

# [Battery REPLACEMENT PROCESSING - RBT1]

## — OUTLINE —

### 1. PRE-PROCESSING of SVP

- ① Check beginning of Battery Replacement
- ② Check battery charge opposite cluster
- ③ Enter the password
- ④ Check with battery storage period
- ⑤ Check the LED blinks
- ⑥ Replacement

### 2. HARDWARE REPLACEMENT PROCESSING

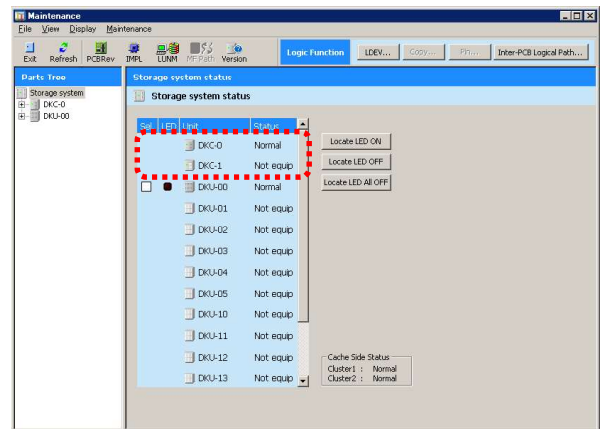
### 3. POST-PROCESSING of SVP

- ① Check beginning of CACHE Battery Replacement
- ② Check the battery status
- ③ Setting Battery Life
- ④ Check end of replacement

## 1. PRE-PROCESSING of SVP

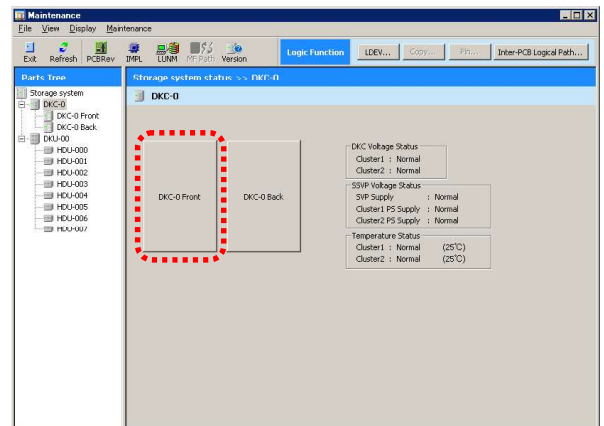
### 1-1. <Maintenance window>

Select (CL) [DKC-n] in the ‘Maintenance’ window.



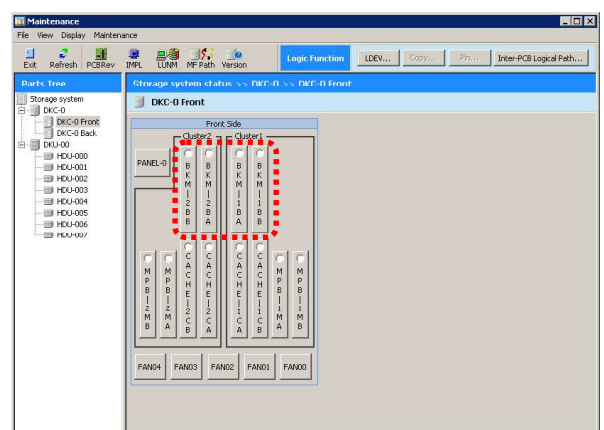
### 1-2. <DKC window>

Select (CL) [DKC-n Front] in the ‘DKC’ window.



### 1-3. <Select BKM>

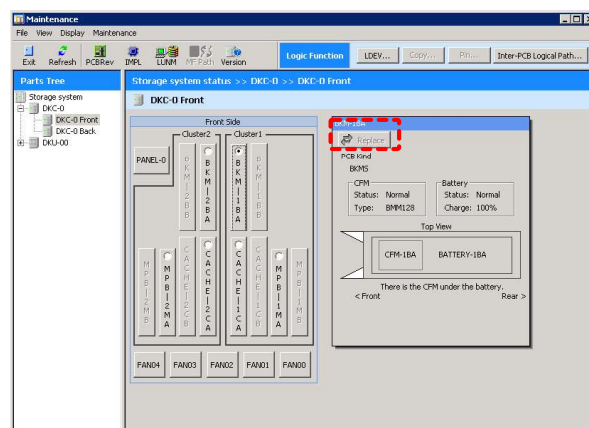
Select (CL) [BKM-nnn].



