

- a. Turn off the circuit breakers in the Disk Controller.

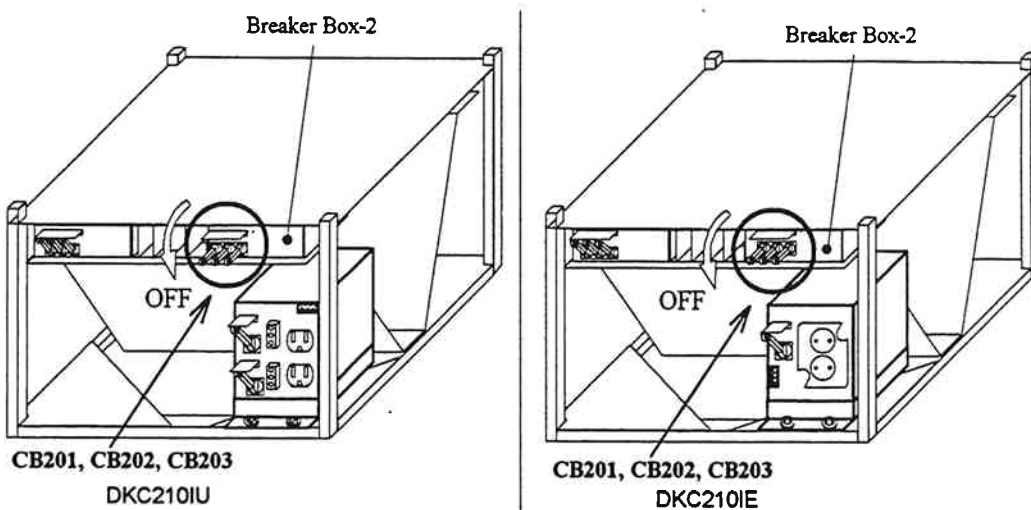


Fig. 1 Circuit Breakers to be Turned Off When Replacing Breaker Box-2

- b. Turn off the circuit breakers (CB101, CB102, CB103) on AC BOX-R11 in the Basic Disk Unit.
Failure to turn off may result in an electric shock.

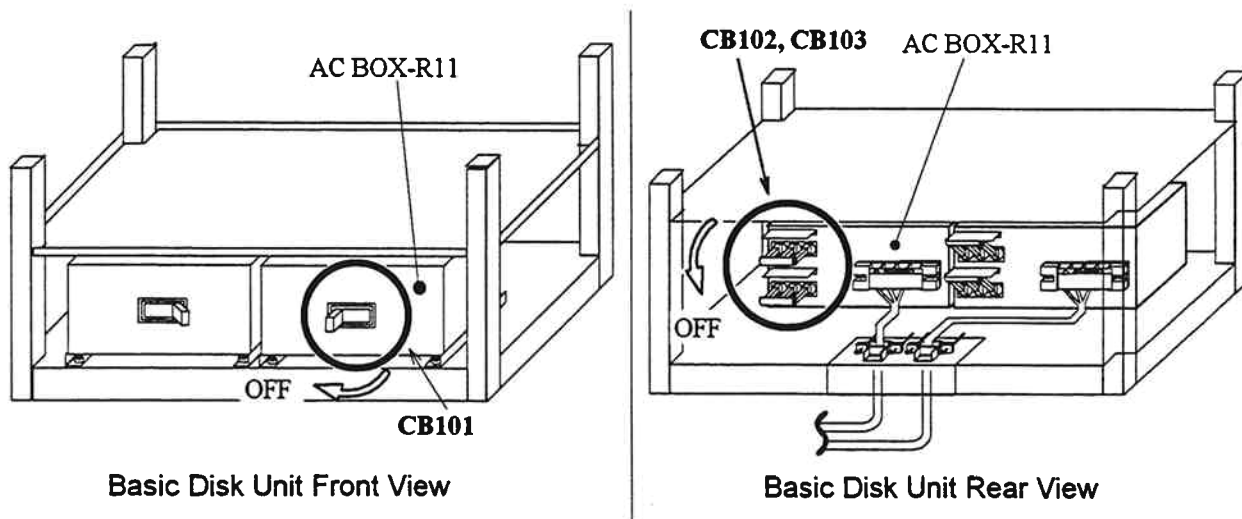


Fig. 2 Circuit Breakers to be Turned Off When Replacing Breaker Box-2

2. Breaker Box Removal

a. Logic PS Box Cover 2 removal

Remove Logic PS Cover 2. Refer to SECTION 3.3.1.8 LOGIC PS BOX COVER 2 [INST03-90]

WARNING

Be Careful with Electric Shock

- Be sure to turn off the circuit breaker of AC BOX-R10 before operation.

b. Disconnect the connectors from Breaker Box-2.

