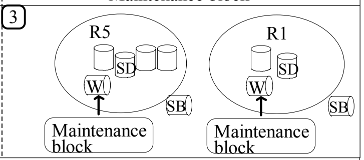
[Case in which a secondary error occurred during error]

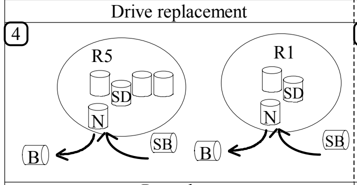
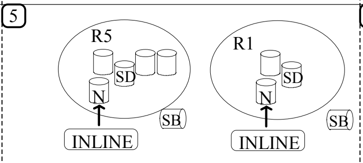
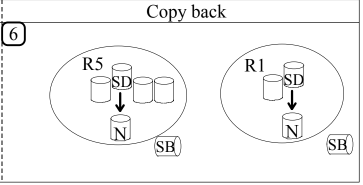
[Case 5]

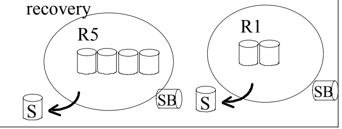
Condition item	Procedure		
	Pre-procedure D		Hardware-Procedure A
		Maintenance block	Drive replacement
Blocked during INLINE	1 	2  R5 B Maintenance block R1 B Maintenance block	3 
Destination blocked during correction copy			

Procedure		
Post-procedure b		
INLINE	Correction copy	Recover
4  R5 N INLINE R1 N INLINE	5 	6 

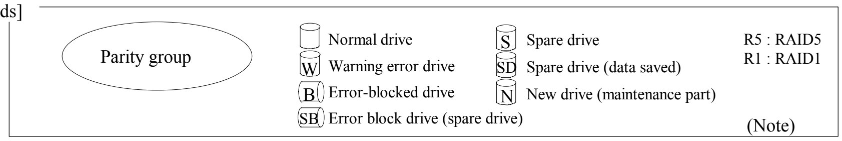
[Case 6]

Condition item	Procedure		
	Pre-procedure B		
		Re-automatic spare save	Maintenance block
Destination blocked during automatic spare save (unused spare present)	1  R5 W SB S R1 W SB S	2  R5 W S SB R1 W S SB	3  R5 SD W SB Maintenance block R1 SD W SB Maintenance block

Procedure		
Hardware-Procedure A	Post-procedure a	
Drive replacement	INLINE	Copy back
4  R5 SD N B SB R1 SD N B SB	5  R5 SD N INLINE SB R1 SD N INLINE SB	6  R5 SD N SB R1 SD N SB

Procedure
Post-procedure a
Recovery
7 Perform [case 12] after recovery  R5 S SB R1 S SB

[Legends]

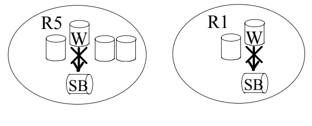
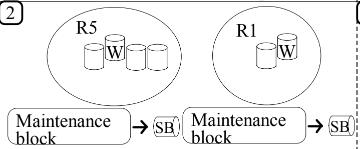
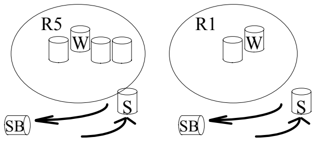
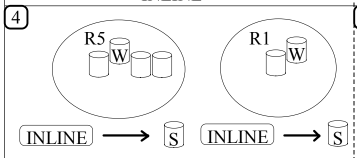
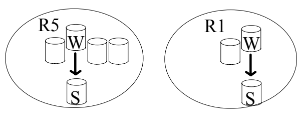
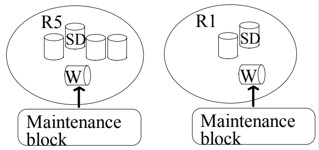
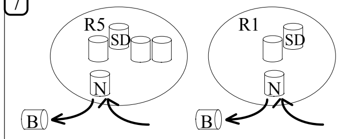
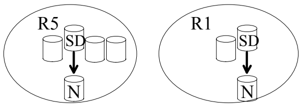
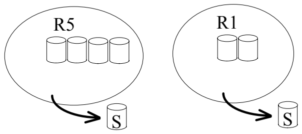


Parity group
Normal drive
W Warning error drive
B Error-blocked drive
SB Error block drive (spare drive)
S Spare drive
SD Spare drive (data saved)
N New drive (maintenance part)
R5 : RAID5
R1 : RAID1
(Note)

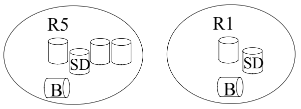
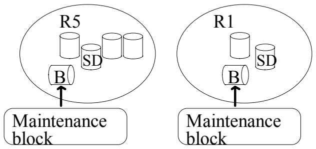
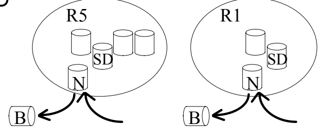
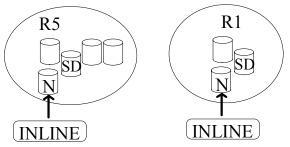
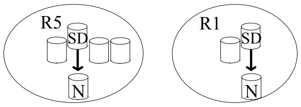
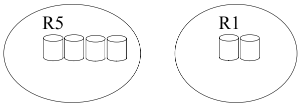
(Note) In RAID 1 method, Parity group consists of two drives.

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

[Case 7]

Condition item	Procedure		
	Pre-procedure D		Hardware-Procedure A
		Maintenance block on spare	Spare drive replacement
Destination blocked during automatic spare save (unused spare absent)	1  R5 W SB R1 W SB	2  R5 W R1 W Maintenance block SB Maintenance block SB	3  R5 W S SB R1 W S SB
	Procedure		
	Post-procedure d	Pre-procedure C	
	INLINE	Spare save	Maintenance block
	4  R5 W R1 W INLINE S INLINE S	5 	6  R5 SD W Maintenance block R1 SD W Maintenance block
	Procedure		
	Hardware-Procedure A	Post-procedure a	
	Drive replacement	Copy back	Recovery
	7  R5 SD N B R1 SD N B	8  R5 SD N R1 SD N	9 

[Case 8]

Condition item	Procedure		
	Pre-procedure D		Hardware-Procedure A
	New drive block	Maintenance block	Drive replacement
New drive blocked (spare saved) New drive blocked (correction copy performed) Destination blocked during copy back	1  R5 SD B R1 SD B	2  R5 SD B Maintenance block R1 SD B Maintenance block	3  R5 SD N B R1 SD N B
	Procedure		
	Post-procedure a		
	INLINE	Copy back	Recovery
	4  R5 SD N INLINE R1 SD N INLINE	5  R5 SD N R1 SD N	6 

[Legends]

Parity group

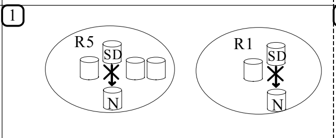
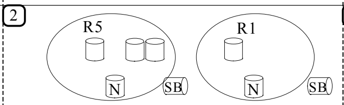
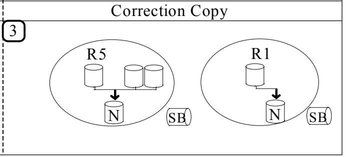
Normal drive	S Spare drive
W Warning error drive	SD Spare drive (data saved)
B Error-blocked drive	N New drive (maintenance part)
SB Error block drive (spare drive)	

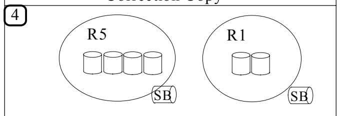
R5 : RAID5
R1 : RAID1
(Note)

(Note) In RAID 1 method, Parity group consists of two drives.

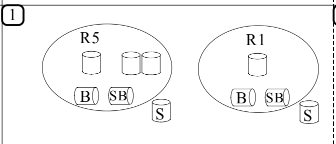
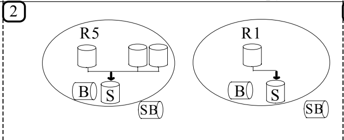
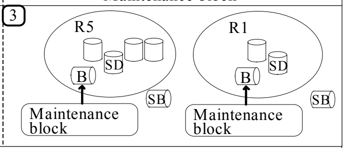
[Case in which a secondary error occurred during error recovery]

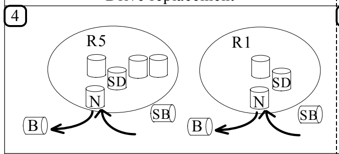
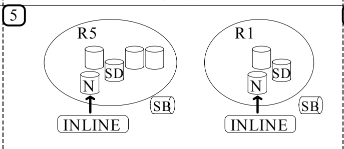
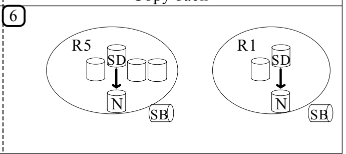
[Case 9]

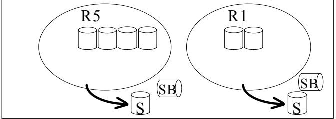
Condition item	Procedure		
	Pre-procedure D		Post-procedure b
			Correction Copy
Source blocked during copyback	1  R5 SD N R1 SD N	2  R5 N SB R1 N SB N : Incomplete status	3  R5 N SB R1 N SB

Procedure
Post-procedure b
Correction Copy
4  After recovering execute [Case 12].

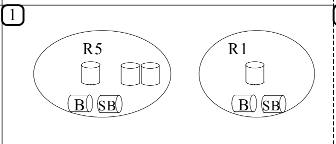
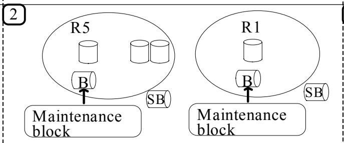
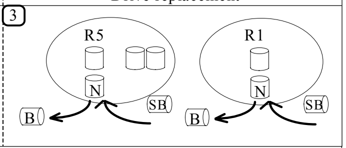
[Case 10]

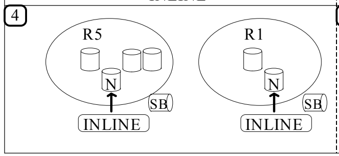
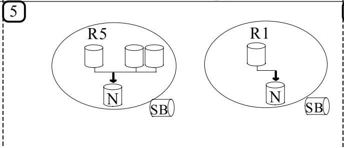
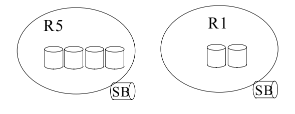
Condition item	Procedure		
	Pre-procedure B		
		Re-automatic correction copy	Maintenance block
Destination blocked during automatic correction copy (unused spare present)	1  R5 B SB S R1 B SB S	2  R5 B S SB R1 B S SB	3  R5 SD B SB Maintenance block R1 B SD SB Maintenance block

Procedure		
Hardware-Procedure A	Post-procedure a	
Drive replacement	INLINE	Copy back
4  R5 SD N SB B R1 SD N SB B	5  R5 SD N SB INLINE R1 SD N SB INLINE	6  R5 SD N SB R1 SD N SB

Procedure
Post-procedure g
Recovery
7 Perform [Case 12] after recovery  R5 SB S R1 SB S

[Case 11]

Condition item	Procedure		
	Pre-procedure D		Hardware-Procedure A
		Maintenance block	Drive replacement
Destination blocked during automatic correction copy (unused spare absent)	1  R5 B SB R1 B SB	2  R5 B SB Maintenance block R1 B SB Maintenance block	3  R5 N SB B R1 N SB B

Procedure		
Post-procedure b		
INLINE	Correction copy	Recovery
4  R5 N SB INLINE R1 N SB INLINE	5  R5 N SB R1 N SB	6 Perform [Case 12] after recovery 

[Legends]

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

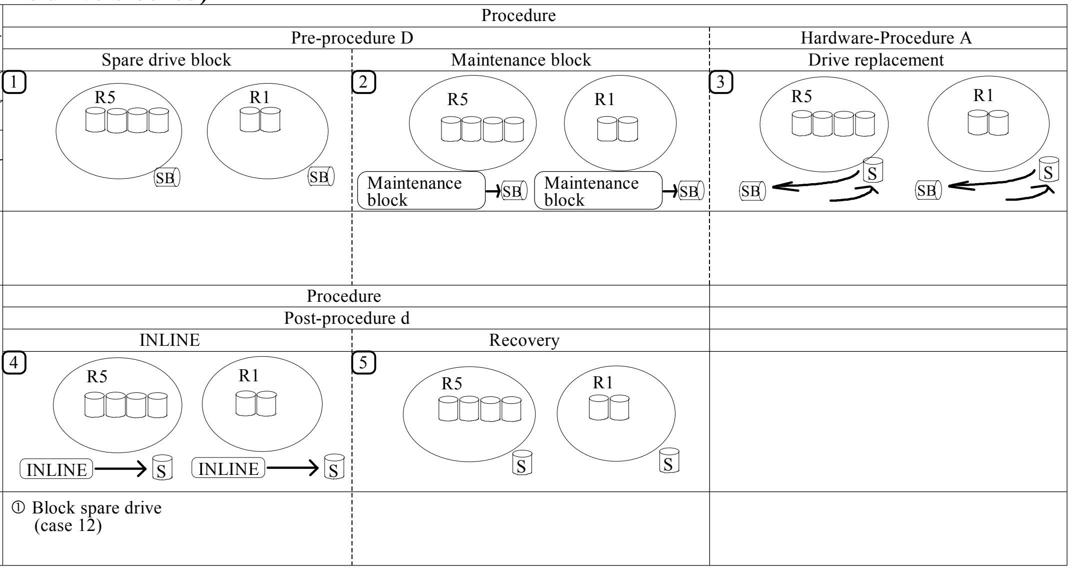
(Note) In RAID 1 method, Parity group consists of two drives.

[Other Cases]

[Case 12] (Spare drive blocked)

Condition item		Condition
Threshold value exceeded	Warning	
	Block	
Error block SIM		○

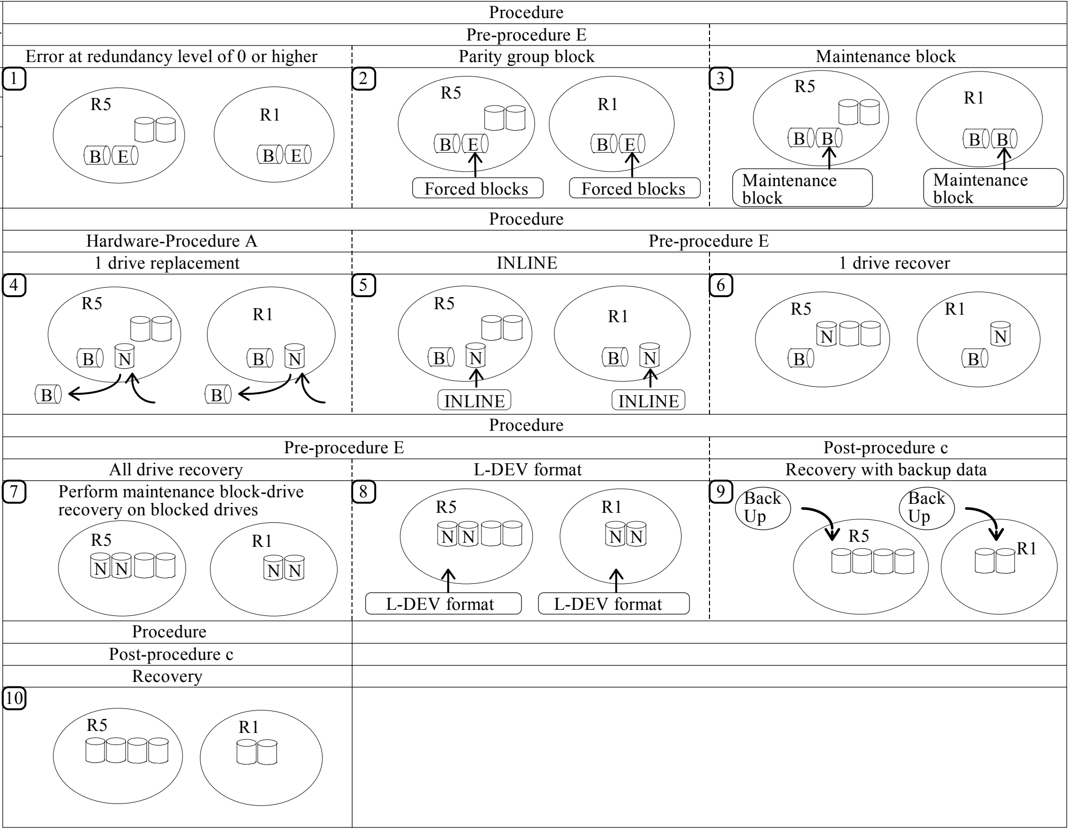
Other case (secondary measure)


Procedure
Pre-procedure D
Hardware-Procedure A
Spare drive block
Maintenance block
Drive replacement
1
R5
R1
SB
SB
2
R5
R1
Maintenance block
SB
Maintenance block
SB
3
R5
R1
S
SB
S
SB
Procedure
Post-procedure d
INLINE
Recovery
4
R5
R1
INLINE
S
INLINE
S
5
R5
R1
S
S
① Block spare drive (case 12)

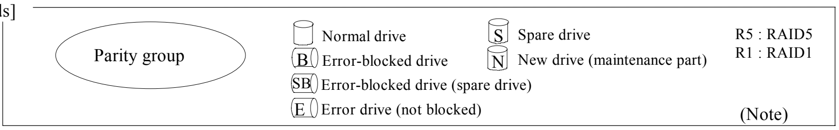
Other case (secondary measure)

[Case 13] (Case in which a block level error occurred in a normal drive with a redundancy level of 0)

Condition item		Condition
Threshold value exceeded	Warning	-
	Block	○ or
Error block SIM		○


Procedure
Pre-procedure E
Error at redundancy level of 0 or higher
Parity group block
Maintenance block
1
R5
R1
B
E
B
E
2
R5
R1
B
E
B
E
Forced blocks
Forced blocks
3
R5
R1
B
B
B
B
Maintenance block
Maintenance block
Procedure
Hardware-Procedure A
Pre-procedure E
1 drive replacement
INLINE
1 drive recover
4
R5
R1
B
N
B
B
N
B
5
R5
R1
B
N
B
N
INLINE
INLINE
6
R5
R1
N
B
N
B
Procedure
Pre-procedure E
Post-procedure c
All drive recovery
L-DEV format
Recovery with backup data
7
Perform maintenance block-drive recovery on blocked drives
R5
R1
N
N
N
N
8
R5
R1
N
N
N
N
L-DEV format
L-DEV format
9
Back Up
R5
Back Up
R1
Procedure
Post-procedure c
Recovery
10
R5
R1

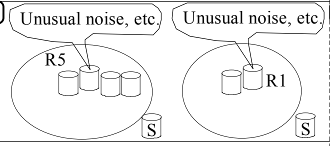
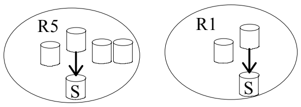
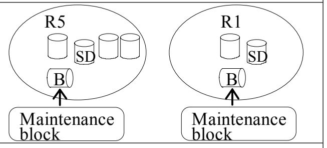
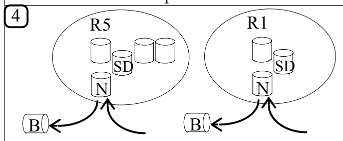
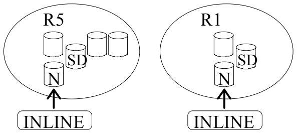
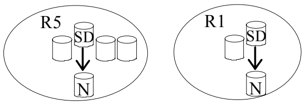
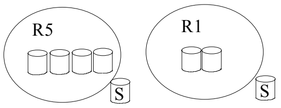
[Legends]


Parity group
Normal drive
B Error-blocked drive
SB Error-blocked drive (spare drive)
E Error drive (not blocked)
S Spare drive
N New drive (maintenance part)
R5 : RAID5
R1 : RAID1
(Note)

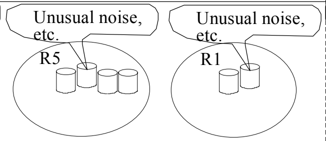
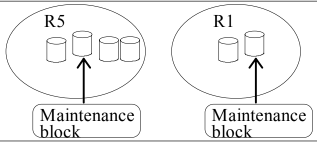
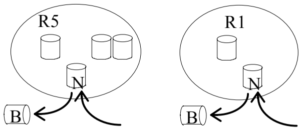
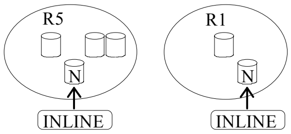
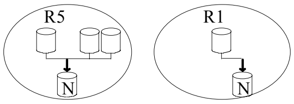
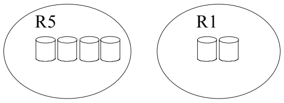
(Note) In RAID 1 method, Parity group consists of two drives.

[Other cases]

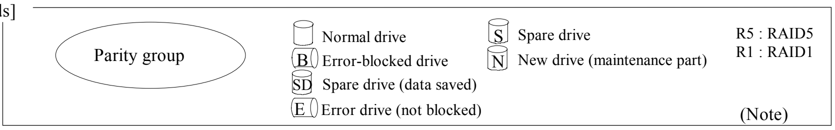
[Case 14] (Preventive drive replacement 1)

Condition item		Condi-tion	Procedure		
			Pre-procedure C		
			Replacement	Spare save	Maintenance block
Threshold value exceeded	Warning	-	1  Unusual noise, etc. Unusual noise, etc. R5 R1 S S	2 	3  R5 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 A	Post-procedure a	
			Drive replacement	INLINE	Copy back
			4  R5 R1 SD SD N N B B	5  R5 R1 SD SD N N INLINE INLINE	6  R5 R1 SD SD N N
Other case (secondary measure)				① Block new drive (case 8)	① Block source drive (case 9) ② Block destination drive (case 8)
			Procedure		
			Post-procedure a		
			Recovery		
			7 		

[Case 15] (Preventive drive replacement 2)

Condition item		Condi-tion	Procedure		
			Pre-procedure D		Hardware Procedure A
			Replacement	Maintenance block	Drive replacement
Threshold value exceeded	Warning	-	1  Unusual noise, etc. Unusual noise, etc. R5 R1	2  R5 R1 Maintenance block Maintenance block	3 
	Block	-			
Others (unusual noise, etc)		○			
Spare drive		-			
Other case (secondary measure)					
			Procedure		
			Post-procedure b		
			INLINE	Correction copy	Recovery
			4  R5 R1 N N INLINE INLINE	5 	6 
Other case (secondary measure)			① Block new drive (case 5)	① 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

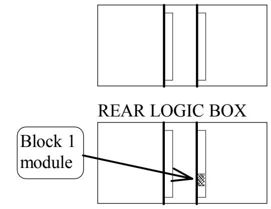
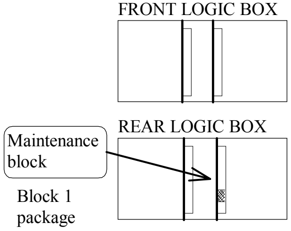
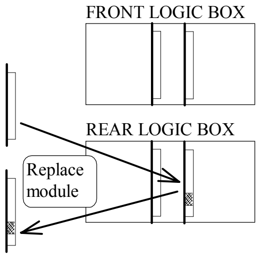
(Note)

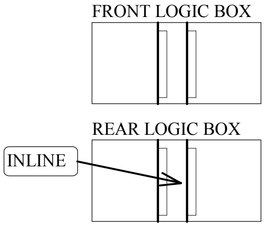
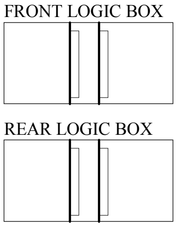
(Note) In RAID 1 method, Parity group consists of two drives.

1.3 Concept of Cache Maintenance

[Case 1]

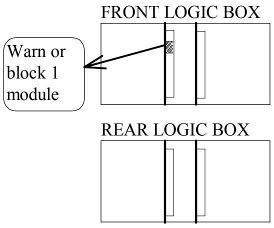
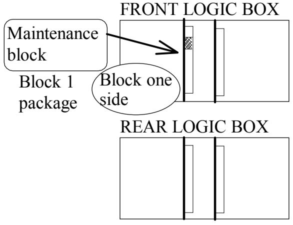
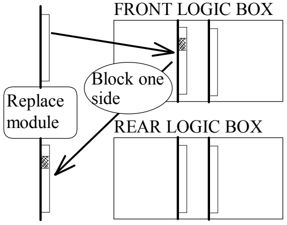
Condition item		Condition
Threshold value exceeded	Warning	
	Block	○
CACHE (WP440-B)		○
CACHE with SM (WP440-A)		-
CACHE space:1G ~ 64G		

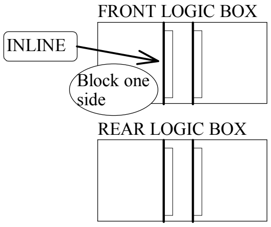
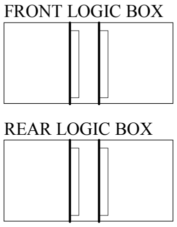
Procedure		
Pre-procedure A, F		Hardware Procedure B
Block	Maintenance block	PCB replacement
1  FRONT LOGIC BOX REAR LOGIC BOX Block 1 module	2  FRONT LOGIC BOX Maintenance block REAR LOGIC BOX Block 1 package	3  FRONT LOGIC BOX REAR LOGIC BOX Replace module

Procedure		
Post-procedure e		
INLINE	Recovery	
4  FRONT LOGIC BOX REAR LOGIC BOX INLINE	5  FRONT LOGIC BOX REAR LOGIC BOX	

[Case 2]

Condition item		Condition
Threshold value exceeded	Warning	
	Block	○
CACHE (WP440-B)		-
CACHE with SM (WP440-A)		○
CACHE space:1G ~ 64G		

Procedure		
Pre-procedure A, F		Hardware Procedure B
Block	Maintenance block	PCB replacement
1  FRONT LOGIC BOX Warn or block 1 module REAR LOGIC BOX	2  FRONT LOGIC BOX Maintenance block Block 1 package Block one side REAR LOGIC BOX	3  FRONT LOGIC BOX Replace module Block one side REAR LOGIC BOX
① Block one side for SM ② For cache, block one side if the size of the rest of cache is a quarter (one side)		

Procedure		
Post-procedure e		
INLINE	Recovery	
4  FRONT LOGIC BOX INLINE Block one side REAR LOGIC BOX	5  FRONT LOGIC BOX REAR LOGIC BOX	

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 REP01-150. 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 REP01-150.
- Take actions according to the SVP pre-procedure, hardware procedure, SVP post-procedure number that match the work ID.

Note : See page REP01-130 for the procedure for searching a work ID to replace a drive.
When replacing a drive, be sure to see page REP01-110 and REP01-120.

[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 REP01-150.

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

Note : See page REP01-130 for the procedure for searching the work ID to replace a drive.
When replacing a drive, be sure to see page REP01-110 and REP01-120.

------------------- ----------------------------<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>

Work ID	Part name	Procedure			Replacing time
		SVP re-procedure	Hardware procedure	SVP post-procedure	
RCA1	CACHE with SM (WP440-A)	Pre A, pre F	Hardware B	Post e	15 minutes
RCA2					

PROCEDURE BEFORE PDEV EXCHANGE AND CORRECTION COPY

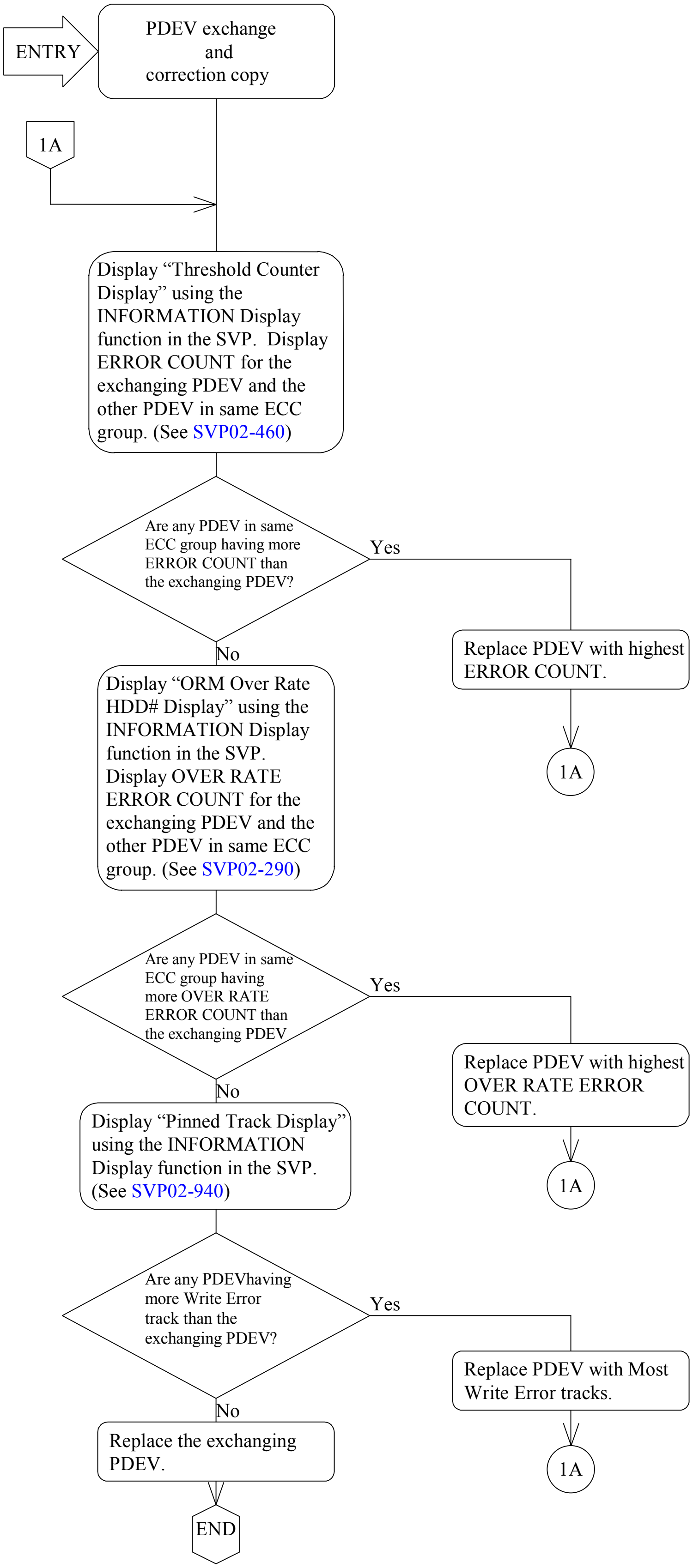
Instructions before blocking and exchanging PDEV with a drive failure error is listed below.

When exchanging unblocked PDEV, redundancy in the ECC group is lost. Therefor, 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.

Before PDEV exchange, following items are checked.

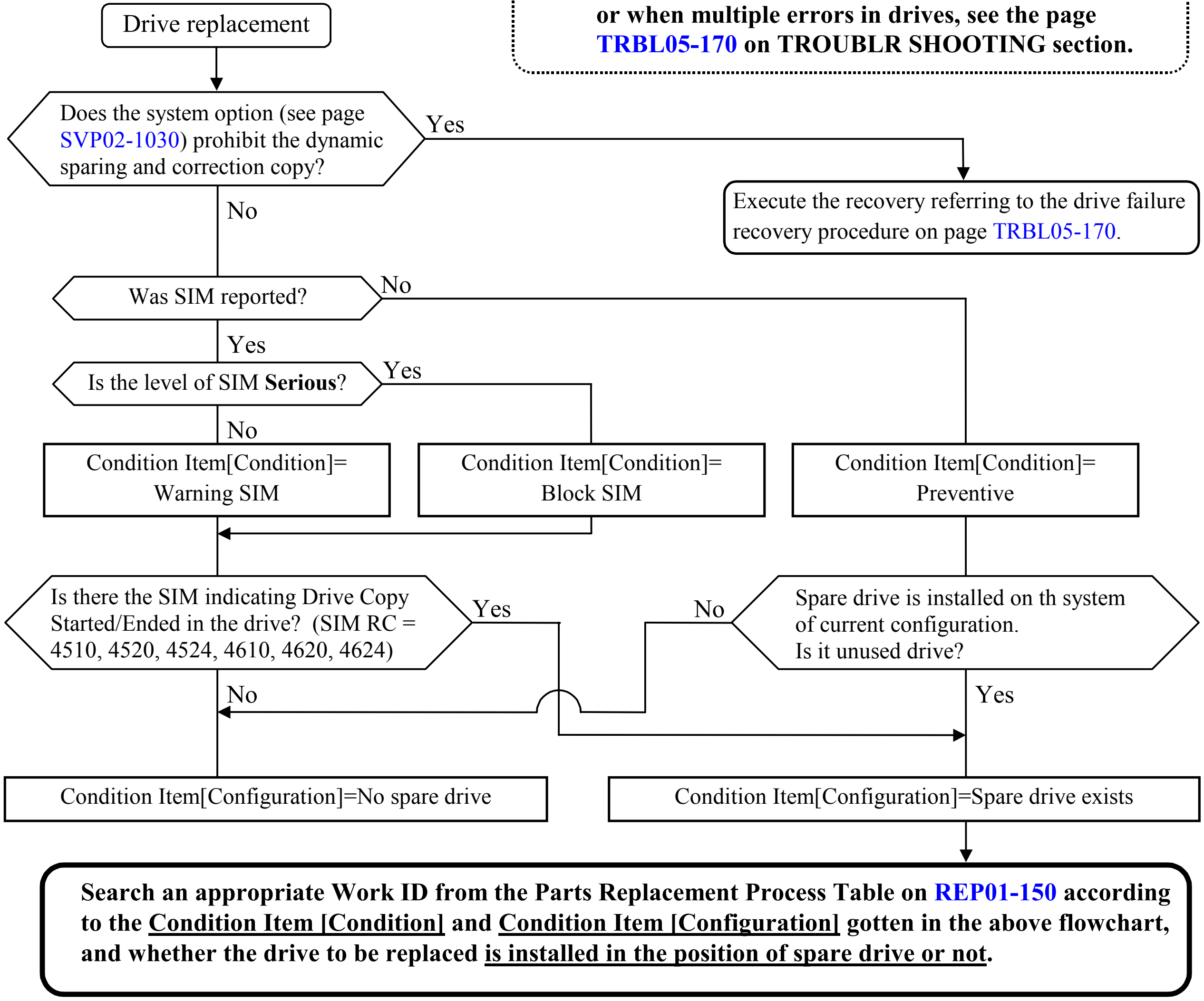
#	Items checked	Procedure
1	Error Count	“Threshold Counter Display” (See SVP02-460)
2	ORM Over Rate	“ORM Over Rate HDD# Display” (See SVP02-290)
3	Write Error	“Pinned Track Display” (See SVP02-940)

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 SVP02-460)
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 SVP02-290)
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 Display” using the INFORMATION Display function in the SVP. (See SVP02-940)
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 TRBL05-170 on TROUBLR SHOOTING section.


Drive replacement
Does the system option (see page SVP02-1030) prohibit the dynamic sparing and correction copy?
Yes
Execute the recovery referring to the drive failure recovery procedure on page TRBL05-170.
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 th 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 REP01-150 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 Image of replacement	
		Condition			Configu-ration	SVP pre-procedure	Hardware procedure	SVP post-procedure	Outline	Case
		Failure		Preven-tive	Unused spare drive					Refer to "1.2 Concept of Drive Maintenance" on REP01-20.
		Warning SIM	Block SIM							
RDK1	Data Drive	×	-	-	Yes	Pre A, Pre B *1	Hard A *1	Post a *1	Drive replacement ~ Copy back	Case 1
RDK2	Data Drive	-	×	-	Yes					

1.5 Parts Replacement Process Table

<Data Drive, Spare Drive>

Work ID	Parts Name	Condition Item				Procedure Note 1			Reference information		
		Condition			Configu-ration	SVP pre-procedure	Hardware procedure	SVP post-procedure	Replacing time Note 3	Outline	Case Note 2
		Failure			Unused Spare drive						
		Warning SIM	Block SIM	Preven-tive							
RDK1	Data Drive Note 4	×	-	-	Yes	Pre A, Pre B Note 1	Hardware A Note 1	Post a, Post z Note 1	20 min	Drive replace ~ Copy back	Case1
RDK2	Data Drive Note 4	-	×	-	Yes	Pre A, Pre B Note 1	Hardware A Note 1	Post a, Post z Note 1	20 min	Drive replace ~ Copy back	Case 2
RDK3	Data Drive Note 4	-	-	×	Yes	Pre A, Pre C, Pre B Note 1	Hardware A Note 1	Post a, Post z Note 1	—	Copy to Spare drive ~ Drive replace ~ Copy back	Case 14
RDK4	Data Drive Note 4,7	×	-	-	No	Pre A, Pre D Note 1	Hardware A Note 1	Post b, Post z Note 1	20 min	Drive replace ~ Correction copy	Case 3
RDK5	Data Drive Note 4,7	-	×	-	No	Pre A, Pre D Note 1	Hardware A Note 1	Post b, Post z Note 1	20 min	Drive replace ~ Correction copy	Case 4
RDK6	Data Drive Note 4,7	-	-	×	No	Pre A, Pre D Note 1	Hardware A Note 1	Post b, Post z Note 1	20 min	Drive replace ~ Correction copy	Case 15
RDK7 Note 5 Note 6	Data Drive Note 4	Note 5				Pre A, Pre E Note 1	Hardware A Note 1	Post c, Post z Note 1	—	LDEV formatting after replacing all the HDDs blocked in a parity group Note 6	Case 13
RDK8	Spare Drive Note 4	-				Pre A, Pre D Note 1	Hardware A Note 1	Post d, Post z Note 1	20 min	Spare drive replace	Case 12

Note 1) Refer to REP01-190

Note 2) Refer to REP01-20

Note 3) This time does not include copy back time of data in HDD.

Note 4) Parts Name is 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.

Note 5) RDK7 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.
When the procedures instructed by RDK7 are executed, data will be lost. Ask the technical support center about the appropriateness of the operation.

Note 6) Confirm the parity group and the LDEV No. corresponding to the HDD through the SVP STATUS. See page SVP03-130 for the procedure for referring to SVP STATUS.

Note 7) See “PROCEDURE BEFORE PDEV EXCHANGE AND CORRECTION COPY” (REP01-110).

Note : If a Work ID cannot be found or if multiple drive error is occurring, see page TRBL05-170 on TROUBLE SHOOTING section.

<Cache>

Work ID	Part Name	Procedure *1			*2 Replacing Time
		SVP Pre-procedure	Hardware procedure	SVP post-procedure	
RCA1	CACHE (with SM) (WP490-A)	Pre A, Pre F	Hardware B	Post e, Post z	15 min

*1 Refer to REP01-190
*2 This time does not include destaging time

Note : Cache PCB Exchange for preventive cause cache close.
Therefore subsystem ability may fall.

<Channel Adapter, Disk Adapter, FSW, and CARB Switch>

Work ID	Parts Name	Procedure *1			Replacing Time
		SVP Pre-procedure	Hardware procedure	SVP Post-procedure	
RCH1	Serial CHA	Pre A, Pre H	Hardware C	Post f, Post z	20 min
RCH5	Fibre CHA	Pre A, Pre H	Hardware D	Post f, Post z	20 min
RCH6	MF Fibre CHA	Pre A, Pre H	Hardware E	Post f, Post z	20 min
RDA1	DKA	Pre A, Pre H	Hardware F	Post f, Post z	20 min
RFS1	FSW	Pre A, Pre L	Hardware T20	Post j, Post z	13 min
RCS1	CSW	Pre A, Pre M	Hardware G	Post k, Post z	13 min

*1 Refer to REP01-190

If a failure occurs in replacing a channel adaptor or a disk adaptor, see “Error Recovery Procedure during CHA/DKA replacement” (TRBL05-100).
If a failure occurs in replacing a CARB Switch, see “Recovery procedure when CSW PCB replacement failed” (TRBL05-560).

<DKC, special P/K, Fan, Others>

Work ID	Parts Name	Procedure Note 1)			Replacing Time
		SVP pre-procedure	Hardware procedure	SVP post-procedure	
RT1	DKC Panel	Pre A, Pre T1	Hardware T1	Post t1, Post z	16 min
RT4	EPO SW	Pre A, Pre T1	Hardware T2	Post t1, Post z	12 min
RT5	DKCMN	Pre A, Pre T1	Hardware T3	Post t1, Post z	22 min
RT6	PCI CON Note 2)	Pre A, Pre T1	Hardware T4	Post t1, Post z	16 min
RT8	Fan assembly(DKC)	Pre A, Pre T3	Hardware T5	Post t3, Post z	8 min
RT9	Thermostat assembly	Pre A, Pre T3	Hardware T6	Post t3, Post z	8 min
RT10	SVP/Flash Memory Card	Pre A, Pre T1 Note 3)	Hardware T7	Post t1	40 min
		Pre A, Pre T5 Note 4)	Hardware T7	Post t5, Post z	60 min
RT11	SSVP	Pre A, Pre T1	Hardware T8	Post t1, Post z	29 min
RT14	Battery Box	Pre A, Pre T3	Hardware T11	Post t3, Post z	11 min
RT15	BAT CTR	Pre A, Pre T3	Hardware T12	Post t3, Post z	8 min
RT17	RS CON	Pre A, Pre T1	Hardware T19	Post t1, Post z	8 min
RT18	Flash Memory Card	Pre A, Pre T1	Hardware T7	Post t1, Post z	15 min
RT35	AC BOX-0, AC BOX-1 (Single Phase/50A Model)	Pre A, Pre T4	Hardware T21	Post t4, Post z	28 min
RT36	AC BOX-0, AC BOX-1 (3 Phase/30A Model)	Pre A, Pre T4	Hardware T21	Post t4, Post z	28 min
RT16	SVPPS	Pre A, Pre T3	Hardware T23	Post t3, Post z	8 min
RT38	HUB Box	Pre A, Pre T1	Hardware T25	Post t1, Post z	20 min
RT40	SVPPS Box Note 4)	Pre A, Pre T1	Hardware T26	Post t1, Post z	8 min
RT6	UPS CON	Pre A, Pre T1	Hardware T27	Post t1, Post z	16 min
	AC BOX-0, AC BOX-1 (Single Phase/30A Model)	Pre A, Pre T1	Hardware T21	Post t4	

Note 1) Refer to REP01-190

Note 2) All connected devices to DKC465I are powered off by EPO signal of PCI when the PCI CON PCB is removed.
Prevent the trouble for connected devices from EPO signal.

Note 3) When SVP is not able to operate, start from Hardware procedure. (When SVP High Reliability Kit is not installed.)

Note 4) Valid when SVP High Reliability Kit is installed.

<DKC Power Supply>

Work ID	Parts Name	Procedure Note 1) SVP pre-procedure	Hardware procedure	SVP post-procedure	Replacing Time
RT20	SW PS(LOGIC,5/3V)	Pre A, Pre T3	Hardware T13	Post t3, Post z	
RT23	SW PS(LOGIC,Sub PS)	Pre A, Pre T3	Hardware T13	Post t3, Post z	
RT26	SW PS(LOGIC,3.3V)	Pre A, Pre T3	Hardware T13	Post t3, Post z	

Note 1) Refer to REP01-190.

<DKU, Special P/K, Power Supply, Fan>

Work ID	Parts Name	Procedure Note 1) SVP pre-procedure	Hardware procedure	SVP post-procedure	Replacing Time
RT37	JMP	Pre A, Pre T4	Hardware T24	Post t4, Post z	10 min
RT30	SW PS(DKU Multi)	Pre A, Pre T4 Note 2)	Hardware T15	Post t4, Post z	10 min
RT31	Fan assembly(DKU)	Pre A, Pre T4 Note 2)	Hardware T16	Post t4, Post z	5 min

Note 1) Refer to REP01-190.
Note 2) When SVP is not able to operate, start from Hardware procedure.

1.6 Procedure contents table

SVP Pre	GO TO
Pre A	REP02-10
Pre B	REP02-30
Pre C	REP02-90
Pre D	REP02-130
Pre E	REP02-180
Pre F	REP02-240
Pre H	REP02-300
Pre K	REP02-370
Pre L	REP02-410
Pre M	REP02-460
Pre T1	REP02-510
Pre T3	REP02-660
Pre T4	REP02-750
Pre T5	REP02-820
Pre V	REP02-880

Hardware		GO TO
Procedure	Parts Name	
Hardware A	HDD Canister	REP03-10
Hardware B	Cache Memory PCB	REP03-50
Hardware C	Serial CHA	REP03-80
Hardware D	Fibre CHA	REP03-110
Hardware E	Mainframe Fibre CHA	REP03-140
Hardware F	DKA	REP03-170
Hardware G	CSW	REP03-200
Hardware T1	DKC Panel	REP03-230
Hardware T2	EPO Switch	REP03-280
Hardware T3	DKCMN	REP03-330
Hardware T4	PCI CON	REP03-360
Hardware T5	Fan Assembly(DKC)	REP03-410
Hardware T6	Thermostat Assembly	REP03-430
Hardware T7	• SVP • Flash Memory Card • Additional SVP Memory	REP03-450
Hardware T8	SSVP	REP03-550
Hardware T11	Battery Box	REP03-570
Hardware T12	BAT CTR	REP03-600
Hardware T13	Power Supply(DKC)	REP03-620
Hardware T15	Power Supply(DKU)	REP03-660
Hardware T16	HDD Fan Assembly	REP03-690
Hardware T19	RS CON	REP03-710
Hardware T20	FSW	REP03-730
Hardware T21	AC BOX (Single Phase/50A) AC BOX (3 Phase/30A) AC BOX (Single Phase/30A)	REP03-750
Hardware T23	SVPPS	REP03-880
Hardware T24	JMP	REP03-910
Hardware T25	HUB Box	REP03-930
Hardware T26	SVPPS Box	REP03-950
Hardware T27	UPS CON	REP03-970

SVP Post	GO TO
Post a	REP04-10
Post b	REP04-50
Post c	REP04-90
Post d	REP04-150
Post e	REP04-180
Post f	REP04-210
Post i	REP04-240
Post j	REP04-270
Post k	REP04-300
Post t1	REP04-320
Post t3	REP04-900
Post t4	REP04-1000
Post t5	REP04-1100
Post u	REP04-1360
Post z	REP04-1400

1.7 MAINTENANCE outline

(1) How to interpret the status display

① The status information is displayed on the SVP screen is not on a realtime basis. It reflects the state that was established.

1.8 Availability of the online maintenance when HRC/HORC is used

Component	Maintenance Type	Condition	HRC path established		During initial copy		After completing initial copy		Suspend	
			MCU	RCU	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 PCB	Replace	—	×	×	SVP2059W	SVP2079W	× (*)	×	×	×
CHE or CHF	Replace	With Alternate path.	×	×	×	SVP2038W	×	SVP2038W	×	SVP2038W
		Without Alternate path.	×	×	SVP2073W	SVP2038W	SVP2074W	SVP2038W	×	SVP2038W
DKA	Replace	—	×	×	×	×	×	×	×	×
CSW PCB	Replace	—	×	×	×	×	×	×	×	×
DKC	Replace	With Alternate path.	×	×	SVP2059W	SVP2079W	×	SVP2038W	×	SVP2038W
		Without Alternate path.	×	×	SVP2059W	SVP2079W	SVP2074W	SVP2038W	×	SVP2038W

Component	Maintenance Type	Condition	Suspending		Deleting	
			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	—	× (*)	×	× (*)	×
CHE or CHF	Replace	With Alternate path.	×	SVP2038W	×	SVP2038W
		Without Alternate path.	SVP2075W	SVP2038W	SVP2075W	SVP2038W
DKA	Replace	—	×	×	×	×
CSW PCB	Replace	—	×	×	×	×
DKC	Replace	With Alternate path.	×	SVP2038W	×	SVP2038W
		Without Alternate path.	SVP2075W	SVP2038W	SVP2075W	SVP2038W

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

Note.1 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.
Refer to “8.3.5 Procedures for online microprogram exchange and CHS/CHF replacement using alternate path” (OPEN08-60).

* : For HRC ASYNC Pairs, a maintenance with the cache blockage is recommended to operate with capacities of Side file and Write Pending Data being 20% below. If the above maintenance is Performed with high capacities of side file and Write Pending Data, the operation will take long and way cause impact such as MIH occurrence on the host operation.
Besides, in the case of cache de-install operation, you must suspend ASYNC HRC pairs by RMC (SVP) before operation regardless of the capacities of Side file and Write Pending Data. If you don’t suspend the ASYNC pairs as above, available cache capacity will decrease to suspend the pairs.
Refer to “Monitoring” in the SVP SECTION for the side file monitor.

1.9 Availability of the online maintenance when HODM is used

Component	Maintenance Type	Condition	HODM path		During initial copy		Waiting to erased		Suspend	
			MCU	RCU	MCU	RCU	MCU	RCU	MCU	RCU
Logical Device	Blocade	—	×		SVP2031W		SVP2031W		SVP2031W	
	Recovery	—	×		SVP2031W		SVP2031W		SVP2031W	
	Format	—	×		SVP2031W		SVP2031W		SVP2031W	
	Verify	—	×		×		×		×	
HDD canister	Replace	—	×		SVP2059W		×		×	
Cache PCB	Replace	—	×		SVP0259W		×		×	
CHE	Replace	With Alternate path.	×		×		×		×	
		Without Alternate path.	×		SVP2076W		SVP2078W		SVP2077W	
CHT	Replace	—	×		×		×		×	
DKA	Replace	—	×		×		×		×	
CSW PCB	Replace	—	×		×		×		×	

Component	Maintenance Type	Condition	During R-Vol Erasing		Erasing Error	
			MCU	RCU	MCU	RCU
Logical Device	Blocade	—	SVP2031W		SVP2031W	
	Recovery	—	SVP2031W		SVP2031W	
	Format	—	SVP2031W		SVP2031W	
	Verify	—	×		×	
HDD canister	Replace	—	×		×	
Cache PCB	Replace	—	×		×	
CHE	Replace	With Alternate path.	×		×	
		Without Alternate path.	SVP2078W		SVP2078W	
CHT	Replace	—	×		×	
DKA	Replace	—	×		×	
CSW PCB	Replace	—	×		×	

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

Note.1 About replacement of CHE in the RCU side

If the CHE to be replaced is connected to a path, please confirm that the Path is deleted from MCU.

After the replacement, please reconnect the path.

Refer to “8.3.5 Procedures for online microprogram exchange and CHS/CHF replacement using alternate path” (OPEN08-60).

1.10 Availability of the online maintenance when HMRCF/HOMRCF 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	—	SVP2484W	SVP2483W	SVP2485W	SVP2483W	SVP2485W	SVP2483W	SVP2485W	×	
	Format	—	SVP2484W	SVP2483W	SVP2485W	SVP2483W	SVP2485W	SVP2483W	SVP2485W	×	
	Verify	—	×	×		×		×		×	
HDD canister	Replace	—	×	×		×		×		×	
	Dynamic Sparing	—	×	SVP2486W		×		×		×	
	Correction Copy	—	×	SVP2486W		×		×		×	
Cache PCB	Replace	—	×	×		×		×		×	
CHA	Replace	—	×	×		×		×		×	
DKA	Replace	—	×	×		×		×		×	
LTM PCB	Replace	—	×	×		×		×		×	

1.11 Availability of the online maintenance when HXRC is used

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

x: Maintenance is available

*: When a maintenance operation is needed while HXRC is being used, I/O's for HXRC pair volumes or HXRC itself should be stopped before the maintenance operation.
If the maintenance operation must be done while HXRC is being used, you must confirm that the usage of Sidefile monitor is less than 20% of total Cache capacity 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 "Monitoring" in the SVP SECTION about Sidefile monitor.
Select the [Information] icon in the 'SVP' window.
Next select the [Monitor] menu in the 'Information' window and select [start....].
Next select the 'Sideflie' box in the 'Item' menu in the 'Monitoring' window and select [OK].

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

[PRE-PROCEDURE A]

— OUTLINE —

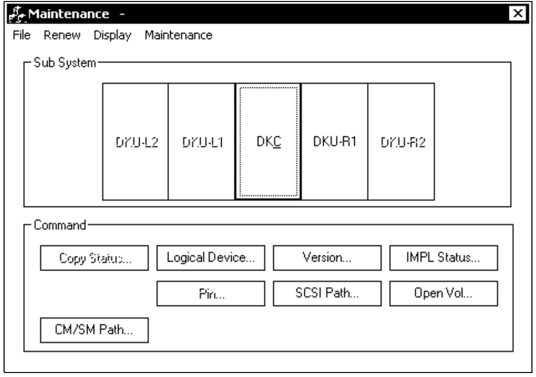
① Display Initial Screen.
② Change SVP operation mode.
③ Open Maintenance window.

1. <Initial screen>

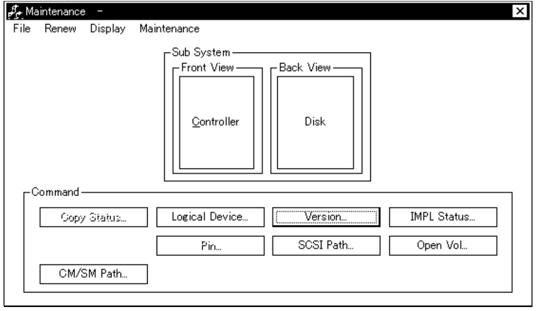
2. <Operation mode change>
Change the mode to [Modify Mode].
Select (CL) [Maintenance].

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

(Multi Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(Single Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

[PRE-PROCEDURE B]

— OUTLINE —

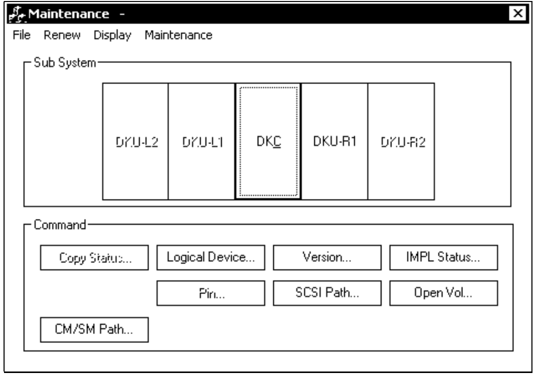
① Select drive (status check).
② Check progress of copy processing
③ Specify Replacement.
④ Place HDD into unpluggable state.

1. <Maintenance window>

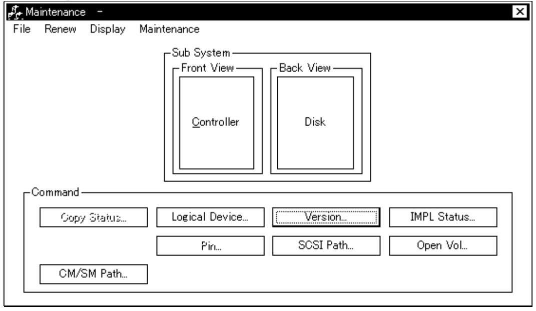
(Multi Cabinet Model)
In the ‘Maintenance’ window, check and select (CL) [DKU-Rn] or [DKU-Ln] to be replaced.

(Single Cabinet Model)
In the ‘Maintenance’ window, check and select (CL) [Disk] to be replaced.

(Multi Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(Single Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

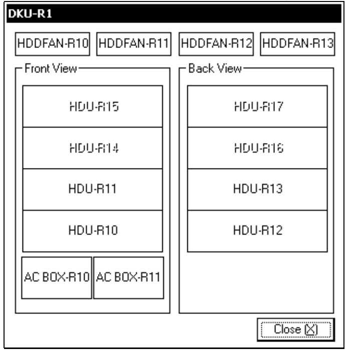
2. <Select HDU-BOX>

(Multi Cabinet Model)
Check and select (CL) [HDU-Rnn] or [HDU-Lnn] to be replaced.

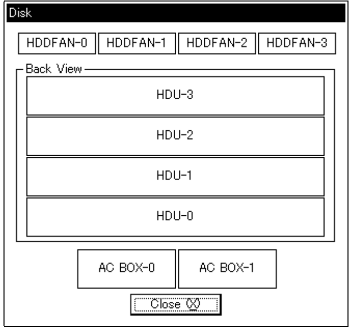
(Single Cabinet Model)
Check and select (CL) [HDU-n] to be replaced.

Selecting (CL) [Close] returns you to step 1.

(Multi Cabinet Model)


DKU-R1
HDDFAN-R10
HDDFAN-R11
HDDFAN-R12
HDDFAN-R13
Front View
HDU-R15
HDU-R14
HDU-R11
HDU-R10
AC BOX-R10
AC BOX-R11
Back View
HDU-R17
HDU-R16
HDU-R13
HDU-R12
Close (X)

(Single Cabinet Model)


Disk
HDDFAN-0
HDDFAN-1
HDDFAN-2
HDDFAN-3
Back View
HDU-3
HDU-2
HDU-1
HDU-0
AC BOX-0
AC BOX-1
Close (X)

3. <Select HDD>

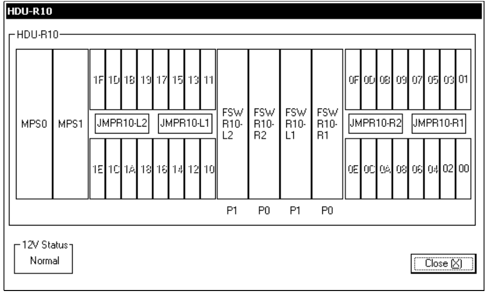
(Multi Cabinet Model [DKU455])
Check and select (CL) [nn] to be replaced.

(Multi Cabinet Model [DKU405])
Check and select (CL) [Rnnn] or [Lnnn] to be replaced.

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

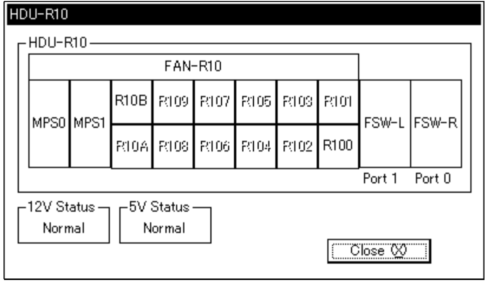
Selecting (CL) [Close] returns you to step 2.

(Multi Cabinet Model [DKU455])


HDU-R10
HDU-R10
MPS0
MPS1
1F 1D 1B 19 17 15 13 11
JMPR10-L2
JMPR10-L1
1E 1C 1A 18 16 14 12 10
FSW R10-L2
FSW R10-R2
FSW R10-L1
FSW R10-R1
P1 P0 P1 P0
0F 0D 0B 09 07 05 03 01
JMPR10-R2
JMPR10-R1
0E 0C 0A 08 06 04 02 00
Close (X)

12V Status
Normal

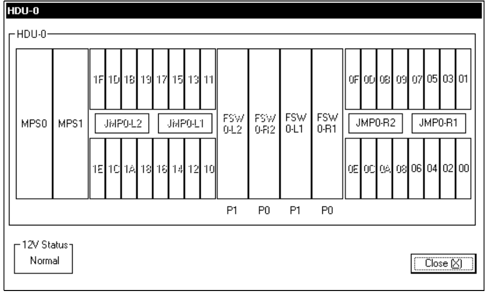
(Multi Cabinet Model [DKU405])


HDU-R10
HDU-R10
FAN-R10
MPS0
MPS1
R10B R109 R107 R105 R103 R101
R10A R108 R106 R104 R102 R100
FSW-L
FSW-R
Port 1
Port 0
Close (X)

12V Status
Normal

5V Status
Normal

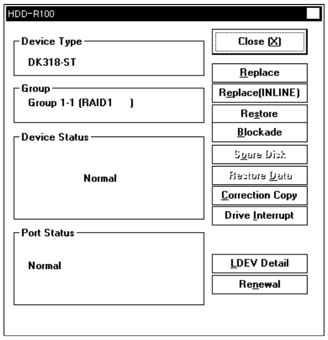
(Single Cabinet Model)


HDU-0
HDU-0
MPS0
MPS1
1F 1D 1B 19 17 15 13 11
JMP0-L2
JMP0-L1
1E 1C 1A 18 16 14 12 10
FSW 0-L2
FSW 0-R2
FSW 0-L1
FSW 0-R1
P1 P0 P1 P0
0F 0D 0B 09 07 05 03 01
JMP0-R2
JMP0-R1
0E 0C 0A 08 06 04 02 00
Close (X)

12V Status
Normal

4. <Specify replacement on HDD>
Check status display.
◆ In the case of a warning SIM, “NORMAL” is displayed.
◆ In the case of a blocking SIM, “FAILED” is displayed.

Select (CL) [Replace].


HDD-R100
Close (X)
Replace
Replace(INLINE)
Restore
Blockade
Spare Disk
Restore Data
Correction Copy
Drive Interrupt
LDEV Detail
Renewal

Device Type
DK318-ST

Group
Group 1-1 (RAID1)

Device Status
Normal

Port Status
Normal

5. <Check progress of copy processing>

(Multi Cabinet Model)
Check the status (other than preventive) of [HDD-nn] to be replaced from [HDU-Rnn] or [HDU-Lnn].

(Single Cabinet Model)
Check the status of the [HDD-nn] to be replaced in the [HDU-n] window (in the case of other than preventive maintenance).

[Warning threshold value]
* [RECOVERING] :Copy processing is in progress.
[FAILED] (S/D set to S) : End of copy processing.
[Block threshold value]
* [FAILED] (S/D set to D) : Copy processing is in progress.
[FAILED] (S/D set to S) : End of copy processing.

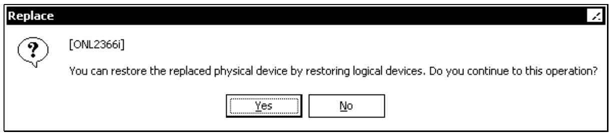
---

6. <Check progress of copy processing>
See SVP section. (SVP03-160)
After copy processing is complete, perform the replacement procedure.

If any other message than the list is displayed, see the SVP Message Section (SVPMSG00-00).

7. <Checking the P-DEV status>
“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 want to continue PDEV Replace, please select (CL) [Yes].
When you want to recover PDEV by recovering LDEV, please select (CL) [No] and see Restore the Logical Device (SVP02-840).

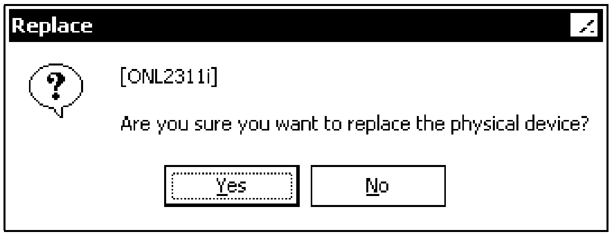
---

8. <P-DEV blocking>

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 center to ask for instructions.

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?

---

9. <Blocking the Physical device>
“Blocking...” is displayed.

---

10. <Spin down the Physical device>
“Spinning down...” is displayed.

11. <Check shut down LED>

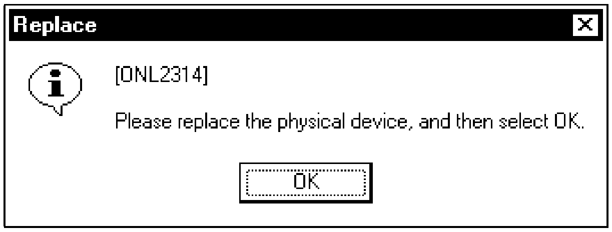
⚠ CAUTION

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.

---

12. <Confirm Replacement.>
Select (CL) [OK] in response to "Please replace the physical device, and then select OK." after the unit is replaced.



[ONL2314]

Please replace the physical device, and then select OK.

---

13. <Replace HDU>
Replace HDU.
See HARDWARE A (REP03-10).

[PRE-PROCEDURE C]

— OUTLINE —

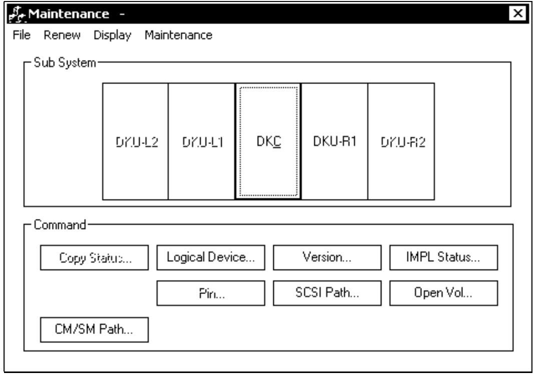
① Select drive (status check).
② Specify Replacement.
③ Save Spare.

1. <Maintenance window>

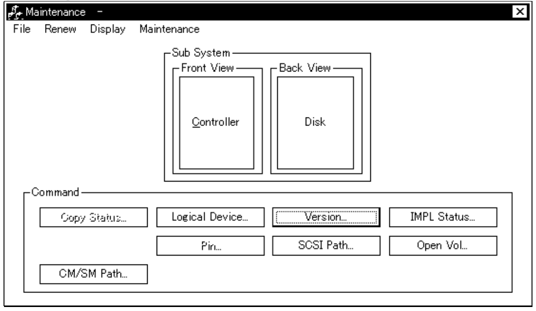
(Multi Cabinet Model)
In the ‘Maintenance’ window, check and select (CL) [DKU-Rn] or [DKU-Ln] to be replaced.

(Single Cabinet Model)
In the ‘Maintenance’ window, select (CL) [Disk].

(Multi Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(Single Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

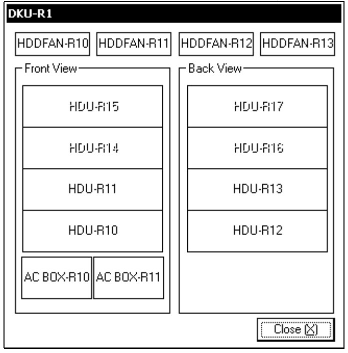
2. <Select HDU-BOX>

(Multi Cabinet Model)
Check and select (CL) [HDU-Rnn] or [HDU-Lnn] to be replaced.

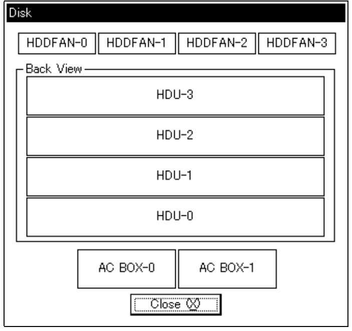
(Single Cabinet Model)
Check and select (CL) [HDU-n] to be replaced.

Selecting (CL) [Close] returns you to step 1.

(Multi Cabinet Model)


DKU-R1
HDDFAN-R10
HDDFAN-R11
HDDFAN-R12
HDDFAN-R13
Front View
HDU-R15
HDU-R14
HDU-R11
HDU-R10
AC BOX-R10
AC BOX-R11
Back View
HDU-R17
HDU-R16
HDU-R13
HDU-R12
Close (X)

(Single Cabinet Model)


Disk
HDDFAN-0
HDDFAN-1
HDDFAN-2
HDDFAN-3
Back View
HDU-3
HDU-2
HDU-1
HDU-0
AC BOX-0
AC BOX-1
Close (X)

3. <Select HDD>

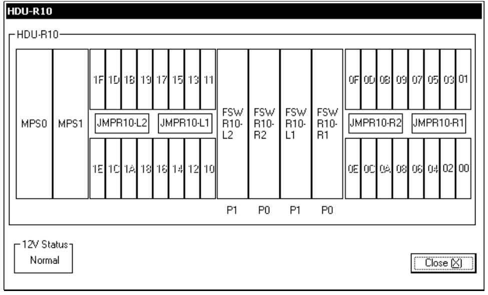
(Multi Cabinet Model [DKU455])
Check and select (CL) [nn] to be replaced.

(Multi Cabinet Model [DKU405])
Check and select (CL) [Rnnn] or [Lnnn] to be replaced.

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

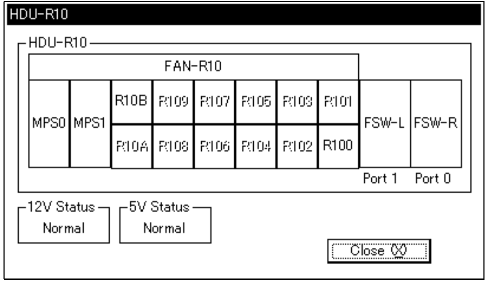
Selecting (CL) [Close] returns you to step 2.

(Multi Cabinet Model [DKU455])


HDU-R10
HDU-R10
MPS0
MPS1
1F 1D 1B 19 17 15 13 11
JMPR10-L2
JMPR10-L1
1E 1C 1A 18 16 14 12 10
FSW R10-L2
FSW R10-R2
FSW R10-L1
FSW R10-R1
P1 P0 P1 P0
0F 0D 0B 09 07 05 03 01
JMPR10-R2
JMPR10-R1
0E 0C 0A 08 06 04 02 00
Close (X)

12V Status: Normal

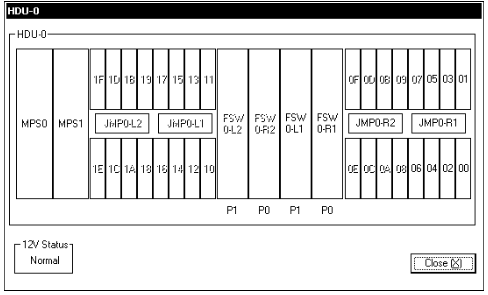
(Multi Cabinet Model [DKU405])


HDU-R10
HDU-R10
FAN-R10
MPS0
MPS1
R10B R109 R107 R105 R103 R101
R10A R108 R106 R104 R102 R100
FSW-L
FSW-R
Port 1
Port 0
Close (X)

12V Status: Normal

5V Status: Normal

(Single Cabinet Model)

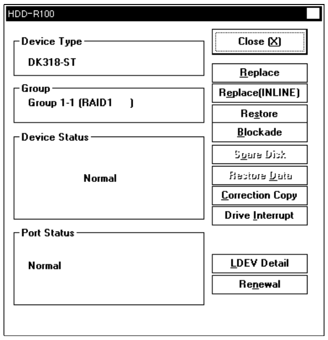

HDU-0
HDU-0
MPS0
MPS1
1F 1D 1B 19 17 15 13 11
JMP0-L2
JMP0-L1
1E 1C 1A 18 16 14 12 10
FSW 0-L2
FSW 0-R2
FSW 0-L1
FSW 0-R1
P1 P0 P1 P0
0F 0D 0B 09 07 05 03 01
JMP0-R2
JMP0-R1
0E 0C 0A 08 06 04 02 00
Close (X)

12V Status: Normal

---

4. <Specify replacement on HDD>
Check status display.
◆ In the case of a warning SIM, "NORMAL" is displayed.
◆ In the case of a blocking SIM, "FAILED" is displayed.

Select (CL) [Spare Disk].


HDD-R100
Close (X)
Replace
Replace(INLINE)
Restore
Blockade
Spare Disk
Restore Data
Correction Copy
Drive Interrupt
LDEV Detail
Renewal

Device Type: DK318-ST

Group: Group 1-1 (RAID1)

Device Status: Normal

Port Status: Normal

If any other message than the list is displayed, see the SVP Message Section (SVPMSG00-00).

5. <Checking the P-DEV status>

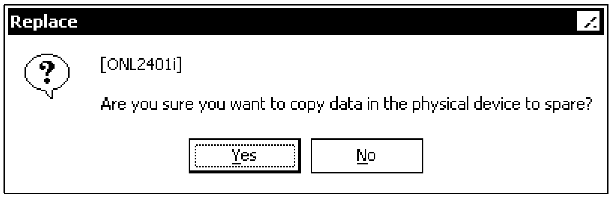
⚠ CAUTION

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 center to ask for instructions.

"Checking..." is displayed.

---

6. <Saving the spare>
Select (CL) [Yes] in response to "Are you sure you want to copy data in the physical device to spare?".



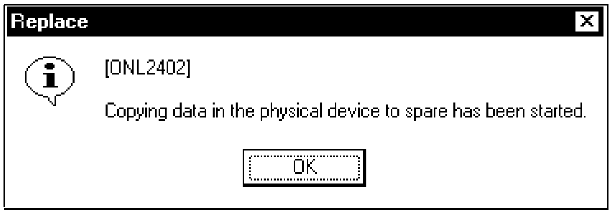
[ONL2401i]

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

---

7. <Saving in process>
"Copying..." is displayed.

8. <End of spare saving>
Select (CL) [OK] in response to “Copying data in the physical device to spare has been started.”.



[ONL2402]

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

9.
Please execute Pre procedure B after finishing copy. (REP02-30)

[PRE-PROCEDURE D]

— OUTLINE —

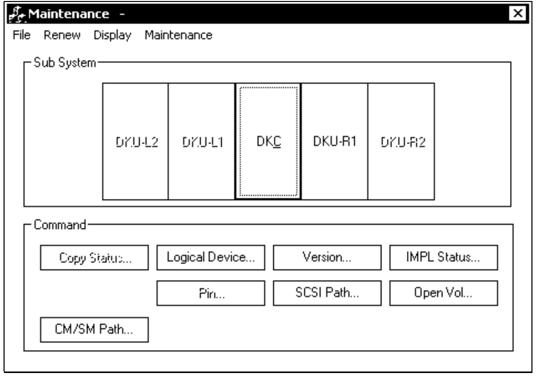
① Select P-DEV (status check).
② Specify Replacement.
③ Place HDD into unpluggable state.

1. <Maintenance window>

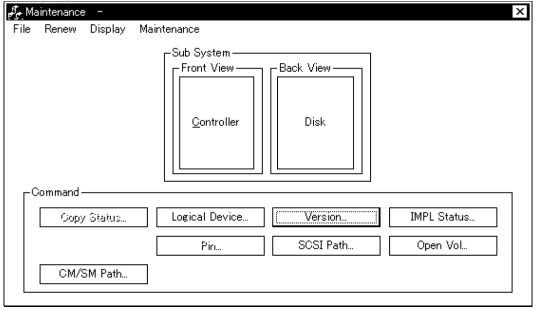
(Multi Cabinet Model)
In the ‘Maintenance’ window, check and select (CL) [DKU-Rn] or [DKU-Ln] to be replaced.

(Single Cabinet Model)
In the ‘Maintenance’ window, select (CL) [Disk].

(Multi Cabinet Model)


Maintenance -
File Renew Display Maintenance
Sub System
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(Single Cabinet Model)


Maintenance -
File Renew Display Maintenance
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

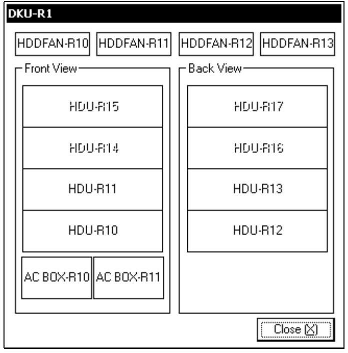
2. <Select HDU-BOX>

(Multi Cabinet Model)
Check and select (CL) [HDU-Rnn] or [HDU-Lnn] to be replaced.

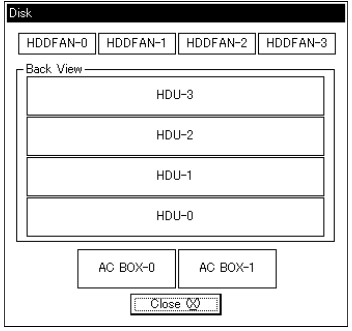
(Single Cabinet Model)
Check and select (CL) [HDU-n] to be replaced.

Selecting [Close] (CL) returns you to step 1.

(Multi Cabinet Model)


DKU-R1
HDDFAN-R10
HDDFAN-R11
HDDFAN-R12
HDDFAN-R13
Front View
HDU-R15
HDU-R14
HDU-R11
HDU-R10
AC BOX-R10
AC BOX-R11
Back View
HDU-R17
HDU-R16
HDU-R13
HDU-R12
Close (X)

(Single Cabinet Model)


Disk
HDDFAN-0
HDDFAN-1
HDDFAN-2
HDDFAN-3
Back View
HDU-3
HDU-2
HDU-1
HDU-0
AC BOX-0
AC BOX-1
Close (X)

3. <Select HDD>

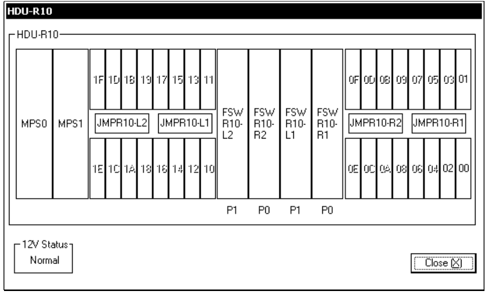
(Multi Cabinet Model [DKU455])
Check and select (CL) [nn] to be replaced.

(Multi Cabinet Model [DKU405])
Check and select (CL) [Rnnn] or [Lnnn] to be replaced.

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

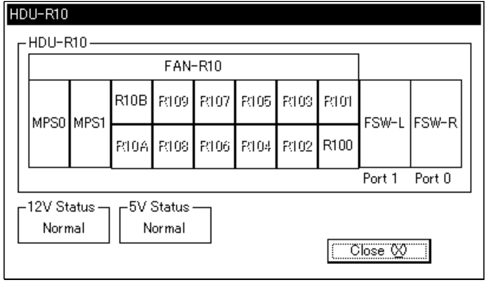
Selecting (CL) [Close] returns you to step 2.

(Multi Cabinet Model [DKU455])


HDU-R10
HDU-R10
MPS0
MPS1
1F 1D 1B 19 17 15 13 11
JMPR10-L2
JMPR10-L1
1E 1C 1A 18 16 14 12 10
FSW R10-L2
FSW R10-R2
FSW R10-L1
FSW R10-R1
0F 0D 0B 09 07 05 03 01
JMPR10-R2
JMPR10-R1
0E 0C 0A 08 06 04 02 00
P1 P0 P1 P0
Close (X)

12V Status
Normal

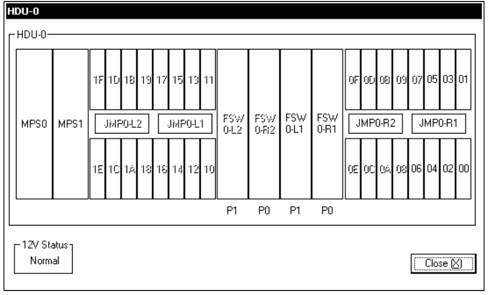
(Multi Cabinet Model [DKU405])


HDU-R10
HDU-R10
FAN-R10
MPS0
MPS1
R10B R109 R107 R105 R103 R101
R10A R108 R106 R104 R102 R100
FSW-L
FSW-R
Port 1
Port 0
Close (X)

12V Status
Normal

5V Status
Normal

(Single Cabinet Model)

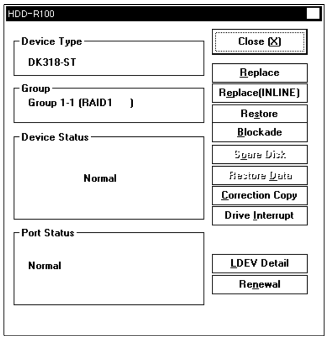

HDU-0
HDU-0
MPS0
MPS1
1F 1D 1B 19 17 15 13 11
JMP0-L2
JMP0-L1
1E 1C 1A 18 16 14 12 10
FSW 0-L2
FSW 0-R2
FSW 0-L1
FSW 0-R1
0F 0D 0B 09 07 05 03 01
JMP0-R2
JMP0-R1
0E 0C 0A 08 06 04 02 00
P1 P0 P1 P0
Close (X)

12V Status
Normal

---

4. <Specify replacement on HDD>
Check status display.
◆ In the case of a warning SIM, "NORMAL" is displayed.
◆ In the case of a blocking SIM, "FAILED" is displayed.

Select (CL) [Replace].


HDD-R100
Close (X)
Replace
Replace(INLINE)
Restore
Blockade
Spare Disk
Restore Data
Correction Copy
Drive Interrupt
LDEV Detail
Renewal

Device Type
DK318-ST

Group
Group 1-1 (RAID1)

Device Status
Normal

Port Status
Normal

If any other message than the list is displayed, see the SVP Message Section (SVPMSG00-00).

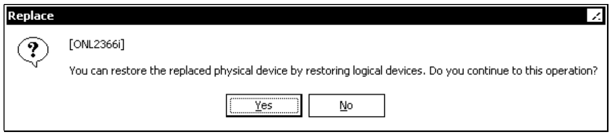
5. <Checking the P-DEV status & saving the spare>

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 center to ask for instructions.

“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.

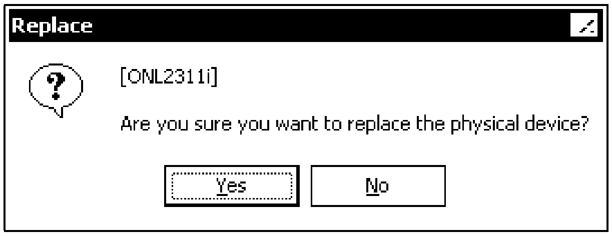


[ONL2366i]

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

When you want to continue PDEV Replace, please select (CL) [Yes].
When you want to recover PDEV by recovering LDEV, please select (CL) [No] and see Restore the Logical Device (SVP02-840).

6. <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?

7. <Blocking the Physical device>
“Blocking...” is displayed.

8. <Spin down the Physical device>
“Spinning down...” is displayed

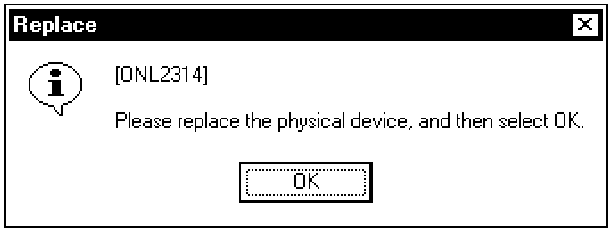
9. <Check shut down LED>

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.

10. <Confirmation of replace>
Select (CL) [OK] in response to "Please replace the physical device, and then select OK." after the unit is replaced (Step 11).



[ONL2314]

Please replace the physical device, and then select OK.

11. <Replace HDD>
Replace HDD.
See HARDWARE A (REP03-10).

[PRE-PROCEDURE E]

— OUTLINE —

① Select HDD (status check).
② Specify Replacement.
③ Block parity group (enter password).
④ Place HDD into unpluggable state.
⑤ Replace HDD.
⑥ Perform steps ② to ⑤ on blocked drives in parity group.

⚠ CAUTION

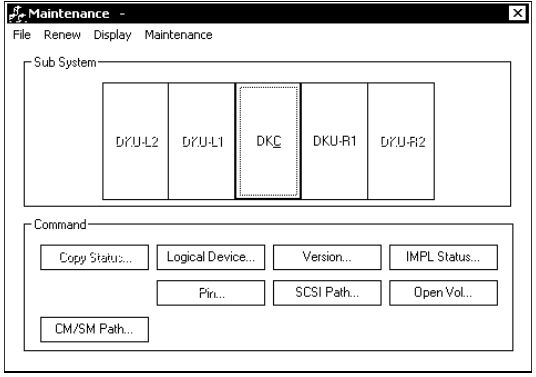
This is a special (exceptional) operation that can cause a serious failure such as a system down or a data loss and requires an input of a password. Ask the technical support center about the appropriateness of the operation, and input the password after getting an approval of executing the operation.

1. <Maintenance window>

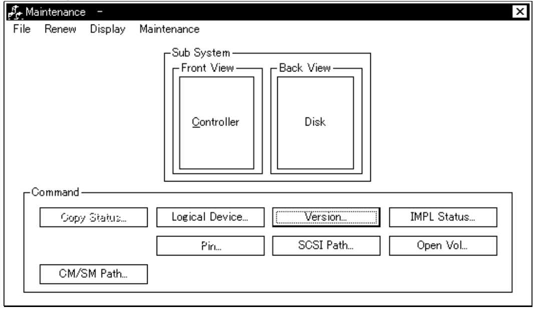
(Multi Cabinet Model)
In the ‘Maintenance’ window, check and select (CL) [DKU-Rn] or [DKU-Ln] to be replaced.

(Single Cabinet Model)
In the ‘Maintenance’ window, check and select (CL) [Disk] to be replaced.

(Multi Cabinet Model)


Maintenance -
File Renew Display Maintenance
Sub System
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(Single Cabinet Model)


Maintenance -
File Renew Display Maintenance
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

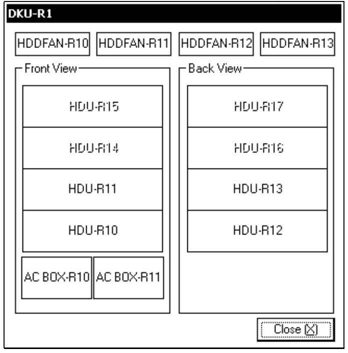
2. <Select HDU-BOX>

(Multi Cabinet Model)
Check and select (CL) [HDU-Rnn] or [HDU-Lnn] to be replaced.

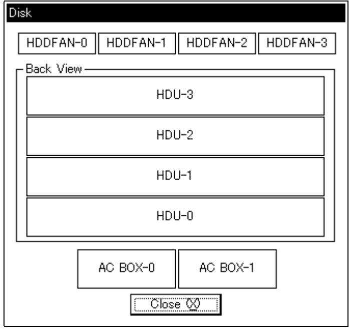
(Single Cabinet Model)
Check and select (CL) [HDU-n] to be replaced.

Selecting [Close] (CL) returns you to step 1.

(Multi Cabinet Model)


DKU-R1
HDDFAN-R10
HDDFAN-R11
HDDFAN-R12
HDDFAN-R13
Front View
HDU-R15
HDU-R14
HDU-R11
HDU-R10
AC BOX-R10
AC BOX-R11
Back View
HDU-R17
HDU-R16
HDU-R13
HDU-R12
Close (X)

(Single Cabinet Model)


Disk
HDDFAN-0
HDDFAN-1
HDDFAN-2
HDDFAN-3
Back View
HDU-3
HDU-2
HDU-1
HDU-0
AC BOX-0
AC BOX-1
Close (X)

3. <Select HDD>

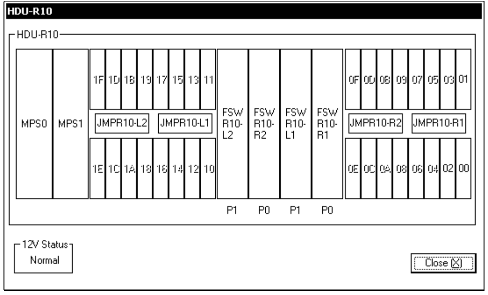
(Multi Cabinet Model [DKU455])
Check and select (CL) [nn] to be replaced.

(Multi Cabinet Model [DKU405])
Check and select (CL) [Rnnn] or [Lnnn] to be replaced.

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

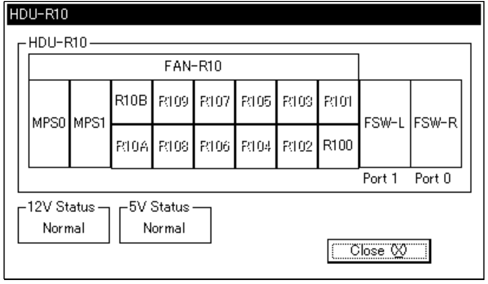
Selecting [Close] (CL) returns you to step 2.

(Multi Cabinet Model [DKU455])


HDU-R10
HDU-R10
MPS0
MPS1
1F 1D 1B 19 17 15 13 11
JMPR10-L2
JMPR10-L1
1E 1C 1A 18 16 14 12 10
FSW R10-L2
FSW R10-R2
FSW R10-L1
FSW R10-R1
0F 0D 0B 09 07 05 03 01
JMPR10-R2
JMPR10-R1
0E 0C 0A 08 06 04 02 00
P1
P0
P1
P0
Close (X)

12V Status: Normal

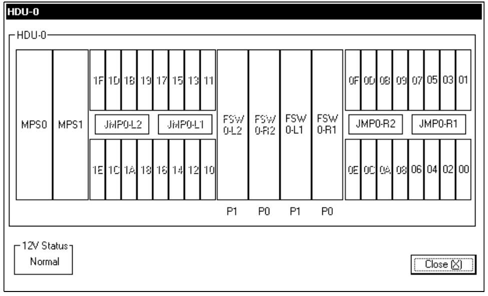
(Multi Cabinet Model [DKU405])


HDU-R10
HDU-R10
FAN-R10
MPS0
MPS1
R10B
R109
R107
R105
R103
R101
R10A
R108
R106
R104
R102
R100
FSW-L
FSW-R
Port 1
Port 0
Close (X)

12V Status: Normal

5V Status: Normal

(Single Cabinet Model)

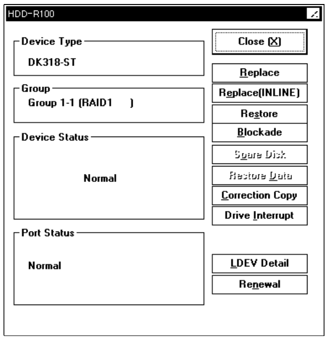

HDU-0
HDU-0
MPS0
MPS1
1F 1D 1B 19 17 15 13 11
JMP0-L2
JMP0-L1
1E 1C 1A 18 16 14 12 10
FSW 0-L2
FSW 0-R2
FSW 0-L1
FSW 0-R1
0F 0D 0B 09 07 05 03 01
JMP0-R2
JMP0-R1
0E 0C 0A 08 06 04 02 00
P1
P0
P1
P0
Close (X)

12V Status: Normal

---

4. <Specify replacement on HDD>
Make sure that the status is FAILED.

Select (CL) [Replace].


HDD-R100
Close (X)
Replace
Replace(INLINE)
Restore
Blockade
Spare Disk
Restore Data
Correction Copy
Drive Interrupt
LDEV Detail
Renewal

Device Type: DK318-ST

Group: Group 1-1 (RAID1)

Device Status: Normal

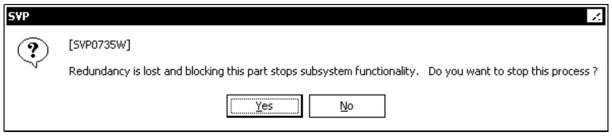
Port Status: Normal

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 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?”



[SVP0735W]
Redundancy is lost and blocking this part stops subsystem functionality.   Do you want to stop this process ?

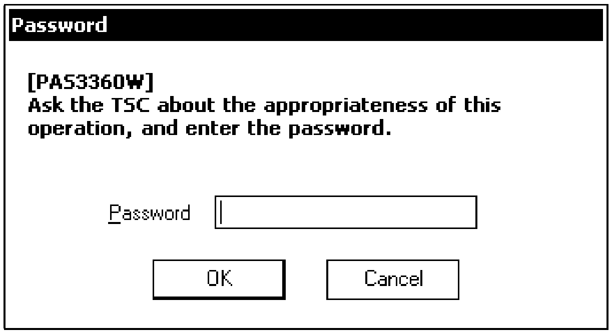
---

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 center 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 TSC about the appropriateness of this operation, and enter the password.” and select (CL) [OK].
Password is needed for this operation.

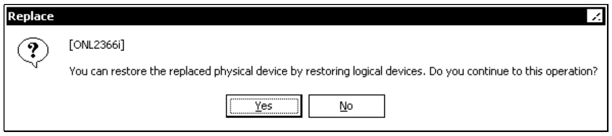


[PAS3360W]
Ask the TSC about the appropriateness of this operation, and enter the password.

If any other message than the list is displayed, see the SVP Message Section (SVPMSG00-00).

7. <Checking the P-DEV status>
“Checking...” is displayed.

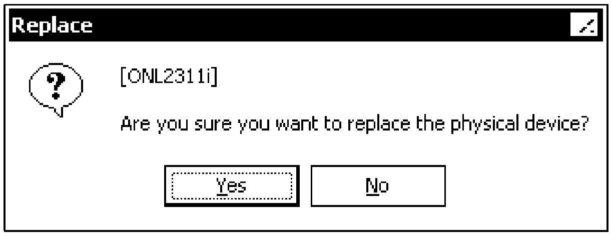
When “You can restore the replaced physical device by restoring logical devices. Do you continue to this operation?” is displayed, PDEV is automatically recovered by recovering LDEV.



[ONL2366i]
You can restore the replaced physical device by restoring logical devices. Do you continue to this operation?

When you want to continue PDEV Replace, please select (CL) [Yes].
When you want to recover PDEV by recovering LDEV, please select (CL) [No] and see Restore the Logical Device (SVP02-840).

8. <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?

---

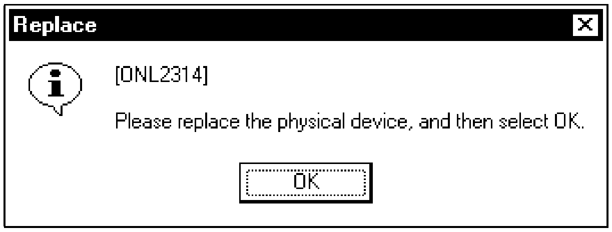
9. <Blocking the Physical device>
"Blocking..." is displayed.

---

10. <Spin down the Physical device>
"Spinning down..." is displayed.
The Shut down LED is lit.

---

11. <Replace HDU>
Select (CL) [OK] in response to "Please replace the physical device, and then select OK." after the unit is replaced.
(See HARDWARE A (REP03-10))



[ONL2314]

Please replace the physical device, and then select OK.

12. <Replace HDD>
    Replace HDD.
    See HARDWARE A (REP03-10).

[PRE-PROCEDURE F]

— OUTLINE —

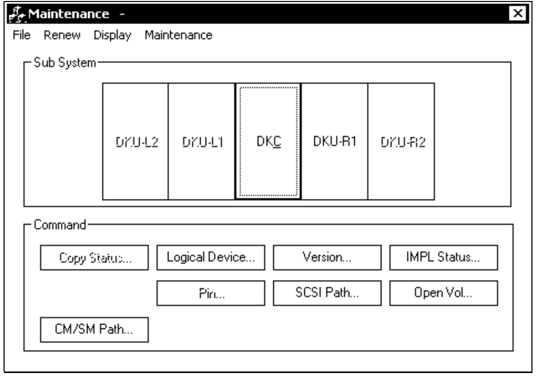
① Select (main platter) cache (status check).
② Specify Replacement.
③ Place PCB into unpluggable state.

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

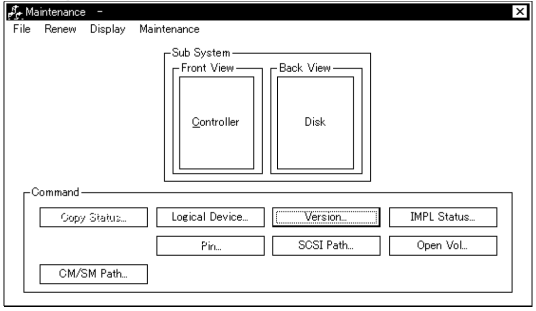
(Multi Cabinet Model)
In the ‘Maintenance’ window, check and select (CL) [DKC] to be replaced.

(Single Cabinet Model)
In the ‘Maintenance’ window, check and select (CL) [Controller] to be replaced.

(Multi Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

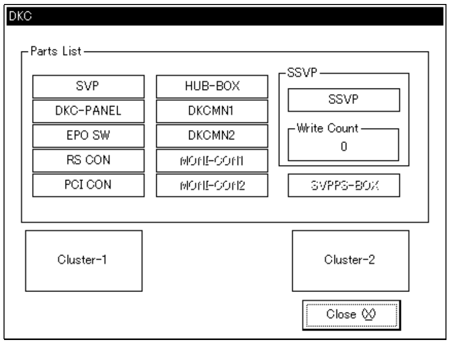
(Single Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

2.

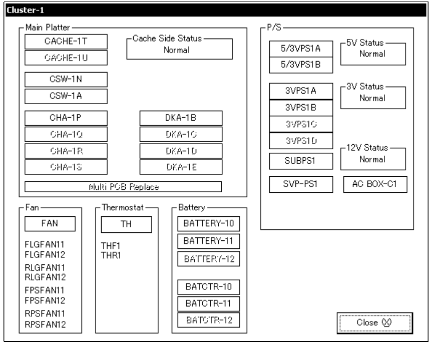
(Multi Cabinet Model)
<DKC window>
Select (CL) [Cluster-n] in the ‘DKC’.

(Single Cabinet Model)
<Controller window>
Select (CL) [Cluster-n] in the ‘Controller’.


DKC
Parts List
SVP
DKC-PANEL
EPO SW
RS CON
PCI CON
HUB-BOX
DKCMN1
DKCMN2
MONI-CON1
MONI-CON2
SSVP
SSVP
Write Count
0
SVPPS-BOX
Cluster-1
Cluster-2
Close (X)

3. <Select Part>
Select (CL) the appropriate part.