## 1-4. &lt;Specify replacement of BKM&gt;

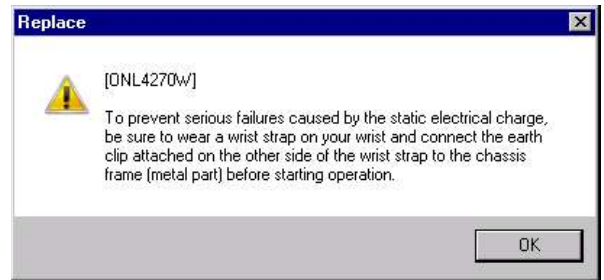
**NOTICE:** When the screen appears prompting the operator to input a password to prevent multiple maintenance or for executing a pin check, contact the technical support division to ask for instructions.

Check the status display.  
Select (CL) [Replace].



### 1-5. <Wear a wrist strap>

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



#### (1) <Confirm wearing wrist strap>

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

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

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



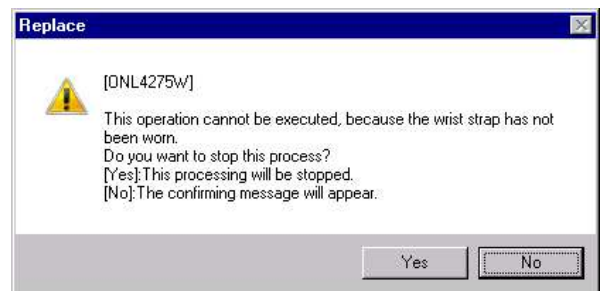
When [No] is selected (CL), go to Step (2).

#### (2)

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

[Yes]: This processing will be stopped.

[No]: The confirming message will appear.”



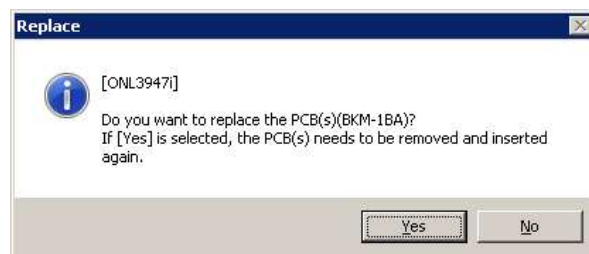
When [Yes] is selected (CL), returned to Step 1-4.

When [No] is selected (CL), returned to Step 1-5.

### 1-6. <BKM replace>

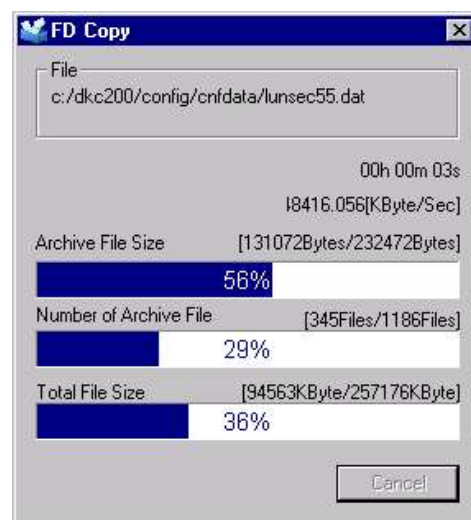
If any other message that is not explained below is displayed, see the SVP MESSAGE SECTION ([SVPMMSG00-00](#)).

Select (CL) [Yes] in response to:  
“Do you want to replace the PCB(s)(BKM-nnn)? If [Yes] is selected, the PCB(s) needs to be removed and inserted again.”.



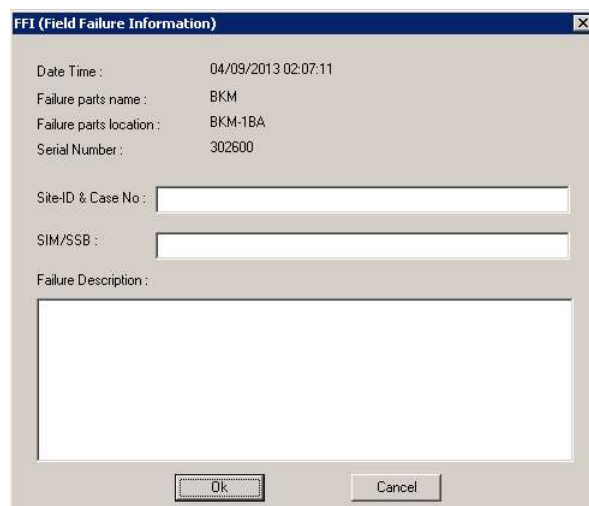
### 1-7. <Compression of the error information>

The error information is compressed.  
The dialog of FD Copy is displayed.



### 1-8. <Get the error information>

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



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

Trouble information is preserved in Maintenance PC connected with SVP. Please select the Maintenance PC radio button of the screen, and select an arbitrary drive letter from the pull-down menu. The drive letter becomes the drive letter of Maintenance PC connected with SVP.



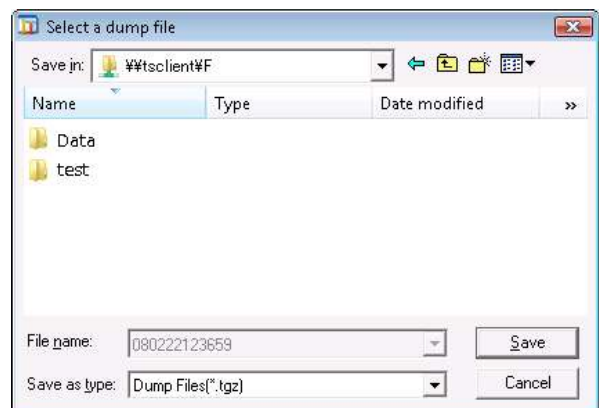
A Primary copy is always placed on the SVP HD in the “c:\dkc200\others\pcbinfo\” directory with the following file name format

“[factory\_cd]\_[Pcb\_type]\_[Pcb\_SerialNo]\_YYMMDDhhmmss.tgz”.

(YY denotes Year, MM denotes Month, DD denotes Day, hh denotes Hour, mm denotes Minute, and ss denotes Second)

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

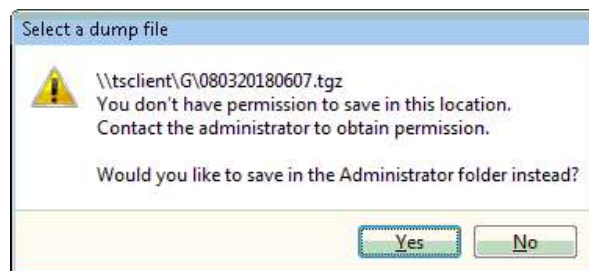
Maintenance PC that \\tsclient connects with SVP is shown when it is a directory display, and \\tsclient\F and \F shows F drive of Maintenance PC.



Select (CL) [Save] when saving a file in a specified directory.

It returns to the drive selection screen when [Cancel] is selected (CL).

- When the destination media is write-protected.  
Selecting (CL) [Yes] displays the “C:\users\Administrator” folder of SVP.  
Selecting (CL) [No] displays the folder selected with the Maintenance PC.



Please appoint another destination whether you remove write protect when you save it and carry it out.

- When dialog of the destination drive specified with the Maintenance PC is open, the media is removed, and then select (CL) [Save].

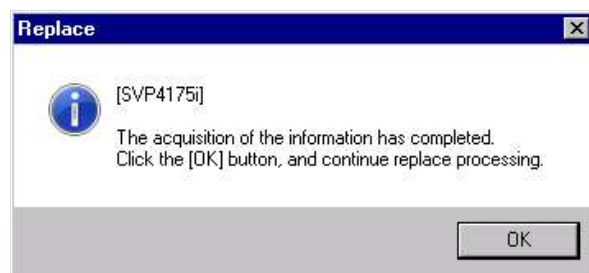
- When the memory in the destination drive specified with the Maintenance PC is corrupted.  
The dialog remains displayed after selecting (CL) [OK].



At the time of the above operation completion, the information collection is not carried out.

Please choose another directory again after having closed a system message whether you reconnect the drive that you removed when you save it and carry it out.

Select (CL) [OK] in response to “The acquisition of the information has completed. Click the [OK] button, and continue replace processing.”.