(Multi Cabinet Single Phase Model,
Multi Cabinet 3 Phase Model
[30A AC BOX])


Cluster-1
Main Platter
CACHE-1T
CACHE-1U
CSW-1N
CSW-1A
CHA-1P
CHA-1Q
CHA-1R
CHA-1S
DKA-1B
DKA-1C
DKA-1D
DKA-1E
Multi PCB Replace
P/S
5/3VPS1A
5/3VPS1B
3VPS1A
3VPS1B
3VPS1C
3VPS1D
SUBPS1
SVP-PS1
AC BOX-C1
Fan
FAN
FLGFAN11
FLGFAN12
RLGFAN11
RLGFAN12
FPSFAN11
FPSFAN12
RPSFAN11
RPSFAN12
Thermostat
TH
THF1
THR1
Battery
BATTERY-10
BATTERY-11
BATTERY-12
BATCTR-10
BATCTR-11
BATCTR-12
Close (X)

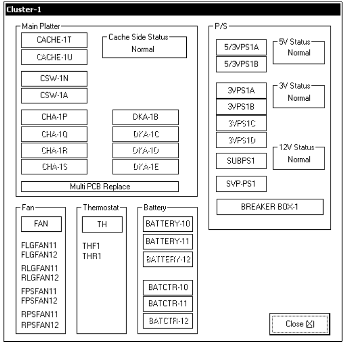
Cache Side Status
Normal

5V Status
Normal

3V Status
Normal

12V Status
Normal

(Multi Cabinet 3 Phase Model
[Without 30A AC BOX])


Cluster-1
Main Platter
CACHE-1T
CACHE-1U
CSW-1N
CSW-1A
CHA-1P
CHA-1Q
CHA-1R
CHA-1S
DKA-1B
DKA-1C
DKA-1D
DKA-1E
Multi PCB Replace
P/S
5/3VPS1A
5/3VPS1B
3VPS1A
3VPS1B
3VPS1C
3VPS1D
SUBPS1
SVP-PS1
BREAKER BOX-1
Fan
FAN
FLGFAN11
FLGFAN12
RLGFAN11
RLGFAN12
FPSFAN11
FPSFAN12
RPSFAN11
RPSFAN12
Thermostat
TH
THF1
THR1
Battery
BATTERY-10
BATTERY-11
BATTERY-12
BATCTR-10
BATCTR-11
BATCTR-12
Close (X)

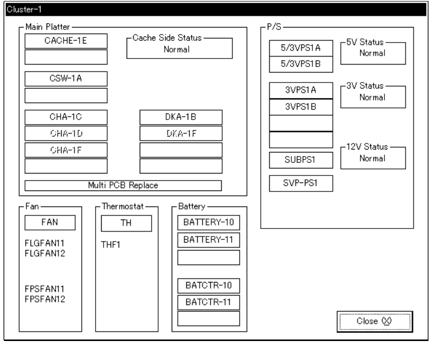
Cache Side Status
Normal

5V Status
Normal

3V Status
Normal

12V Status
Normal

(Single Cabinet Model)


Cluster-1
Main Platter
CACHE-1E
CSW-1A
CHA-1C
CHA-1D
CHA-1F
DKA-1B
DKA-1F
Multi PCB Replace
P/S
5/3VPS1A
5/3VPS1B
3VPS1A
3VPS1B
SUBPS1
SVP-PS1
Fan
FAN
FLGFAN11
FLGFAN12
FPSFAN11
FPSFAN12
Thermostat
TH
THF1
Battery
BATTERY-10
BATTERY-11
BATCTR-10
BATCTR-11
Close (X)

Cache Side Status
Normal

5V Status
Normal

3V Status
Normal

12V Status
Normal

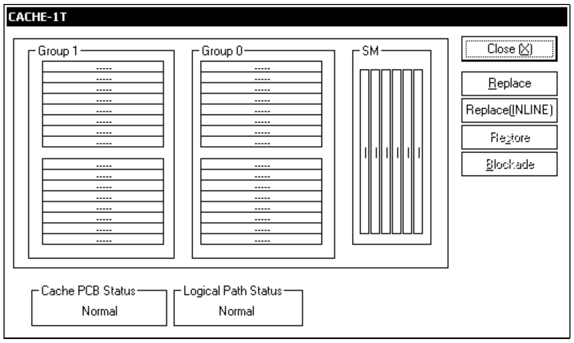
(ex. Cluster-1)

4. <Select 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 center to ask for instructions.

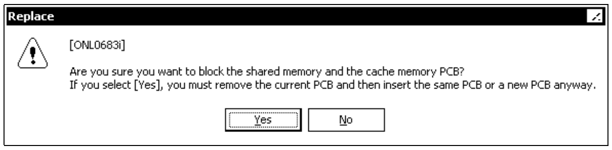
Check status display.
Select (CL) a cache and select (CL) [Replace].



Cache PCB Status: Normal
Logical Path Status: Normal

If any other message than the list is displayed, see the SVP Message Section (SVPMSG00-00).

5. <Check the beginning of cache blocking>
Select (CL) [Yes] after making sure that the package to be blocked is correct in response to:
* For CACHE (with SM) -- [Go to step 6]
“Are you sure you want to block the Shared Memory and Cache Memory PCB? If you select [Yes], physically pulling off and putting in of PCB will be unavoidable.”
* For CACHE ---------- [Go to step 6]
“Are you sure you want to block the cache memory? If you select [Yes] in response to this inquiry, it is required to pull out and reinsert the cache memory PCBA concerned.”

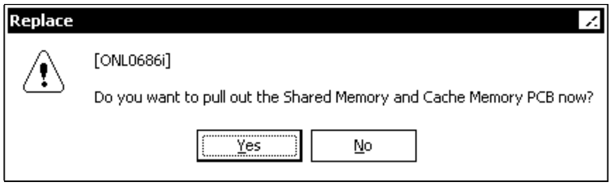


[ONL0683i]
Are you sure you want to block the shared memory and the cache memory PCB?
If you select [Yes], you must remove the current PCB and then insert the same PCB or a new PCB anyway.

---

6. <Cache blocking>
“The Cache Memory PCB is being blocked.” is displayed.
“The Shared Memory PCB is being blocked…” is displayed.

7. <Check removal of cache>
   Select (CL) [Yes] in response to:
   * For CACHE (with SM)
   “Do you want to pull out the Shared Memory and Cache Memory PCB now?”
   * For CACHE
   “Do you want to pull out the Cache Memory PCB now?”

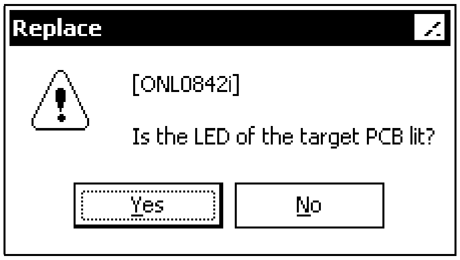


Replace

[ONL0686i]

Do you want to pull out the Shared Memory and Cache Memory PCB now?

8. <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 lit?”.
When [No] is selected, the same message is displayed again.
Check the LED and then reply to a message.



[ONL0842i]

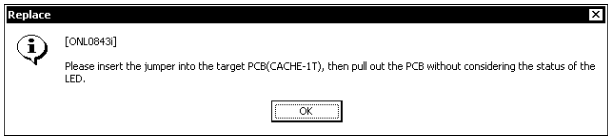
Is the LED of the target PCB lit?

<Forcing shut down LED on>

CAUTION

If the jumper is inserted in the wrong PCB, a system down may be caused.

If [No] is selected:
Insert a jumper in response to “Please insert jumper into the target PCB (CACHE-nn), then pull it out without considering the status of the LED”.
(Refer REP03-50)
Go to step 9.

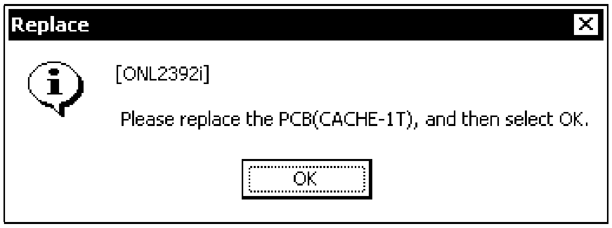


[ONL0843i]

Please insert the jumper into the target PCB(CACHE-1T), then pull out the PCB without considering the status of the LED.

---

9. <Cache Replacement>
“Please replace the PCB (CACHE-nn), and then select OK.” is displayed.
(Select (CL) [OK] after replacing the PCB.)



[ONL2392i]

Please replace the PCB(CACHE-1T), and then select OK.

---

10. <Replace cache PCB>
Replace cache.

For CACHE (with SM) see HARDWARE B (REP03-50)

[PRE-PROCEDURE H]

— OUTLINE —

① Select CHA/DKA (status check).
② Specify Replacement.
③ Place PCB into blocked state.

1. <Set path offline>

CAUTION

The path to be placed offline is that connected with the CHA concerned.

Set the path offline from HOST when replacing the CHA by your customer.

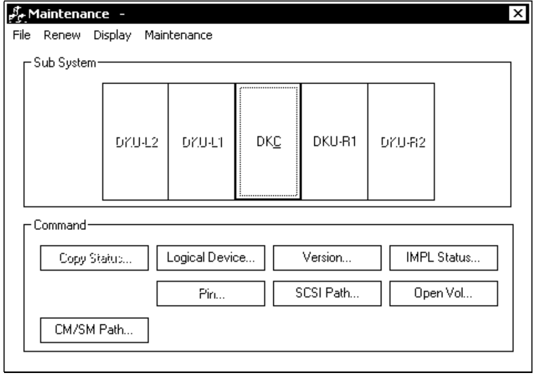
---

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

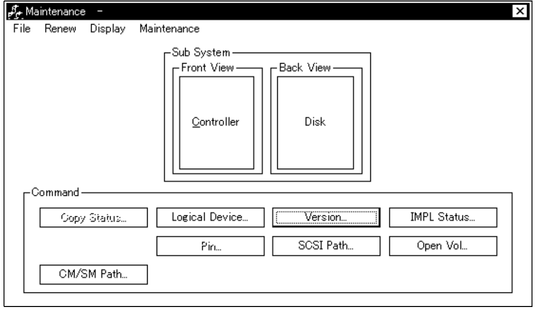
(Multi Cabinet Model)
In the 'Maintenance' window, check and select (CL) [DKC] to be replaced.

(Single Cabinet Model)
In the 'Maintenance' window, check and select (CL) [Controller] to be replaced.

(Multi Cabinet Model)

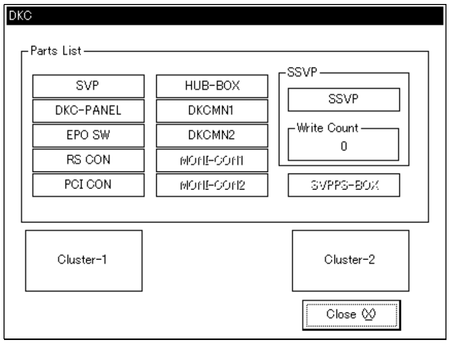

Maintenance -
File
Renew
Display
Maintenance
Sub System
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(Single Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

3.
(Multi Cabinet Model)
<DKC window>
Select (CL) [Cluster] in the 'DKC'.

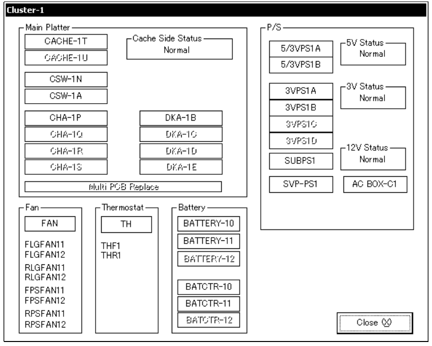
(Single Cabinet Model)
<Controller window>
Select (CL) [Cluster] in the 'Controller'.


DKC
Parts List
SVP
DKC-PANEL
EPO SW
RS CON
PCI CON
HUB-BOX
DKCMN1
DKCMN2
MONI-CON1
MONI-CON2
SSVP
SSVP
Write Count
0
SVPPS-BOX
Cluster-1
Cluster-2
Close (X)

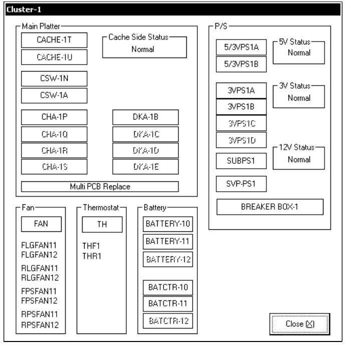
4. <Select CHA/DKA>
Select (CL) CHA/DKA.

Selecting (CL) [Close] returns you to step 3.

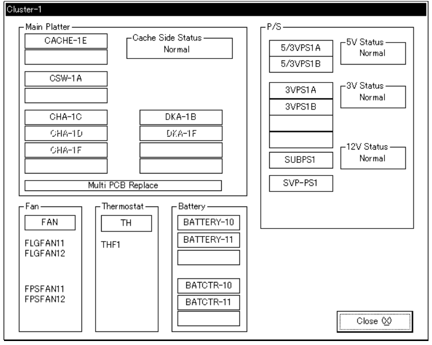
(Multi Cabinet Single Phase Model,
Multi Cabinet 3 Phase Model
[30A AC BOX])


Cluster-1
Main Platter
CACHE-1T
CACHE-1U
Cache Side Status
Normal
CSW-1N
CSW-1A
CHA-1P
CHA-1Q
CHA-1R
CHA-1S
DKA-1B
DKA-1C
DKA-1D
DKA-1E
Multi PCB Replace
P/S
5/3VPS1A
5/3VPS1B
5V Status
Normal
3VPS1A
3VPS1B
3VPS1C
3VPS1D
3V Status
Normal
12V Status
Normal
SUBPS1
SVP-PS1
AC BOX-C1
Fan
FAN
FLGFAN11
FLGFAN12
RLGFAN11
RLGFAN12
FPSFAN11
FPSFAN12
RPSFAN11
RPSFAN12
Thermostat
TH
THF1
THR1
Battery
BATTERY-10
BATTERY-11
BATTERY-12
BATCTR-10
BATCTR-11
BATCTR-12
Close (X)

(Multi Cabinet 3 Phase Model
[Without 30A AC BOX])


Cluster-1
Main Platter
CACHE-1T
CACHE-1U
Cache Side Status
Normal
CSW-1N
CSW-1A
CHA-1P
CHA-1Q
CHA-1R
CHA-1S
DKA-1B
DKA-1C
DKA-1D
DKA-1E
Multi PCB Replace
P/S
5/3VPS1A
5/3VPS1B
5V Status
Normal
3VPS1A
3VPS1B
3VPS1C
3VPS1D
3V Status
Normal
12V Status
Normal
SUBPS1
SVP-PS1
BREAKER BOX-1
Fan
FAN
FLGFAN11
FLGFAN12
RLGFAN11
RLGFAN12
FPSFAN11
FPSFAN12
RPSFAN11
RPSFAN12
Thermostat
TH
THF1
THR1
Battery
BATTERY-10
BATTERY-11
BATTERY-12
BATCTR-10
BATCTR-11
BATCTR-12
Close (X)

(Single Cabinet Model)


Cluster-1
Main Platter
CACHE-1E
Cache Side Status
Normal
CSW-1A
CHA-1C
CHA-1D
CHA-1F
DKA-1B
DKA-1F
Multi PCB Replace
P/S
5/3VPS1A
5/3VPS1B
5V Status
Normal
3VPS1A
3VPS1B
3V Status
Normal
12V Status
Normal
SUBPS1
SVP-PS1
Fan
FAN
FLGFAN11
FLGFAN12
FPSFAN11
FPSFAN12
Thermostat
TH
THF1
Battery
BATTERY-10
BATTERY-11
BATCTR-10
BATCTR-11
Close (X)

(ex. Cluster-1)

5. <Specify Replacement of CHA/DKA>

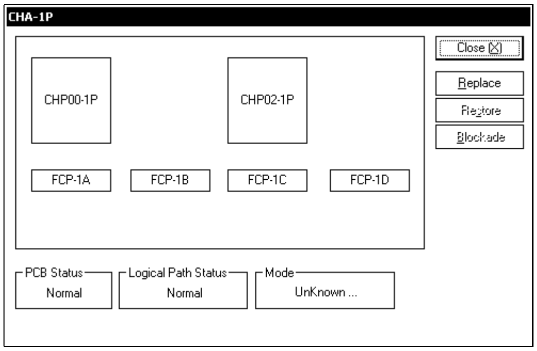
CAUTION

When the subsystem is placed online, ask the customer to place it offline. (When the CHA replace)

CAUTION

When the screen requests an operator to input a password in order to prevent multiple maintenance contact the technical support center to ask for instructions.

Make sure that the status is WARNING.
Select (CL) [Replace].

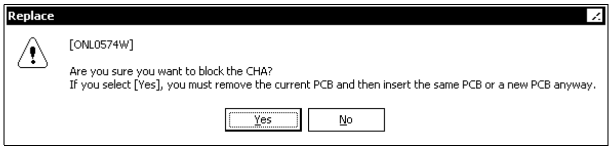


PCB Status: Normal
Logical Path Status: Normal
Mode: UnKnown ...

If any other message than the list is displayed, see the SVP Message Section (SVPMSG00-00).

6. <CHA/DKA blocking>
Select (CL) [Yes] in response to:

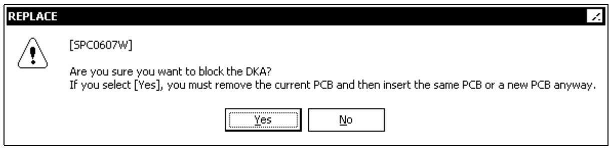
* For CHA
"Are you sure you want to block the CHA? If you select [Yes], physically pulling off and putting in of PCB will be unavoidable."
Go to step 7.



[ONL0574W]

Are you sure you want to block the CHA?
If you select [Yes], you must remove the current PCB and then insert the same PCB or a new PCB anyway.

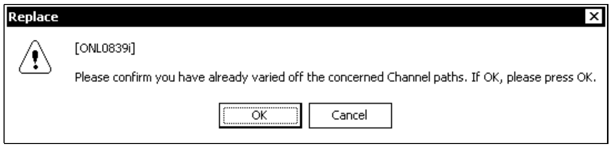
* For DKA
"Are you sure you want to block the DKA? If you select [Yes], physically pulling off and putting in of PCB will be unavoidable."
Go to step 8.



[SPC0607W]

Are you sure you want to block the DKA?
If you select [Yes], you must remove the current PCB and then insert the same PCB or a new PCB anyway.

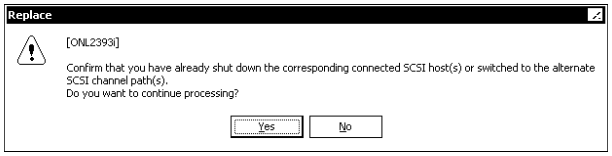
7. <Confirm Channel Path offline>
Select (CL) [OK] in response to:
“Please confirm you have already varied off the concerned Channel paths. If OK, please press OK.”



[ONL0839i]

Please confirm you have already varied off the concerned Channel paths. If OK, please press OK.

If Fibre channel adapter is installed:
After you confirm that you have stopped the concerned SCSI channel paths, select (CL) [Yes].



[ONL2393i]

Confirm that you have already shut down the corresponding connected SCSI host(s) or switched to the alternate SCSI channel path(s).
Do you want to continue processing?

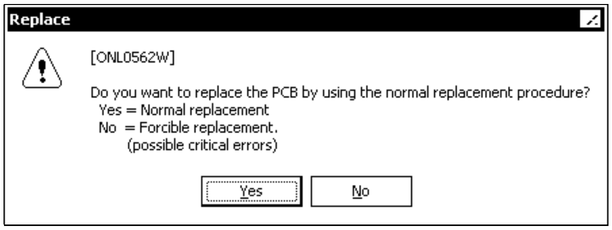
---

8. <Caution message for system down>

⚠ CAUTION

Select (CL) [Yes] in response to the message below.

“Automatic subsystem check for error prevention will be performed when blocking target PCB.
Yes = Normal replacement
No = Forcible replacement
(Possible critical errors)”



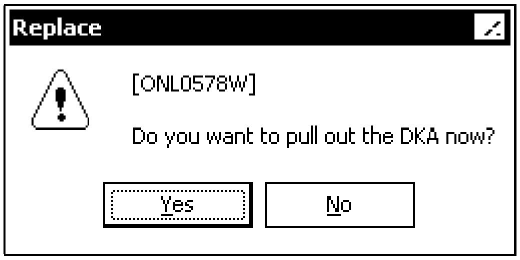
[ONL0562W]

Do you want to replace the PCB by using the normal replacement procedure?
Yes = Normal replacement
No = Forcible replacement.
(possible critical errors)

---

9. <CHA/DKA blocking>
* For CHA
“The CHA is being blocked...”
* For DKA
“The DKA is being blocked...”

10. <Removal of CHA/DKA>
Select (CL) [Yes] in response to:
* For CHA
"Do you want to pull out the CHA now?"
* For DKA
"Do you want to pull out the DKA now?"



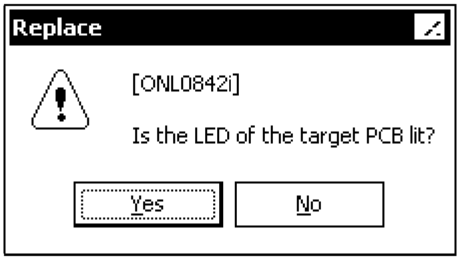
[ONL0578W]

Do you want to pull out the DKA now?

(ex. DKA)

---

11. <Check to see if the shut down LED is lit>
Select (CL)
* [Yes] if LED is on
* [No] if LED is off
in response to "Is the LED of the target PCB lit?".
If [No] is selected:
Select in response to "Is the LED of the target PCB lit?" again.



[ONL0842i]

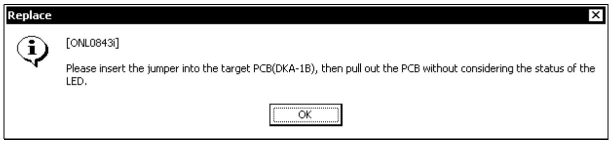
Is the LED of the target PCB lit?

<Forcing shut down LED on>

⚠ CAUTION

If the jumper is inserted in the wrong PCB, a system down may occur.

If [No] is selected twice:
Insert a jumper in response to "Please insert the jumper into the target PCB (CHA-nn/DKA-nn), then pull it out without considering the status of the LED". (Refer REP03-80)



[ONL0843i]

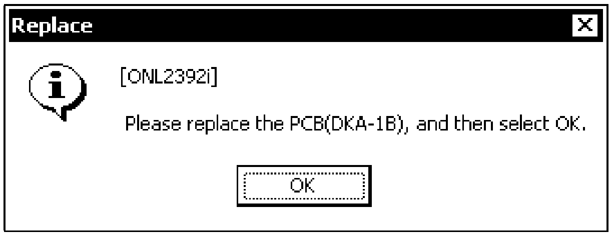
Please insert the jumper into the target PCB(DKA-1B), then pull out the PCB without considering the status of the LED.

(ex. DKA)

For Serial CHA	(REP03-80)
For Fibre CHA	(REP03-110)
For MF Fibre CHA	(REP03-140)
For DKA	(REP03-170)

12. <Beginning of CHA/DKA Replacement>
“Please replace the PCB (CHA-nn/DKA-nn), and then select OK.” is displayed. Select (CL) [OK] after replacing the PCBs.

For Serial CHA	Go to (REP03-80)
For Fibre CHA	Go to (REP03-110)
For MF Fibre CHA	Go to (REP03-140)
For DKA	Go to (REP03-170)



[ONL2392i]

Please replace the PCB(DKA-1B), and then select OK.

(ex. DKA)

[PRE-PROCEDURE K]

— OUTLINE —

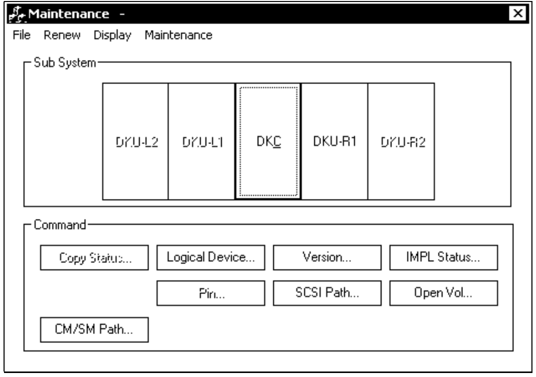
① Select drive (status check).
② Check progress of copy processing
③ Specify Correction Copy
④ Save Spare

1. <Maintenance window>

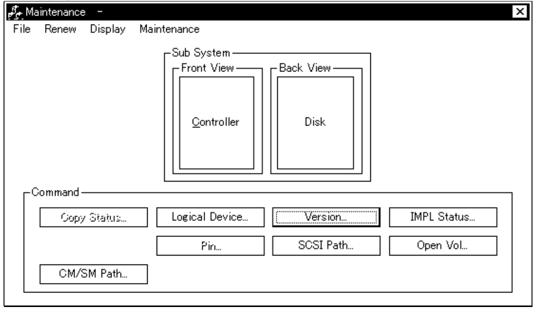
(Multi Cabinet Model)
In the ‘Maintenance’ window, check and select (CL) [DKU-Rn] or [DKU-Ln] to be replaced.

(Single Cabinet Model)
In the ‘Maintenance’ window, select (CL) [Disk].

(Multi Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(Single Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

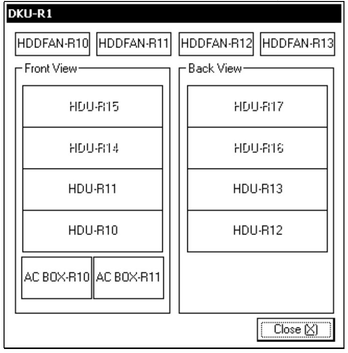
2. <Select HDU-BOX>

(Multi Cabinet Model)
Check and select (CL) [HDU-Rnn] or [HDU-Lnn] to be replaced.

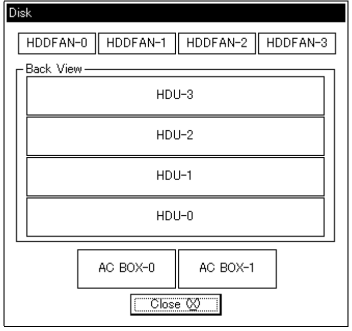
(Single Cabinet Model)
Check and select (CL) [HDU-n] to be replaced.

Selecting (CL) [Close] returns you to step 1.

(Multi Cabinet Model)


DKU-R1
HDDFAN-R10
HDDFAN-R11
HDDFAN-R12
HDDFAN-R13
Front View
HDU-R15
HDU-R14
HDU-R11
HDU-R10
AC BOX-R10
AC BOX-R11
Back View
HDU-R17
HDU-R16
HDU-R13
HDU-R12
Close (X)

(Single Cabinet Model)


Disk
HDDFAN-0
HDDFAN-1
HDDFAN-2
HDDFAN-3
Back View
HDU-3
HDU-2
HDU-1
HDU-0
AC BOX-0
AC BOX-1
Close (X)

3. <Select HDD>

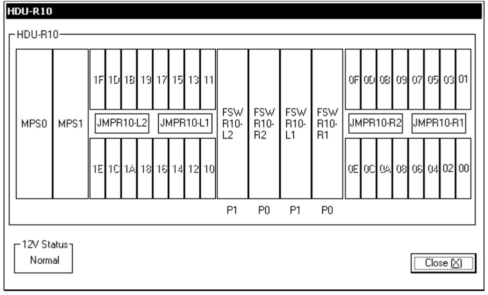
(Multi Cabinet Model [DKU455])
Check and select [nn] to be replaced.

(Multi Cabinet Model [DKU405])
Check and select [Rnnn] or [Lnnn] to be replaced.

(Single Cabinet Model)
Check and select [nn] to be replaced.

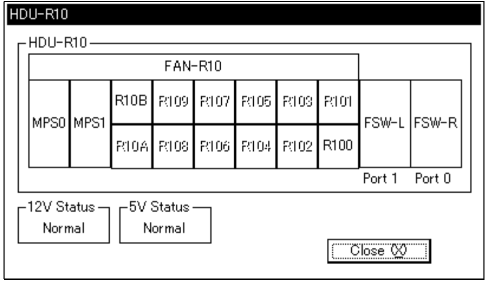
Selecting (CL) [Close] returns you to step 2.

(Multi Cabinet Model [DKU455])


HDU-R10
HDU-R10
MPS0
MPS1
1F 1D 1B 19 17 15 13 11
JMPR10-L2
JMPR10-L1
1E 1C 1A 18 16 14 12 10
FSW R10-L2
FSW R10-R2
FSW R10-L1
FSW R10-R1
P1 P0 P1 P0
0F 0D 0B 09 07 05 03 01
JMPR10-R2
JMPR10-R1
0E 0C 0A 08 06 04 02 00
Close (X)

12V Status: Normal

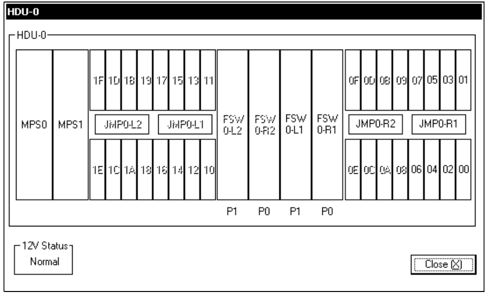
(Multi Cabinet Model [DKU405])


HDU-R10
HDU-R10
FAN-R10
MPS0
MPS1
R10B R109 R107 R105 R103 R101
R10A R108 R106 R104 R102 R100
FSW-L
FSW-R
Port 1
Port 0
Close (X)

12V Status: Normal

5V Status: Normal

(Single Cabinet Model)

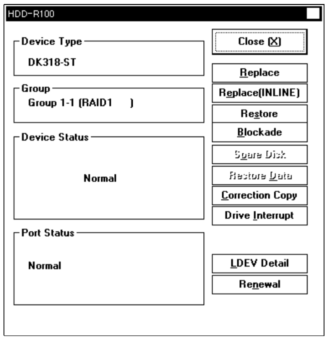

HDU-0
HDU-0
MPS0
MPS1
1F 1D 1B 19 17 15 13 11
JMP0-L2
JMP0-L1
1E 1C 1A 18 16 14 12 10
FSW 0-L2
FSW 0-R2
FSW 0-L1
FSW 0-R1
P1 P0 P1 P0
0F 0D 0B 09 07 05 03 01
JMP0-R2
JMP0-R1
0E 0C 0A 08 06 04 02 00
Close (X)

12V Status: Normal

---

4. <Specify replacement on HDD>
Check status display.
◆ In the case of a warning SIM, "NORMAL" is displayed.
◆ In the case of a blocking SIM, "FAILED" is displayed.

Select (CL) [Correction Copy].


HDD-R100
Close (X)
Replace
Replace(INLINE)
Restore
Blockade
Spare Disk
Restore Data
Correction Copy
Drive Interrupt
LDEV Detail
Renewal

Device Type: DK318-ST

Group: Group 1-1 (RAID1)

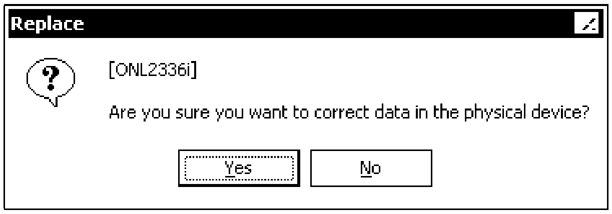
Device Status: Normal

Port Status: Normal

If any other message than the list is displayed, see the SVP Message Section (SVPMSG00-00).

5. <Reading the subsystem configuration data and Checking the P-DEV status>
“Checking...” is displayed.

6. <Saving the spare>
Select (CL) [Yes] in response to “Are you sure you want to correct data in the physical device?”.

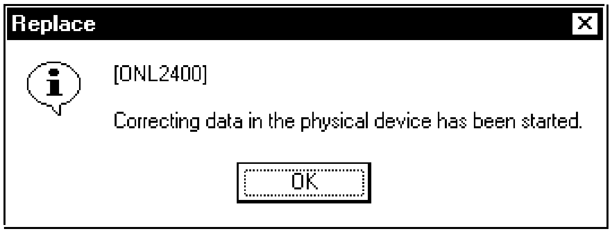


[ONL2336i]

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

7. <Correction copy in progress>
“Correcting...” is displayed.

8. <End of starting correction copy>
Select (CL) [OK] in response to “Correcting data in the physical device has been started.”.



[ONL2400]

Correcting data in the physical device has been started.

[PRE-PROCEDURE L]

— OUTLINE —

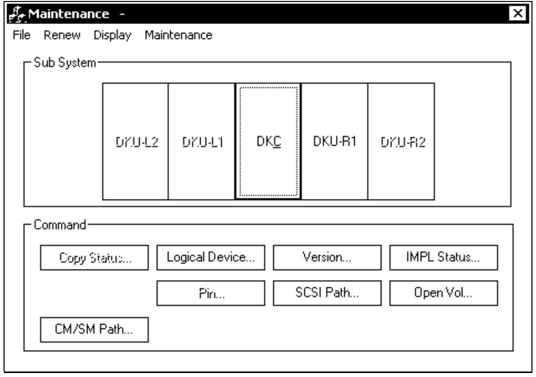
① Select FSW.
② Specify Replacement.
③ Please FSW into unplugable state.

1. <Maintenance window>

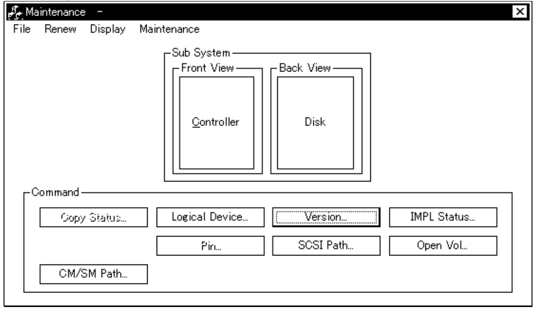
(Multi Cabinet Model)
In the 'Maintenance' window, check and select (CL) [DKU-Rn] or [DKU-Ln] to be replaced.

(Single Cabinet Model)
In the 'Maintenance' window, check and select (CL) [Disk] to be replaced.

(Multi Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(Single Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

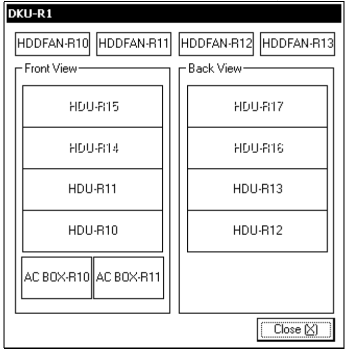
2. <Select HDU-BOX>

(Multi Cabinet Model)
Check and select (CL) [HDU-Rnn] or [HDU-Lnn] to be replaced.

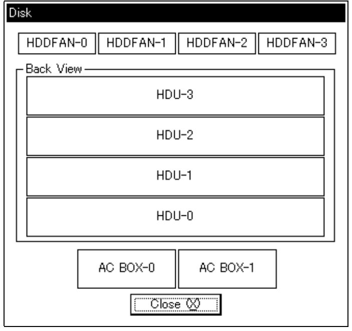
(Single Cabinet Model)
Check and select (CL) [HDU-n] to be replaced.

Selecting (CL) [Close] returns you to step 1.

(Multi Cabinet Model)


DKU-R1
HDDFAN-R10
HDDFAN-R11
HDDFAN-R12
HDDFAN-R13
Front View
HDU-R15
HDU-R14
HDU-R11
HDU-R10
AC BOX-R10
AC BOX-R11
Back View
HDU-R17
HDU-R16
HDU-R13
HDU-R12
Close (X)

(Single Cabinet Model)


Disk
HDDFAN-0
HDDFAN-1
HDDFAN-2
HDDFAN-3
Back View
HDU-3
HDU-2
HDU-1
HDU-0
AC BOX-0
AC BOX-1
Close (X)

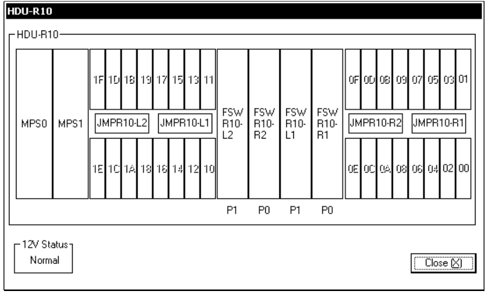
3. <Select FSW>

(Multi Cabinet Model)
Select (CL) [FSWXnn-Xn] to be replaced.

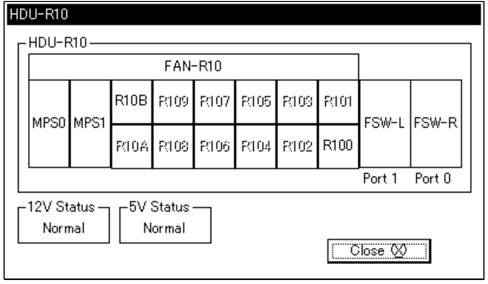
(Single Cabinet Model)
Select (CL) [FSWn-Xn] to be replaced.

Selecting (CL) [Close] returns you to step 2.

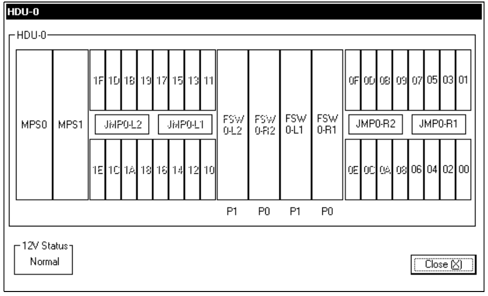
(Multi Cabinet Model [DKU455])


HDU-R10
HDU-R10
MPS0
MPS1
1F 1D 1B 19 17 15 13 11
JMPR10-L2
JMPR10-L1
1E 1C 1A 18 16 14 12 10
FSW R10-L2
FSW R10-R2
FSW R10-L1
FSW R10-R1
0F 0D 0B 09 07 05 03 01
JMPR10-R2
JMPR10-R1
0E 0C 0A 08 06 04 02 00
P1
P0
P1
P0
12V Status
Normal
Close (X)

(Multi Cabinet Model [DKU405])


HDU-R10
HDU-R10
FAN-R10
MPS0
MPS1
R10B R109 R107 R105 R103 R101
R10A R108 R106 R104 R102 R100
FSW-L
FSW-R
Port 1
Port 0
12V Status
Normal
5V Status
Normal
Close (X)

(Single Cabinet Model)


HDU-0
HDU-0
MPS0
MPS1
1F 1D 1B 19 17 15 13 11
JMP0-L2
JMP0-L1
1E 1C 1A 18 16 14 12 10
FSW 0-L2
FSW 0-R2
FSW 0-L1
FSW 0-R1
0F 0D 0B 09 07 05 03 01
JMP0-R2
JMP0-R1
0E 0C 0A 08 06 04 02 00
P1
P0
P1
P0
12V Status
Normal
Close (X)

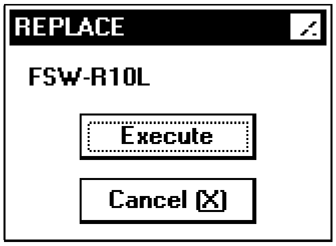
4. <Specify replacement>

⚠ CAUTION

When the screen requests an operator to input a password in order to prevent multiple maintenance, contact the technical support center to ask for instructions.

Select (CL) [Execute].

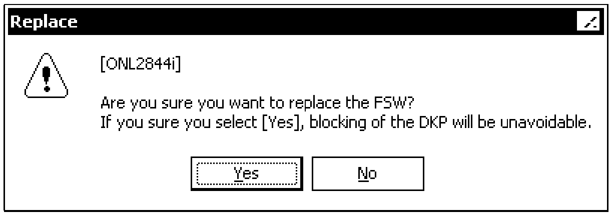
Selecting (CL) [Cancel] returns you to step 3.



FSW-R10L

If any other message than the list is displayed, see the SVP Message Section (SVPMSG00-00).

5. <Check beginning of DKP blocking>
Select (CL) [Yes] in response to “Are you sure you want to replace the FSW? If you select [Yes], blocking of the DKP will be unavoidable.”.



[ONL2844i]

Are you sure you want to replace the FSW?
If you sure you select [Yes], blocking of the DKP will be unavoidable.

---

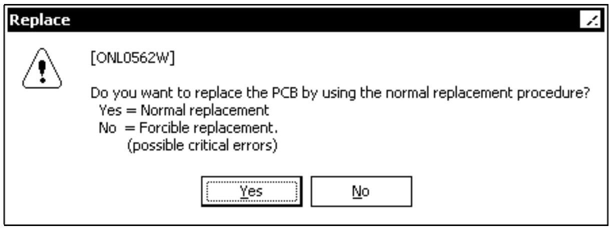
6. <Check system down>

⚠ CAUTION

Select (CL) [Yes] in response to the message below.

“Automatic subsystem check for error prevention will be performed when blocking target PCB.

Yes = Normal replacement
No = Forcible replacement
(Possible critical errors)”



[ONL0562W]

Do you want to replace the PCB by using the normal replacement procedure?
Yes = Normal replacement
No = Forcible replacement.
(possible critical errors)

7. <Check DKP blocking>
“The DKP is being blocked...” is displayed.

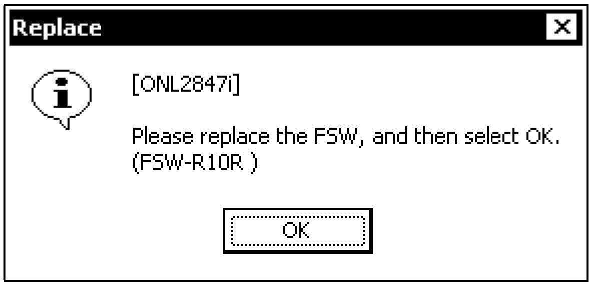
---

8. <Replace FSW>
“Please replace the FSW, and then select OK. (FSW-nnnn)” or “Please replace the FSW which connected by same Fibre Interface cable, and then select OK. (FSW-nnnn····)” is displayed.

Make sure of the FSW PCB location is displayed, select (CL) the [OK] button after replaced all target FSW PCB.
If the FSW LED is not turned on, please replace FSW PCB.

Refer HARDWARE T20 (REP03-730)

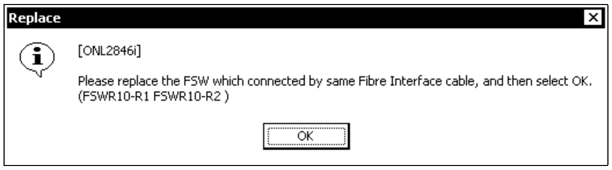
(A PCB to be replaced)



[ONL2847i]

Please replace the FSW, and then select OK.
(FSW-R10R)

(Two or more PCBs to be replaced)



[ONL2846i]

Please replace the FSW which connected by same Fibre Interface cable, and then select OK.
(FSWR10-R1 FSWR10-R2)

[PRE-PROCEDURE M]

— OUTLINE —

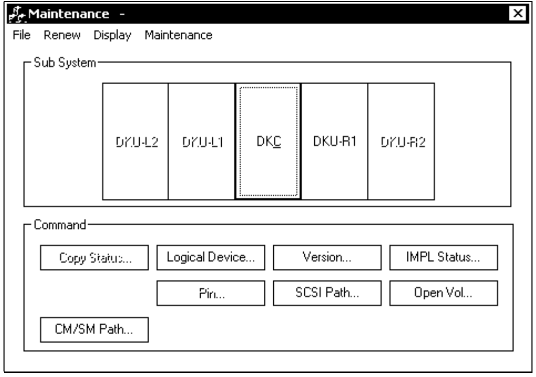
① Select CSW (status check).
② Specify Replacement.
③ Place PCB into blocked state.

1. <Maintenance window>

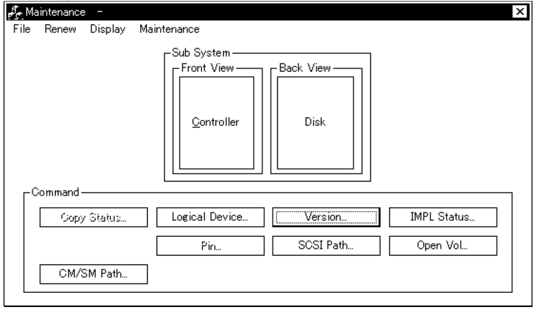
   (Multi Cabinet Model)
   In the ‘Maintenance’ window, check and select (CL) [DKC] to be replaced.

   (Single Cabinet Model)
   In the ‘Maintenance’ window, check and select (CL) [Controller] to be replaced.

(Multi Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

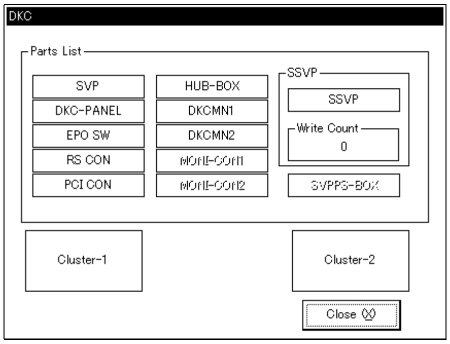
(Single Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

---

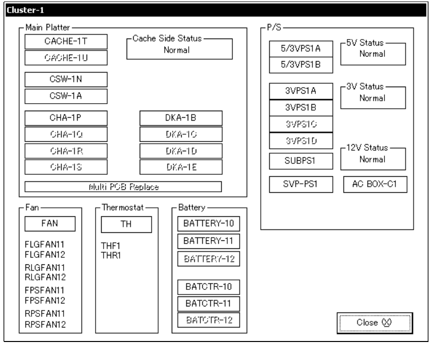
2. (Multi Cabinet Model)
   <DKC window>
   Select (CL) [Cluster] in the ‘DKC’.

   (Single Cabinet Model)
   <Controller window>
   Select (CL) [Cluster] in the ‘Controller’.

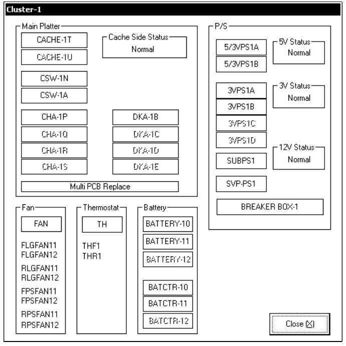

DKC
Parts List
SVP
HUB-BOX
DKC-PANEL
DKCMN1
EPO SW
DKCMN2
RS CON
MONI-CON1
PCI CON
MONI-CON2
SSVP
SSVP
Write Count
0
SVPPS-BOX
Cluster-1
Cluster-2
Close (X)

3. <Select CSW>
   Select (CL) [CSW]
   Selecting (CL) [Close] returns you to step 2.

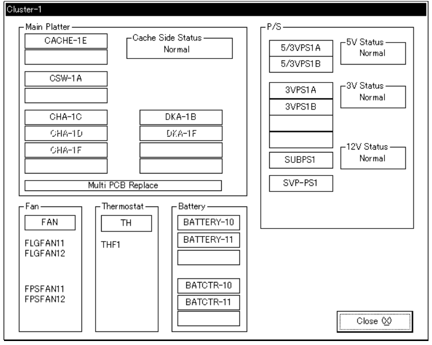
(Multi Cabinet Single Phase Model,
Multi Cabinet 3 Phase Model
[30A AC BOX])


Cluster-1
Main Platter
CACHE-1T
CACHE-1U
Cache Side Status
Normal
CSW-1N
CSW-1A
CHA-1P
CHA-1Q
CHA-1R
CHA-1S
DKA-1B
DKA-1C
DKA-1D
DKA-1E
Multi PCB Replace
P/S
5/3VPS1A
5/3VPS1B
5V Status
Normal
3VPS1A
3VPS1B
3VPS1C
3VPS1D
3V Status
Normal
12V Status
Normal
SUBPS1
SVP-PS1
AC BOX-C1
Fan
FAN
FLGFAN11
FLGFAN12
RLGFAN11
RLGFAN12
FPSFAN11
FPSFAN12
RPSFAN11
RPSFAN12
Thermostat
TH
THF1
THR1
Battery
BATTERY-10
BATTERY-11
BATTERY-12
BATCTR-10
BATCTR-11
BATCTR-12
Close (X)

(Multi Cabinet 3 Phase Model
[Without 30A AC BOX])


Cluster-1
Main Platter
CACHE-1T
CACHE-1U
Cache Side Status
Normal
CSW-1N
CSW-1A
CHA-1P
CHA-1Q
CHA-1R
CHA-1S
DKA-1B
DKA-1C
DKA-1D
DKA-1E
Multi PCB Replace
P/S
5/3VPS1A
5/3VPS1B
5V Status
Normal
3VPS1A
3VPS1B
3VPS1C
3VPS1D
3V Status
Normal
12V Status
Normal
SUBPS1
SVP-PS1
BREAKER BOX-1
Fan
FAN
FLGFAN11
FLGFAN12
RLGFAN11
RLGFAN12
FPSFAN11
FPSFAN12
RPSFAN11
RPSFAN12
Thermostat
TH
THF1
THR1
Battery
BATTERY-10
BATTERY-11
BATTERY-12
BATCTR-10
BATCTR-11
BATCTR-12
Close (X)

(Single Cabinet Model)


Cluster-1
Main Platter
CACHE-1E
Cache Side Status
Normal
CSW-1A
CHA-1C
CHA-1D
CHA-1F
DKA-1B
DKA-1F
Multi PCB Replace
P/S
5/3VPS1A
5/3VPS1B
5V Status
Normal
3VPS1A
3VPS1B
3V Status
Normal
12V Status
Normal
SUBPS1
SVP-PS1
Fan
FAN
FLGFAN11
FLGFAN12
FPSFAN11
FPSFAN12
Thermostat
TH
THF1
Battery
BATTERY-10
BATTERY-11
BATCTR-10
BATCTR-11
Close (X)

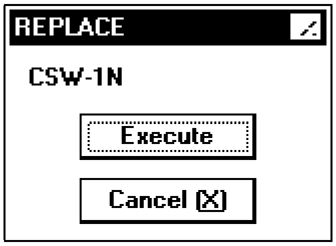
(ex. Cluster-1)

4. <Specify replacement>

⚠ CAUTION

Be sure to operate procedure 5 to 7 within thirty minutes.

Select (CL) [Execute].
Selecting (CL) [Cancel] returns you to step 3.

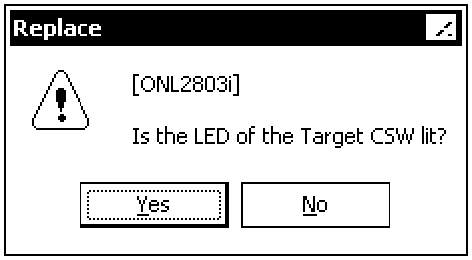


CSW-1N

If any other message than the list is displayed, see the SVP Message Section (SVPMSG00-00).

5. <Check CSW blocking>
“Blocking the CSW...” is displayed.

6. <Check to see if shut down LED is lit>
Select (CL)
* [Yes] if the LED is on
* [No] if the LED is off
in replace to “Is the LED of the target CSW lit?”.



[ONL2803i]

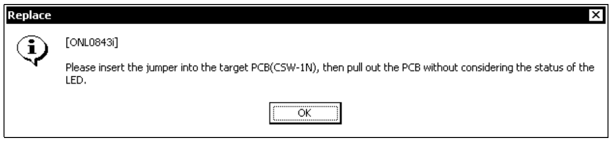
Is the LED of the Target CSW lit?

<Forcing shut down LED on>

⚠ CAUTION

If the jumper is inserted in the wrong PCB, a system down may be caused.

If [No] is selected twice:
Insert a jumper in response to “Please insert the jumper into the target PCB (CSW-nn), then pull out the target PCB without considering the status of the LED”. (Refer REP03-210)



[ONL0843i]

Please insert the jumper into the target PCB(CSW-1N), then pull out the PCB without considering the status of the LED.

7. <Blocking of CSW replacement>
The LED on the operator panel shown in the following table goes out during a period from a pulling off of the CSW to an insertion of the new CSW.

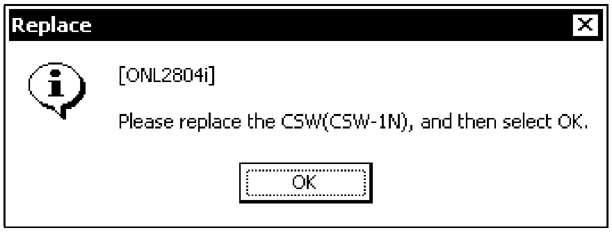
Location of CSW to be replaced	LED on the operator panel	
	Cluster 1	Cluster 2
CSW-1A	ABCD EFGH JKLM	—
CSW-2M	—	ABCD EFGH JKLM

⚠ CAUTION

If you take procedure 5 to 7 operation, the ‘ONL0117E’ message will be displayed on SVP after you select [OK]. Please start PRE-PROCEDURE M all over again.

“Please replace the CSW (CSW-nn), and then select OK.” is displayed.
Select (CL) [OK] after replacing the CSW.

Go to HARDWARE G (REP03-200)



[ONL2804i]

Please replace the CSW(CSW-1N), and then select OK.

[PRE-PROCEDURE T1]

— OUTLINE —

① Select special (DKC) part (status check).
② Specify Replacement.
③ Detach parts related to special part.

[1] Select special part

CAUTION

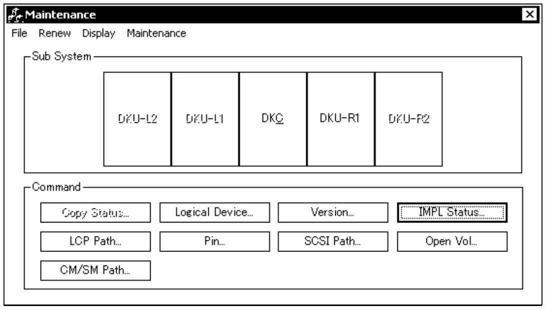
When you want to replace the FLASH CARD, Complete SIM before operation.

1. <Maintenance window>
   ‘Maintenance’ window is displayed.

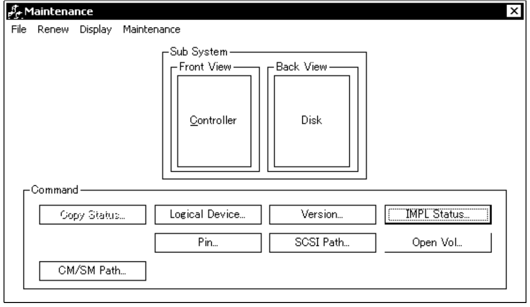
   (Multi Cabinet Model)
   In the ‘Maintenance’ window, check and select (CL) [DKC] to be replaced.

   (Single Cabinet Model)
   In the “Maintenance’ window, check and select (CL) [Controller] to be replaced.

(Multi Cabinet Model)


Maintenance
File
Renew
Display
Maintenance
Sub System
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
LCP Path...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(Single Cabinet Model)


Maintenance
File
Renew
Display
Maintenance
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

2. <Specify special part>

(Multi Cabinet Model)
Select (CL) part [XXXXX] to be replaced from 'DKC'.

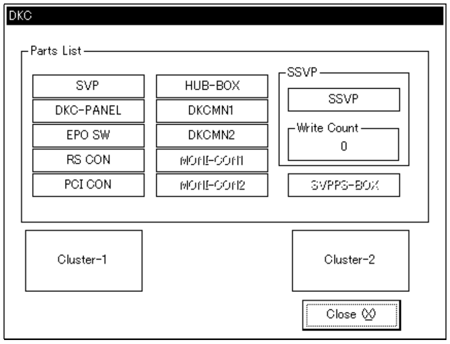
(Single Cabinet Model)
Select (CL) part [XXXXX] to be replaced from 'Controller'.

Valid [XXXXX] values are listed below.

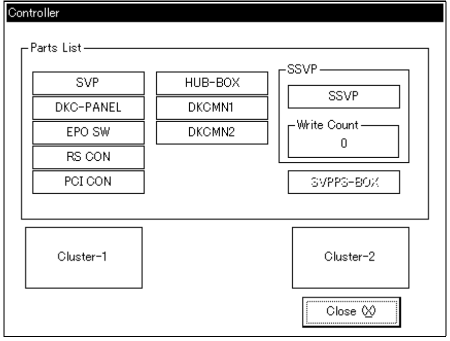
- DKC-PANEL ---------- [DKC-PANEL]
- DKCMN --------------- [DKCMN 1/2]
- PCI CON --------------- [PCI CON]
- UPS CON -------------- [PCI CON]
- EPO SW ---------------- [EPO SW]
- SVP ---------------------- [SVP]
- SSVP -------------------- [SSVP]
- RS CON ---------------- [RS CON]
- SVP&FLASH CARD - [SVP]
- FLASH CARD -------- [SVP]
- HUB-BOX-------------- [HUB-BOX]
- MONI-CON ----------- [MONI-CON]
- Switch SVP------------- [SVP]
- SVPPS-BOX ----------- [SVPPS-BOX]

Note: When replacing the UPS CON, select (CL) [PCI CON].

(Multi Cabinet Model)


DKC
Parts List
SVP
DKC-PANEL
EPO SW
RS CON
PCI CON
HUB-BOX
DKCMN1
DKCMN2
MONI-CON1
MONI-CON2
SSVP
SSVP
Write Count
0
SVPPS-BOX
Cluster-1
Cluster-2
Close

(Single Cabinet Model)


Controller
Parts List
SVP
DKC-PANEL
EPO SW
RS CON
PCI CON
HUB-BOX
DKCMN1
DKCMN2
SSVP
SSVP
Write Count
0
SVPPS-BOX
Cluster-1
Cluster-2
Close

3. <Execute>

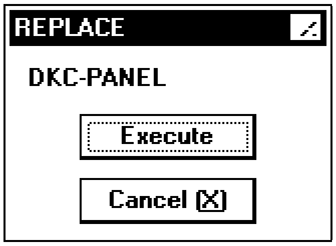
CAUTION

When the screen prompting an operator to input a password in order to prevent a multiple maintenance, contact the technical support center to ask for an instruction.

If any other message than the list is displayed, see the SVP Message Section (SVPMSG00-00).

When the part you have selected in step 1 is one of the following, a window shown on the right is displayed.

- DKC-PANEL
- DKCMN
- PCI CON (UPS CON)
- EPO SW
- SSVP
- HUB-BOX
- RS CON
- MONI-CON

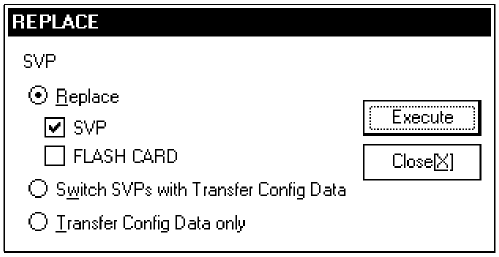

REPLACE
DKC-PANEL
Execute
Cancel [X]

(ex. DKC-PANEL)

Select (CL) [Execute].

When the part you have selected in step 2 is the following, a window shown on the right is displayed.

- SVP

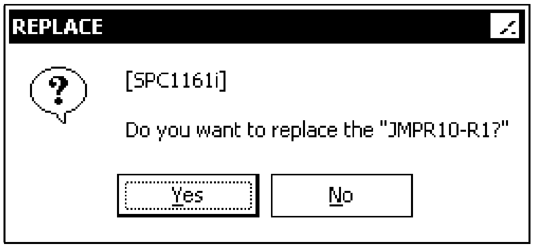

REPLACE
SVP
○ Replace
☑ SVP
☐ FLASH CARD
○ Switch SVPs with Transfer Config Data
○ Transfer Config Data only
Execute
Close[X]

When you replace a part, select (CL) [Replace], select (CL) replacement parts [XXXXX], and select (CL) [Execute].
Valid [XXXXX] values are listed below.

- SVP ---------------------[SVP]
- SVP&FLASH CARD -[SVP], [FLASH CARD]
- FLASH CARD --------[FLASH CARD]

When you switch a Master SVP to a Standby SVP and vice versa, select (CL) [Switch SVPs with Transfer Config Data], and select (CL) [Execute].
When you transfer Master SVP’s Configuration Data to a Standby SVP, select (CL) [Transfer Config Data only], and select (CL) [Execute].

4. <Check beginning of special part Replacement>
Select (CL) [Yes] in response to “Do you want to replace the "XXXXX?"”.



[SPC1161i]

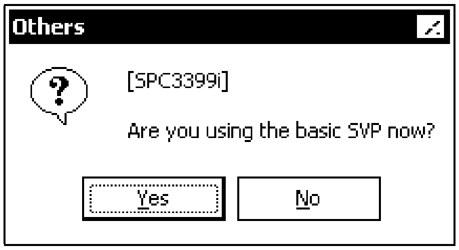
Do you want to replace the "JMPR10-R1?"

(ex. DKC-PANEL)

XXXXX represents one of the part names listed in step 2.

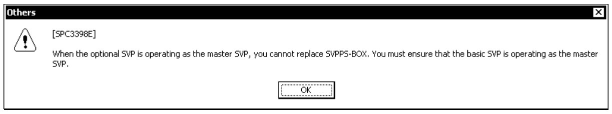
- “DKC-PANEL”----------- Go to [2] (REP02-550)
- “EPO SW”----------------- Go to [3] (REP02-560)
- “DKCMN 1/2”------------ Go to [5] (REP02-590)
- “RS CON”----------------- Go to [10] (REP02-650)
- “MONI-CON” ------------ Go to [9] (REP02-640)

- “SVPPS-BOX” -----------
  When replacing the SVPPS-BOX, the SVP in operation is checked before confirming the replacement start. In response to a message, “Are you using the basic SVP now?” select (CL) [Yes] when the SVP being operated is a Basic SVP or select (CL) [No] when the SVP being operated is an Optional SVP. When a Basic SVP is being operated, go to Item [11] (REP02-651).
  When an Optional SVP is being operated, a message, “When the optional SVP is operating as the master SVP, you cannot replace SVPPS-BOX. You must ensure that the basic SVP is operating as the master SVP.” is displayed. Select (CL) [OK]. Replace the SVPPS-BOX after switching the Master SVP (by selecting “Switch SVP”) since replacement of the SVPPS-BOX cannot be performed when the Optional SVP is activated.



[SPC3399i]

Are you using the basic SVP now?

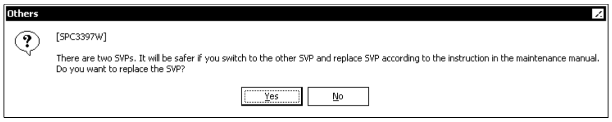


[SPC3398E]

When the optional SVP is operating as the master SVP, you cannot replace SVPPS-BOX. You must ensure that the basic SVP is operating as the master SVP.

- “SVP” ---------------------- Go to [6] (REP02-600)
- “SVP&FLASH CARD” - Go to [6] (REP02-600)
- “FLASH CARD” --------- Go to [8] (REP02-620)

If SVP high Reliability Kit is installed, the following message is displayed. “There are two SVPs. It will be safer if you switch to the other SVP and replace SVP according to the instruction in the maintenance manual. Do you want to replace the SVP?”
Refer to PRE-PROCEDURE T5 (REP02-820).

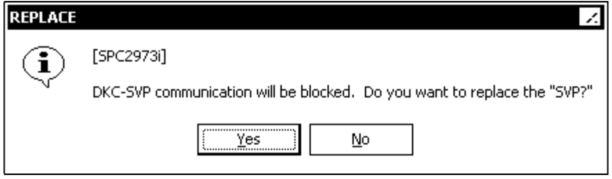


[SPC3397W]

There are two SVPs. It will be safer if you switch to the other SVP and replace SVP according to the instruction in the maintenance manual.
Do you want to replace the SVP?

(ex. SVP)

- “HUB-BOX” -- Go to [10] (REP02-650)

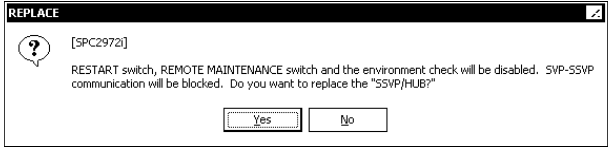


[SPC2973i]

DKC-SVP communication will be blocked. Do you want to replace the "SVP?"

(ex. SVP)

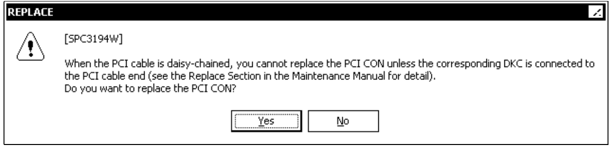
- “SSVP”-- Go to [7] (REP02-610)



[SPC2972i]

RESTART switch, REMOTE MAINTENANCE switch and the environment check will be disabled. SVP-SSVP communication will be blocked. Do you want to replace the "SSVP/HUB?"

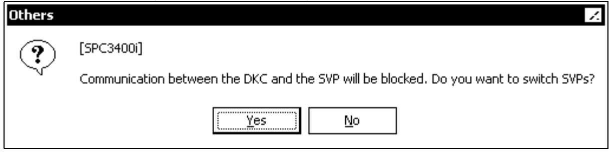
- “PCI CON”(UPS CON) -------------------------- Go to [4] (REP02-570)



[SPC3194W]

When the PCI cable is daisy-chained, you cannot replace the PCI CON unless the corresponding DKC is connected to the PCI cable end (see the Replace Section in the Maintenance Manual for detail).
Do you want to replace the PCI CON?

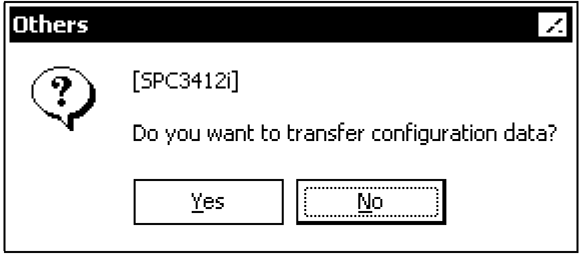
- “Switch SVPs with Transfer Config Data” ---- Go to [12] (REP02-652)



[SPC3400i]

Communication between the DKC and the SVP will be blocked. Do you want to switch SVPs?

- “Transfer Config Data only”--------------------- Go to [13] (REP02-653)



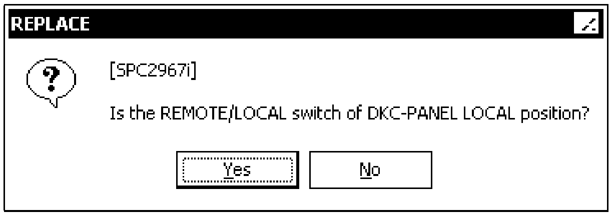
[SPC3412i]

Do you want to transfer configuration data?

Note: When replacing the UPS CON, execute the PCI CON replacement procedure.

[2] DKC-PANEL

1. <Read environment monitor>
The SVP automatically read REMOTE/LOCAL position of the CE part. When SVP occurred read failure, “Is the REMOTE/LOCAL switch of DKC-PANEL LOCAL position?” is displayed.
In the case REMOTE/LOCAL switch is LOCAL position, select (CL) [Yes].
In the case REMOTE/LOCAL switch is REMOTE position, select (CL) [No].

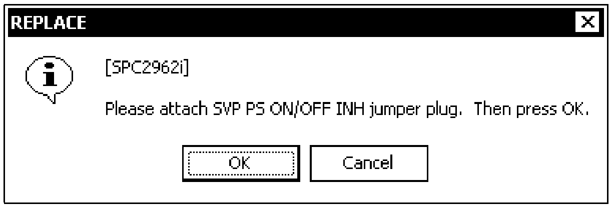


[SPC2967i]

Is the REMOTE/LOCAL switch of DKC-PANEL LOCAL position?

---

2. <Check jumper installation>
Attach jumper on DKCMN 1/2 in response to “Please attach DKC Panel INH jumper plug. Then press OK.”. (see HARDWARE T1 (REP03-230 step 2)).
Select (CL) [OK] after confirming that jumper is attached.
Go to step 4.
If jumper plug is not attached, go to step 3.

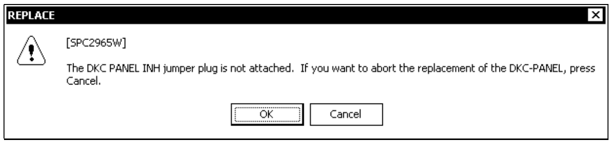


[SPC2962i]

Please attach SVP PS ON/OFF INH jumper plug. Then press OK.

---

3. <Check jumper reinstallation>
“The DKC Panel INH jumper plug is not attached. If you want to abort the replacement of the DKC-PANEL, press Cancel.” is displayed if no jumper is attached. Attach jumper and select (CL) [OK].
Go to step 4.
If jumper plug is not attached, step 3 again.



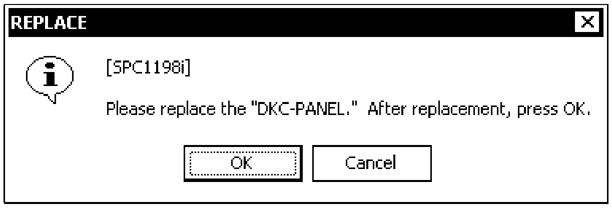
[SPC2965W]

The DKC PANEL INH jumper plug is not attached. If you want to abort the replacement of the DKC-PANEL, press Cancel.

---

4. <Check beginning of special part Replacement>
“Please replace the "DKC-PANEL." After replacement, press OK.” is displayed.
(Reply with [OK] after replacing the special part.)

see HARDWARE T1 (REP03-230)



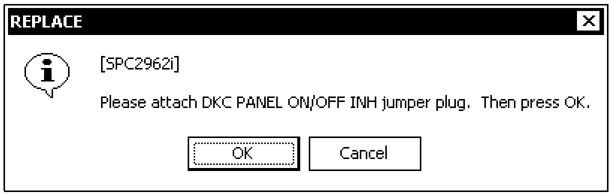
[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

[End of PRE-PROCEDURE]

[3] EPO SW

1. <Check jumper installation>
   Attach jumper on DKCMN 1/2 in response to "Please attach DKC PANEL ON/OFF INH jumper plug. Then press OK.".
   (see HARDWARE T2 (REP03-280 step 1)).
   Select (CL) [OK] after confirming that jumper is attached.
   Go to step 3.
   If jumper plug is not attached, go to 2.

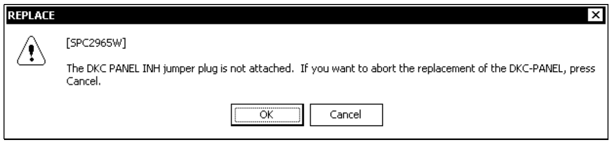


[SPC2962i]

Please attach DKC PANEL ON/OFF INH jumper plug. Then press OK.

---

2. <Check jumper reinstallation>
   "The DKC Panel INH jumper plug is not attached. If you want to abort the replacement of the DKC-PANEL, press Cancel." is displayed if no jumper is attached. Attach jumper and select (CL) [OK].
   Go to step 3.
   If jumper plug is not attached, step 2 again.

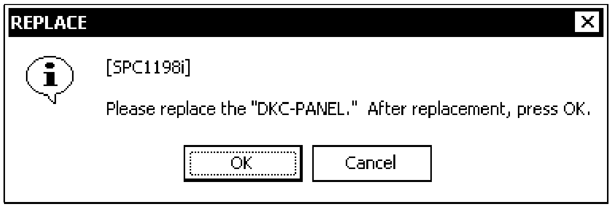


[SPC2965W]

The DKC PANEL INH jumper plug is not attached. If you want to abort the replacement of the DKC-PANEL, press Cancel.

---

3. <Check beginning of special part Replacement>
   "Please replace the "XXXXX." After replacement, press OK." is displayed.
   (Reply with [OK] after replacing the special part.)



[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

(ex. DKC-PANEL)

see HARDWARE T2 (REP03-280)

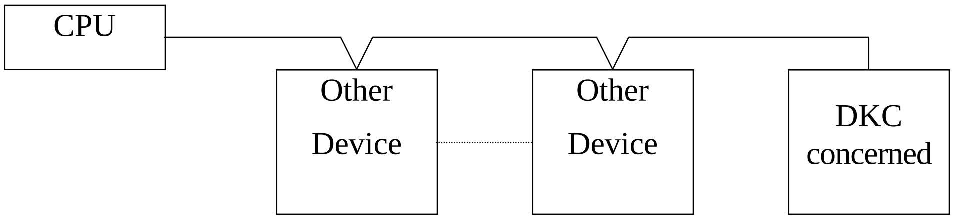
[End of PRE-PROCEDURE]

[4] PCI CON (UPS CON)

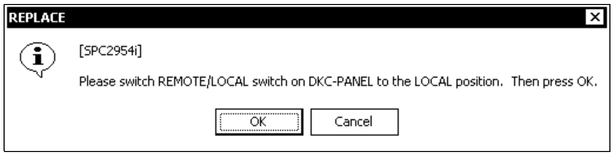
CAUTION

< When the part concerned is the PCI CON >
Replacement of PCI CON Panel causes other devices running on the same PCI connection line to be powered off except a) and b) shown below (because giving the EPO instruction is assumed). Therefore, stop the other device before performing replacement.

a) If PCI cable is not connected to the replacing DKC.
b) If the replacing DKC (DKC concerned) is connected to the end of the PCI cable as shown below.

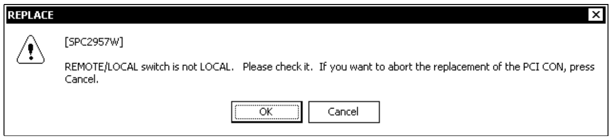


1. <Check DKC-PANEL switches>
Set REMOTE/LOCAL switch to LOCAL and select (CL) [OK] in response to “Please switch REMOTE/LOCAL switch, on "DKC-PANEL" to the LOCAL position. Then press OK.”. (see HARDWARE T4 (REP03-360 step 1))
Go to step 3.
If REMOTE/LOCAL switch is not LOCAL, go to 2.



[SPC2954i]
Please switch REMOTE/LOCAL switch on DKC-PANEL to the LOCAL position. Then press OK.

2. <Check that the REMOTE/LOCAL switch of DKC-PANEL is LOCAL>
“REMOTE/LOCAL switch is not LOCAL. Please check it. If you want to abort the replacement of the PCI CON, press Cancel.” is displayed if REMOTE/LOCAL switch is not LOCAL. Turn to LOCAL and select (CL) [OK], or [Cancel] to terminate replacing.
If REMOTE/LOCAL switch is not LOCAL, step 2 again.

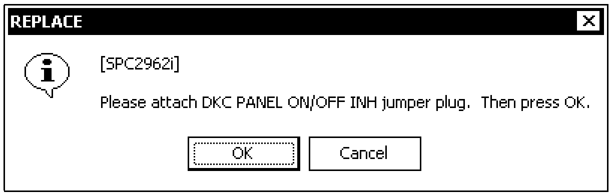


[SPC2957W]

REMOTE/LOCAL switch is not LOCAL. Please check it. If you want to abort the replacement of the PCI CON, press Cancel.

---

3. <Check jumper installation>
Attach jumper on DKCMN 1/2 in response to “Please attach DKC PANEL ON/OFF INH jumper plug. Then press OK.”.
(see HARDWARE T4 (REP03-360 step 2)).
Select (CL) [OK] after confirming that jumper is attached.
Go to step 5.
If jumper plug is not attached, go to 4.

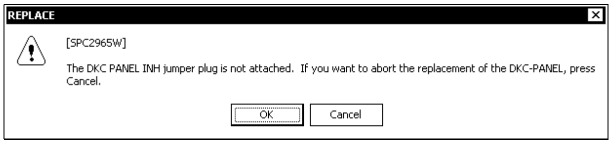


[SPC2962i]

Please attach DKC PANEL ON/OFF INH jumper plug. Then press OK.

---

4. <Check jumper reinstallation>
“The DKC PANEL INH jumper plug is not attached. If you want to abort the replacement of the DKC-PANEL press Cancel.” is displayed if no jumper is attached. Attach jumper and select (CL) [OK].
Go to step 5.
If jumper plug is not attached, step 4 again.

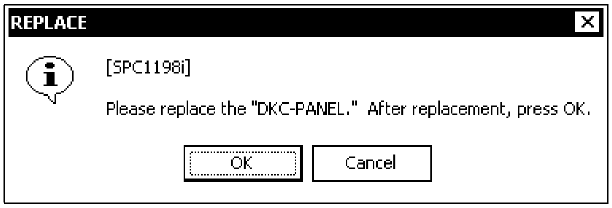


[SPC2965W]

The DKC PANEL INH jumper plug is not attached. If you want to abort the replacement of the DKC-PANEL, press Cancel.

---

5. <Check beginning of special part Replacement>
“Please replace the "XXXXX." After replacement, press OK.” is displayed.
(Reply with [OK] after replacing the special part.)



[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

(ex. DKC-PANEL)

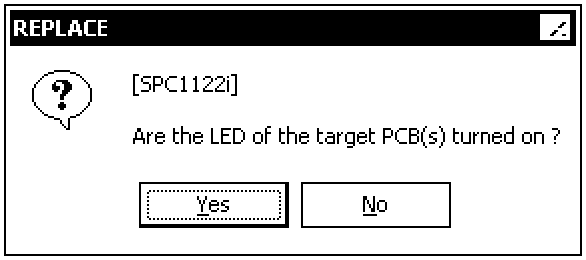
PCI CON -- see HARDWARE T4 (REP03-360)
UPS CON-- see HARDWARE T27 (REP03-970)

[End of PRE-PROCEDURE]

[5] DKCMN

1.

The message “Are the LED of the target PCB(s) turned on?” is displayed.
If you select (CL) [Yes], go to step 3.
If you select (CL) [No], go to step 2.



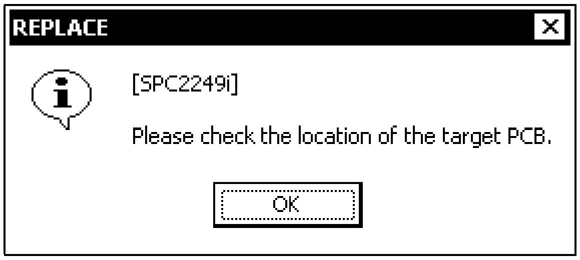
REPLACE

[SPC1122i]

Are the LED of the target PCB(s) turned on ?

2.

The message shown on the right is displayed.
Check the location of the DKCMN.
(see HARDWARE T3 (REP03-330))
Select (CL) [OK].



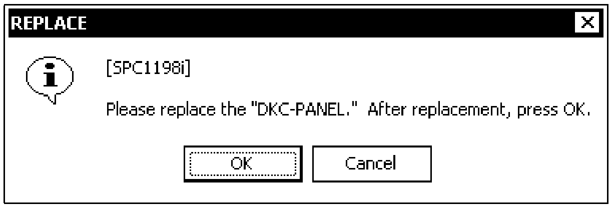
REPLACE

[SPC2249i]

Please check the location of the target PCB.

---

3. <Check beginning of special part Replacement>
“Please replace the "DKCMNx." After replacement, press OK.” is displayed.
(Reply with [OK] after replacing the special part.)



REPLACE

[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

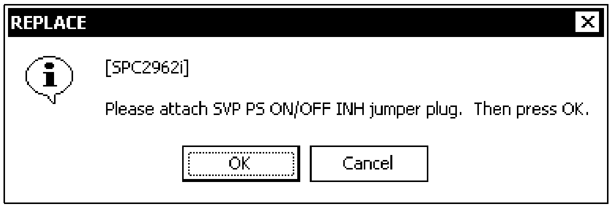
(ex. DKC - PANEL)

see HARDWARE T3 (REP03-330)

[End of PRE-PROCEDURE]

[6] SVP, SVP&FLASH CARD

1. <Attaching a jumper plug>
Attach a jumper plug to the RSCON following a message, “Please attach SVP PS ON/OFF INH jumper plug. Then press OK.”. (see HARDWARE T7 (on page REP03-450)).
After checking that the jumper plug has been attached, select (CL) [OK].
At this time, do not attach Shut Down jumper plug.
Go to step 3.
When the jumper plug has not been attached, go to step 2.

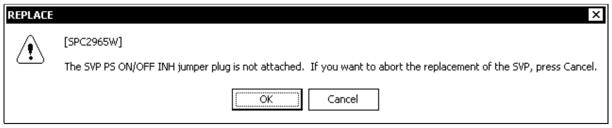


[SPC2962i]

Please attach SVP PS ON/OFF INH jumper plug. Then press OK.

---

2. <Checking re-attachment of the jumper plug>
When the jumper plug has not been attached, a message, “The SVP PS ON/OFF INH jumper plug is not attached. If you want to abort the replacement of the SVP, press Cancel.” is displayed. Attach the jumper plug and select (CL) [OK].
Go to step 3.
When the jumper plug has not been attached, execute step 2 again.

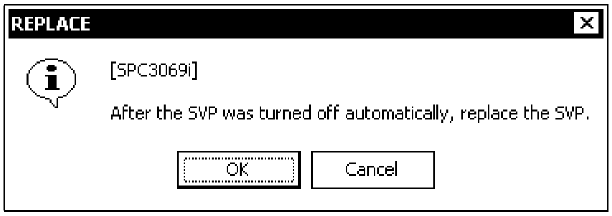


[SPC2965W]

The SVP PS ON/OFF INH jumper plug is not attached. If you want to abort the replacement of the SVP, press Cancel.

3.

The message “After the SVP was turned off automatically, replace the XXXXX.” is displayed.
- In the case that SNMP Option is installed.
  Go to 4.
- In the case that SNMP Option is not installed.
  If the CD-ROM disk inserted into the CD-ROM drive, remove the CD-ROM disk.
  Select (CL) [OK], so SVP is turned off automatically.
  (See HARDWARE T7 (REP03-450))



[SPC3069i]

After the SVP was turned off automatically, replace the SVP.

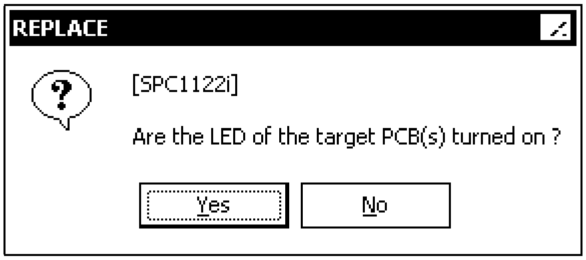
(ex. SVP)

[End of PRE-PROCEDURE]

[7] SSVP

1\.

The message “Are the LED of the target PCB(s) turned on?” is displayed.
If you select (CL) [Yes], go to step 3.
If you select (CL) [No], go to step 2.

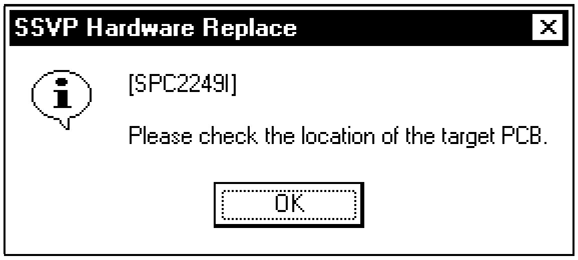

REPLACE

[SPC1122i]

Are the LED of the target PCB(s) turned on ?

2\.

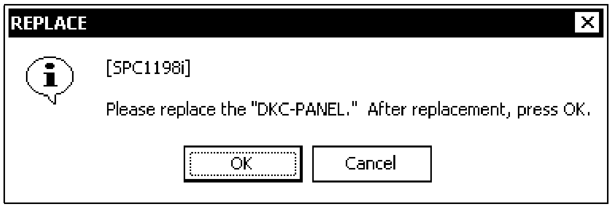
The message shown on the right is displayed.
Check the location of the SSVP.
(see HARDWARE T8 (REP03-550))
Select (CL) [OK].


SSVP Hardware Replace

[SPC2249I]

Please check the location of the target PCB.

3. <Check beginning of special part Replacement>
“Please replace the "SSVP." After replacement, press OK.” is displayed.
(Reply with [OK] after replacing the special part.)


REPLACE

[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

(ex. DKC - PANEL)

see HARDWARE T8 (REP03-550)

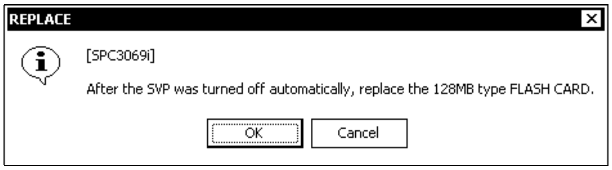
[End of PRE-PROCEDURE]

[8] FLASH CARD

⚠ CAUTION

When the “Explorer” windows are executing, close them before replacement procedure.

1. <Check beginning of FLASH CARD Replacement>
   The message “After the SVP was turned off automatically, replace the FLASH CARD.” is displayed.
   Select (CL) [OK], so it will reboot the SVP, and the files on FLASH CARD are moved to HD. Then SVP is turned off automatically.
   (See HARDWARE T7 (REP03-450))



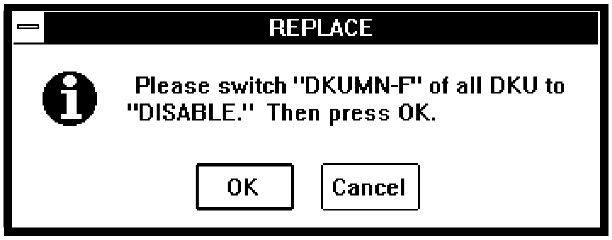
[SPC3069i]

After the SVP was turned off automatically, replace the 128MB type FLASH CARD.

[End of PRE-PROCEDURE]

[9] MONI-CON 1/2

1. <Checking DKUMN switch>
Set the DKUMN switches to “DISABLE” and then select (CL) the [OK] in response to the following message.
“Please switch “DKUMN-n” of all DKUs (the DKUMN-F switches are located on the front side of the DKUs and the DKUMN-R switches, on the rear side of the DKUs) to “DISABLE.” Then press OK.”
(For the locations and connections of the DKUMN switches, refer to pages LOCATION02-10 and LOCATION05-40 of LOCATION SECTION respectively.



Please switch "DKUMN-F" of all DKU to "DISABLE." Then press OK.

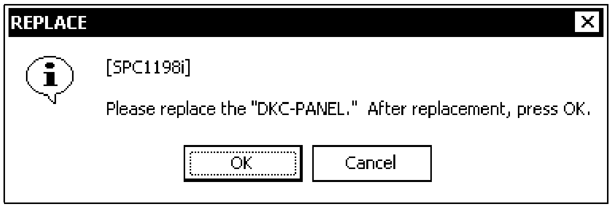
DKUMN-n:
- In the case of the MONI-CON1
  n = F (DKUMN-F): Reset the DKUMN switch on the front side of the DKU to “DISABLE.”
- In the case of the MONI-CON2
  n = R (DKUMN-F): Reset the DKUMN switch on the rear side of the DKU to “DISABLE.”

---

2. <Checking beginning of special part replacement>
A message, “Please replace the XXXXX. After replacement, press OK.” is displayed. (Select (CL) the [OK] after replacing the special part.)

See HARDWARE Tx (page REP03-xxx).

[End of PRE-PROCEDURE]



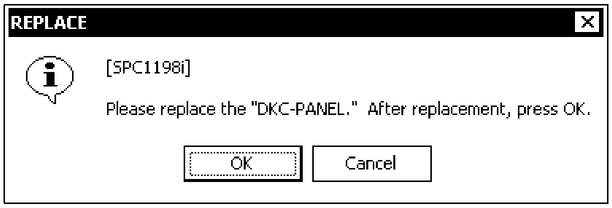
[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

(ex. DKC - PANEL)

[10] RS CON, HUB-BOX

1. <Check beginning of special part Replacement>
“Please replace the "XXXXXX." After replacement, press OK.” is displayed.
(Reply with [OK] after replacing the special part.)



[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

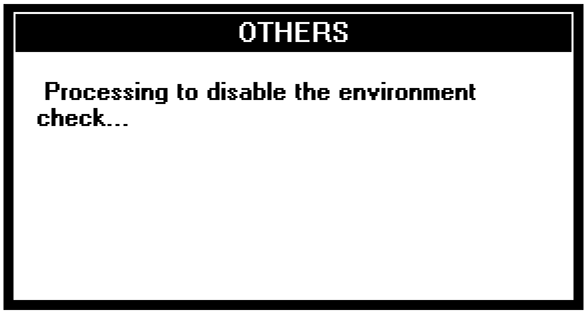
(ex. DKC-PANEL)

RS CON ------------------see HARDWARE T19 (REP03-710)
HUB-BOX----------------see HARDWARE T25 (REP03-930)

[End of PRE-PROCEDURE]

[11] SVPPS-BOX

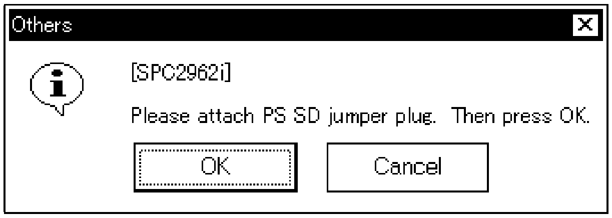
1. <Check environment monitor stopped state>
“Processing to disable the environment check...” is displayed.



Processing to disable the environment check...

---

2. <Attaching a jumper plug>
You must ensure that an Optional SVP is powered off.
Attach a jumper plug to the SVPPS-BOX in response to a message, “Please attach PS SD jumper plug. Then press OK.”
(See Steps 2 and 3 in HARDWARE T26 (REP03-960).)
After making sure that the jumper plug has been attached, select (CL) [OK].

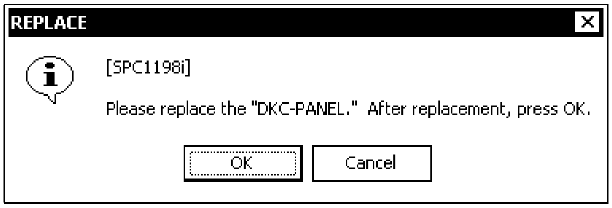


[SPC2962i]

Please attach PS SD jumper plug. Then press OK.

---

3. <Check beginning of special part Replacement>
“Please replace the "XXXXX." After replacement, press OK.” is displayed.
(Select (CL) [OK] after the replacement.)



[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

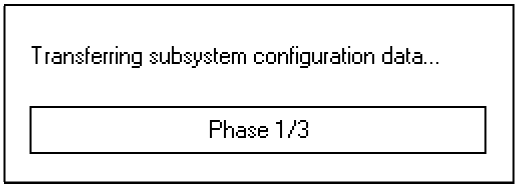
(ex. DKC-PANEL)

See HARDWARE T26 (REP03-950).

[End of PRE-PROCEDURE]

[12] Switch SVPs with Transfer Config Data

1. <Transferring Subsystem Configuration Data>
The message "Transferring subsystem configuration data..." is displayed.

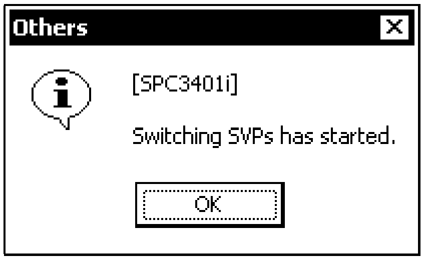


Transferring subsystem configuration data...

2. <Checking beginning of the SVP switching >
The message "Switching SVPs has started." is displayed.
The SVP is powered off automatically owing to the SVP switching. Make sure that the Standby SVP has started up.

See SVP POST-PROCEDURE t1 (REP04-320).

[End of PRE-PROCEDURE]

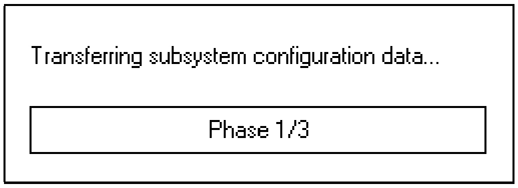


[SPC3401i]

Switching SVPs has started.

[13] Transfer configuration data only

1. <Status>
“Transferring subsystem configuration data...” is displayed.



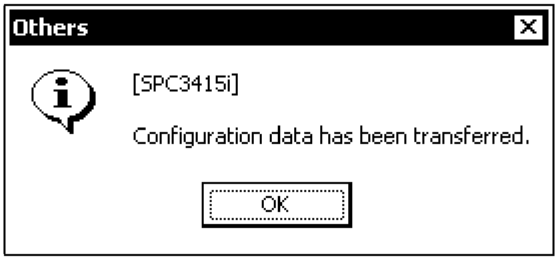
Transferring subsystem configuration data...

---

2. <Check end of transferring>
“Configuration data has been transferred.” is displayed. Select OK.

See SVP POST-PROCEDURE t1 (REP04-320).

[End of PRE-PROCEDURE]



[SPC3415i]

Configuration data has been transferred.

3.

(Multi Cabinet Model)
Close ‘DKC’ window.
Close ‘Maintenance’ window.

(Single Cabinet Model)
Close ‘Controller’ window.
Close ‘Maintenance’ window.

Go to POST-PROCEDURE z (REP04-1400).

[PRE-PROCEDURE T3]

— OUTLINE —

① Select special (DKC) part (status check).
② Specify Replacement.
③ Detach parts related to special part.
④ Place parts related to special part into unpluggable state.

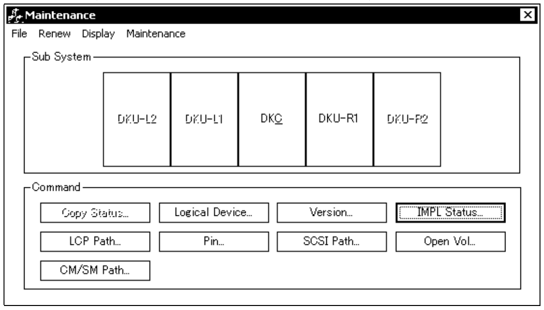
[1] Select special part

1. <Maintenance window>

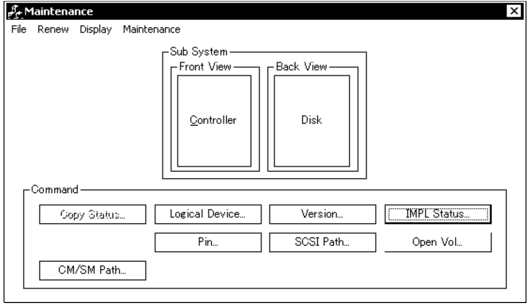
(Multi Cabinet Model)
In the ‘Maintenance’ window, check and select (CL) [DKC] to be replaced.

(Single Cabinet Model)
In the ‘Maintenance’ window, check and select (CL) [Controller] to be replaced.

(Multi Cabinet Model)


Maintenance
File Renew Display Maintenance
Sub System
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
LCP Path...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(Single Cabinet Model)


Maintenance
File Renew Display Maintenance
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

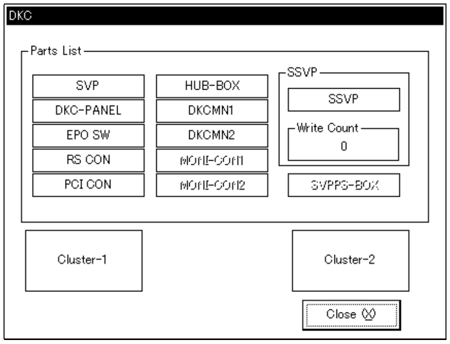
---

2. <DKC window>

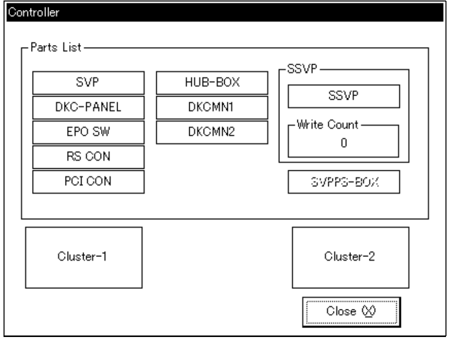
(Multi Cabinet Model)
Select (CL) [Cluster-n] in the ‘DKC’.

(Single Cabinet Model)
Select (CL) [Cluster-n] in the ‘Controller’.

(Multi Cabinet Model)


DKC
Parts List
SVP
DKC-PANEL
EPO SW
RS CON
PCI CON
HUB-BOX
DKCMN1
DKCMN2
MONI-CON1
MONI-CON2
SSVP
SSVP
Write Count
0
SVPPS-BOX
Cluster-1
Cluster-2
Close (X)

(Single Cabinet Model)

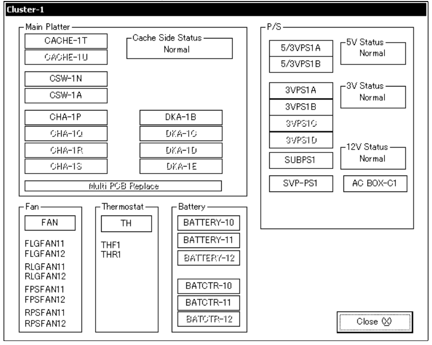

Controller
Parts List
SVP
DKC-PANEL
EPO SW
RS CON
PCI CON
HUB-BOX
DKCMN1
DKCMN2
SSVP
SSVP
Write Count
0
SVPPS-BOX
Cluster-1
Cluster-2
Close (X)

3. <Select special part>
If any other message than the list is displayed, see the SVP Message Section (SVPMSG00-00).

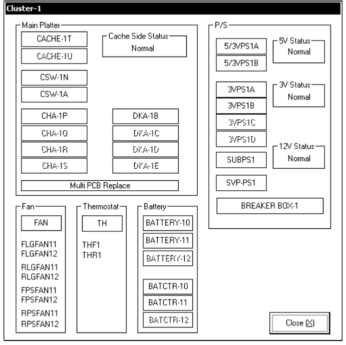
Select (CL) part [XXXX] to be replaced from [Cluster-n] window and select (CL) [Execute].
Valid [XXXX] values are listed below.

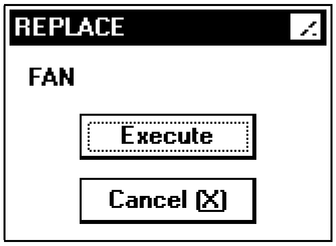
- Fan assembly(DKC) ... [FAN]
- PS................................ [5/3VPSn], [3VPSn], [SUBPS]
- SVP-PS .... [SVP-PSn]
- Battery, BAT CTR...... [BATTERY-mm, BAT CTR-mm]
- Breaker Box .... [BREAKER BOX-n]
- Thermostat assembly .. [TH]
- AC BOX(DKC) .... [AC BOX-Cn]

(Multi Cabinet Single Phase Model,
Multi Cabinet 3 Phase Model
[30A AC BOX])


Cluster-1
Main Platter
CACHE-1T
CACHE-1U
CSW-1N
CSW-1A
CHA-1P
CHA-1Q
CHA-1R
CHA-1S
DKA-1B
DKA-1C
DKA-1D
DKA-1E
Cache Side Status
Normal
Multi PCB Replace
P/S
5/3VPS1A
5/3VPS1B
5V Status
Normal
3VPS1A
3VPS1B
3VPS1C
3VPS1D
3V Status
Normal
SUBPS1
12V Status
Normal
SVP-PS1
AC BOX-C1
Fan
FAN
FLGFAN11
FLGFAN12
RLGFAN11
RLGFAN12
FPSFAN11
FPSFAN12
RPSFAN11
RPSFAN12
Thermostat
TH
THF1
THR1
Battery
BATTERY-10
BATTERY-11
BATTERY-12
BATCTR-10
BATCTR-11
BATCTR-12
Close (X)

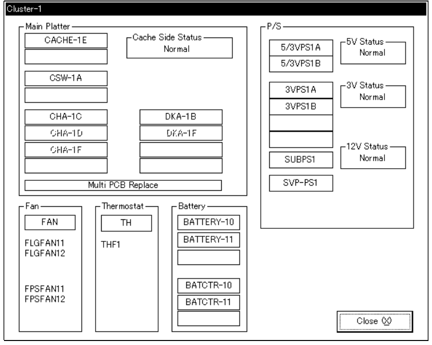
(Multi Cabinet 3 Phase Model
[Without 30A AC BOX])


Cluster-1
Main Platter
CACHE-1T
CACHE-1U
CSW-1N
CSW-1A
CHA-1P
CHA-1Q
CHA-1R
CHA-1S
DKA-1B
DKA-1C
DKA-1D
DKA-1E
Cache Side Status
Normal
Multi PCB Replace
P/S
5/3VPS1A
5/3VPS1B
5V Status
Normal
3VPS1A
3VPS1B
3VPS1C
3VPS1D
3V Status
Normal
SUBPS1
12V Status
Normal
SVP-PS1
BREAKER BOX-1
Fan
FAN
FLGFAN11
FLGFAN12
RLGFAN11
RLGFAN12
FPSFAN11
FPSFAN12
RPSFAN11
RPSFAN12
Thermostat
TH
THF1
THR1
Battery
BATTERY-10
BATTERY-11
BATTERY-12
BATCTR-10
BATCTR-11
BATCTR-12
Close (X)


REPLACE
FAN
Execute
Cancel (X)

(ex. Fan assembly)

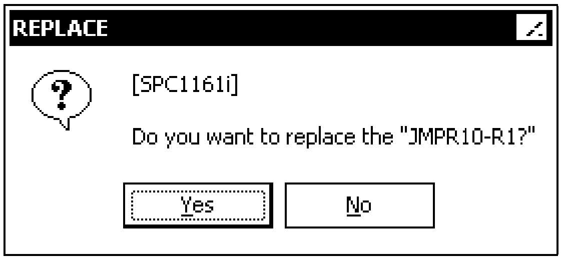
(Single Cabinet Model)


Cluster-1
Main Platter
CACHE-1E
CSW-1A
CHA-1C
CHA-1D
CHA-1F
DKA-1B
DKA-1F
Cache Side Status
Normal
Multi PCB Replace
P/S
5/3VPS1A
5/3VPS1B
5V Status
Normal
3VPS1A
3VPS1B
3V Status
Normal
SUBPS1
12V Status
Normal
SVP-PS1
Fan
FAN
FLGFAN11
FLGFAN12
FPSFAN11
FPSFAN12
Thermostat
TH
THF1
Battery
BATTERY-10
BATTERY-11
BATCTR-10
BATCTR-11
Close (X)

(ex. Cluster-1)

4. <Check beginning of special part Replacement>
Select (CL) [Yes] in response to “Do you want to replace the "XXXXX?."”.

XXXXX represents one of the part names listed in step 3.



[SPC1161i]

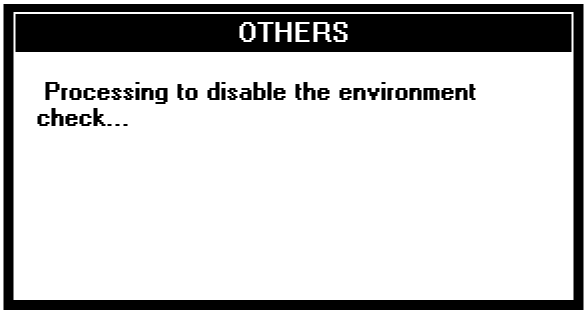
Do you want to replace the "JMPR10-R1?"

(ex. JMPR10-R1)

- “Fan assembly” ----------- Go to [2] (REP02-700)
- “Thermostat assembly” -- Go to [2] (REP02-700)
- “5/3V PSn” ---------------- Go to [3] (REP02-710)
- “3V PSn” ------------------ Go to [3] (REP02-710)
- “SUBPSn” ----------------- Go to [3] (REP02-710)
- “BATTERY-n” ----------- Go to [4] (REP02-720)
- “BAT CTR-n”------------- Go to [5] (REP02-730)
- “SVP-PSn” ---------------- Go to [7] (REP02-745)
- “BREAKER BOX-n” ---- Go to [6] (REP02-740)
- “AC BOX-Cn” ------------ Go to [6] (REP02-740)

[2] Fan assembly, Thermostat assembly

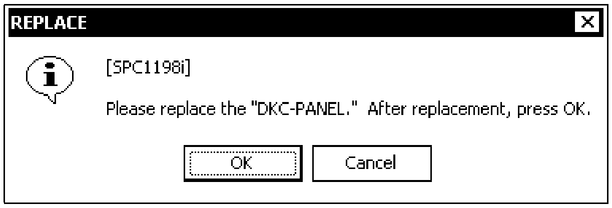
1. <Check environment monitor stopped state>
“Processing to disable the environment check...” is displayed.



Processing to disable the environment check...

---

2. <Special part Replacement>
“Please replace the "XXXXX." After replacement, press OK.” is displayed.
(Reply with [OK] after replacing the special part.)



[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

(ex. DKC-PANEL)

Fan assembly-------------see HARDWARE T5 (REP03-410)
Thermostat assembly----see HARDWARE T6 (REP03-430)

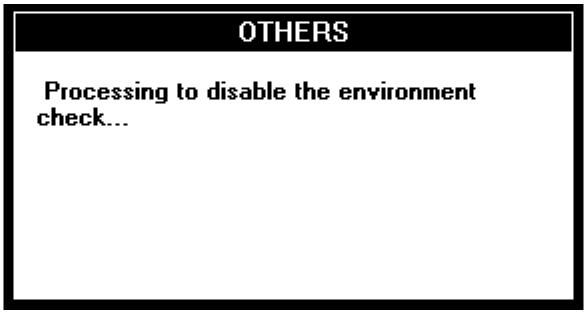
[End of PRE-PROCEDURE]

[3] 5/3V PS, 3V PS, SUBPS

1. <Check matching power supply>
The SVP automatically checks the power supply to see if it is replaceable.

---

2. <Environment monitor state>
"Processing to disable the environment check..." is displayed.



Processing to disable the environment check...

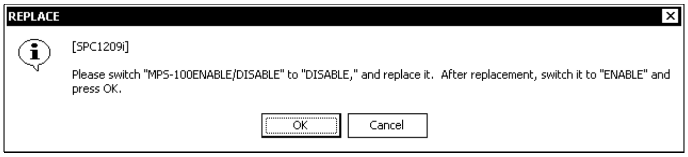
---

3. <Special part replacement>

v The message shown on the right is displayed.
(Reply with [OK] after replacing the special part.)

see HARDWARE T13 (REP03-620)

[End of PRE-PROCEDURE]



[SPC1209i]

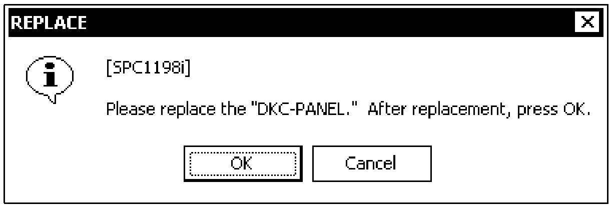
Please switch "MPS-100ENABLE/DISABLE" to "DISABLE," and replace it. After replacement, switch it to "ENABLE" and press OK.

(ex. MPS-R100)

[4] BATTERY

1. <Check source power>
   The SVP automatically checks the 5/3V power supply to determine whether it is not shut down.

2. <Check beginning of special part Replacement>
   “Please replace the "XXXXX." After replacement, press OK.” is displayed.
   (Reply with [OK] after replacing the special part.)



[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

(ex. DKC-PANEL)

see HARDWARE T11 (REP03-570)

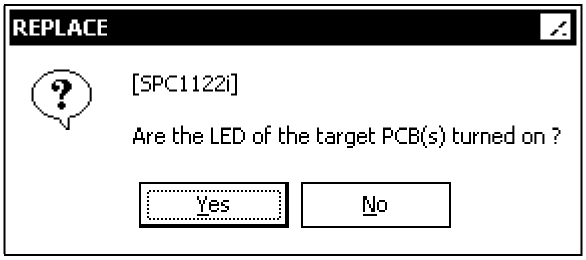
[End of PRE-PROCEDURE]

[5] BATCTR

1. <Check source power>
The SVP automatically checks the 5/3V power supply to determine whether it is not shut down.

2.

The message “Are the LED of the target PCB(s) turned on?” is displayed.
If you select (CL) [Yes], go to step 4.
If you select (CL) [No], go to step 3.

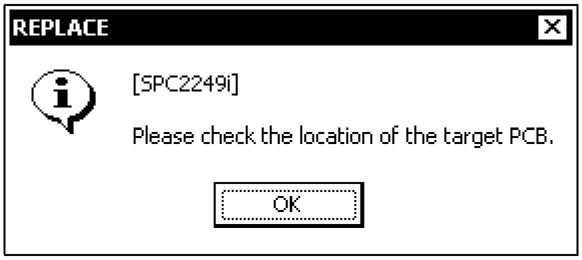


[SPC1122i]

Are the LED of the target PCB(s) turned on ?

3.

The message shown on the right is displayed.
Check the location of the BATCTR.
(see HARDWARE T12 (REP03-600))
Select (CL) [OK].



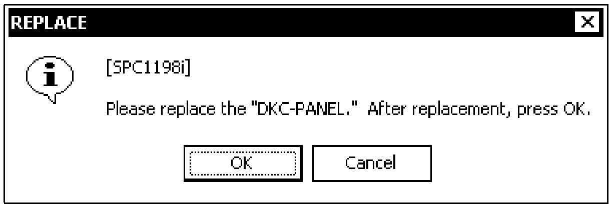
[SPC2249i]

Please check the location of the target PCB.

---

4. <Check beginning of special part Replacement>
“Please replace the "XXXXX." After replacement, press OK.” is displayed.
(Reply with [OK] after replacing the special part.)

see HARDWARE T12 (REP03-600)



[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

(ex. DKC-PANEL)

[End of PRE-PROCEDURE]

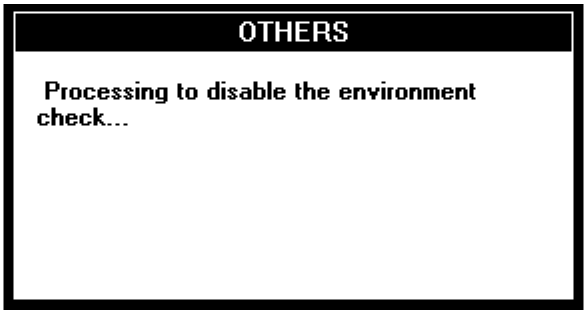
[6] BREAKER BOX, AC BOX(DKC)

These parts equip Multi Cabinet Model only.

1. <Check matching power supply>
   The SVP automatically checks the power supplies to see if the part is replaceable.

---

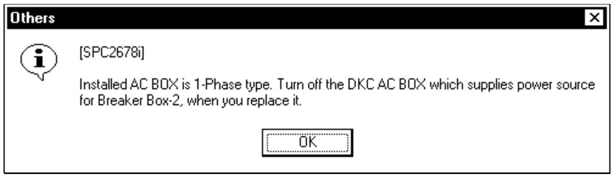
2. <Check environment monitor stopped state>
   "Processing to disable the environment check..." is displayed.



Processing to disable the environment check...

---

3. In the case of Breaker Box replacement with 1-Phase Power Supply option, SVP displays "Installed AC BOX is 1-Phase type. Turn off the DKC AC BOX which supplies power source for XXXXX, when you replace it." Message. Select (CL) [OK].
   In the other case, go to [4].



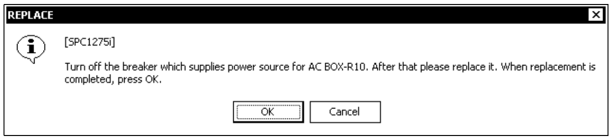
[SPC2678i]

Installed AC BOX is 1-Phase type. Turn off the DKC AC BOX which supplies power source for Breaker Box-2, when you replace it.

(ex. BREAKER BOX-2)

---

4. The message shown on the right is displayed.
   (Reply with [OK] after replacing the special part.)



[SPC1275i]

Turn off the breaker which supplies power source for AC BOX-R10. After that please replace it. When replacement is completed, press OK.

(ex. AC BOX-R10)

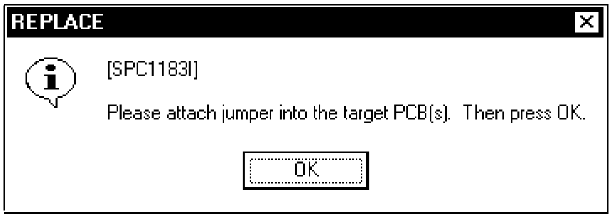
BREAKER BOX-1 ------ see HARDWARE T9 (REP03-1000) of Multi Cabinet Model Maintenance Manual
BREAKER BOX-2 ------ see HARDWARE T10 (REP03-1070) of Multi Cabinet Model Maintenance Manual
AC BOX(DKC) ---------- see HARDWARE T21 (REP03-750) of Multi Cabinet Model Maintenance Manual

[End of PRE-PROCEDURE]

[7] SVPPS

1. <Check matching power supply>
The SVP automatically checks the power supply to see if it is replaceable.

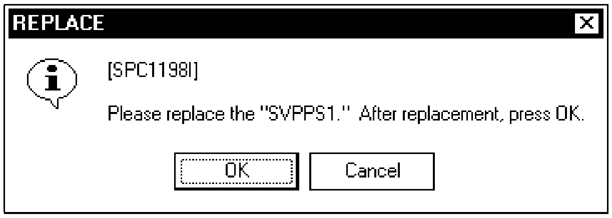
2.
Please attach the jumper in response to the displayed message.
(see HARDWARE T23 (REP03-890 step 1))
Select (CL) [OK].



[SPC1183I]

Please attach jumper into the target PCB(s). Then press OK.

3.
The message “Please replace the "SVPPS1." After replacement, press OK.” is displayed.
(Reply with [OK] after replacing the special part.)



[SPC1198I]

Please replace the "SVPPS1." After replacement, press OK.

see HARDWARE T23 (REP03-880)

[End of PRE-PROCEDURE]

[PRE-PROCEDURE T4]

— OUTLINE —

① Select special (DKU) part (status check).
② Specify Replacement.
③ Detach parts related to special part.
④ Place part into unpluggable state.

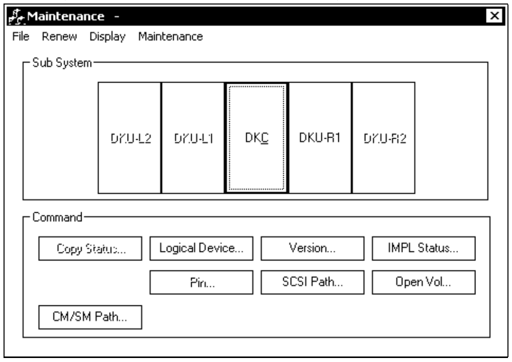
[1] Select special part

1. <Select DKU-X>

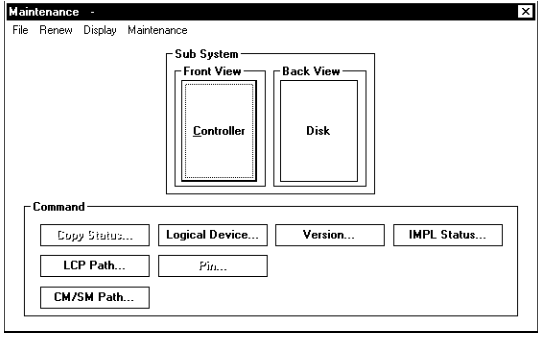
   (Multi Cabinet Model)
   Select (CL) [DKU] from ‘Maintenance’.

   (Single Cabinet Model)
   Select (CL) [Disk] from ‘Maintenance’.

(Multi Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(Single Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
LCP Path...
Pin...
CM/SM Path...

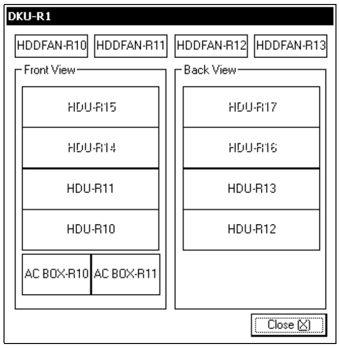
2. <Specify special part>
Select part [XXXXX] to be Replaced.
- DKUMN -- [DKUMN-X]
- AC BOX -- [AC BOX-X]
- Fan assembly (DKU455, Single Cabinet Model)
 --- [HDDFAN-X]

Go to step 4.

- Fan assembly (DKU405)
- SW PS (DKU Multi)
- JMP

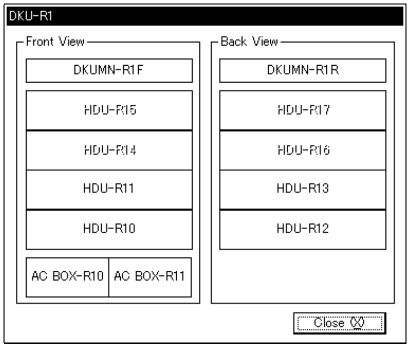
Select (CL) [HDU-X]. Go to step 3.

(Multi Cabinet Model [DKU455])


DKU-R1
HDDFAN-R10
HDDFAN-R11
HDDFAN-R12
HDDFAN-R13
Front View
Back View
HDU-R15
HDU-R14
HDU-R11
HDU-R10
AC BOX-R10
AC BOX-R11
HDU-R17
HDU-R16
HDU-R13
HDU-R12
Close (X)

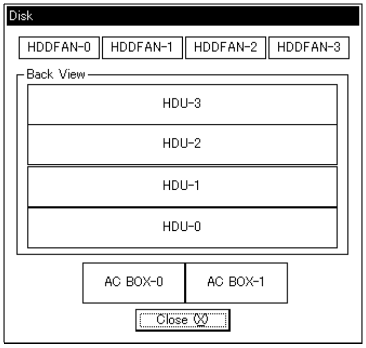
(ex. DKU-R1)

(Multi Cabinet Model [DKU405])


DKU-R1
Front View
Back View
DKUMN-R1F
HDU-R15
HDU-R14
HDU-R11
HDU-R10
AC BOX-R10
AC BOX-R11
DKUMN-R1R
HDU-R17
HDU-R16
HDU-R13
HDU-R12
Close (X)

(ex. DKU-R1)

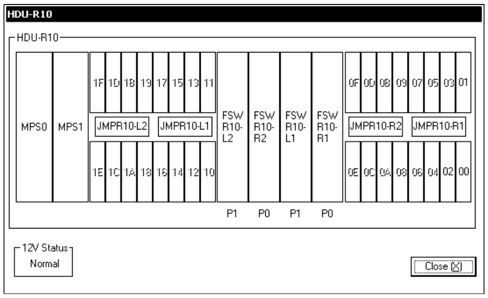
(Single Cabinet Model)


Disk
HDDFAN-0
HDDFAN-1
HDDFAN-2
HDDFAN-3
Back View
HDU-3
HDU-2
HDU-1
HDU-0
AC BOX-0
AC BOX-1
Close (X)

3. <Specify special part>
   Perform the replacement using the [HDU-x] window.
   Select (CL) [xxxxx].

   - Fan assembly (DKU405) ---- [FAN-X]
   - SW PS (DKU, Multi) -------- [MPS-n]
   - JMP ----------------------------- [JMPY-m]

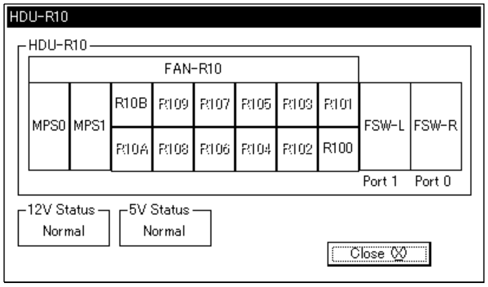
(Multi Cabinet Model [DKU455])


HDU-R10
HDU-R10
MPS0
MPS1
1F 1D 1B 19 17 15 13 11
JMPR10-L2
JMPR10-L1
1E 1C 1A 18 16 14 12 10
FSW R10-L2
FSW R10-R2
FSW R10-L1
FSW R10-R1
P1 P0 P1 P0
0F 0D 0B 09 07 05 03 01
JMPR10-R2
JMPR10-R1
0E 0C 0A 08 06 04 02 00
Close (X)

12V Status: Normal

(ex. HDU-R10)

(Multi Cabinet Model [DKU405])

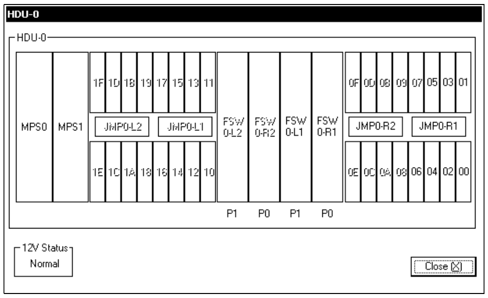

HDU-R10
HDU-R10
FAN-R10
MPS0
MPS1
R10B R109 R107 R105 R103 R101
R10A R108 R106 R104 R102 R100
FSW-L
FSW-R
Port 1
Port 0
Close (X)

12V Status: Normal

5V Status: Normal

(ex. HDU-R10)

(Single Cabinet Model)

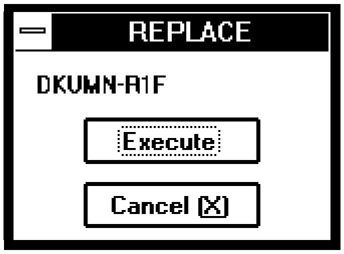

HDU-0
HDU-0
MPS0
MPS1
1F 1D 1B 19 17 15 13 11
JMP0-L2
JMP0-L1
1E 1C 1A 18 16 14 12 10
FSW 0-L2
FSW 0-R2
FSW 0-L1
FSW 0-R1
P1 P0 P1 P0
0F 0D 0B 09 07 05 03 01
JMP0-R2
JMP0-R1
0E 0C 0A 08 06 04 02 00
Close (X)

12V Status: Normal

(ex. HDU-0)

4. <Specify special part Replacement>
If any other message than the list is displayed, see the SVP Message Section (SVPMSG00-00).

Select (CL) [Execute].



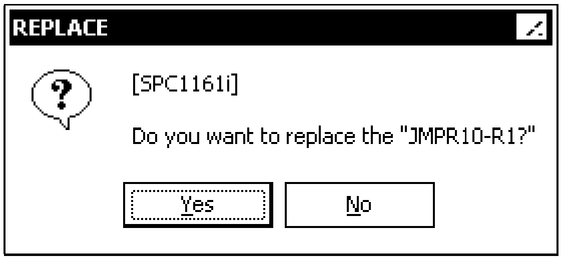
DKUMN-R1F

(ex. DKUMN-R1F of Multi Cabinet Model)

---

5. <Special part Replacement>
Select (CL) [Yes] in response to “Do you want to replace the "XXXXXX?"”.
XXXXX represents one of the part names listed in step 2 or 3.
Valid [XXXXX] values are listed below.

- ‘DKUMN-X’ -----------Go to [2] (REP02-780)
- ‘MPS-X’ ----------------Go to [3] (REP02-790)
- ‘Fan assembly’ ---------Go to [4] (REP02-800)
- ‘AC BOX-X’ -----------Go to [5] (REP02-810)
- ‘JMPY-m’ --------------Go to [6] (REP02-815)



[SPC1161i]

Do you want to replace the "JMPR10-R1?"

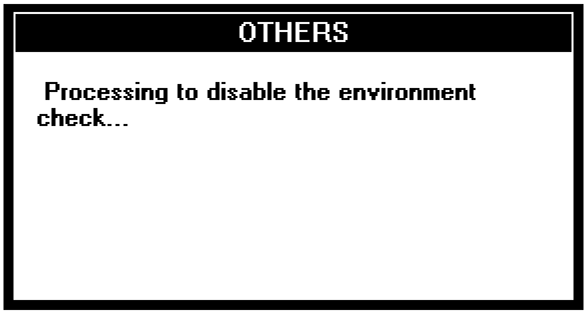
(ex. JMPR1U-R1)

[2] DKUMN PCB

1. <Environment monitor state>
“Processing to disable the environment check...” is displayed.

(Multi Cabinet Model)
• DKUMN-R3n, DKUMN-L3n ----- Go to 3

(Single Cabinet Model)
Go to 3.

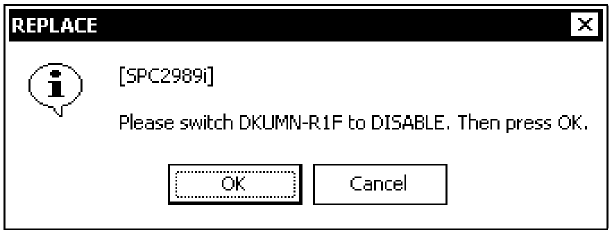


Processing to disable the environment check...

---

2. <Disable DKUMN>
When Multi Cabinet Model, if DKUMN-XXX (listed below) is installed, this message is displayed.
Disable the DKUMN in response to “Please switch DKUMN-X to DISABLE.
Then press OK.” (see HARDWARE T14 (REP03-xxx)).
After confirming that the DKUMN-X has been disabled, select (CL) [OK].
DKUMN-X (Multi Cabinet Model):

Replace parts	X
DKUMN-R1F	R2F, R3F
DKUMN-R1R	R2R, R3R
DKUMN-R2F	R3F
DKUMN-R2R	R3R
DKUMN-L1F	L2F, L3F
DKUMN-L1R	L2R, L3R
DKUMN-L2F	L3F
DKUMN-L2R	L3R



[SPC2989i]

Please switch DKUMN-R1F to DISABLE. Then press OK.

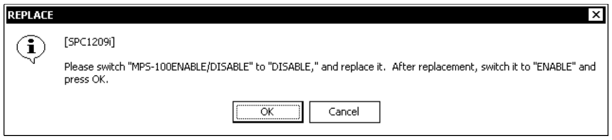
(ex. Replacement of the DKUMN-R1F)

---

3. <Special part Replacement>
“Please switch "DKUMN-X" to "DISABLE," and replace it. After replacement, switch it to "ENABLE" and press OK.” is displayed.
(Reply with [OK] after replacing the special part.)

see HARDWARE T24 (REP03-910)

[End of PRE-PROCEDURE]



[SPC1209i]

Please switch "MPS-100ENABLE/DISABLE" to "DISABLE," and replace it. After replacement, switch it to "ENABLE" and press OK.

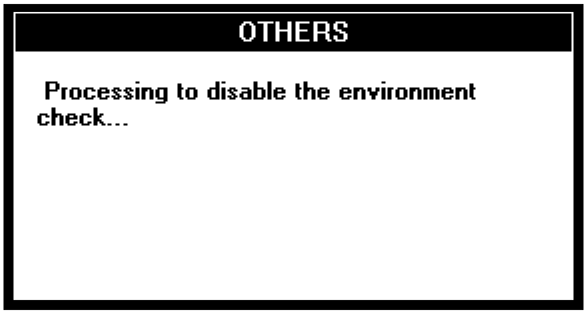
(ex. MPS-R100)

[3] MPS (DKU, Disk)

1. <Check matching power supply>
   The SVP automatically checks that the mate power supply is normal.

---

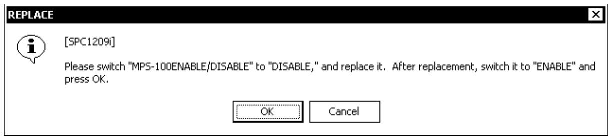
2. <Environment monitor state>
   “Processing to disable the environment check...” is displayed.



Processing to disable the environment check...

---

3. <Special part replacement>
   The message shown on the right is displayed. (Reply with [OK] after replacing the special part.)



[SPC1209i]

Please switch "MPS-100ENABLE/DISABLE" to "DISABLE," and replace it. After replacement, switch it to "ENABLE" and press OK.

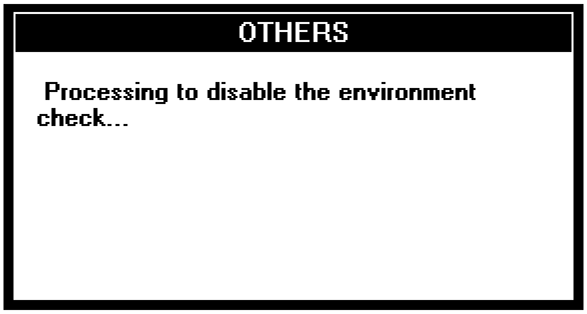
(ex. MPS-R100)

see HARDWARE T15 (REP03-660)

[End of PRE-PROCEDURE]

[4] Fan assembly

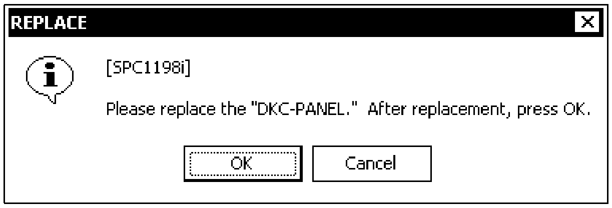
1. <Environment monitor state>
“Processing to disable the environment check...” is displayed.



Processing to disable the environment check...

---

2. <Special part Replacement>
“Please replace the "XXXXX." After replacement, press OK.” is displayed.
(Reply with [OK] after replacing the special part.)



[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

(ex. DKC-PANEL)

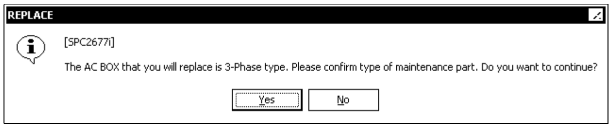
see HARDWARE T16 (REP03-690)

[End of PRE-PROCEDURE]

[5] AC BOX

1.

(Multi Cabinet Model)
“The AC BOX that you will replace is XXXX. Please confirm type of maintenance part. Do you want to continue?” is displayed.
Confirm the maintenance part “XXXX” with Power Supply option, and select (CL) [Yes].
XXXX : 3-Phase type
1-Phase type



[SPC2677i]

The AC BOX that you will replace is 3-Phase type. Please confirm type of maintenance part. Do you want to continue?

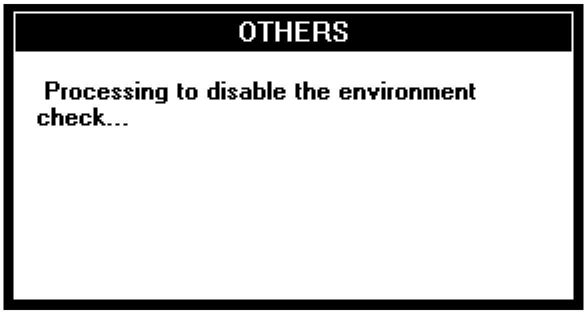
(Single Cabinet Model)
Go to 2.

2.

The SVP automatically checks the power supplies to see if AC BOX is replaceable.

---

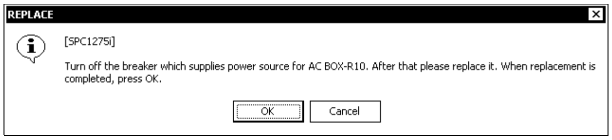
3. <Check environment monitor stopped state>
“Processing to disable the environment check...” is displayed.



Processing to disable the environment check...

4.

“Turn off the breaker which supplies power source for AC-BOX-X. After that please replace it. When replacement is completed, press OK.” is displayed.
(Reply with [OK] after replacing the special part.)



[SPC1275i]

Turn off the breaker which supplies power source for AC BOX-R10. After that please replace it. When replacement is completed, press OK.

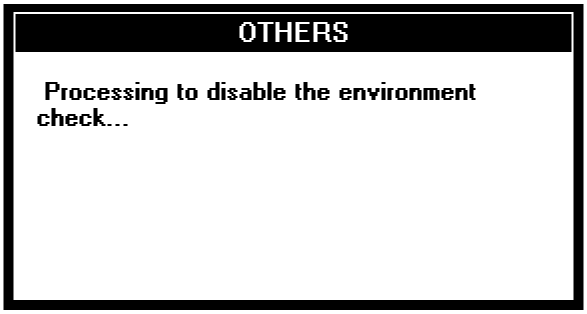
(ex. AC BOX-R10 of Multi Cabinet Model)

AC BOX-R10(3 Phase Type for Multi Cabinet Model)
---see HARDWARE T17
AC BOX(except AC BOX-R10 of 3 Phase Type for Multi Cabinet Model)
---see HARDWARE T18
AC BOX(1 Phase Type for Multi Cabinet Model) -----see HARDWARE T22
AC BOX(Single Cabinet Model) -------------------------see HARDWARE T21 (REP03-750)

[End of PRE-PROCEDURE]

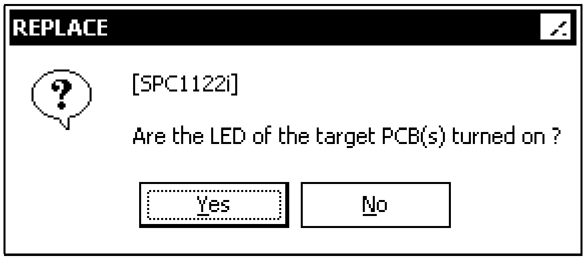
[6] JMP

1. <Check environment monitor stopped state>
“Processing to disable the environment check...” is displayed.



Processing to disable the environment check...

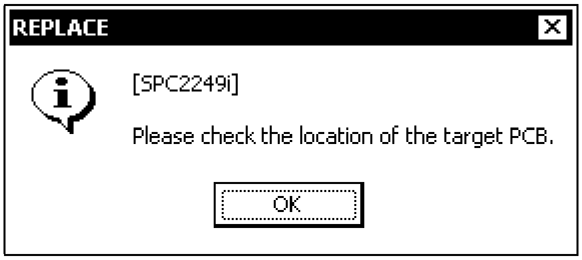
2. The message “Are the LED of the target PCB(s) turned on?” is displayed.
If you select (CL) [Yes], go to step 4.
If you select (CL) [No], go to step 3.



[SPC1122i]

Are the LED of the target PCB(s) turned on ?

3. The message shown on the right is displayed.
Check the location of the JMP.
(see HARDWARE T24 (REP03-910))
Select (CL) [OK].

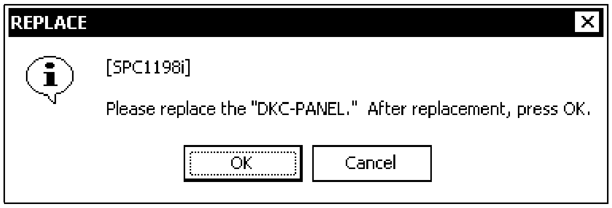


[SPC2249i]

Please check the location of the target PCB.

4. <Check beginning of special part Replacement>
“Please replace the "XXXXX." After replacement, press OK.” is displayed.
(Reply with [OK] after replacing the special part.)

see HARDWARE T24 (REP03-910)



[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

(ex. DKC-PANEL)

Note: If the switch is wrongly set, an error message is displayed. Reset the switch correctly and replace the part concerned. After the replacement, select (CL) [Retry].

[End of PRE-PROCEDURE]

[PRE-PROCEDURE T5]

— OUTLINE —

① Select a procedure for SVP replacement.
② Replace an SVP.

[1] Select a procedure for the SVP replacement.

1.

Select a procedure for replacing an SVP and/or a Flash Card according to a part(s) to be replaced.

Procedure for replacement of an SVP and/or a Flash Card in the normal state

- “SVP” ---------------------- Go to [2] (REP02-840)
- “SVP & FLASH CARD” Go to [2] (REP02-840)
- “FLASH CARD” --------- Go to [3] (REP02-850)

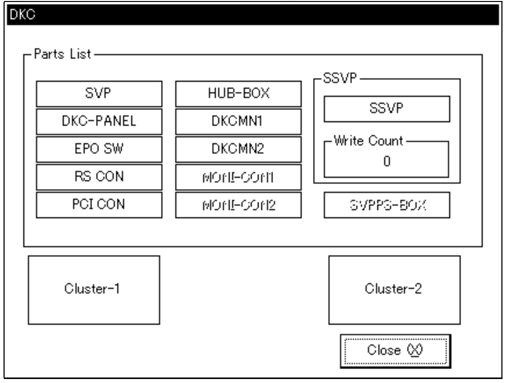
Procedure for replacing an SVP and / or a Flash Card on master mode when the SVP cannot be switched

<Specify special part>

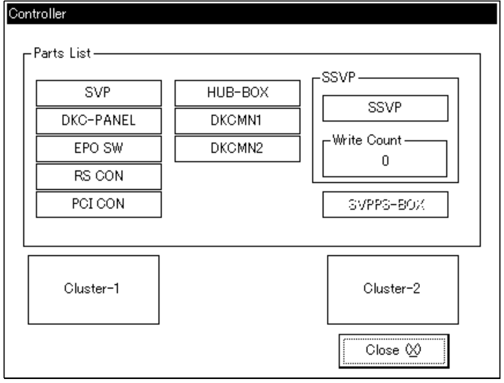
(Multi Cabinet Model)
Select (CL) part [SVP] to be replaced from “DKC”.

(Single Cabinet Model)
Select (CL) part [SVP] to be replaced from “Controller”.

(Multi Cabinet Model)

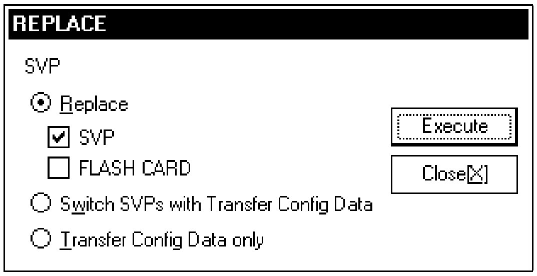

DKC
Parts List
SVP
DKC-PANEL
EPO SW
RS CON
PCI CON
HUB-BOX
DKCMN1
DKCMN2
MONI-CON1
MONI-CON2
SSVP
SSVP
Write Count
0
SVPPS-BOX
Cluster-1
Cluster-2
Close (X)

(Single Cabinet Model)


Controller
Parts List
SVP
DKC-PANEL
EPO SW
RS CON
PCI CON
HUB-BOX
DKCMN1
DKCMN2
SSVP
SSVP
Write Count
0
SVPPS-BOX
Cluster-1
Cluster-2
Close (X)

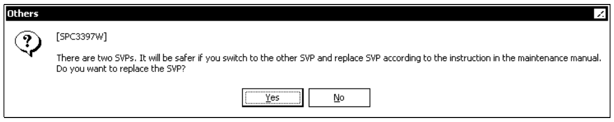
A window shown on the right is displayed.
Select (CL) “Replace” and select replacement parts [xxxxx], and select (CL) [Execute].
Valid [XXXXX] values are listed below.

- SVP ------------------------- [SVP]
- SVP & FLASH CARD -- [SVP][FLASH CARD]
- FLASH CARD------------ [FLASH CARD]



SVP
● Replace
☑ SVP
☐ FLASH CARD
○ Switch SVPs with Transfer Config Data
○ Transfer Config Data only

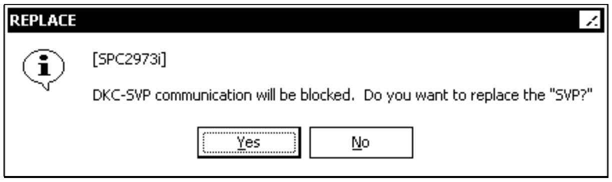
<Check beginning of special part Replacement>
In response to a message, “There are two SVPs. It will be safer if you switch to the other SVP and replace SVP according to the instruction in the maintenance manual. Do you want to replace the SVP?”, select (CL) [Yes].



[SPC3397W]

There are two SVPs. It will be safer if you switch to the other SVP and replace SVP according to the instruction in the maintenance manual.
Do you want to replace the SVP?

In response to a message, “DKC-SVP communication will be blocked. Do you want to replace the “SVP?””, select (CL) [Yes].



[SPC2973I]

DKC-SVP communication will be blocked. Do you want to replace the "SVP?"

(ex. SVP)

- “SVP” ---------------------- Go to [4] (REP02-860)
- “SVP & FLASH CARD” Go to [4] (REP02-860)
- “FLASH CARD” --------- Go to [5] (REP02-870)

[2] Replacement of an SVP with or without a Flash Card

1. <Checking the SVP to be replaced>
   Check whether the SVP to be replaced is a Basic SVP or an Optional SVP. (For the location of the SVP, refer to LOCATION SECTION (LOCATION02-10).)
   When the SVP to be replaced is operating as a Master SVP, go to Step 2.
   When the SVP to be replaced is powered on, go to Step 3.
   In the case other than the above, go to Step 4.

2. <Switching the SVP>
   When you want to replace an SVP, it is necessary to place it in the Standby mode. Replace the SVP after switching it if necessary. When you want to replace the SVP without performing the switching, refer to Item [4], procedure for replacement of an SVP with or without a Flash Card (without SVP switching).

3. <Powering off the Standby SVP>
   When the SVP to be replaced is powered on, shutdown the OS by manual operation and go to Step 4 after checking that the SVP has been powered off.

4. <Replacing hardware>
   Attach a jumper plug to the SVP PS ON/OFF INH pin of the RS CON. When the SVP to be replaced is an Optional SVP, attach a jumper plug to the PS CTLINH pin of the SVPPS-BOX too.
   (See HARDWARE T7 (Step 4 on REP03-470).)
   Replace the SVP according to HARDWARE T7 (REP03-450).
   However you must not connect the LAN cable to the HUB-BOX.

   See POST-PROCEDURE t5 (REP04-1100).

   [End of PRE-PROCEDURE]

[3] Replacement of a Flash Card

1. <Checking the SVP to be replaced>
   Check whether the SVP in which the Flash Card to be replaced is inserted is a Basic SVP or an Optional SVP. (For the location of the SVP, refer to LOCATION SECTION (LOCATION02-10).)
   When the SVP to be replaced is operating as a Master SVP, go to Step 2.
   When the SVP to be replaced is powered on, go to Step 3.
   In the case other than the above, go to Step 4.

---

2. <Switching the SVP>
   When you want to replace a FLASH CARD, it is necessary to place it in the Standby mode. Replace the FLASH CARD after switching the SVP if necessary. When you want to replace the FLASH CARD without performing the switching, refer to Item [5], procedure for replacement of a Flash Card (without SVP switching).

---

3. <Powering off the Standby SVP>
   When the SVP to be replaced is powered on, shutdown the OS by manual operation and go to Step 4 after checking that the SVP has been powered off.

---

4. <Replacing hardware>
   Replace the SVP according to HARDWARE T7 (REP03-450).

   See POST-PROCEDURE t5 (REP04-1100).

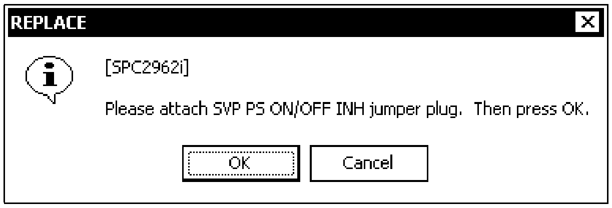
   [End of PRE-PROCEDURE]

[4] Replacement of an SVP with or without a Flash Card (without SVP switching)

1. <Checking the SVP to be replaced>
Check whether the Master SVP is a Basic SVP or an Optional SVP. (For the location of the SVP, refer to LOCATION SECTION (LOCATION02-10).)

---

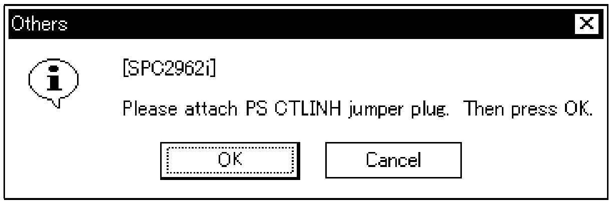
2. <Attaching a jumper plug>
When the SVP is a Basic SVP:
Attach a jumper plug to the RS CON in response to a message, “Please attach SVP PS ON/OFF INH jumper plug. Then press OK.” (See HARDWARE T7 (Step 4 on REP03-470))


REPLACE

[SPC2962i]

Please attach SVP PS ON/OFF INH jumper plug. Then press OK.

When the SVP is an Optional SVP:
Attach a jumper plug to the SVPPS-BOX and the RS CON in response to a message, “Please attach PS CTLINH jumper plug. Then press OK.” (See HARDWARE T7 (Step 4 on REP03-470))

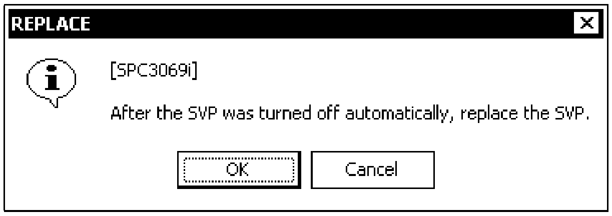

Others

[SPC2962i]

Please attach PS CTLINH jumper plug. Then press OK.

After making sure that the jumper plug has been attached, select (CL) [OK]. Do not attach the shutdown jumper at this time.

3.
The message “After the SVP turned off automatically, replace the XXXXX.” is displayed.


REPLACE

[SPC3069i]

After the SVP was turned off automatically, replace the SVP.

- In the case that SNMP Option is installed.
Go to 4.
- In the case that SNMP Option is not installed.

If the CD-ROM disk inserted into the CD-ROM drive, remove the CD-ROM disk. Select (CL) [OK], so SVP is turned off automatically.
(See HARDWARE T7 (REP03-450))

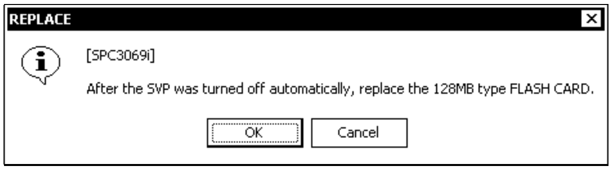
[End of PRE-PROCEDURE]

[5] Replacement of a Flash Card (without SVP switching)

1. <Checking the SVP to be replaced>
   Check whether the Master SVP is a Basic SVP or an Optional SVP. (For the location of the SVP, refer to LOCATION SECTION (LOCATION02-10).)

2. <Check beginning of FLASH CARD>
   The message “After the SVP was turned off automatically, replace the 128MB type FLASH CARD.” is displayed.
   Select (CL) [OK], so it will reboot the SVP, and the files on FLASH CARD are moved to HD. Then SVP is turned off automatically.
   (See HARDWARE T7 (REP03-450))

   [End of PRE-PROCEDURE]



[SPC3069i]

After the SVP was turned off automatically, replace the 128MB type FLASH CARD.

[PRE-PROCEDURE V]

— OUTLINE —

① Select P-DEV (status check).
② Specify Replacement.
③ Place HDD into unpluggable state.

⚠ CAUTION

This processing is a special operation for detecting a cause of a Fibre loop error.
Ask the technical support center about the appropriateness of the operation.

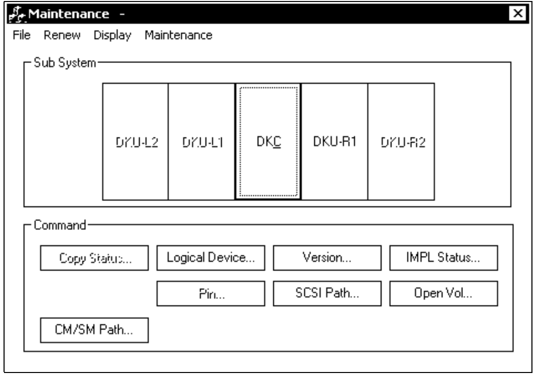
⚠ **CAUTION**

This processing is a special operation for detecting a cause of a Fibre loop error.
Ask the technical support center about the appropriateness of the operation.

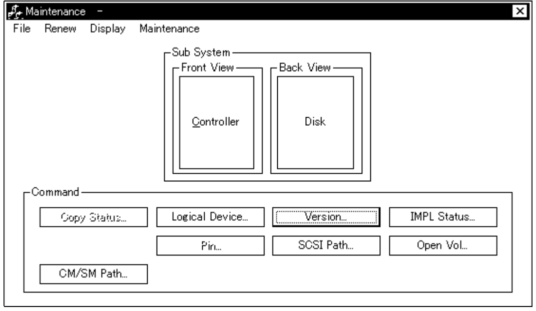
1. <Maintenance window> (Multi Cabinet Model)
In the 'Maintenance' window, check and select (CL) [DKU-Rn] or [DKU-Ln] to be replaced.

(Single Cabinet Model)
In the 'Maintenance' window, select (CL) [Disk].

(Multi Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(Single Cabinet Model)

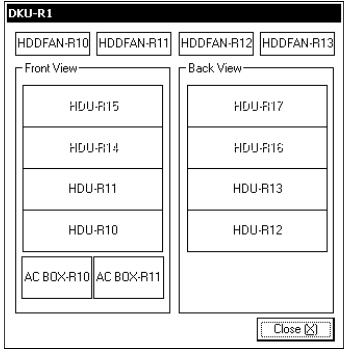

Maintenance -
File
Renew
Display
Maintenance
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

2. <Select HDU-BOX> (Multi Cabinet Model)
Check and select (CL) [HDU-Rnn] or [HDU-Lnn] to be replaced.

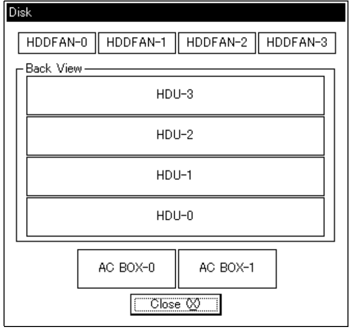
(Single Cabinet Model)
Check and select (CL) [HDU-n] to be replaced.

Selecting (CL) [Close] returns you to step 1.

(Multi Cabinet Model)


DKU-R1
HDDFAN-R10
HDDFAN-R11
HDDFAN-R12
HDDFAN-R13
Front View
Back View
HDU-R15
HDU-R14
HDU-R11
HDU-R10
HDU-R17
HDU-R16
HDU-R13
HDU-R12
AC BOX-R10
AC BOX-R11
Close (X)

(Single Cabinet Model)


Disk
HDDFAN-0
HDDFAN-1
HDDFAN-2
HDDFAN-3
Back View
HDU-3
HDU-2
HDU-1
HDU-0
AC BOX-0
AC BOX-1
Close (X)

⚠ CAUTION

This processing is a special operation for detecting a cause of a Fibre loop error.
Ask the technical support center about the appropriateness of the operation.

3. <Select HDD>

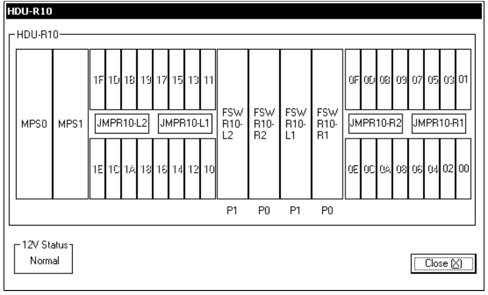
(Multi Cabinet Model [DKU455])
Check and select (CL) [nn] to be replaced.

(Multi Cabinet Model [DKU405])
Check and select (CL) [Rnnn] or [Lnnn] to be replaced.

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

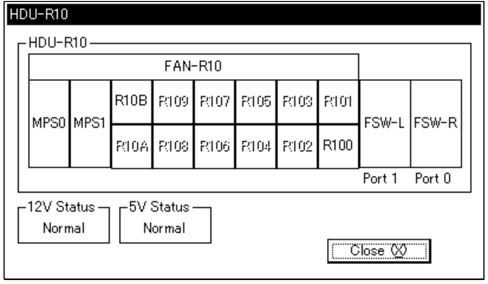
Selecting (CL) [Close] returns you to step 2.

(Multi Cabinet Model [DKU455])


HDU-R10
HDU-R10
MPS0
MPS1
1F 1D 1B 19 17 15 13 11
JMPR10-L2
JMPR10-L1
1E 1C 1A 18 16 14 12 10
FSW R10-L2
FSW R10-R2
FSW R10-L1
FSW R10-R1
P1 P0 P1 P0
0F 0D 0B 09 07 05 03 01
JMPR10-R2
JMPR10-R1
0E 0C 0A 08 06 04 02 00
Close (X)

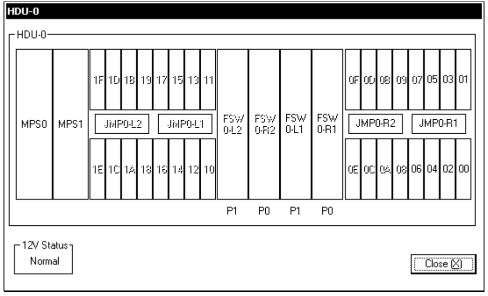
12V Status: Normal

(Multi Cabinet Model [DKU405])


HDU-R10
HDU-R10
FAN-R10
MPS0
MPS1
R10B R109 R107 R105 R103 R101
R10A R108 R106 R104 R102 R100
FSW-L
FSW-R
Port 1
Port 0
Close (X)

12V Status: Normal
5V Status: Normal

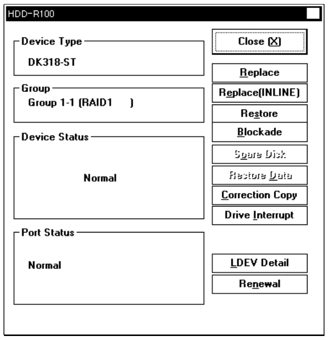
(Single Cabinet Model)


HDU-0
HDU-0
MPS0
MPS1
1F 1D 1B 19 17 15 13 11
JMP0-L2
JMP0-L1
1E 1C 1A 18 16 14 12 10
FSW 0-L2
FSW 0-R2
FSW 0-L1
FSW 0-R1
P1 P0 P1 P0
0F 0D 0B 09 07 05 03 01
JMP0-R2
JMP0-R1
0E 0C 0A 08 06 04 02 00
Close (X)

12V Status: Normal

4. <Specify replacement on HDD>
Check the status display.
◆ In the case of a warning SIM, "NORMAL" is displayed.
◆ In the case of a blocking SIM, "FAILED" is displayed.

Select (CL) [Replace (INLINE)].


HDD-R100
Close (X)
Replace
Replace(INLINE)
Restore
Blockade
Spare Disk
Restore Data
Correction Copy
Drive Interrupt
LDEV Detail
Renewal

Device Type: DK318-ST
Group: Group 1-1 (RAID1)
Device Status: Normal
Port Status: Normal

⚠ CAUTION

This processing is a special operation for detecting a cause of a Fibre loop error. Ask the technical support center about the appropriateness of the operation.

If any other message than the list is displayed, see the SVP Message Section (SVPMSG00-00).

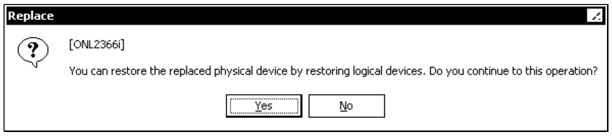
5. <Checking the P-DEV status & saving the spare>

⚠ 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 center to ask for instructions.

"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.

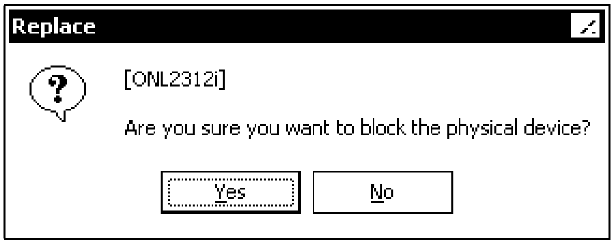


[ONL2366i]

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

When you want to continue PDEV Replace, please select (CL) [Yes].
When you want to recover PDEV by recovering LDEV, please select (CL) [No] and see Restore the Logical Device (SVP02-840).

6. <P-DEV blocking>
Select (CL) [Yes] in response to "Are you sure you want to block the physical device?".



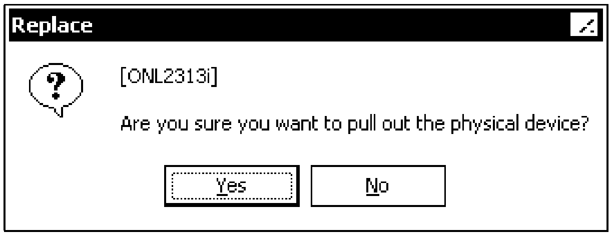
[ONL2312i]

Are you sure you want to block the physical device?

7. <Blocking the Physical device>
"Blocking..." is displayed.

8. <Spin down the Physical device>
"Spinning down..." is displayed

9. <P-DEV pull out>
Select (CL) [Yes] in response to “Are you sure you want to pull out the physical device?”.



[ONL2313i]

Are you sure you want to pull out the physical device?

CAUTION

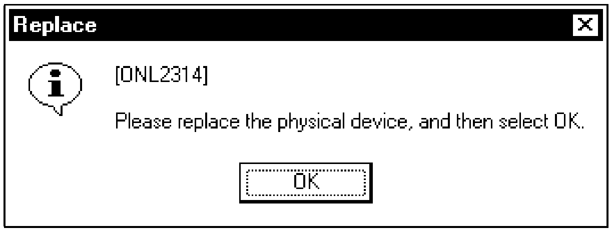
This processing is a special operation for detecting a cause of a Fibre loop error. Ask the technical support center about the appropriateness of the operation.

10. <Check shut down LED>
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.

CAUTION

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

11. <Confirmation of replace>
Select (CL) [OK] in response to “Please replace the physical device, and then select OK.” after the unit is replaced (Step 12).



[ONL2314]

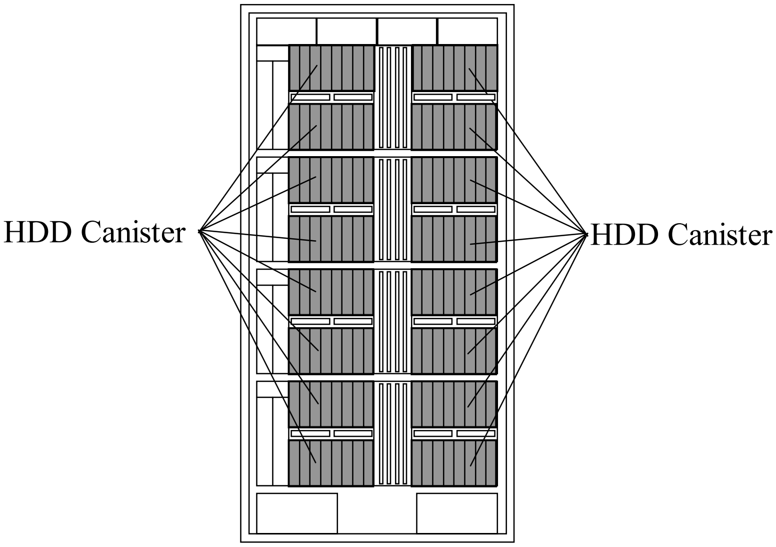
Please replace the physical device, and then select OK.

12. <Replace HDD>
Replace HDD.
See HARDWARE A (REP03-10).

[HARDWARE A]

Location	Function Name of Component		Part Name	HDA Label
HDU Box	1	HDD Canister	HDU450-36K1FC	DKS2B-K36FC
			HDU450-72J1FC	DKR2D-J72FC

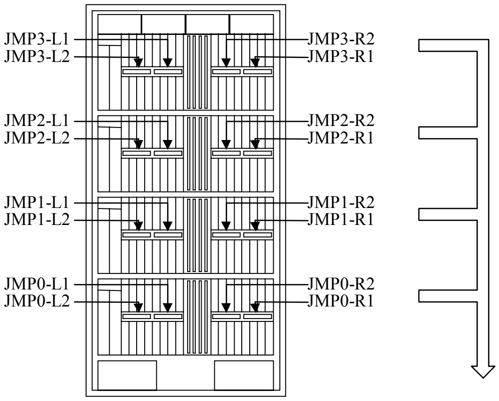
NOTICE:
Replace the HDD canister in the subsystem power on status only.
Do not replace with the subsystem power off status.



Rear View

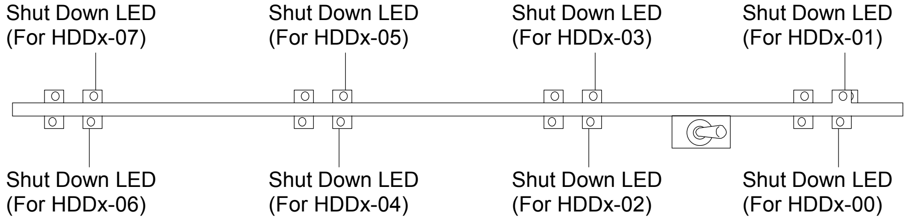
NOTICE:
(1) Be sure to wear your wrist strap and attach to ground prior to performing the following work.
This will ensure that the IC and LSI on the PCB are protected from static electricity.
(2) HDD is a precise component. Be careful in handling HDD to avoid vibration and impact.

1. The following figure shows the correct way to replace the HDD canister.
   a. Check Shut Down LED on the JMP PCB.

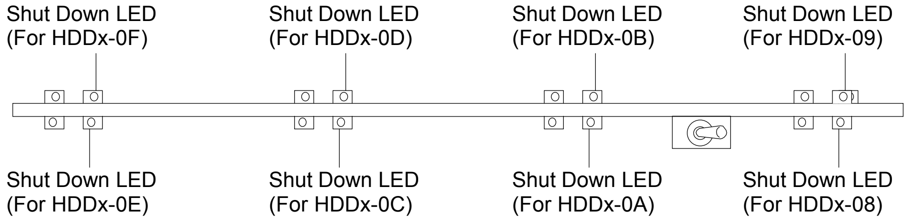

JMP3-L1
JMP3-L2
JMP3-R2
JMP3-R1
JMP2-L1
JMP2-L2
JMP2-R2
JMP2-R1
JMP1-L1
JMP1-L2
JMP1-R2
JMP1-R1
JMP0-L1
JMP0-L2
JMP0-R2
JMP0-R1

Rear View

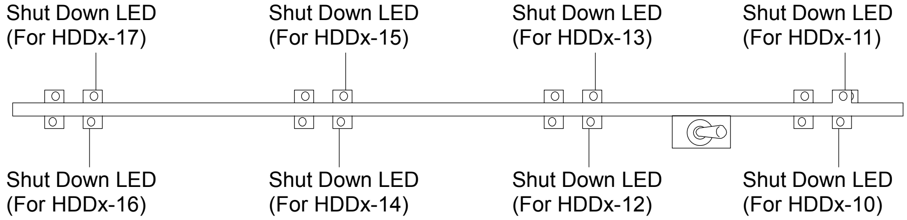
JMPx-R1


Shut Down LED (For HDDx-07)
Shut Down LED (For HDDx-05)
Shut Down LED (For HDDx-03)
Shut Down LED (For HDDx-01)
Shut Down LED (For HDDx-06)
Shut Down LED (For HDDx-04)
Shut Down LED (For HDDx-02)
Shut Down LED (For HDDx-00)

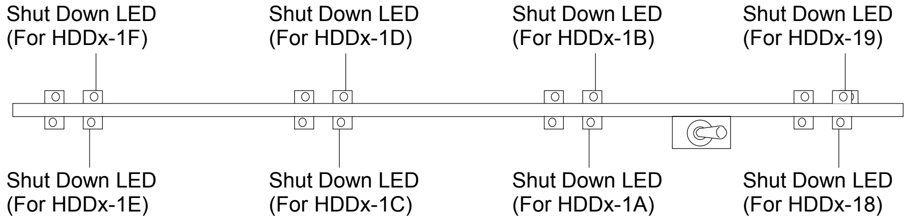
JMPx-R2


Shut Down LED (For HDDx-0F)
Shut Down LED (For HDDx-0D)
Shut Down LED (For HDDx-0B)
Shut Down LED (For HDDx-09)
Shut Down LED (For HDDx-0E)
Shut Down LED (For HDDx-0C)
Shut Down LED (For HDDx-0A)
Shut Down LED (For HDDx-08)

JMPx-L1


Shut Down LED (For HDDx-17)
Shut Down LED (For HDDx-15)
Shut Down LED (For HDDx-13)
Shut Down LED (For HDDx-11)
Shut Down LED (For HDDx-16)
Shut Down LED (For HDDx-14)
Shut Down LED (For HDDx-12)
Shut Down LED (For HDDx-10)

JMPx-L2

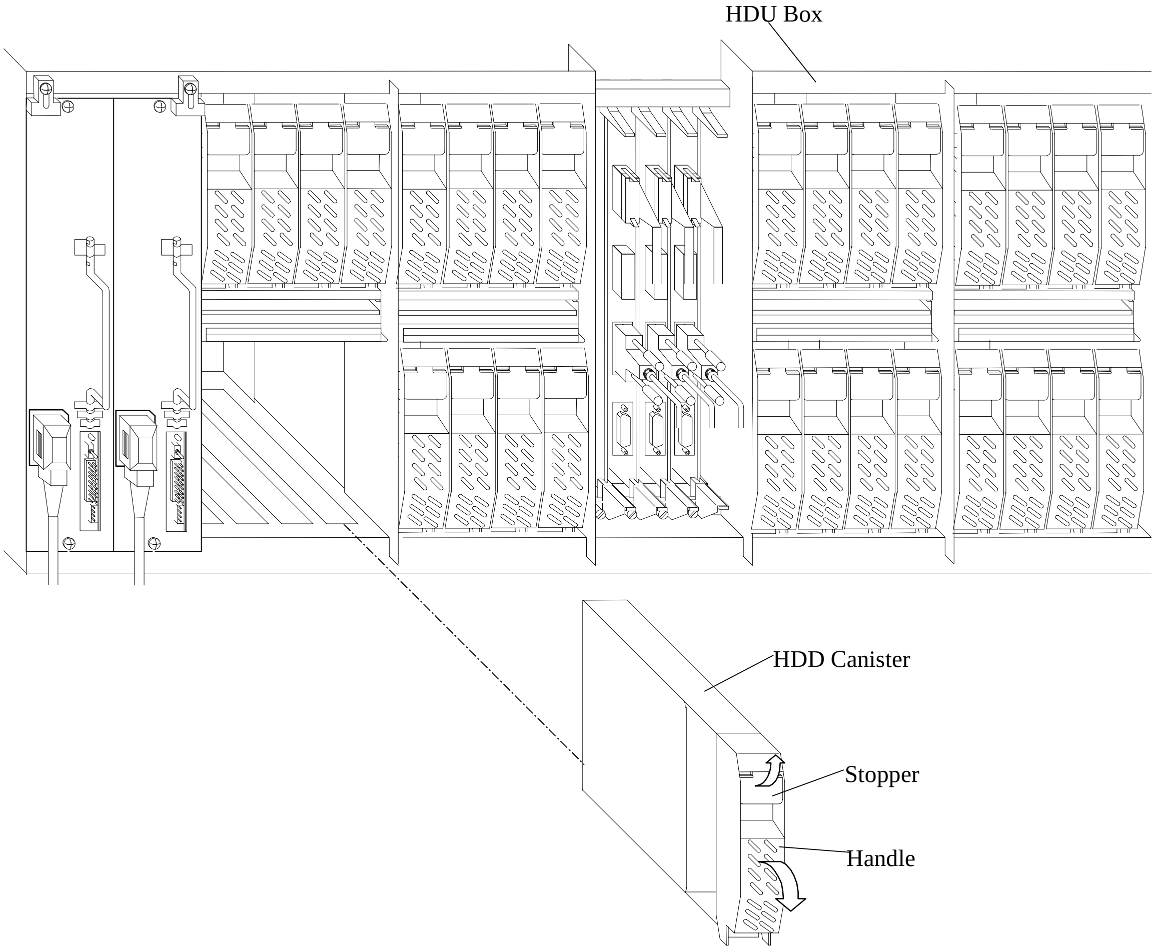

Shut Down LED (For HDDx-1F)
Shut Down LED (For HDDx-1D)
Shut Down LED (For HDDx-1B)
Shut Down LED (For HDDx-19)
Shut Down LED (For HDDx-1E)
Shut Down LED (For HDDx-1C)
Shut Down LED (For HDDx-1A)
Shut Down LED (For HDDx-18)

⚠ CAUTION

A system down may be caused by a replacement of an HDD canister other than that to be replaced. Make sure that it is the HDD canister to be replaced.

b. After pushing up the stopper on the front side of the HDD canister, pull the handle toward you to remove the HDD canister.

c. Install a spare HDD canister. (For the detailed procedure for installation, refer to the procedure for installing HDD canister on page REP03-35.)



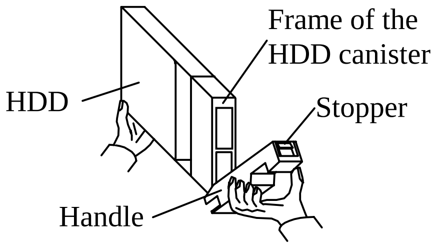
HDD canister install procedure

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

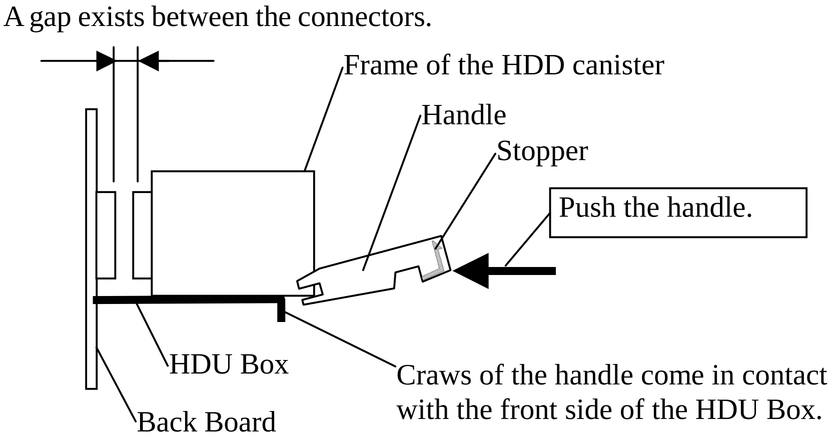
(1) Insert the HDD canister into the HDU Box holding its handle.
(Insert the canister until the claws that are located at the bottom of the handle come in contact with the front side of the HDU Box.)

(2) 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.)

Handling of the canister


Frame of the HDD canister
HDD
Stopper
Handle

(1) Insert the HDD canister into the HDU Box holding its handle.


A gap exists between the connectors.
Frame of the HDD canister
Handle
Stopper
Push the handle.
HDU Box
Craws of the handle come in contact with the front side of the HDU Box.
Back Board

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

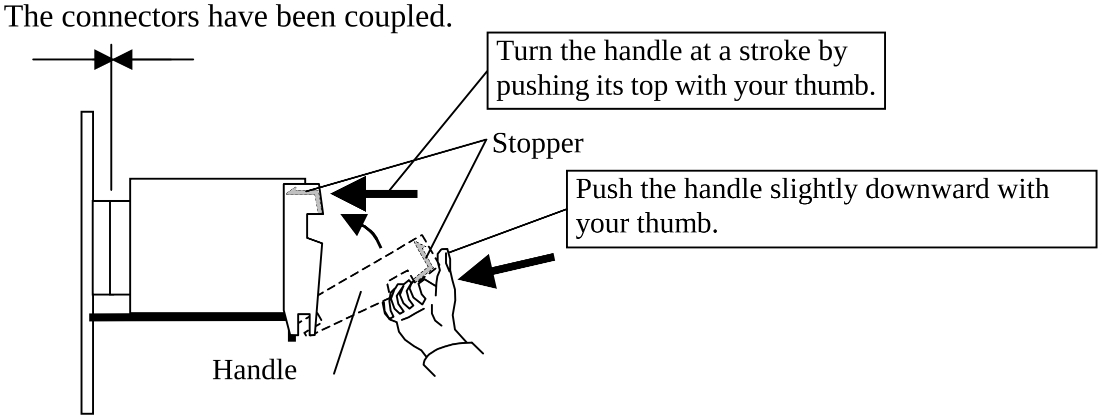

The connectors have been coupled.
Turn the handle at a stroke by pushing its top with your thumb.
Stopper
Push the handle slightly downward with your thumb.
Handle

Fig. A-1 Method of Installing HDD Canister

2. See SVP post-procedure as follows.

> Note: Before starting the <Check the beginning of recovery> operation in POST-PROCEDURES a, b, c and d, be sure to insert a floppy disk for dump, collect failure information, and return the floppy disk with the failed HDD.
> A dump floppy disk is attached with a Spare HDD.

<Data drive, spare drive>

Work ID	Part name	Condition Item				Procedure *1
		Condition			Configuration	SVP post-procedure
		Failure		Preventive	Unused Spare drive	
		Warning SIM	Block SIM			
RDK1	Data Drive Note 1	×	-	-	Yes	Post a *1
RDK2	Data Drive Note 1	-	×	-	Yes	Post a *1
RDK3	Data Drive Note 1	-	-	×	Yes	Post a *1
RDK4	Data Drive Note 1	×	-	-	No	Post b *1
RDK5	Data Drive Note 1	-	×	-	No	Post b *1
RDK6	Data Drive Note 1	-	-	×	No	Post b *1
RDK7 Note 2 Note 3	Data Drive Note 1	Note 2				Post c *1
RDK8	Spare Drive Note 1	-				Post d *1

*1: Refer to REP01-190

Note 1) Parts Name is 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.

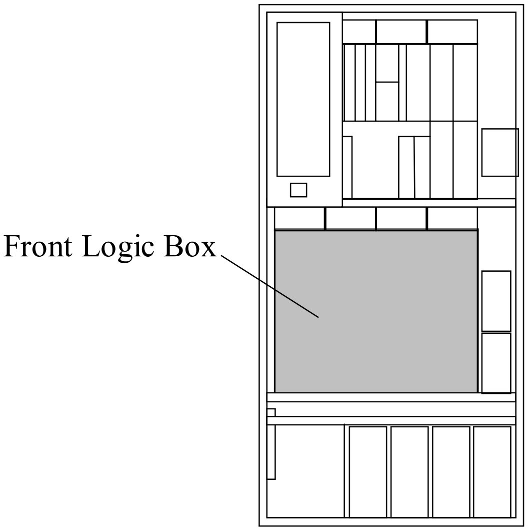
Note 2) RDK7 is a Work ID for a work which is applicable to a case that two or more drives in a same parity group are blocked.
When the procedures instructed by RDK7 are executed, data will be lost. Ask the technical support center about the appropriateness of the operation.

Note 3) Confirm the parity group and the LDEV No. corresponding to the HDD through the SVP STATUS. See page SVP03-130 for the procedure for referring to SVP STATUS.

> Note : If a Work ID cannot be found or if multiple drive error is occurring, see page TRBL05-170 on TROUBLE SHOOTING section.

[HARDWARE B]

Location	Function Name of Component		Part Name	Remarks
Front Logic Box	1	Cache Memory PCB	• WP490-A	Color of PCB lever : Blue
	2	Cache Memory Module on Cache Memory PCB	• SH288-B	
	3	Shared Memory Module on Cache Memory PCB	• SH287-B	



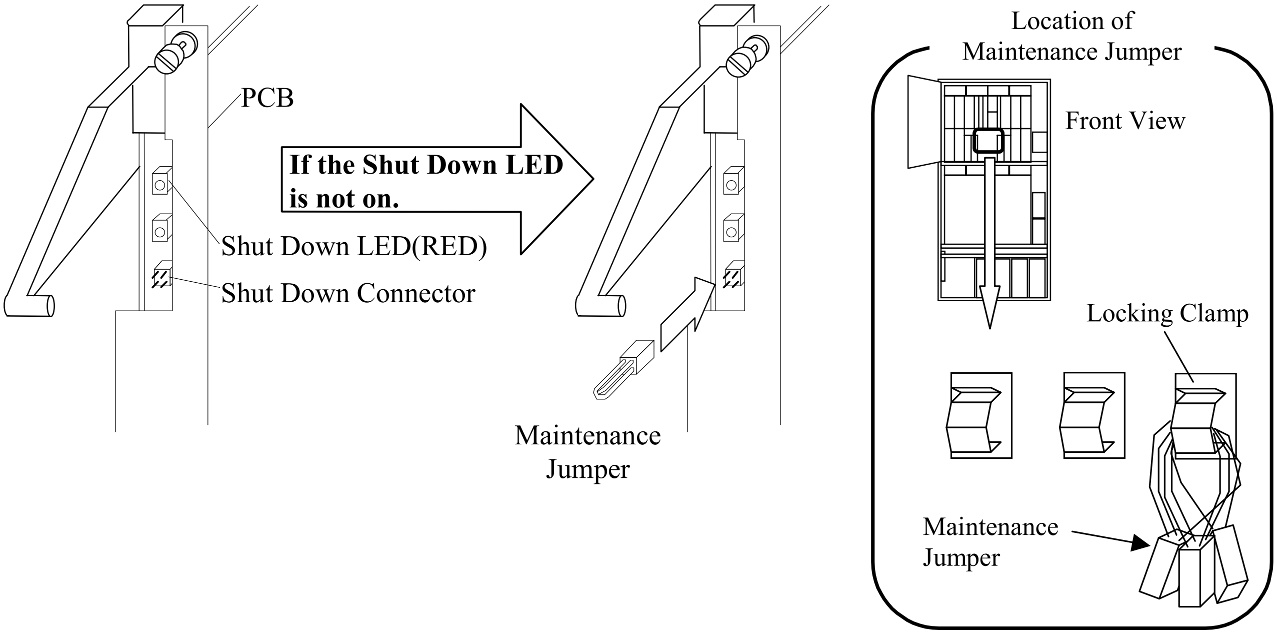
Front View

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.

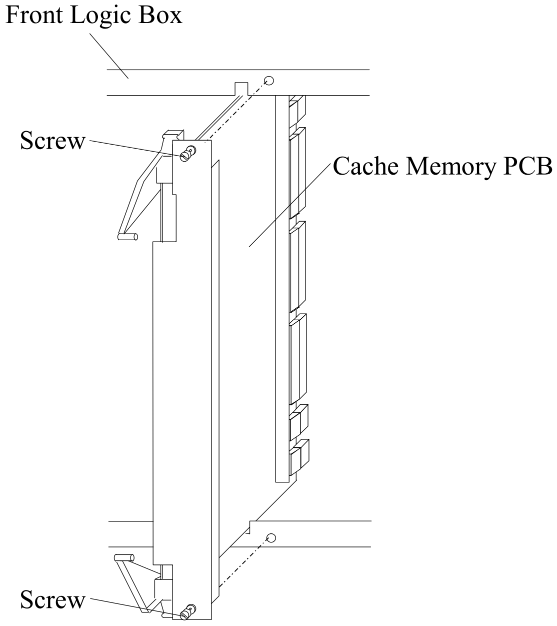
1. Remove the Cache Memory PCB.
   a. Check that the Shut Down LED is on. If not, connect the Maintenance Jumper to the Shut Down Connector. (only hot replace)

⚠ CAUTION

A system down may be caused if the Maintenance Jumper is inserted in a PCB other than that to be replaced. Make sure that it is the PCB to be replaced.

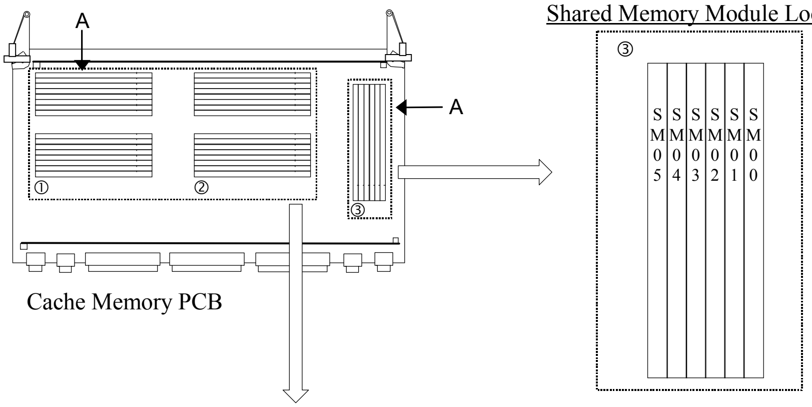

PCB
If the Shut Down LED is not on.
Shut Down LED(RED)
Shut Down Connector
Maintenance Jumper
Location of Maintenance Jumper
Front View
Locking Clamp
Maintenance Jumper

   b. Remove the two screws and remove the Cache Memory PCB.


Front Logic Box
Screw
Cache Memory PCB
Screw

   c. Remove the Maintenance Jumper if it is mounted.

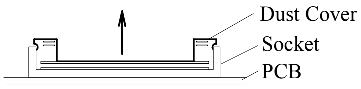
2. Replace the failed part to spare part.
   a. When replacing the CM PCB, move all the shared memory modules and cache memory modules (including dust covers if any) mounted on an extracted PCB to the same mounting positions on the spare PCB.
   b. When the failed part is Cache Memory Module, replace the Cache Memory Module.
   c. When the failed part is Shared Memory Module, replace the Shared Memory Module.


A
A
①
②
③
Cache Memory PCB
Shared Memory Module Location
③
SM005
SM004
SM003
SM002
SM001
SM000

Cache Memory Module Location

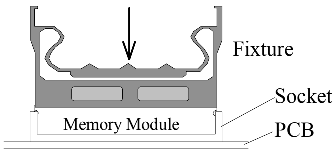
①	②
BCM007 (MG#15)	ACM007 (MG#14)
BCM006 (MG#13)	ACM006 (MG#12)
BCM005 (MG#11)	ACM005 (MG#10)
BCM004 (MG#9)	ACM004 (MG#8)
BCM003 (MG#7)	ACM003 (MG#6)
BCM002 (MG#5)	ACM002 (MG#4)
BCM001 (MG#3)	ACM001 (MG#2)
BCM000 (MG#1)	ACM000 (MG#0)
BCM107 (MG#15)	ACM107 (MG#14)
BCM106 (MG#13)	ACM106 (MG#12)
BCM104 (MG#11)	ACM105 (MG#10)
BCM104 (MG#9)	ACM104 (MG#8)
BCM103 (MG#7)	ACM103 (MG#6)
BCM102 (MG#5)	ACM102 (MG#4)
BCM101 (MG#3)	ACM101 (MG#2)
BCM100 (MG#1)	ACM100 (MG#0)

Removal of Dust Cover


Dust Cover
Socket
PCB

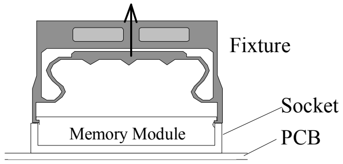
Viewed from A

Attachment of Memory Module


Fixture
Socket
Memory Module
PCB

Viewed from A

Removal of Memory Module


Fixture
Socket
Memory Module
PCB

Viewed from A

---

3. Insert the Cache Memory PCB.

Note: Make sure that a color of the levers of the PCB to be installed is blue.
Never insert a PCB whose lever is not blue.

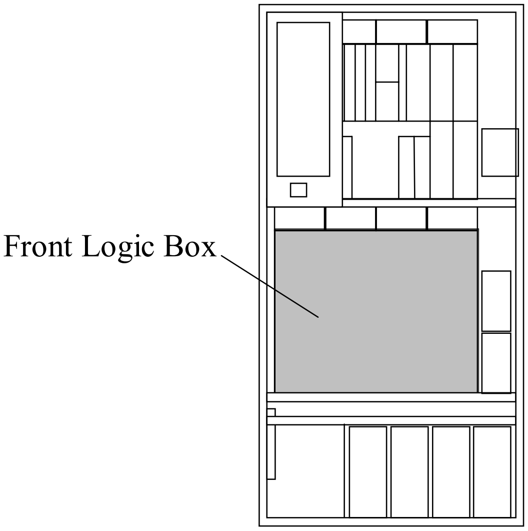
   a. Insert the Cache Memory PCB and fasten the two screws.

---

4. Go to SVP post-procedure e [REP04-180].

[HARDWARE C]

Location	Function Name of Component		Part Name	Remarks
Front Logic Box	1	CHA (Channel Adapter) PCB for serial channel	• WP462-A ×1 & SH281-C ×4	Color of PCB lever : Blue

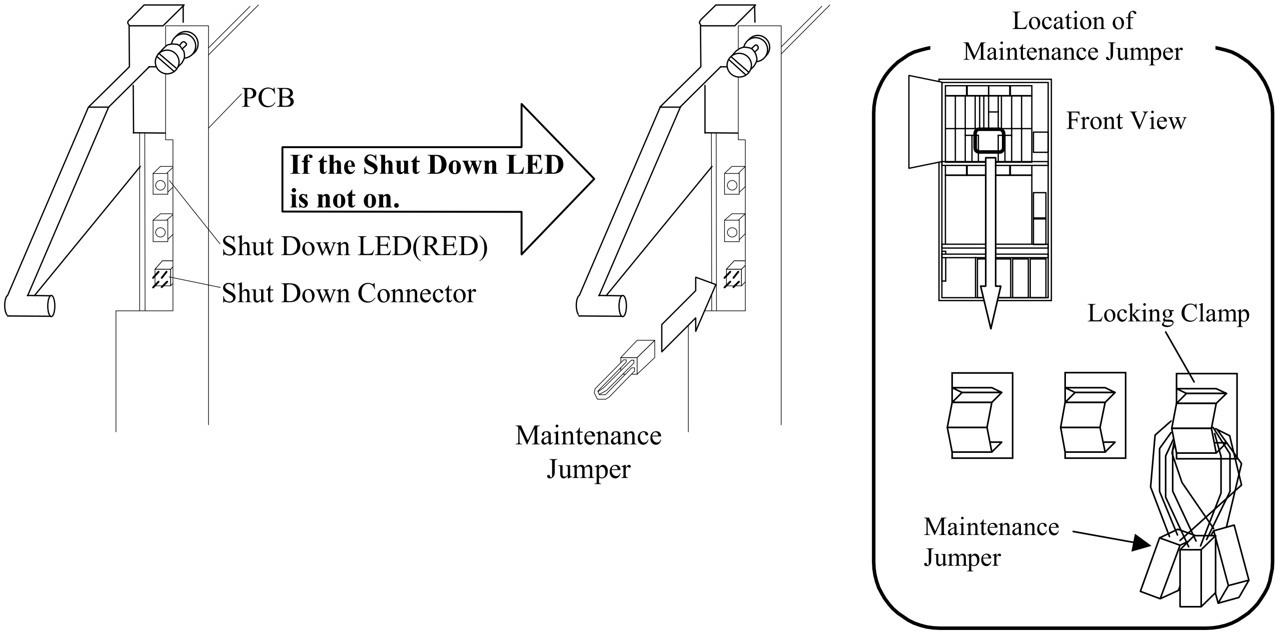


Front View

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.

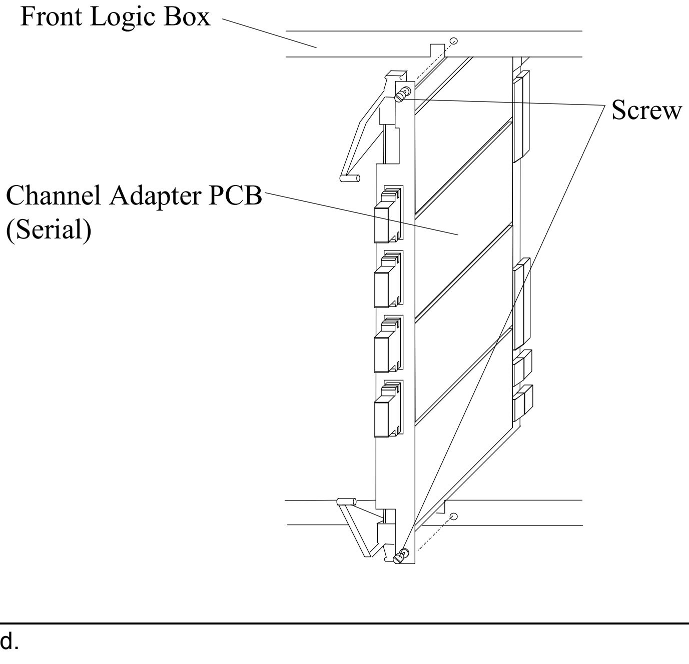
1. Check that the Shut Down LED is on. If not, connect the Maintenance Jumper to the Shut Down Connector. (only hot replace)

> **⚠ CAUTION**
>
> A system down may be caused if the Maintenance Jumper is inserted in a PCB other than that to be replaced. Make sure that it is the PCB to be replaced.


PCB
If the Shut Down LED is not on.
Shut Down LED(RED)
Shut Down Connector
Maintenance Jumper
Location of Maintenance Jumper
Front View
Locking Clamp
Maintenance Jumper

2. Disconnect the optical fiber cables from the failed Channel Adapter PCB.

3. Remove the two screws and remove the failed PCB.
   Note: If the Maintenance Jumper is used, remove it.


Front Logic Box
Screw
Channel Adapter PCB (Serial)

4. Insert the spare PCB to the correct location and fasten the two screws.

Note: Make sure that a color of the levers of the PCB to be installed is blue.
Never insert a PCB whose lever is not blue.

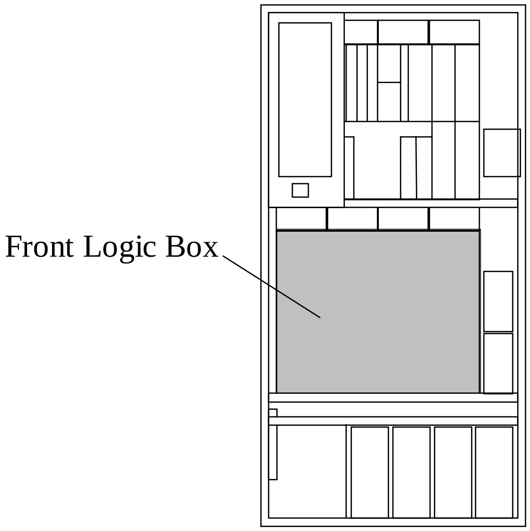
5. Cleaning the fiber cable connectors.
   For the tools needed for the cleaning, refer to the tool list on page PARTS06-10.
   a. Blow compressed gas against the connector using an air sprayer (for about five seconds).
   b. Wipe the connector lightly with a piece of cut gauze wet with ethyl alcohol.
   c. Blow compressed air again and check the result of the cleaning. (None of dust, sticking of foreign matter, and dirt must be observed.)

6. Connect the optical fiber cables to the spare PCB.

7. Go to SVP post procedure f [REP04-210].

[HARDWARE D]

Location		Function Name of Component	Part Name	Remarks
Front Logic Box	1	Fibre 4-port Adapter PCB for Short Wavelength (DKC-F460I-8GSE)	• WP461-D ×1 & SH281-A ×2	Color of PCB lever : Blue
	2	Fibre 2-port Adapter PCB for Short Wavelength (DKC-F460I-4HSE)	• WP461-E ×1 & SH281-A ×2	
	3	Fibre 4-port Adapter PCB for Short Wavelength (DKC-F460I-8HSE)	• WP461-B ×1 & SH281-A ×4	
	4	Fibre 4-port Adapter PCB for Long Wavelength (DKC-F460I-8HLE)	• WP461-C ×1 & SH281-A ×4	
	5	Fibre 4-port Adapter PCB for Short Wavelength (DKC-F460I-8GSF)	• WP461-H ×1 & SH281-A ×2	
	6	Fibre 2-port Adapter PCB for Short Wavelength (DKC-F460I-4HSF)	• WP461-J ×1 & SH281-A ×2	
	7	Fibre 4-port Adapter PCB for Short Wavelength (DKC-F460I-8HSF)	• WP461-F ×1 & SH281-A ×4	
	8	Fibre 4-port Adapter PCB for Long Wavelength (DKC-F460I-8HLF)	• WP461-G ×1 & SH281-A ×4	



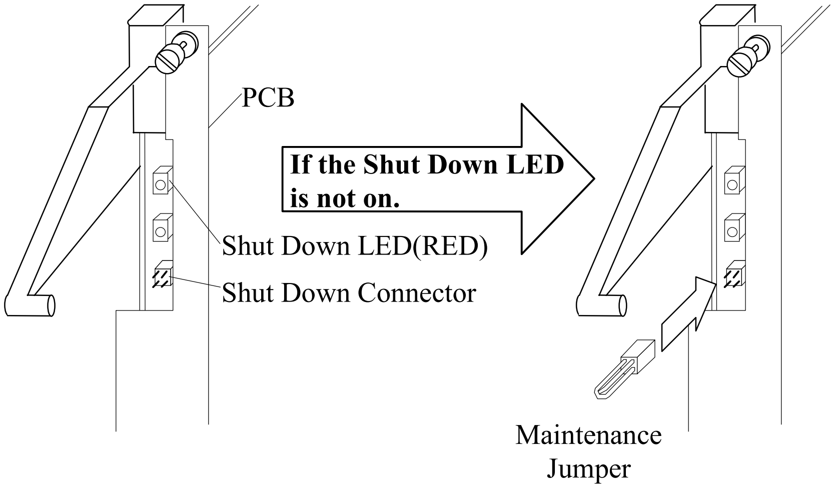
Front View

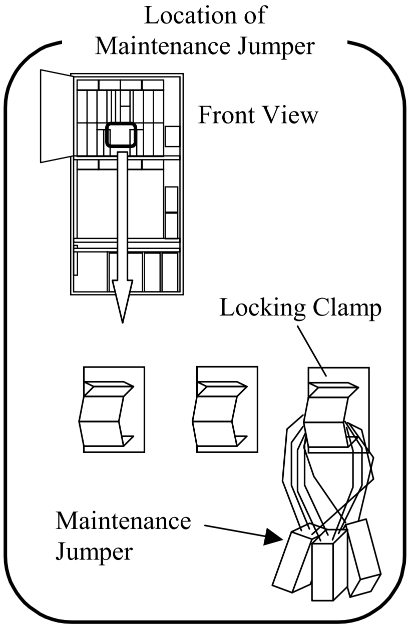
NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

1. Check that the Shut Down LED is on. If not, connect the Maintenance Jumper to the Shut Down Connector. (only hot replace)

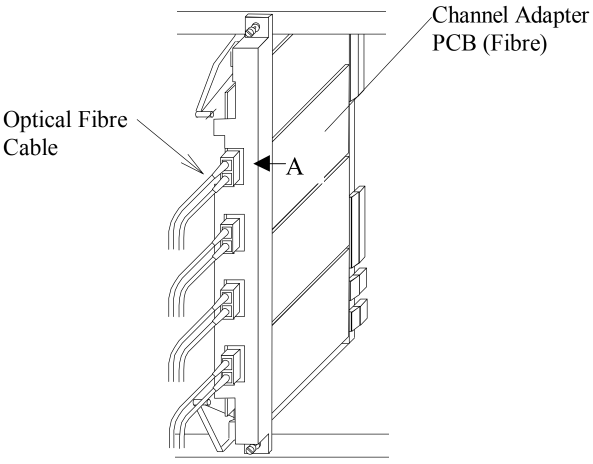
⚠ CAUTION

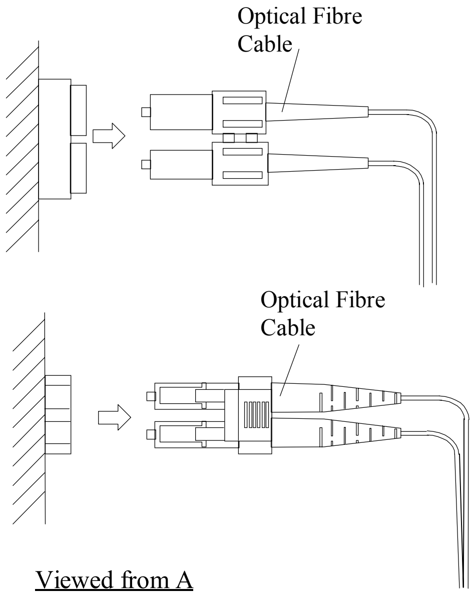
A system down may be caused if the Maintenance Jumper is inserted in a PCB other than that to be replaced. Make sure that it is the PCB to be replaced.