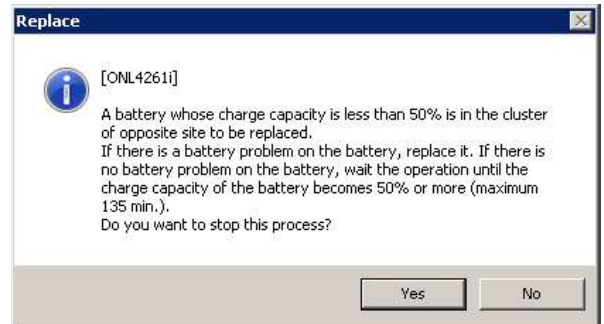


### 1-9. <Check battery charge opposite cluster>

Automatically, the battery's charge is measured in the opposite cluster.

- More than 50% charge capacity, or “being measured”, go to Step 1-11.

Charge capacity of less than 50%, the following message “A battery whose charge capacity is less than 50% is in the cluster of opposite site to be replaced. If there is a battery problem on the battery, replace it. If there is no battery problem on the battery, wait the operation until the charge capacity of the battery becomes 50% or more (maximum 135 min.). Do you want to stop this process?” is displayed.



If you stop for battery replacement, select (CL) [Yes], returned to Step 1-4.

To continue the replacement battery, select (CL) [No], go to Step 1-10.

### 1-10. <Enter the password>

Corresponding to the following message, enter the password and select (CL) the [OK] button.

“Ask the Technical Support Division about the appropriateness of this operation, and enter the password.”

Go to Step 1-11.

If you stop for a replacement, [Cancel].

Return to Step 1-9.

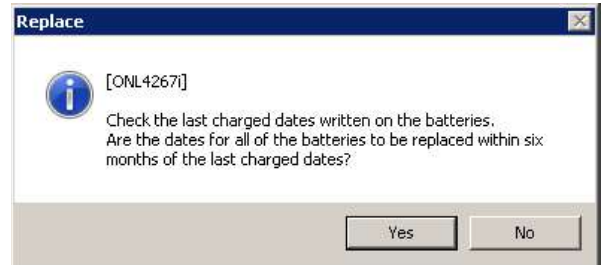




### 1-11. <Check with battery storage period>

Check the date that is mentioned in the final charge to replace the battery.

“Check the last charged dates written on the batteries. Are the dates for all of the batteries to be replaced within six months of the last charged dates?” is displayed.



- Within six months from the date when the final charge, select (CL) [Yes].
- When more than 6 months from the date of the last charge, select (CL) [No].

And Processing. Go to Step 1-12.



### 1-12. <Check BKM blocking>

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

“The BKM(BKM-nnn) is being blocked...” is displayed.

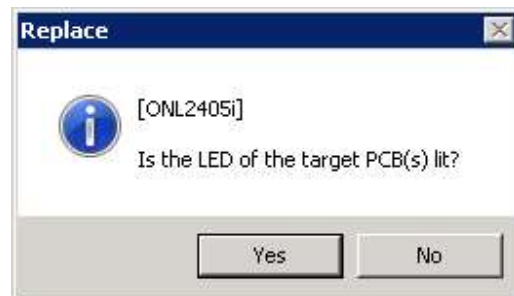
### 1-13. <Check shut down LED>

Select (CL)

\* [Yes] if LED is on

\* [No] if LED is off

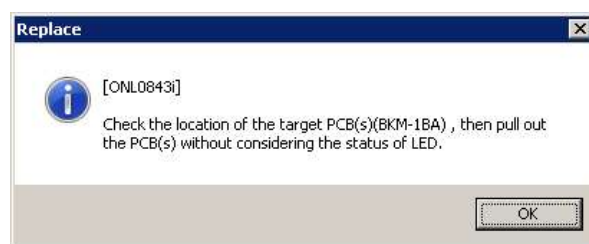
in response to “Is the LED of the target PCB(s) lit?”.



If [No] is selected:

Select (CL) [OK] in response to “Check the location of the target PCB(s)(BKM-nnn), then pull out the PCB(s) without considering the status of LED.”. (Refer to “2. HARDWARE REPLACEMENT PROCESSING”)

NOTE: Select (CL) [OK] after pulling out the PCB.



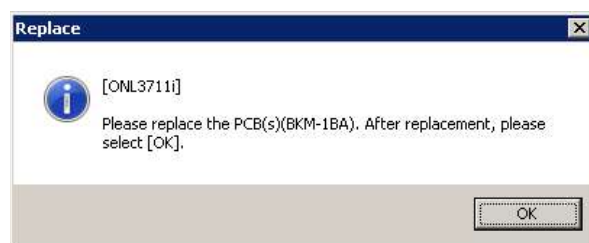
Go to Step 1-14.

### 1-14. <Beginning of Battery replacement>

“Please replace the PCB(s)(BKM-nnn). After replacement, please select [OK].” is displayed.

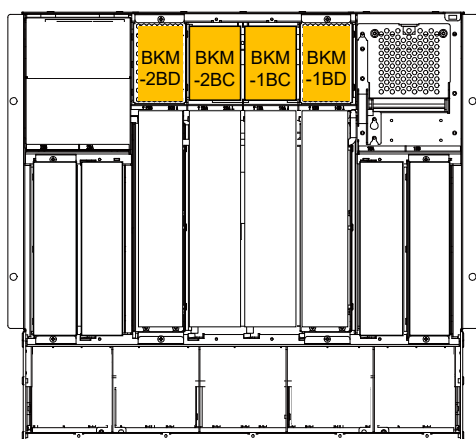
Select (CL) [OK] after replacing the Battery.

Go to “2. HARDWARE REPLACEMENT PROCESSING”.

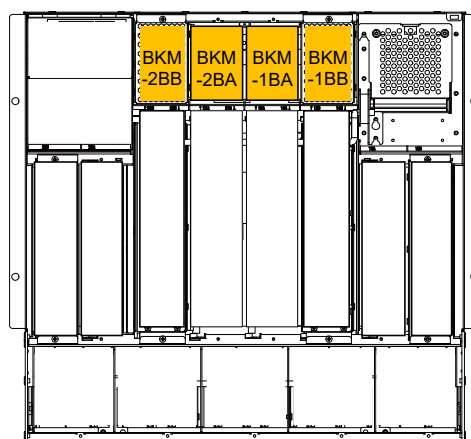


## 2. HARDWARE REPLACEMENT PROCESSING

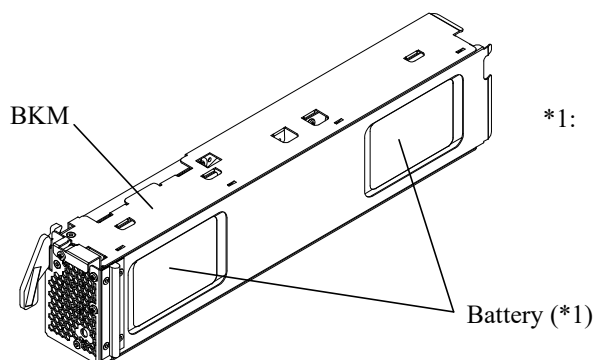
Location		Function Name of Component	Part Name
Inside of BKM	1	Battery (*1)	<ul style="list-style-type: none"> <li>• Cache Battery (Ni-MH) (BKMS)</li> <li>• Cache Battery (Ni-MH) (BKML)</li> </ul>



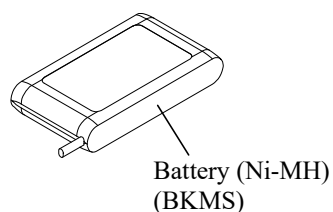
Front View of  
DKC-1



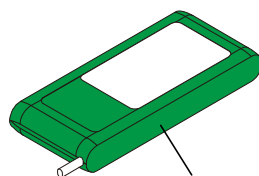
Front View of  
DKC-0



\*1: When replacing the batteries in the BKM, prepare two spare batteries and replace the two batteries in the BKM with the two spare batteries at the same time.



Battery (Ni-MH)  
(BKMS)



Battery (Ni-MH)  
(BKML)

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

## 2-1 Replacement of Battery

**⚠ CAUTION**

Watching for short-circuits:

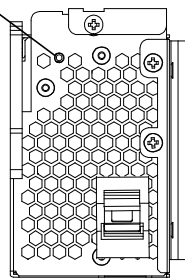
A Short-circuit may cause a fire.

Never insert metal or the like into the battery box connector or a short-circuit may occur.

2-1-1. Check that the Shut Down LED is on.