PCB
If the Shut Down LED is not on.
Shut Down LED(RED)
Shut Down Connector
Maintenance Jumper


Location of Maintenance Jumper
Front View
Locking Clamp
Maintenance Jumper

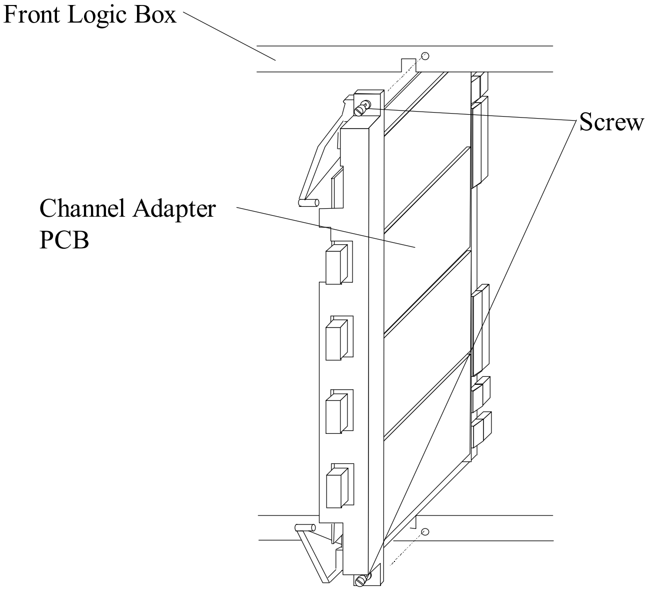
2. Disconnect the fibre cables from the failed PCB.


Channel Adapter PCB (Fibre)
Optical Fibre Cable
A


Optical Fibre Cable
Optical Fibre Cable

Viewed from A

3. Remove the two screws and remove the failed PCB.
   Note: If the Maintenance Jumper is used, remove it.



4. Insert the spare PCB to the correct location and fasten the two screws.

Note:	Make sure that a color of the levers of the PCB to be installed is blue. Never insert a PCB whose lever is not blue.

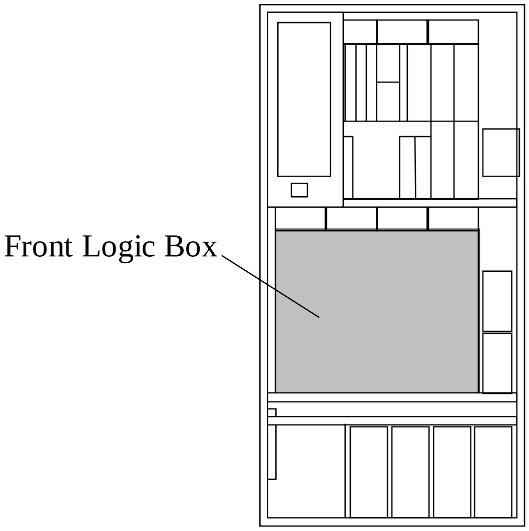
5. Cleaning the fiber cable connectors.
   For the tools needed for the cleaning, refer to the tool list on page PARTS06-10.
   a. Blow compressed gas against the connector using an air sprayer (for about five seconds).
   b. Wipe the connector lightly with a piece of cut gauze wet with ethyl alcohol.
   c. Blow compressed air again and check the result of the cleaning. (None of dust, sticking of foreign matter, and dirt must be observed.)

6. Connect the fibre cables to the spare PCB.

7. Go to SVP post procedure f [REP04-210].

[HARDWARE E]

Location		Function Name of Component	Part Name	Remarks
Front Logic Box	1	MF Fibre 4-port Adapter PCB for Short Wavelength (DKC-F460I-8MS)	• WP465-A ×1 & SH281-D ×4	Color of PCB lever : Blue
	2	MF Fibre 4-port Adapter PCB for Long Wavelength (DKC-F460I-8ML)	• WP465-B ×1 & SH281-D ×4	



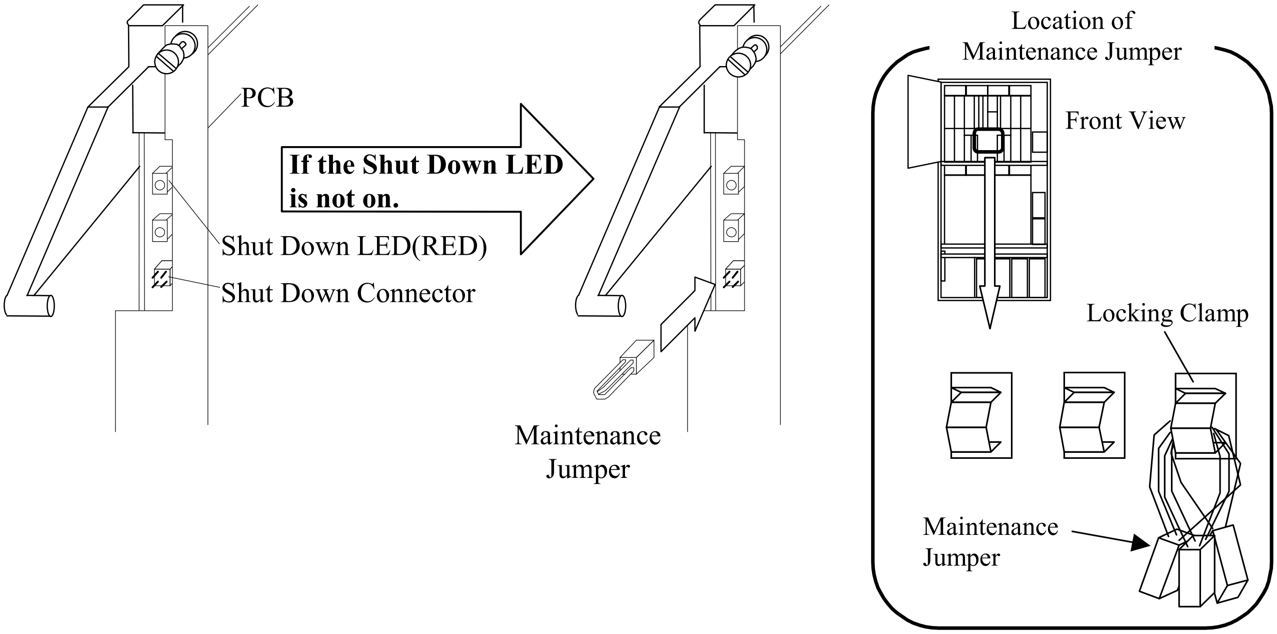
Front View

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.

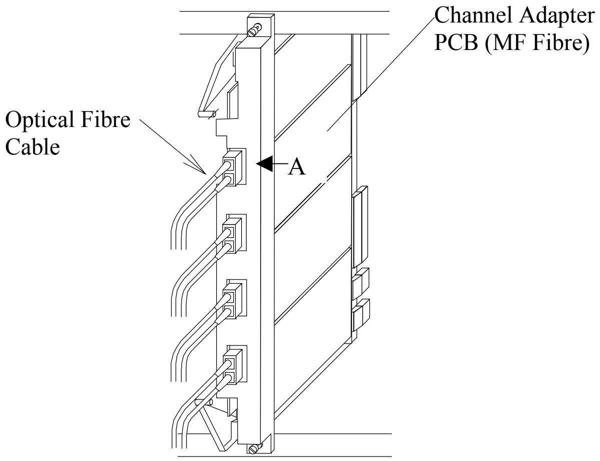
1. Check that the Shut Down LED is on. If not, connect the Maintenance Jumper to the Shut Down Connector. (only hot replace)

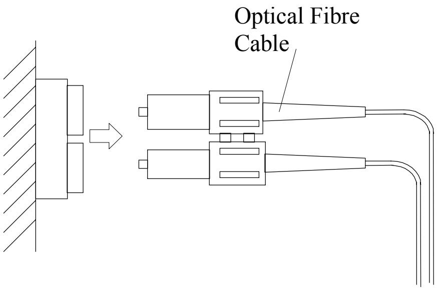
⚠ CAUTION

A system down may be caused if the Maintenance Jumper is inserted in a PCB other than that to be replaced. Make sure that it is the PCB to be replaced.


PCB
If the Shut Down LED is not on.
Shut Down LED(RED)
Shut Down Connector
Maintenance Jumper
Location of Maintenance Jumper
Front View
Locking Clamp
Maintenance Jumper

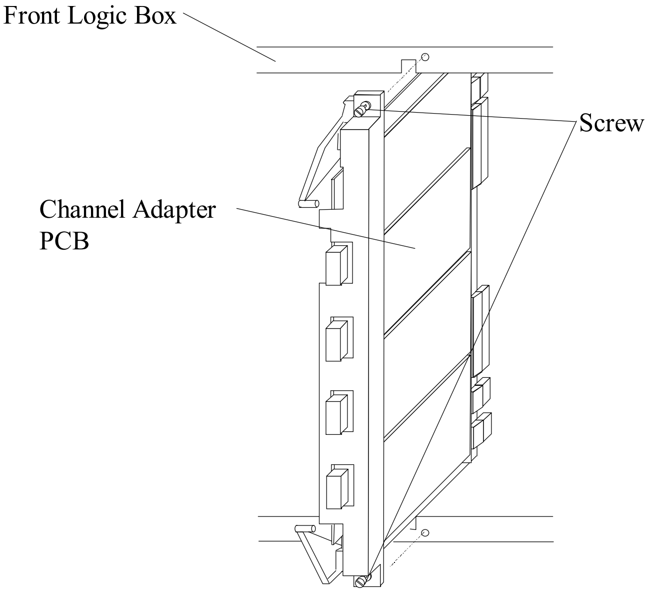
2. Disconnect the fibre cables from the failed PCB.


Channel Adapter PCB (MF Fibre)
Optical Fibre Cable
A


Optical Fibre Cable

Viewed from A

3. Remove the two screws and remove the failed PCB.
   Note: If the Maintenance Jumper is used, remove it.



4. Insert the spare PCB to the correct location and fasten the two screws.

Note: Make sure that a color of the levers of the PCB to be installed is blue.
Never insert a PCB whose lever is not blue.

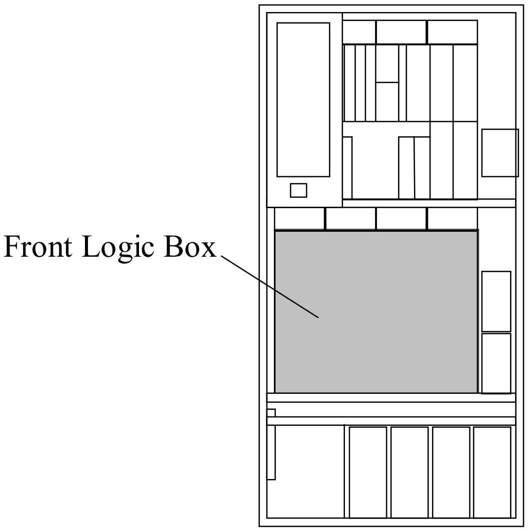
5. Cleaning the fiber cable connectors.
   For the tools needed for the cleaning, refer to the tool list on page PARTS06-10.
   a. Blow compressed gas against the connector using an air sprayer (for about five seconds).
   b. Wipe the connector lightly with a piece of cut gauze wet with ethyl alcohol.
   c. Blow compressed air again and check the result of the cleaning. (None of dust, sticking of foreign matter, and dirt must be observed.)

6. Connect the fibre cables to the spare PCB.

7. Go to SVP post procedure f [REP04-210].

[HARDWARE F]

Location		Function Name of Component	Part Name	Remarks
Front Logic Box	1	DKA (Disk Adapter) PCB	• WP471-A & SH281-B × 2 • WP471-B & SH281-B × 4	Color of PCB lever : Blue



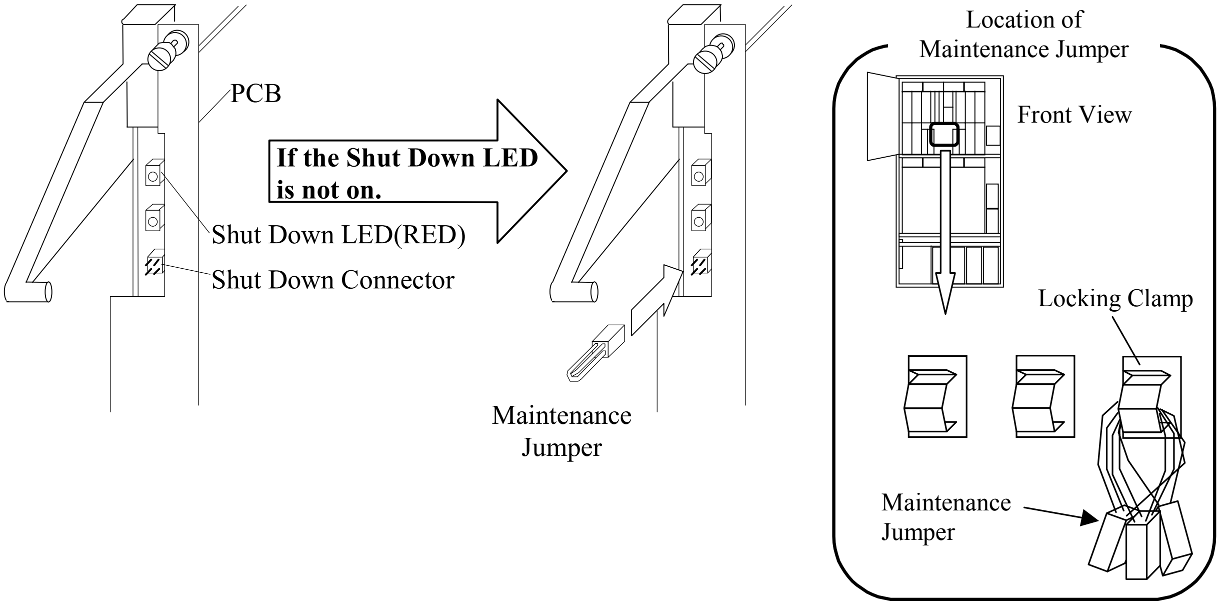
Front View

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.

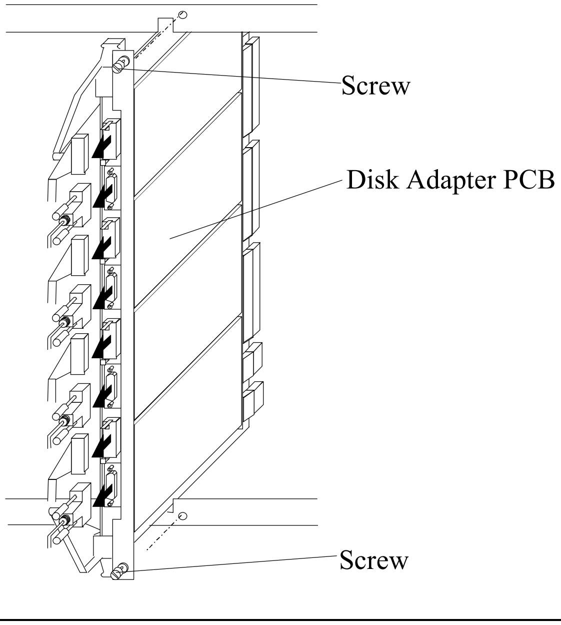
1. Check that the Shut Down LED is on. If not, connect the Maintenance Jumper to the Shut Down Connector. (only hot replace)

⚠ CAUTION

A system down may be caused if the Maintenance Jumper is inserted in a PCB other than that to be replaced. Make sure that it is the PCB to be replaced.


PCB
If the Shut Down LED is not on.
Shut Down LED(RED)
Shut Down Connector
Maintenance Jumper
Location of Maintenance Jumper
Front View
Locking Clamp
Maintenance Jumper

2. Remove the PCB.
   a. Disconnect the cables.
   b. Remove two screws and remove the failed Disk Adapter PCB.
   c. If the Maintenance Jumper is used, remove it.


Screw
Disk Adapter PCB
Screw

3. Insert the spare PCB to the correct location and fasten the screws.

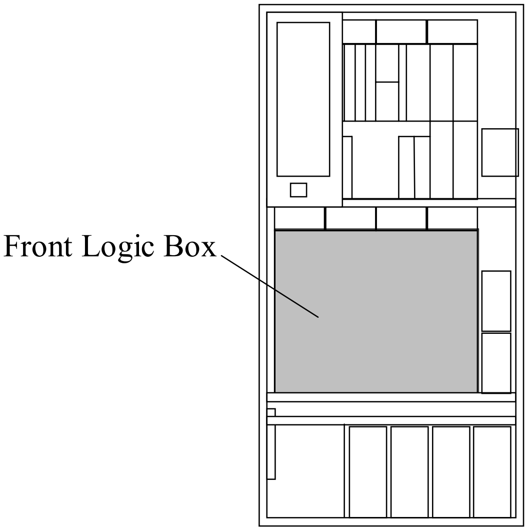
Note: Make sure that a color of the levers of the PCB to be installed is blue.
Never insert a PCB whose lever is not blue.

4. Connect the cables to the spare PCB.

5. Go to SVP post procedure f [REP04-210].

[HARDWARE G]

Location	Function Name of Component		Part Name	Remarks
Front Logic Box	1	CSW PCB	• WP481-C	Color of PCB lever : Blue



Front View

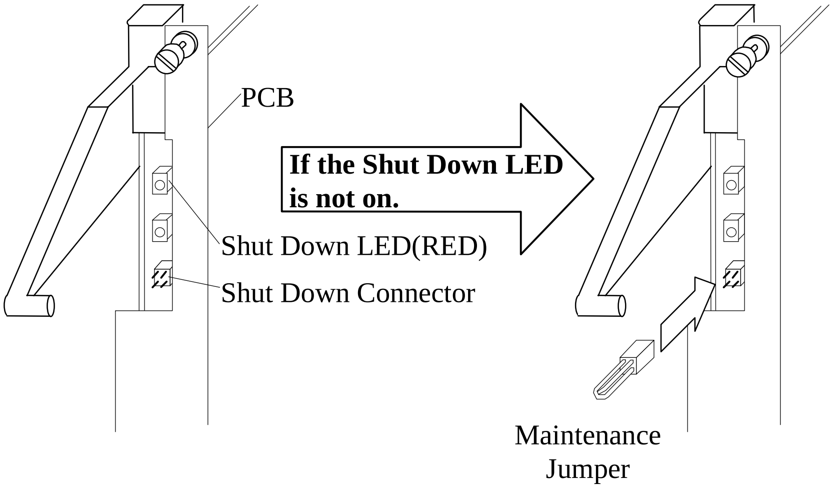
NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

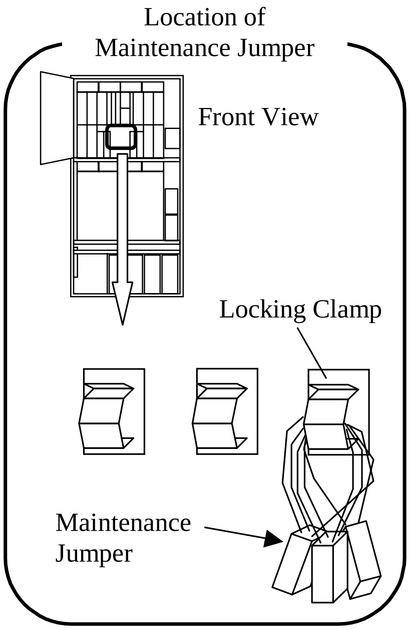
REV.1	Jun.2001	Feb.2002				

1. Check that the Shut Down LED is on. If not, connect the Maintenance Jumper to the Shut Down Connector. (only hot replace)

CAUTION

A system down may be caused if the Maintenance Jumper is inserted in a PCB other than that to be replaced. Make sure that it is the PCB to be replaced.

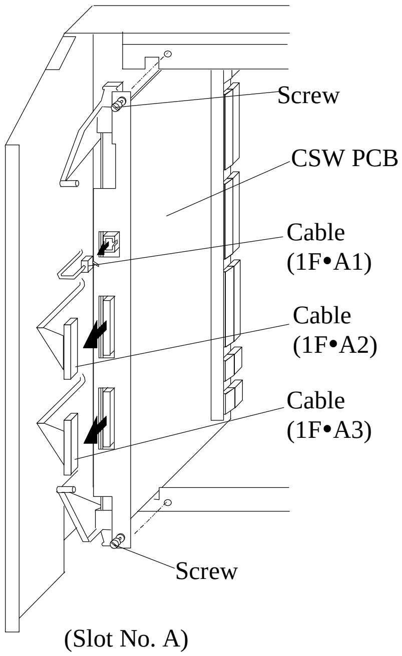

PCB
If the Shut Down LED is not on.
Shut Down LED(RED)
Shut Down Connector
Maintenance Jumper


Location of Maintenance Jumper
Front View
Locking Clamp
Maintenance Jumper

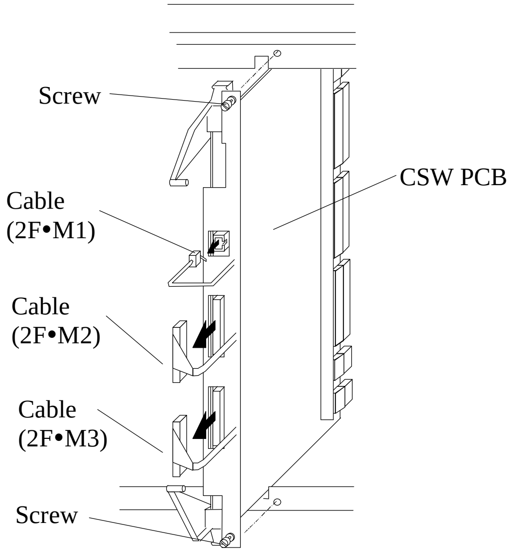
2. Remove the CSW PCB.
   The LED on the operator panel shown in the following table goes out during a period from a pulling off of the CSW to an insertion of the new CSW.

Location of CSW to be replaced	LED on the operator panel	
	Cluster 1	Cluster 2
CSW-1A	ABCD EFGH JKLM	—
CSW-2M	—	ABCD EFGH JKLM

   a. Disconnect the cables from the sub-edge of the failed PCB.
   b. Remove the two screws and remove the failed CSW PCB.
   c. If the Maintenance Jumper is used, remove it.


Screw
CSW PCB
Cable
(1F•A1)
Cable
(1F•A2)
Cable
(1F•A3)
Screw

(Slot No. A)


Screw
CSW PCB
Cable
(2F•M1)
Cable
(2F•M2)
Cable
(2F•M3)
Screw

(Slot No. M)

3. Insert the spare PCB to the correct location and fasten the screws.

Note: Make sure that a color of the levers of the PCB to be installed is blue.
Never insert a PCB whose lever is not blue.

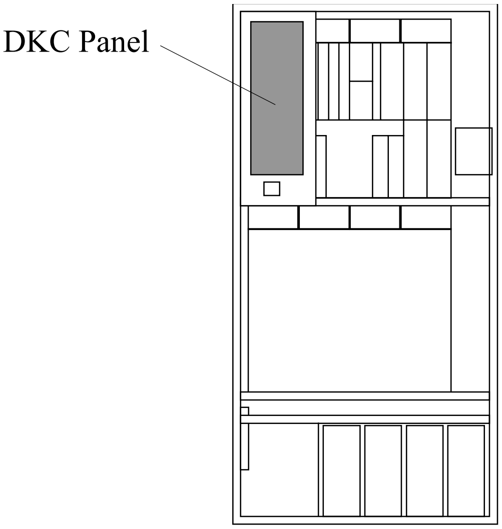
(When you plug in new PCB, the Shut Down LED is lit on again.)

4. Connect the cable to the sub-edge of the spare PCB.

5. Go to SVP post procedure k [REP04-300].

[HARDWARE T1]

Location	Function Name of Component		Part Name
Front of DKC	1	DKC Panel	• SH302-A • SH302-C (for UPS)



Front View

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.

Note: The COMP signal of PCI is turned off, if the DKC Panel is removed.

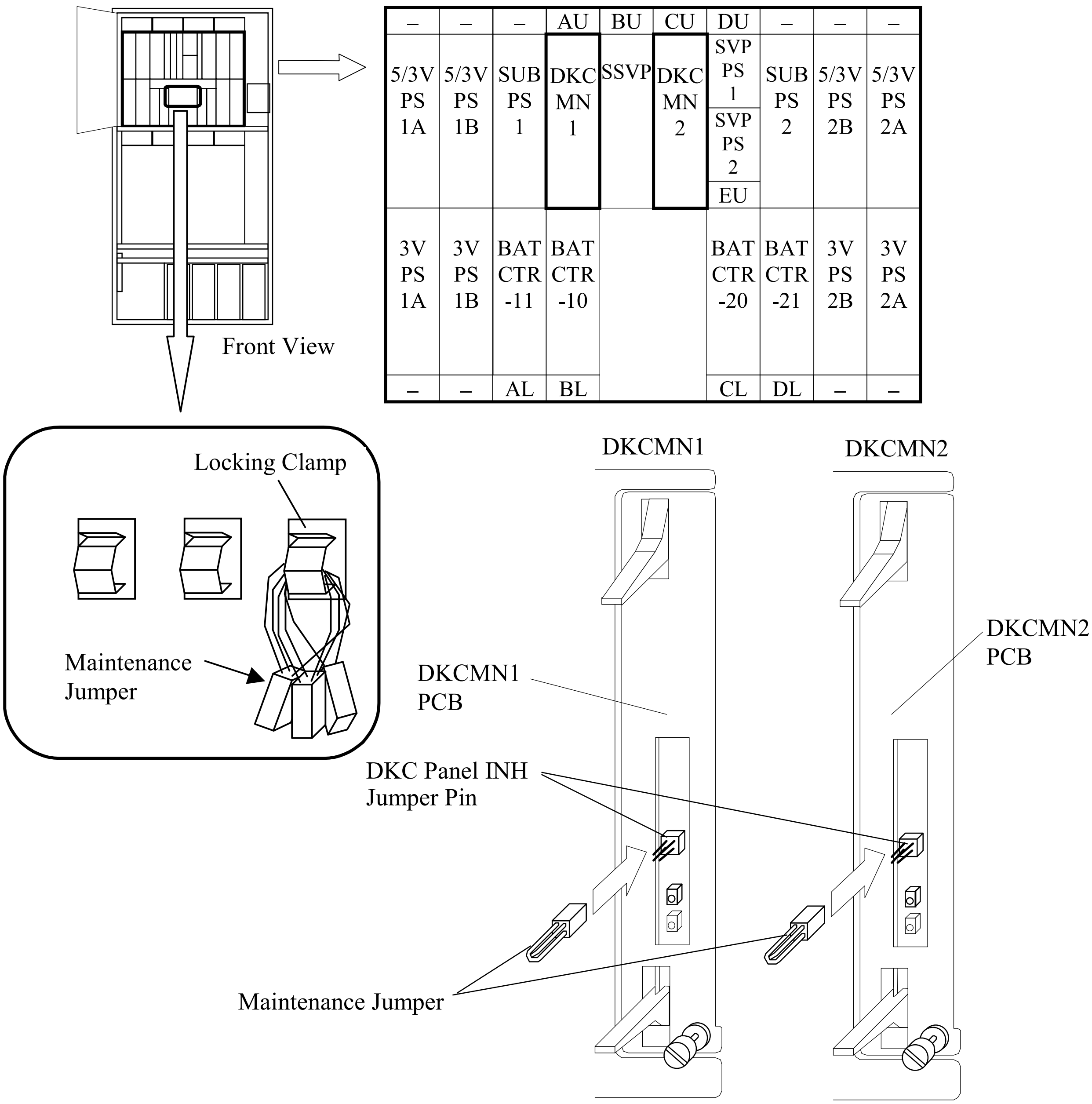
1. Set the switches of the spare PCB to the same positions as those of the failed PCB.

---

2. Connect the Maintenance Jumper to the connector plug on the DKCMN1 and DKCMN2.

⚠ CAUTION

A system down is caused if the Maintenance Jumper is not inserted. Be sure to insert the Maintenance Jumper before starting the work.


Front View
Locking Clamp
Maintenance Jumper
DKCMN1
DKCMN2
DKCMN1 PCB
DKCMN2 PCB
DKC Panel INH Jumper Pin
Maintenance Jumper

–	–	–	AU	BU	CU	DU	–	–	–
5/3V PS 1A	5/3V PS 1B	SUB PS 1	DKC MN 1	SSVP	DKC MN 2	SVP PS 1 SVP PS 2 EU	SUB PS 2	5/3V PS 2B	5/3V PS 2A
3V PS 1A	3V PS 1B	BAT CTR -11	BAT CTR -10			BAT CTR -20	BAT CTR -21	3V PS 2B	3V PS 2A
–	–	AL	BL			CL	DL	–	–

Fig. T1-1 Insertion of Maintenance Jumpers

3. Remove the plate from the Movable rack.
   a. Loosen the screw and remove the plate from the Movable rack.

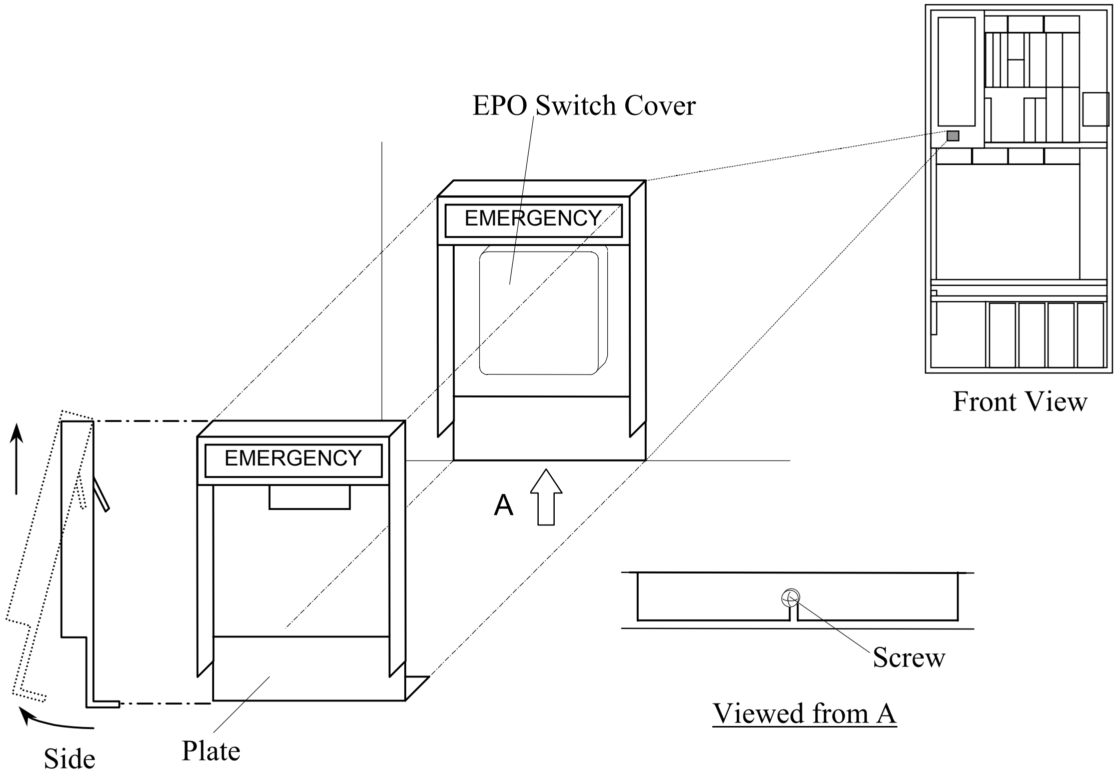

EPO Switch Cover
EMERGENCY
EMERGENCY
Front View
A
Screw
Viewed from A
Side
Plate

Fig. T1-2 Removal of Plate

   b. Remove the EPO Switch cover.

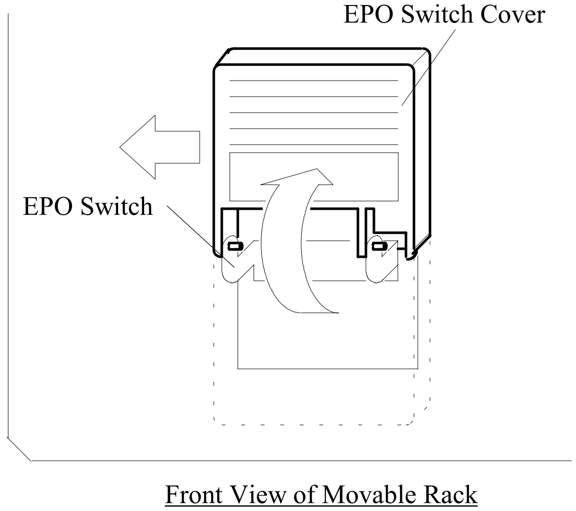

EPO Switch Cover
EPO Switch
Front View of Movable Rack

Fig. T1-3 Removal of EPO Switch Cover

c. Loosen the three screws and remove the plate.

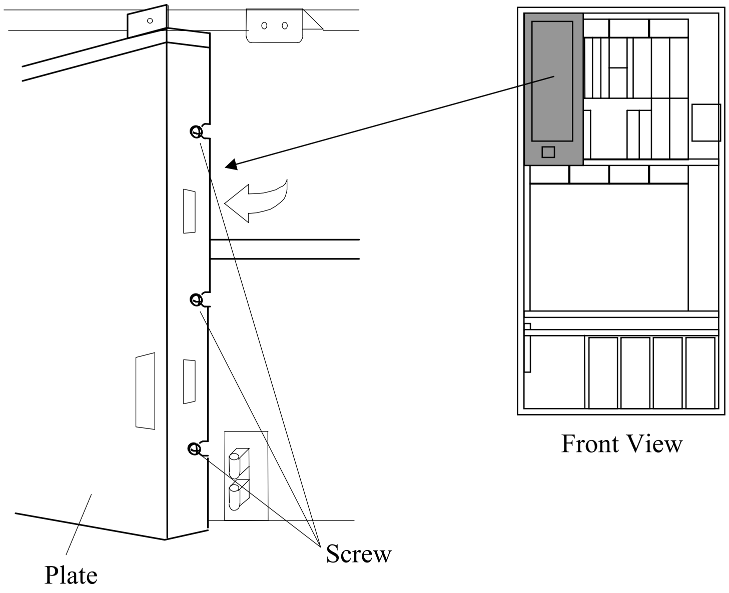

Front View
Screw
Plate

Fig. T1-4 Removal of Plate

4. Replace the PCB.
   a. Disconnect the cables from the DKC Panel PCB.
   b. Loosen the six screws and remove the DKC Panel PCB from the Movable rack.
   c. Attach the spare PCB and fasten the six screws.
   d. Connect the cables to the spare PCB.

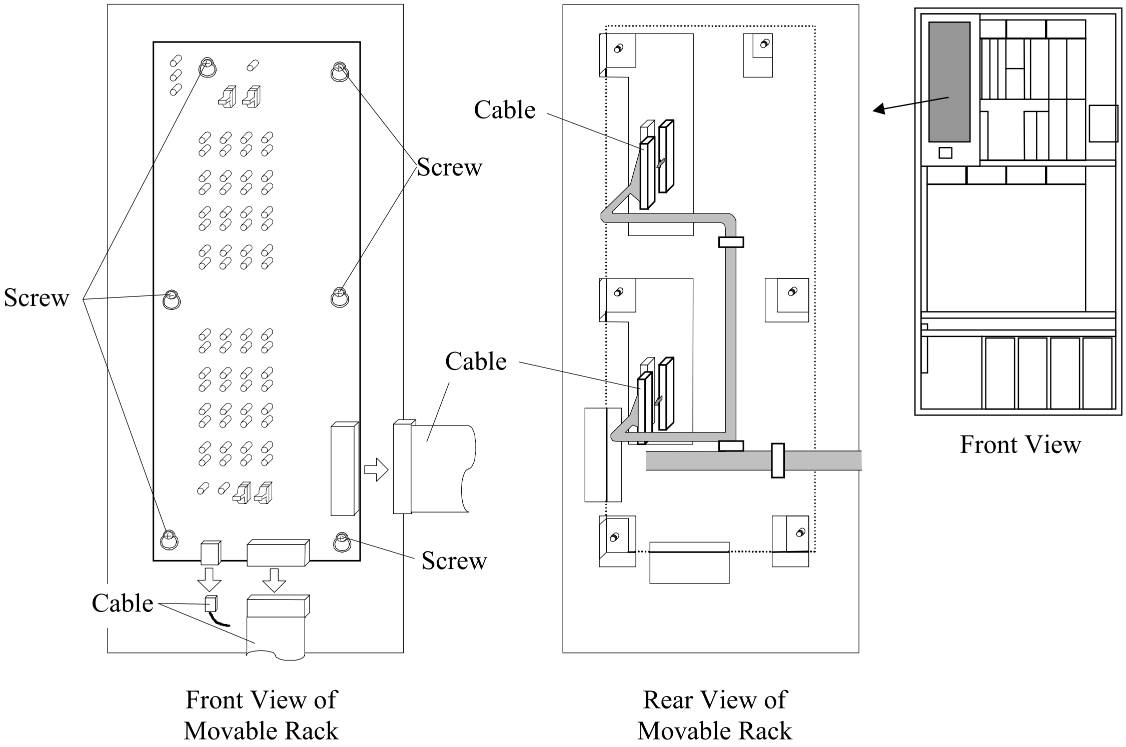
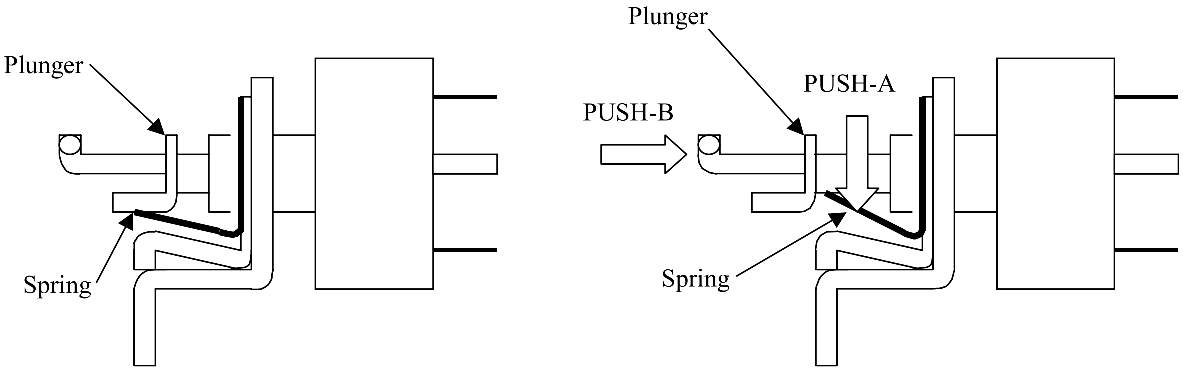

Cable
Screw
Screw
Cable
Screw
Cable
Front View
Front View of
Movable Rack
Rear View of
Movable Rack

Fig. T1-5 Replace of PCB

5. Make sure of condition of the EPO switch.
   a. Make sure that the EPO switch is in normal condition. If the EPO switch is in a condition in which it has been operated, return its condition to normal by pressing the plunger after pressing down the spring.



Side View of EPO Switch
(In Normal Condition)

Side View of EPO Switch
(After the Switch has been Operated)

Fig. T1-6 Condition of the EPO switch

---

6. Attach the Plate.
   a. Attach the plate to the Movable rack and fasten the three screws. Refer to Fig. T1-4.
   b. Attach the EPO Switch cover. Refer to Fig. T1-3.
   c. Attach the plate and fasten the screw. Refer to Fig. T1-2.

---

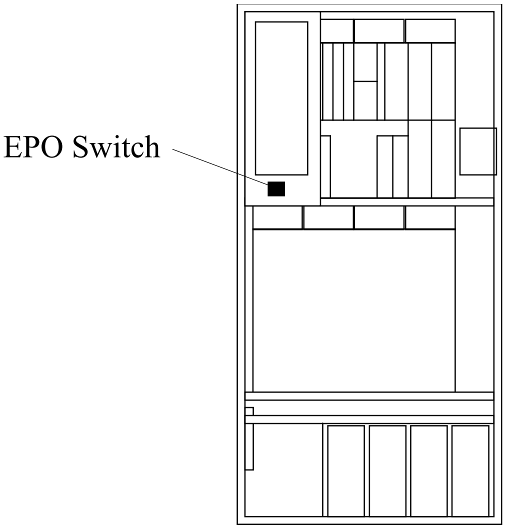
7. Go to SVP post procedure t1 [REP04-320].

CAUTION

Disconnect the Maintenance Jumper from the connector plug on the DKCMN according to the guidance of SVP.

[HARDWARE T2]

Location	Function Name of Component	
Front of DKC	1	EPO Switch
(Reference) The related PCB for replacement of EPO Switch 1. DKCMN PCB (Front PS Box)		



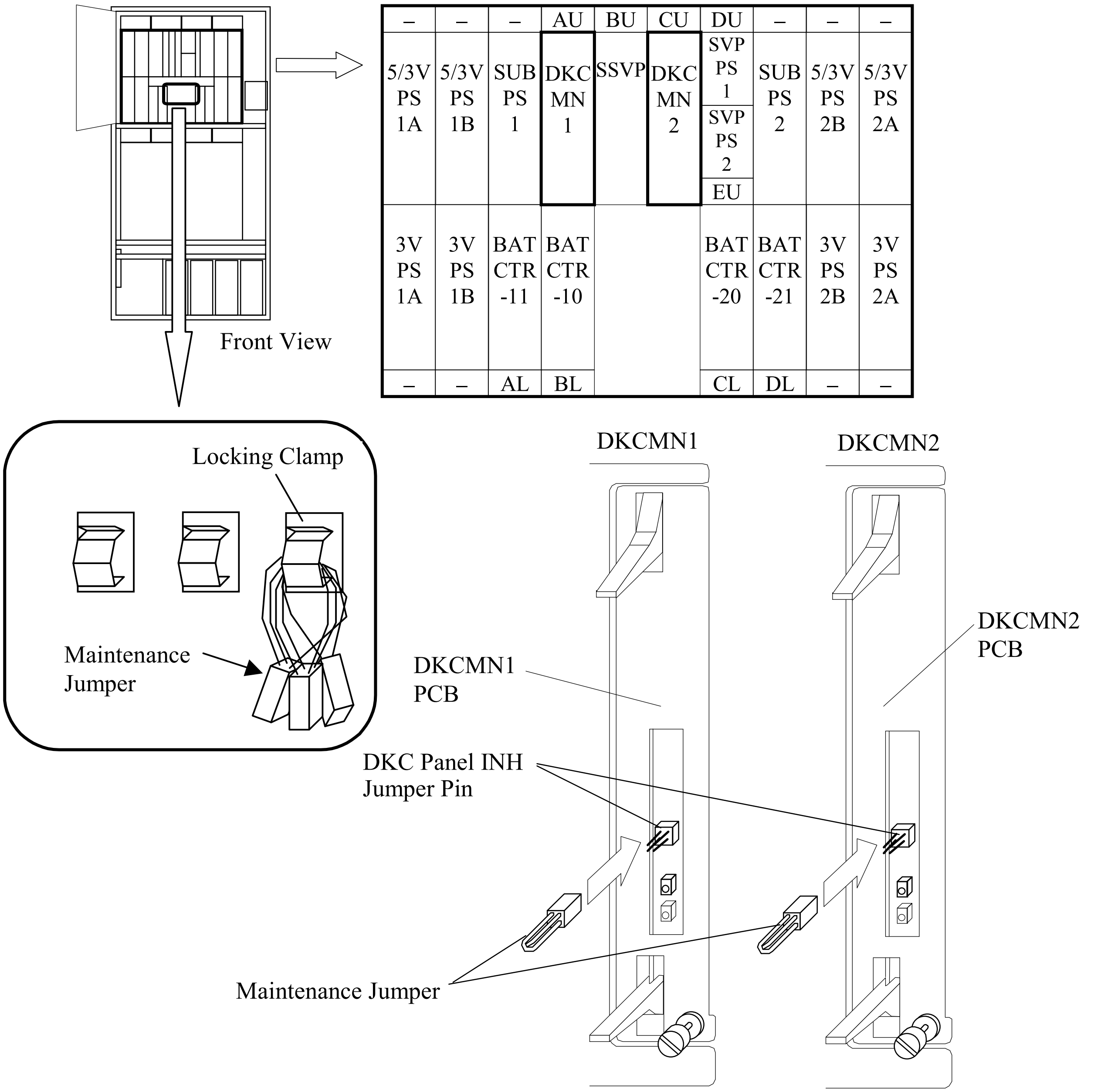
Front View

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. Connect the Maintenance Jumper connector to the connector plug on the DKCMN1 and DKCMN2.

⚠ CAUTION

A system down is caused if the Maintenance Jumper is not inserted. Be sure to insert the Maintenance Jumper before starting the work.


Front View
Locking Clamp
Maintenance Jumper
DKCMN1
DKCMN2
DKCMN1 PCB
DKCMN2 PCB
DKC Panel INH Jumper Pin
Maintenance Jumper

–	–	–	AU	BU	CU	DU	–	–	–
5/3V PS 1A	5/3V PS 1B	SUB PS 1	DKC MN 1	SSVP	DKC MN 2	SVP PS 1 SVP PS 2 EU	SUB PS 2	5/3V PS 2B	5/3V PS 2A
3V PS 1A	3V PS 1B	BAT CTR -11	BAT CTR -10			BAT CTR -20	BAT CTR -21	3V PS 2B	3V PS 2A
–	–	AL	BL			CL	DL	–	–

Fig. T2-1 Insertion of Maintenance Jumpers

2. Remove the plate from the Movable rack.
   a. Loosen the screw.
   b. Pull the plate forward, then lift up and remove it. (Make sure you don't pull and turn off EPO switch.)

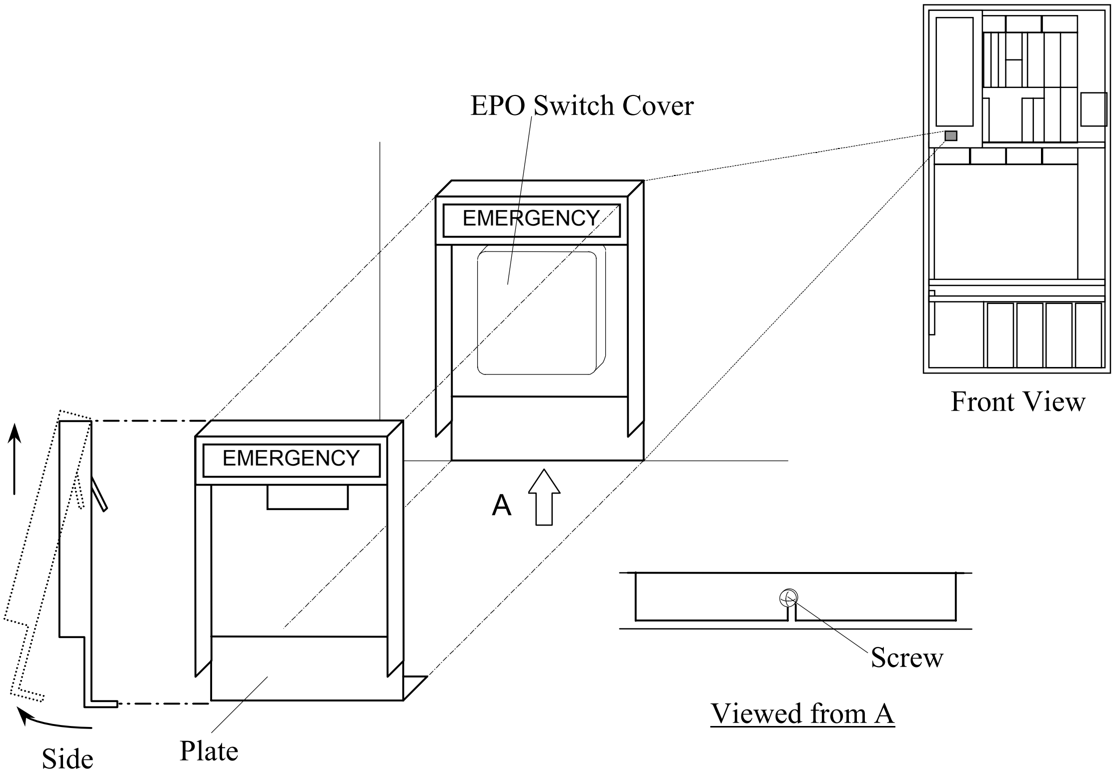

EPO Switch Cover
EMERGENCY
EMERGENCY
Front View
A
Screw
Viewed from A
Side
Plate

Fig. T2-2 Removal of Plate

   c. Remove the EPO switch cover.

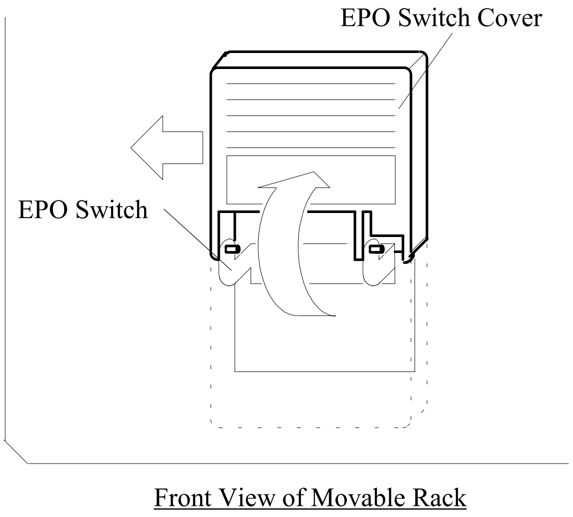

EPO Switch Cover
EPO Switch
Front View of Movable Rack

Fig. T2-3 Removal of EPO Switch Cover

d. Loosen the three screws and remove the plate.

⚠ CAUTION

When removing the plate of the DKC panel, do it with care not to touch the EPO switch.

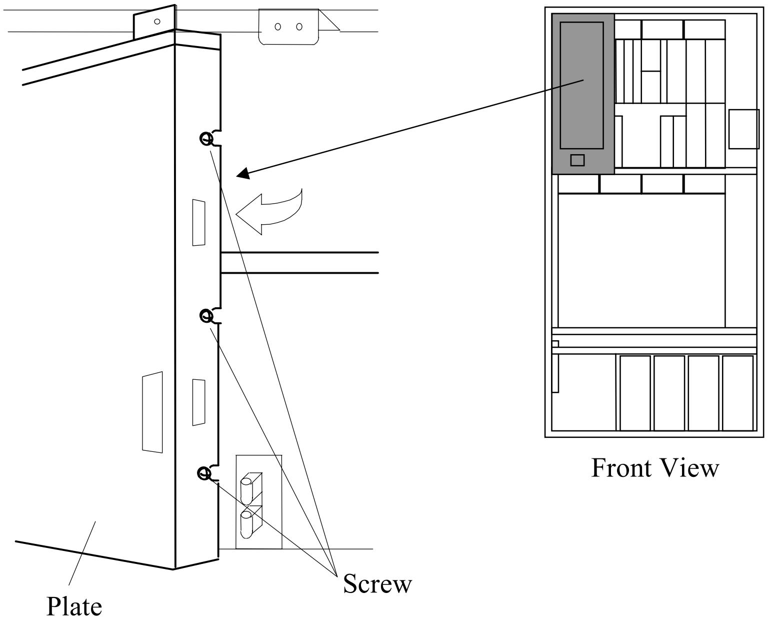


Plate
Screw
Front View

Fig. T2-4 Removal of Plate

---

3. Remove the EPO Switch.
   a. Disconnect the cable from the DKC panel.
   b. Loosen the two screws and remove the EPO switch.

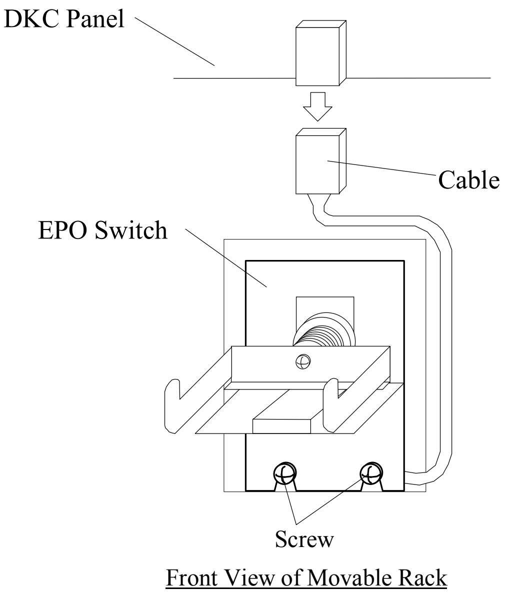

DKC Panel
Cable
EPO Switch
Screw
Front View of Movable Rack

Fig. T2-5 Removal of EPO Switch

4. Make sure of condition of the spare part EPO switch.
   a. Make sure that the spare part EPO switch is in normal condition. If the spare part EPO switch is in a condition in which it has been operated, return its condition to normal by pressing the plunger after pressing down the spring.

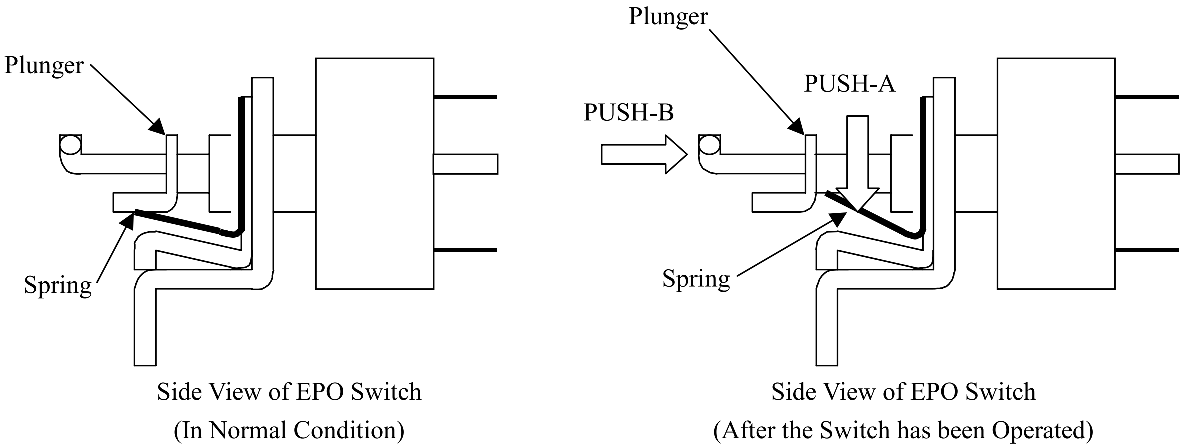

Plunger
Spring
Side View of EPO Switch
(In Normal Condition)
Plunger
PUSH-A
PUSH-B
Spring
Side View of EPO Switch
(After the Switch has been Operated)

Fig. T2-6 Condition of the spare part EPO switch

5. Attach the EPO Switch
   a. Attach the spare EPO switch with the two screws. Refer to Fig. T2-5.
   b. Connect the cable to the DKC panel.
   c. Attach the plate and fasten the three screws. Refer to Fig. T2-4.
   d. Attach the EPO switch cover. Refer to Fig. T2-3.
   e. Attach the plate and fasten the screw. Refer to Fig. T2-2.

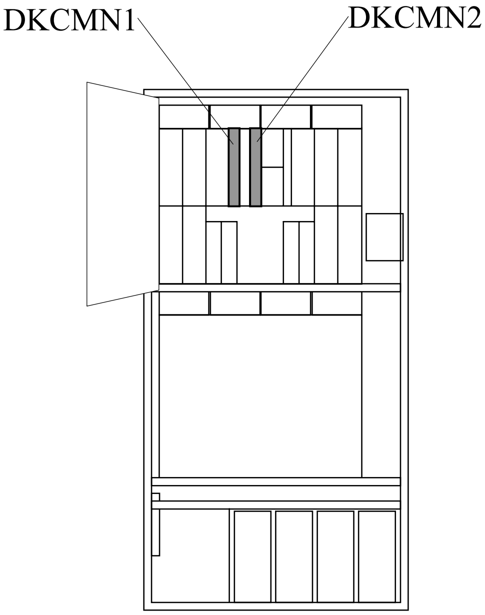
6. Go to SVP post procedure t1 [REP04-320].

⚠ CAUTION

Disconnect the Maintenance jumper from the connector plug on the DKCMN according to the guidance of SVP.

[HARDWARE T3]

Location	Function Name of Component		Part Name
Front PS Box	1	DKCMN1 or DKCMN2	• SH307-A
			• SH307-B (for UPS)



Front View

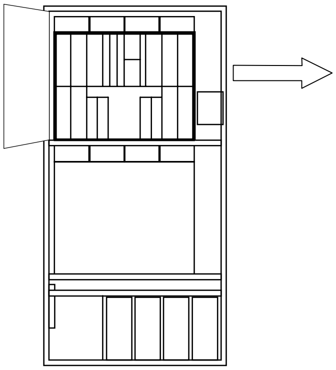
NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

DKCMN1 or DKCMN2

Note: Do not replace DKCMN1 PCB and DKCMN2 PCB at the same time.
If you want to replace the both PCB, first complete the replacement of one PCB and then start the replacement of the other.

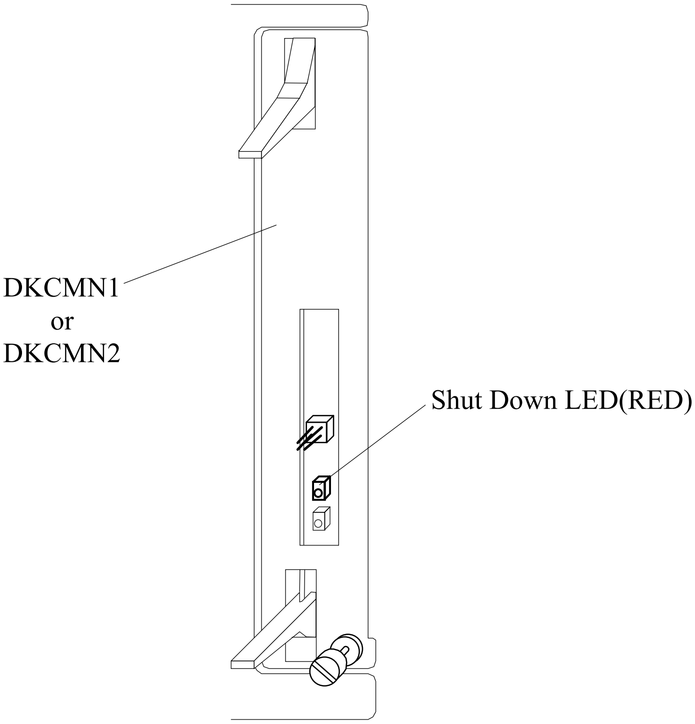
1. Check that the Shut Down LED is on. (only hot replace)

> **⚠ CAUTION**
>
> A system down is caused by a replacement of the DKCMN PCB other than that to be replaced. Make sure that it is the DKCMN PCB to be replaced.

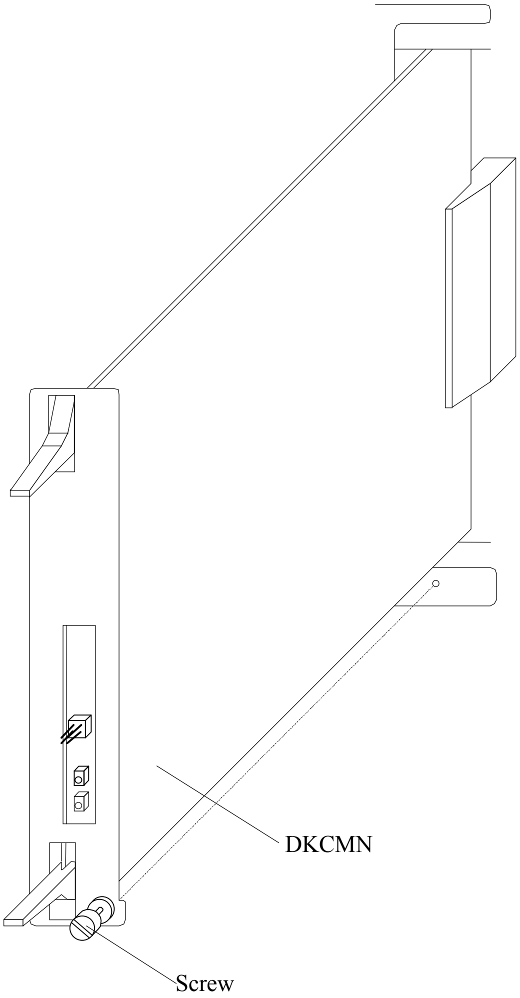


Front View

–	–	–	AU	BU	CU	DU	–	–	–
5/3V PS 1A	5/3V PS 1B	SUB PS 1	DKC MN 1	SSVP	DKC MN 2	SVP PS 1 SVP PS 2 EU	SUB PS 2	5/3V PS 2B	5/3V PS 2A
3V PS 1A	3V PS 1B	BAT CTR -11	BAT CTR -10			BAT CTR -20	BAT CTR -21	3V PS 2B	3V PS 2A
–	–	AL	BL			CL	DL	–	–



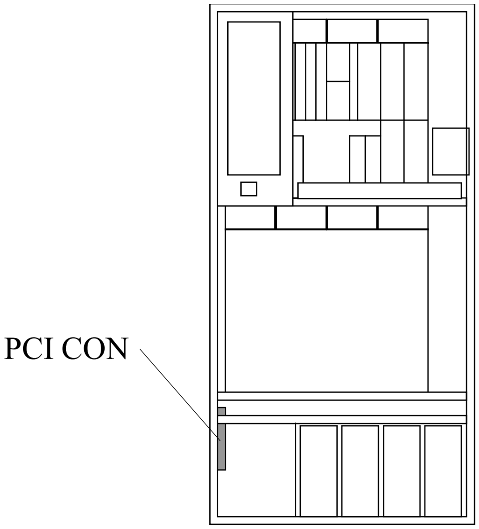
2. Replace the DKCMN PCB.
   a. Loosen the screw and remove the DKCMN PCB.
   b. Insert the spare DKCMN PCB and fasten the screw.



3. Go to SVP post procedure t1 [REP04-320].

[HARDWARE T4]

Location		Function Name of Component	Part Name
Lower left front of DKC	1	PCI CON	• SH218-A
(Reference) The related PCB for replacement of PCI CON. 1. DKC Panel PCB (Front of DKC) 2. DKCMN PCB (Front PS Box in DKC)			



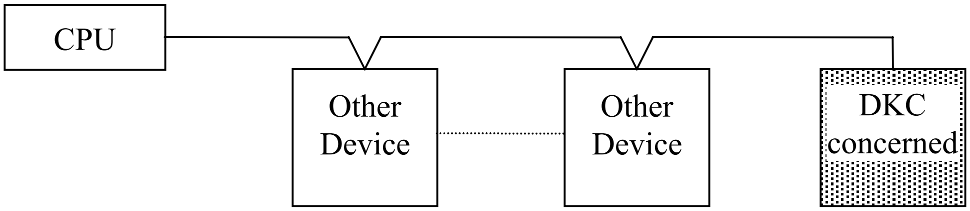
Front View

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.

⚠ CAUTION

1: Replacement of PCI CON Panel causes other devices running on the same PCI connection line to be powered off except a and b shown below (because giving the EPO instruction is assumed). Therefore, stop the other device before performing replacement.

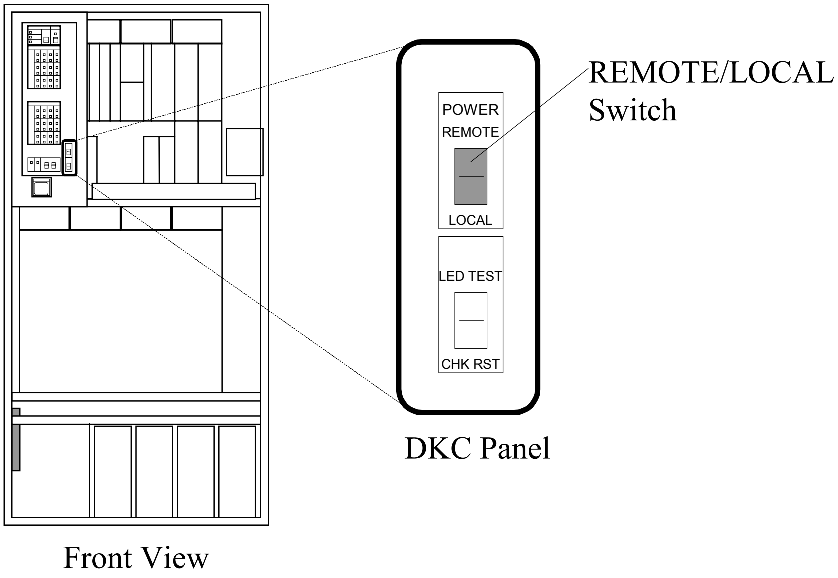
a. If PCI cable is not connected to the replacing DKC.
b. If the replacing DKC (DKC concerned) is connected to the end of the PCI cable as shown below.


CPU
Other Device
Other Device
DKC concerned

2: The COMP signal of PCI is turned off, if the PCI cable is disconnected.

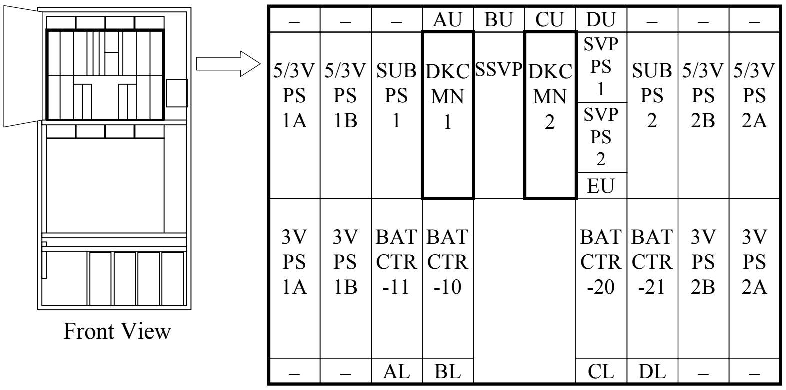
---

1. Confirm that the REMOTE/LOCAL Switch of DKC Panel is set to LOCAL. If not, set the REMOTE/LOCAL Switch to LOCAL.

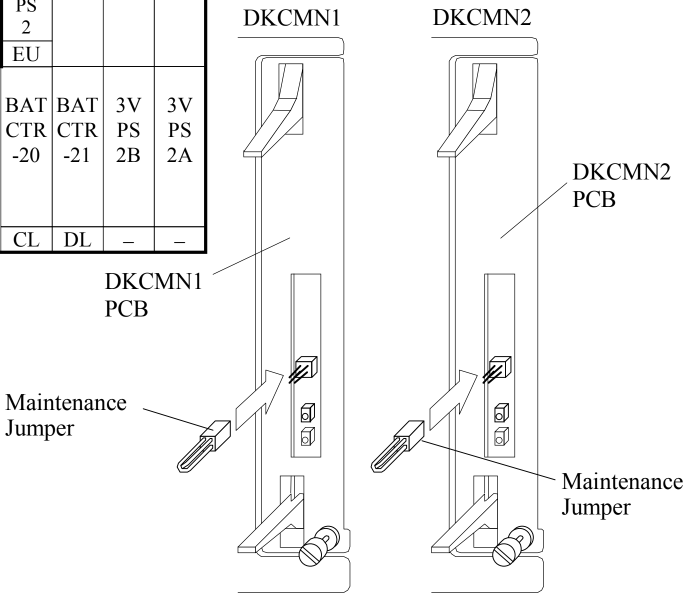

REMOTE/LOCAL Switch
POWER
REMOTE
LOCAL
LED TEST
CHK RST
DKC Panel
Front View

2. Connect the Maintenance Jumper to the connector plug on the DKCMN1 and DKCMN2.

> **⚠ CAUTION**
>
> A system down is caused if the Maintenance Jumper is not inserted. Be sure to insert the Maintenance Jumper before starting the work.

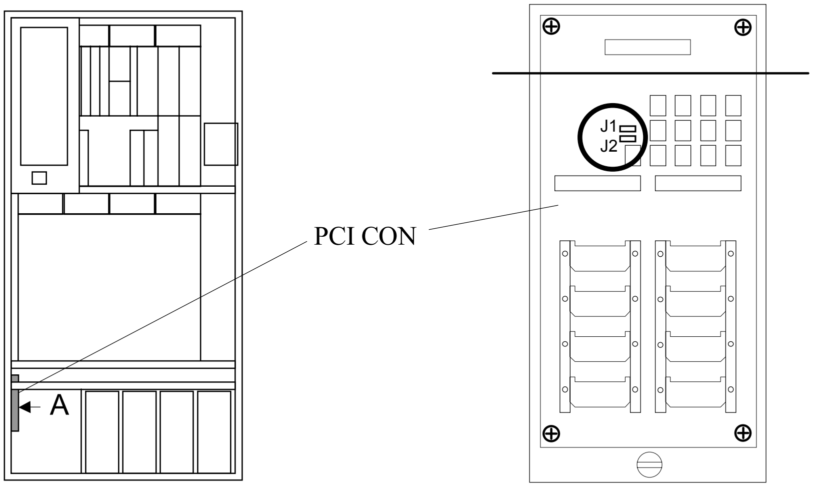

Front View

–	–	–	AU	BU	CU	DU	–	–	–
5/3V PS 1A	5/3V PS 1B	SUB PS 1	DKC MN 1	SSVP	DKC MN 2	SVP PS 1 SVP PS 2 EU	SUB PS 2	5/3V PS 2B	5/3V PS 2A
3V PS 1A	3V PS 1B	BAT CTR -11	BAT CTR -10			BAT CTR -20	BAT CTR -21	3V PS 2B	3V PS 2A
–	–	AL	BL			CL	DL	–	–


DKCMN1
DKCMN2
DKCMN2 PCB
DKCMN1 PCB
Maintenance Jumper
Maintenance Jumper

---

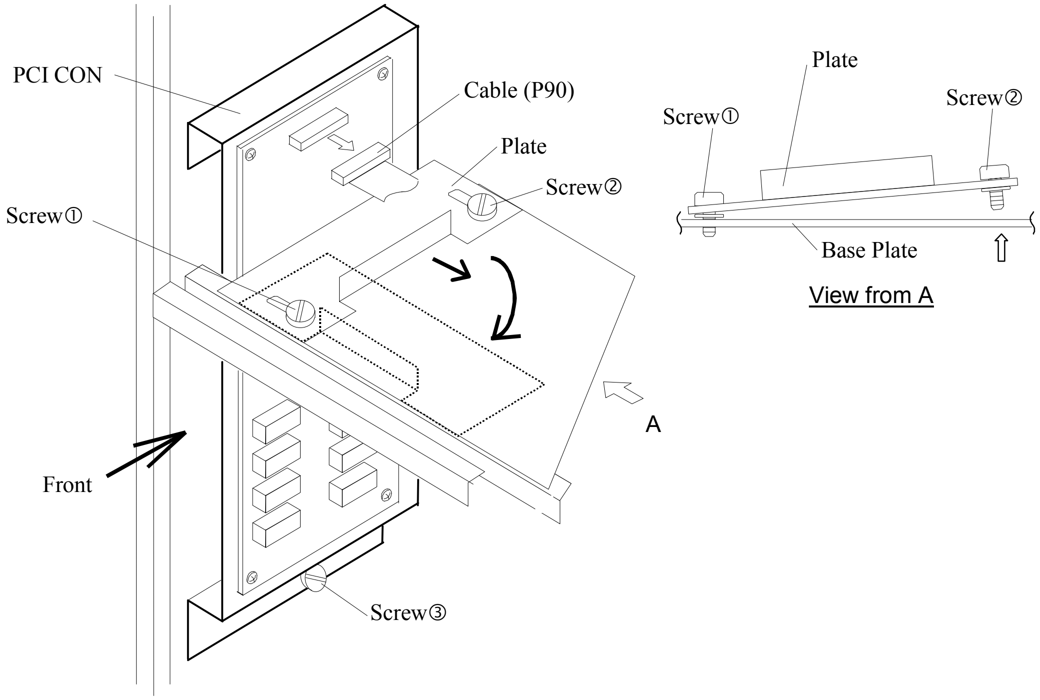
3. Set the jumper connectors(J1 and J2) of the spare PCI CON PCB to the same positions as those of the failed PCB.


A
PCI CON
J1
J2

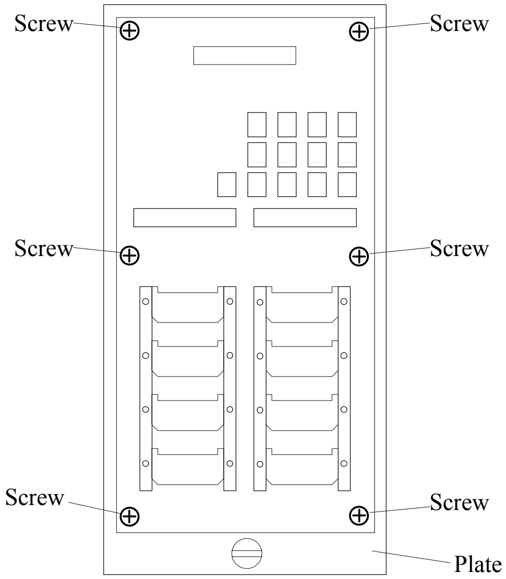
Front View

Viewed from A

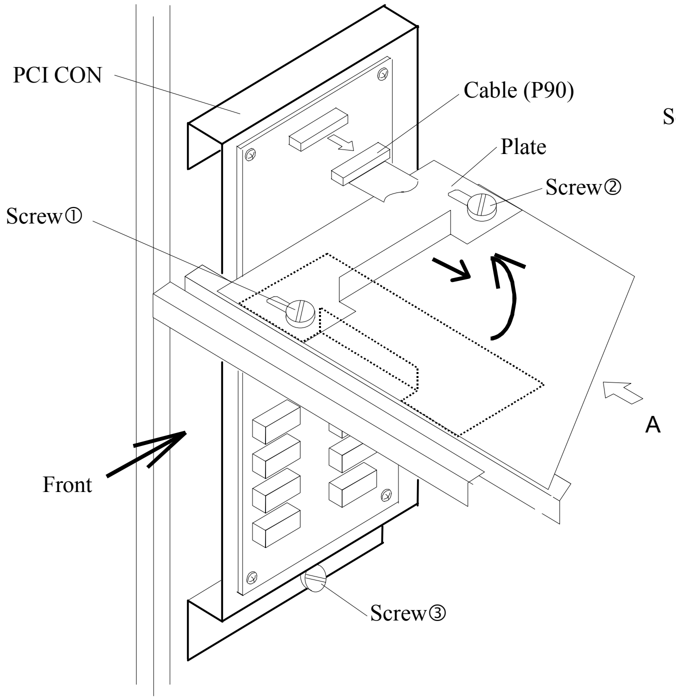
4. Replace the PCI CON.
   a. Disconnect all cables from PCI CON.
   b. Loosen the screw① and remove the screw② from base plate.
   c. Slide the plate and turn it using the screw① as an axis.
   d. Remove the screw③ and remove the PCI CON.


PCI CON
Cable (P90)
Plate
Screw②
Screw①
Front
Screw③
A
Plate
Screw①
Screw②
Base Plate
View from A

5. Remove the plate from the failed PCB, and then attach them to the spare PCB.
   a. Remove the six screws and the plate from the failed PCB.
   b. Attach the plate to the spare PCB and fasten the six screws.


Screw
Screw
Screw
Screw
Screw
Screw
Plate

6. Attach the PCI CON.
   a. Attach the PCI CON and fasten the screw②.
   b. Slide the plate and fasten the screw① and ②.
   c. Connect the cables.


PCI CON
Cable (P90)
Plate
Screw②
Screw①
A
Front
Screw③

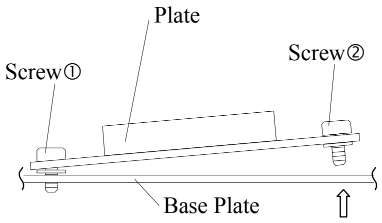


Plate
Screw①
Screw②
Base Plate
⇧

View from A

---

7. Restore the REMOTE/LOCAL switch on the DKC panel in step 1.

---

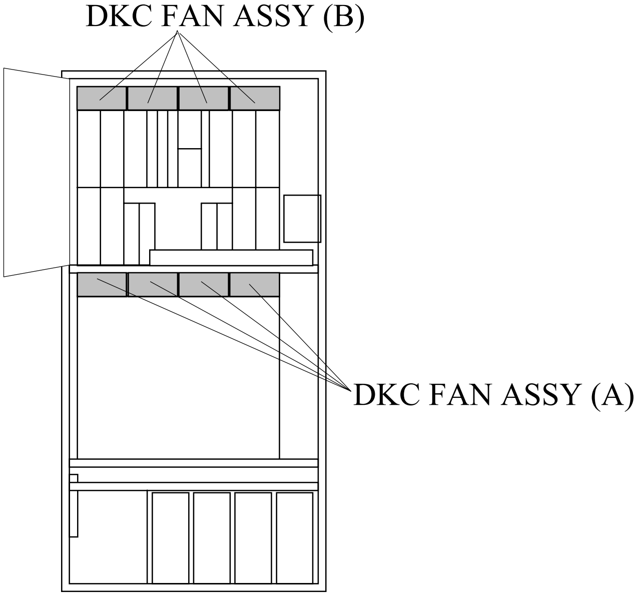
8. Disconnect the Maintenance Jumper from the connector plug on the DKCMN.

---

9. Go to SVP post procedure t1 [REP04-320].

[HARDWARE T5]

Location	Function Name of Component		
Top of Box	1	Fan Assembly	DKC FAN ASSY (A)
			DKC FAN ASSY (B)



Front View

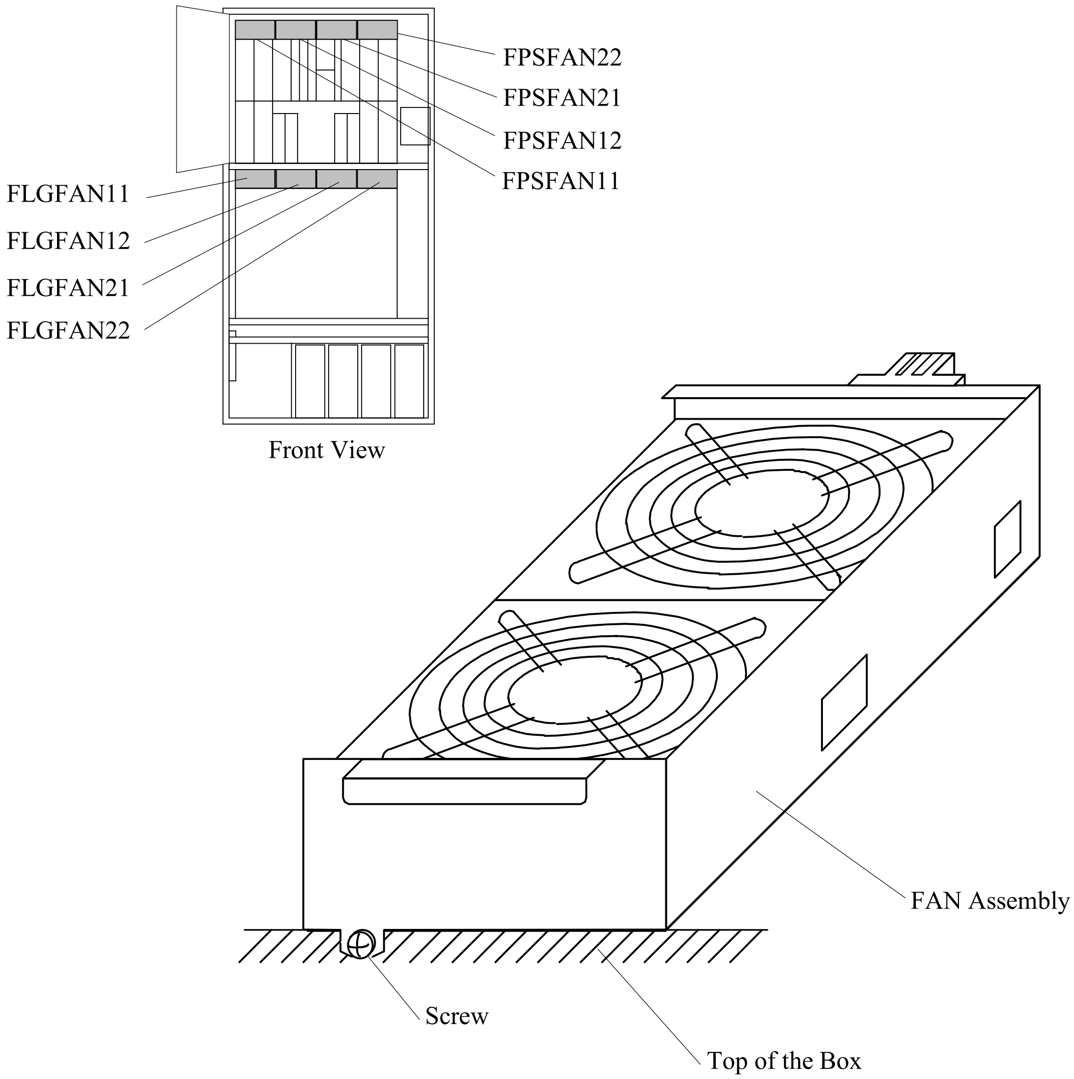
NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

Fan Assembly

⚠ CAUTION

Hazardous rotating mechanism:
Can cause injury if touched. Stay clear of it when machine is running.

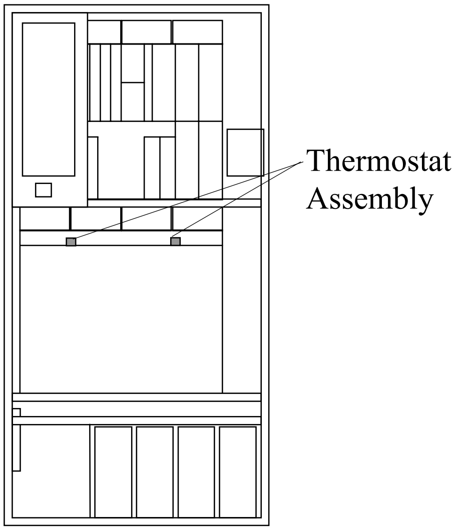
1. The following figure shows the correct way to replace the Fan Assembly.
   a. Loosen the screw.
   b. Replace the Fan Assembly.
   c. Fasten the screw.


FPSFAN22
FPSFAN21
FPSFAN12
FPSFAN11
FLGFAN11
FLGFAN12
FLGFAN21
FLGFAN22
Front View
FAN Assembly
Screw
Top of the Box

2. Go to SVP post procedure t3 [REP04-900].

[HARDWARE T6]

Location	Function Name of Component	
Front Logic Box	1	Thermostat Assembly

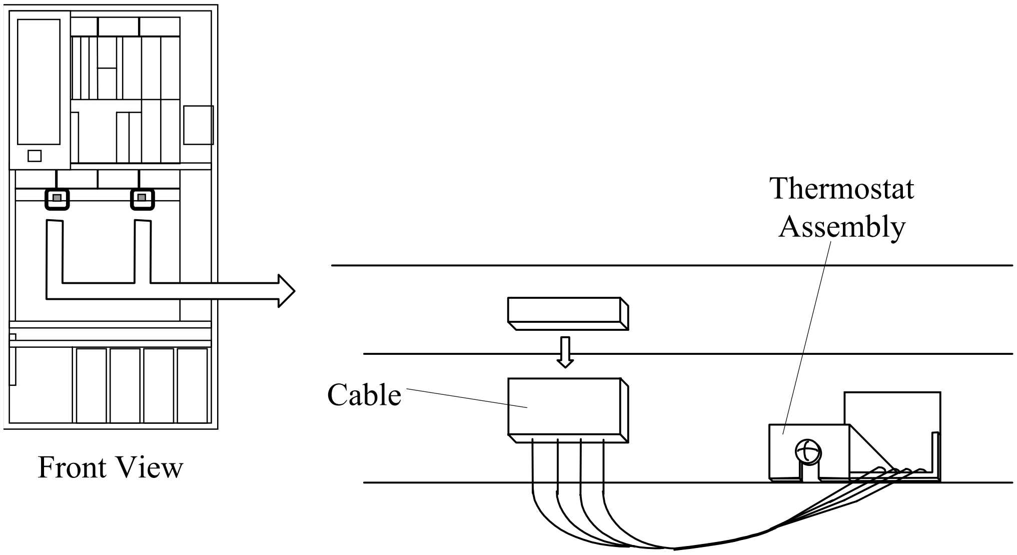


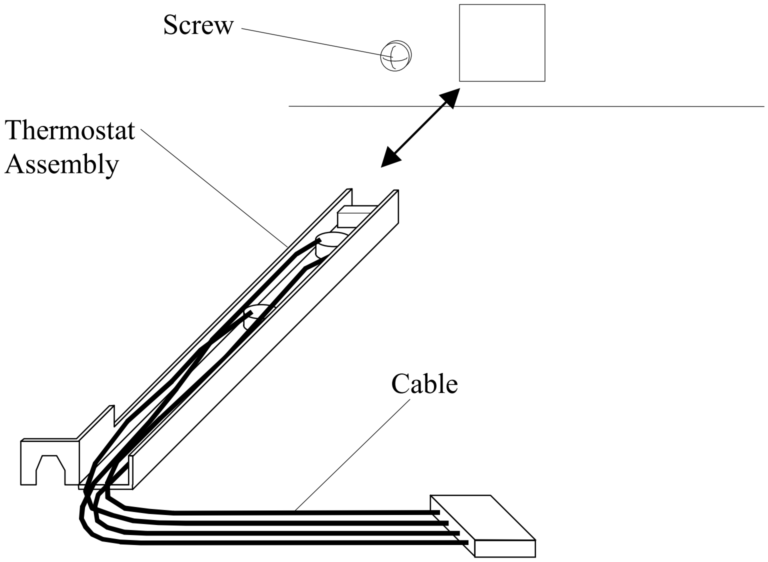
Front View

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.

Thermostat Assembly

1. The following figure shows the correct way to replace the Thermostat Assembly.
   a. Disconnect the cable.
   b. Loosen the screw and remove the thermostat assembly.
   c. Attach a spare thermostat assembly and tighten the screw.
   d. Connect the cable.

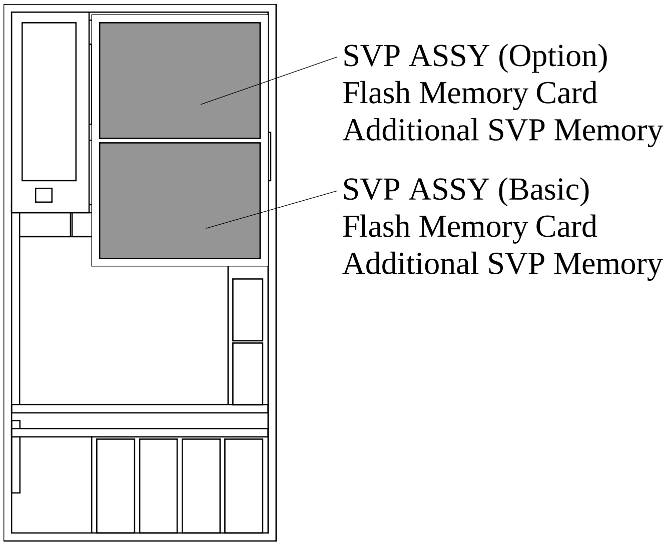

Thermostat
Assembly
Cable
Front View


Screw
Thermostat
Assembly
Cable

2. Go to SVP post procedure t3 [REP04-900].

[HARDWARE T7]

Location	Function Name of Component		Part Name
Front upside of DKC	1	SVP ASSY	• FLORA270HX (HITACHI)
	2	Flash Memory Card	• PCCF-H128MS
	3	Additional SVP Memory	


SVP ASSY (Option)
Flash Memory Card
Additional SVP Memory
SVP ASSY (Basic)
Flash Memory Card
Additional SVP Memory

Front View

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.

Replacement of SVP ASSY

1. Open the front door and then open the DKC panel.
2. Turn the SVP Assy and turn off the power for the SVP.
   (When you operate this operation from Pre-Procedure T1, do not this operation.)
3. Open the SVP frame.

SVP frame type1

a. Loosen the screw① and open the SVP frame.

SVP frame type2

a. Loosen the screw② and the SVP stopper is slide to the left.
b. Open the SVP ASSY (Basic).
c. Loosen the screw③ and open the SVP frame.

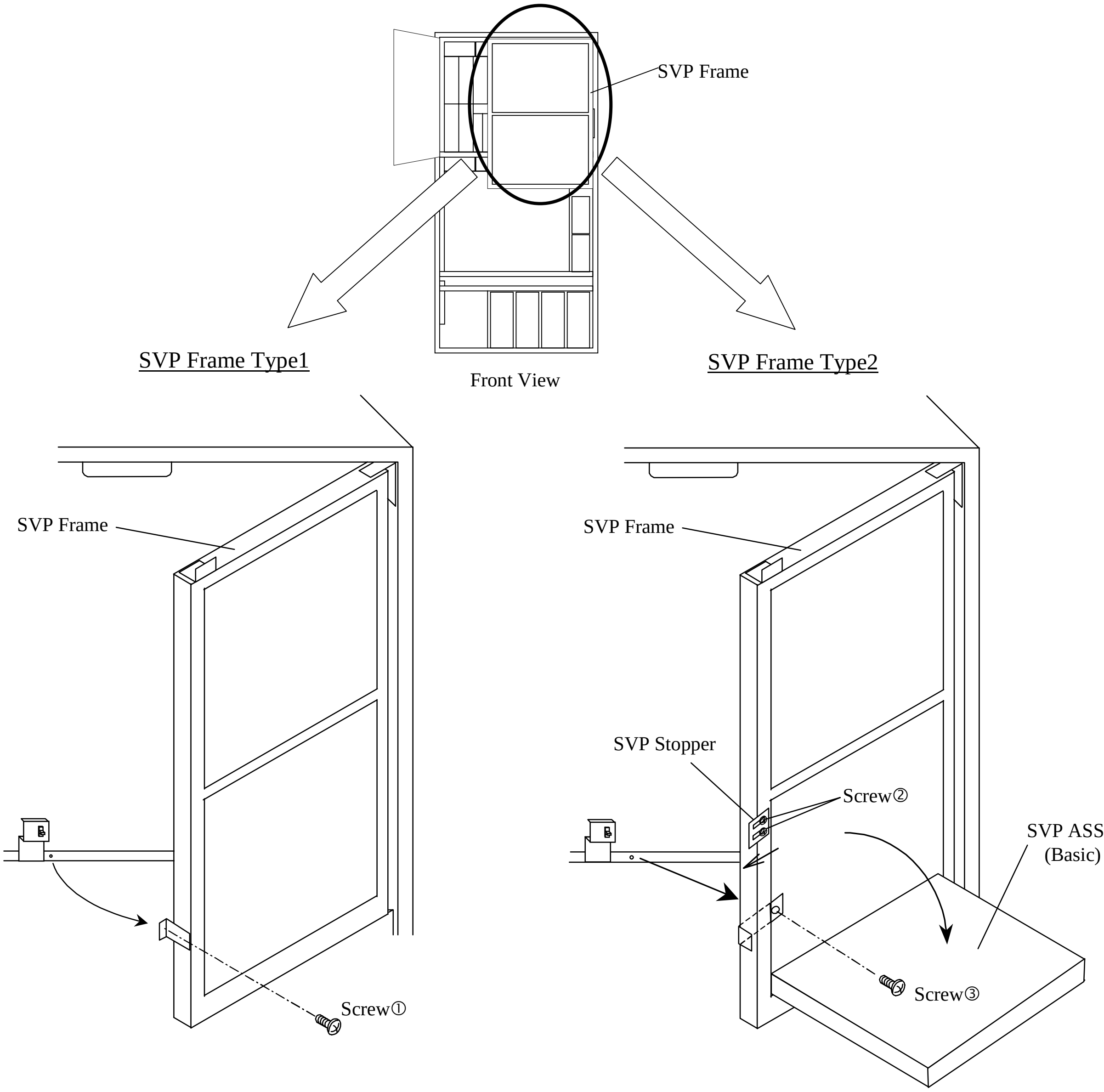

SVP Frame
SVP Frame Type1
Front View
SVP Frame Type2
SVP Frame
Screw①
SVP Frame
SVP Stopper
Screw②
SVP ASSY
(Basic)
Screw③

Fig. T7.1-1 Open the SVP Frame

4. Insert the Jumper.

Replacement of Basic SVP ASSY

a. Insert the maintenance jumper into JP1 on the RS CON PCB.