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

Shut Down LED (Red)



Front View of BKM

Fig. 3.23.2-1 Confirmation of Shut Down LED

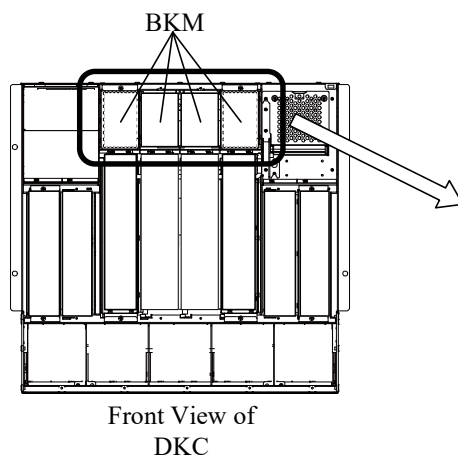
2-1-2. If the cables are attached to the BKMs, move the cables.

If the cables are not attached to the BKMs, go to Procedure 2-1-3.

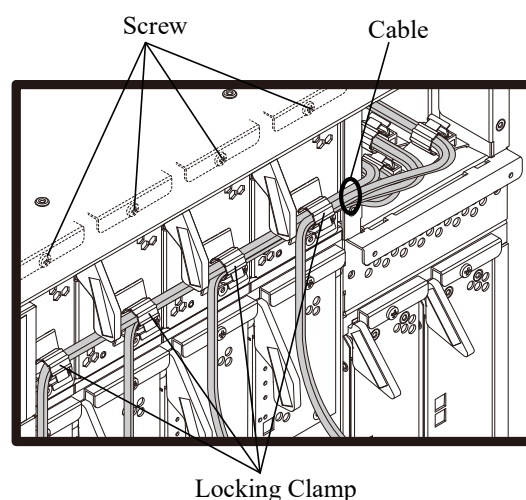
a. Check that the screws to secure the BKMs are tightened.

NOTE: If the screw is loose, the BKM may be extracted when the cables or the locking clamp is moved.

b. Open the four locking clamps and move all the cables to where they cannot obstruct removal of the BKM.



Front View of  
DKC



Locking Clamp

Fig. 3.23.2-2 Moving Cables

## 2-1-3. Replacement of Battery

- a. Remove the screw and remove the BKM.

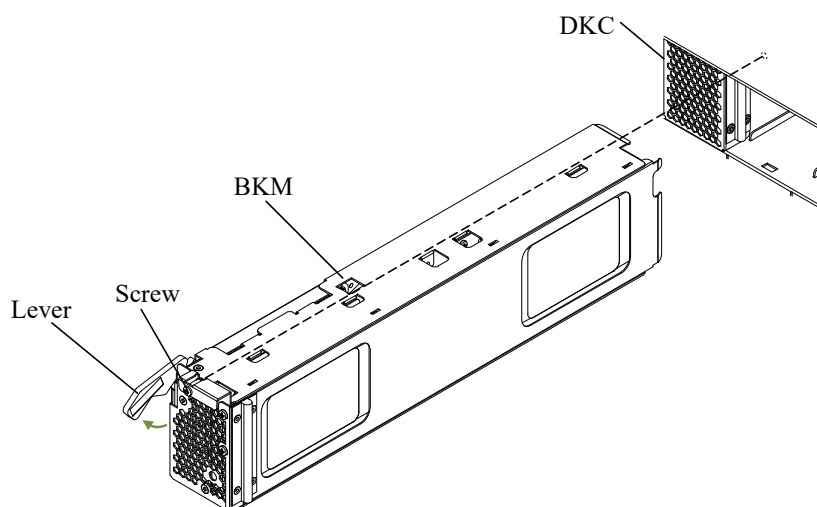
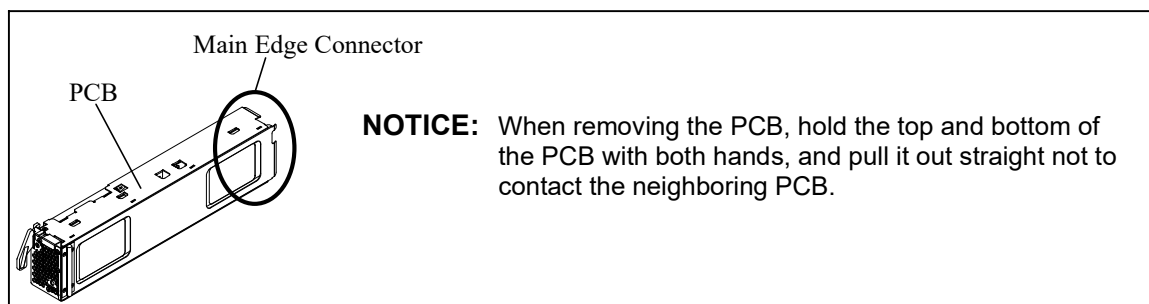


Fig. 3.23.2-3 Removal of BKM

- b. Remove the two screws and remove the cover.

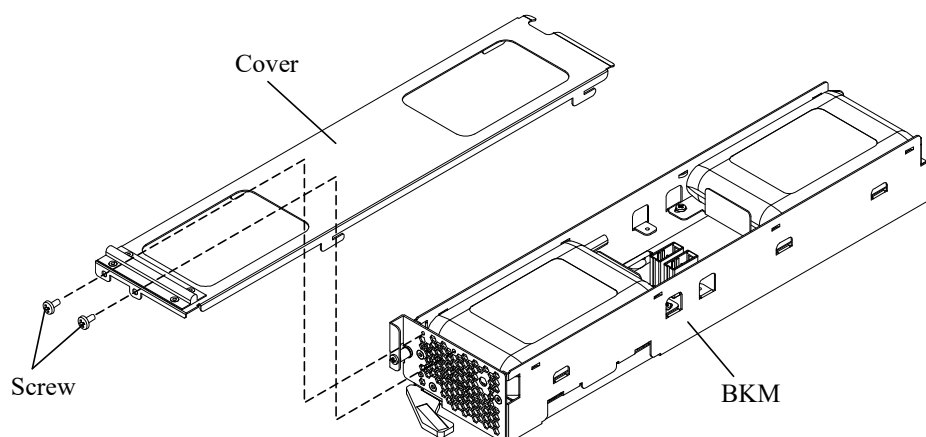


Fig. 3.23.2-4 Removal of Cover

- c. Disconnect the two cables and remove the two batteries.
- d. Attach the spare batteries and connect the cables to the BKM.
- e. Attach the cover to the BKM and tighten the two screws. (Refer to Fig. 3.23.2-4.)

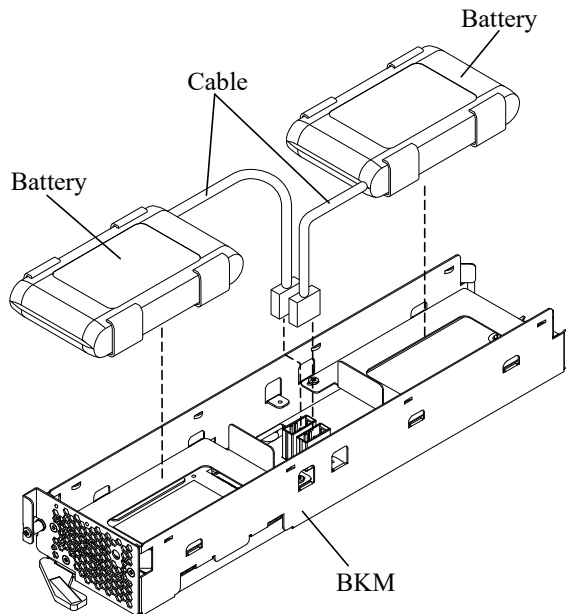
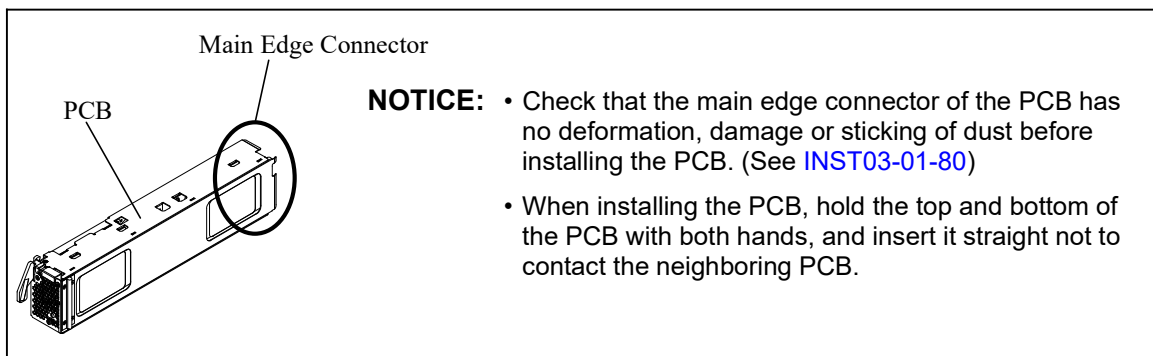


Fig. 3.23.2-5 Replacement of Batteries

## 2-1-4. Insert the BKM.

- a. Insert the BKM to the correct location and tighten the screw.
- b. If the cables were moved aside in Procedure 2-1-2, put them back in place.