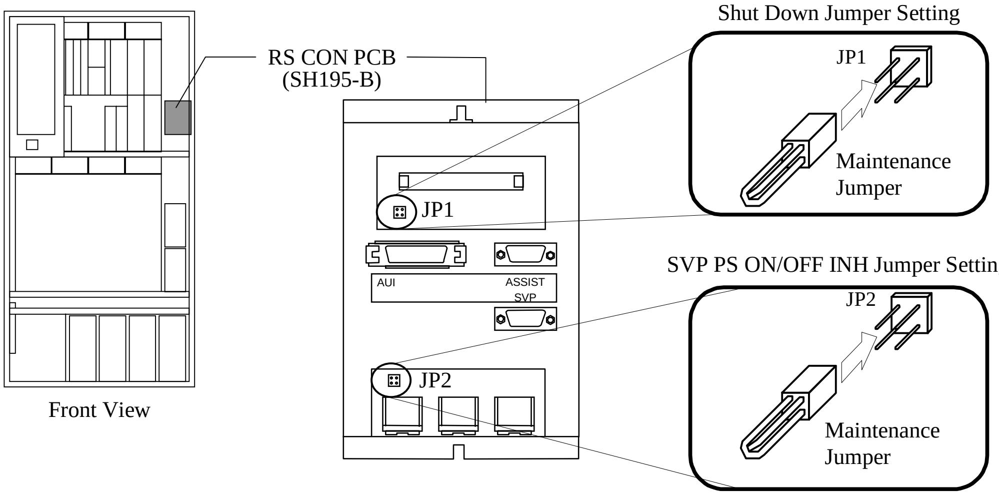

Shut Down Jumper Setting
RS CON PCB
(SH195-B)
JP1
Maintenance
Jumper
JP1
AUI
ASSIST
SVP
SVP PS ON/OFF INH Jumper Setting
JP2
JP2
Maintenance
Jumper
Front View

Fig. T7.1-2 Jumper settings of RS CON PCB

Replacement of Option SVP ASSY

a. Insert the maintenance jumper into PS SD on the SVPPS BOX.

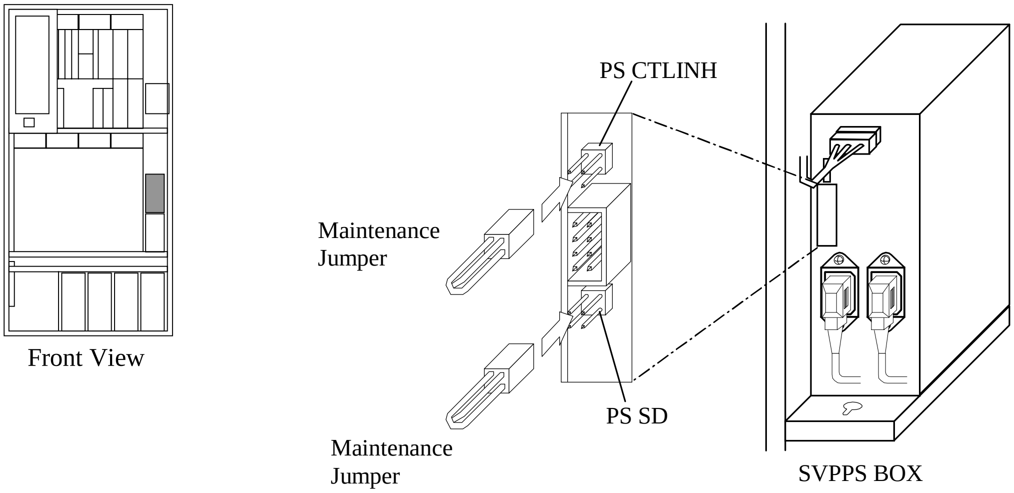

PS CTLINH
Maintenance
Jumper
PS SD
Maintenance
Jumper
SVPPS BOX
Front View

Fig. T7.1-3 Jumper settings of SVPPS BOX

5. Remove the cables.

Replacement of Basic SVP ASSY

a. Disconnect the cables (PSVP-1 and RSVP-1) from the RS CON PCB.

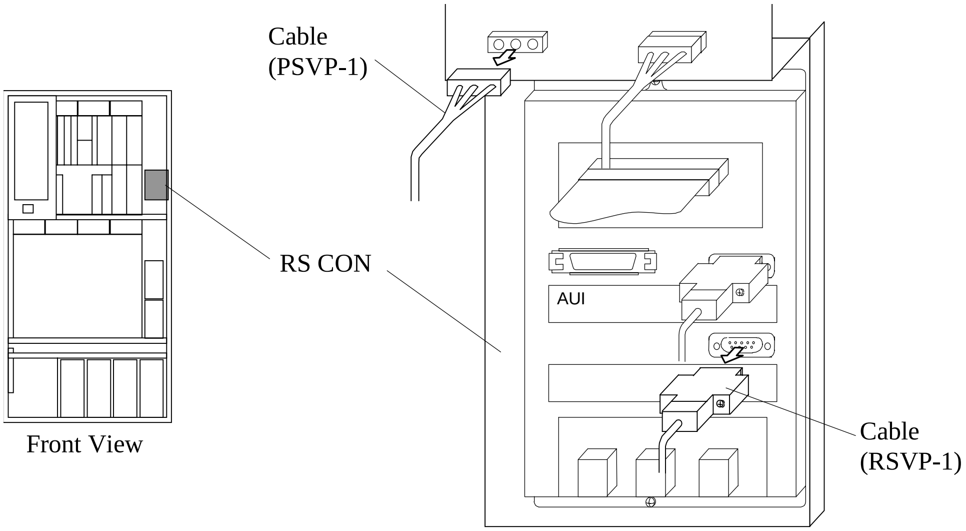

Cable
(PSVP-1)
RS CON
AUI
Front View
Cable
(RSVP-1)

Fig. T7.1-4 Disconnect of Cables

b. Disconnect the LAN cable (LSVP-1) from the HUB BOX.

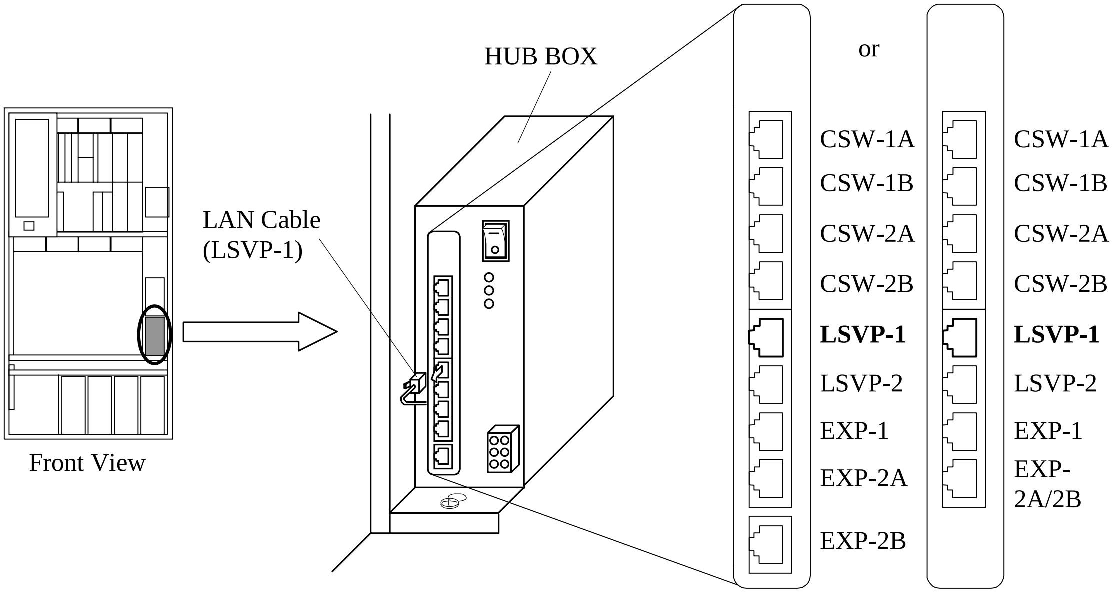

HUB BOX
or
LAN Cable
(LSVP-1)
Front View
CSW-1A
CSW-1B
CSW-2A
CSW-2B
LSVP-1
LSVP-2
EXP-1
EXP-2A
EXP-2B
CSW-1A
CSW-1B
CSW-2A
CSW-2B
LSVP-1
LSVP-2
EXP-1
EXP-
2A/2B

Fig. T7.1-5 Disconnect of LAN Cable

c. Open the locking clamps and remove the cables.

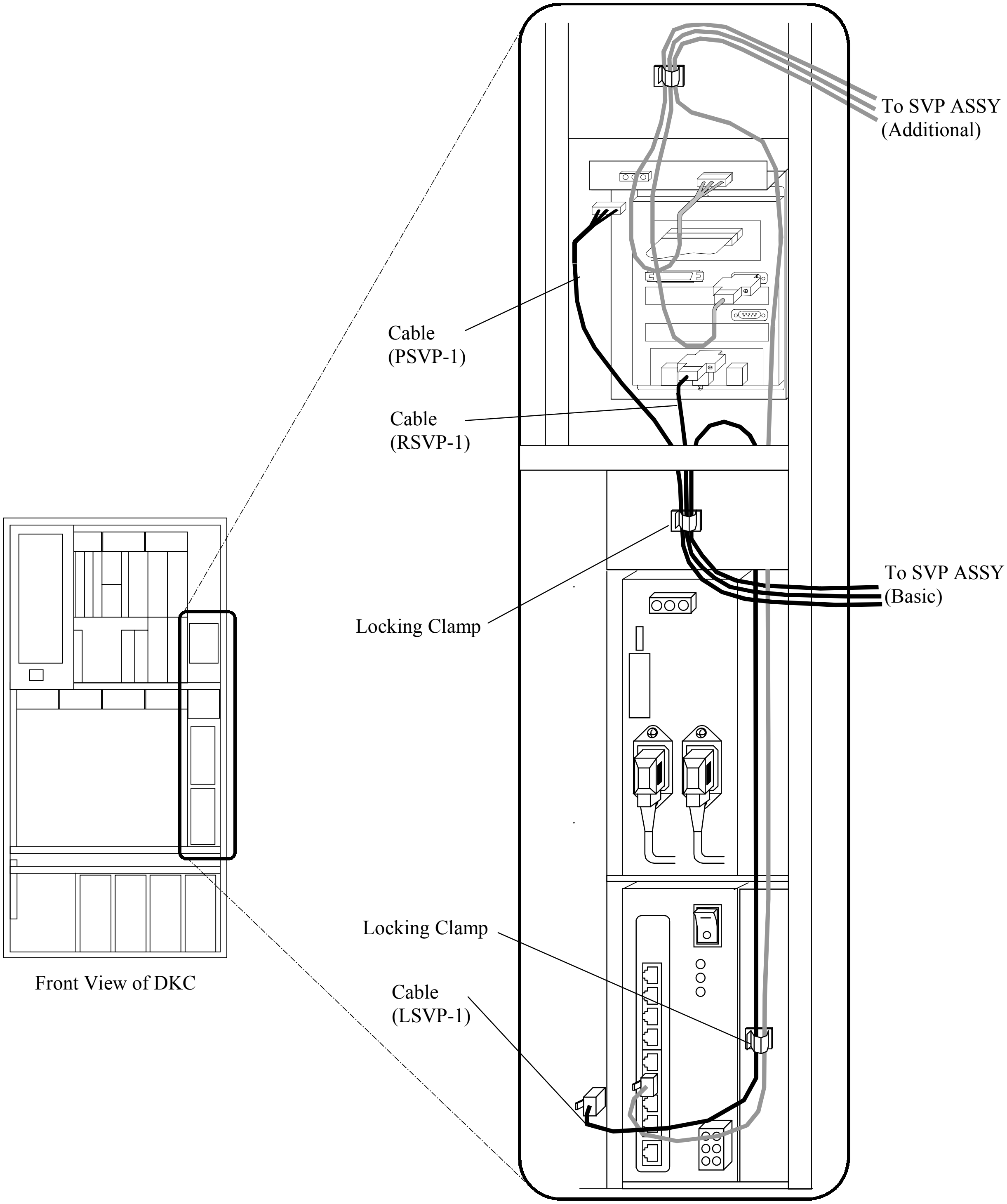

To SVP ASSY
(Additional)
Cable
(PSVP-1)
Cable
(RSVP-1)
To SVP ASSY
(Basic)
Locking Clamp
Front View of DKC
Locking Clamp
Cable
(LSVP-1)

Fig. T7.1-6 Removal of Cables

Replacement of Option SVP ASSY

a. Disconnect the cables (PSVP-2 and RSVP-2) from the RS CON PCB.

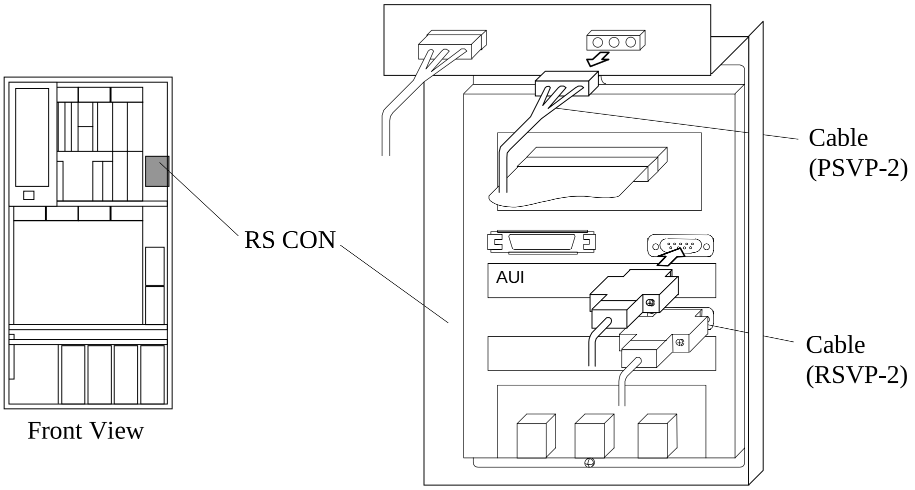

RS CON
Cable
(PSVP-2)
AUI
Cable
(RSVP-2)
Front View

Fig. T7.1-7 Disconnect of Cables

b. Disconnect the LAN cable (LSVP-2) from the HUB BOX.

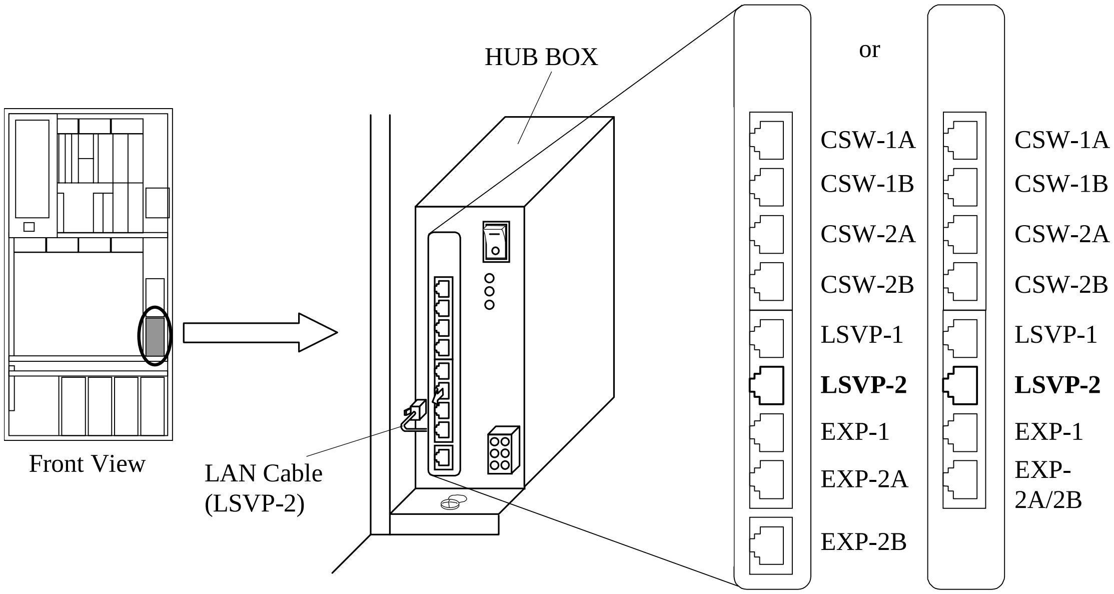

HUB BOX
or
CSW-1A
CSW-1B
CSW-2A
CSW-2B
LSVP-1
LSVP-2
EXP-1
EXP-2A
EXP-2B
CSW-1A
CSW-1B
CSW-2A
CSW-2B
LSVP-1
LSVP-2
EXP-1
EXP-2A/2B
Front View
LAN Cable
(LSVP-2)

Fig. T7.1-8 Disconnect of LAN Cable

c. Open the locking clamps and remove the cables.

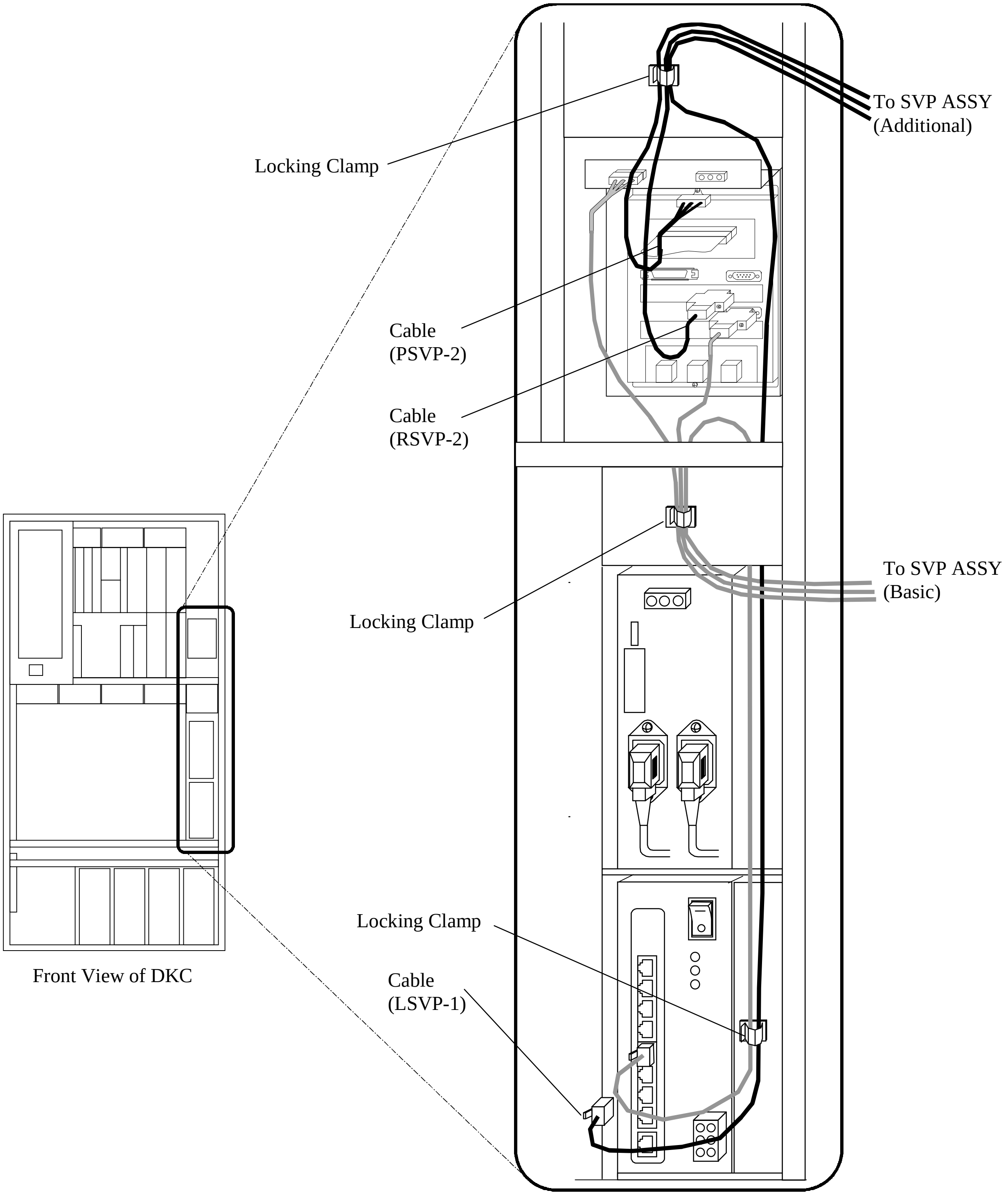
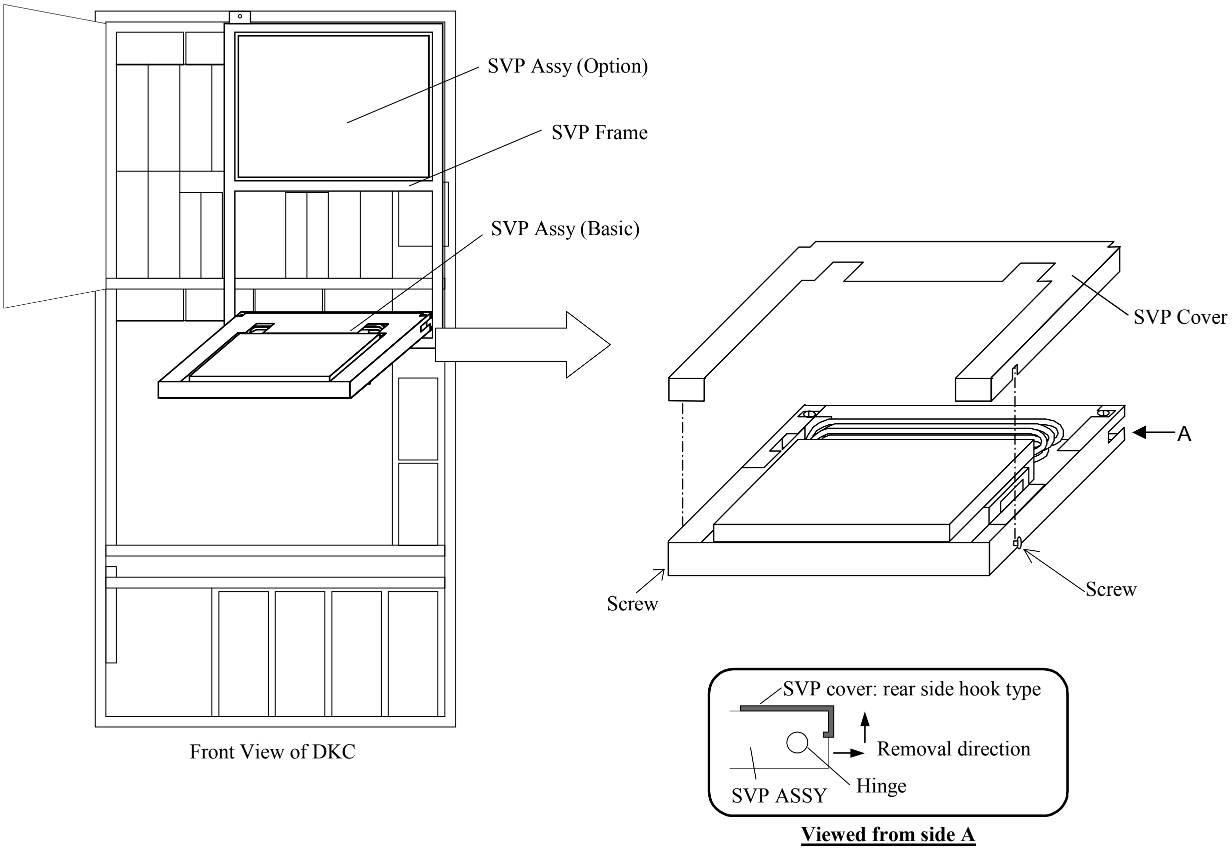

Locking Clamp
To SVP ASSY
(Additional)
Cable
(PSVP-2)
Cable
(RSVP-2)
Locking Clamp
To SVP ASSY
(Basic)
Front View of DKC
Locking Clamp
Cable
(LSVP-1)

Fig. T7.1-8A Removal of Cables

6. Remove the SVP cover.
   a. Close the SVP frame.
   b. Loosen the screws and remove the SVP cover.


SVP Assy (Option)
SVP Frame
SVP Assy (Basic)
Front View of DKC
SVP Cover
A
Screw
Screw
SVP cover: rear side hook type
Removal direction
Hinge
SVP ASSY

Viewed from side A

Fig. T7.1-9 Removing SVP cover

7. Loosen the screws and remove the stopper.
8. Pull out the defective SVP Assy.
9. Remove the flash memory card which are attached to the SVP and attach it to a spare SVP. (See REP03-540.)
10. Install a spare SVP Assy.
    a. Loosen the screws and remove the SVP cover and stopper from the SVP Assy.
    b. Remove the Additional SVP memory which are attached to the SVP and attach it to a spare SVP. (See REP03-541 through 03-544.)
    c. Install the SVP Assy to the SVP frame and attach the stoppers with screws. At the time, confirm that the convex sections of the stoppers are inserted into the notches of the SVP base.
    d. Attach the SVP Assy cables to the RS CON PCB and HUB BOX. And then close the four locking clamps. (See Fig. T7.1-7.)
    e. Install the SVP cover.

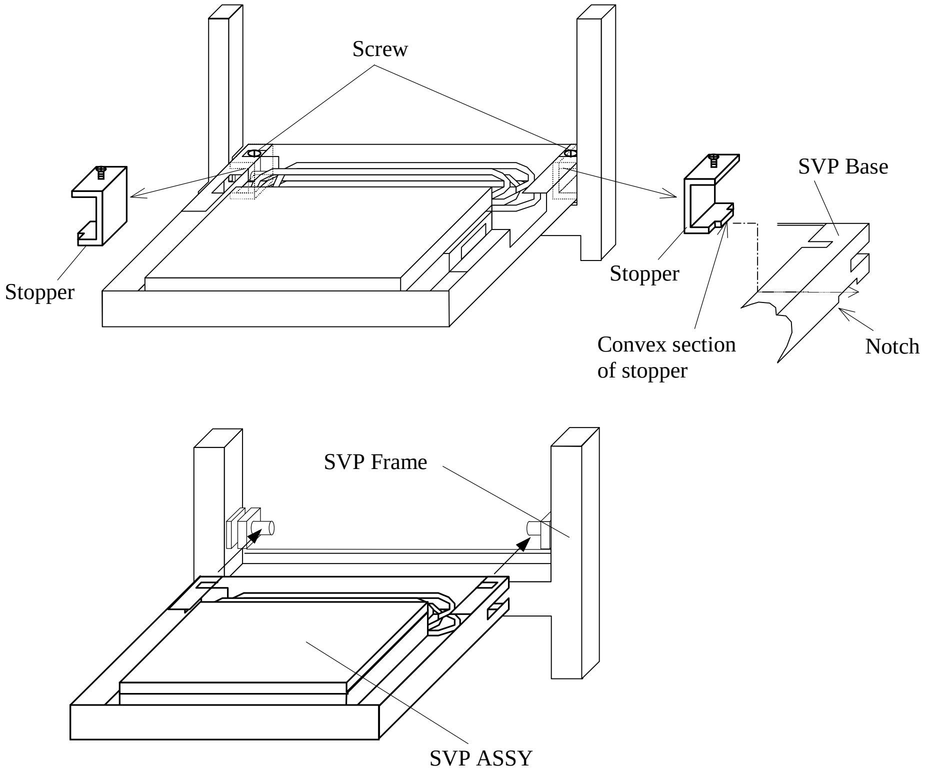


Fig. T7.1-10 Removing and installing the SVP Assy

---

11. Set the Jumper.

Replacement of Basic SVP ASSY

a. Remove the maintenance jumper of the JP1 on the RS CON PCB. (See Fig. T7.1-2.) (When the maintenance jumper is pulled off, power supply of the SVP is turned on.)
b. Insert the maintenance jumper into the JP2 on the RS CON PCB. (See Fig. T7.1-2.)

Replacement of Option SVP ASSY

a. Remove the maintenance jumper of the PS SD on the SVPPS BOX. (See Fig. T7.1-3.) (When the maintenance jumper is pulled off, power supply of the SVP is turned on.)
b. Insert the maintenance jumper into the PS CTLINH on the SVPPS BOX. (See Fig. T7.1-3.)

---

12. Go to SVP post procedure t1 [REP04-320].

Replacement of Flash Memory Card

1. Open the front door and then open the DKC panel.
2. Turn the SVP Assy and turn off the power for the SVP.
3. Insert the jumper.

Replacement of Basic SVP ASSY

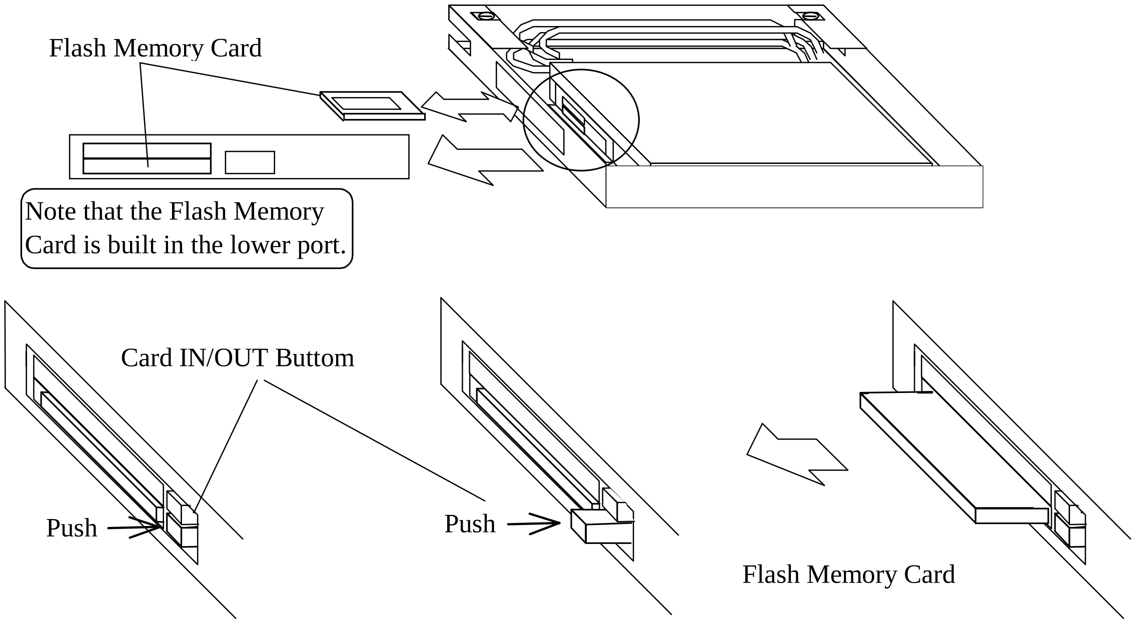
d. Insert the maintenance jumper into JP1 on the RS CON PCB. (See Fig. T7.1-2 [REP03-470].)

Replacement of Option SVP ASSY

e. Insert the maintenance jumper into PS SD on the SVPPS BOX. (See Fig. T7.1-3 [REP03-480].)

4. Loosen the screws and remove the SVP cover. (See Fig. T7.1-9 [REP03-520].)
5. Operate the card IN/OUT lever to remove the flash memory card from the SVP.
6. Insert a spare flash memory card.

For FLORA270HX


Flash Memory Card
Note that the Flash Memory Card is built in the lower port.
Card IN/OUT Buttom
Push
Push
Flash Memory Card

① Push the card IN/OUT Button.

② Push the card IN/OUT Button to remove the Flash Memory Card.

How to remove the Flash Memory Card

Fig. T7.2-1 Replacing the flash memory card (for FLORA270HX)

7. Attach the SVP cover.
8. Pull out the maintenance jumper on the RS CON PCB or SVPPS BOX. (See Fig. T7.1-2 [REP03-470].)
   (When the maintenance jumper is pulled off, power supply of the SVP is turned on.)

---

9. Go to SVP post procedure t1 [REP04-320].

Replacement of Additional SVP Memory

1. Open the front door and then open the DKC panel.
2. Turn the SVP ASSY and turn off the power for the SVP.
3. Loosen the screw and open the SVP frame. (See Fig. T7.1-1 [REP03-460].)
4. Insert the jumper.

Replacement of Basic SVP ASSY

Insert the maintenance jumper into JP1 on the RS CON PCB. (See Fig. T7.1-2 [REP03-470].)

Replacement of Option SVP ASSY

Insert the maintenance jumper into PS SD on the SVPPS BOX. (See Fig. T7.1-3 [REP03-470].)

5. Remove the cables.

Replacement of Basic SVP ASSY

a. Disconnect the RS232C cable (RSVP-1) from the RS CON PCB. (See Fig. T7.1-4 [REP03-480].)
b. Disconnect the LAN cable (LSVP-1) from the HUB BOX.
   Disconnect the SVP PS cable (PSVP-1) from the CON PLATE. (See Fig. T7.1-5 [REP03-480].)
c. Open the locking clamps and remove the cables. (See Fig. T7.1-6 [REP03-490].)

Replacement of Option SVP ASSY

a. Disconnect the RS232C cable (RSVP-2) from the RS CON PCB. (See Fig. T7.1-7 [REP03-500].)
b. Disconnect the LAN cable (LSVP-2) from the HUB BOX.
   Disconnect the SVP PS cable (PSVP-2) from the CON PLATE. (See Fig. T7.1-8 [REP03-500].)
c. Open the locking clamps and remove the cables. (See Fig. T7.1-8A [REP03-510].)

6. Loosen the screws and remove the SVP cover. (See Fig. T7.1-9 [REP03-520].)

7. Loosen the screws and remove the stopper. (See Fig. T7.1-10 [REP03-530].)

8. Pull out the defective SVP ASSY. (See Fig. T7.1-10 [REP03-530].)

9. Remove the DC Cable LAN Cable and LAN Port cable.

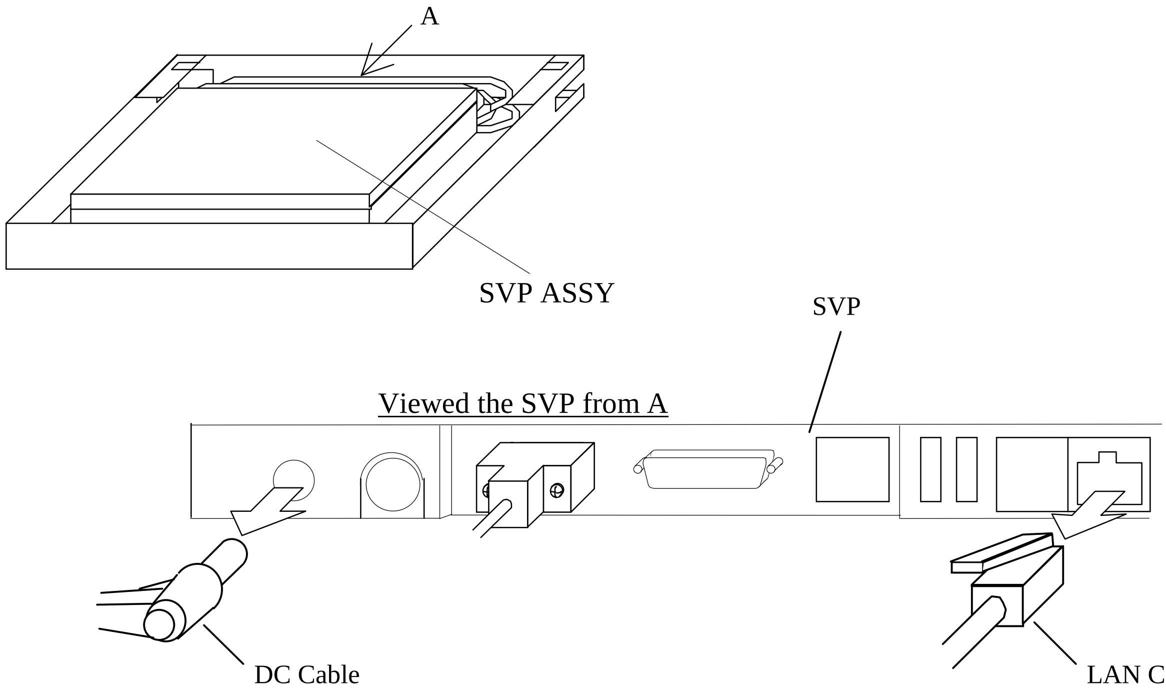

A
SVP ASSY
SVP
Viewed the SVP from A
DC Cable
LAN Cable

Fig. T7.3-1 Removing and installing Cables

10. Loosen the screw and remove the SVP stoppers.

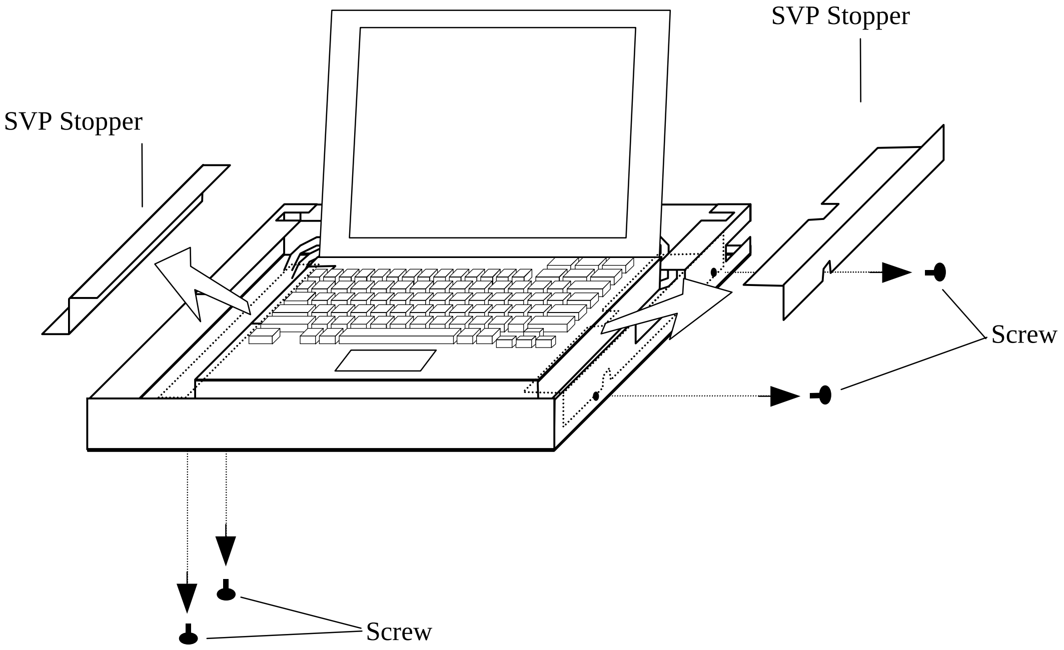

SVP Stopper
SVP Stopper
Screw
Screw

Fig. T7.3-2 Removing and installing the SVP Stoppers

11. Remove the RS232C Cable from the SVP ASSY.

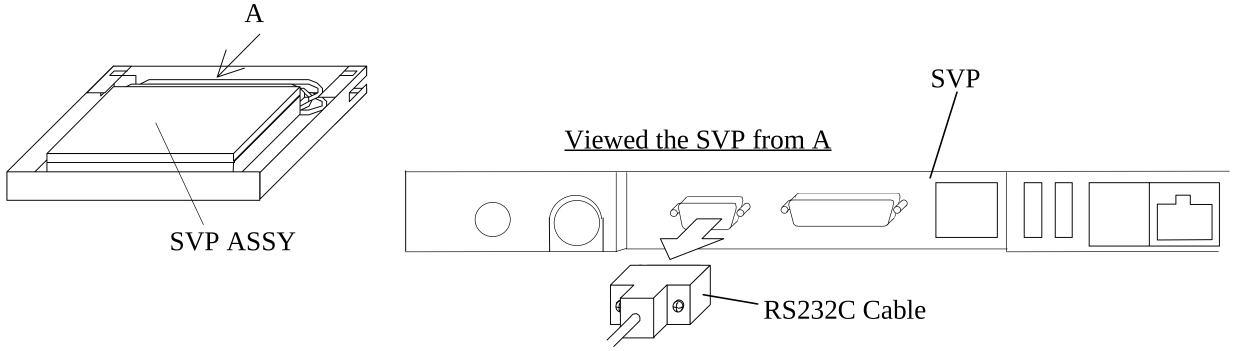
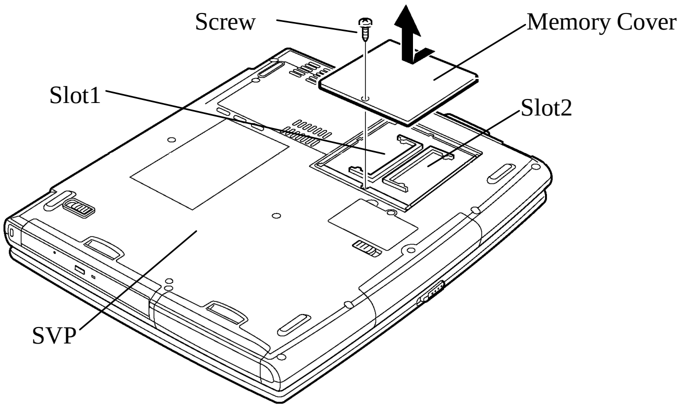

A
SVP ASSY
SVP
Viewed the SVP from A
RS232C Cable

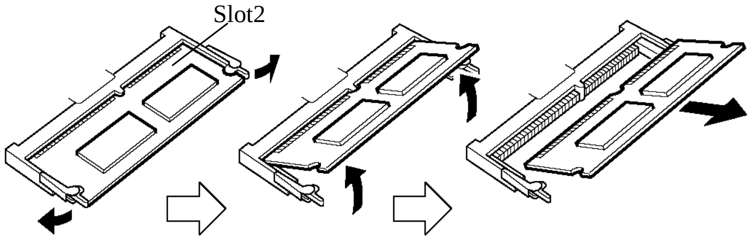
Fig. T7.3-3 Removing and installing RS232C Cable

12. Replacement of Additional SVP Memory

a. Loosen the screw and remove the Memory cover.


Screw
Memory Cover
Slot1
Slot2
SVP

b. Remove the Memory module.



c. Insert the Memory module.
d. Attach the Memory cover with screw.

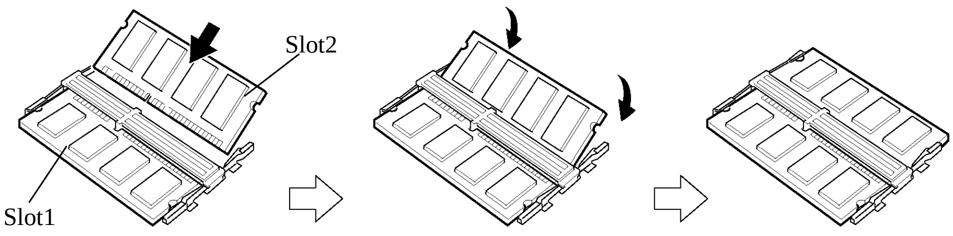

Slot2
Slot1

Fig. T7.3-4 Replacing the Additional SVP Memory

13. Install a SVP.
    a. Attach the SVP and RS232C Cable. (See Fig. T7.3-3.)
    b. Install the SVP to the SVP ASSY and attach the SVP stoppers with screws. (See Fig. T7.3-2)
    c. Connect the LAN cable and DC cable to the SVP. (See Fig. T7.3-1.)

14. Install a SVP Assy.
    a. Install the SVP to the SVP ASSY and attach the SVP stoppers with screws. (See Fig. T7.1-10 [REP03-530].)
    b. Attach the SVP ASSY cables to the RS CON PCB, HUB BOX and CON PLATE. And then close the locking clamps. (See Fig. T7.1-2 through T7.1-8A [REP03-470 through 520].)
    c. Attach the SVP cover. (See Fig. T7.1-9 [REP03-520].)

15. Set the Jumper.

Replacement of Additional SVP Memory of Basic SVP ASSY

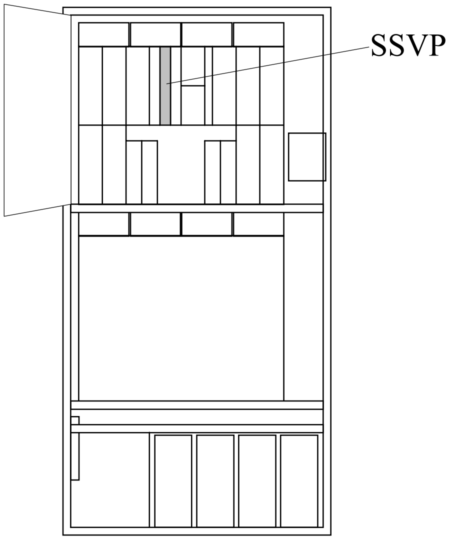
a. Remove the maintenance jumper of the JP1 on the RS CON PCB. (See Fig. T7.1-2 [REP03-470].)
b. Insert the Maintenance jumper into the JP2 on the RS CON PCB. (See Fig. T7.1-2 [REP03-470].)

Replacement of Additional SVP Memory of Option SVP ASSY

a. Remove the maintenance jumper of the PS SD on the SVPPS BOX. (See Fig. T7.1-3 [REP03-470].)
b. Insert the Maintenance jumper into the PS CTLINH on the SVPPS BOX. (See Fig. T7.1-3 [REP03-470].)

[HARDWARE T8]

Location	Function Name of Component		Part Name
Front PS Box	1	SSVP PCB	• SH313-A



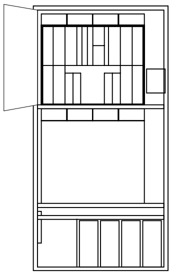
Front View

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.

SSVP PCB

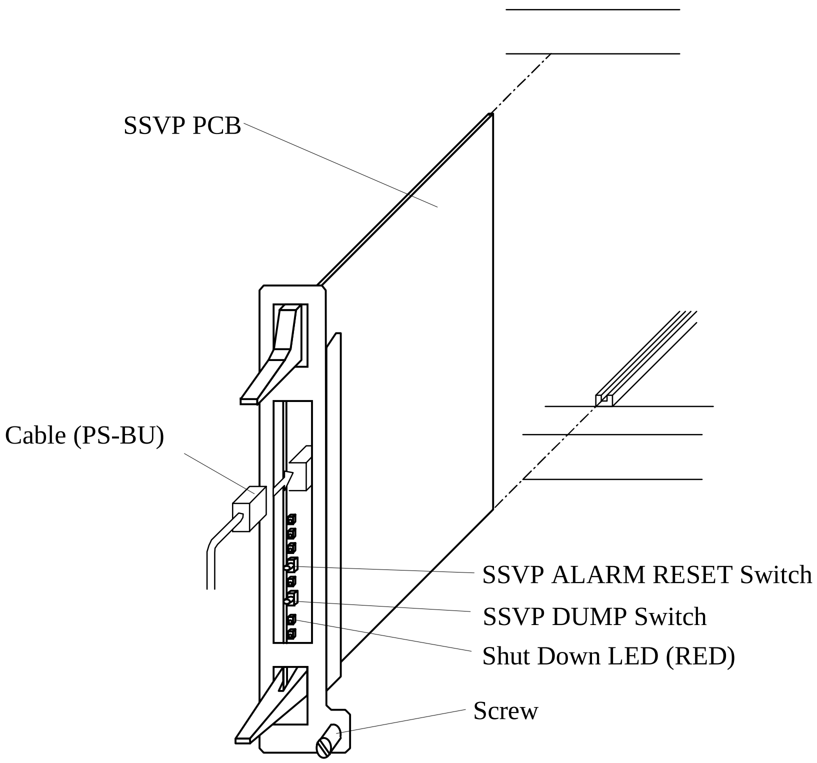
1. Checking that the shut-down LED is turned on.
   a. Check that the shut-down LED on the SSVP PCB in the front PS box is turned on.

2. Replacing the SSVP PCB.
   a. Disconnect the cable from SSVP PCB.
   b. Loosen the screw and remove the SSVP PCB.
   c. Inset the spare SSVP PCB and fix it with the screw.
   d. Connect the cable to the SSVP PCB.
   e. Push the SSVP ALARM RESET switch.



Front View

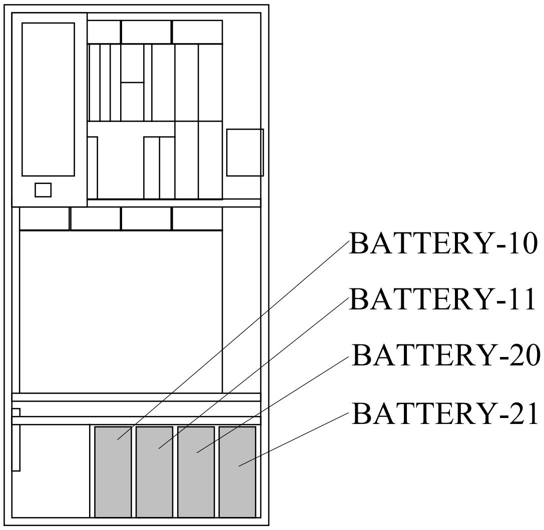
–	–	–	AU	BU	CU	DU	–	–	–
5/3V PS 1A	5/3V PS 1B	SUB PS 1	DKC MN 1	**SSVP**	DKC MN 2	SVP PS 1 SVP PS 2 EU	SUB PS 2	5/3V PS 2B	5/3V PS 2A
3V PS 1A	3V PS 1B	BAT CTR -11	BAT CTR -10			BAT CTR -20	BAT CTR -21	3V PS 2B	3V PS 2A
–	–	AL	BL			CL	DL	–	–


SSVP PCB
Cable (PS-BU)
SSVP ALARM RESET Switch
SSVP DUMP Switch
Shut Down LED (RED)
Screw

3. Go to SVP post procedure t1 [REP04-320].

[HARDWARE T11]

Location	Function Name of Component		Part Name
Lower front	1	BATTERY BOX	• BATTERY-10 (CL1 Shared Memory) • BATTERY-11 (CL1 Cache Memory) • BATTERY-20 (CL2 Shared Memory) • BATTERY-21 (CL2 Cache Memory)



Front View

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.

BATTERY BOX

CAUTION

The weight of the battery box is 20 kg. When you handle it, be sure to hold the grip at the front and rear sides by both hands firmly.

Paying attention to falls:

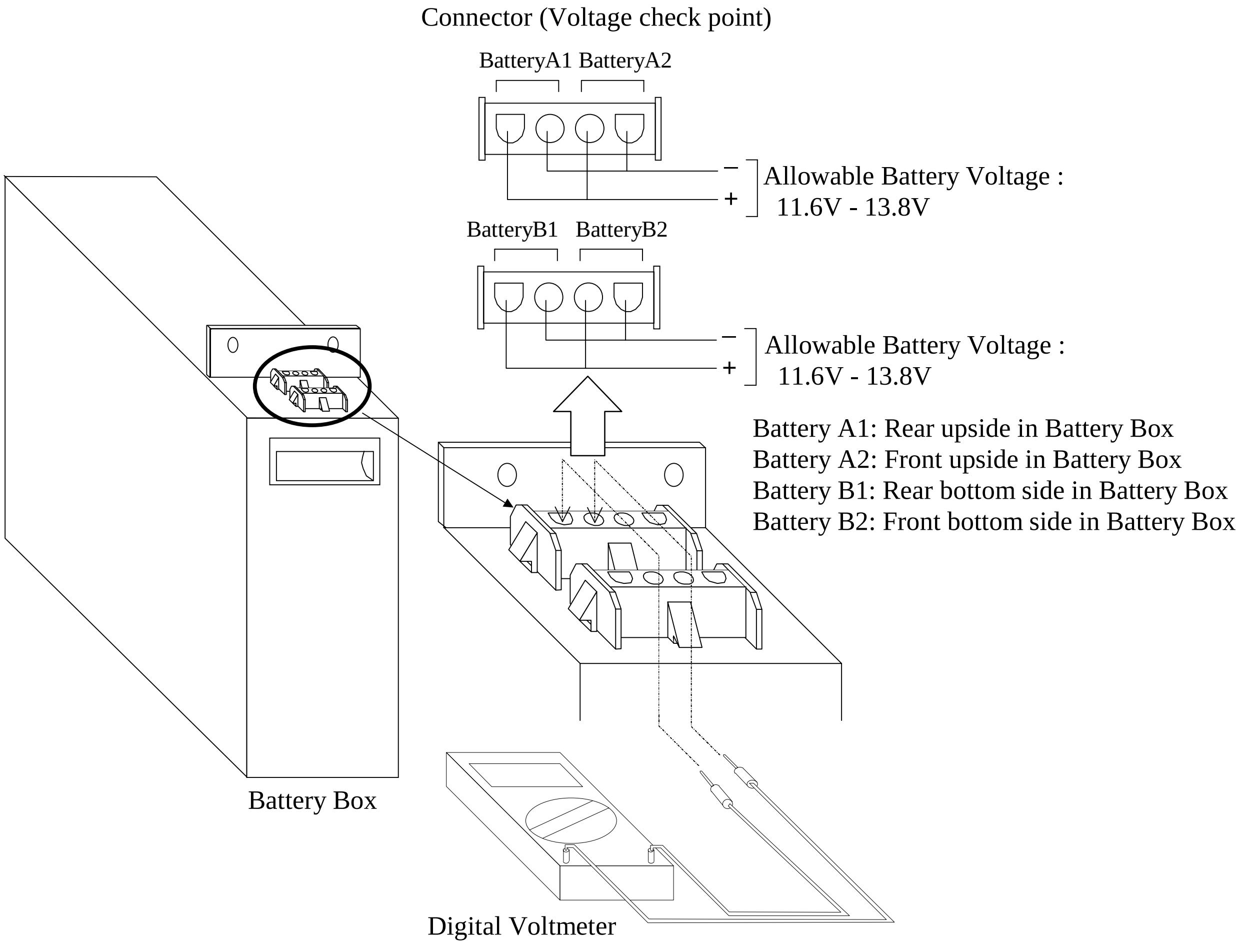
If the battery box falls, injury may occur. Hold the battery box firmly by both hands and use caution to prevent it from falling.

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.

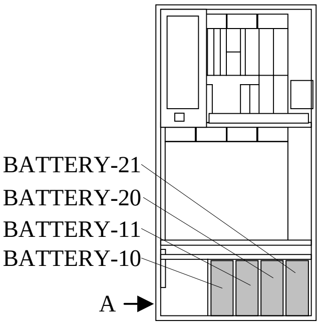
1. Insert the pins of the digital voltmeter into the Connectors on the spare part to make sure that battery voltage is within the allowable voltage.


Connector (Voltage check point)
BatteryA1
BatteryA2
−
+
Allowable Battery Voltage :
11.6V - 13.8V
BatteryB1
BatteryB2
−
+
Allowable Battery Voltage :
11.6V - 13.8V
Battery Box
Digital Voltmeter

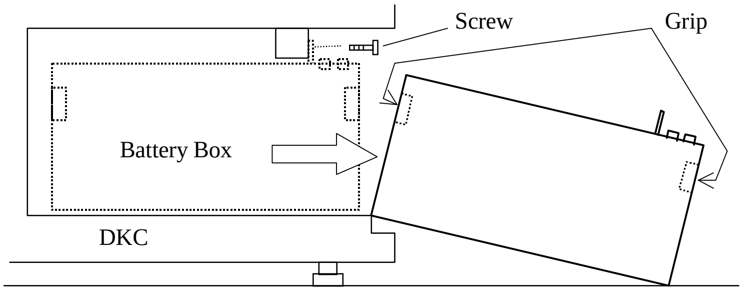
Battery A1: Rear upside in Battery Box
Battery A2: Front upside in Battery Box
Battery B1: Rear bottom side in Battery Box
Battery B2: Front bottom side in Battery Box

2. Replacing the battery box.
   a. Remove the cables connected to the battery box you intend to remove.
   b. Loosen the screws and remove the battery box.
   c. Insert the spare battery box and tighten with the screws.
   d. Connect the cables to the battery box.

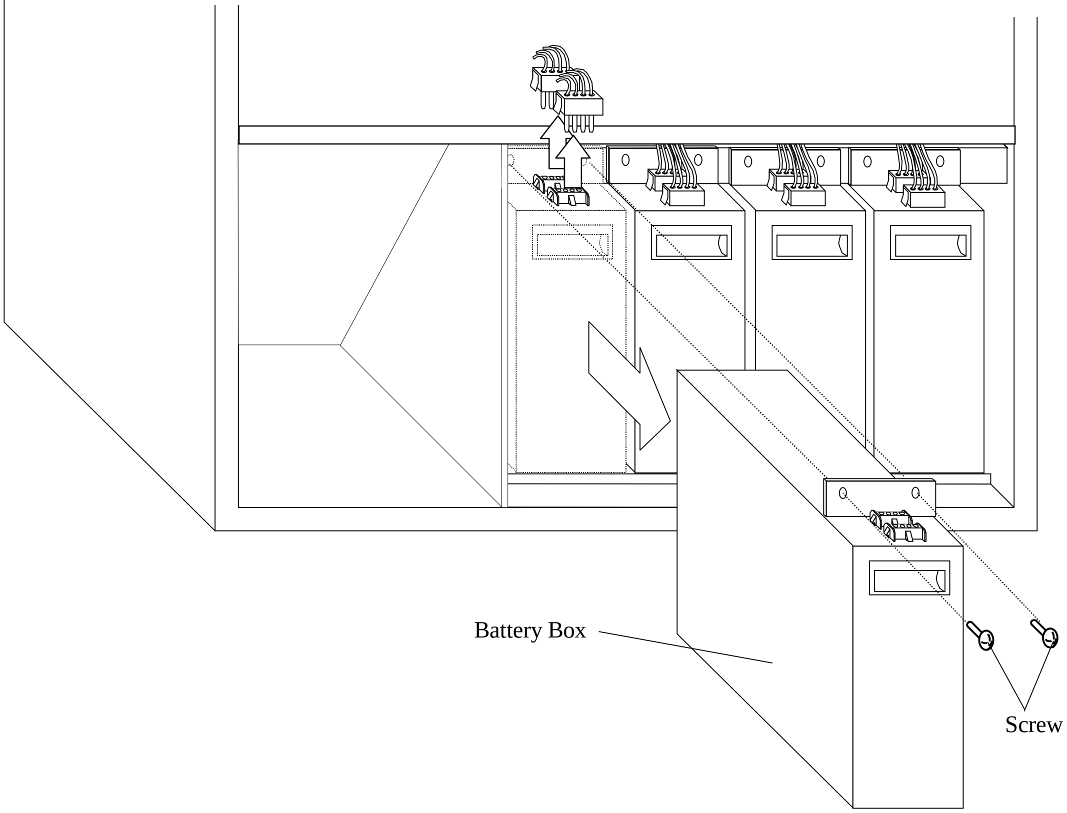
Remove the screw of the battery box and pull it out forward by pulling the grip on the front panel of the box. When carrying the battery box, be sure to hold the front and rear grips firmly with both hands.


BATTERY-21
BATTERY-20
BATTERY-11
BATTERY-10
A

Front View


Screw
Grip
Battery Box
DKC

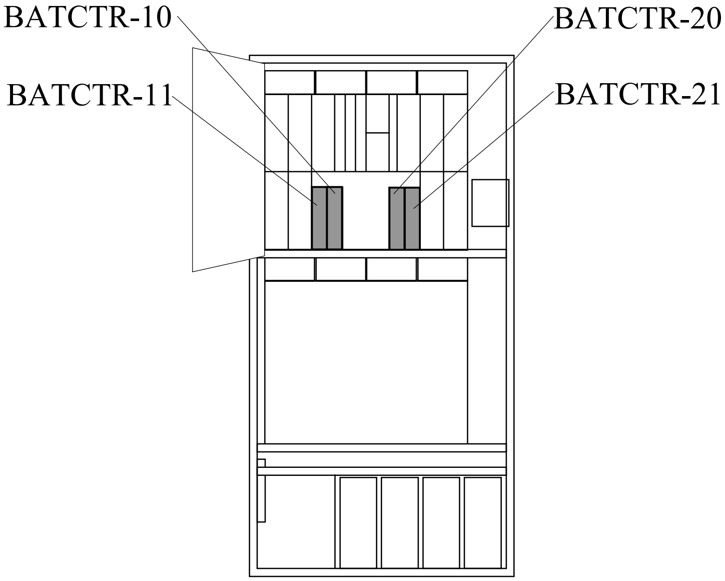
Viewed from A


Battery Box
Screw

3. Go to SVP post procedure t3 [REP04-900].

[HARDWARE T12]

Location	Function Name of Component		Part Name
Front PS Box	1	BAT CTR (Battery Control) PCB	• SH200-A

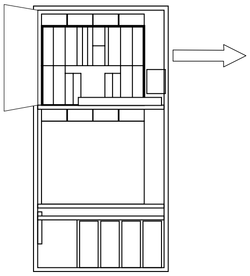

BATCTR-10
BATCTR-20
BATCTR-11
BATCTR-21

Front View

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.

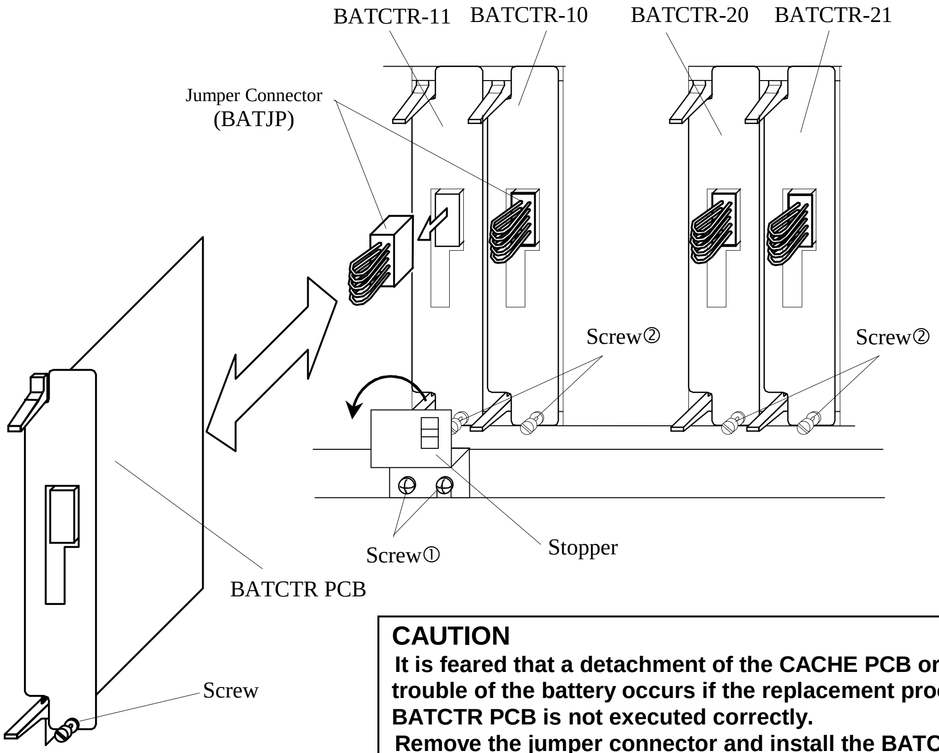
BAT CTR PCB

1. Replacing the BAT CTR PCB.
   - a. Loosen the screw① and turn the stopper. (Perform this when replacing the BATCTR-10/11 only.)
   - b. Remove the jumper connector connected to the BAT CTR PCB you intend to remove.
   - c. Loosen the screw② and remove the BAT CTR PCB.
   - d. Replace the BAT CTR PCB with a spare BAT CTR PCB.
     Don’t connect the Jumper Connector before insertion of the PCB.
   - e. Insert the spare BAT CTR PCB and tighten with the screw②. Then, insert the jumper connector removed in step ‘b’ described above.
   - f. Return the stopper and tighten the screw①. (Perform this when replacing the BATCTR-10/11 only.)



Front View

–	–	–	AU	BU	CU	DU	–	–	–
5/3V PS 1A	5/3V PS 1B	SUB PS 1	DKC MN 1	SSVP	DKC MN 2	SVP PS 1 SVP PS 2	SUB PS 2	5/3V PS 2B	5/3V PS 2A
						EU			
3V PS 1A	3V PS 1B	BAT CTR -11	BAT CTR -10			BAT CTR -20	BAT CTR -21	3V PS 2B	3V PS 2A
–	–	AL	BL			CL	DL	–	–

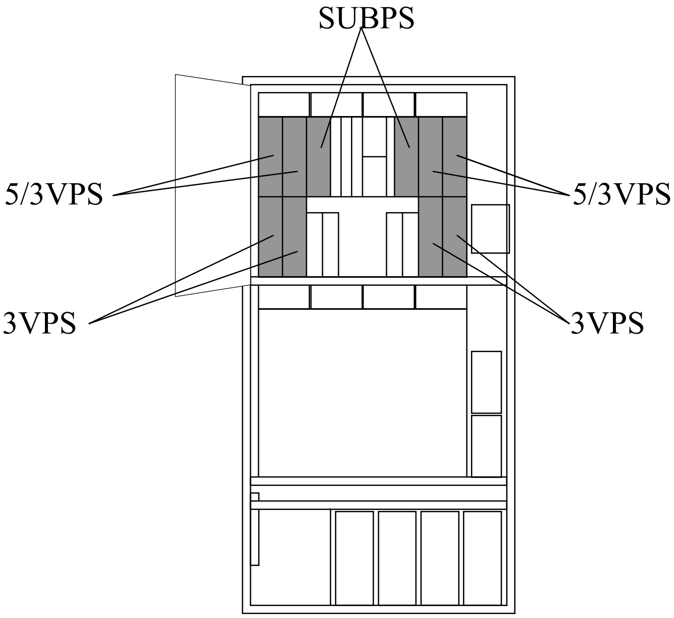


CAUTION
It is feared that a detachment of the CACHE PCB or a charge trouble of the battery occurs if the replacement procedure of the BATCTR PCB is not executed correctly.
Remove the jumper connector and install the BATCTR PCB.
After that, insert a jumper connector.

2. Go to SVP post procedure t3 [REP04-900].

[HARDWARE T13]

Location	Function Name of Component		Part Name
Front PS Box	1	3V Power Supply	• PPD03130 • HS0429
	2	5/3V Power Supply	• PPD5002-1 • HS0482
	3	SUB Power Supply	• PPD7502 • HS0591


SUBPS
5/3VPS
5/3VPS
3VPS
3VPS

Front View

Replacement of Power Supply

1. Open the front door and then open the DKC panel.
2. Turn the SVP Assy and turn off the power for the SVP.
   (When you operate this operation from Pre-Procedure T1, do not this operation.)
3. Open the SVP frame.

SVP frame type1

a. Loosen the screw① and open the SVP frame.

SVP frame type2

a. Loosen the screw② and the SVP stopper is slide to the left.
b. Open the SVP ASSY (Basic).
c. Loosen the screw③ and open the SVP frame.

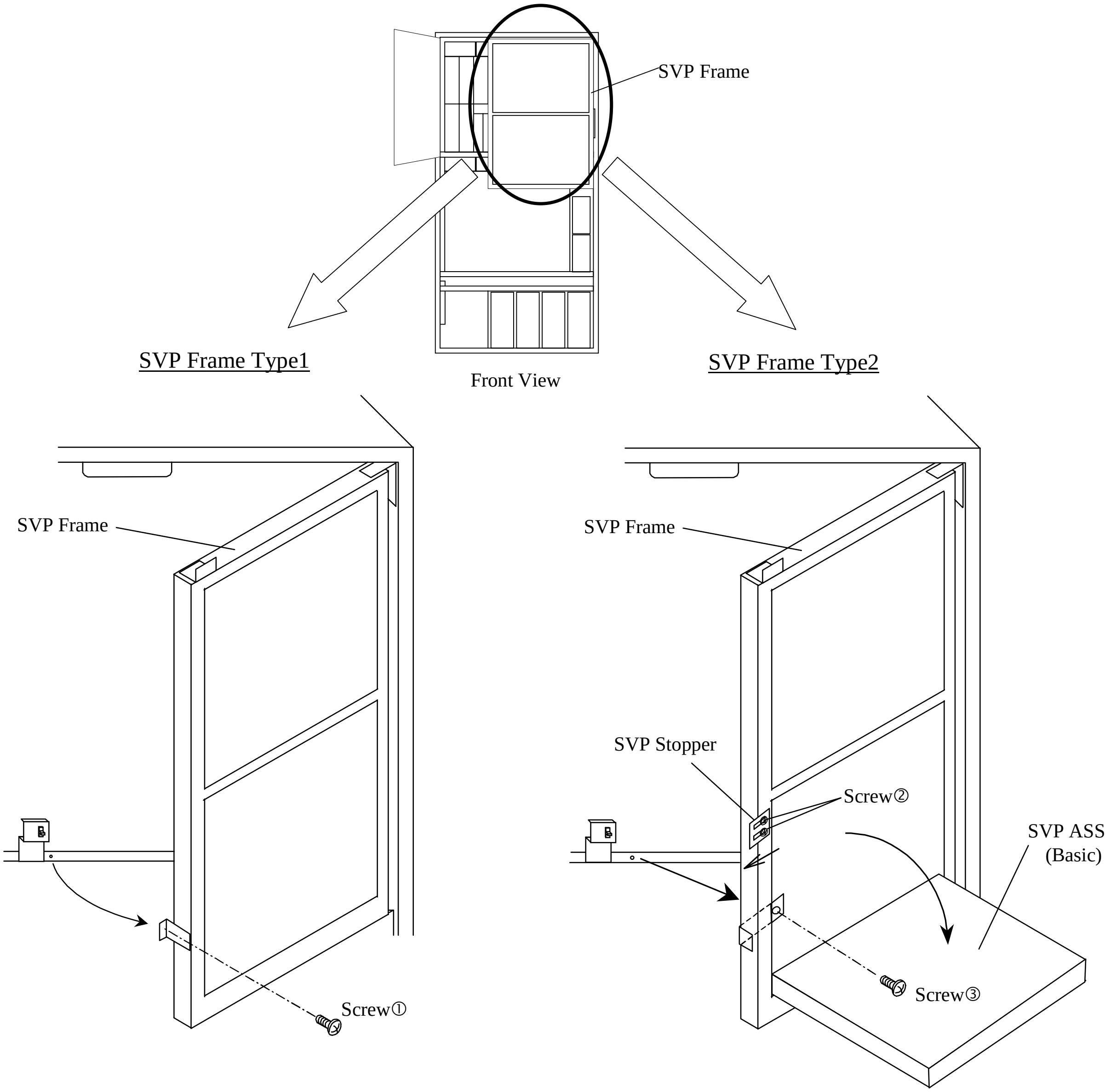

SVP Frame
SVP Frame Type1
Front View
SVP Frame Type2
SVP Frame
SVP Frame
SVP Stopper
Screw②
SVP ASSY
(Basic)
Screw①
Screw③

Fig. T13-1 Open the SVP Frame

3. The following figure shows the correct way to replace the power supply (PS).
   a. Set PS Enable/Disable Switch to Disable (DOWN).

⚠ CAUTION

A system down may be caused by setting the PS Enable/Disable switch of the power supply other than that to be replaced to “Disable”. Make sure that it is a power supply to be replaced.

   b. Remove the power supply lever and disconnect the inlet cable.
   c. Loosen the screw and remove the failed PS.
   d. Perform the short circuit check on the spare power supply. (Refer to REP03-650.)
   e. Confirm that PS Enable/Disable Switch of spare PS is set to Disable (DOWN)
   f. Insert the spare PS and fasten the screw.
   g. Connect the inlet cable and secure it with the lever.
   h. Set PS Enable/Disable Switch to Enable (UP).

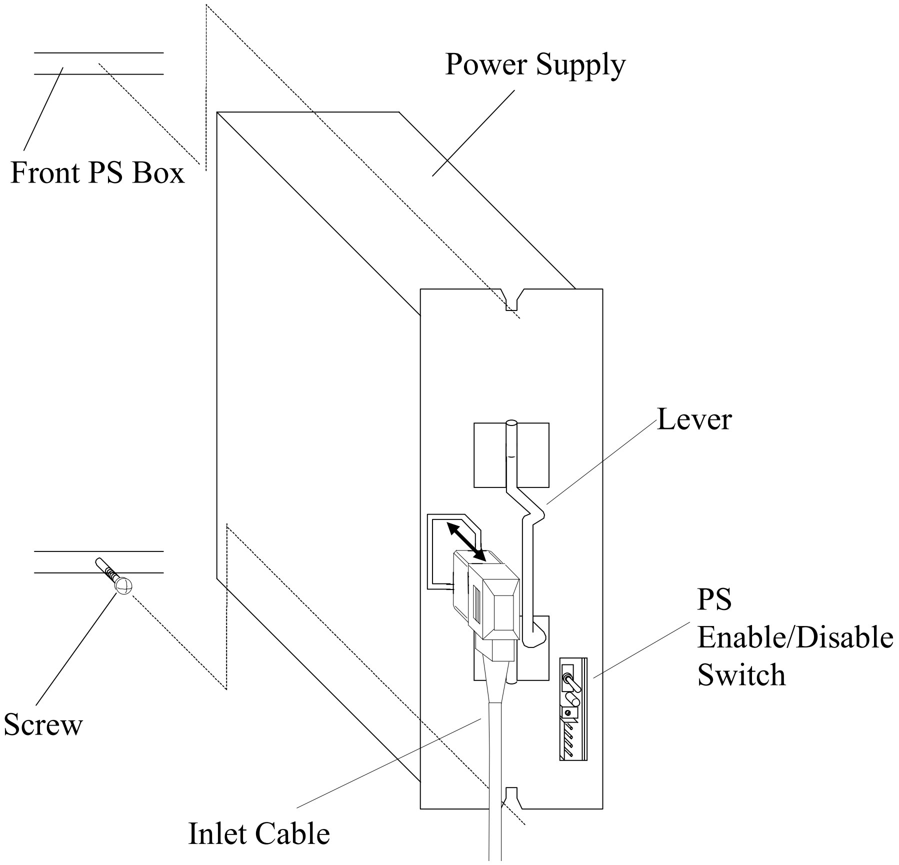


Fig. T13-2 Replacement of Power Supply

---

4. Close the SVP frame and fasten the screw.

---

5. Go to SVP post procedure t3 [REP04-900].

Procedure for short circuit check on the power supply

a. Check the power supply for short circuit by connecting the voltage checking jig to the short circuit check point of the power supply as shown below.
b. Measure the resistance at the check points on the individual power supply before installation shown below. Confirm that the measured resistance values are over the value shown in the table below. If the resistance values are not over the value, replace it to the new part.

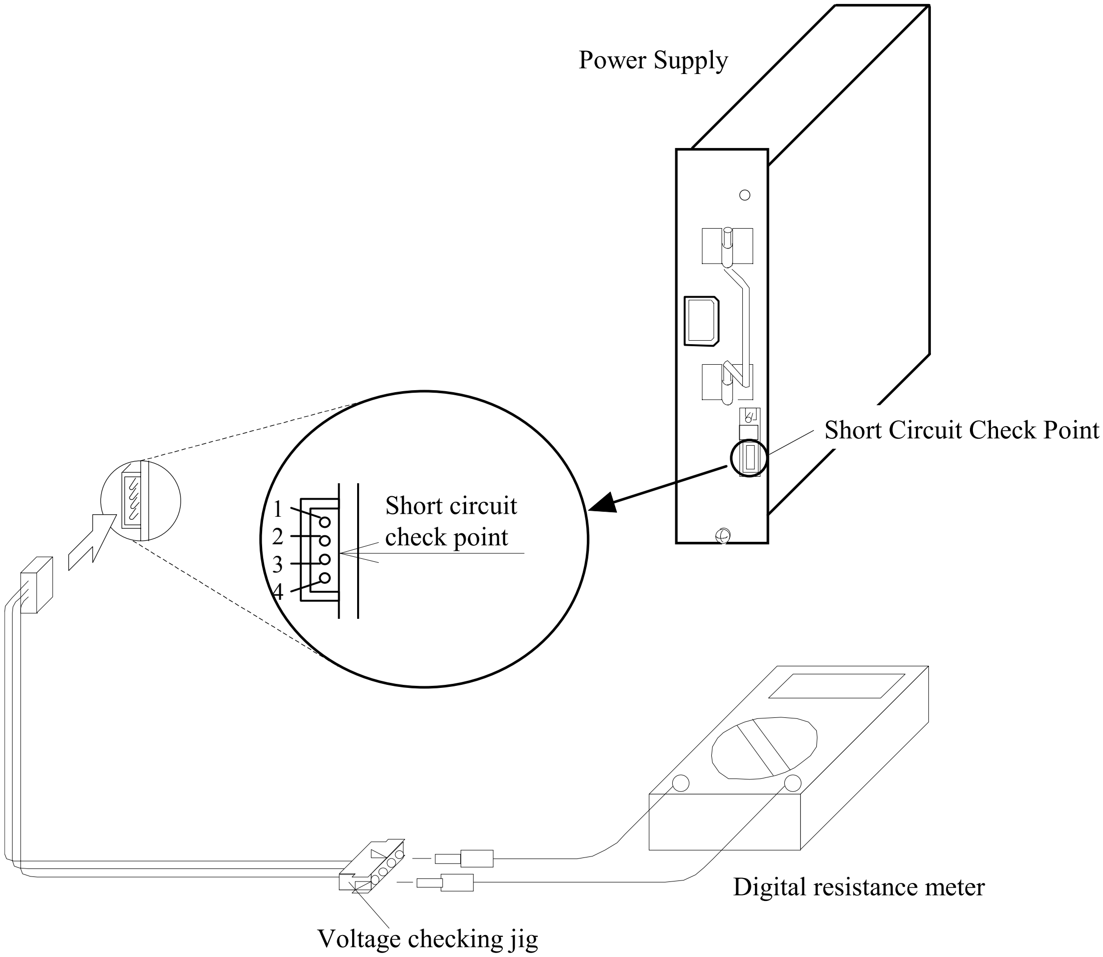

Power Supply
Short Circuit Check Point
1
2
3
4
Short circuit check point
Digital resistance meter
Voltage checking jig

Fig. T13-3 Short Circuit Check Point

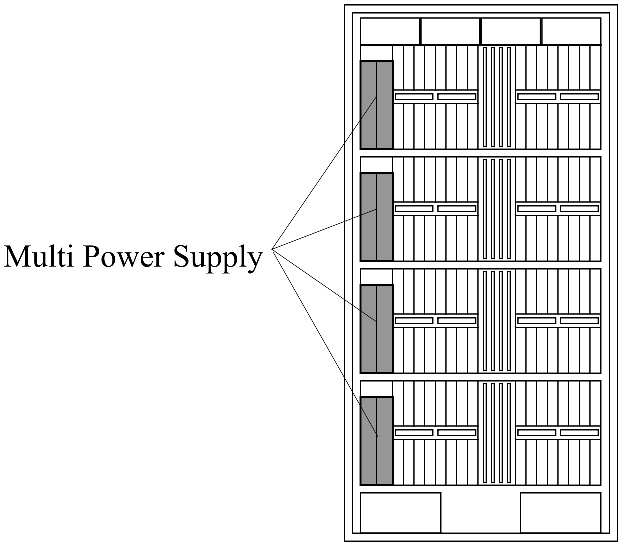
Table T13-1 Short Circuit Check Point

PS	Check pin	Resistance
3V PS	Between 1 and 4	1.7 kΩ
5/3V PS	Between 1 and 4	1.7 kΩ
	Between 2 and 4	1.7 kΩ
SUB PS	Between 1 and 4	1.7 kΩ
	Between 2 and 4	1.7 kΩ

Note: Pin number 4 is ground.

[HARDWARE T15]

Location	Function Name of Component		Part Name
Rear Side	1	Multi Power Supply	• PPD13502 • HS1182


Multi Power Supply

Rear View

Replacement of Multi Power Supply

1. The following figure shows the correct way to replace the multi power supply (MPS).
   a. Set PS Enable/Disable Switch to Disable (DOWN).

CAUTION

A system down may be caused by setting the PS Enable/Disable switch of the power supply other than that to be replaced to "Disable". Make sure that it is a power supply to be replaced.

   b. Disconnect the inlet cable and remove the two screws①.
   c. Move up the rubber absorber.
   d. Remove the multi power supply (MPS).
   e. Perform the short circuit check on the spare power supply. (Refer to REP03-680.)
   f. Set the jumper plugs of the spare power supply. (Refer to LOCATION06-120.)
   g. Confirm that PS Enable/Disable Switch of the spare PS is set to Disable (DOWN).
   h. With the rubber absorber set down, insert the spare PS. Shock caused by the insertion is absorbed by the rubber absorber.
   i. With the rubber absorber set up, push the MPS into the HDU box until secure.
   j. Secure the MPS with the two screws① and connect the inlet cable.
   k. Set PS Enable/Disable Switch to Enable (UP).

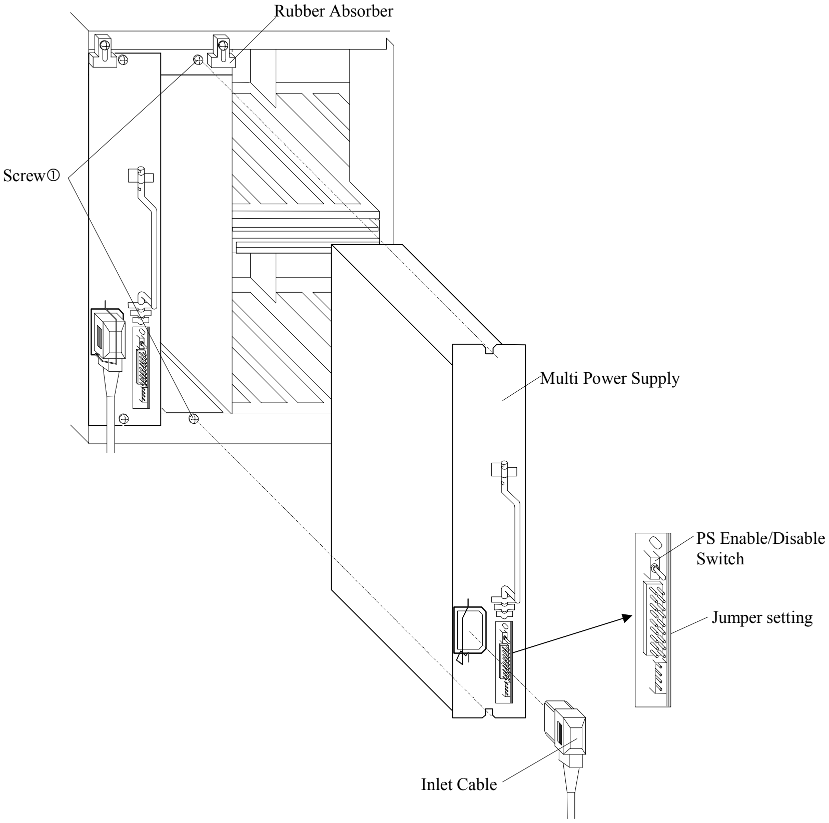


Fig. T15-1 Replacement of Multi Power Supply

2. Go to SVP post procedure t4 [REP04-1000].

Procedure for short circuit check on the power supply

a. Check the power supply for short circuit by connecting the voltage checking jig to the short circuit check point of the power supply as shown below.
b. Measure the resistance at the check points on the individual power supply before installation shown below. Confirm that the measured resistance values are over the value shown in the table below. If the resistance values are not over the value, replace it to the new part.

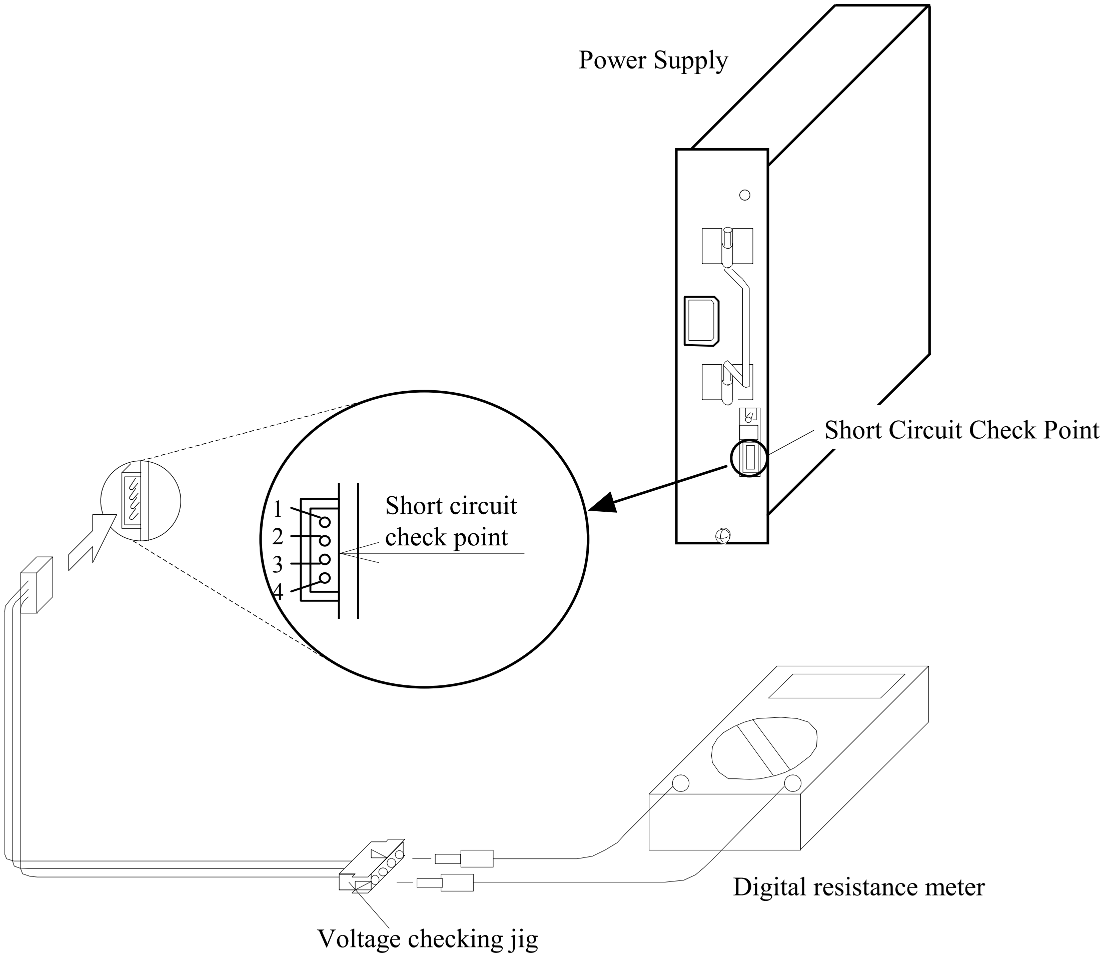

Power Supply
Short Circuit Check Point
1
2
3
4
Short circuit check point
Digital resistance meter
Voltage checking jig

Fig. T15-2 Short Circuit Check Point

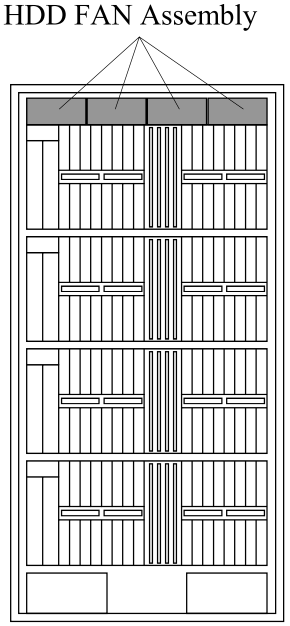
Table T15-1 Short Circuit Check Point

PS	Check pin	Resistance	
		TAJ-490HS	PPD5002
Multi PS	Between 1 and 4	1.7 kΩ	1.7 kΩ
	Between 2 and 4	1.7 kΩ	1.7 kΩ

Note: Pin number 4 is ground.

[HARDWARE T16]

Location	Function Name of Component	
Top of HDD BOX	1	HDD FAN Assembly



Rear View

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.

REV.0	Jun.2001					

Replacement of HDD FAN Assembly

⚠ CAUTION

Hazardous rotating mechanism

Can cause injury if touched. Stay clear when machine is running.

1. The following figure shows the correct way to replace the HDD FAN Assembly.
   a. Disconnect the cables (x-P401 and x-P402) from the HDD FAN Assembly.
   b. Loosen the two screws.
   c. Replace the HDD FAN assembly.
   d. Fasten the screw.
   e. Connect the cables to HDD FAN Assembly.

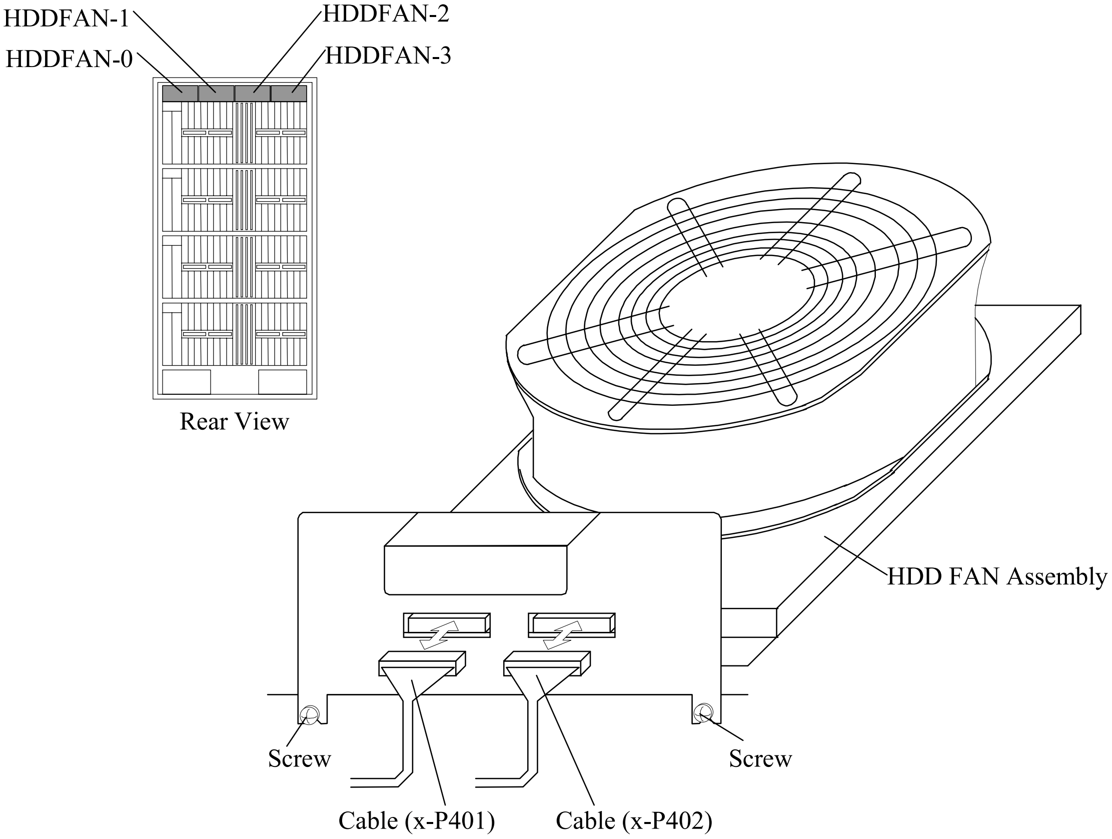

HDDFAN-1
HDDFAN-0
HDDFAN-2
HDDFAN-3
Rear View
HDD FAN Assembly
Screw
Screw
Cable (x-P401)
Cable (x-P402)

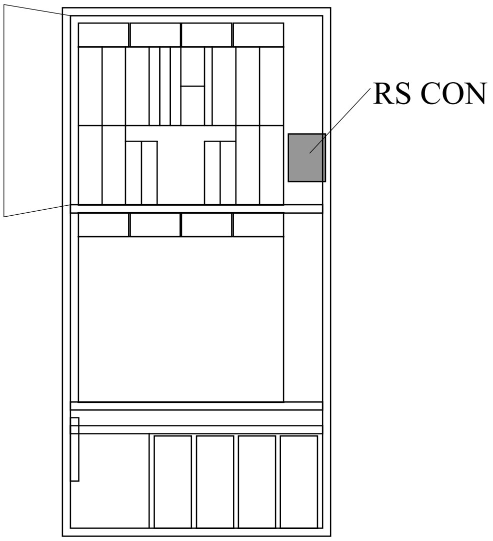
Fig. T16-1 Removal of HDD FAN Assembly

---

2. Go to SVP post procedure t4 [REP04-1000].

[HARDWARE T19]

Location	Function Name of Component		Part Name
Upper right front of DKC	1	RS CON (Connector) Panel	• SH195-B



Front View

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.

Replacement of RS CON (Connector) Panel

1. The following figure shows the correct way to replace the RS CON.
   a. Disconnect all cables from RS CON.
   b. Slide the stopper and pull out the Connector.
   c. Loosen two screws and remove RS CON.
   d. Attach the RS CON and fasten two screws.
   e. Attach the Connector and slide the stopper.
   f. Connect all the cables.

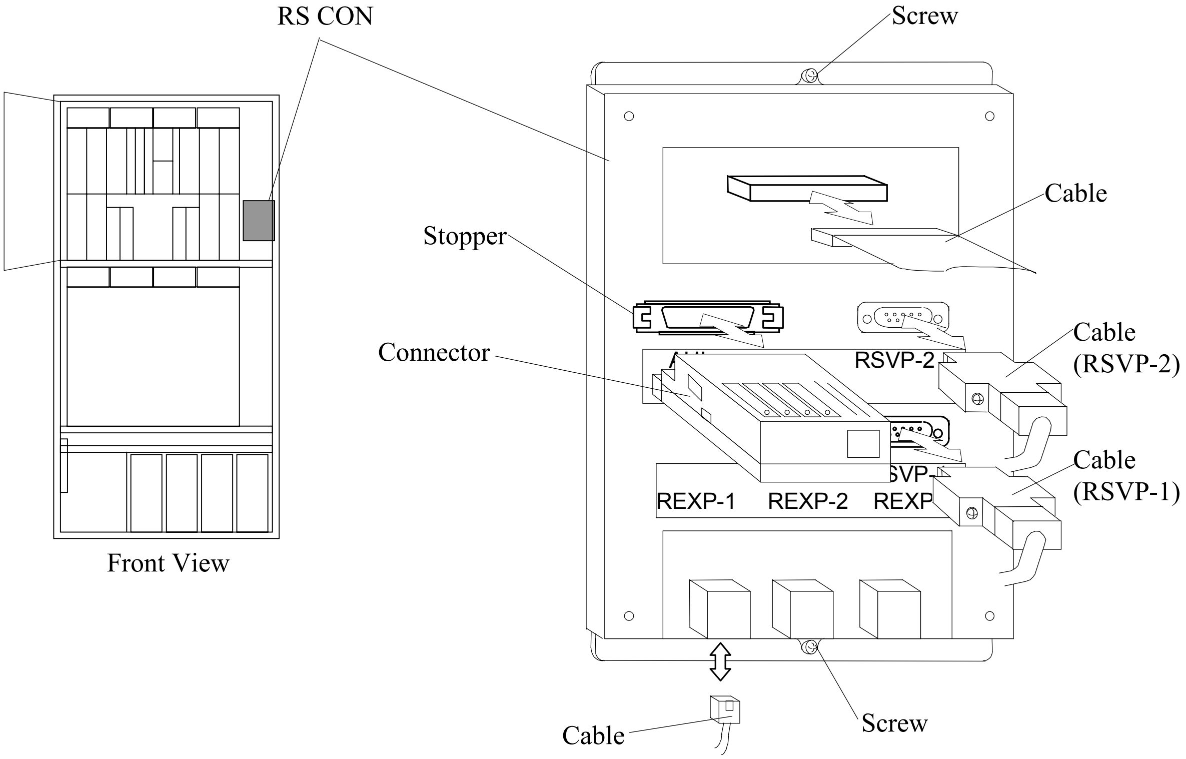
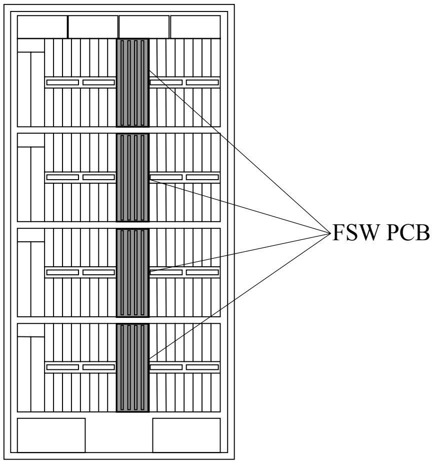

RS CON
Screw
Cable
Stopper
Connector
RSVP-2
Cable
(RSVP-2)
SVP-
Cable
(RSVP-1)
REXP-1
REXP-2
REXP
Front View
Cable
Screw

Fig. T19-1 Replacement of RS CON

2. Go to SVP post procedure t1 [REP04-320].

[HARDWARE T20]

Location		Function Name of Component	Part Name
HDU Box	1	FSW PCB	• SH303-A
			• SH303-B
			• SH303-C



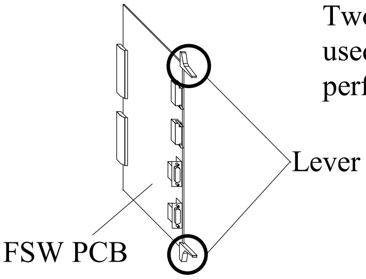
Rear View

NOTICE:

① 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 Replace the FSW to be replaced following the direction given in "Replace the FSW PCB". Make the Shut Down LEDs go out by removing all the FSWs (whose Shut Down LEDs are on) once and then installing them.