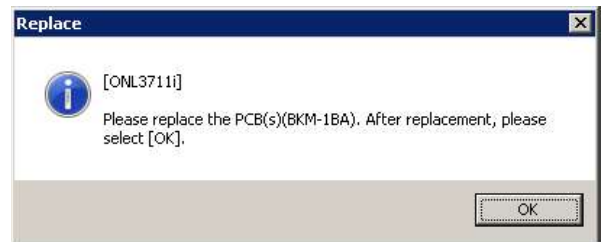


## 2-1-5. Go to “3. POST-PROCESSING of SVP”.

### 3. POST-PROCESSING of SVP

#### 3-1. < Check replacement of BKM >

Select (CL) [OK] in response to  
“Please replace the PCB(s)(BKM-1BA). After replacement, please select [OK].” after replacement.



#### 3-2. <INLINE CUDG>

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

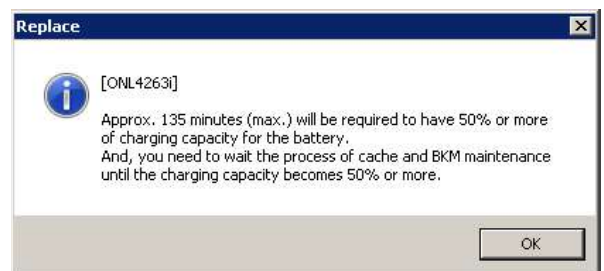
#### 3-3. <Check the BKM recovery procedure>

“Restoring the BKM...” is displayed.

#### 3-4. <Check the battery status>

Automatically check the status of the replaced battery.

If the storage period of the battery is more than six months from the date of the last charge, “Approx. 135 minutes (max.) will be required to have 50% or more of charging capacity for the battery. And, you need to wait the process of cache and BKM maintenance until the charging capacity becomes 50% or more.” is displayed.



Go to Step 3-5.

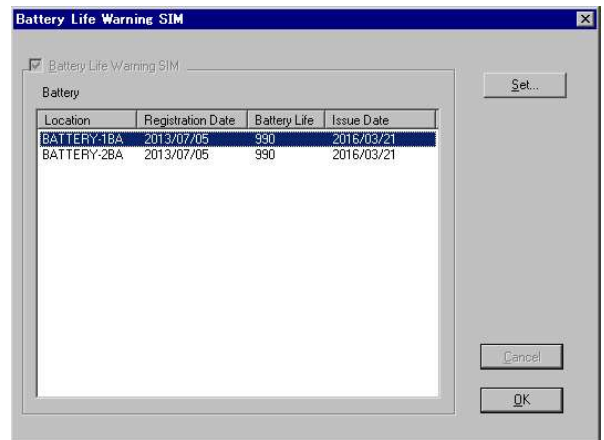
If the display of Battery Life Warning SIM is disabled, go to Step 3-6.

### 3-5. <Setting Battery Life>

- (1)  
Select (CL) the target Battery in the 'Battery Life Warning SIM' screen, and then select (CL) [Set...].  
Go to Step (2).

Make sure that the all input items are correct and select (CL) [OK].

NOTE: If the date is displayed as "\*\*\*\*/\*\*/\*\*", follow Step (2) to set the date.



- (2)  
Select (CL) [OK] after inputting the remainder days until Warning SIM is reported.  
Return to Step (1).



NOTE: After executing the periodical exchange of a battery, set 33 month (990 days).

NOTE: Default value is 33 month (990 days), which is 3 month earlier than the lifetime of a battery (3 years).

Determine the number of days remained based on your maintenance plan.

NOTE: The input ranges of "Remained Battery life" are from 1 to 3650.

### 3-6. <Check end of replacement>

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



### 3-7.

Go to POST-PROCEDURE ([REP04-01-10](#)).



# [DKCPS REPLACEMENT PROCESSING - RTC9]

## — OUTLINE —

1. PRE-PROCESSING of SVP
  - ① Select DKCPS (status check)
  - ② Specify Replacement
  - ③ Detach DKCPS
2. HARDWARE REPLACEMENT PROCESSING
3. POST-PROCESSING of SVP
  - ① Specify end of DKCPS replacement
  - ② Reinstall related parts