③



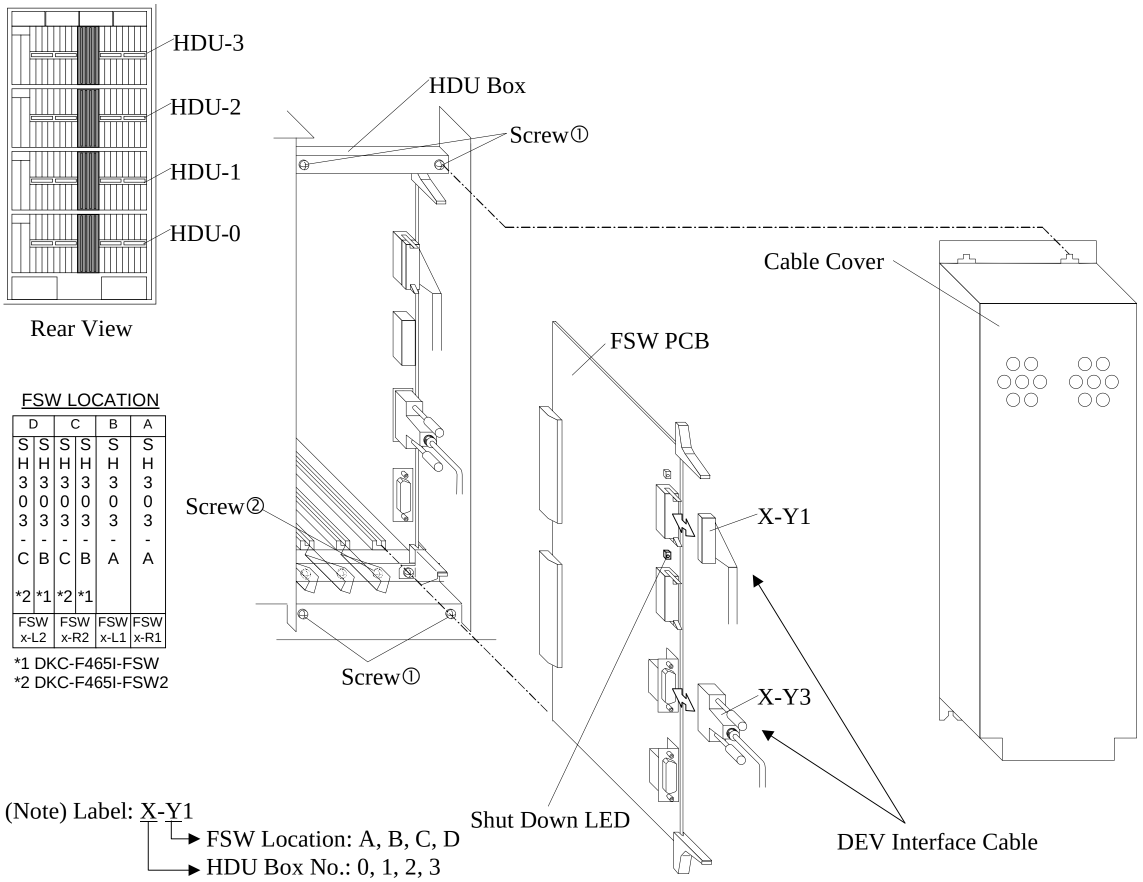
Two types of levers for inserting/removing the FSW, large and small ones, are used. The levers were enlarged to make the operation easier, accordingly their performance and function are the same.

1. Replace the FSW PCB.
   a. Loosen the screws ① and remove the cable cover.
   b. Check Shut Down LED on the FSW PCB.

⚠ CAUTION

A system down is caused by a replacement of the FSW PCB other than that to be replaced. Make sure that it is the FSW PCB to be replaced.

   c. Disconnect the DEV interface cables.
   d. Loosen the screw ② and rotate the stopper.
   e. Make sure that the model name of the spare FSW PCB is correct.
   f. Replace the FSW PCB.
   g. Rotate the stopper and fasten the screw ②.
   h. Connect the DEV interface cables.
   i. Attach the cable cover with the screws ①.


HDU-3
HDU-2
HDU-1
HDU-0
Rear View
HDU Box
Screw①
Cable Cover
FSW PCB
Screw②
X-Y1
X-Y3
Screw①
Shut Down LED
DEV Interface Cable

FSW LOCATION

D		C		B	A
SH303-C *2	SH303-B *1	SH303-C *2	SH303-B *1	SH303-A	SH303-A
FSW x-L2		FSW x-R2		FSW x-L1	FSW x-R1

*1 DKC-F465I-FSW
*2 DKC-F465I-FSW2

(Note) Label: X-Y1
Y → FSW Location: A, B, C, D
X → HDU Box No.: 0, 1, 2, 3

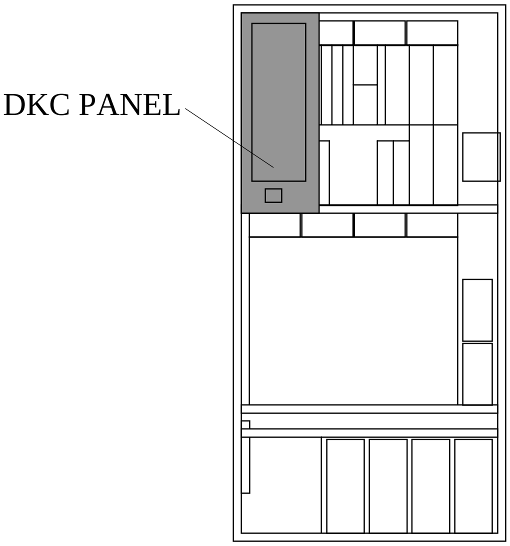
Fig. T20-1 Replacement of FSW PCB

---

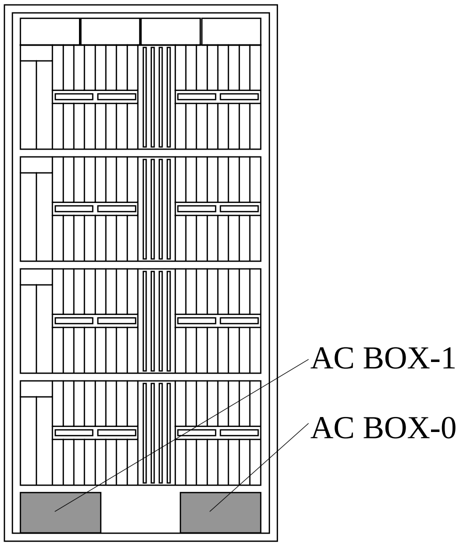
2. Go to SVP post procedure j [REP04-270].

[HARDWARE T21]

Location		Function Name of Component	Part Name
Lower Rear of DKC	1	AC BOX (Single Phase 50A Model)	• AC BOX-0, 1
	2	AC BOX (3 Phase 30A Model)	• AC BOX-0, 1
	3	AC BOX (Single Phase 30A Model)	• AC BOX-0, 1
(Reference)			
The related parts for replacement of AC BOX-0 1. DKC PANEL PCB (Front Upside in DKC) 2. Circuit breakers on the power distribution panel that are connected to the AC BOX-0			
The related parts for replacement of AC BOX-1 1. DKC PANEL PCB (Front Upside in DKC) 2. Circuit breakers on the power distribution panel that are connected to the AC BOX-1			



Front View



Rear View

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.

Replacement of AC BOX for Single Phase 50A Model

1. Open the front door.
2. Connection of the Jumper.
   a. Connect the Maintenance Jumper to the connector on the DKC Panel PCB.

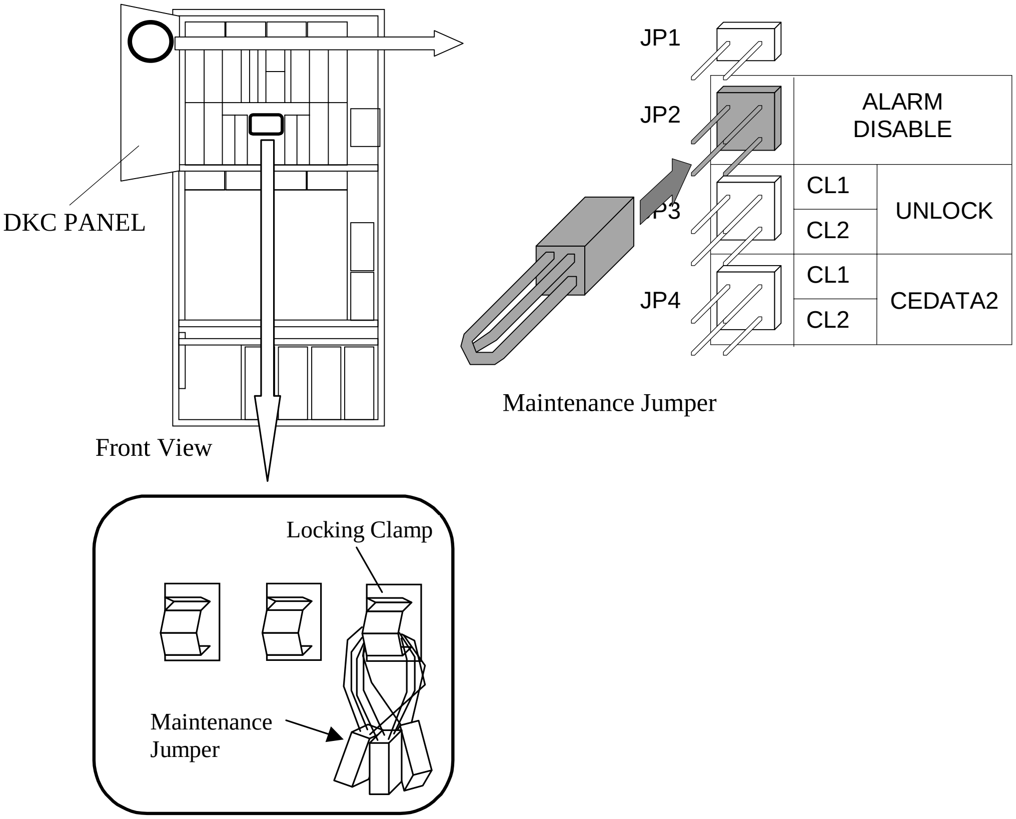

DKC PANEL
Front View
JP1
JP2
ALARM DISABLE
P3
CL1
CL2
UNLOCK
JP4
CL1
CL2
CEDATA2
Maintenance Jumper
Locking Clamp
Maintenance Jumper

Fig. T21-1 Connection of Alarm INH Jumper

3. Power Off the Component to be Replaced

WARNING

Be Careful of Electric Shock

- The power to the device is still on after turning off the breakers shown below.
- The device may be powered off when turning off the breakers not shown below.
- The circuit has residual voltage for one minute after turning off the breakers, so be sure to disconnect all the connectors after this period.

a. Turn off the circuit breaker (CB101) on AC BOX.

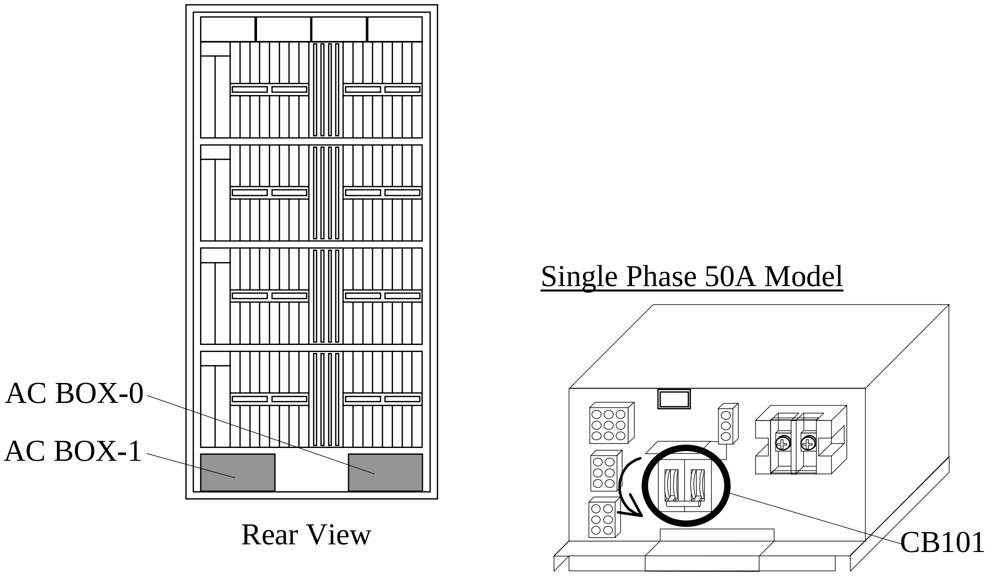


Fig. T21-2 Circuit Breakers to be Turned Off When Replacing AC BOX

b. Turn off the circuit breakers on the power distribution panel in the plant that are connected to AC BOX.

WARNING

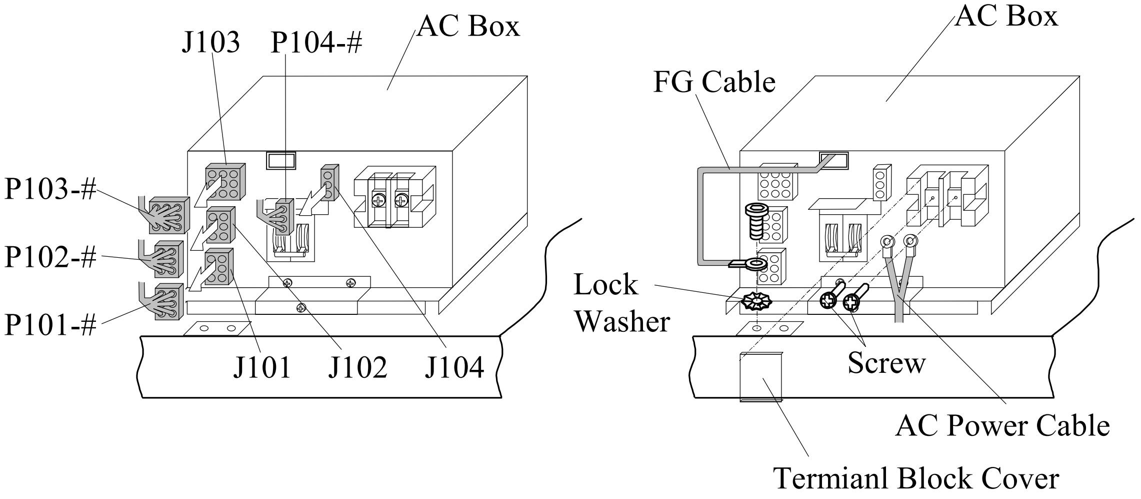
Warning: You will get an electric shock if you fail to turn it off.
Start your work after turning off the breaker on the distribution board connected to the AC BOX.

4. Removal of AC BOX

⚠ WARNING

Warning: You will get an electric shock if you fail to turn it off.
Start your work after turning off the breaker on the distribution board connected to the AC BOX.

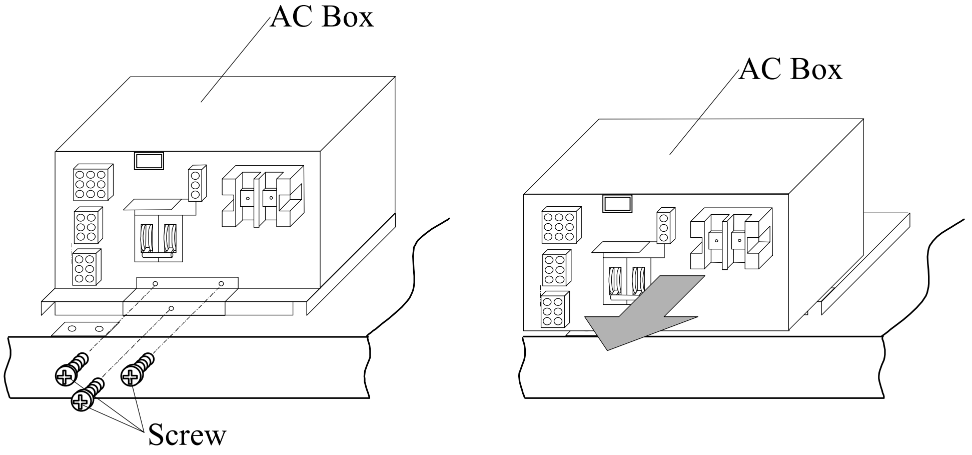
a. Disconnect the cable connectors (P101-#, P102-#, P103-# and P104-#) from AC BOX.
b. Remove the terminal block cover from AC BOX. Remove the three screws, and then disconnect the AC power cable and frame ground cable.


J103
P104-#
AC Box
P103-#
P102-#
P101-#
J101
J102
J104
AC Box
FG Cable
Lock Washer
Screw
AC Power Cable
Termianl Block Cover

(1) Removal of Cable Connector (2) Disconnection of AC Power Cable

Fig. T21-3 Removal of Cable Connector

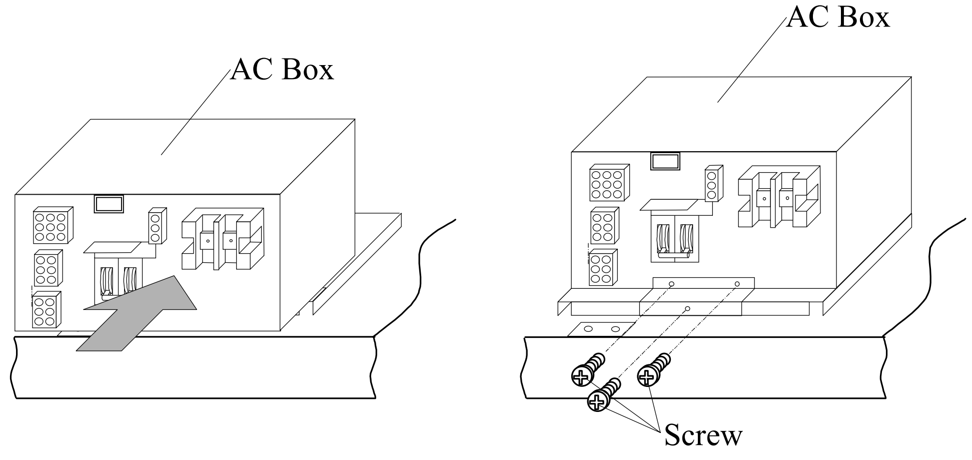
c. Remove the three screws.
d. Remove AC BOX.


AC Box
Screw
AC Box

(3)Removal of screws (4) Removal of AC Box

Fig. T21-4 Removal of AC BOX

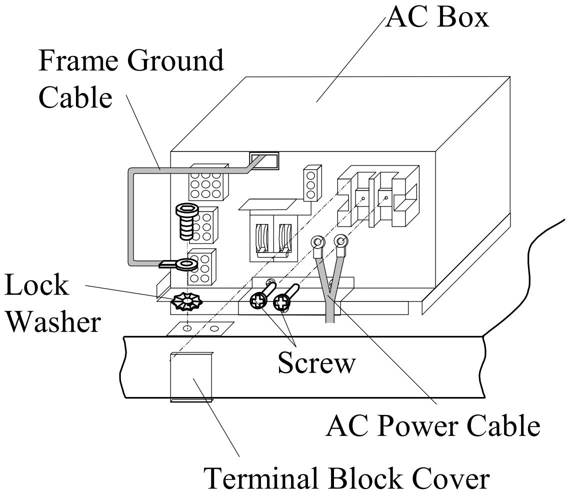
5. Installation of Spare AC BOX
   a. Check that the circuit breaker (CB101) on the spare AC BOX are turned off.
   b. Attach the spare AC BOX.
   c. Secure AC BOX at the front with the screws.


AC Box
AC Box
Screw

(1) Attachment of spare AC Box (2) Attachment of AC Box

Fig. T21-5 Attachment of AC BOX

   d. Connect the frame ground cable to the frame ground.
   e. Connect the AC power cable to the terminal block. Attach the terminal block cover.


AC Box
Frame Ground Cable
Lock Washer
Screw
AC Power Cable
Terminal Block Cover

Connection of AC Power Cable

Letters indicated on the terminal block	Connecting LINE
U/L1	Phase U
V/L2	Phase V

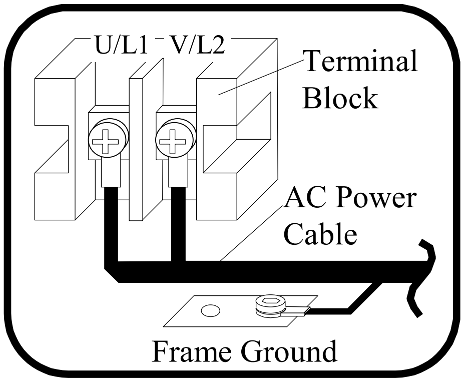

U/L1
V/L2
Terminal Block
AC Power Cable
Frame Ground

Fig. T21-6 Connection of AC Power Cable

f. Connect the cable connectors (P101-#, P102-#, P103-# and P104-#) to AC BOX.

Table T21-1 Cable Connection of AC BOX

No.	Cable No.		Connector No.	Remarks
	AC BOX-0	AC BOX-1		
1	P101-1	P101-2	J101	
2	P102-1	P102-2	J102	
3	P103-1	P103-2	J103	
4	P104-1	P104-2	J104	

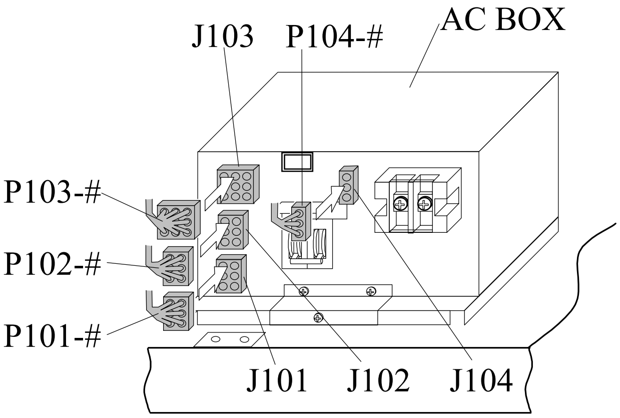

J103
P104-#
AC BOX
P103-#
P102-#
P101-#
J101
J102
J104

Fig. T21-7 Connection of Cable Connectors

6. Power On the Replacement Component
   a. Turn on the circuit breakers on the power distribution panel that are connected to AC BOX.
   b. Turn on all the circuit breakers on AC BOX.
   c. Turn “LED TEST/CHK RST” switch on the DKC panel to “CHK RST”.

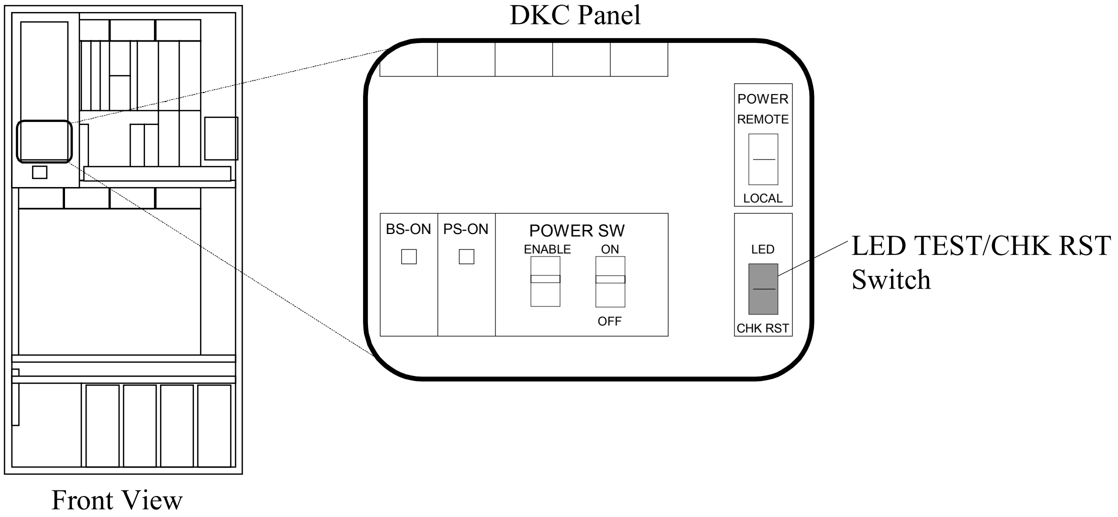

DKC Panel
POWER
REMOTE
LOCAL
BS-ON
PS-ON
POWER SW
ENABLE
ON
OFF
LED
CHK RST
LED TEST/CHK RST Switch
Front View

Fig. T21-8 Setting of LED TEST/CHK RST Switch

7. Disconnection of the Jumper
   a. Disconnect the Maintenance Jumper from the connector on the DKC Panel PCB.

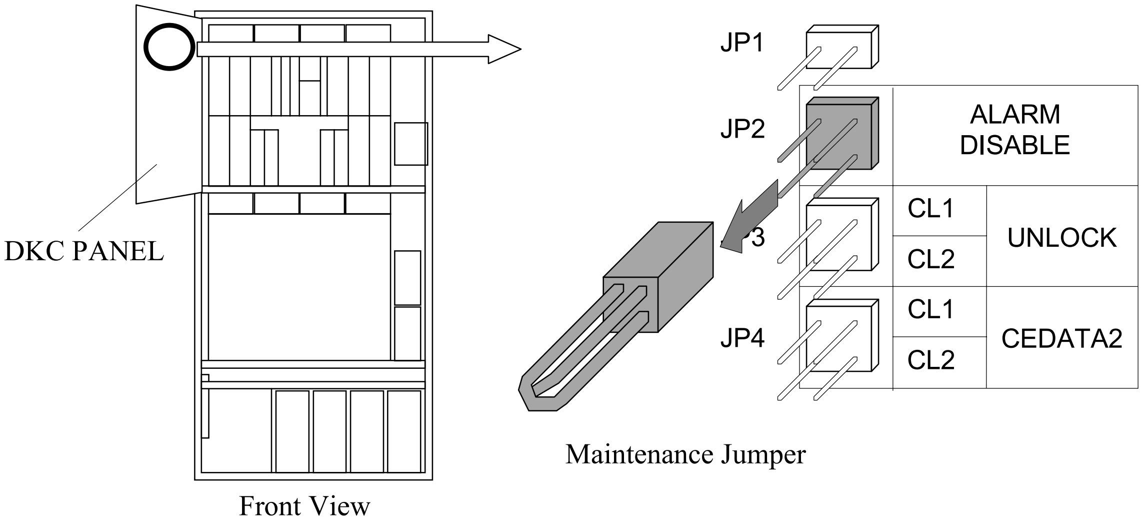

DKC PANEL
Front View
JP1
JP2
3
JP4
ALARM DISABLE
CL1
CL2
UNLOCK
CL1
CL2
CEDATA2
Maintenance Jumper

Fig. T21-9 Disconnection of Jumper

---

8. Go to SVP post-procedure t4 [REP04-1000].

Replacement of AC BOX for 3 Phase 30A Model

1. Open the front door.
2. Connection of the Jumper
   a. Connect the Maintenance Jumper to the connector on the DKC Panel PCB.

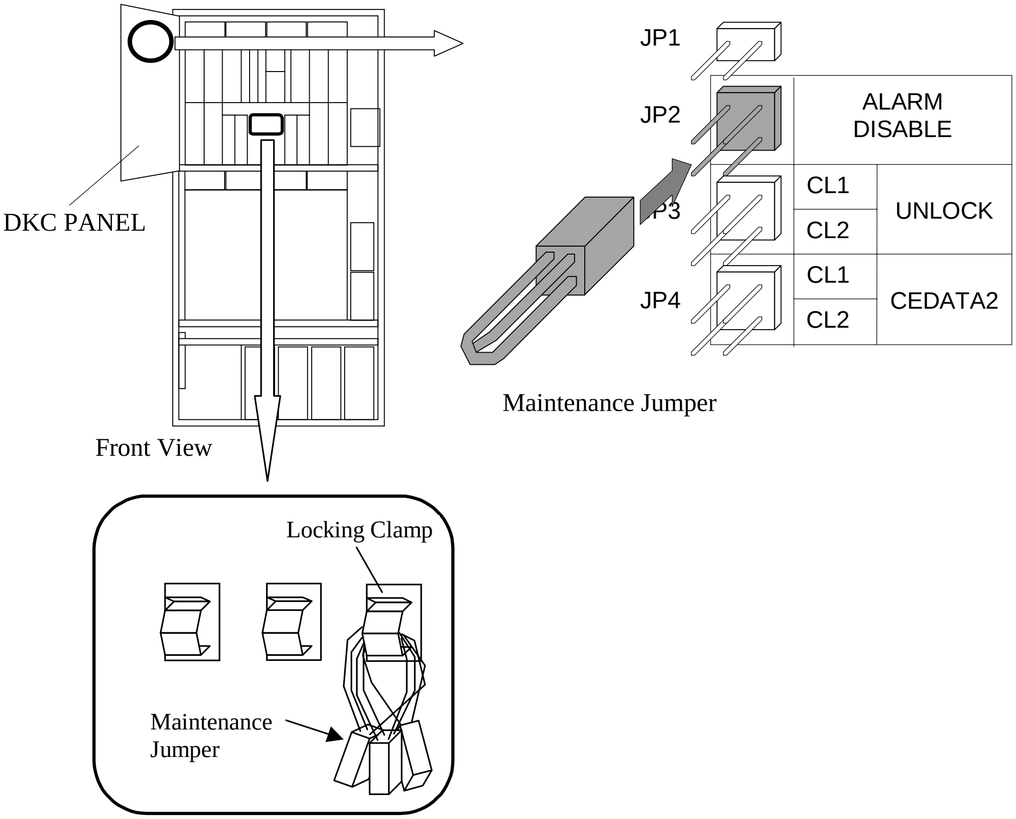

JP1
JP2
ALARM DISABLE
P3
CL1
CL2
UNLOCK
JP4
CL1
CL2
CEDATA2
DKC PANEL
Maintenance Jumper
Front View
Locking Clamp
Maintenance Jumper

Fig. T21-10 Connection of Alarm INH Jumper

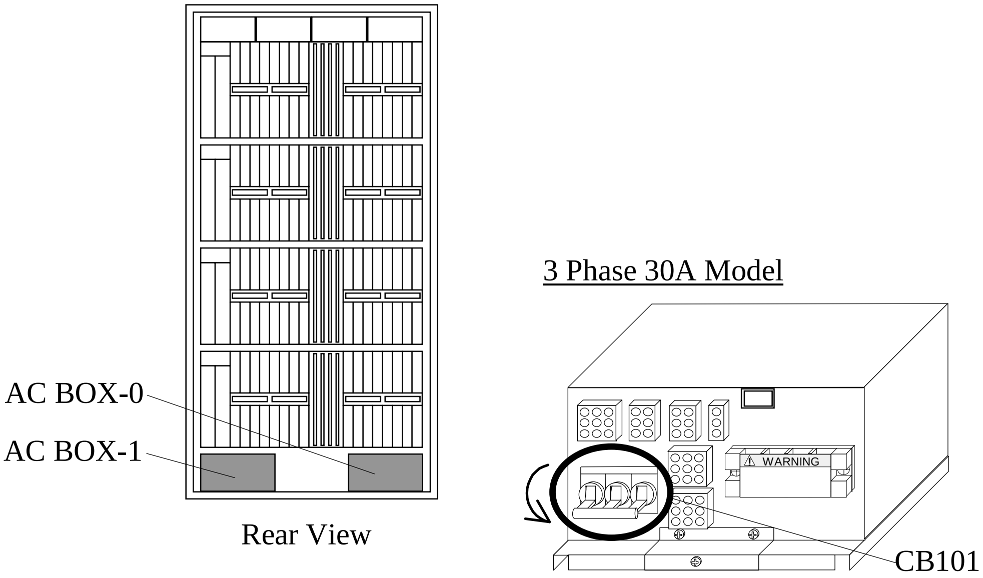
3. Power Off the Component to be Replaced

⚠ **WARNING**

Be Careful of Electric Shock

- The power to the device is still on after turning off the breakers shown below.
- The device may be powered off when turning off the breakers not shown below.
- The circuit has residual voltage for one minute after turning off the breakers, so be sure to disconnect all the connectors after this period.

a. Turn off the circuit breaker (CB101) on AC BOX.



Rear View

3 Phase 30A Model

Fig. T21-11 Circuit Breakers to be Turned Off When Replacing AC BOX

b. Turn off the circuit breakers on the power distribution panel in the plant that are connected to AC BOX.

⚠ **WARNING**

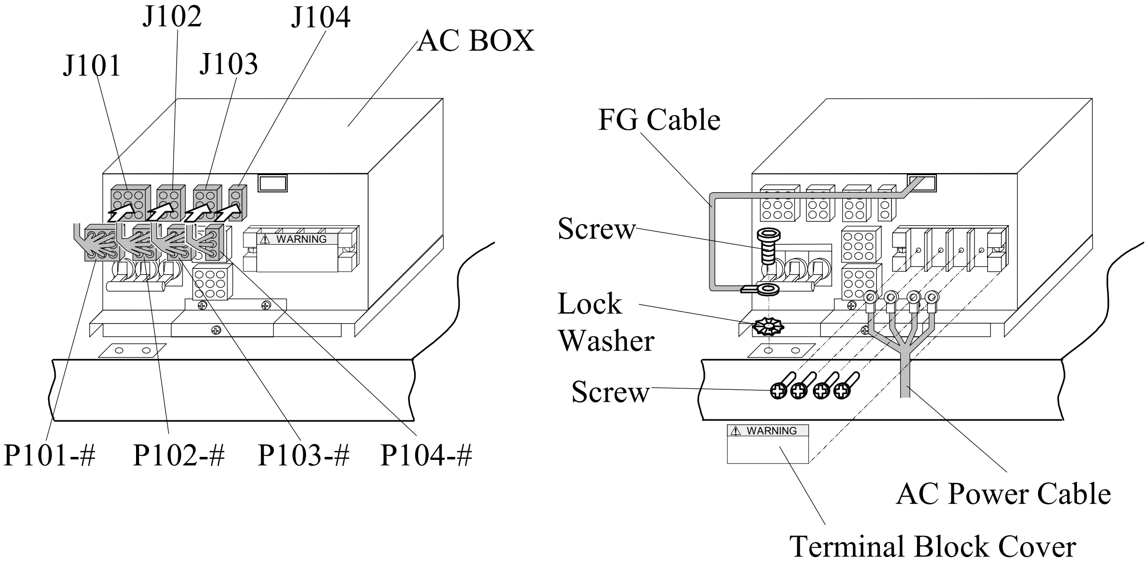
Warning: You will get an electric shock if you fail to turn it off.
Start your work after turning off the breaker on the distribution board connected to the AC BOX.

4. Removal of AC BOX

⚠ WARNING

Warning: You will get an electric shock if you fail to turn it off.
Start your work after turning off the breaker on the distribution board connected to the AC BOX.

a. Disconnect the cable connectors (P101-#, P102-#, P103-# and P104-#) from AC BOX.
b. Remove the terminal block cover from AC BOX. Remove the screws, and then disconnect the AC power cable and frame ground cable.

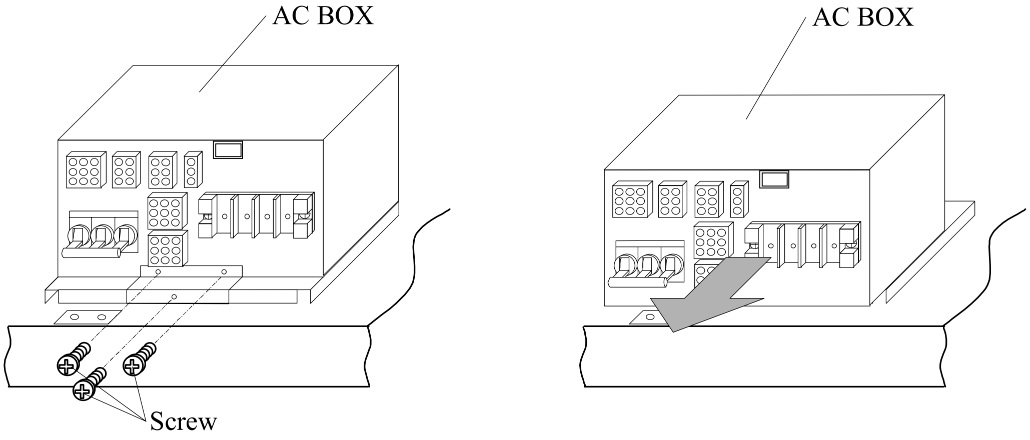

J102
J104
AC BOX
J101
J103
WARNING
P101-#
P102-#
P103-#
P104-#
FG Cable
Screw
Lock Washer
Screw
WARNING
AC Power Cable
Terminal Block Cover

(1) Removal of Cable Connector

(2) Disconnection of AC Power Cable

Fig. T21-12 Removal of Cable Connector

c. Remove the three screws.
d. Remove AC BOX.

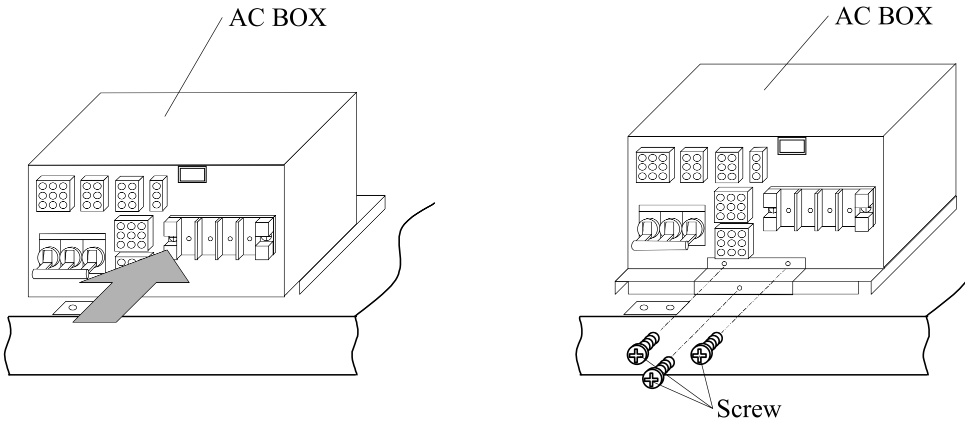

AC BOX
Screw
AC BOX

(3) Removal of Screws

(4) Removal of AC BOX

Fig. T21-13 Removal of AC BOX

5. Installation of Spare AC BOX
   a. Check that the circuit breaker (CB101) on the spare AC BOX are turned off.
   b. Attach the spare AC BOX.
   c. Secure AC BOX at the front with the screws.

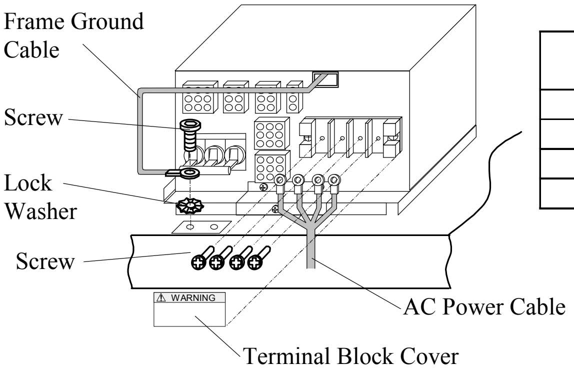

AC BOX
AC BOX
Screw

(1) Attachment of spare AC BOX

(2) Attachment of AC BOX

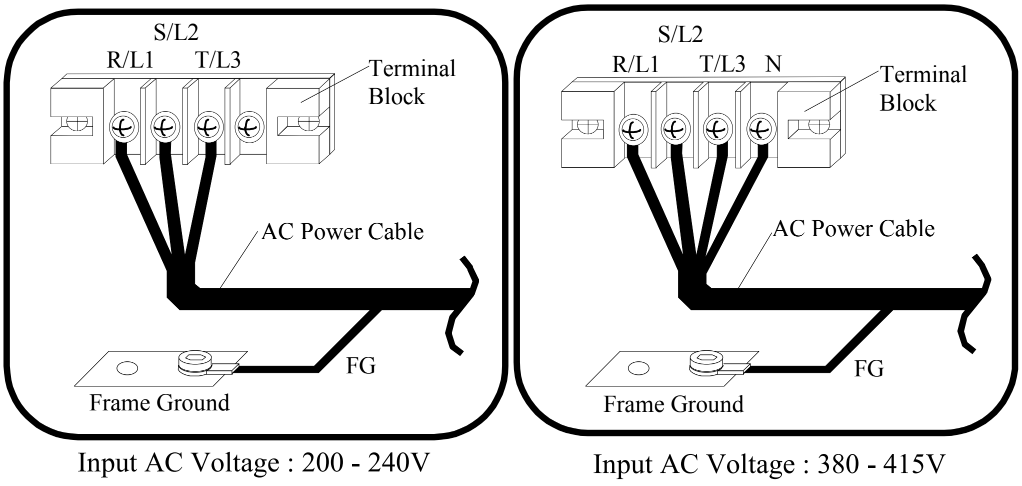
Fig. T21-14 Attachment of AC BOX

   d. Connect the frame ground cable to the frame ground.
   e. Connect the AC power cable to the terminal block. Attach the terminal block cover.


Frame Ground Cable
Screw
Lock Washer
Screw
WARNING
AC Power Cable
Terminal Block Cover

Connection of AC Power Cable

Letters indicated on the terminal Block	Connecting LINE
R/L1	Phase R
S/L2	Phase S
T/L3	Phase T
N	Phase N


S/L2
R/L1
T/L3
Terminal Block
AC Power Cable
FG
Frame Ground
S/L2
R/L1
T/L3
N
Terminal Block
AC Power Cable
FG
Frame Ground

Input AC Voltage : 200 - 240V

Input AC Voltage : 380 - 415V

Fig. T21-15 Connection of AC Power Cable

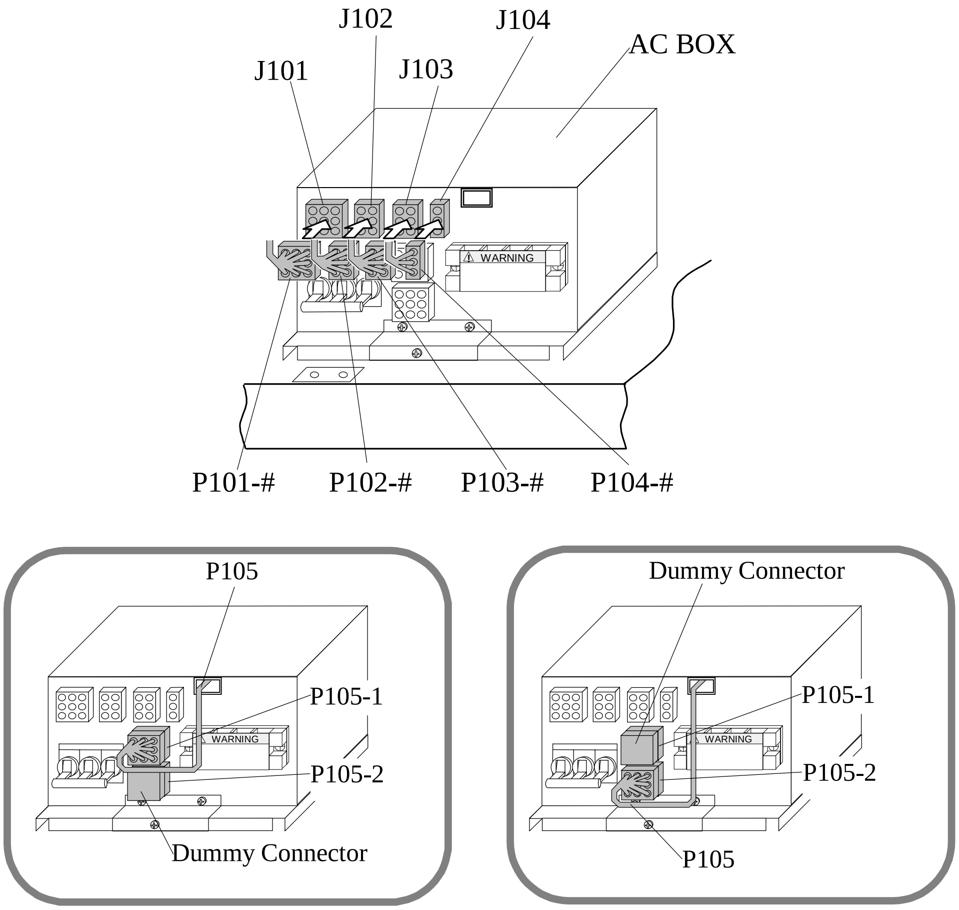
f. Connect the cable connectors (P101-#, P102-#, P103-#, P104-# and P105) and dummy connector to AC BOX.

⚠ CAUTION

The mate connectors of the P105 shown as No.5 in Table T21-2 vary depending on the voltage of the AC power inputted.
Never make a wrong connection because the subsystem will be damaged if the connection is wrongly made.

Table T21-2 Cable Connection of AC BOX

No.	Cable No.		Connector No.	Remarks
	AC BOX-0	AC BOX-1		
1	P101-1	P101-2	J101	
2	P102-1	P102-2	J102	
3	P103-1	P103-2	J103	
4	P104-1	P104-2	J104	
5	P105	P105	J105-1	Input AC Voltage 200-240V
6	Dummy Connector	Dummy Connector	J105-2	
7	Dummy Connector	Dummy Connector	J105-1	Input AC Voltage 380-415V
8	P105	P105	J105-2	


J102
J104
AC BOX
J101
J103
WARNING
P101-#
P102-#
P103-#
P104-#
P105
P105-1
WARNING
P105-2
Dummy Connector
Dummy Connector
P105-1
WARNING
P105-2
P105

Input AC Voltage: 200-240V

Input AC Voltage: 380-415V

Fig. T21-16 Connection of Cable Connector

6. Power On the Replacement Component
   a. Turn on the circuit breakers on the power distribution panel that are connected to AC BOX.
   b. Turn on all the circuit breakers on AC BOX.
   c. Turn “LED TEST/CHK RST” switch on the DKC panel to “CHK RST”.

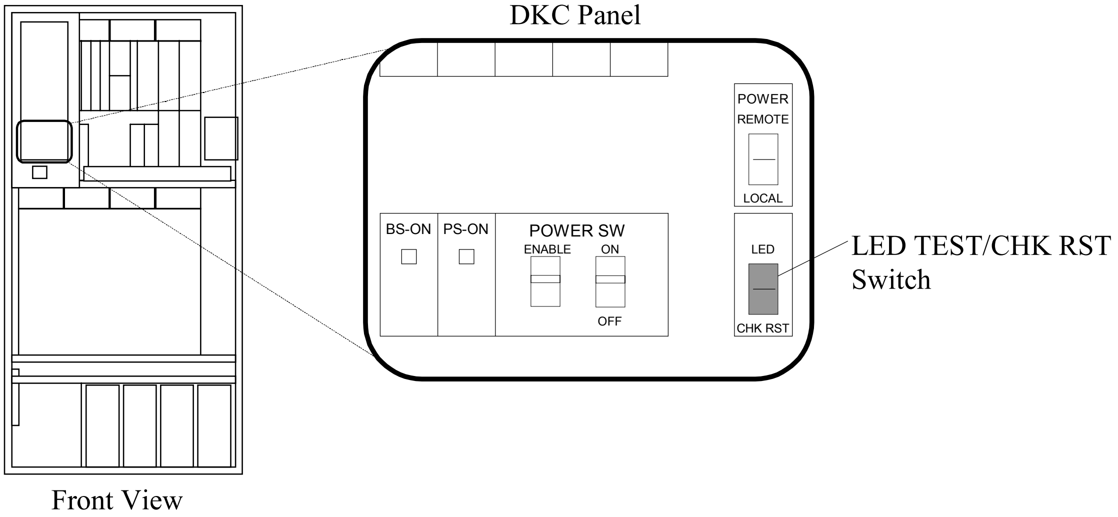

DKC Panel
POWER
REMOTE
LOCAL
BS-ON
PS-ON
POWER SW
ENABLE
ON
OFF
LED
CHK RST
LED TEST/CHK RST Switch
Front View

Fig. T21-17 Setting of LED TEST/CHK RST Switch

7. Disconnection of the Jumper
   a. Disconnect the Maintenance Jumper from the connector on the DKC Panel PCB.

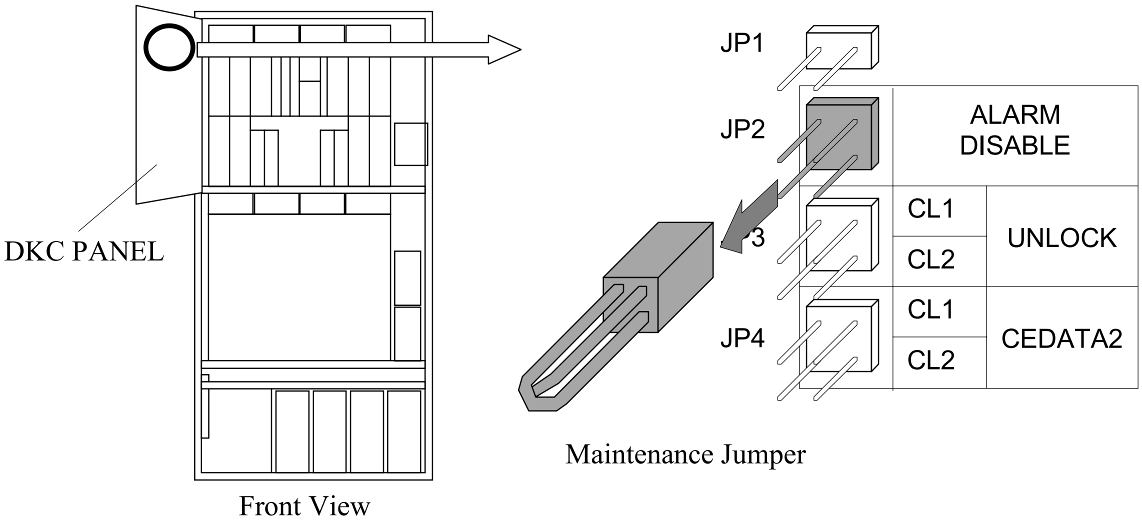

JP1
JP2
ALARM DISABLE
3
CL1
CL2
UNLOCK
JP4
CL1
CL2
CEDATA2
DKC PANEL
Maintenance Jumper
Front View

Fig. T21-18 Disconnection of Jumper

8. Go to SVP post-procedure t4 [REP04-1000].

Replacement of AC BOX for Single Phase 30A Model

1. Open the front door.
2. Connection of the Jumper
   a. Connect the Maintenance Jumper to the connector (JP2) on the DKC Panel PCB.

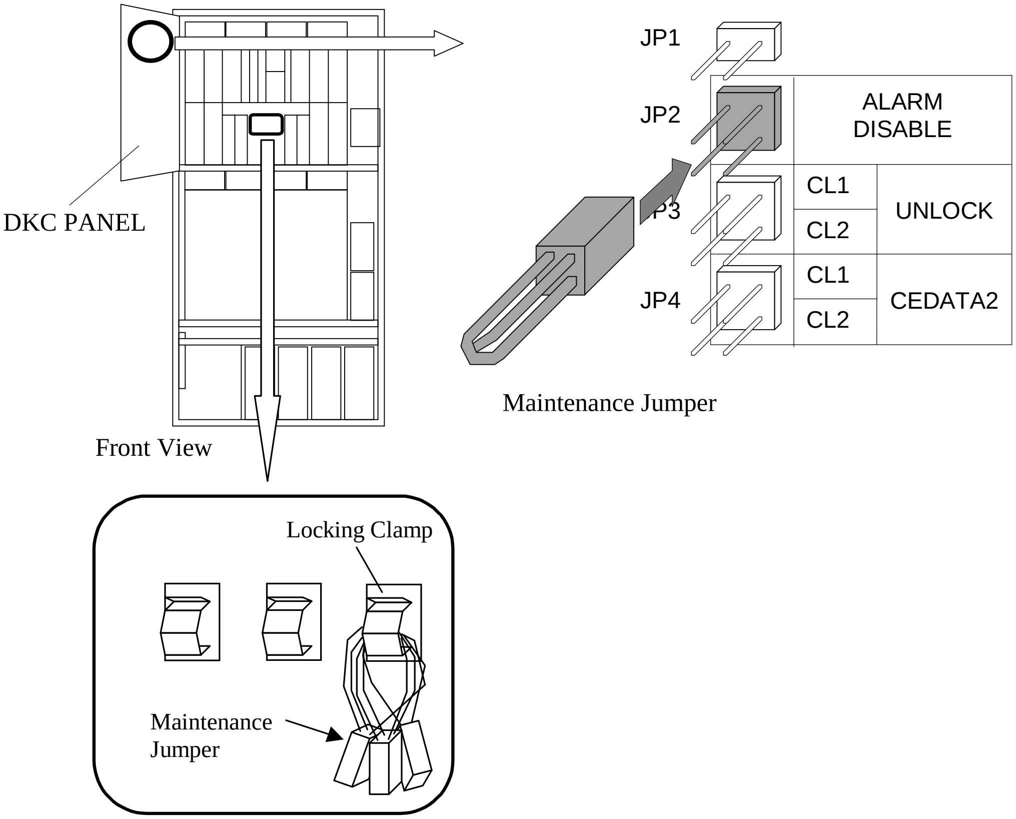

DKC PANEL
Front View
JP1
JP2
ALARM DISABLE
JP3
CL1
CL2
UNLOCK
JP4
CL1
CL2
CEDATA2
Maintenance Jumper
Locking Clamp
Maintenance Jumper

Fig. T21-19 Connection of Alarm INH Jumper

3. Power Off the Component to be Replaced

> ⚠ **WARNING**
>
> Be Careful of Electric Shock
>
> - The power to the device is still on after turning off the breakers shown below.
> - The device may be powered off when turning off the breakers not shown below.
> - The circuit has residual voltage for one minute after turning off the breakers, so be sure to disconnect all the connectors after this period.

a. Turn off the circuit breaker (CB101) on the failed AC BOX.

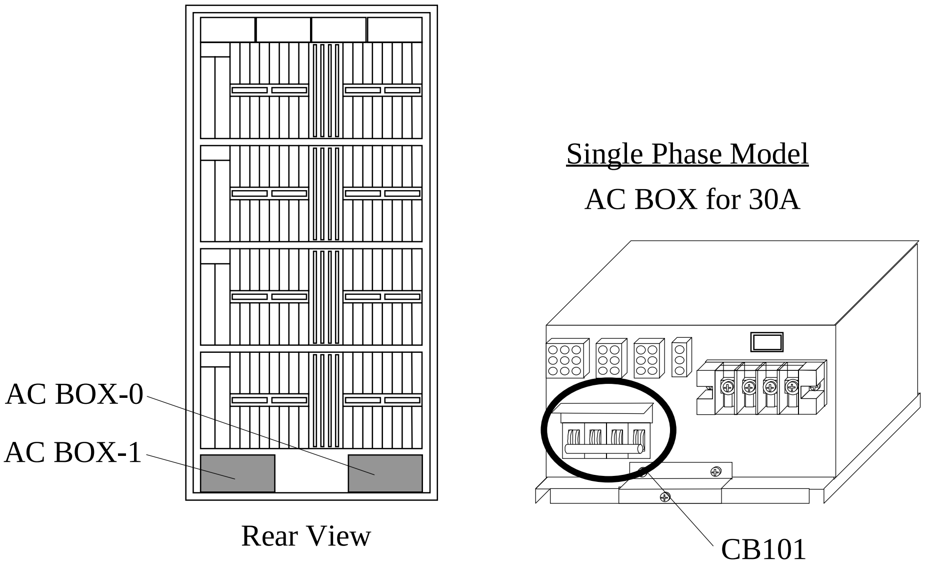


Fig. T21-2 Circuit Breakers to be Turned Off When Replacing AC BOX

b. Turn off the two circuit breakers on the power distribution panel in the plant that are connected to the failed AC BOX.

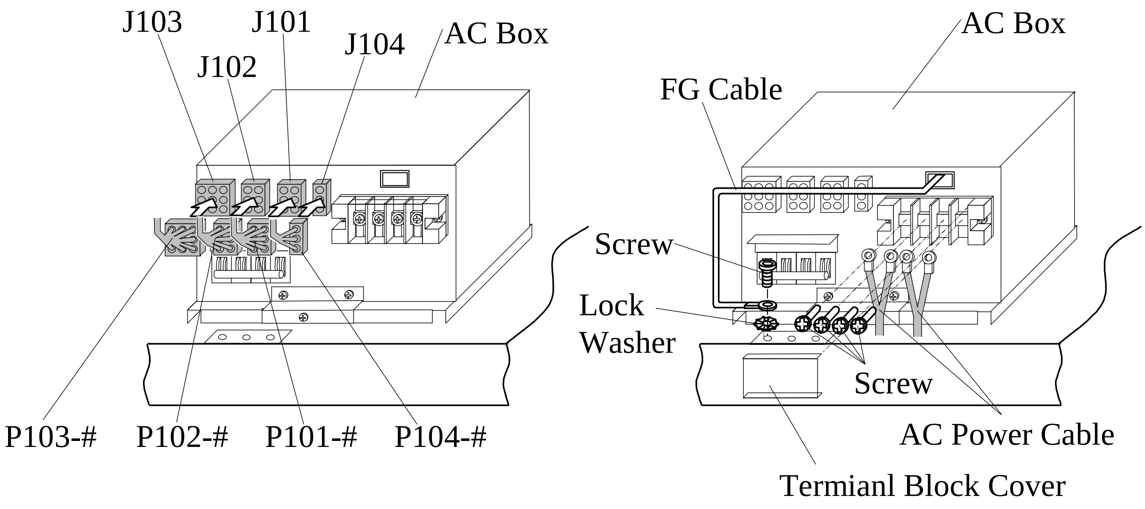
> ⚠ **WARNING**
>
> Warning: You will get an electric shock if you fail to turn it off.
> Start your work after turning off the two breakers on the distribution board connected to the AC BOX.

4. Removal of AC BOX

WARNING

Warning: You will get an electric shock if you fail to turn it off.
Start your work after turning off the breaker on the distribution board connected to the AC BOX.

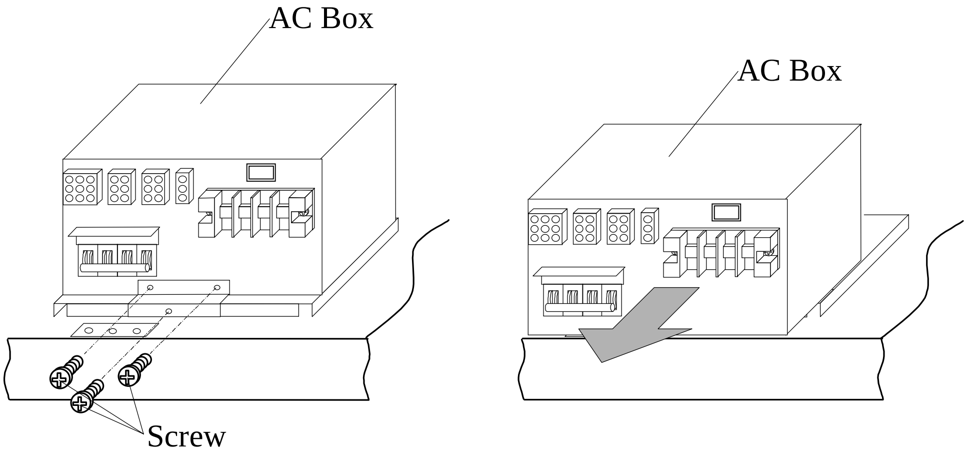
a. Disconnect the cable connectors (P101-#, P102-#, P103-# and P104-#) from AC BOX.
b. Remove the terminal block cover from AC BOX. Remove the five screws, and then disconnect the AC power cables and frame ground cable.


J103
J101
J104
J102
AC Box
P103-#
P102-#
P101-#
P104-#
AC Box
FG Cable
Screw
Lock Washer
Screw
AC Power Cable
Termianl Block Cover

(1) Removal of Cable Connector (2) Disconnection of AC Power Cable

Fig. T21-20 Removal of Cable Connector

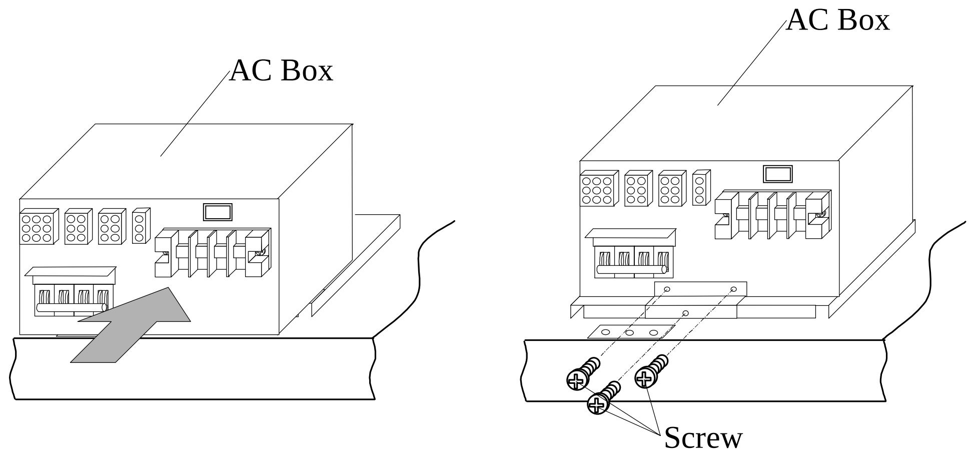
c. Remove the three screws.
d. Remove AC BOX.


AC Box
Screw
AC Box

(3)Removal of screws (4) Removal of AC Box

Fig. T21-21 Removal of AC BOX

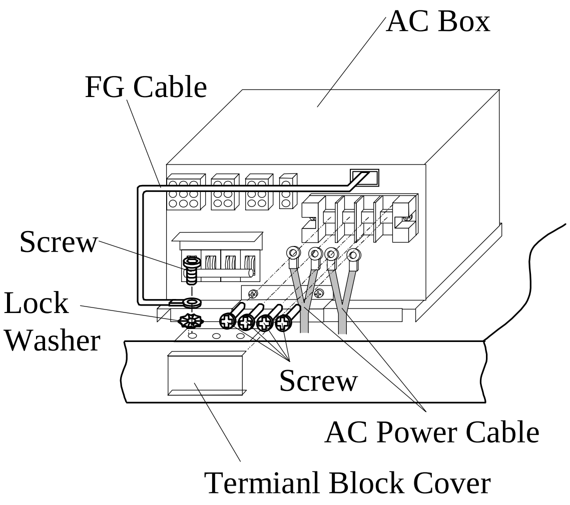
5. Installation of Spare AC BOX
   a. Check that the circuit breaker (CB101) on the spare AC BOX is turned off.
   b. Attach the spare AC BOX.
   c. Secure AC BOX at the front with the screws.


AC Box
AC Box
Screw

(1) Attachment of spare AC Box (2) Attachment of AC Box

Fig. T21-22 Attachment of AC BOX

d. Connect the frame ground cable to the frame ground.
e. Connect the AC power cables to the terminal block. Attach the terminal block cover.


AC Box
FG Cable
Screw
Lock
Washer
Screw
AC Power Cable
Termianl Block Cover

Connection of AC Power Cable

Letters indicated on the terminal block	Connecting LINE
U/L1	Phase U
V/L2	Phase V
U/L1	Phase U
V/L2	Phase V

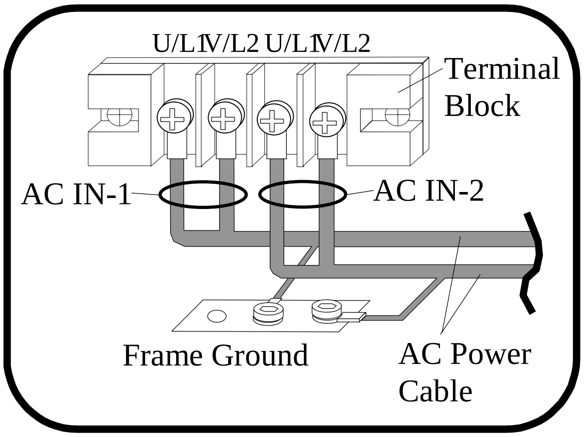

U/L1
V/L2
U/L1
V/L2
Terminal
Block
AC IN-1
AC IN-2
Frame Ground
AC Power
Cable

Fig. T21-23 Connection of AC Power Cable

f. Connect the cable connectors (P101-#, P102-#, P103-# and P104-#) to AC BOX.

Table T21-3 Cable Connection of AC BOX

No.	Cable No.		Connector No.	Remarks
	AC BOX-0	AC BOX-1		
1	P101-1	P101-2	J101	
2	P102-1	P102-2	J102	
3	P103-1	P103-2	J103	
4	P104-1	P104-2	J104	

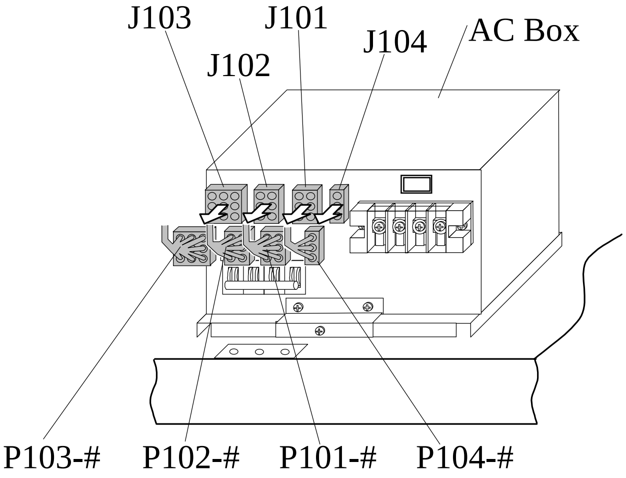

J103
J101
J102
J104
AC Box
P103-#
P102-#
P101-#
P104-#

Fig. T21-24 Connection of Cable Connectors

6. Power On the Replacement Component
   a. Turn on the two circuit breakers on the power distribution panel that are connected to AC BOX.
   b. Turn on all the circuit breakers on AC BOX.
   c. Turn “LED TEST/CHK RST” switch on the DKC panel to “CHK RST”.

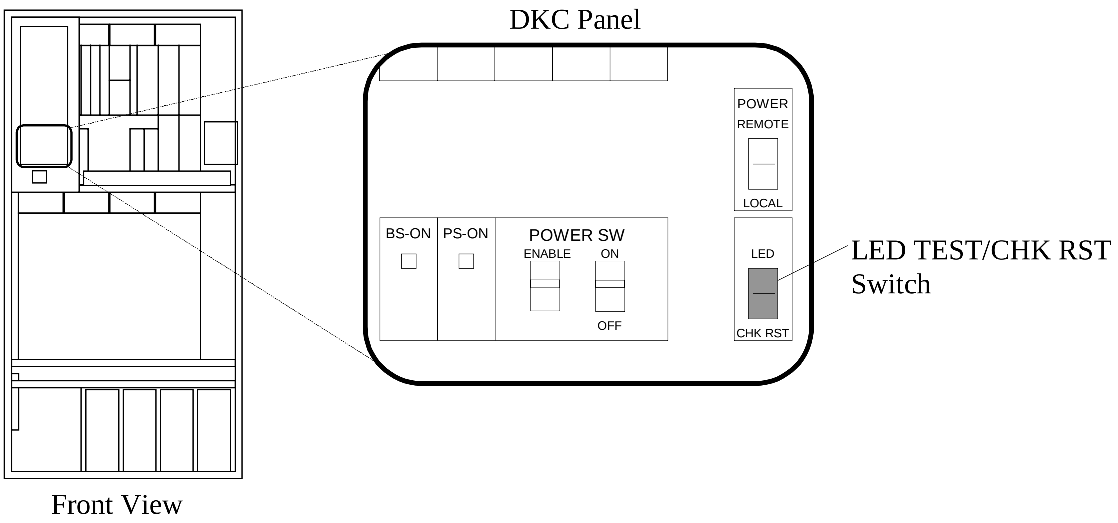

DKC Panel
POWER
REMOTE
LOCAL
BS-ON
PS-ON
POWER SW
ENABLE
ON
OFF
LED
CHK RST
LED TEST/CHK RST Switch
Front View

Fig. T21-25 Setting of LED TEST/CHK RST Switch

7. Disconnection of the Jumper
   a. Disconnect the Maintenance Jumper from the connector (JP2) on the DKC Panel PCB.

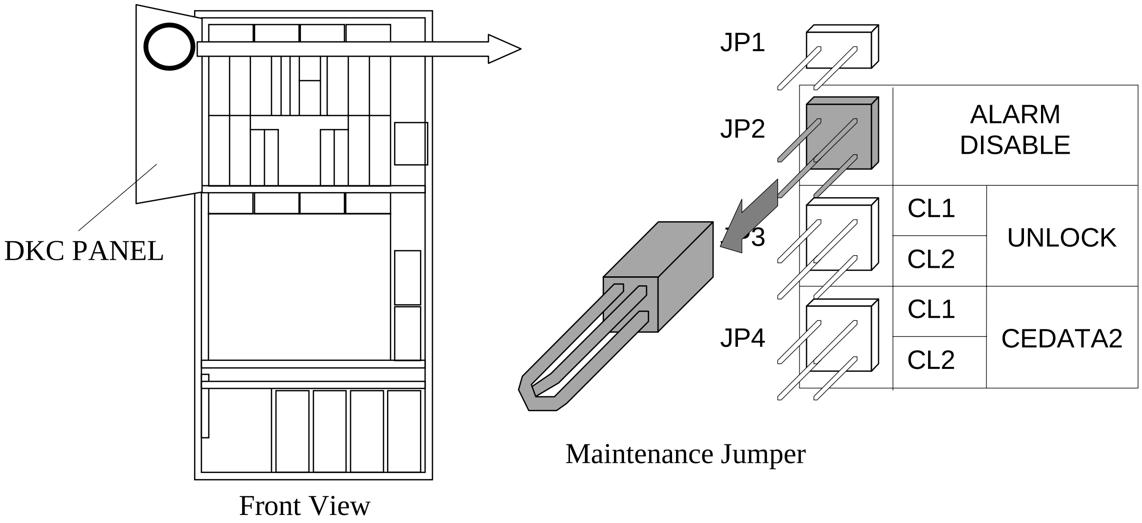

DKC PANEL
Front View
JP1
JP2
JP3
JP4
ALARM DISABLE
CL1
CL2
UNLOCK
CL1
CL2
CEDATA2
Maintenance Jumper

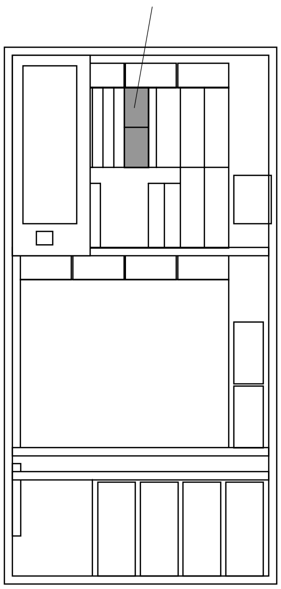
Fig. T21-26 Disconnection of Jumper

---

8. Go to SVP post-procedure t4 [REP04-1000].

[HARDWARE T23]

Location	Function Name of Component		Part Name
Front PS Box	1	SVPPS PCB	• SH111-B



Front View

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.

REV.0	Jun.2001					

Replacement of SVPPS

Note: Do not replace SVPPS 1 and SVPPS 2 at the same time.
If you want to replace the both PCB, first complete the replacement of one PCB and then start the replacement of the other.

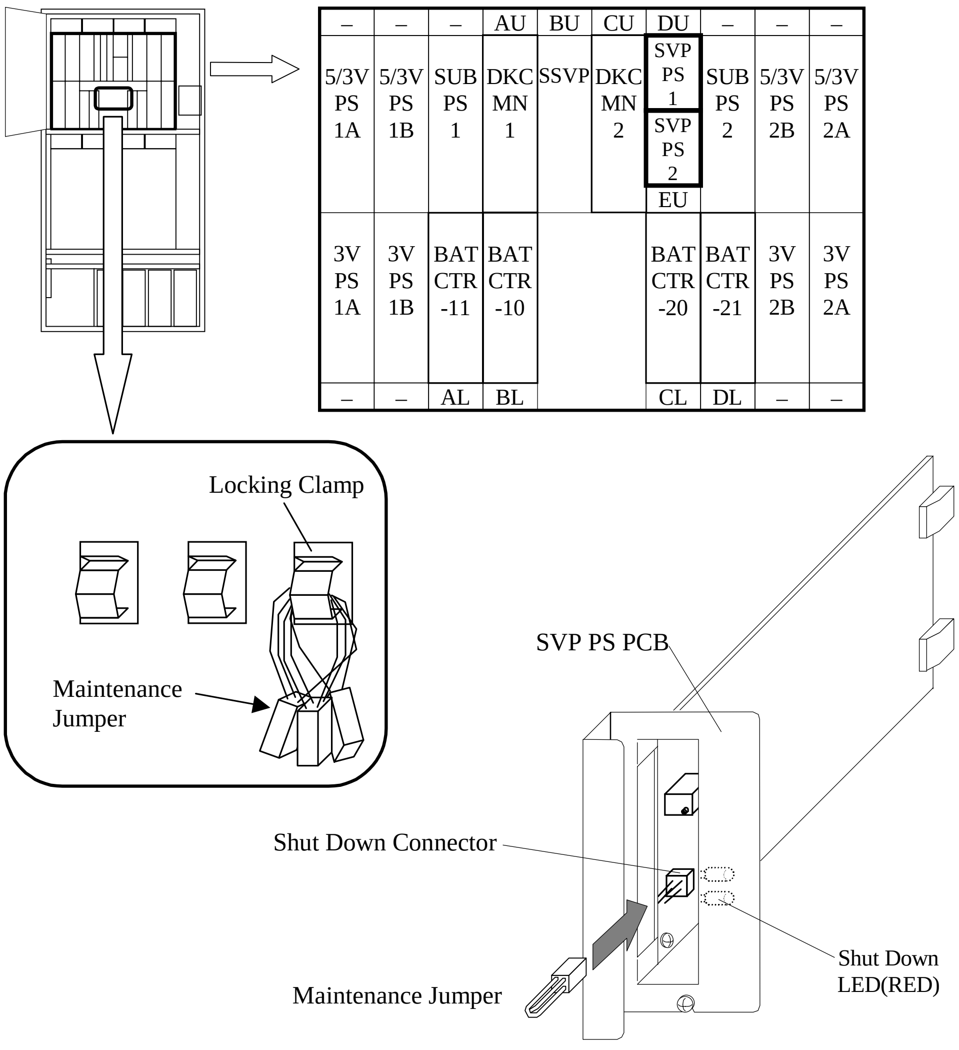
1. Check that the Shut Down LED is on. (only hot replace)

⚠ CAUTION

A system down is caused by a replacement of the PCB other than that to be replaced. Make sure that it is the PCB to be replaced.

a. Check that the Shut Down LED is on.
b. Connect the Maintenance Jumper to the Shut Down connector. When the Maintenance Jumper is inserted, go to step c.
c. Wait for 15 seconds after inserting the jumper, then go to next operation.

Front View

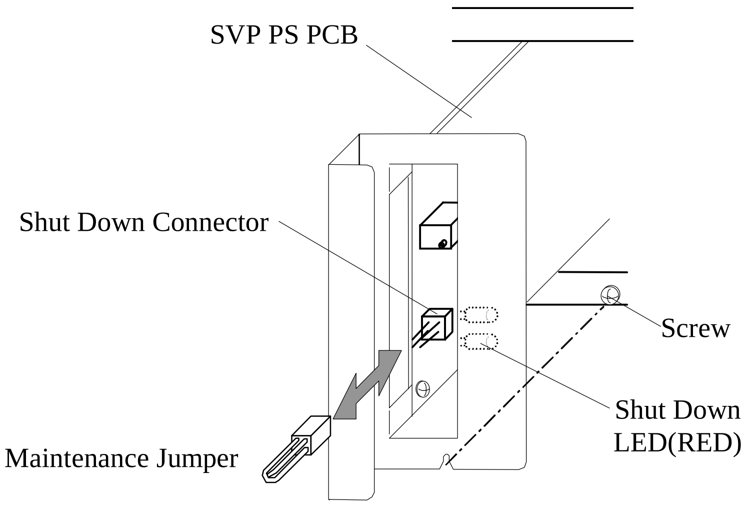


–	–	–	AU	BU	CU	DU	–	–	–
5/3V PS 1A	5/3V PS 1B	SUB PS 1	DKC MN 1	SSVP	DKC MN 2	SVP PS 1 SVP PS 2 EU	SUB PS 2	5/3V PS 2B	5/3V PS 2A
3V PS 1A	3V PS 1B	BAT CTR -11	BAT CTR -10			BAT CTR -20	BAT CTR -21	3V PS 2B	3V PS 2A
–	–	AL	BL			CL	DL	–	–

Locking Clamp
Maintenance Jumper
SVP PS PCB
Shut Down Connector
Maintenance Jumper
Shut Down LED(RED)

2. Replace the SVPPS PCB.
    a. Loosen the screw and remove the SVPPS PCB.
    b. Remove the maintenance jumper and connect it to the spare PCB.
    c. Insert the spare PCB and fasten the screw.

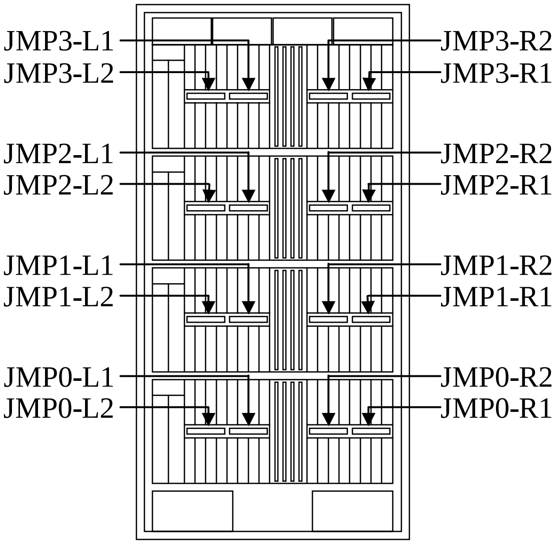
> Note:
> Remove the maintenance jumper attached to the SVP PS PCB in Step (3) following instructions given by the SVP.


SVP PS PCB
Shut Down Connector
Screw
Shut Down LED(RED)
Maintenance Jumper

3. Go to SVP post procedure t3 [REP04-900].

[HARDWARE T24]

Location	Function Name of Component		Part Name
HDU Box	1	JMP PCB	• SH304-A


JMP3-L1
JMP3-L2
JMP3-R2
JMP3-R1
JMP2-L1
JMP2-L2
JMP2-R2
JMP2-R1
JMP1-L1
JMP1-L2
JMP1-R2
JMP1-R1
JMP0-L1
JMP0-L2
JMP0-R2
JMP0-R1

Rear View

NOTICE:

① 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 When the Shut Down LED on the JMP PCB to be replaced is on, replace the JMP PCB irrespective of the status of the HDD ENABLE LED (green) on the JMP PCB concerned.

REV.2	Jun.2001	Feb.2002	Apr.2002			

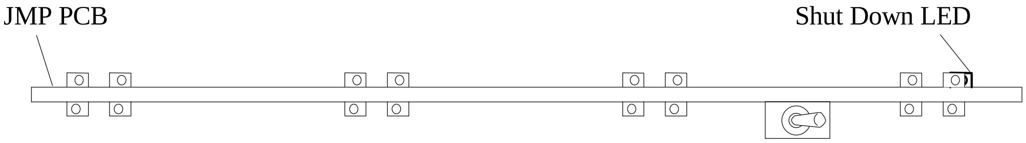
Replacement of JMP PCB

NOTICE:

① When replacing the JMP PCB, check if the switches on the other three JMP PCBs installed in the same HDU BOX are set correctly.

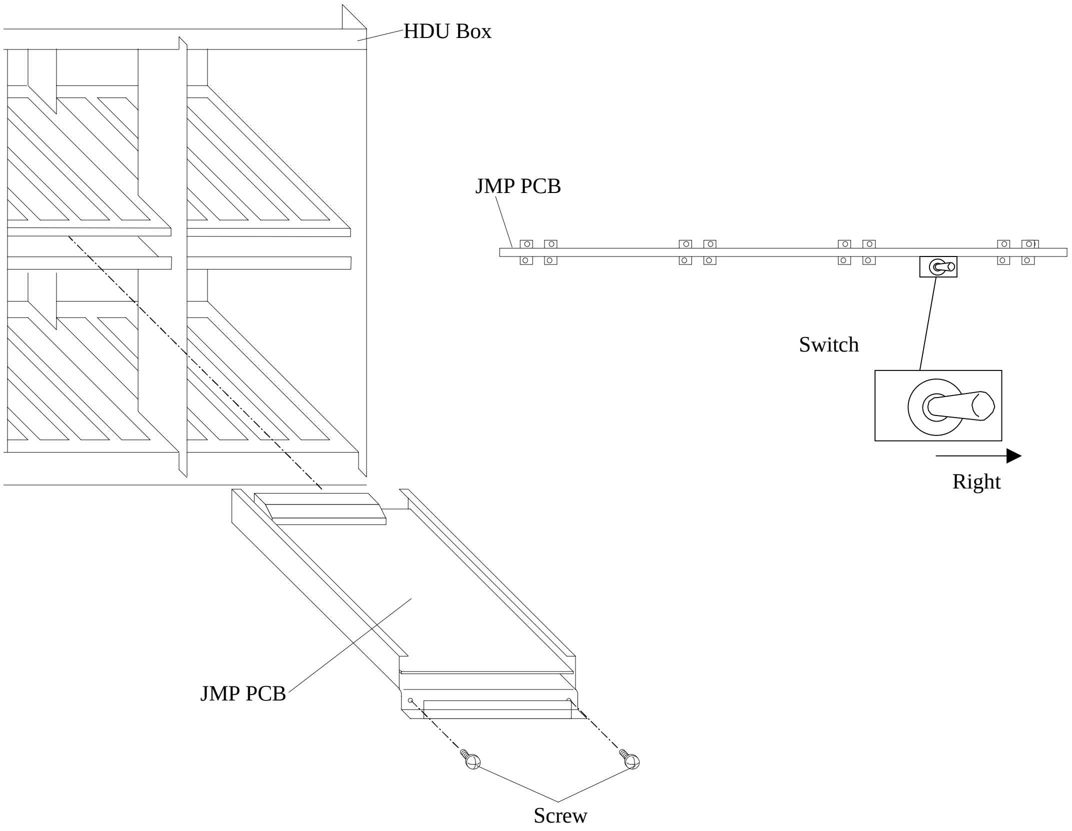
② If any of the switches on the JMP PCB to be replaced and the other ones installed are wrongly set, an error of SIM = 3daxxx (such as an LED BUS TEST error) occurs. Set them correctly as shown in the figure below.

1. Check that the Shut Down LED is on.



2. Replace the JMP PCB.
   a. Loosen the two screws and remove the JMP PCB.
   b. The switch of the spare JMP PCB is set to the right side.
   c. Insert the spare JMP PCB and fasten the two screws.

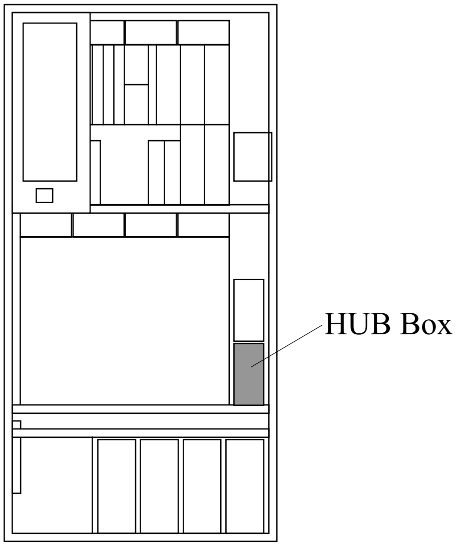
NOTICE: Shut Down LED light off when you operated post procedure on SVP.



3. Go to SVP post procedure t4 [REP04-1000].

[HARDWARE T25]

Location		Function Name of Component	Part Name
Right of Front Logic Box	1	HUB Box	HUB Box

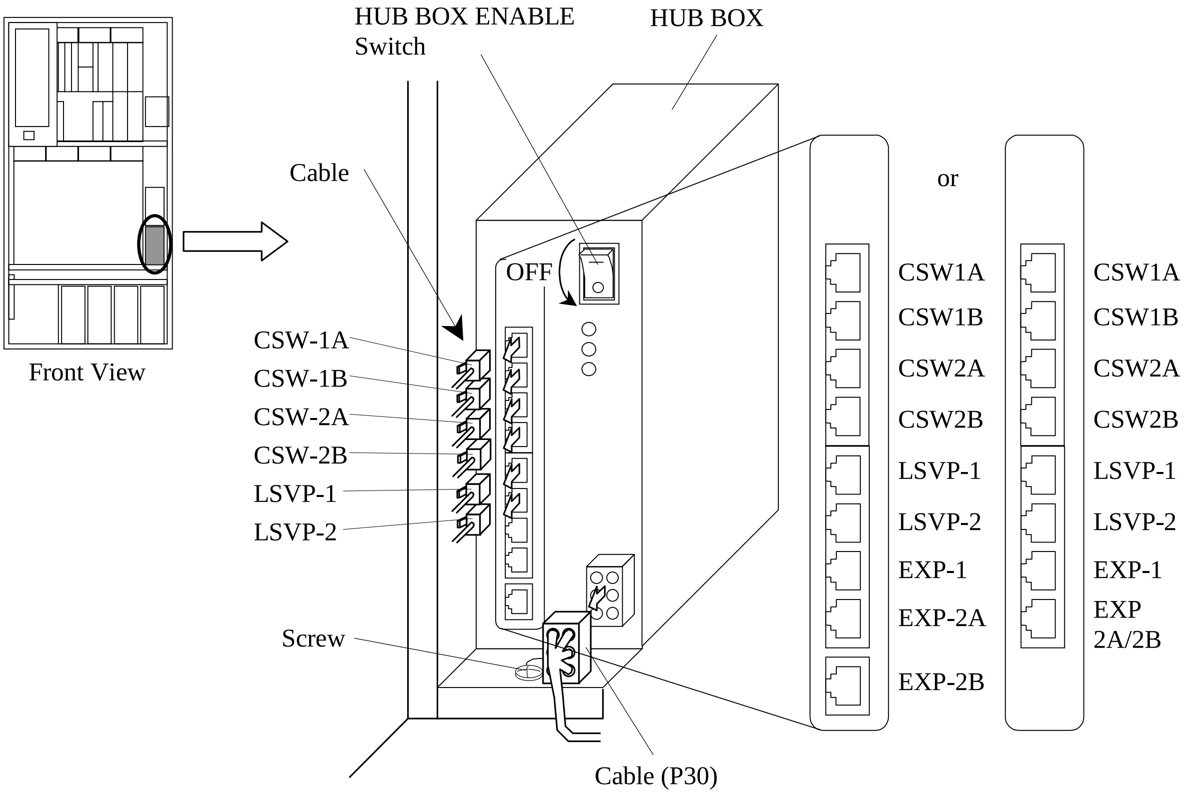


Front View

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.

Replacement of HUB Box

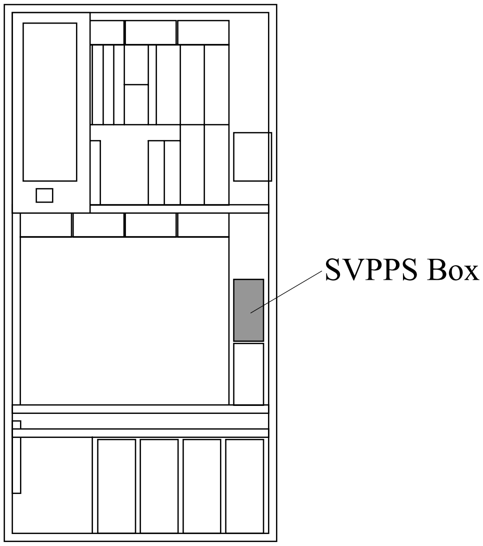
1. Replace the HUB BOX.
   a. Turn off the HUB BOX ENABLE switch on the HUB BOX.
   b. Disconnect the cables from the HUB BOX.
   c. Loosen the screw and remove the HUB BOX.
   d. Insert the spare HUB BOX and fasten the screw.
   e. Connect the cables to the HUB BOX.
   f. Turn on the HUB BOX ENABLE switch on the HUB BOX.


Front View
HUB BOX ENABLE Switch
HUB BOX
Cable
OFF
CSW-1A
CSW-1B
CSW-2A
CSW-2B
LSVP-1
LSVP-2
Screw
Cable (P30)
or
CSW1A
CSW1B
CSW2A
CSW2B
LSVP-1
LSVP-2
EXP-1
EXP-2A
EXP-2B
CSW1A
CSW1B
CSW2A
CSW2B
LSVP-1
LSVP-2
EXP-1
EXP 2A/2B

2. Go to SVP post procedure t1 [REP04-320].

[HARDWARE T26]

Location		Function Name of Component	Part Name
Right of Front Logic Box	1	SVPPS Box	SVPPS Box

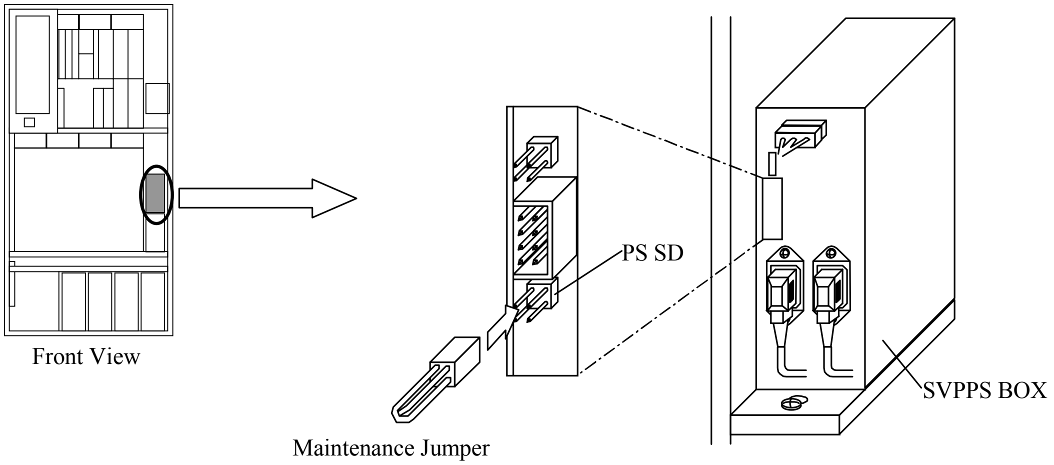


Front View

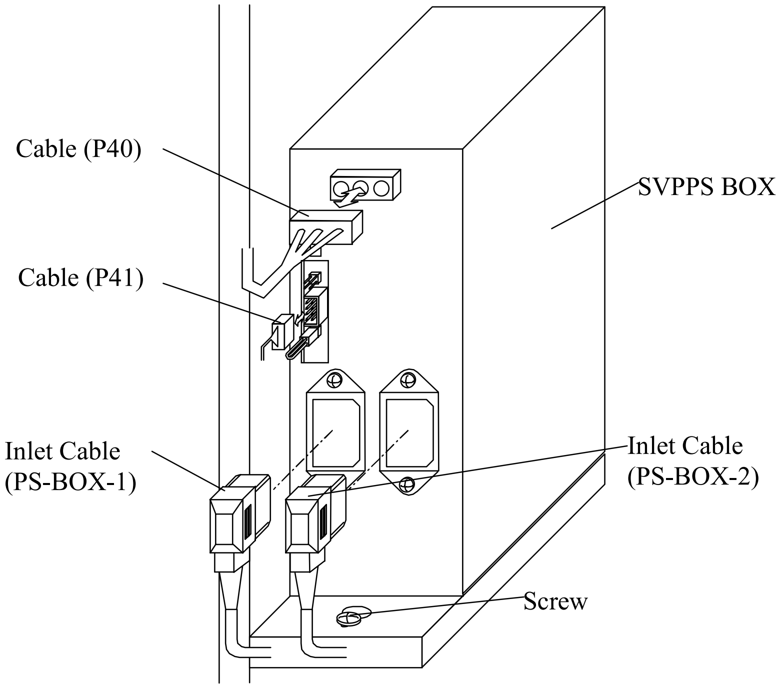
NOTICE:
Be sure to wear your wrist strap and attach to ground prior to performing the following work. This will ensure that the IC and LSI on the PCB are protected from static electricity.

Replacement of SVPPS Box

1. Insert the maintenance jumper into PS SD on the SVPPS BOX.


Front View
PS SD
SVPPS BOX
Maintenance Jumper

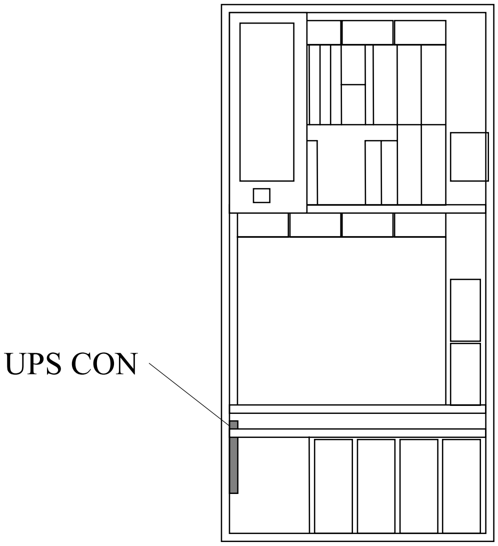
2. Replace the SVPPS BOX.
   a. Disconnect the cables from the SVPPS BOX.
   b. Loosen the screw and remove the SVPPS BOX.
   c. Insert the spare SVPPS BOX and fasten the screw.
   d. Connect the cables to the SVPPS BOX.


Cable (P40)
SVPPS BOX
Cable (P41)
Inlet Cable
(PS-BOX-1)
Inlet Cable
(PS-BOX-2)
Screw

3. Go to SVP post procedure t1 [REP04-320].

[HARDWARE T27]

Location	Function Name of Component		Part Name
Lower left front of DKC	1	UPS CON	• SH298-A



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.

1. Disconnect the DBUS Cables.
   a. Disconnect the DBUS cables from the UPS CON.

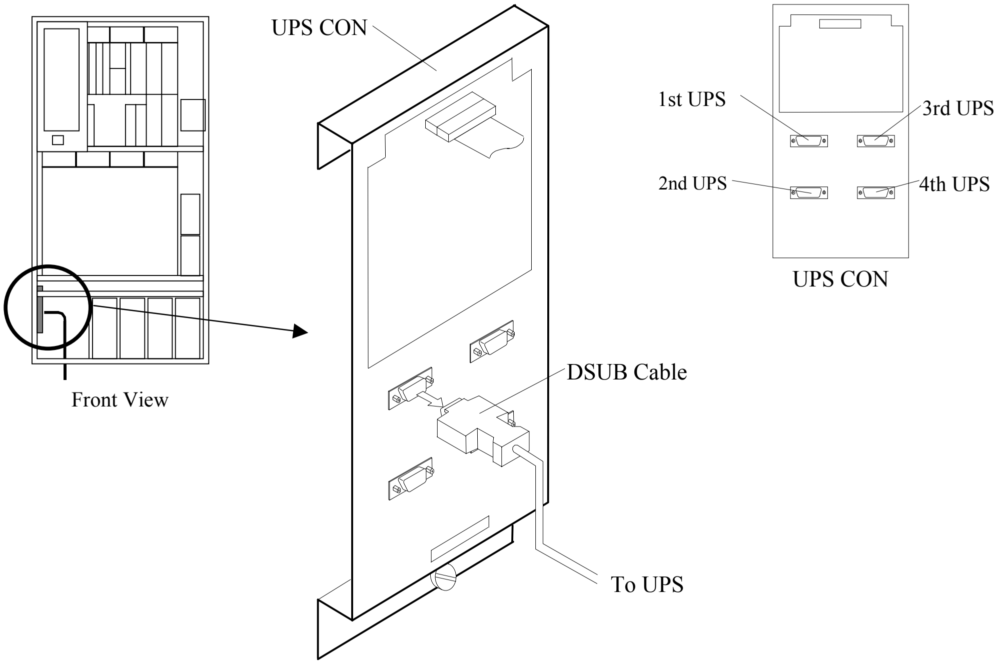

UPS CON
Front View
DSUB Cable
To UPS
1st UPS
3rd UPS
2nd UPS
4th UPS
UPS CON

Fig. T27-1 Disconnection of Cables

2. Replace the UPS CON.
   a. Disconnect cable from UPS CON.
   b. Loosen the screw① and remove the screw② from the base plate
   c. Slide the plate and turn it using the screw① as an axis.
   d. Remove the screw③ and remove the UPS CON.
   e. Attach the UPS CON of spare parts and fixed it with screw③.
   f. Return the plate as it was and tighten the screw① and ②.
   g. Connect the cable to the UPS CON.

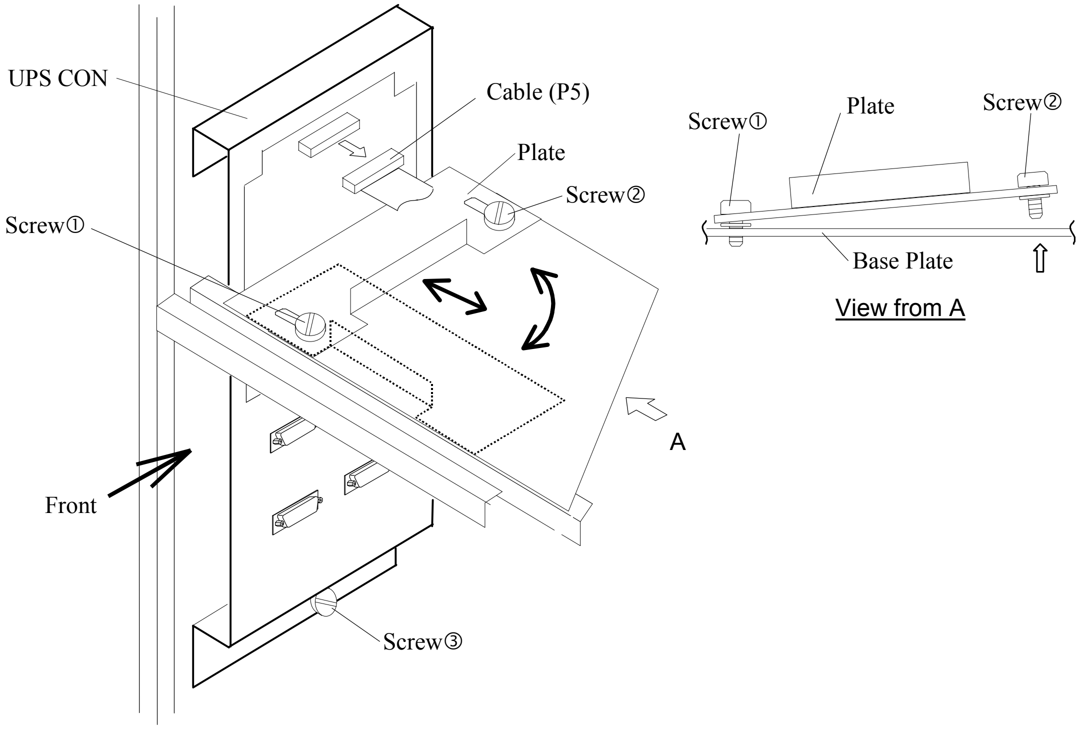

UPS CON
Cable (P5)
Plate
Screw②
Screw①
A
Front
Screw③
Screw①
Plate
Screw②
Base Plate
View from A

Fig. T27-2 Replacement of UPS CON

---

3. Connect the DBUS Cables.
   a. Connect the DBUS cables to UPS CON. Refer to Fig. T27-1.

---

4. Go to SVP post procedure t1 [REP04-320].

[POST-PROCEDURE a]

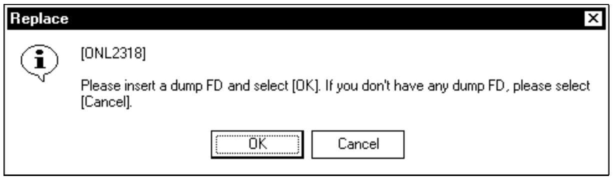
— OUTLINE —

① Execute CUDG on P-DEV.
② Specify recovery.
③ Copy back
④ SIM Complete

CAUTION

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

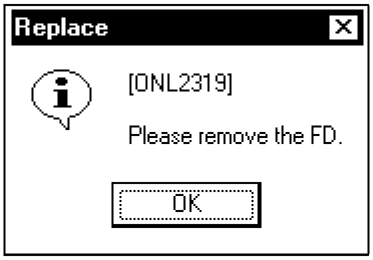
1. <Check the beginning of recovery>
   Please insert the floppy disk and select (CL) [OK].
   Failure information of the physical device is written to the floppy disk.



[ONL2318]

Please insert a dump FD and select [OK]. If you don't have any dump FD, please select [Cancel].

   [After the completion of writing failure information:]
   "Please remove the FD." is displayed.
   Please remove the floppy disk and select (CL) [OK].



[ONL2319]

Please remove the FD.

---

2. <Spin up the Physical Drive>
   "Spinning up..." is displayed.

---

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

4. <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.

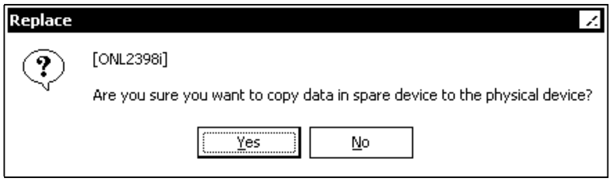
---

5. <Restore Physical Drive>
“Restoring...” is displayed.

6. <Check the Physical Drive>
“Checking...” is displayed.

---

7. <Check the beginning of copyback>
Select (CL) [Yes] in response to “Are you sure you want to copy data in spare device to the physical device?”.

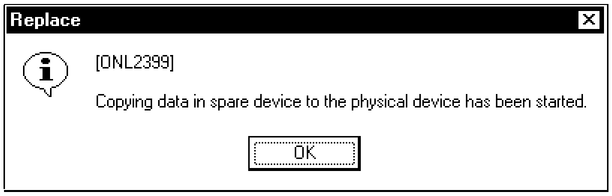


[ONL2398i]

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

---

8. <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.”.



[ONL2399]

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

---

9. <SIM Complete>
Refer to SVP02-580.

[POST-PROCEDURE b]

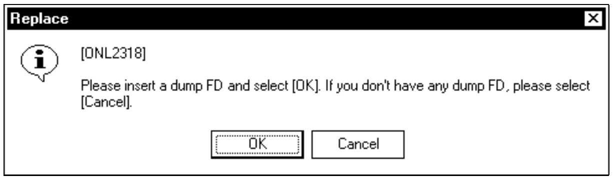
— OUTLINE —

① Execute CUDG on P-DEV.
② Specify recovery.
③ Correction copy
④ Reset ORM Error Count on the P-DEV.
⑤ Reset Threshole Counter
⑥ SIM Complete

CAUTION

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

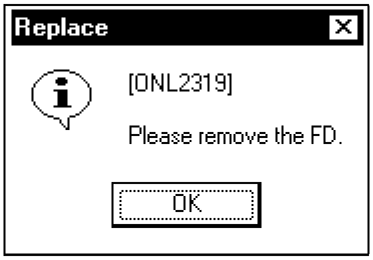
1. <Check the beginning of recovery>
   Please insert the floppy disk and select (CL) [OK].
   Failure information of the physical device is written to the floppy disk.



[ONL2318]

Please insert a dump FD and select [OK]. If you don't have any dump FD, please select [Cancel].

   [After the completion of writing failure information:]
   "Please remove the FD." is displayed.
   Please remove the floppy disk and select (CL) [OK].



[ONL2319]

Please remove the FD.

2. <Spin up the Physical Drive>
   "Spinning up..." is displayed.

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

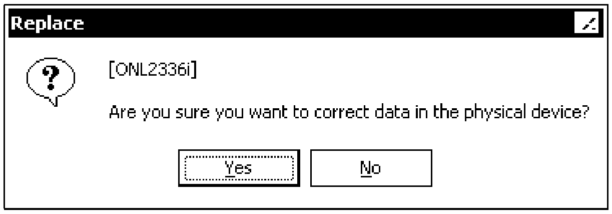
4. <Restore Physical Drive>
“Restoring...” is displayed.

---

5. <Check the Drive Status>
“Checking...” is displayed.
Device is still blocked.

---

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



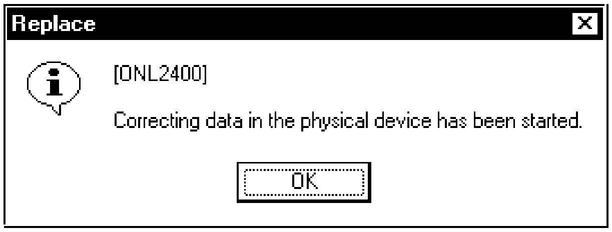
[ONL2336i]

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

---

7. <Correct data>
“Correcting...” is displayed.

8. <Check the starting of Correction copy>
Select (CL) [OK] in response to “Correcting data in the physical device has been started.”.

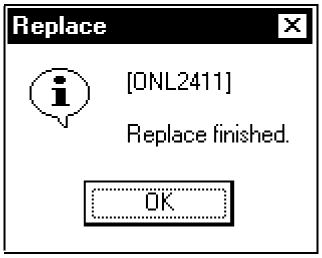


[ONL2400]

Correcting data in the physical device has been started.

---

9. <Check the end of P-DEV recovery>
Select (CL) [OK] in response to “Replace finished.”.



[ONL2411]

Replace finished.

---

10. <SIM Complete>
Refer to SVP02-580.

[POST-PROCEDURE c]

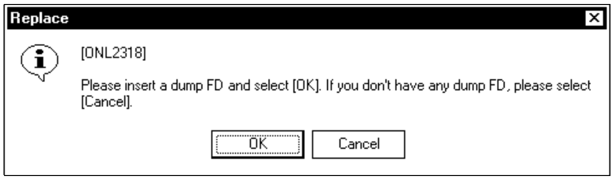
— OUTLINE —

① Perform L-DEV formatting on P-DEV.
② Reset ORM Error Count on P-DEVs.
③ Recover with backup data.
④ Reset Threshold Counter
⑤ SIM Complete

CAUTION

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

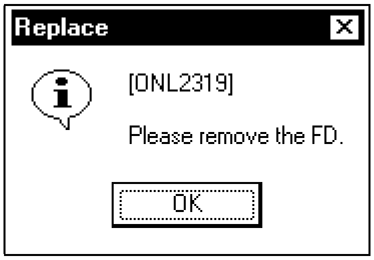
1. <Check the beginning of recovery>
   Insert the floppy disk and select (CL) [OK].
   Failure information of the physical device is written to the floppy disk.



[ONL2318]

Please insert a dump FD and select [OK]. If you don't have any dump FD, please select [Cancel].

[After the completion of writing failure information:]
"Please remove the FD." is displayed.
Remove the floppy disk and select (CL) [OK].



[ONL2319]

Please remove the FD.

2. <Spin up the Physical Drive>
   "Spinning up..." is displayed.

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

4. <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.

5. <Restore Physical Drive>
“Restoring...” is displayed.

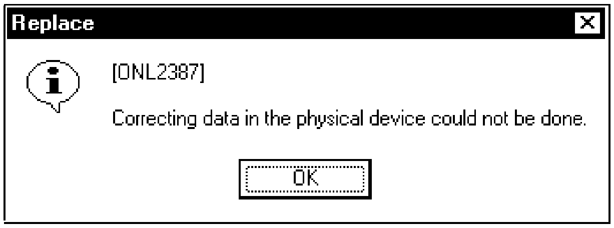
6. <Check the Drive Status>
“Checking...” is displayed.

7. <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.”.



[ONL2387]

Correcting data in the physical device could not be done.

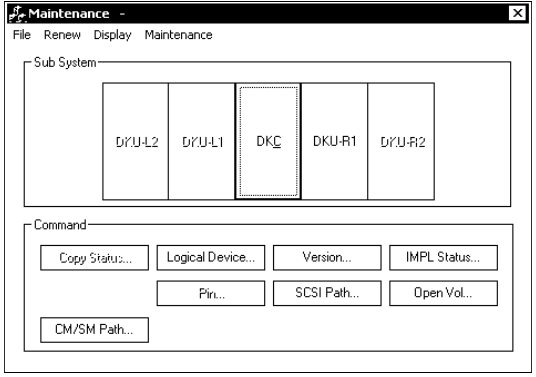
8. <Select [Logical Device]>

CAUTION

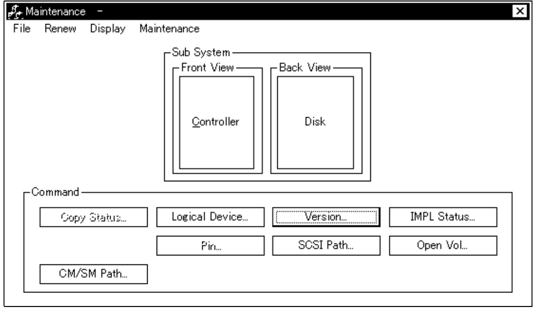
Before you perform following steps, be sure to call T.S.C.
Data housed in Logical Device will be lost due to formatting Logical Device.

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

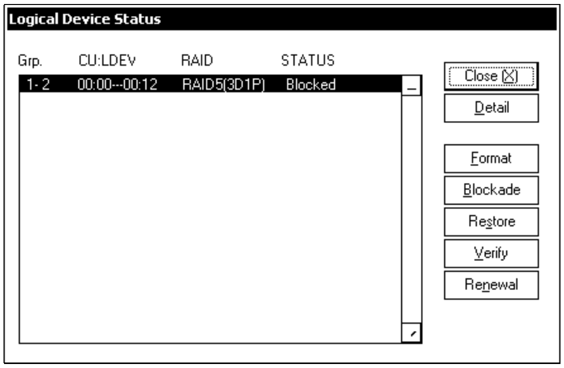
(Multi Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(Single Cabinet Model)


Maintenance -
File
Renew
Display
Maintenance
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

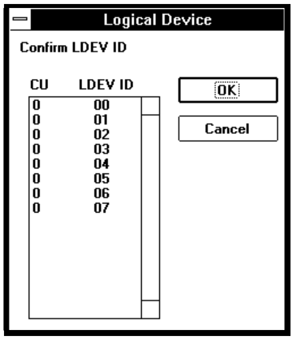
9. <Logical Device Status>
Select (CL) [Format...].


Logical Device Status
Close [X]
Detail
Format
Blockade
Restore
Verify
Renewal

Grp.	CU:LDEV	RAID	STATUS
1- 2	00:00---00:12	RAID5(3D1P)	Blocked

---

10. <Format Logical Device>
Select (CL) corresponding LDEV from the LDEV ID list in the 'Logical Device' dialog box and select (CL) [OK].
If the target LDEV is not blocked, return to 'Logical Device Status' dialog box.


Logical Device
Confirm LDEV ID
OK
Cancel

CU	LDEV ID
0	00
0	01
0	02
0	03
0	04
0	05
0	06
0	07

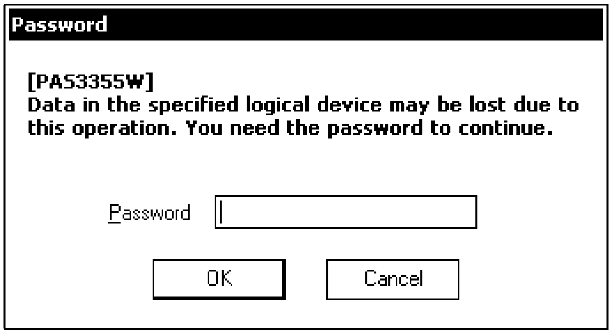
---

11. <Caution message for DATA lost>

⚠ CAUTION

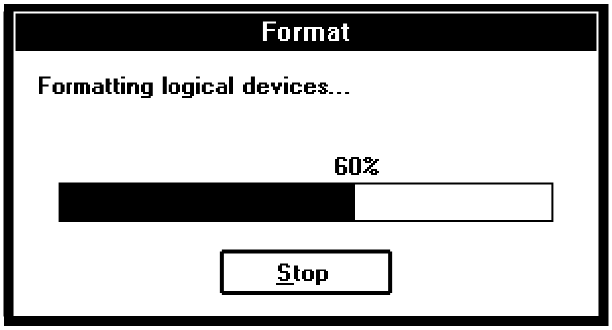
This is a special (exceptional) operation that can cause a serious failure such as a system down or a data loss and requires an input of a password. Ask the technical support center about the appropriateness of the operation, and input the password after getting an approval of executing the operation.

"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].


Password
Password
OK
Cancel

[PAS3355W]
Data in the specified logical device may be lost due to this operation. You need the password to continue.

12. <Check Formatting the logical Device>
“Formatting the logical device...” is displayed.



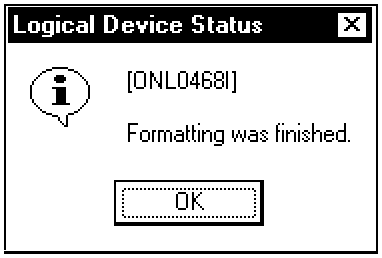
Format

Formatting logical devices...

60%

---

13. <Check the end of Format Logical Device>
Select (CL) [OK] in response to “Formatting was finished.”.



Logical Device Status

[ONL0468I]

Formatting was finished.

---

14. <SIM Complete>
Refer to SVP02-580.

---

15. <Recover data>
Ask the customer for recovering data with backup data.

[POST-PROCEDURE d]

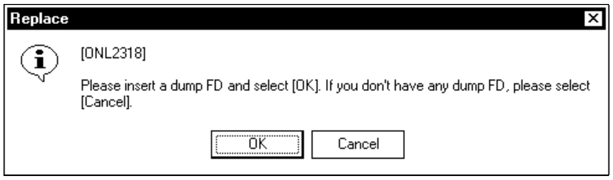
— OUTLINE —

① Execute CUDG on P-DEV.
② Specify recovery.
③ Reset ORM Error Count on the P-DEV.
④ Reset Threshold Counter.
⑤ SIM Complete.

⚠ CAUTION

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

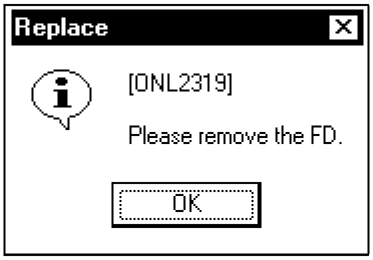
1. <Check the beginning of recovery>
Please insert the floppy disk and select (CL) [OK].
Failure information of the physical device is written to the floppy disk.



[ONL2318]

Please insert a dump FD and select [OK]. If you don't have any dump FD, please select [Cancel].

[After the completion of writing failure information:]
"Please remove the FD." is displayed.
Please remove the floppy disk and select (CL) [OK].



[ONL2319]

Please remove the FD.

---

2. <Check the spin up process>
"Spinning up..." is displayed.

---

3. <Check the INLINE process>
"DKU INLINE is now running..." is displayed.

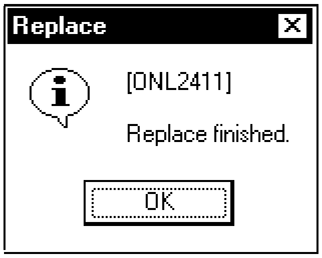
4. <Replacement of the DKU micro-program>
When the revision of the DKU micro-program in the SVP hard disk is newer than that in the PDEV, the following message appears on the screen.
The message "Exchanging DKU micro-program..." appears.

---

5. <Restore Physical Drive>
"Restoring..." is displayed.

---

6. <Check the end of P-DEV recovery>
Select (CL) [OK] in response to "Replace finished.".



Replace

[ONL2411]

Replace finished.

---

7. <SIM Complete>
Refer to SVP02-580.

[POST-PROCEDURE e]

— OUTLINE —

① Execute CUDG on cache.
② Specify recovery.
③ SIM Complete

1. <INLINE CUDG>
   “INLINE CUDG is now running...” is displayed.

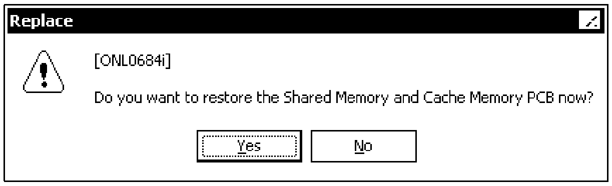
---

2. <Check the beginning of cache/SM recovery>

CAUTION

Selecting "No" stops the recovery and places the cache in the status being blocked for maintenance.

Select (CL) [Yes] in response to:
* For CACHE (with SM)
“Do you want to restore the Shared Memory and Cache Memory PCB now?”
* For CACHE ---------- [Go to step 4]
“Do you want to restore the Cache Memory PCB now?”



[ONL0684i]

Do you want to restore the Shared Memory and Cache Memory PCB now?

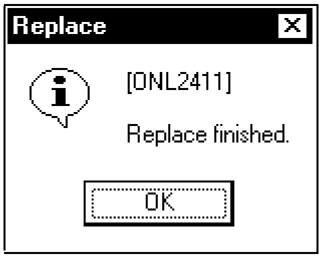
---

3. <Restore the Shared Memory>
   “Restoring the Shared Memory PCB...” is displayed.

4. <Restore the Cache Memory>
   "Restoring the Cache Memory PCB..." is displayed.

---

5. <Check the end of Cache/Shared Memory recovery>
   Select (CL) [OK] in response to "Replace finished.".



Replace

[ONL2411]

Replace finished.

---

6. <SIM Complete>
   Refer to SVP02-580.

7\.

Close the 'cache-xx' window.
Close the 'cluster-n' window.

(Multi Cabinet Model)
Close 'DKC' window.

(Single Cabinet Model)
Close 'Controller' window.

Close 'Maintenance' window.

[POST-PROCEDURE f]

— OUTLINE —

① Specify recovery for CHA/DKA.
② Path online (for CHA)
③ SIM Complete

<For CHA/DKA>

1. <Waiting for Power Event>
   “Waiting for Power Event...
   Usually several minutes (maximum 15 minutes).” is displayed.

---

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

---

3. <Check the recovery processing>
   The following message is displayed:

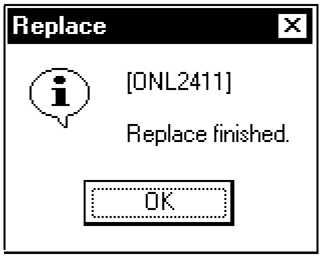
   * For DKA
   “Restoring the DKA...”

4. <Check the end of CHA/DKA recovery>

CAUTION

Confirm the version of the exchanged CHA/DKA microprogram on the "STATUS" screen.

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



[ONL2411]

Replace finished.

---

5. <Path on-line when CHA is replaced>
Whenever a CHA is replaced, set the path (from the host) on the replaced CHA to ONLINE by your customer.

6. <SIM Complete>
Refer to SVP02-580.

7.

Close the ‘CHA-xx’ window.
Close the ‘cluster-n’ window.

(Multi Cabinet Model)
Close ‘DKC’ window.

(Single Cabinet Model)
Close ‘Controller’ window.

Close ‘Maintenance’ window.

[POST-PROCEDURE i]

— OUTLINE —

① Specify recovery for DKA.
② SIM Complete

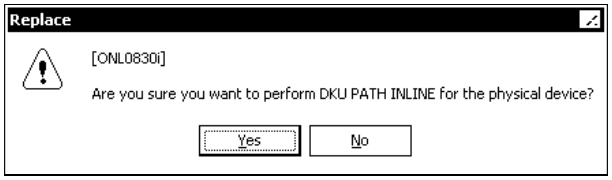
⚠ CAUTION

This processing is a special procedure for detecting a cause of a path error.
Contact the technical support center before performing this processing.

CAUTION

This processing is a special procedure for detecting a cause of a path error.
Contact the technical support center before performing this processing.

1. <Check the execution of PATH INLINE>
Select (CL) [Yes] in response to:
"Are you sure you want to perform DKU PATH INLINE for the physical device?"
Go to step 2.
Select (CL) [No] in response to:
Go to step 3.



[ONL0830i]

Are you sure you want to perform DKU PATH INLINE for the physical device?

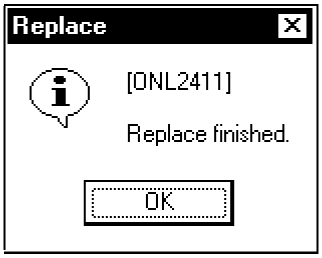
2. "DKU PATH INLINE is now running..." is displayed.

3. <Check the DKA recovery processing>
The following message is displayed:
"Restoring the DKA..."

CAUTION

This processing is a special procedure for detecting a cause of a path error.
Contact the technical support center before performing this processing.

4. <Check the end of DKA recovery>
   Select (CL) [OK] in response to “Replace finished.”.



[ONL2411]

Replace finished.

---

5. <SIM Complete>
   Refer to SVP02-580.

6.

   Close the ‘DKA-xx’ window.
   Close the ‘cluster-n’ window.

   (Multi Cabinet Model)
   Close ‘DKC’ window.

   (Single Cabinet Model)
   Close ‘Controller’ window.

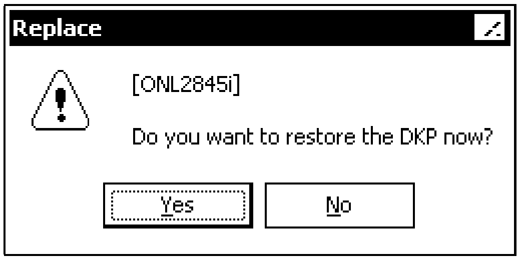
   Close ‘Maintenance’ window.

[POST-PROCEDURE j]

— OUTLINE —

① Specify recovery of DKP was connected FSW.
② SIM Complete

1. <Check the beginning of DKP recovery>
Select (CL) [Yes] in response to “Do you want to restore the DKP now?”.



[ONL2845i]

Do you want to restore the DKP now?

---

2. <DKU PATH INLINE>
“DKU PATH INLINE is now running...” is displayed.

⚠ CAUTION

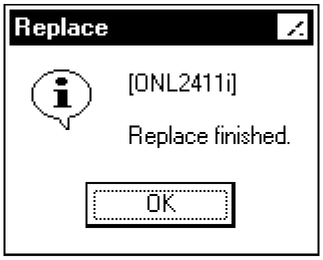
DKP connected to the loop concerned blockades with DKU PATH INLINE at the time of obstacle discovery.
Confirm the Diagnosis Log and solve the problem.

---

3. <Check DKP recovery processing>
“Restoring the DKP...” is displayed.

---

4. <Check the end of FSW replace>
Select (CL) [OK] in response to “Replace finished.”.



[ONL2411i]

Replace finished.

5. <SIM Complete>
Refer to SVP02-580.

6.
Close the ‘HDU-xxx’ window.
Close the ‘Disk-xx’ window.
Close ‘Maintenance’ window.

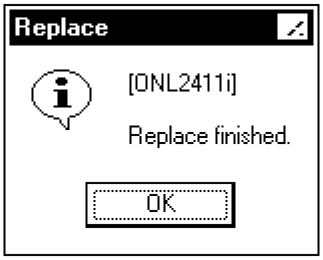
[POST-PROCEDURE k]

— OUTLINE —

① Specify recovery of CSW.
② SIM Complete

1. <Check the CSW recovery procedure>
   “Restoring the CSW...” is displayed.

2. <Check the CSW replace finished>
   Select (CL) [OK] in response to “Replace finished.”.



Replace

[ONL2411i]

Replace finished.

3. <SIM Complete>
   Refer to SVP02-580.

4. Close ‘Cluster-n’ window.

   (Multi Cabinet Model)
   Close ‘DKC’ window.

   (Single Cabinet Model)
   Close ‘Controller’ window.

   Close ‘Maintenance’ window.

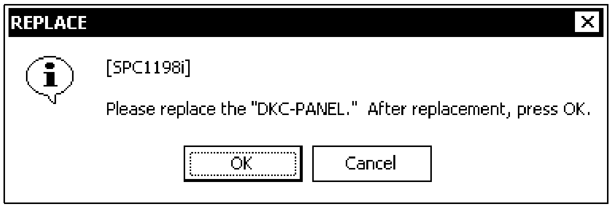
[POST-PROCEDURE t1]

— OUTLINE —

① Specify end of special part replacement.
② Reinstall related parts.
③ Start environment monitor.
④ SIM Complete.

[1] Start of POST-PROCEDURE

1. <Check replacement of special part>
Select (CL) [OK] in response to “Please replace the "XXXXX." After replacement, press OK.”.
Valid “XXXXX” values are listed below.
- DKC-PANEL ---Go to [2] (REP04-340)
- PCI CON---------Go to [3] (REP04-370)
- UPS CON--------Go to [3] (REP04-370)
- EPO SW ---------Go to [6] (REP04-400)
- RS CON----------Go to [5] (REP04-390)
- DKCMN 1/2-----Go to [4] (REP04-380)
- SSVP -------------Go to [7] (REP04-410)
- HUB-BOX-------Go to [8] (REP04-430)
- MONI-CON1/2 -Go to [9] (REP04-440)
- SVPPS-BOX ----Go to [12] (REP04-590)



[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

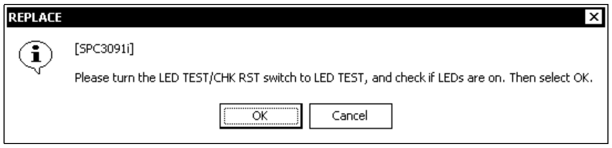
(ex. DKC-PANEL)

For each of the following, no message is displayed when a part (hardware) of it has been replaced. Proceed to the respective steps shown below.
- SVP ---------------Go to [10] (REP04-460)
- SVP&FLASH ---Go to [10] (REP04-460)
- FLASH CARD--Go to [11] (REP04-580)
- Switch SVP------Go to [13] (REP04-610)

Note: When you want to replace UPS CON, execute PCI CON Replacement Process.

[2] DKC-PANEL

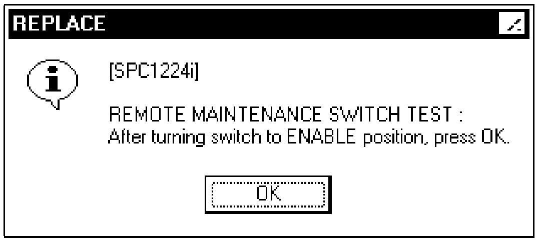
1. <LED TEST>
Select (CL) [OK] in response to “Please turn the LED TEST/CHK RST switch to LED TEST, and check if LEDs are on. Then select OK.”.



[SPC3091i]

Please turn the LED TEST/CHK RST switch to LED TEST, and check if LEDs are on. Then select OK.

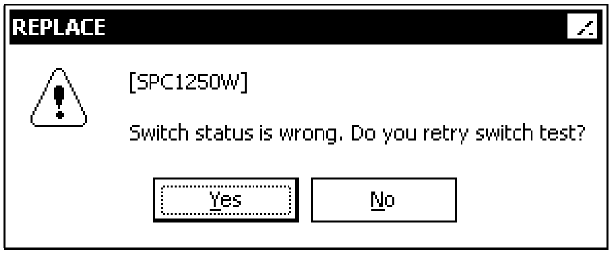
2.
Select (CL) [OK] in response to “REMOTE MAINTENANCE SWITCH TEST: After turning switch to ENABLE position, press OK.”.



[SPC1224i]

REMOTE MAINTENANCE SWITCH TEST :
After turning switch to ENABLE position, press OK.

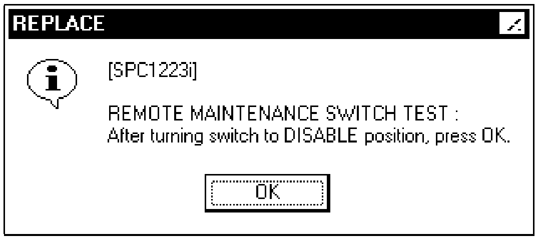
3.
If an error has occurred in the switch test, an error message is displayed.
If you select (CL) [Yes], go back to step 2.
If you select (CL) [No], go to step 8.



[SPC1250W]

Switch status is wrong. Do you retry switch test?

4.
Select (CL) [OK] in response to “REMOTE MAINTENANCE SWITCH TEST: After turning switch to DISABLE position, Press OK.”.

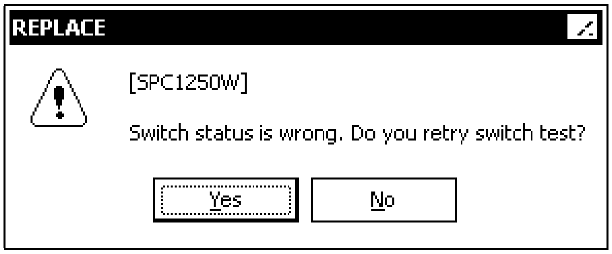


[SPC1223i]

REMOTE MAINTENANCE SWITCH TEST :
After turning switch to DISABLE position, press OK.

5.

If an error has occurred in the switch test, an error message is displayed.
If you select (CL) [Yes], go back to step 4.
If you select (CL) [No], go to step 8.



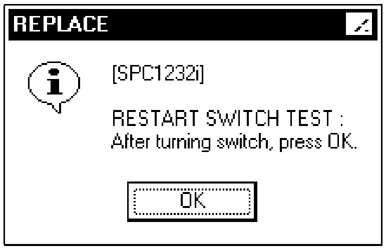
REPLACE

[SPC1250W]

Switch status is wrong. Do you retry switch test?

6.

Select (CL) [OK] in response to “RESTART SWITCH TEST: After turning switch, press OK.”.



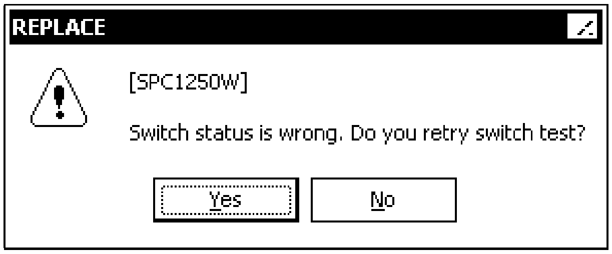
REPLACE

[SPC1232i]

RESTART SWITCH TEST :
After turning switch, press OK.

7.

If an error has occurred in the switch test, an error message is displayed.
If you select (CL) [Yes], go back step 6.
If you select (CL) [No], go to step 8.



REPLACE

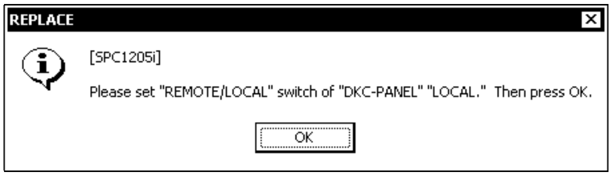
[SPC1250W]

Switch status is wrong. Do you retry switch test?

---

8. <Set REMOTE/LOCAL>

Set REMOTE/LOCAL switch, in response to the message “Please set "REMOTE/LOCAL" switch of "DKC-PANEL" "LOCAL". Then press OK.”.
After confirming that switch set, select (CL) [OK].
The SVP automatically checks the REMOTE/LOCAL switch status.

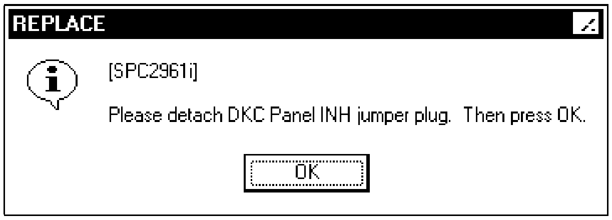


REPLACE

[SPC1205i]

Please set "REMOTE/LOCAL" switch of "DKC-PANEL" "LOCAL." Then press OK.

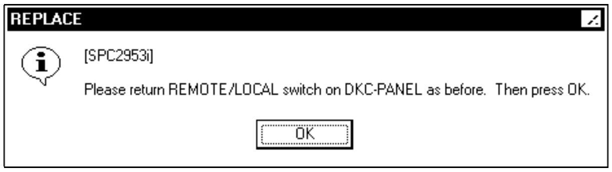
9. <Detach jumper>
Detach jumper from DKCMN in response to "Please detach DKC Panel INH jumper plug. Then press OK.".
After confirming that jumper is detached, select (CL) [OK].
The SVP automatically checks that jumper plug is detached.



[SPC2961i]

Please detach DKC Panel INH jumper plug. Then press OK.

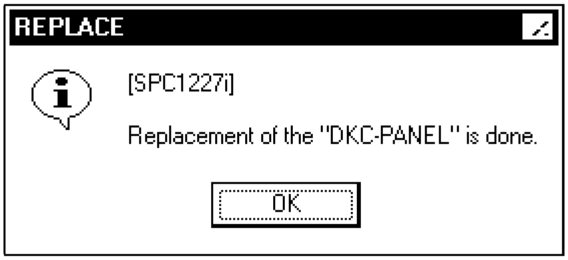
10. <Reset REMOTE/LOCAL switch>
Reset REMOTE/LOCAL switch to original value in response to "Please return REMOTE/LOCAL switch, on DKC-PANEL as before. Then press OK." (REP03-370).
After checking SW setting, select (CL) [OK].



[SPC2953i]

Please return REMOTE/LOCAL switch on DKC-PANEL as before. Then press OK.

11. <Check end of replacement>
Select (CL) [OK] in response to "Replacement of the "DKC-PANEL" is done.".



[SPC1227i]

Replacement of the "DKC-PANEL" is done.

(ex. RS CON)

12. <SIM Complete>

See SVP02-580.

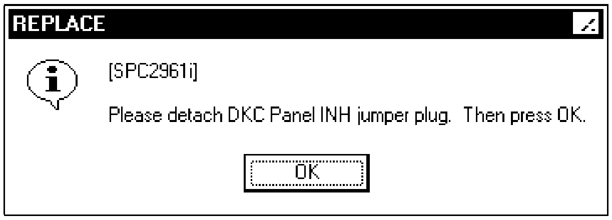
(Multi Cabinet Model)
Close 'DKC' window.
Close 'Maintenance' window.

(Single Cabinet Model)
Close 'Controller' window.
Close 'Maintenance' window.

Go to POST-PROCEDURE z (REP04-1400).

[3] PCI CON (UPS CON)

1. <Detach jumper>
   Detach jumper from DKCMN in response to "Please detach DKC Panel INH jumper plug. Then press OK.".
   After confirming that jumper is detached, select (CL) [OK].
   The SVP automatically checks that jumper plug is detached.

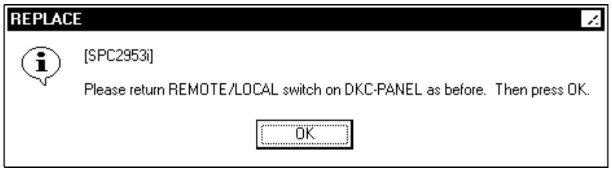


[SPC2961i]

Please detach DKC Panel INH jumper plug. Then press OK.

---

2. <Reset DKC-PANEL switch>
   Reset REMOTE/LOCAL switch to original value in response to "Please return REMOTE/LOCAL switch, on DKC-PANEL as before. Then press OK." (REP03-370).
   After checking SW setting, select (CL) [OK].

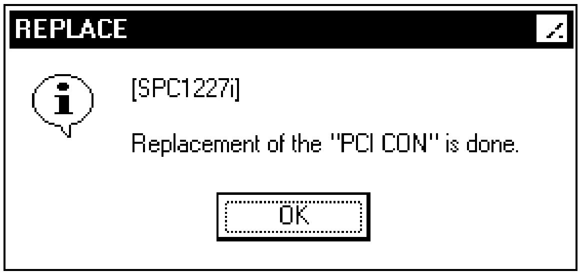


[SPC2953i]

Please return REMOTE/LOCAL switch on DKC-PANEL as before. Then press OK.

---

3. <Check end of replacement>
   Select (CL) [OK] in response to "Replacement of the "PCI CON" is done.".



[SPC1227i]

Replacement of the "PCI CON" is done.

(ex. RS CON)

---

4. <SIM Complete>

   See SVP02-580.

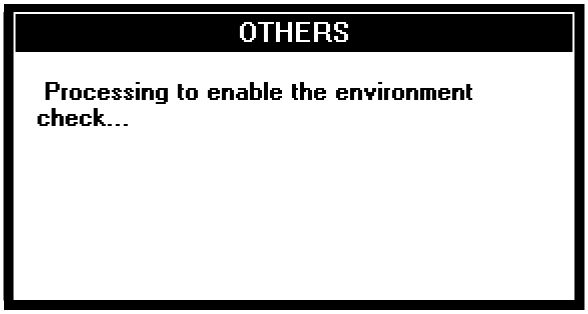
   (Multi Cabinet Model)
   Close 'DKC' window.
   Close 'Maintenance' window.

   (Single Cabinet Model)
   Close 'Controller' window.
   Close 'Maintenance' window.

   Go to POST-PROCEDURE z (REP04-1400).

[4] DKCMN 1/2

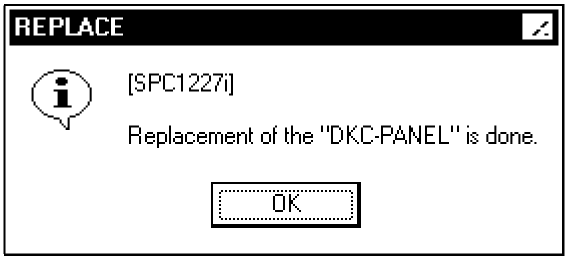
1. <Check environment monitor start processing>
"Processing to enable the environment check..." is displayed.



Processing to enable the environment check...

---

2. <Check end of replacement>
Select (CL) [OK] in response to "Replacement of the "DKCMNn" is done.".



[SPC1227i]

Replacement of the "DKC-PANEL" is done.

(ex. RS CON)

---

3. <Confirm status>
- DKCMN 1/2
  Confirm the status display.
  If button is normal (lighting), go to step 4.
  If button is blinking, replace the target part again, or see TROUBLE SHOOTING SECTION.

---

4. <SIM Complete>

See SVP02-580.

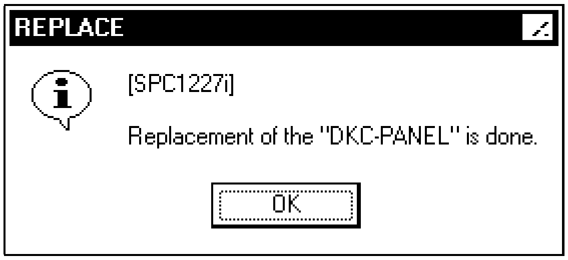
(Multi Cabinet Model)
Close 'DKC' window.
Close 'Maintenance' window.

(Single Cabinet Model)
Close 'Controller' window.
Close 'Maintenance' window.

Go to POST-PROCEDURE z (REP04-1400).

[5] RS CON

1. <Check end of replacement>
Select (CL) [OK] in response to “Replacement of the "RS CON" is done.”.



REPLACE

[SPC1227i]

Replacement of the "DKC-PANEL" is done.

---

2. <Check normal operation of the remote maintenance support system>
When the remote maintenance support system (ASSIST) is not installed, go to step 3.
Perform the line connection test on the SVP connecting line of the remote maintenance support system.

---

3. <SIM Complete>

See SVP02-580.

(Multi Cabinet Model)
Close ‘DKC’ window.
Close ‘Maintenance’ window.

(Single Cabinet Model)
Close ‘Controller’ window.
Close ‘Maintenance’ window.

Go to POST-PROCEDURE z (REP04-1400).

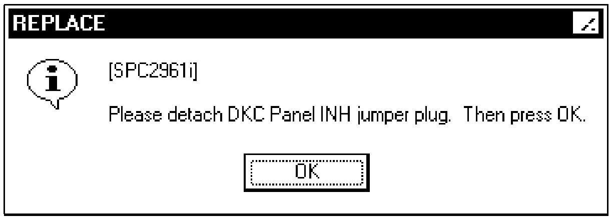
[6] EPO SW

1\.

The SVP automatically checks the EPO SW status.

2. <Detach jumper>

Detach jumper from DKCMN in response to “Please detach DKC Panel INH jumper plug. Then press OK.”.
After confirming that jumper is detached, select (CL) [OK].
The SVP automatically checks that jumper plug is detached.

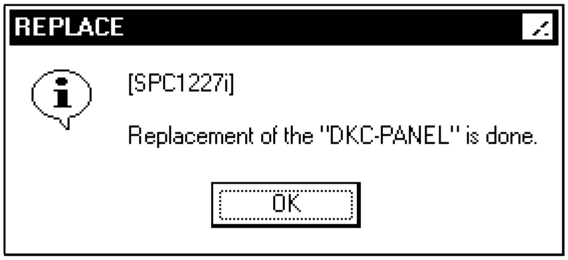


[SPC2961i]

Please detach DKC Panel INH jumper plug. Then press OK.

3. <Check end of replacement>

Select (CL) [OK] in response to “Replacement of the "EPO SW" is done.”.



[SPC1227i]

Replacement of the "DKC-PANEL" is done.

(ex. RS CON)

4. <SIM Complete>

See SVP02-580.

(Multi Cabinet Model)
Close ‘DKC’ window.
Close ‘Maintenance’ window.

(Single Cabinet Model)
Close ‘Controller’ window.
Close ‘Maintenance’ window.

Go to POST-PROCEDURE z (REP04-1400).

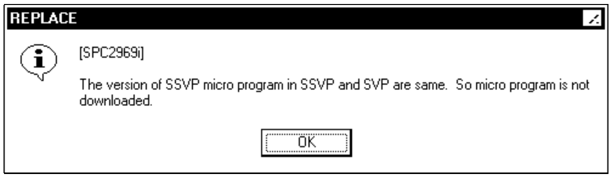
[7] SSVP

1. <Warning message>

CAUTION

When performing a down-load, a request for an entry of a password is displayed.
Contact the Technical Support Center to ask for an instruction.

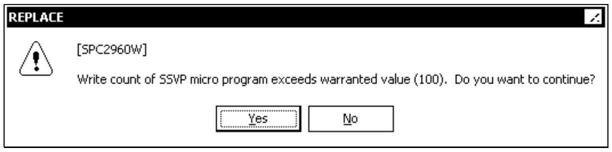
When versions of the microprogram to be downloaded to the SSVP and that stored in an ROM in the SSVP are the same, a message, “The version of SSVP micro program in SSVP and SVP are same. So micro program is not downloaded.” is displayed.
Select (CL) [OK], go to step 3.



[SPC2969i]

The version of SSVP micro program in SSVP and SVP are same. So micro program is not downloaded.

When a number of the SSVP microprogram down-loads exceeds 100, a message, “Write count of SSVP micro program exceeds warranted value (100). Do you want to continue?” is displayed.
When you want to download, select (CL) [Yes] and go to the next step.
When you do not want to download, select (CL) [No] and go to step 3.

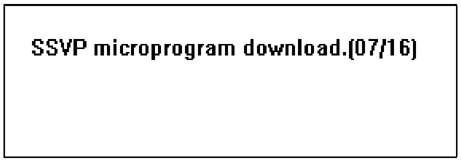


[SPC2960W]

Write count of SSVP micro program exceeds warranted value (100). Do you want to continue?

---

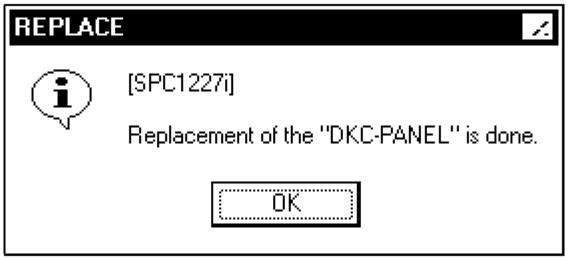
2. The message “SSVP microprogram download.” is displayed.



SSVP microprogram download.(07/16)

---

3. <Check end of replacement>
Select (CL) [OK] in response to “Replacement of the "SSVP" is done.”.



[SPC1227i]

Replacement of the "DKC-PANEL" is done.

4. <SIM Complete>

See SVP02-580.

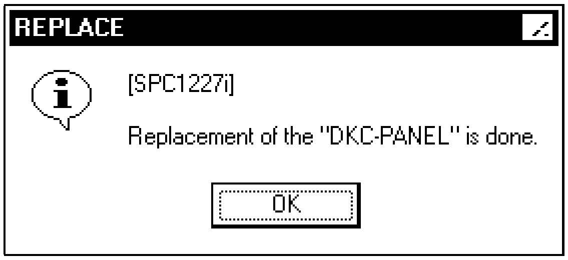
(Multi Cabinet Model)
Close ‘DKC’ window.
Close ‘Maintenance’ window.

(Single Cabinet Model)
Close ‘Controller’ window.
Close ‘Maintenance’ window.

Go to POST-PROCEDURE z (REP04-1400).

[8] HUB-BOX

1. <Check end of replacement>
   Select (CL) [OK] in response to “Replacement of the "HUB-BOX" is done.”.



[SPC1227i]

Replacement of the "DKC-PANEL" is done.

(ex. RS CON)

---

2. <SIM Complete>

   See SVP02-580.

   (Multi Cabinet Model)
   Close ‘DKC’ window.
   Close ‘Maintenance’ window.

   (Single Cabinet Model)
   Close ‘Controller’ window.
   Close ‘Maintenance’ window.

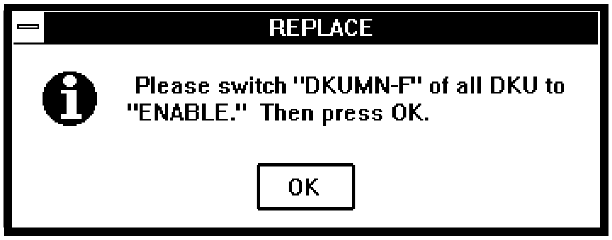
   Go to POST-PROCEDURE z (REP04-1400).

[9] MONI-CON 1/2

1. <Enable DKUMN>

   Enable DKUMN in response to “Please switch “DKUMN-n” of all DKU to “ENABLE.” Then press OK.”.
   After confirming DKUMN is enabled, select (CL) [OK].

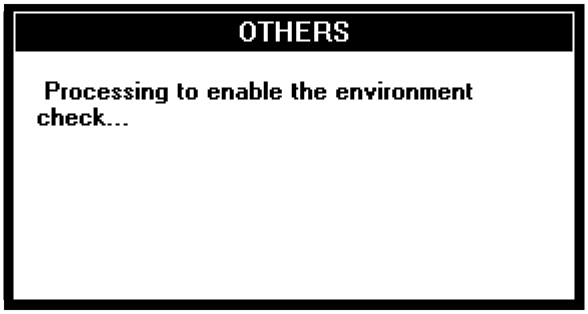
   DKUMN-n
   - For MONI-CON1:
     [Power on DKUMN on front side of DKU]
   - For MONI-CON2:
     [Power on DKUMN on rear side of DKU]



Please switch "DKUMN-F" of all DKU to "ENABLE." Then press OK.

---

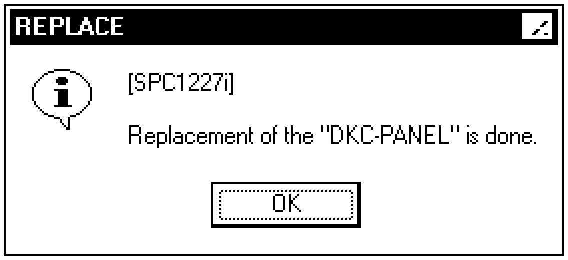
2. <Check environment monitor start processing>
   “Processing to enable the environment check...” is displayed.



Processing to enable the environment check...

---

3. <Check end of replacement>
   Select (CL) [OK] in response to “Replacement of the "MONI-CONn" is done.”.



[SPC1227i]

Replacement of the "DKC-PANEL" is done.

(ex. RS CON)

4. <SIM Complete>

See SVP02-580.

(Multi Cabinet Model)
Close ‘DKC’ window.
Close ‘Maintenance’ window.

(Single Cabinet Model)
Close ‘Controller’ window.
Close ‘Maintenance’ window.

Go to POST-PROCEDURE z (REP04-1400).

[10] SVP, SVP&FLASH CARD

1. Powering up the SVP

⚠ CAUTION

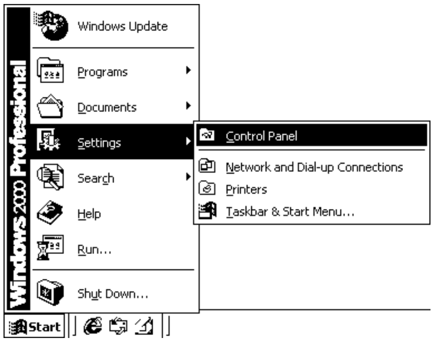
If the MESSAGE LED on DKC-PANEL has lit on when power on SVP, please complete SIM before operation.
(Although “SIM RC = BFE010 (SVP PS1 Warning) and BFE011 (SVP PS2 Warning)” may occur, because it was generated in the process which replaces a SVP, and there is no problem.)

⚠ CAUTION

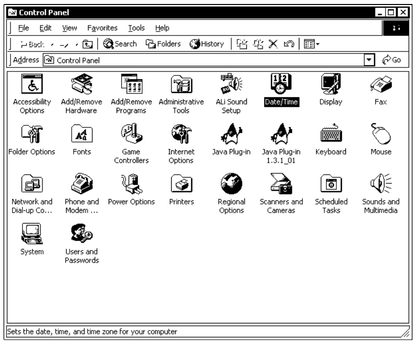
When an SSVP alarm is issued during replacement of the PC, reset the SSVP.

1-1. Set Date/Time

(1) <Open [Control Panel]>
Select (DR) [Settings] and then [Control Panel] from [Start].

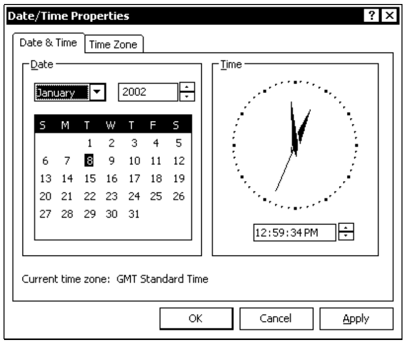

Windows 2000 Professional
Windows Update
Programs
Documents
Settings
Search
Help
Run...
Shut Down...
Start
Control Panel
Network and Dial-up Connections
Printers
Taskbar & Start Menu...

(2) <Open [Date/Time]>
Select (DC) [Date/Time] from [Control Panel].


Control Panel
File
Edit
View
Favorites
Tools
Help
Back
Search
Folders
History
Address
Control Panel
Go
Accessibility Options
Add/Remove Hardware
Add/Remove Programs
Administrative Tools
ALi Sound Setup
Date/Time
Display
Fax
Folder Options
Fonts
Game Controllers
Internet Options
Java Plug-in
Java Plug-in 1.3.1_01
Keyboard
Mouse
Network and Dial-up Co...
Phone and Modem ...
Power Options
Printers
Regional Options
Scanners and Cameras
Scheduled Tasks
Sounds and Multimedia
System
Users and Passwords

Sets the date, time, and time zone for your computer

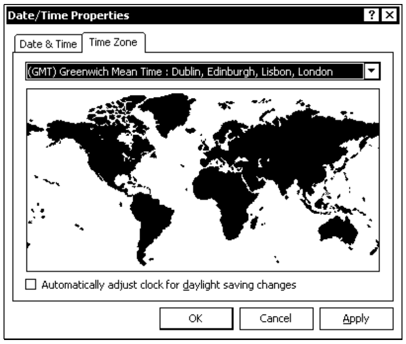
(3) <Select [Time Zone]>
Select (CL) [Time Zone].


Date/Time Properties
Date & Time
Time Zone
Date
Time
S M T W T F S
OK
Cancel
Apply

Date: January 2002, 8
Time: 12:59:34 PM
Current time zone: GMT Standard Time

---

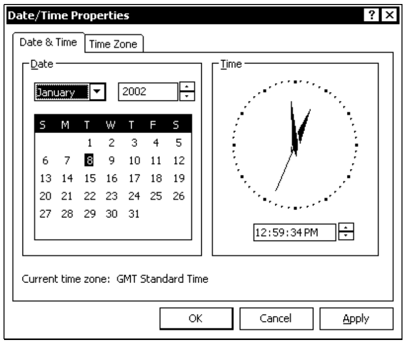
(4) <Check the setting of [Time Zone]>
Make sure that the setting of [Time Zone] is without the relation of a subsystem position "[GMT] Greenwich Mean Time; Dublin, Edinburgh, Lisbon, London". Also, make sure that a check box on the left of "Automatically adjust clock for daylight saving changes" is ☐ (without a check mark).
Then, select (CL) [Date/Time].


Date/Time Properties
Date & Time
Time Zone
OK
Cancel
Apply

(GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London
☐ Automatically adjust clock for daylight saving changes

---

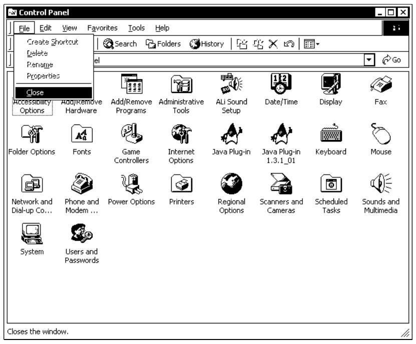
(5) <Set the [Date/Time]>
Check if the [Date/Time] is set to the current time and date.
If not, reset it correctly. Then, select (CL) [OK].


Date/Time Properties
Date & Time
Time Zone
Date
Time
S M T W T F S
OK
Cancel
Apply

Date: January 2002, 8
Time: 12:59:34 PM
Current time zone: GMT Standard Time

---

(6) <Close "Control Panel">
Select (CL) [File] on "Control Panel".
Select (CL) [Close].


Control Panel
File
Edit
View
Favorites
Tools
Help
Create Shortcut
Delete
Rename
Properties
Close
Search
Folders
History
Go
Accessibility Options
Add/Remove Hardware
Add/Remove Programs
Administrative Tools
ALi Sound Setup
Date/Time
Display
Fax
Folder Options
Fonts
Game Controllers
Internet Options
Java Plug-in
Java Plug-in 1.3.1_01
Keyboard
Mouse
Network and Dial-up Co...
Phone and Modem ...
Power Options
Printers
Regional Options
Scanners and Cameras
Scheduled Tasks
Sounds and Multimedia
System
Users and Passwords
Closes the window.

Blank Sheet

2. Installation of Micro-program

① Insert the CD-ROM disk into the CD-ROM drive and then wait one minute.

② Select (CL) [Run...] from the [Start]. Enter “e:\setup.exe” and select (CL) [OK].

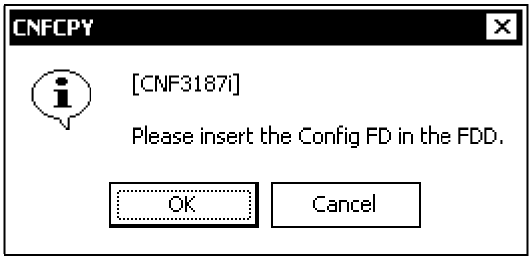
3. Installation of Configuration

(1) Inserting the Config FD

① A message “Please insert the Config FD into the FDD.” is displayed.

② Insert the Config FD into the FDD and select (CL) [OK].

If you insert the previously backed-up Config FD, the original configuration is recovered.



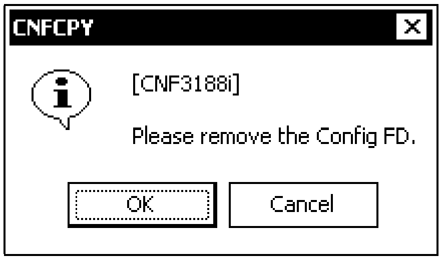
[CNF3187i]

Please insert the Config FD in the FDD.

(2) Removing the Config FD

① When the copying of the Config is completed, a message “Please remove the Config FD.” is displayed.

② Remove the Config FD from the FDD and select (CL) [OK].



[CNF3188i]

Please remove the Config FD.

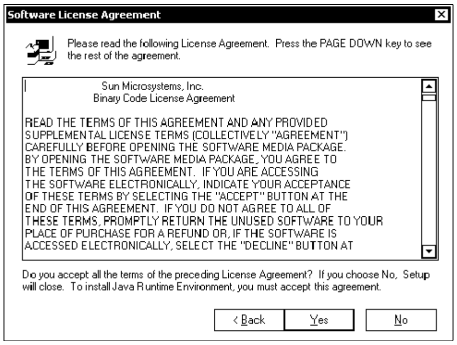
4. JAVA Setup

4-1 JAVA Setup

Java Setup is executed. When Java is installed, it progresses to step 4-2.

(1)

Select (CL) [Yes].



Please read the following License Agreement. Press the PAGE DOWN key to see the rest of the agreement.

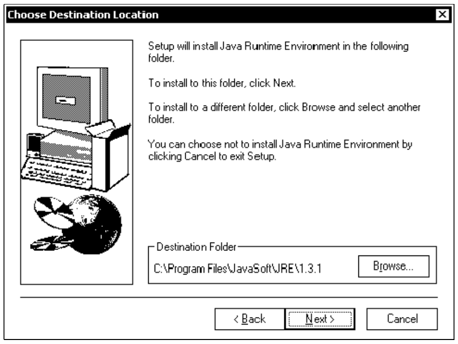
Sun Microsystems, Inc.
Binary Code License Agreement

READ THE TERMS OF THIS AGREEMENT AND ANY PROVIDED SUPPLEMENTAL LICENSE TERMS (COLLECTIVELY "AGREEMENT") CAREFULLY BEFORE OPENING THE SOFTWARE MEDIA PACKAGE. BY OPENING THE SOFTWARE MEDIA PACKAGE, YOU AGREE TO THE TERMS OF THIS AGREEMENT. IF YOU ARE ACCESSING THE SOFTWARE ELECTRONICALLY, INDICATE YOUR ACCEPTANCE OF THESE TERMS BY SELECTING THE "ACCEPT" BUTTON AT THE END OF THIS AGREEMENT. IF YOU DO NOT AGREE TO ALL OF THESE TERMS, PROMPTLY RETURN THE UNUSED SOFTWARE TO YOUR PLACE OF PURCHASE FOR A REFUND OR, IF THE SOFTWARE IS ACCESSED ELECTRONICALLY, SELECT THE "DECLINE" BUTTON AT

Do you accept all the terms of the preceding License Agreement? If you choose No, Setup will close. To install Java Runtime Environment, you must accept this agreement.

(2)

Select (CL) [Next].



Setup will install Java Runtime Environment in the following folder.

To install to this folder, click Next.

To install to a different folder, click Browse and select another folder.

You can choose not to install Java Runtime Environment by clicking Cancel to exit Setup.

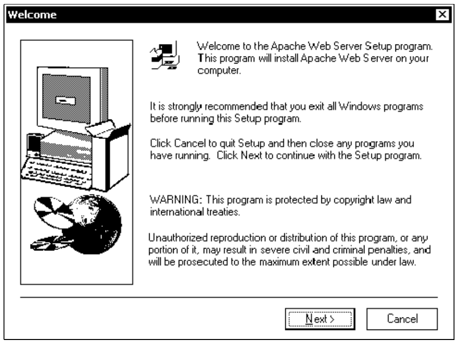
Destination Folder: C:\Program Files\JavaSoft\JRE\1.3.1

4-2 APACHE Setup

APACHE Setup is executed. When APACHE is installed, it progresses to step 5.

(1)

Select (CL) [Next].



Welcome to the Apache Web Server Setup program. This program will install Apache Web Server on your computer.

It is strongly recommended that you exit all Windows programs before running this Setup program.

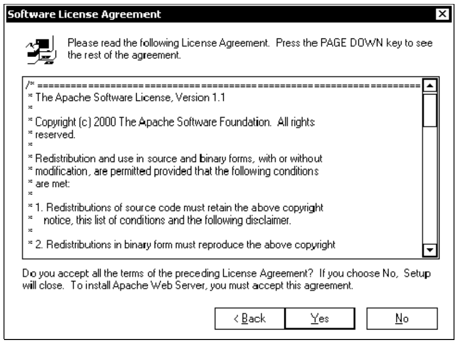
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.

WARNING: This program is protected by copyright law and international treaties.

Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

(2)

Select (CL) [Yes].



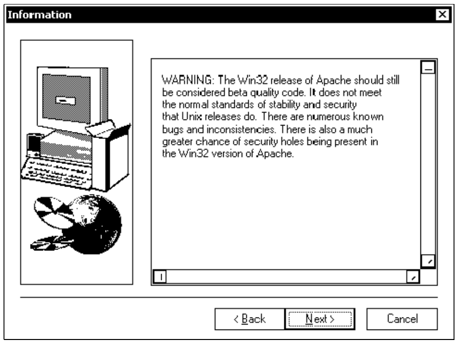
Please read the following License Agreement. Press the PAGE DOWN key to see the rest of the agreement.

```
/* ====================================================================
 * The Apache Software License, Version 1.1
 *
 * Copyright (c) 2000 The Apache Software Foundation.  All rights
 * reserved.
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 *
 * 1. Redistributions of source code must retain the above copyright
 *    notice, this list of conditions and the following disclaimer.
 *
 * 2. Redistributions in binary form must reproduce the above copyright
```

Do you accept all the terms of the preceding License Agreement? If you choose No, Setup will close. To install Apache Web Server, you must accept this agreement.

(3)

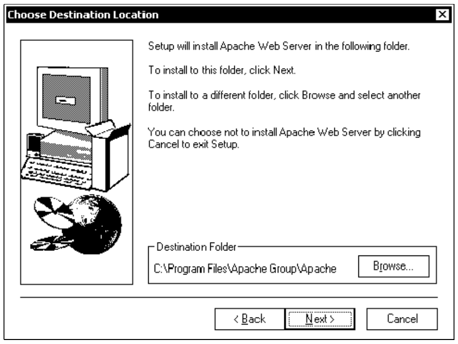
Select (CL) [Next].



WARNING: The Win32 release of Apache should still be considered beta quality code. It does not meet the normal standards of stability and security that Unix releases do. There are numerous known bugs and inconsistencies. There is also a much greater chance of security holes being present in the Win32 version of Apache.

(4)

Select (CL) [Next].


Choose Destination Location
Browse...
< Back
Next >
Cancel

Setup will install Apache Web Server in the following folder.

To install to this folder, click Next.

To install to a different folder, click Browse and select another folder.

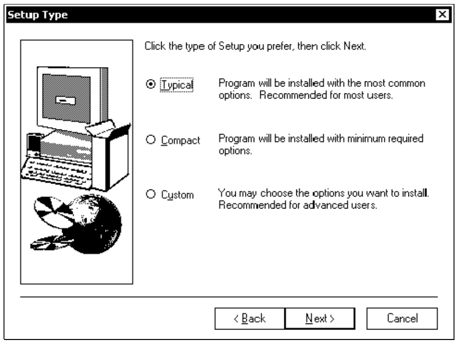
You can choose not to install Apache Web Server by clicking Cancel to exit Setup.

Destination Folder: C:\Program Files\Apache Group\Apache

---

(5)

Select (CL) [Next].


Setup Type
< Back
Next >
Cancel

Click the type of Setup you prefer, then click Next.

● Typical — Program will be installed with the most common options. Recommended for most users.

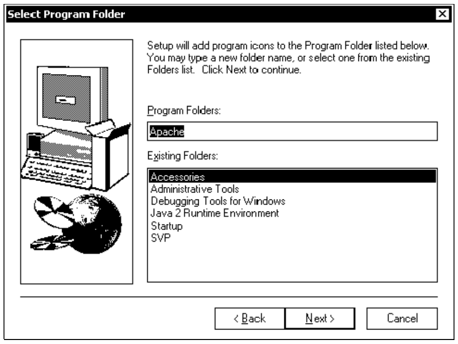
○ Compact — Program will be installed with minimum required options.

○ Custom — You may choose the options you want to install. Recommended for advanced users.

---

(6)

Select (CL) [Next].


Select Program Folder
< Back
Next >
Cancel

Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing Folders list. Click Next to continue.

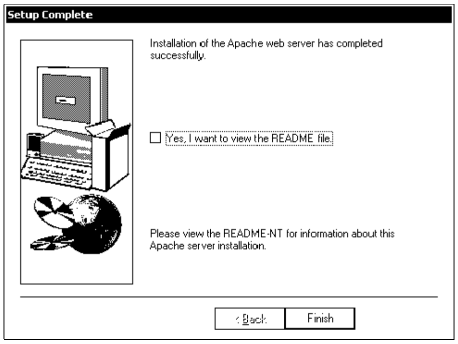
Program Folders: Apache

Existing Folders:
- Accessories
- Administrative Tools
- Debugging Tools for Windows
- Java 2 Runtime Environment
- Startup
- SVP

---

(7)

Remove the check box of “Yes and I want to view the README file.”, and select (CL) [Finish].


Setup Complete
< Back
Finish

Installation of the Apache web server has completed successfully.

☐ Yes, I want to view the README file.

Please view the README-NT for information about this Apache server installation.

5. Restarting the SVP

When the setup is completed, the SVP restarts automatically.

6. Removing the SVP PS ON/OFF INH jumper

Remove the SVP PS ON/OFF INH jumper plug that was attached according to Step1 of [6] in PRE-PROCEDURE T1 (REP02-510).

⚠ CAUTION

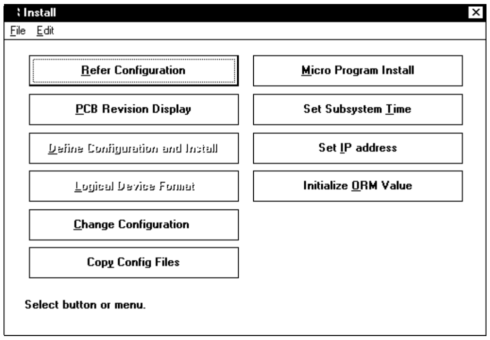
Although “RC = bf85a2” may occur, it generated in process of replacement, and there is no problem. Please complete SIM before operation.

7. Set IP address of SVP

(1) <Open [Install]>
Select (CL) [Install] from 'SVP'.

---

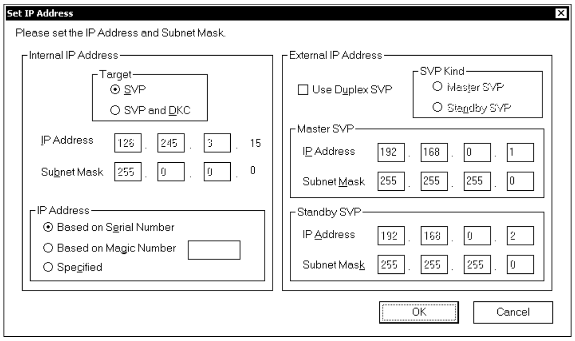
(2) <Select [Set Subsystem IP Address...]>
Select (CL) [Set IP Address...] from 'Install'.


Install
File Edit
Refer Configuration
Micro Program Install
PCB Revision Display
Set Subsystem Time
Define Configuration and Install
Set IP address
Logical Device Format
Initialize ORM Value
Change Configuration
Copy Config Files

Select button or menu.

---

(3) <Set IP Address>
Select (CL) [SVP] from [Target], confirm "IP Address" and "Subnet Mask". Select (CL) [OK]. If the IP Address or Subnet Mask is wrong, enter a correct value.


Set IP Address
Internal IP Address
Target
External IP Address
SVP Kind
○ Master SVP
○ Standby SVP
OK
Cancel

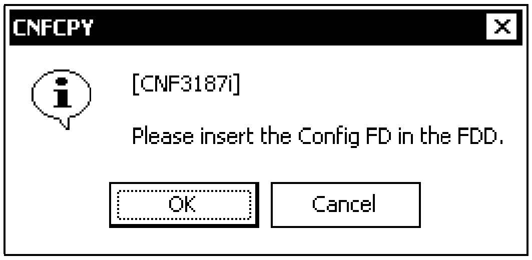
Please set the IP Address and Subnet Mask.

Internal IP Address
Target: ● SVP ○ SVP and DKC
IP Address 126 . 245 . 3 . 15
Subnet Mask 255 . 0 . 0 . 0
IP Address: ● Based on Serial Number ○ Based on Magic Number ○ Specified

External IP Address
☐ Use Duplex SVP
Master SVP: IP Address 192 . 168 . 0 . 1
Subnet Mask 255 . 255 . 255 . 0
Standby SVP: IP Address 192 . 168 . 0 . 2
Subnet Mask 255 . 255 . 255 . 0

---

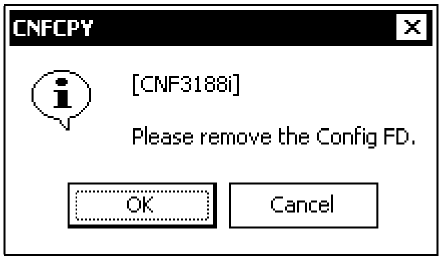
(4) Inserting the Config FD
Insert the Config FD into the FDD and select (CL) [OK].


CNFCPY
OK
Cancel

[CNF3187i]

Please insert the Config FD in the FDD.

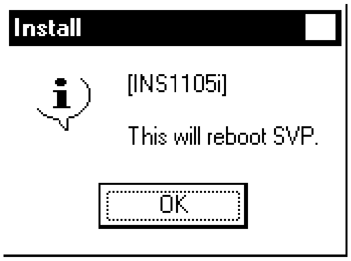
(5) Removing the Config FD
When the copying of the Config is completed, a message "Please remove the Config FD." is displayed.
Remove the Config FD from the FDD and select (CL) [OK].



[CNF3188i]

Please remove the Config FD.

(6) <Check SVP reboot>
Select (CL) [OK].



[INS1105i]

This will reboot SVP.

8. TOD Setting

Wait a few minutes, message "Loading SVP Program... SVP requests to DKC can not be performed presently. Please wait..." will be extinguished. Then set TOD.
See SVP02-10.

9. Load the Configuration from the SM to the SVP's HDD

(1) <Open [Maintenance]>
Select (CL) [Maintenance] form 'SVP'.

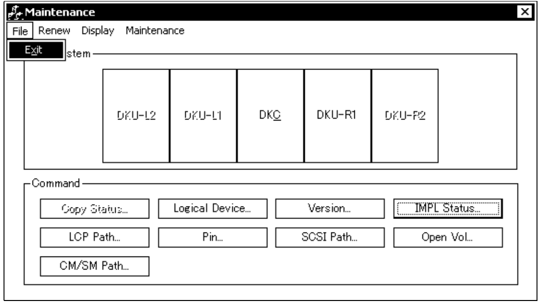
(2)

Check “Connection error occurred SVP-DKC.” is not displayed.
If “Connection error occurred SVP-DKC” is displayed, see TRBL05-60.

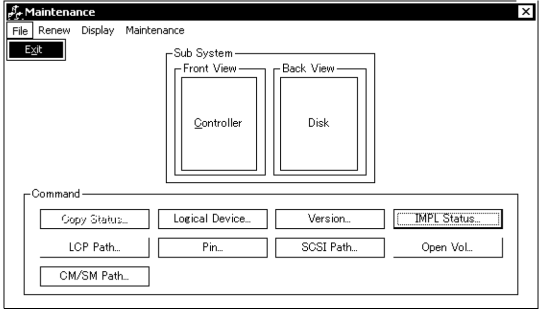
---

(3) <Select [Exit]>
Select (CL) [File] from the “Maintenance”.
Select (CL) [Exit].

(Multi Cabinet Model)


Maintenance
File
Renew
Display
Maintenance
Exit
stem
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
LCP Path...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(Single Cabinet Model)


Maintenance
File
Renew
Display
Maintenance
Exit
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
LCP Path...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

10. Setting Web Console

Make a setting of the Web Console according to [Web Station] section. (WEB01-10)

When you have installed from the backed-up Config FD,

i) Storage list / user list / environment information can be recovered to the backed-up status by copy the following files under c:\program files\apache group\apache\cgi-bin\Utility\CSV.

- USERLIST.CSV
- STRLIST.CSV
- ENV.CSV

ii) Please perform the following procedure, when you use SNMP Agent.
   1. Push Web Console button.
   2. Open the SNMP Information Tab.
   3. Remove the check mark of Extension SNMP and push Apply button.
   4. Add the check mark of Extension SNMP and push Apply button again.

iii)Please perform the following procedure, when you don’t use SNMP Agent.
   1. Push Web Console button.
   2. Specify Name, Contact and Location on Information Tab again.

11. Confirm status

Confirm the status display.
If button is valid, go to [12].
If button is blinking, replace the FLASH CARD.

12. Configuration Back

Make a backup copy of the configuration in the CONFIG FD. (See MICRO-FC08-10)

13. SIM Complete

See SVP02-580.

[End of POST-PROCEDURE]

[11] FLASH CARD

CAUTION

SIM (SIM RC = BFE010 (SVP PS1 Warning) and BFE011 (SVP PS2 Warning)) generates, after power on SVP (PC). Because it was generated in the process which replaces a SVP, and there is no problem.
Please complete SIM before operation.

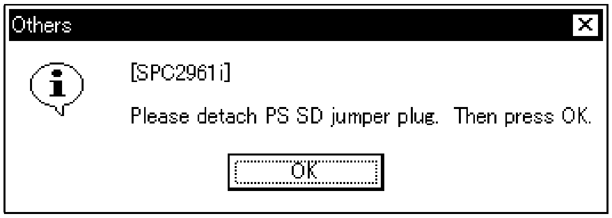
1. <Confirm status>
   Confirm the status display.

   If button is blinking, refer to SIM and replace the target part again, or see TROUBLE SHOOTING SECTION.

   Go to POST-PROCEDURE z (REP04-1400).

[12] SVPPS-BOX

1. <Detaching the jumper plug>
Detach the jumper plug from the SVPPS-BOX PS SD pin in response to a message, “Please detach the PS SD jumper plug. Then select OK.”. If you have already detached the jumper plug according to HARDWARE T26, go to Step 2.
After making sure that the jumper plug has been detached, select (CL) [OK].
The Optional SVP will be started when the jumper plug is removed. Shutdown the OS.

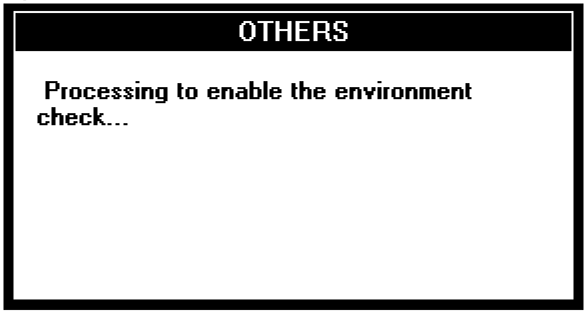


[SPC2961i]

Please detach PS SD jumper plug. Then press OK.

---

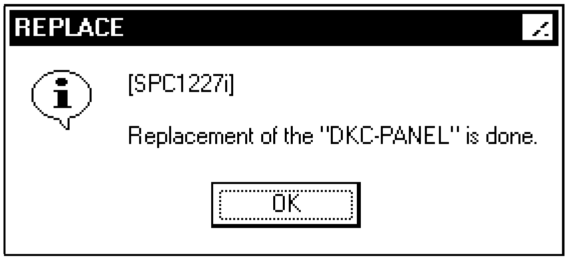
2. <Checking the environment monitor start processing>
“Processing to enable the environment check...” is displayed.



Processing to enable the environment check...

---

3. <Checking the end of replacement>
Select (CL) [OK] in response to “Replacement of the "SVPPS-BOX" is done.”.



[SPC1227i]

Replacement of the "DKC-PANEL" is done.

(ex. RS CON)

---

4. <Checking the status>
• SVPPS-BOX
Check the status display.
If the button is normal (kept on), go to Step 5.
If the button is blinking, perform the replacement again or refer to TROUBLE SHOOTING SECTION.

5. <Complete status of SIM log>
See page SVP02-580.

(Multi Cabinet model)
Close the ‘DKC’ window.
Close the ‘Maintenance’ window.

(Single Cabinet model)
Close the ‘Controller’ window.
Close the ‘Maintenance’ window.

Go to POST-PROCEDURE z (REP04-1400).

[13] Switch SVP

1. <Verifying the SVP switching >
   The SVP which was the Standby SVP before the switching starts up automatically, and reboots after a setup of Subsystem Configuration.
   Check if the SVP is operating normally (without error) after reboot.

Blank Sheet

Blank Sheet

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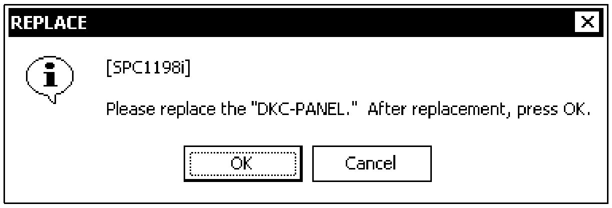
[POST-PROCEDURE t3]

— OUTLINE —

① Specify end of special part replacement.
② Reinstall related parts.
③ Start environment monitor.
④ SIM Complete.

[1] START OF POST-PROCEDURE

1. <Check special part replacement>
Select (CL) [OK] in response to “Please replace the "XXXXX" After replacement, press OK.”.
Valid “XXXXX” values are listed below.
- ‘Fan assembly (DKC)’
 --------------------------- Go to [2] (REP04-920)
- ‘Thermostat assembly’
 --------------------------- Go to [3] (REP04-930)
- ‘BATTERY-x’ ------- Go to [4] (REP04-940)
- ‘BATCTRL-x’ ------- Go to [5] (REP04-950)
- ‘SVPPSx’ ------------- Go to [9] (REP04-995)

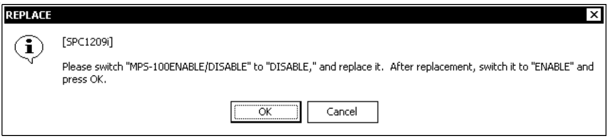


[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

(ex. DKC-PANEL)

Select (CL) [OK] in response to “Please switch "xxPSn" to "DISABLE," and replace it.
After replacement, switch it to "ENABLE" and press OK.”.
- ‘xxPSn’ --------------- Go to [6] (REP04-960)



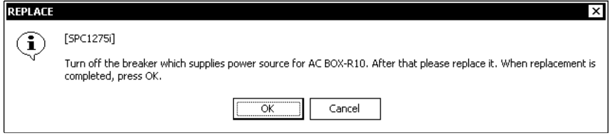
[SPC1209i]

Please switch "MPS-100ENABLE/DISABLE" to "DISABLE," and replace it. After replacement, switch it to "ENABLE" and press OK.

(ex. MPS-R100)

Select (CL) [OK] in response to “Turn off the breaker which supplies power source for AC BOX-x. After that please replace it. When replacement is completed, press OK.”.
- ‘BREAKER BOX-x’
 --------------------------- Go to [7] (REP04-980)

- ‘AC BOX-Cn’-------- Go to [8] (REP04-990)



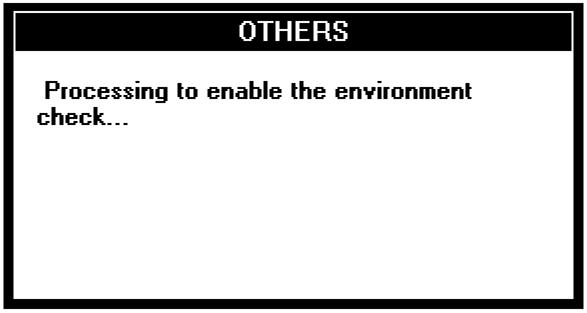
[SPC1275i]

Turn off the breaker which supplies power source for AC BOX-R10. After that please replace it. When replacement is completed, press OK.

(ex. AC BOX-R10)

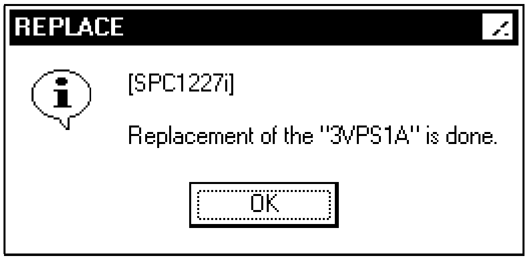
[2] Fan assembly

1. <Checking the environment monitor start processing>
   “Processing to enable the environment check...” is displayed.



Processing to enable the environment check...

2. <Checking the end of replacement>
   Select (CL) [OK] in response to “Replacement of the "Fan assembly" is done.”.



[SPC1227i]

Replacement of the "3VPS1A" is done.

(ex. 3VPS1A)

3. <Confirm status>
   Confirm the status display.
   If button is normal (The string is normally display), go to step 4.
   If button is abnormal (The string is blinking), replace the target part again, or see TROUBLE SHOOTING SECTION.

4. < SIM Complete >
   See SVP02-580.

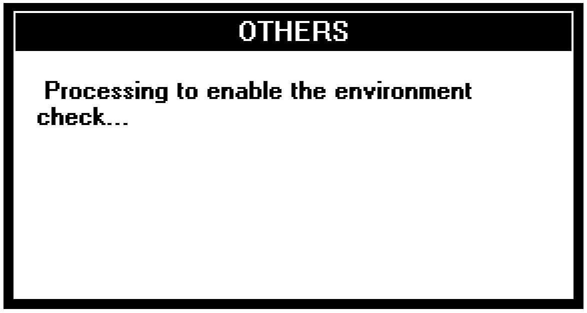
   (Multi Cabinet Model)
   Close ‘Cluster-X’ window.
   Close ‘DKC’ window.
   Close ‘Maintenance’ window.

   (Single Cabinet Model)
   Close ‘Cluster-X’ window.
   Close ‘Controller’ window.
   Close ‘Maintenance’ window.

   Go to POST-PROCEDURE z (REP04-1400).

[3] Thermostat assembly

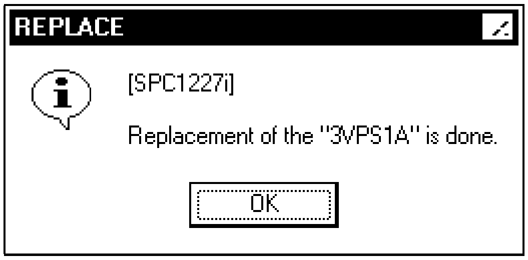
1. <Checking the environment monitor start processing>
“Processing to enable the environment check...” is displayed.



Processing to enable the environment check...

---

2. <Checking the end of replacement>
Select (CL) [OK] in response to “Replacement of the "Themostat assembly" is done.”.



[SPC1227i]

Replacement of the "3VPS1A" is done.

(ex. 3VPS1A)

---

3. <Confirm status>
Confirm the status display.
If button is normal (The string is normally display), go to step 4.
If button is abnormal (The string is blinking), replace the target part again, or see TROUBLE SHOOTING SECTION.

---

4. <SIM Complete>
See SVP02-580.

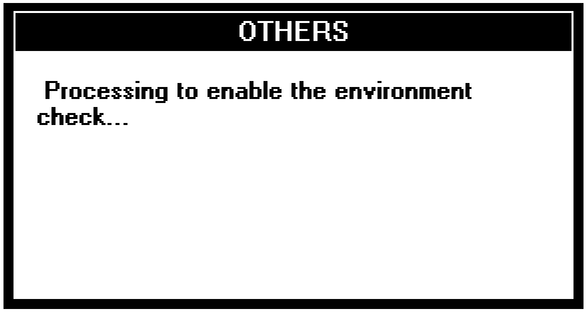
(Multi Cabinet Model)
Close ‘Cluster-X’ window.
Close ‘DKC’ window.
Close ‘Maintenance’ window.

(Single Cabinet Model)
Close ‘Cluster-X’ window.
Close ‘Controller’ window.
Close ‘Maintenance’ window.

Go to POST-PROCEDURE z (REP04-1400).

[4] BATTERY

1. <Checking the environment monitor start processing>
“Processing to enable the environment check...”
is displayed.

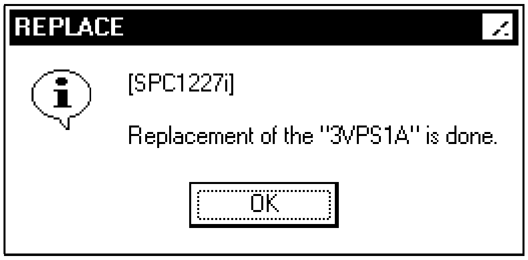


OTHERS

Processing to enable the environment check...

---

2. <Checking the end of replacement>
Select (CL) [OK] in response to “Replacement of the "BATTERY-x" is done.”.



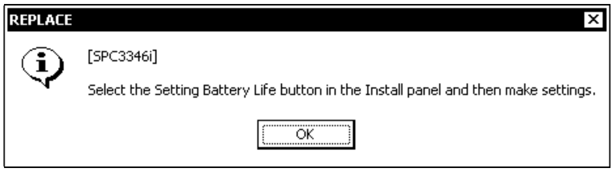
[SPC1227i]

Replacement of the "3VPS1A" is done.

(ex. 3VPS1A)

---

3. <Setting Battery Warning SIM>
Set the Battery Warning SIM in response to “Select the Setting Battery Life button in the Install panel and then make settings.”.



[SPC3346i]

Select the Setting Battery Life button in the Install panel and then make settings.

---

4. <Confirm status>
Confirm the status display.
If button is normal (The string is normally display), go to step 4.
If button is abnormal (The string is blinking), replace the target part again, or see TROUBLE SHOOTING SECTION.

5. <SIM Complete>
   See SVP02-580.

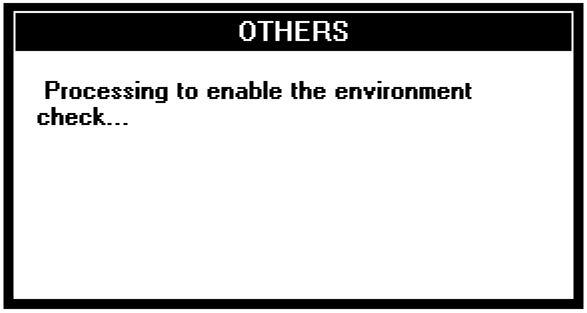
   (Multi Cabinet Model)
   Close ‘Cluster-X’ window.
   Close ‘DKC’ window.
   Close ‘Maintenance’ window.

   (Single Cabinet Model)
   Close ‘Cluster-X’ window.
   Close ‘Controller’ window.
   Close ‘Maintenance’ window.

   Go to POST-PROCEDURE z (REP04-1400).

[5] BATCTR

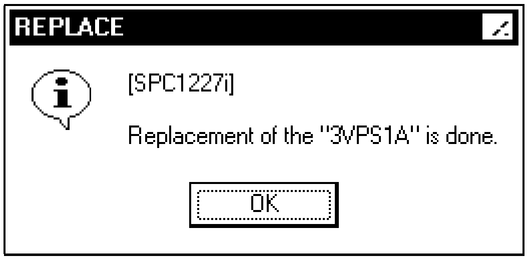
1. <Checking the environment monitor start processing>
"Processing to enable the environment check..." is displayed.



Processing to enable the environment check...

---

2. <Checking the end of replacement>
Select (CL) [OK] in response to "Replacement of the "BATCTR-x" is done.".



[SPC1227i]

Replacement of the "3VPS1A" is done.

(ex. 3VPS1A)

---

3. <Confirm status>
Confirm the status display.
If button is normal (The string is normally display), go to step 4.
If button is abnormal (The string is blinking), replace the target part again, or see TROUBLE SHOOTING SECTION.

---

4. <SIM Complete>
See SVP02-580.

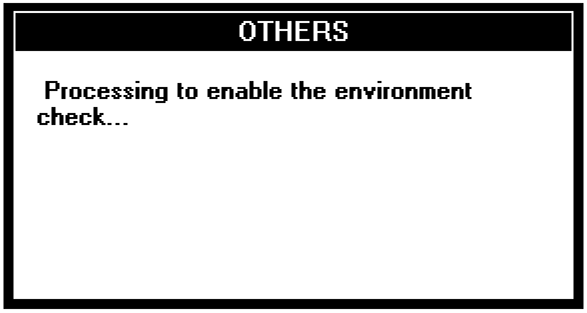
(Multi Cabinet Model)
Close 'Cluster-X' window.
Close 'DKC' window.
Close 'Maintenance' window.

(Single Cabinet Model)
Close 'Cluster-X' window.
Close 'Controller' window.
Close 'Maintenance' window.

Go to POST-PROCEDURE z (REP04-1400).

[6] PS

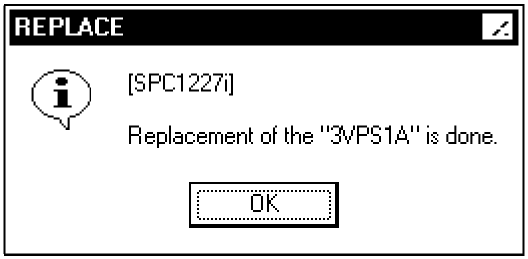
1. <Checking the environment monitor start processing>
   "Processing to enable the environment check..." is displayed.



OTHERS

Processing to enable the environment check...

2. <Checking the end of replacement>
   Select (CL) [OK] in response to "Replacement of the "PS-X" is done.".



[SPC1227i]

Replacement of the "3VPS1A" is done.

(ex. 3VPS1A)

3. <Confirm status>
   Confirm the status display.
   If button is normal (The string is normally display), go to step 4.
   If button is abnormal (The string is blinking), replace the target part again, or see TROUBLE SHOOTING SECTION.

4. <Confirm Cluster>
   If Cluster is blocked, recover it.
   See SVP02-1110.

5. <SIM Complete>
See SVP02-580.

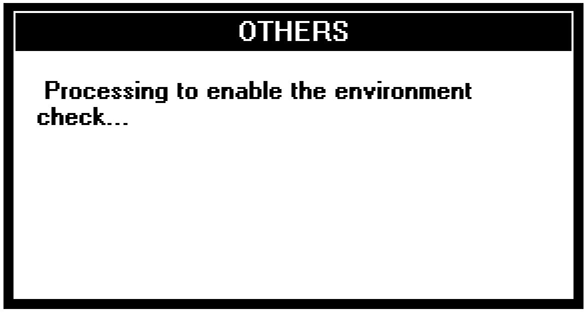
(Multi Cabinet Model)
Close ‘Cluster-X’ window.
Close ‘DKC’ window.
Close ‘Maintenance’ window.

(Single Cabinet Model)
Close ‘Cluster-X’ window.
Close ‘Controller’ window.
Close ‘Maintenance’ window.

Go to POST-PROCEDURE z (REP04-1400).

[7] BREAKER BOX

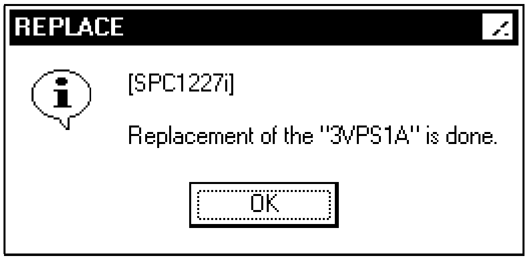
1. <Checking the environment monitor start processing>
"Processing to enable the environment check..."
is displayed.



Processing to enable the environment check...

---

2. <Checking the end of replacement>
Select (CL) [OK] in response to "Replacement of the "BREAKER BOX-X" is done.".



[SPC1227i]

Replacement of the "3VPS1A" is done.

(ex. 3VPS1A)

---

3. <Confirm Cluster>
If Cluster is blocked, recover it.
See SVP02-1110.

---

4. <SIM Complete>
See SVP02-580.

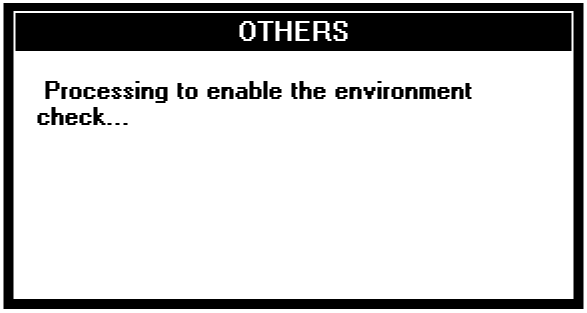
(Multi Cabinet Model)
Close 'Cluster-X' window.
Close 'DKC' window.
Close 'Maintenance' window.

(Single Cabinet Model)
Close 'Cluster-X' window.
Close 'Controller' window.
Close 'Maintenance' window.

Go to POST-PROCEDURE z (REP04-1400).

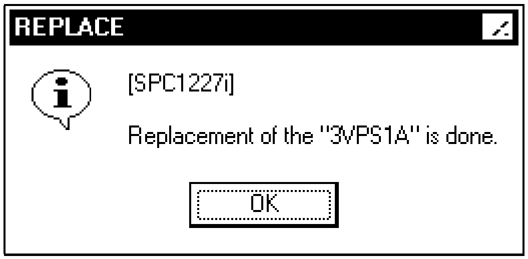
[8] AC BOX(DKC)

1. <Checking the environment monitor start processing>
“Processing to enable the environment check...” is displayed.



Processing to enable the environment check...

2. <Checking the end of replacement>
Select (CL) [OK] in response to “Replacement of the "AC BOX-x" is done.”.



[SPC1227i]

Replacement of the "3VPS1A" is done.

(ex. 3VPS1A)

3. <Confirm Cluster>
If Cluster is blocked, recover it.
See SVP02-1110.

4. <SIM Complete>
See SVP02-580.

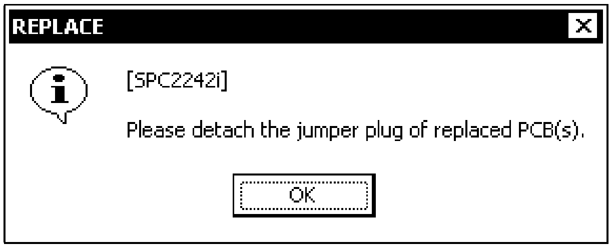
(Multi Cabinet Model)
Close ‘Cluster-X’ window.
Close ‘DKC’ window.
Close ‘Maintenance’ window.

(Single Cabinet Model)
Close ‘Cluster-X’ window.
Close ‘Controller’ window.
Close ‘Maintenance’ window.

Go to POST-PROCEDURE z (REP04-1400).

[9] SVPPS

1. <Detaching a jumper plug>
Detach a jumper plug to the SVPPS following a message, “Please detach the jumper plug of replaced PCB(s).”.
After checking that the jumper plug has been detached, select (CL) [OK]. (See REP03-880)

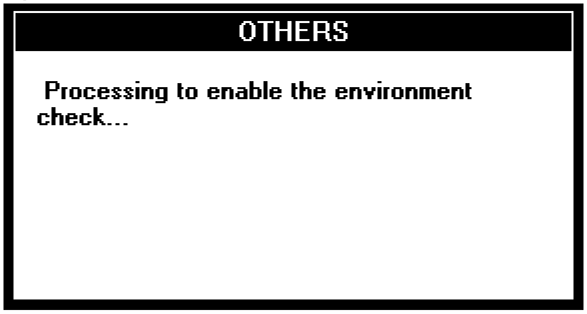


[SPC2242i]

Please detach the jumper plug of replaced PCB(s).

---

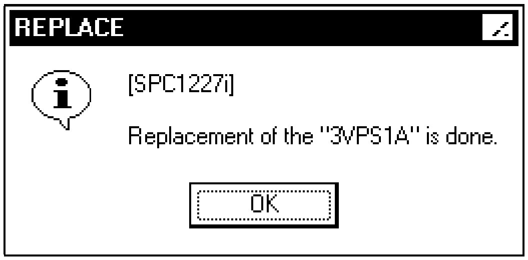
2. <Checking the environment monitor start processing>
“Processing to enable the environment check...” is displayed.



Processing to enable the environment check...

---

3. <Checking the end of replacement>
Select (CL) [OK] in response to “Replacement of the "SVPPSx" is done.”.



[SPC1227i]

Replacement of the "3VPS1A" is done.

(ex. 3VPS1A)

---

4. <Confirm Cluster>
If Cluster is blocked, recover it.
See SVP02-1110.

5. <SIM Complete>
   See SVP02-580.

   (Multi Cabinet Model)
   Close ‘Cluster-X’ window.
   Close ‘DKC’ window.
   Close ‘Maintenance’ window.

   (Single Cabinet Model)
   Close ‘Cluster-X’ window.
   Close ‘Controller’ window.
   Close ‘Maintenance’ window.

   Go to POST-PROCEDURE z (REP04-1400).

[POST-PROCEDURE t4]

— OUTLINE —

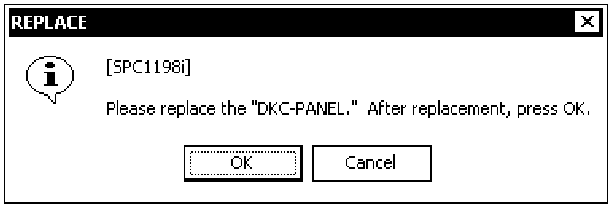
① Specify end of special part replacement.
② Reinstall related parts.
③ Start environment monitor.
④ DKU Path Inline Test.
⑤ SIM Complete.

[1] Start of POST-PROCEDURE

1. <Making part replacement check>

- Fan assembly

Select (CL) [OK] in response to “Please replace the "XXXXX" After replacement, press OK.”
‘Fan assembly’ ----- Go to [2] (REP04-1020)



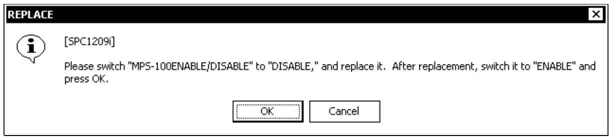
[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

(ex. DKC-PANEL)

- MPS-X, DKUMN-X

Select (CL) [OK] in response to “Please switch "XXXXX" to "DISABLE," and replace it. After replacement, switch it to "ENABLE" and press OK.”.
‘MPS-n’------------- Go to [3] (REP04-1030)



[SPC1209i]

Please switch "MPS-100ENABLE/DISABLE" to "DISABLE," and replace it. After replacement, switch it to "ENABLE" and press OK.

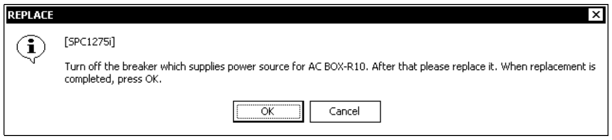
(ex. MPS-R100 of Multi Cabinet Model)

‘DKUMN-R3n’, ‘DKUMN-L3n’ --- Go to [4] (REP04-1050)
Other ‘DKUMN-X’ ------------------- Go to [5] (REP04-1060)

- AC BOX-X

Select (CL) [OK] in response to “Turn off the breaker which supplies power source for AC BOX-X. After that please replace it.
When replacement is completed, press OK.”.

‘AC BOX-X’------- Go to [6] (REP04-1080)



[SPC1275i]

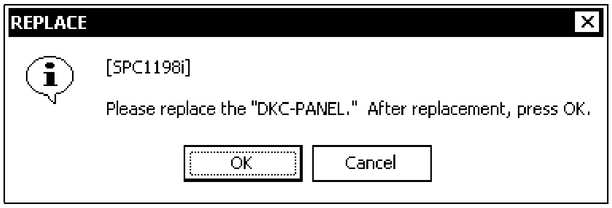
Turn off the breaker which supplies power source for AC BOX-R10. After that please replace it. When replacement is completed, press OK.

(ex. AC BOX-R10 of Multi Cabinet Model)

- JMP

Select (CL) [OK] in response to “Please replace the "JMPm-n". After replacement, press OK.”.

‘JMPm-n’----------- Go to [7] (REP04-1091)



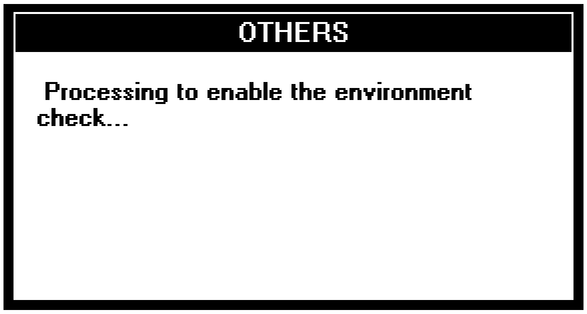
[SPC1198i]

Please replace the "DKC-PANEL." After replacement, press OK.

(ex. DKC-PANEL)

[2] Fan assembly

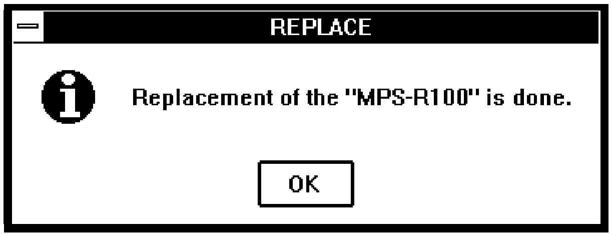
1. <Checking environment monitor start processing>
   “Processing to enable the environment check...” is displayed.



Processing to enable the environment check...

---

2. <Checking end of replacement>
   Select (CL) [OK] in response to “Replacement of the "Fan assembly" is done.”.



Replacement of the "MPS-R100" is done.

(ex. MPS-R100 of Multi Cabinet Model)

---

3. <Confirm status>
   Confirm the status display.
   If button is normal (lighting), go to step 4.
   If button is blinking, replace the target part again, or TROUBLE SHOOTING SECTION.

---

4. <SIM Complete>
   See SVP02-580.

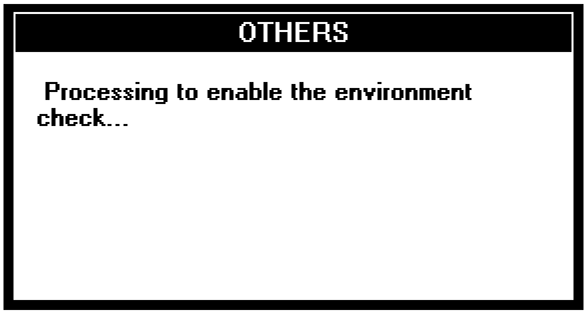
   (Multi Cabinet Model)
   Close ‘HDU-X’ window.
   Close ‘DKU-X’ window.
   Close ‘Maintenance’ window.

   (Single Cabinet Model)
   Close ‘Disk’ window.
   Close ‘Maintenance’ window.

   Go to POST-PROCEDURE z (REP04-1400).

[3] MPS

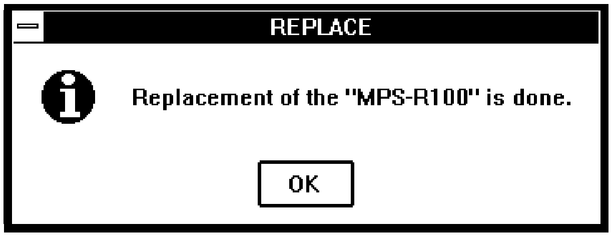
1. <Checking environment monitor start processing>
“Processing to enable the environment check...”
is displayed.



Processing to enable the environment check...

---

2. <Checking end of replacement>
Select (CL) [OK] in response to
“Replacement of the "MPS-n" is done.”.



Replacement of the "MPS-R100" is done.

(ex. MPS-R100 of Multi Cabinet Model)

---

3. <Confirm status>
Confirm the status display.
If button is normal (lighting), go to step 4.
If button is blinking, replace the target part again, or TROUBLE SHOOTING SECTION.

---

4. <Confirm Cluster>
If Cluster is blocked, recover it.
See SVP02-1110.

5. <SIM Complete>
See SVP02-580.

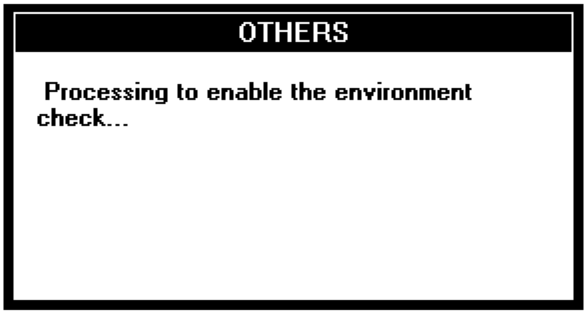
(Multi Cabinet Model)
Close ‘HDU-X’ window
Close ‘DKU-X’ window.
Close ‘Maintenance’ window.

(Single Cabinet Model)
Close ‘HDU-X’ window.
Close ‘Disk’ window.
Close ‘Maintenance’ window.

Go to POST-PROCEDURE z (REP04-1400).

[4] DKUMN-R3n, DKUMN-L3n

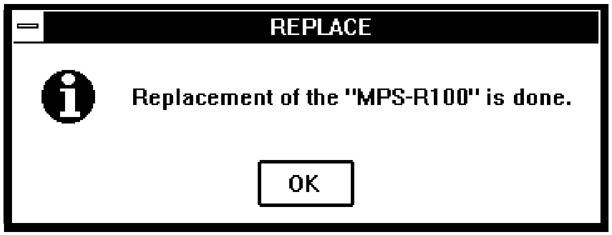
1. <Checking environment monitor start processing>
“Processing to enable the environment check...”
is displayed.



Processing to enable the environment check...

---

2. <Checking end of replacement>
Select (CL) [OK] in response to
“Replacement of the "DKUMN-X" is done.”.



Replacement of the "MPS-R100" is done.

(ex. MPS-R100 of Multi Cabinet Model)

---

3. <Confirm status>
Confirm the status display.
If button is valid, go to step 4.
If button is blinking, replace the target part again, or TROUBLE SHOOTING SECTION.

---

4. <SIM Complete>
See SVP02-580.

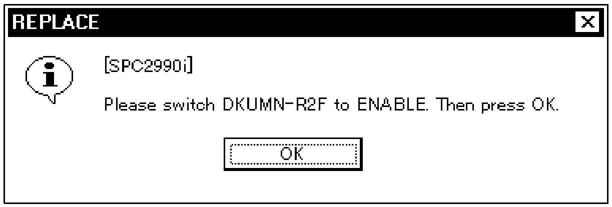
(Multi Cabinet Model)
Close ‘DKU-X’ window.
Close ‘Maintenance’ window.

Go to POST-PROCEDURE z (REP04-1400).

[5] Other DKUMN-X

1. <Enabling DKUMN>
When Multi Cabinet Model, if DKUMN-X (listed below) is installed, this message is displayed.
Enable DKUMN in response to “Please switch "DKUMN-X" to "ENABLE". Then press OK.”.
After confirming DKUMN-X is enabled, Select (CL) [OK].
DKUMN-X (Multi Cabinet Model):

Replace parts	X
DKUMN-R1F	R2F, R3F
DKUMN-R1R	R2R, R3R
DKUMN-R2F	R3F
DKUMN-R2R	R3R
DKUMN-L1F	L2F, L3F
DKUMN-L1R	L2R, L3R
DKUMN-L2F	L3F
DKUMN-L2R	L3R

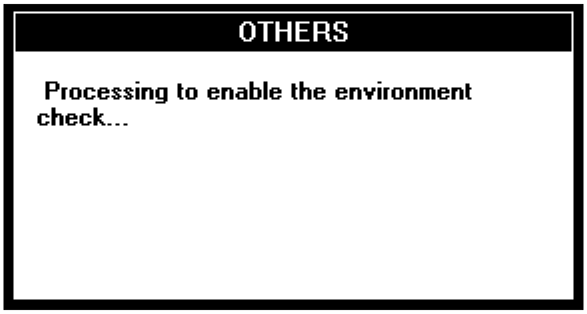


[SPC2990i]

Please switch DKUMN-R2F to ENABLE. Then press OK.

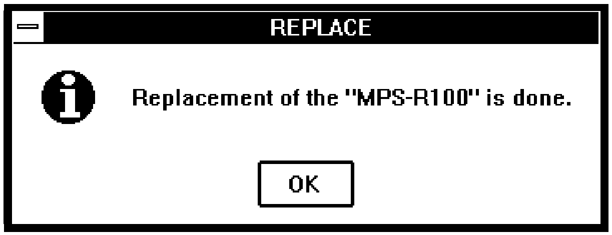
(ex. Replacement of the DKUMN-R1F)

2. <Checking environment monitor start processing>
“Processing to enable the environment check...” is displayed.



Processing to enable the environment check...

3. <Checking end of replacement>
Select (CL) [OK] in response to “Replacement of the "DKUMN-X" is done.”.



Replacement of the "MPS-R100" is done.

(ex. MPS-R100 of Multi Cabinet Model)

4. <Confirm status>
Confirm the status display.
If button is valid, go to step 5.
If button is blinking, replace the target part again, or TROUBLE SHOOTING SECTION.

---

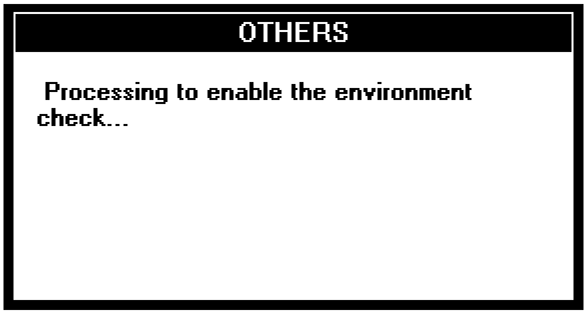
5. <SIM Complete>
See SVP02-580.

(Multi Cabinet Model)
Close ‘DKU-X’ window.
Close ‘Maintenance’ window.

Go to POST-PROCEDURE z (REP04-1400).

[6] AC BOX-X

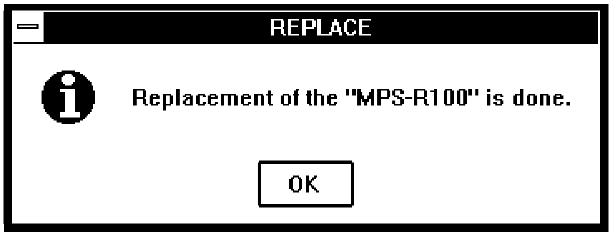
1. <Checking environment monitor start processing>
“Processing to enable the environment check...”
is displayed.



Processing to enable the environment check...

---

2. <Checking end of replacement>
Select (CL) [OK] in response to
“Replacement of the "AC BOX-X" is done.”.



Replacement of the "MPS-R100" is done.

(ex. MPS-R100 of Multi Cabinet Model)

---

3. <Confirm status>
Confirm the status display.
If button is normal (lighting), go to step 4.
If button is blinking, replace the target part again, or TROUBLE SHOOTING SECTION.

---

4. <Confirm Cluster>
If Cluster is blocked, recover it.
See SVP02-1110.

5. <SIM Complete>
   See SVP02-580.

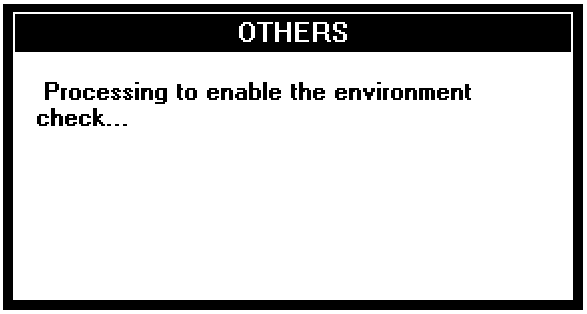
   (Multi Cabinet Model)
   Close ‘DKU-X’ window.
   Close ‘Maintenance’ window.

   (Single Cabinet Model)
   Close ‘Disk’ window.
   Close ‘Maintenance’ window.

   Go to POST-PROCEDURE z (REP04-1400).

[7] JMP

1. <Checking environment monitor start processing>
“Processing to enable the environment check...”
is displayed.

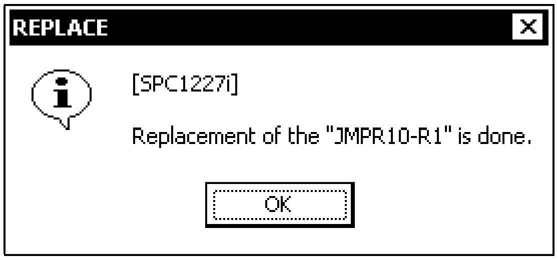


OTHERS

Processing to enable the environment check...

---

2. <Checking end of replacement>
Select (CL) [OK] in response to “Replacement of the "JMPm-n" is done.”.



[SPC1227i]

Replacement of the "JMPR10-R1" is done.

(ex. JMPR10-R1 of Multi Cabinet Model)

---

3. <Confirm status>
Confirm the status display.
If button is normal (lighting), go to step 4.
If button is blinking, replace the target part again, or TROUBLE SHOOTING SECTION.

4. <SIM Complete>
See SVP02-580.

(Multi Cabinet Model)
Close ‘HDU-X’ window
Close ‘DKU-X’ window.
Close ‘Maintenance’ window.

(Single Cabinet Model)
Close ‘HDU-X’ window.
Close ‘Disk’ window.
Close ‘Maintenance’ window.

Go to POST-PROCEDURE z (REP04-1400).

[POST-PROCEDURE t5]

— OUTLINE —

① Select a part to be replaced.
② Reinstall the related parts.
③ Complete status of SIM log.

[1] Select a procedure for SVP replacing.

1.

Select a procedure for replacing an SVP and/or a Flash Card according to a part(s) to be replaced.

Procedure for replacing an SVP and/or a Flash Card in the normal state
- “SVP” ---------------------- Go to [2] (REP04-1120)
- “SVP & FLASH CARD” Go to [2] (REP04-1120)
- “FLASH CARD” --------- Go to [3] (REP04-1230)

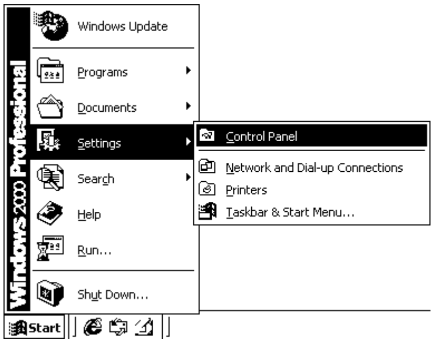
Procedure for replacing an SVP and/or a Flash Card on master mode when the SVP cannot be switched
- “SVP” ---------------------- Go to [4] (REP04-1240)
- “SVP & FLASH CARD” Go to [4] (REP04-1240)
- “FLASH CARD” --------- Go to [5] (REP04-1350)

[2] Replacement of an SVP with or without a Flash Card

Perform the following operation at a Standby SVP.

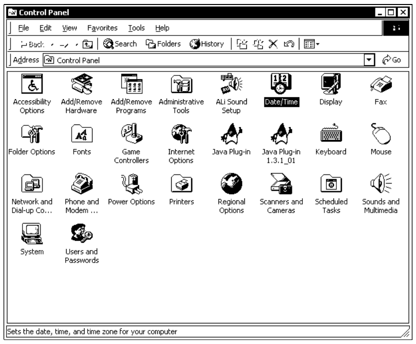
1. Set Date/Time

(1) <Open [Control Panel]>
Select (DR) [Settings] and then [Control Panel] from [Start].


Windows 2000 Professional
Windows Update
Programs
Documents
Settings
Search
Help
Run...
Shut Down...
Start
Control Panel
Network and Dial-up Connections
Printers
Taskbar & Start Menu...

---

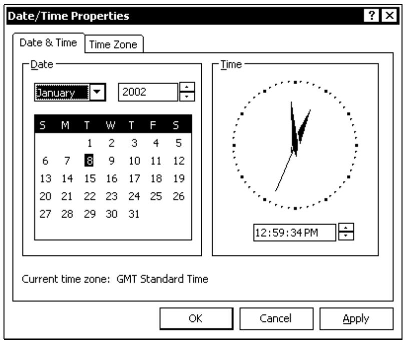
(2) <Open [Date/Time]>
Select (DC) [Date/Time] from [Control Panel].


Control Panel
File
Edit
View
Favorites
Tools
Help
Back
Search
Folders
History
Address
Control Panel
Go
Accessibility Options
Add/Remove Hardware
Add/Remove Programs
Administrative Tools
ALi Sound Setup
Date/Time
Display
Fax
Folder Options
Fonts
Game Controllers
Internet Options
Java Plug-in
Java Plug-in 1.3.1_01
Keyboard
Mouse
Network and Dial-up Co...
Phone and Modem ...
Power Options
Printers
Regional Options
Scanners and Cameras
Scheduled Tasks
Sounds and Multimedia
System
Users and Passwords

Sets the date, time, and time zone for your computer

---

(3) <Select [Time Zone]>
Select (CL) [Time Zone].


Date/Time Properties
Date & Time
Time Zone
Date
Time
OK
Cancel
Apply

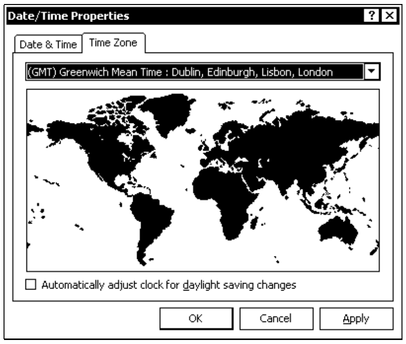
Date: January 2002

S	M	T	W	T	F	S
		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	31		

Time: 12:59:34 PM

Current time zone: GMT Standard Time

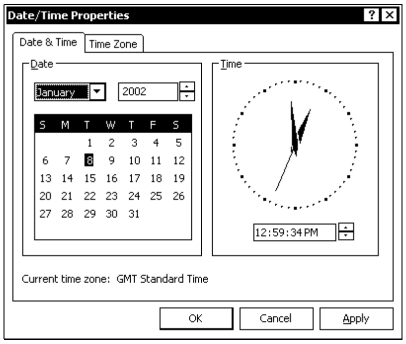
(4) <Check the setting of [Time Zone]>
Make sure that the setting of [Time Zone] is without the relation of a subsystem position “[GMT] Greenwich Mean Time; Dublin, Edinburgh, Lisbon, London”. Also, make sure that a check box on the left of “Automatically adjust clock for daylight saving changes” is ☐ (without a check mark).
Then, select (CL) [Date/Time].


Date/Time Properties
?
Date & Time
Time Zone
OK
Cancel
Apply

(GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London

☐ Automatically adjust clock for daylight saving changes

(5) <Set the [Date/Time]>
Check if the [Date/Time] is set to the current time and date.
If not, reset it correctly. Then, select (CL) [OK].


Date/Time Properties
?
Date & Time
Time Zone
Date
Time
OK
Cancel
Apply

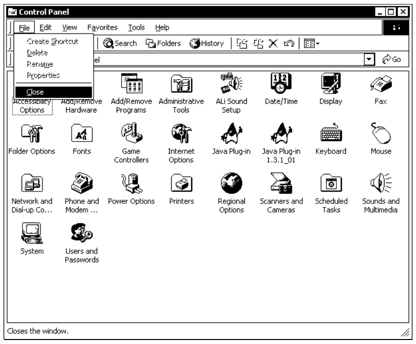
January 2002

S	M	T	W	T	F	S
		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	31		

12:59:34 PM

Current time zone: GMT Standard Time

(6) <Close “Control Panel”>
Select (CL) [File] on “Control Panel”.
Select (CL) [Close].


Control Panel
File
Edit
View
Favorites
Tools
Help
Create Shortcut
Delete
Rename
Properties
Close
Search
Folders
History
el
Go
Accessibility Options
Add/Remove Hardware
Add/Remove Programs
Administrative Tools
ALi Sound Setup
Date/Time
Display
Fax
Folder Options
Fonts
Game Controllers
Internet Options
Java Plug-in
Java Plug-in 1.3.1_01
Keyboard
Mouse
Network and Dial-up Co…
Phone and Modem …
Power Options
Printers
Regional Options
Scanners and Cameras
Scheduled Tasks
Sounds and Multimedia
System
Users and Passwords

Closes the window.

2. Installation of Micro-program

① Insert the CD-ROM disk into the CD-ROM drive and then wait one minute.
② Select (CL) [Run...] from the [Start]. Enter “setup-exe” and press the [Enter] key.

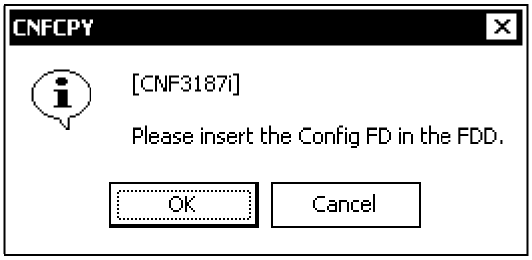
3. Installation of Configuration

(1) Inserting the Config FD

① A message “Please insert the Config FD into the FDD.” is displayed.

② Insert the Config FD into the FDD and select (CL) [OK].

If you insert the previously backed-up Config FD, the original configuration is recovered.



[CNF3187i]

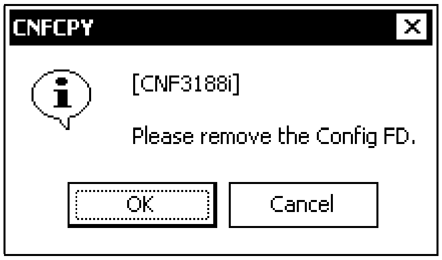
Please insert the Config FD in the FDD.

---

(2) Removing the Config FD

① When the copying of the Config is completed, a message “Please remove the Config FD.” is displayed.

② Remove the Config FD from the FDD and select (CL) [OK].



[CNF3188i]

Please remove the Config FD.

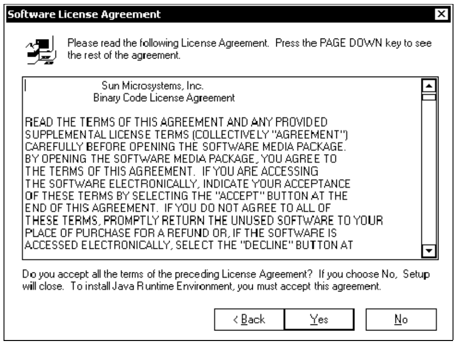
4. JAVA Setup

4-1 JAVA Setup

Setting up of Java is executed. When Java has already been installed, the routine proceeds to Step 4-2.

(1)

Select (CL) [Yes].



Please read the following License Agreement. Press the PAGE DOWN key to see the rest of the agreement.

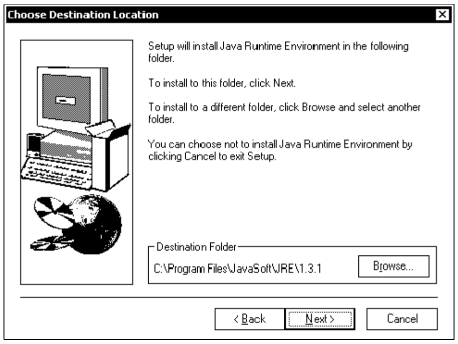
Sun Microsystems, Inc.
Binary Code License Agreement

READ THE TERMS OF THIS AGREEMENT AND ANY PROVIDED SUPPLEMENTAL LICENSE TERMS (COLLECTIVELY "AGREEMENT") CAREFULLY BEFORE OPENING THE SOFTWARE MEDIA PACKAGE. BY OPENING THE SOFTWARE MEDIA PACKAGE, YOU AGREE TO THE TERMS OF THIS AGREEMENT. IF YOU ARE ACCESSING THE SOFTWARE ELECTRONICALLY, INDICATE YOUR ACCEPTANCE OF THESE TERMS BY SELECTING THE "ACCEPT" BUTTON AT THE END OF THIS AGREEMENT. IF YOU DO NOT AGREE TO ALL OF THESE TERMS, PROMPTLY RETURN THE UNUSED SOFTWARE TO YOUR PLACE OF PURCHASE FOR A REFUND OR, IF THE SOFTWARE IS ACCESSED ELECTRONICALLY, SELECT THE "DECLINE" BUTTON AT

Do you accept all the terms of the preceding License Agreement? If you choose No, Setup will close. To install Java Runtime Environment, you must accept this agreement.

(2)

Select (CL) [Next].



Setup will install Java Runtime Environment in the following folder.

To install to this folder, click Next.

To install to a different folder, click Browse and select another folder.

You can choose not to install Java Runtime Environment by clicking Cancel to exit Setup.

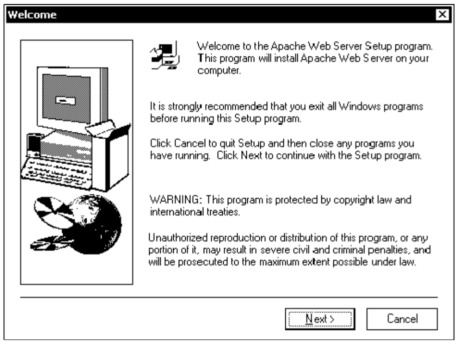
C:\Program Files\JavaSoft\JRE\1.3.1

4-2 APACHE Setup

Setting up of APACHE is executed. When APACHE has already been installed, the routine proceeds to Step 5.

(1)

Select (CL) [Next].



Welcome to the Apache Web Server Setup program. This program will install Apache Web Server on your computer.

It is strongly recommended that you exit all Windows programs before running this Setup program.

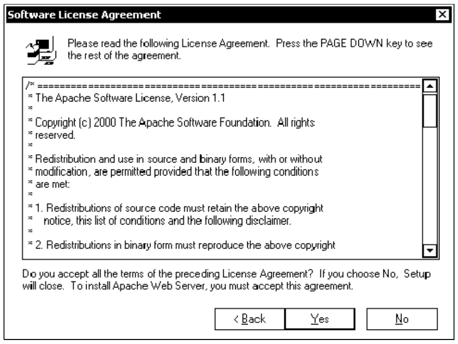
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.

WARNING: This program is protected by copyright law and international treaties.

Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

(2)

Select (CL) [Yes].



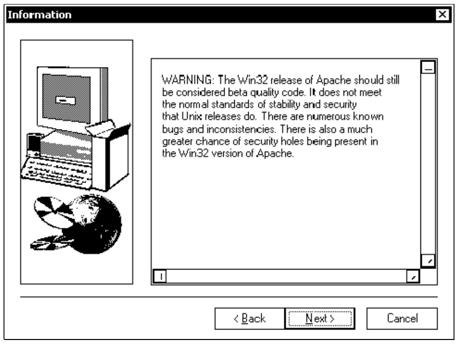
Please read the following License Agreement. Press the PAGE DOWN key to see the rest of the agreement.

```
/* ====================================================================
 * The Apache Software License, Version 1.1
 *
 * Copyright (c) 2000 The Apache Software Foundation.  All rights
 * reserved.
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 *
 * 1. Redistributions of source code must retain the above copyright
 *    notice, this list of conditions and the following disclaimer.
 *
 * 2. Redistributions in binary form must reproduce the above copyright
```

Do you accept all the terms of the preceding License Agreement? If you choose No, Setup will close. To install Apache Web Server, you must accept this agreement.

(3)

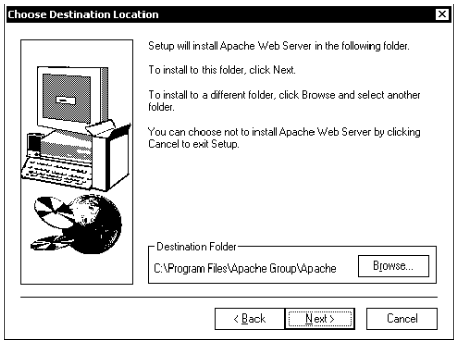
Select (CL) [Next].



WARNING: The Win32 release of Apache should still be considered beta quality code. It does not meet the normal standards of stability and security that Unix releases do. There are numerous known bugs and inconsistencies. There is also a much greater chance of security holes being present in the Win32 version of Apache.

(4)

Select (CL) [Next].



Choose Destination Location

Setup will install Apache Web Server in the following folder.

To install to this folder, click Next.

To install to a different folder, click Browse and select another folder.

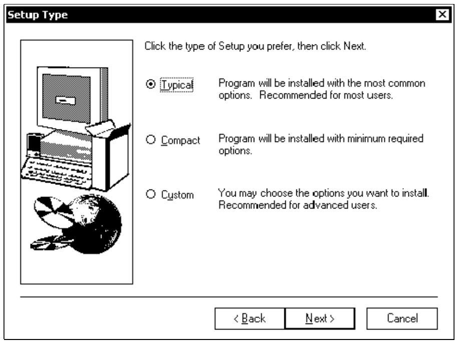
You can choose not to install Apache Web Server by clicking Cancel to exit Setup.

Destination Folder: C:\Program Files\Apache Group\Apache

---

(5)

Select (CL) [Next].



Setup Type

Click the type of Setup you prefer, then click Next.

● Typical — Program will be installed with the most common options. Recommended for most users.

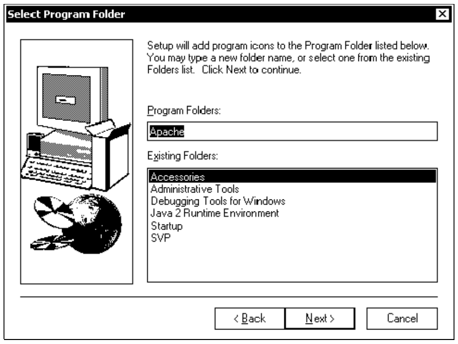
○ Compact — Program will be installed with minimum required options.

○ Custom — You may choose the options you want to install. Recommended for advanced users.

---

(6)

Select (CL) [Next].



Select Program Folder

Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing Folders list. Click Next to continue.

Program Folders: Apache

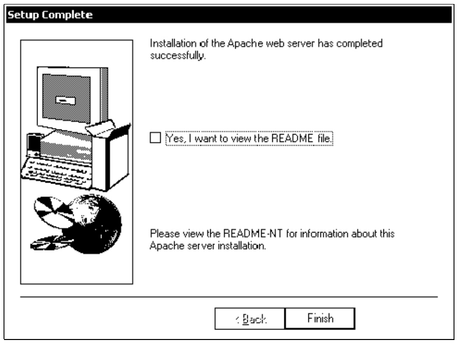
Existing Folders:

- Accessories
- Administrative Tools
- Debugging Tools for Windows
- Java 2 Runtime Environment
- Startup
- SVP

---

(7)

Remove the check box of “Yes and I want to view the README file.”, and select (CL) [Finish].



Setup Complete

Installation of the Apache web server has completed successfully.

☐ Yes, I want to view the README file.

Please view the README-NT for information about this Apache server installation.

5. Restarting the SVP

When the setup is completed, the SVP restarts automatically.

6. Set IP address of SVP

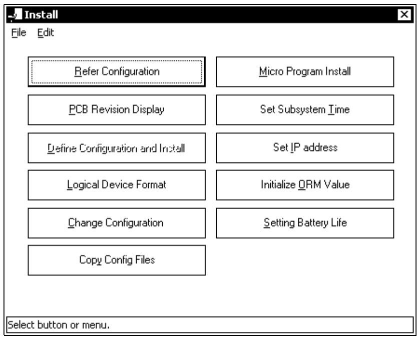
(1) <Changing the mode>
Change the mode by selecting [Modify Mode].

---

(2) <Opening the Install window>
Select (CL) [Install] from the [SVP] menu.

---

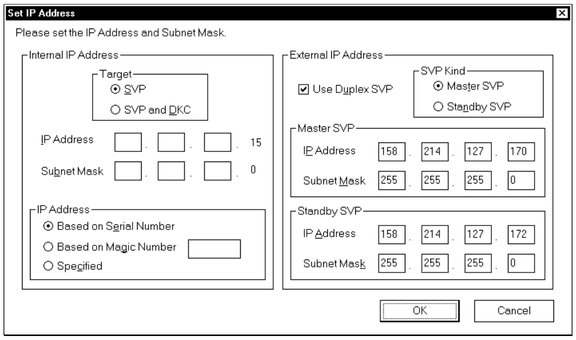
(3) <Selecting [Set SVP IP Address]>
Select (CL) [Set IP Address] in the [Install] window.


Install
File Edit
Refer Configuration
Micro Program Install
PCB Revision Display
Set Subsystem Time
Define Configuration and Install
Set IP address
Logical Device Format
Initialize ORM Value
Change Configuration
Setting Battery Life
Copy Config Files

Select button or menu.

---

(4) <Setting an IP address>
Select (CL) [SVP] in the Internal IP Address box and enter an IP address and subnet mask of the internal IP address.


Set IP Address
Internal IP Address
Target
External IP Address
SVP Kind
Master SVP
Standby SVP
IP Address
OK
Cancel

Please set the IP Address and Subnet Mask.

Target: ● SVP ○ SVP and DKC

IP Address . . . 15

Subnet Mask . . . 0

IP Address: ● Based on Serial Number ○ Based on Magic Number ○ Specified

☑ Use Duplex SVP

SVP Kind: ● Master SVP ○ Standby SVP

Master SVP
IP Address 158 . 214 . 127 . 170
Subnet Mask 255 . 255 . 255 . 0

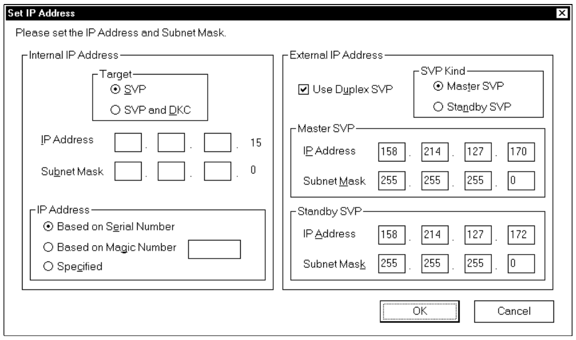
Standby SVP
IP Address 158 . 214 . 127 . 172
Subnet Mask 255 . 255 . 255 . 0

(5) <Setting the SVP duplication>

(a) Select (CL) [Use Duplex SVP] in the External IP address box.

(b) Select (CL) [Standby SVP] in the SVP Kind box.

(c) Enter the IP addresses and subnet masks of the Master and Standby SVPs, and then select (CL) [OK].



Set IP Address

Please set the IP Address and Subnet Mask.

Internal IP Address

Target: ● SVP ○ SVP and DKC

IP Address: _ . _ . _ . 15

Subnet Mask: _ . _ . _ . 0

IP Address: ● Based on Serial Number ○ Based on Magic Number ○ Specified

External IP Address

☑ Use Duplex SVP

SVP Kind: ● Master SVP ○ Standby SVP

Master SVP

IP Address: 158 . 214 . 127 . 170

Subnet Mask: 255 . 255 . 255 . 0

Standby SVP

IP Address: 158 . 214 . 127 . 172

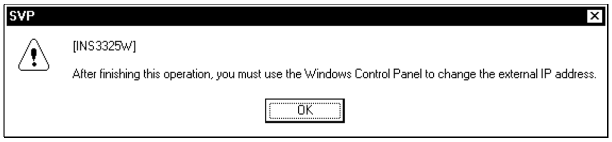
Subnet Mask: 255 . 255 . 255 . 0

* You do not have to enter the information of Item (c) above when the setting of the external IP address is not required.

---

(6) <Confirming the external IP address setting>

When a message, “After finishing this operation, you must use the Windows Control Panel to change the external IP address.” is displayed, select (CL) the [OK] button.



SVP

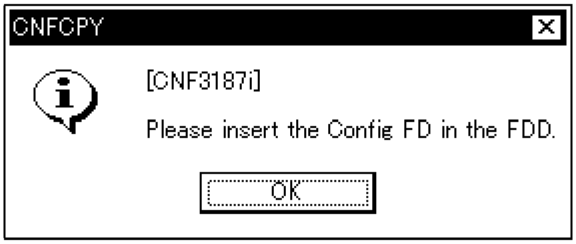
[INS3325W]

After finishing this operation, you must use the Windows Control Panel to change the external IP address.

---

(7) <Inserting the Config FD>

Insert the Config FD into the FDD and select (CL) [OK].



CNFCPY

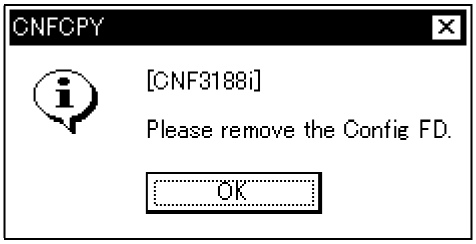
[CNF3187i]

Please insert the Config FD in the FDD.

---

(8) <Removing the Config FD>

When the copying of the Config is completed, a message, “Please remove the Config FD.” is displayed. Remove the FD and select (CL) [OK].

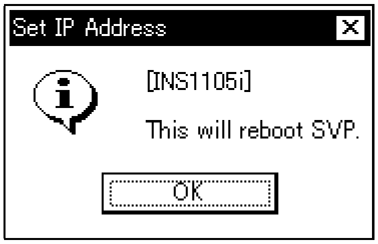


CNFCPY

[CNF3188i]

Please remove the Config FD.

(9) <Confirming rebooting of the SVP>
Select (CL) [OK] in response to a message, “This will reboot SVP.”.

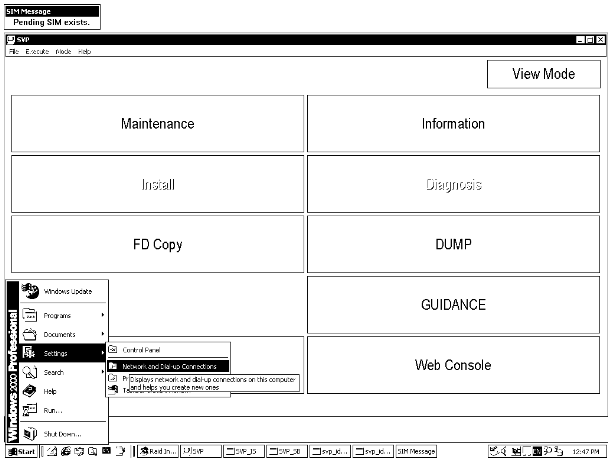

Set IP Address
OK

[INS1105i]

This will reboot SVP.

---

(10) <Opening the Network and Dial-up Connections window>
When the setting of the external IP address is not required, go to Step 8.
Select (CL) [Settings] and [Network and Dialup Connections] in this order from the [Start].


SVP
File Execute Mode Help
View Mode
Maintenance
Information
Install
Diagnosis
FD Copy
DUMP
GUIDANCE
Web Console
Windows 2000 Professional
Windows Update
Programs
Documents
Settings
Search
Help
Run...
Shut Down...
Control Panel
Network and Dial-up Connections
Start
12:47 PM

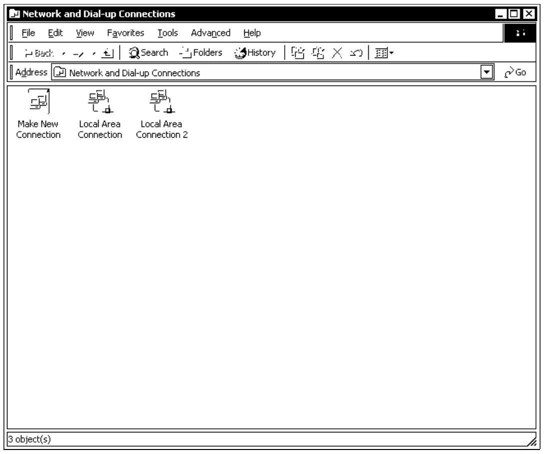
SIM Message

Pending SIM exists.

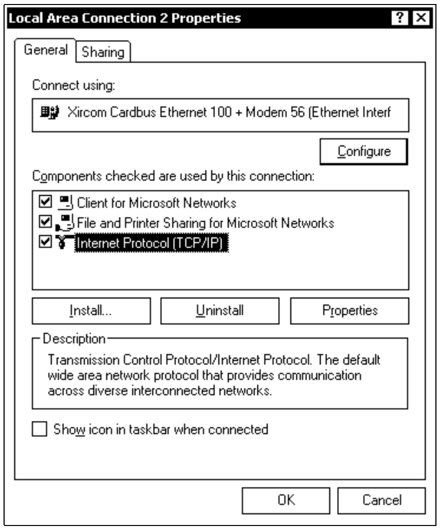
Displays network and dial-up connections on this computer and helps you create new ones

---

(11) <Opening the Local Area Connection 2 window>
Select (CL) [Local Area Connection 2] in the Network and Dial-up Connections window.


Network and Dial-up Connections
File Edit View Favorites Tools Advanced Help
Back Search Folders History
Address Network and Dial-up Connections
Go
Make New Connection
Local Area Connection
Local Area Connection 2
3 object(s)

(12) <Opening the Local Area Connection 2 Properties window>
Select (CL) [Internal Protocol (TCP/IP)] in the Local Area Connection 2 Properties window, and then select the [Properties] button.



Local Area Connection 2 Properties

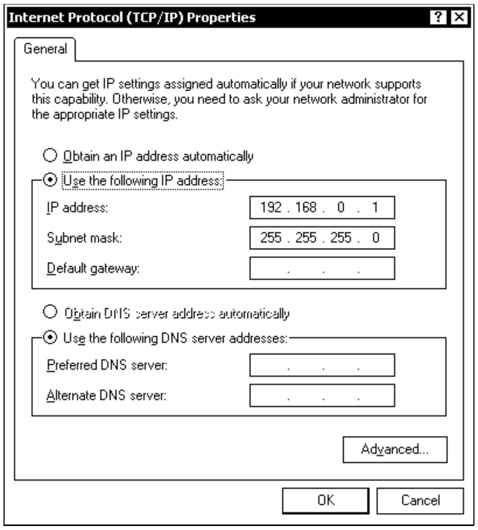
Connect using:
Xircom Cardbus Ethernet 100 + Modem 56 (Ethernet Interf

Components checked are used by this connection:
- ☑ Client for Microsoft Networks
- ☑ File and Printer Sharing for Microsoft Networks
- ☑ Internet Protocol (TCP/IP)

Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

☐ Show icon in taskbar when connected

(13) <Setting an external IP address>
Set the IP address and subnet mask, and then select (CL) the [OK] button.



Internet Protocol (TCP/IP) 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: . . .

○ Obtain DNS server address automatically
● Use the following DNS server addresses:
Preferred DNS server: . . .
Alternate DNS server: . . .

7. Removing the SVP PS ON/OFF INH jumper

Remove the jumper plug that was attached in Step 4 of Item [2] in PRE-PROCEDURE T5.
Remove the jumper plug from the SVP PS ON/OFF INH pin of the RS CON. When the SVP is an Optional SVP, remove the jumper plug from the PS CTLINH pin of the SVPPS-BOX, too.
(See HARDWARE T7 (Step 5 on REP03-480))

8. Setting Web Console

Make a setting of the Internet Explorer according to [Web Station] section. (WEB01-10)

---

9. Shutting down the SVP

Power off the SVP (PC) by shutting it down.

---

10. Connect the LAN cable

(1) Connect the LAN cable that was removed in Step 4 of Item [2] in PRE-PROCEDURE T5 to the HUB Box. (See Fig. T7.1-6, Fig. T7.1-9)
(2) Attach the Lower SH Box Cover (See Fig. T7.1-2)

---

11. Reset the SSVP

Press the SSVP ALARM RESET switch of the SSVP (see LOCATION SECTION (LOCATION03-40 and LOCATION03-60)).

12. Transferring configuration data

(1) Change the mode to [Modify Mode].
Select (CL) [Maintenance].

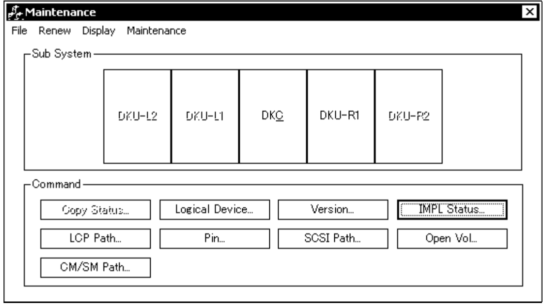
---

(2) The “Maintenance” window is displayed.

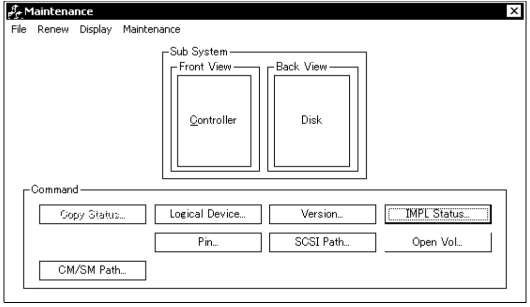
(Multi Cabinet Model)
In the ‘Maintenance’ window, check and select (CL) [DKC] to be replaced.

(Single Cabinet Model)
In the “Maintenance’ window, check and select (CL) [Controller] to be replaced.

(Multi Cabinet Model)


Maintenance
File Renew Display Maintenance
Sub System
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
LCP Path...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(Single Cabinet Model)

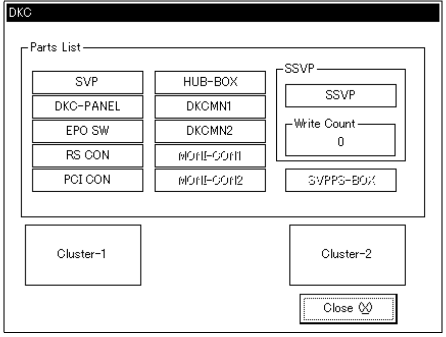

Maintenance
File Renew Display Maintenance
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(3)

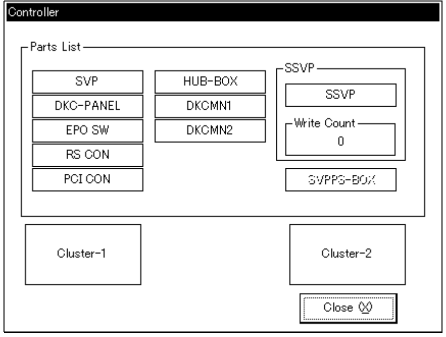
(Multi Cabinet Model)
In the ‘DKC’ window, check and select (CL) [SVP] to be replaced.

(Single Cabinet Model)
In the ‘Controller’ window, check and select (CL) [SVP] to be replaced.

(Multi Cabinet Model)

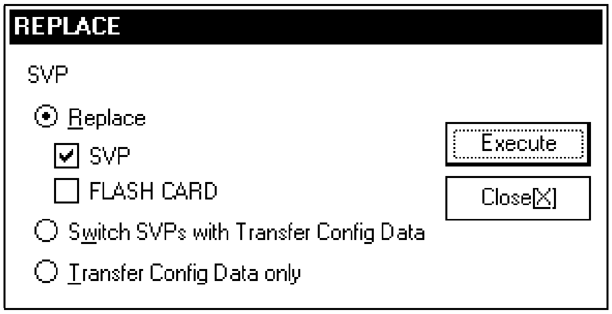

DKC
Parts List
SVP
DKC-PANEL
EPO SW
RS CON
PCI CON
HUB-BOX
DKCMN1
DKCMN2
MONI-CON1
MONI-CON2
SSVP
SSVP
Write Count
0
SVPPS-BOX
Cluster-1
Cluster-2
Close (X)

(Single Cabinet Model)


Controller
Parts List
SVP
DKC-PANEL
EPO SW
RS CON
PCI CON
HUB-BOX
DKCMN1
DKCMN2
SSVP
SSVP
Write Count
0
SVPPS-BOX
Cluster-1
Cluster-2
Close (X)

---

(4) Select (CL) “Transfer Config Data only”, and select (CL) [Execute].



REPLACE

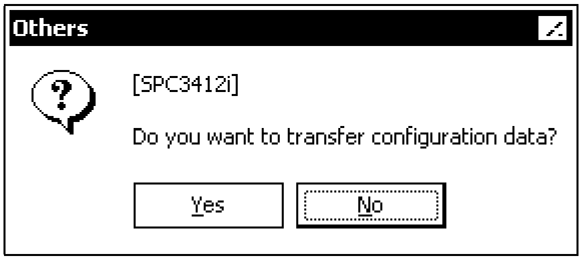
SVP

● Replace
☑ SVP
☐ FLASH CARD
○ Switch SVPs with Transfer Config Data
○ Transfer Config Data only

Execute
Close[X]

---

(5) In response to a message “Do you want to transfer configuration data?”, select (CL) [Yes].

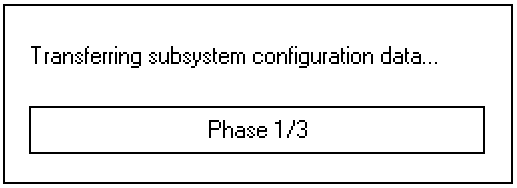


Others

[SPC3412i]

Do you want to transfer configuration data?

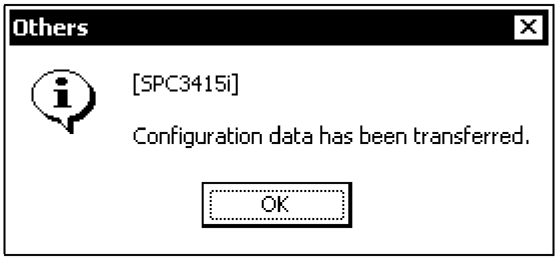
(6) “Transferring subsystem configuration data...” is displayed.



Transferring subsystem configuration data...

Phase 1/3

(7) “Configuration data has been transferred.” is displayed, when Configuration data has been transferred. Select (CL) [OK].
If error has occurred while transferring, correct that a replaced SVP has problem of connecting and/or setting.



[SPC3415i]

Configuration data has been transferred.

(8)

(Multi Cabinet Model)
Close ‘DKC’ window.
Close ‘Maintenance’ window.

(Single Cabinet Model)
Close ‘Controller’ window.
Close ‘Maintenance’ window.

Go to POST-PROCEDURE z (REP04-1400).

[3] Replacement of a Flash Card

Perform the following operation at a Standby SVP.

1. <Shutting down the SVP>
   When the SVP whose Flash Card was replaced starts, power off the SVP (PC) by shutting it down.

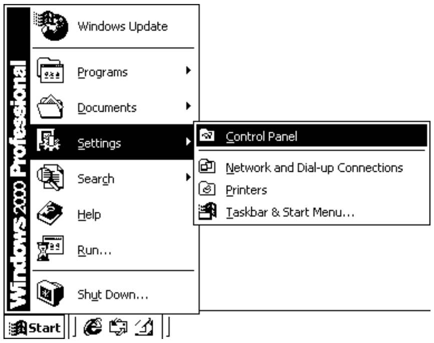
   Go to POST-PROCEDURE z (REP04-1400).

[4] Replacement of an SVP with or without a Flash Card (without SVP switching)

Perform the following operation at a Master SVP.

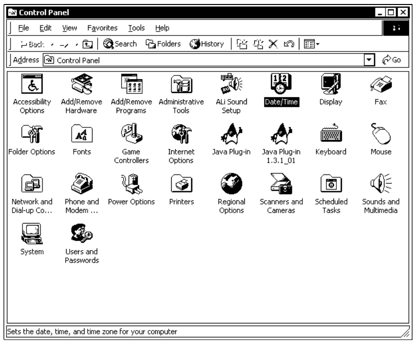
1. Set Date/Time

(1) <Open [Control Panel]>
Select (DR) [Settings] and then [Control Panel] from [Start].


Windows 2000 Professional
Windows Update
Programs
Documents
Settings
Search
Help
Run...
Shut Down...
Start
Control Panel
Network and Dial-up Connections
Printers
Taskbar & Start Menu...

---

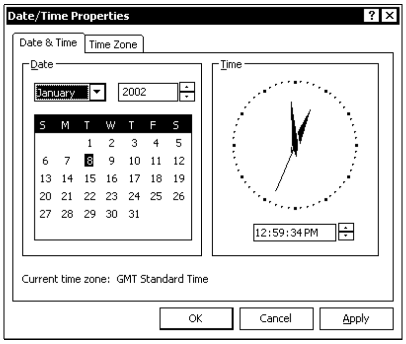
(2) <Open [Date/Time]>
Select (DC) [Date/Time] from [Control Panel].


Control Panel
File Edit View Favorites Tools Help
Back Search Folders History
Address Control Panel
Go
Accessibility Options
Add/Remove Hardware
Add/Remove Programs
Administrative Tools
ALi Sound Setup
Date/Time
Display
Fax
Folder Options
Fonts
Game Controllers
Internet Options
Java Plug-in
Java Plug-in 1.3.1_01
Keyboard
Mouse
Network and Dial-up Co...
Phone and Modem ...
Power Options
Printers
Regional Options
Scanners and Cameras
Scheduled Tasks
Sounds and Multimedia
System
Users and Passwords

Sets the date, time, and time zone for your computer

---

(3) <Select [Time Zone]>
Select (CL) [Time Zone].

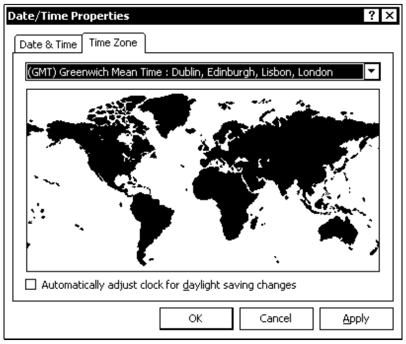

Date/Time Properties
Date & Time
Time Zone
Date
Time
S M T W T F S
1 2 3 4 5
6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30 31
OK
Cancel
Apply

Date: January 2002

Time: 12:59:34 PM

Current time zone: GMT Standard Time

(4) <Check the setting of [Time Zone]>
Make sure that the setting of [Time Zone] is without the relation of a subsystem position "[GMT] Greenwich Mean Time; Dublin, Edinburgh, Lisbon, London". Also, make sure that a check box on the left of "Automatically adjust clock for daylight saving changes" is ☐ (without a check mark).
Then, select (CL) [Date/Time].

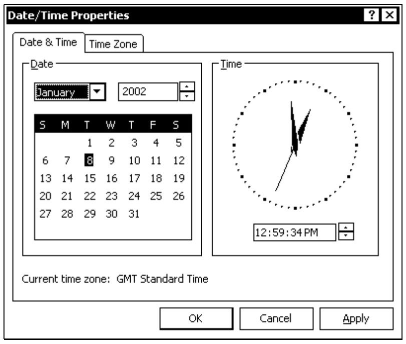


(GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London

☐ Automatically adjust clock for daylight saving changes

Date/Time Properties
Date & Time
Time Zone
OK
Cancel
Apply

(5) <Set the [Date/Time]>
Check if the [Date/Time] is set to the current time and date.
If not, reset it correctly. Then, select (CL) [OK].



Date: January 2002

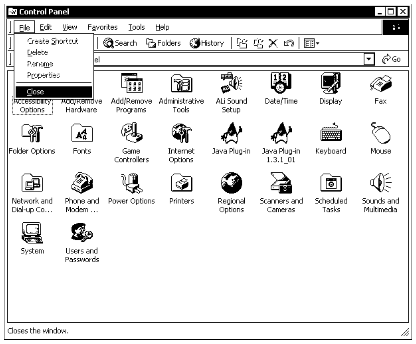
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Time: 12:59:34 PM

Current time zone: GMT Standard Time

Date/Time Properties
Date & Time
Time Zone
OK
Cancel
Apply

(6) <Close "Control Panel">
Select (CL) [File] on "Control Panel".
Select (CL) [Close].



Closes the window.

Control Panel
File
Edit
View
Favorites
Tools
Help
Create Shortcut
Delete
Rename
Properties
Close
Search
Folders
History
Go
Accessibility Options
Add/Remove Hardware
Add/Remove Programs
Administrative Tools
ALi Sound Setup
Date/Time
Display
Fax
Folder Options
Fonts
Game Controllers
Internet Options
Java Plug-in
Java Plug-in 1.3.1_01
Keyboard
Mouse
Network and Dial-up Co…
Phone and Modem …
Power Options
Printers
Regional Options
Scanners and Cameras
Scheduled Tasks
Sounds and Multimedia
System
Users and Passwords

2. Installation of Micro-program

① Insert the CD-ROM disk into the CD-ROM drive and then wait one minute.
② Select (CL) [Run...] from the [Start]. Enter "setup-exe" and press the [Enter] key.

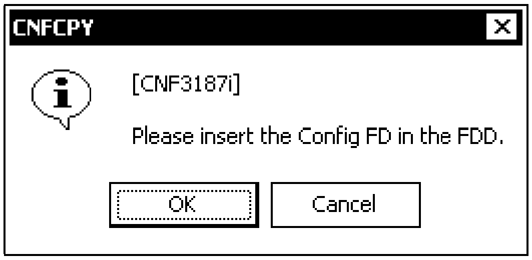
3. Installation of Configuration

(1) Inserting the Config FD

① A message “Please insert the Config FD into the FDD.” is displayed.

② Insert the Config FD into the FDD and select (CL) [OK].

If you insert the previously backed-up Config FD, the original configuration is recovered.



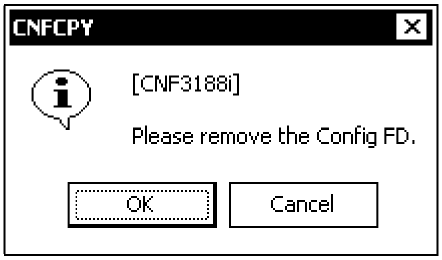
[CNF3187i]

Please insert the Config FD in the FDD.

(2) Removing the Config FD

① When the copying of the Config is completed, a message “Please remove the Config FD.” is displayed.

② Remove the Config FD from the FDD and select (CL) [OK].



[CNF3188i]

Please remove the Config FD.

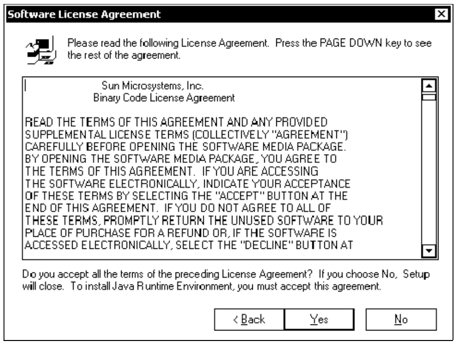
4. JAVA Setup

4-1 JAVA Setup

Setting up of Java is executed. When Java has already been installed, the routine proceeds to Step 4-2.

(1)

Select (CL) [Yes].



Please read the following License Agreement. Press the PAGE DOWN key to see the rest of the agreement.

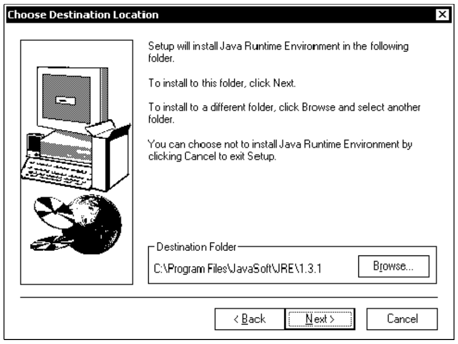
Sun Microsystems, Inc.
Binary Code License Agreement

READ THE TERMS OF THIS AGREEMENT AND ANY PROVIDED SUPPLEMENTAL LICENSE TERMS (COLLECTIVELY "AGREEMENT") CAREFULLY BEFORE OPENING THE SOFTWARE MEDIA PACKAGE. BY OPENING THE SOFTWARE MEDIA PACKAGE, YOU AGREE TO THE TERMS OF THIS AGREEMENT. IF YOU ARE ACCESSING THE SOFTWARE ELECTRONICALLY, INDICATE YOUR ACCEPTANCE OF THESE TERMS BY SELECTING THE "ACCEPT" BUTTON AT THE END OF THIS AGREEMENT. IF YOU DO NOT AGREE TO ALL OF THESE TERMS, PROMPTLY RETURN THE UNUSED SOFTWARE TO YOUR PLACE OF PURCHASE FOR A REFUND OR, IF THE SOFTWARE IS ACCESSED ELECTRONICALLY, SELECT THE "DECLINE" BUTTON AT

Do you accept all the terms of the preceding License Agreement? If you choose No, Setup will close. To install Java Runtime Environment, you must accept this agreement.

(2)

Select (CL) [Next].



Setup will install Java Runtime Environment in the following folder.

To install to this folder, click Next.

To install to a different folder, click Browse and select another folder.

You can choose not to install Java Runtime Environment by clicking Cancel to exit Setup.

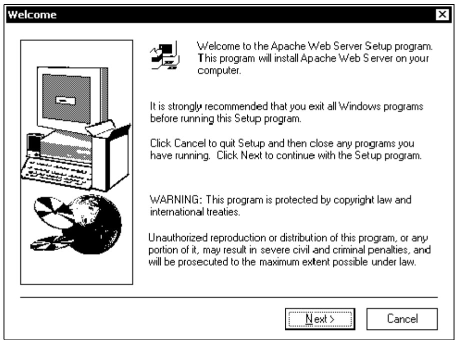
Destination Folder
C:\Program Files\JavaSoft\JRE\1.3.1

4-2 APACHE Setup

Setting up of APACHE is executed. When APACHE has already been installed, the routine proceeds to Step 5.

(1)

Select (CL) [Next].



Welcome to the Apache Web Server Setup program. This program will install Apache Web Server on your computer.

It is strongly recommended that you exit all Windows programs before running this Setup program.

Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.

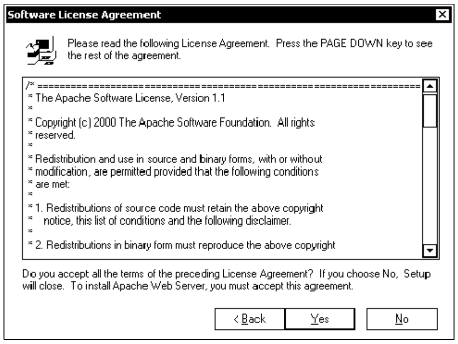
WARNING: This program is protected by copyright law and international treaties.

Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

---

(2)

Select (CL) [Yes].



Please read the following License Agreement. Press the PAGE DOWN key to see the rest of the agreement.

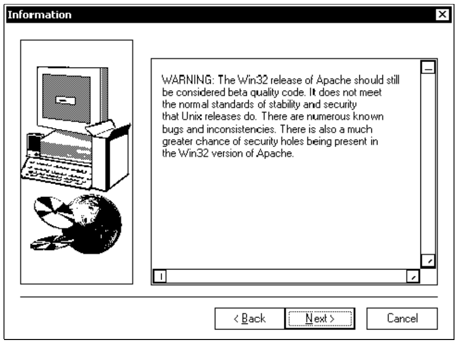
```
/* ====================================================================
 * The Apache Software License, Version 1.1
 *
 * Copyright (c) 2000 The Apache Software Foundation.  All rights
 * reserved.
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 *
 * 1. Redistributions of source code must retain the above copyright
 *    notice, this list of conditions and the following disclaimer.
 *
 * 2. Redistributions in binary form must reproduce the above copyright
```

Do you accept all the terms of the preceding License Agreement? If you choose No, Setup will close. To install Apache Web Server, you must accept this agreement.

---

(3)

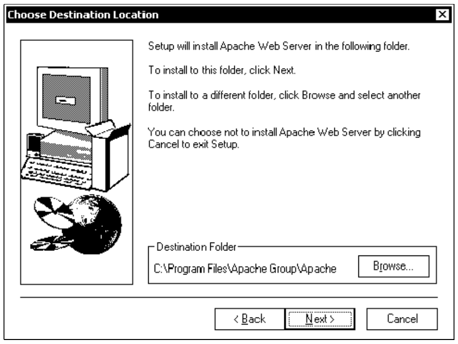
Select (CL) [Next].



WARNING: The Win32 release of Apache should still be considered beta quality code. It does not meet the normal standards of stability and security that Unix releases do. There are numerous known bugs and inconsistencies. There is also a much greater chance of security holes being present in the Win32 version of Apache.

(4)

Select (CL) [Next].


Choose Destination Location
Destination Folder
Browse...
< Back
Next >
Cancel

Setup will install Apache Web Server in the following folder.

To install to this folder, click Next.

To install to a different folder, click Browse and select another folder.

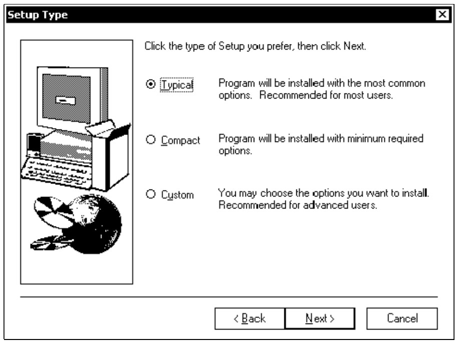
You can choose not to install Apache Web Server by clicking Cancel to exit Setup.

C:\Program Files\Apache Group\Apache

---

(5)

Select (CL) [Next].


Setup Type
< Back
Next >
Cancel

Click the type of Setup you prefer, then click Next.

● Typical Program will be installed with the most common options. Recommended for most users.

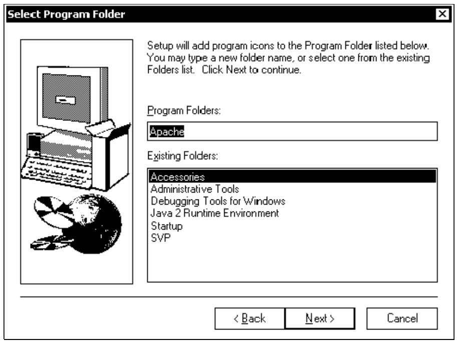
○ Compact Program will be installed with minimum required options.

○ Custom You may choose the options you want to install. Recommended for advanced users.

---

(6)

Select (CL) [Next].


Select Program Folder
< Back
Next >
Cancel

Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing Folders list. Click Next to continue.

Program Folders:

Apache

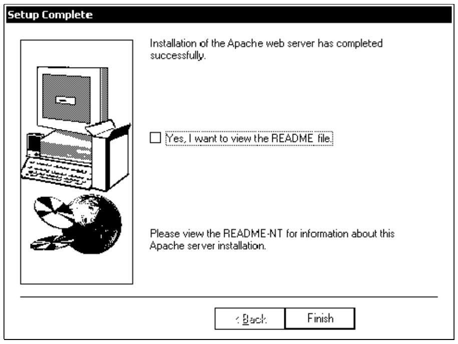
Existing Folders:

Accessories
Administrative Tools
Debugging Tools for Windows
Java 2 Runtime Environment
Startup
SVP

---

(7)

Remove the check box of “Yes and I want to view the README file.”, and select (CL) [Finish].


Setup Complete
< Back
Finish

Installation of the Apache web server has completed successfully.

☐ Yes, I want to view the README file.

Please view the README-NT for information about this Apache server installation.

REV.0	Jun.2002					

5. Restarting the SVP

When the setup is completed, the SVP restarts automatically.

6. Set IP address of SVP

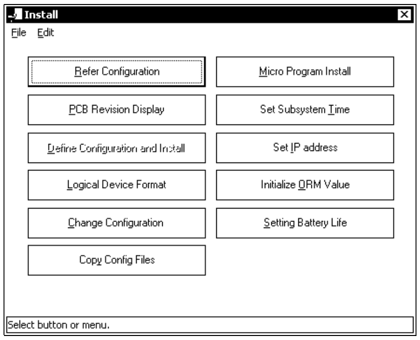
(1) <Changing the mode>
Change the mode by selecting [Modify Mode].

---

(2) <Opening the Install window>
Select (CL) [Install] from the [SVP] menu.

---

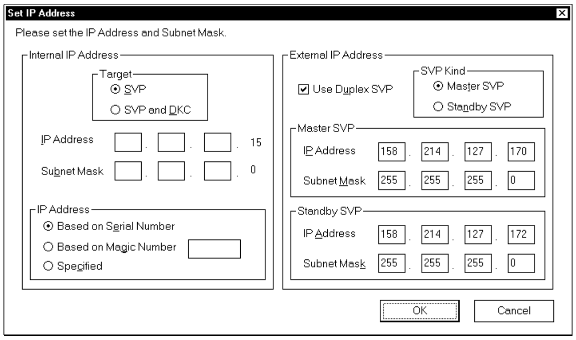
(3) <Selecting [Set SVP IP Address]>
Select (CL) [Set IP Address] in the [Install] window.


Install
File
Edit
Refer Configuration
Micro Program Install
PCB Revision Display
Set Subsystem Time
Define Configuration and Install
Set IP address
Logical Device Format
Initialize ORM Value
Change Configuration
Setting Battery Life
Copy Config Files

Select button or menu.

---

(4) <Setting an IP address>
Select (CL) [SVP] in the Internal IP Address box and enter an IP address and subnet mask of the internal IP address.

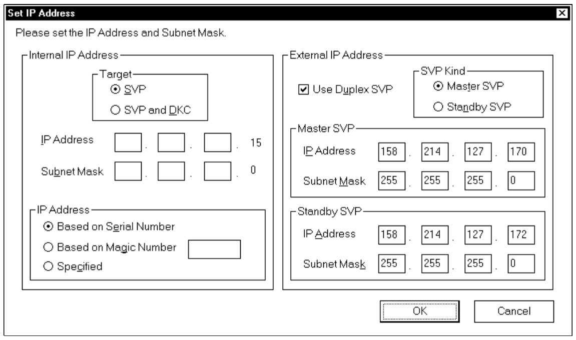

Set IP Address
OK
Cancel

Please set the IP Address and Subnet Mask.

Internal IP Address
Target: ● SVP ○ SVP and DKC
IP Address: . . . 15
Subnet Mask: . . . 0
IP Address: ● Based on Serial Number ○ Based on Magic Number ○ Specified

External IP Address
☑ Use Duplex SVP
SVP Kind: ● Master SVP ○ Standby SVP
Master SVP
IP Address: 158 . 214 . 127 . 170
Subnet Mask: 255 . 255 . 255 . 0
Standby SVP
IP Address: 158 . 214 . 127 . 172
Subnet Mask: 255 . 255 . 255 . 0

(5) <Setting an IP address>
Select (CL) [SVP] in the Internal IP Address box and enter an IP address and subnet mask of the internal IP address.



Set IP Address

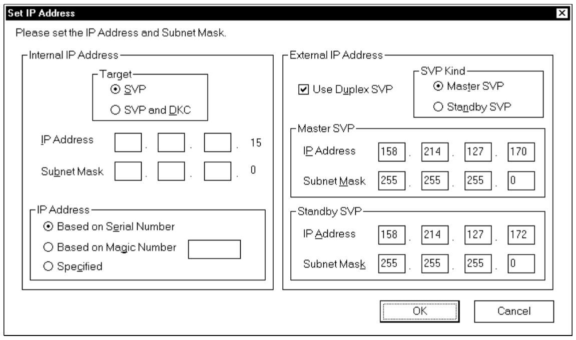
Please set the IP Address and Subnet Mask.

Internal IP Address
Target: ● SVP ○ SVP and DKC
IP Address: [ ] . [ ] . [ ] . 15
Subnet Mask: [ ] . [ ] . [ ] . 0
IP Address: ● Based on Serial Number ○ Based on Magic Number ○ Specified

External IP Address
☑ Use Duplex SVP
SVP Kind: ● Master SVP ○ Standby SVP
Master SVP: IP Address 158 . 214 . 127 . 170; Subnet Mask 255 . 255 . 255 . 0
Standby SVP: IP Address 158 . 214 . 127 . 172; Subnet Mask 255 . 255 . 255 . 0

(6) <Setting the SVP duplication>
(a) Select (CL) [Use Duplex SVP] in the External IP address box.
(b) Select (CL) [Standby SVP] in the SVP Kind box.
(c) Enter the IP addresses and subnet masks of the Master and Standby SVPs, and then select (CL) [OK].

* You do not have to enter the information of Item (c) above when the setting of the external IP address is not required.



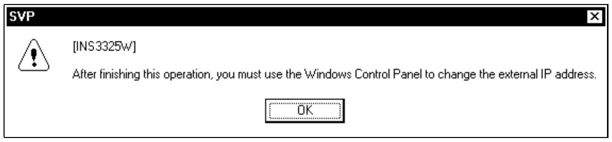
Set IP Address

Please set the IP Address and Subnet Mask.

Internal IP Address
Target: ● SVP ○ SVP and DKC
IP Address: [ ] . [ ] . [ ] . 15
Subnet Mask: [ ] . [ ] . [ ] . 0
IP Address: ● Based on Serial Number ○ Based on Magic Number ○ Specified

External IP Address
☑ Use Duplex SVP
SVP Kind: ● Master SVP ○ Standby SVP
Master SVP: IP Address 158 . 214 . 127 . 170; Subnet Mask 255 . 255 . 255 . 0
Standby SVP: IP Address 158 . 214 . 127 . 172; Subnet Mask 255 . 255 . 255 . 0

(7) <Confirming the external IP address setting>
When a message, “After finishing this operation, you must use the Windows Control Panel to change the external IP address.” is displayed, select (CL) the [OK] button.

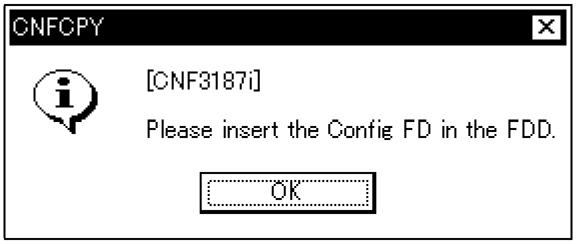


SVP

[INS3325W]

After finishing this operation, you must use the Windows Control Panel to change the external IP address.

(8) <Inserting the Config FD>
Insert the Config FD into the FDD and select (CL) [OK].

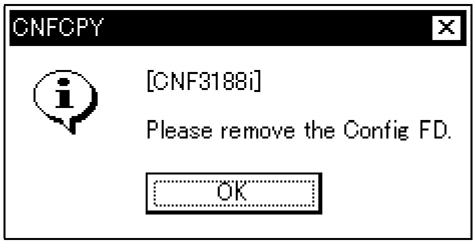


CNFCPY

[CNF3187i]

Please insert the Config FD in the FDD.

(9) <Removing the Config FD>
When the copying of the Config is completed, a message, "Please remove the Config FD." is displayed. Remove the FD and select (CL) [OK].

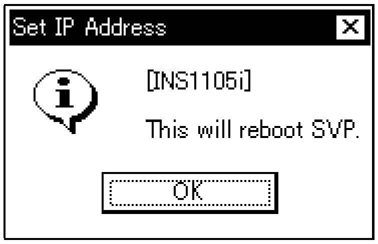


[CNF3188i]

Please remove the Config FD.

---

(10) <Confirming rebooting of the SVP>
Select (CL) [OK] in response to a message, "This will reboot SVP.".

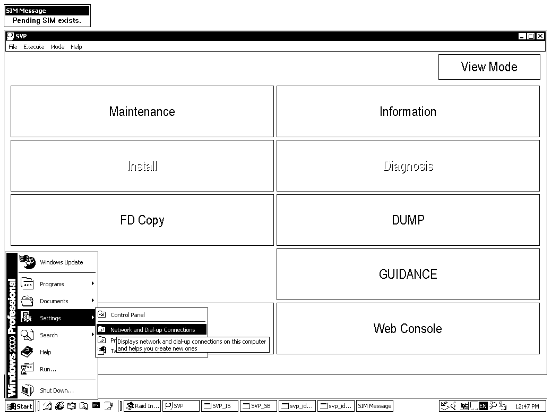

Set IP Address
OK

[INS1105i]

This will reboot SVP.

---

(11) <Opening the Network and Dial-up Connections window>
When the setting of the external IP address is not required, go to Step 8.
Select (CL) [Settings] and [Network and Dialup Connections] in this order from the [Start].

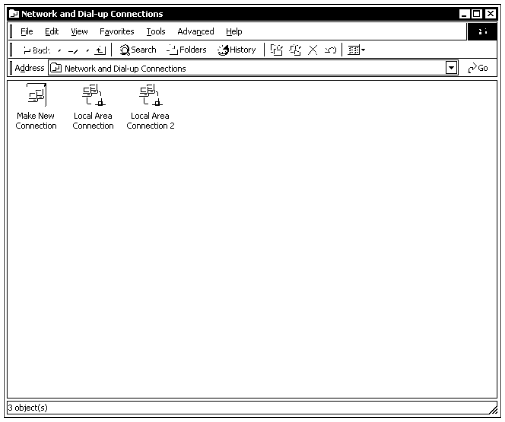

SIM Message
SVP
File
Execute
Mode
Help
View Mode
Maintenance
Information
Install
Diagnosis
FD Copy
DUMP
GUIDANCE
Web Console
Windows 2000 Professional
Windows Update
Programs
Documents
Settings
Search
Help
Run...
Shut Down...
Control Panel
Network and Dial-up Connections
Start
Raid In...
SVP
SVP_IS
SVP_SB
svp_id...
svp_id...
SIM Message
12:47 PM

Pending SIM exists.

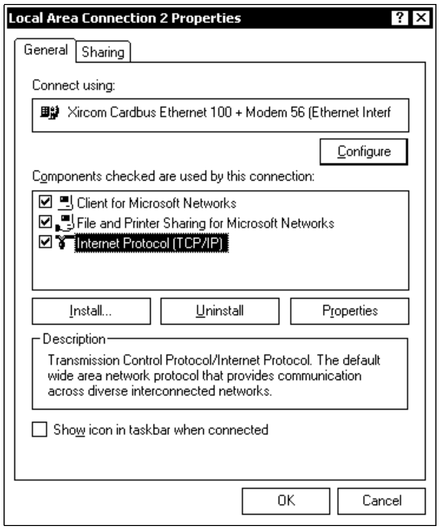
Displays network and dial-up connections on this computer and helps you create new ones

---

(12) <Opening the Local Area Connection 2 window>
Select (CL) [Local Area Connection 2] in the Network and Dial-up Connections window.


Network and Dial-up Connections
File
Edit
View
Favorites
Tools
Advanced
Help
Back
Search
Folders
History
Address
Network and Dial-up Connections
Go
Make New Connection
Local Area Connection
Local Area Connection 2
3 object(s)

(13) <Opening the Local Area Connection 2 Properties window>
Select (CL) [Internal Protocol (TCP/IP)] in the [Local Area Connection 2 Properties window, and then select (CL) the [Properties] button.



Local Area Connection 2 Properties

General | Sharing

Connect using:

Xircom Cardbus Ethernet 100 + Modem 56 (Ethernet Interf

Configure

Components checked are used by this connection:

☑ Client for Microsoft Networks
☑ File and Printer Sharing for Microsoft Networks
☑ Internet Protocol (TCP/IP)

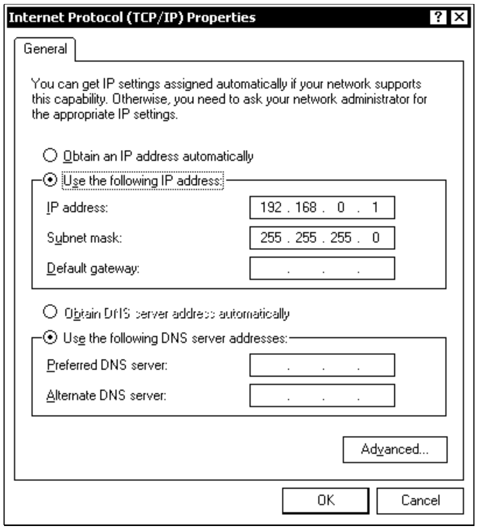
Install... | Uninstall | Properties

Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

☐ Show icon in taskbar when connected

OK | Cancel

(14) <Setting an external IP address>
Set the IP address and subnet mask, and then select (CL) the [OK] button.



Internet Protocol (TCP/IP) Properties

General

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: . . .

○ Obtain DNS server address automatically
● Use the following DNS server addresses:
Preferred DNS server: . . .
Alternate DNS server: . . .

Advanced...

OK | Cancel

7. Removing the SVP PS ON/OFF INH jumper

Remove the jumper plug that was attached in Step 4 of Item [4] in PRE-PROCEDURE T5.
Remove the jumper plug from the SVP PS ON/OFF INH pin of the RS CON.
When the SVP is an Optional SVP, remove the jumper plug from the PS CTLINH pin of the SVPPS-BOX, too.
(See HARDWARE T7 (Step 5 on REP03-480))

8. TOD Setting

Wait a few minutes, message “Loading SVP Program... SVP requests to DKC can not be performed presently. Please wait...” will be extinguished. Then set TOD.
See SVP02-10.

9. Load the Configuration from the SM to the SVP’s HDD

(1) <Open [Maintenance]>
Select (CL) [Maintenance] form ‘SVP’.

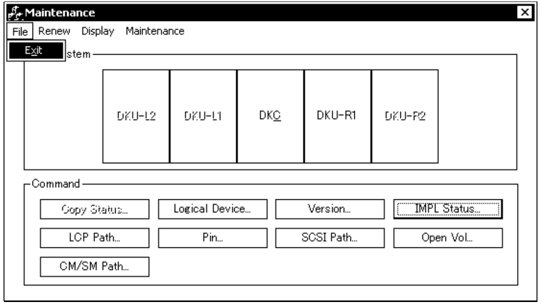
---

(2)
Check “Connection error occurred SVP-DKC.” is not displayed.
If “Connection error occurred SVP-DKC” is displayed, see TRBL05-60.

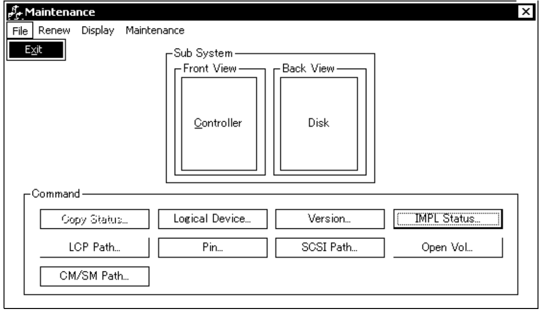
---

(3) <Select [Exit]>
Select (CL) [File] from the “Maintenance”.
Select (CL) [Exit].

(Multi Cabinet Model)


Maintenance
File
Renew
Display
Maintenance
Exit
stem
DKU-L2
DKU-L1
DKC
DKU-R1
DKU-R2
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
LCP Path...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

(Single Cabinet Model)


Maintenance
File
Renew
Display
Maintenance
Exit
Sub System
Front View
Back View
Controller
Disk
Command
Copy Status...
Logical Device...
Version...
IMPL Status...
LCP Path...
Pin...
SCSI Path...
Open Vol...
CM/SM Path...

10. Setting Web Console

Make a setting of the Web Console according to [Web Station] section. (WEB01-10)

When you have installed from the backed-up Config FD,

i) Storage list / user list / environment information can be recovered to the backed-up status by copy the following files under c:\program files\apache group\apache\cgi-bin\Utility\CSV.

- USERLIST.CSV
- STRLIST.CSV
- ENV.CSV

ii) Please perform the following procedure, when you use SNMP Agent.

1. Push Web Console button.
2. Open the SNMP Information Tab.
3. Remove the check mark of Extension SNMP and push Apply button.
4. Add the check mark of Extension SNMP and push Apply button again.

iii)Please perform the following procedure, when you don’t use SNMP Agent.

1. Push Web Console button.
2. Specify Name, Contact and Location on Information Tab again.

11. Confirm status

Confirm the status display.
If button is valid, go to [12].
If button is blinking, replace the FLASH CARD.

12. Configuration Back

Make a backup copy of the configuration in the CONFIG FD. (See MICRO-FC08-10)

13. SIM Complete

See SVP02-580.

[End of POST-PROCEDURE]

[5] Replacement of a Flash Card (without SVP switching)

Perform the following operation at a Master SVP.

1. <Confirm status>
   Confirm the status display.

   If button is blinking, refer to SIM and replace the target part again, or see TROUBLE SHOOTING SECTION.

   [End of POST-PROCEDURE]

[POST-PROCEDURE u]

— OUTLINE —

① Execute CUDG on P-DEV.
② Specify recovery.
③ Correction copy
④ Reset ORM Error Count on the P-DEV.
⑤ Reset Threshole Counter
⑥ SIM Complete.

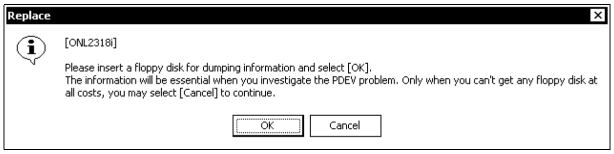
CAUTION

This processing is a special operation for detecting a cause of a Fibre loop error. Ask the technical support center about the appropriateness of the operation.

CAUTION

This processing is a special operation for detecting a cause of a Fibre loop error. Ask the technical support center about the appropriateness of the operation.

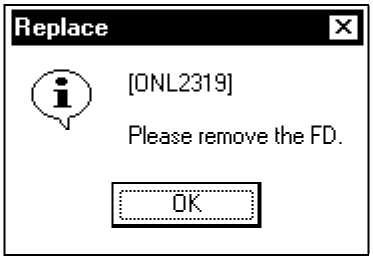
1. <Check the beginning of recovery>
Please insert the floppy disk and select (CL) [OK].
Failure information of the physical device is written to the floppy disk.



[ONL2318i]

Please insert a floppy disk for dumping information and select [OK].
The information will be essential when you investigate the PDEV problem. Only when you can't get any floppy disk at all costs, you may select [Cancel] to continue.

[After the completion of writing failure information:]
"Please remove the FD." is displayed.
Please remove the floppy disk and select (CL) [OK].



[ONL2319]

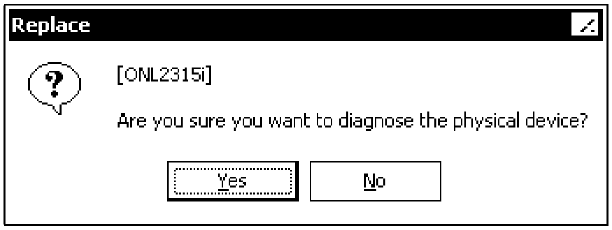
Please remove the FD.

---

2. <Spin up the Physical Drive>
"Spinning up..." is displayed.

---

3. <DKU INLINE>
Select (CL) [No] in response to "Are you sure you want to diagnose the physical device?".



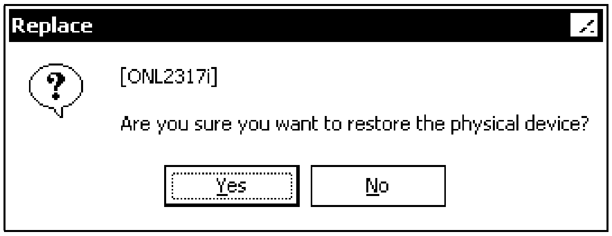
[ONL2315i]

Are you sure you want to diagnose the physical device?

⚠ CAUTION

This processing is a special operation for detecting a cause of a Fibre loop error. Ask the technical support center about the appropriateness of the operation.

4. <Restore Physical Drive>
Select (CL) [Yes] in response to “Are you sure you want to restore the physical device?”.



[ONL2317i]

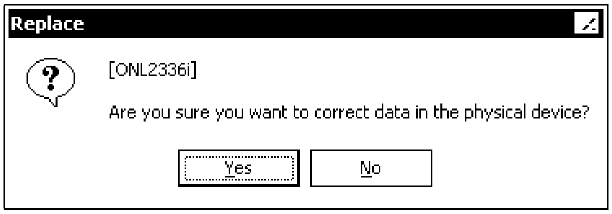
Are you sure you want to restore the physical device?

---

5. <Check the Drive Status>
“Checking...” is displayed.
Device is still blocked.

---

6. <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?

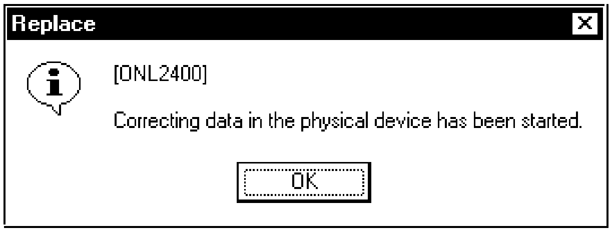
---

7. <Correct data>
“Correcting...” is displayed.

CAUTION

This processing is a special operation for detecting a cause of a Fibre loop error.
Ask the technical support center about the appropriateness of the operation.

8. <Check the starting of Correction copy>
Select (CL) [OK] in response to “Correcting data in the physical device has been started.”.

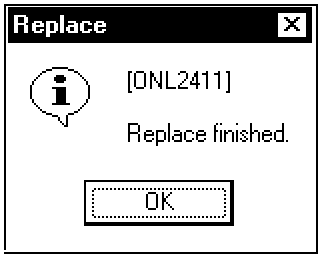


[ONL2400]

Correcting data in the physical device has been started.

---

9. <Check the end of P-DEV recovery>
Select (CL) [OK] in response to “Replace finished.”.



[ONL2411]

Replace finished.

---

10. <SIM Complete>
Refer to SVP02-580.

[POST-PROCEDURE z]

— OUTLINE —

① SVP Window
② Change the SVP operation mode.

1. <SVP window>

2. <Changing the SVP operation mode>
   Change the mode to [View Mode].