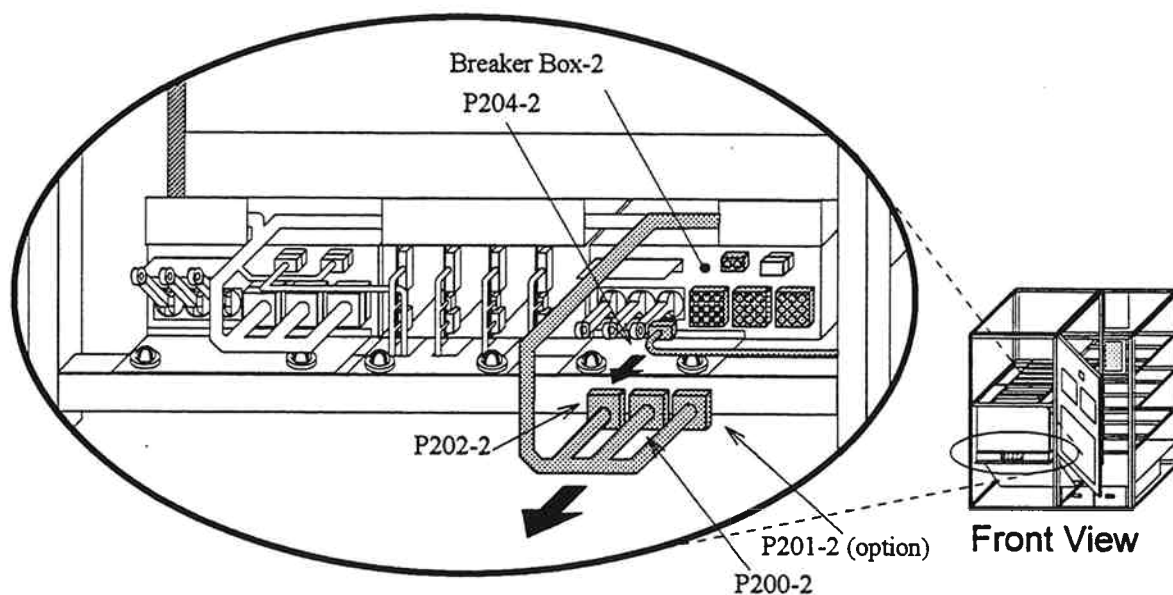


Fig. 3 Disconnection of Cable Connectors from Breaker Box-2

c. Loosen the two screws. Remove Breaker Box-2.

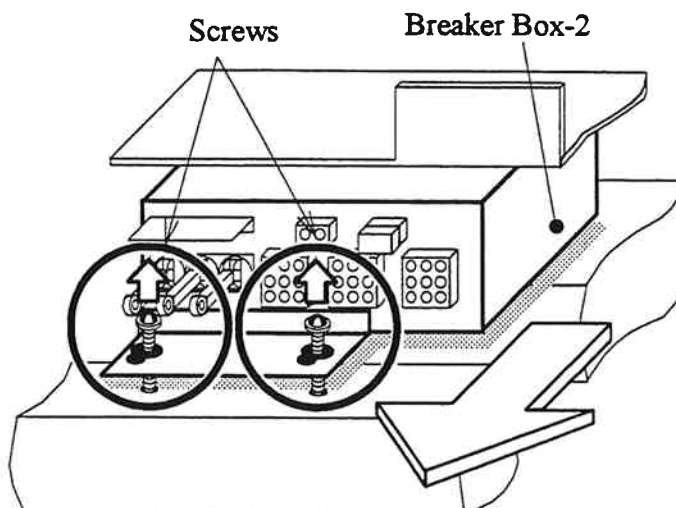


Fig. 4 Removal of Breaker Box-2

3. Angle(Breaker) Replacement

Loosen the two screws. Remove the Angle(Breaker) from the failed Breaker Box.

Secure the Angle(Breaker) to a new Breaker Box with the two screws

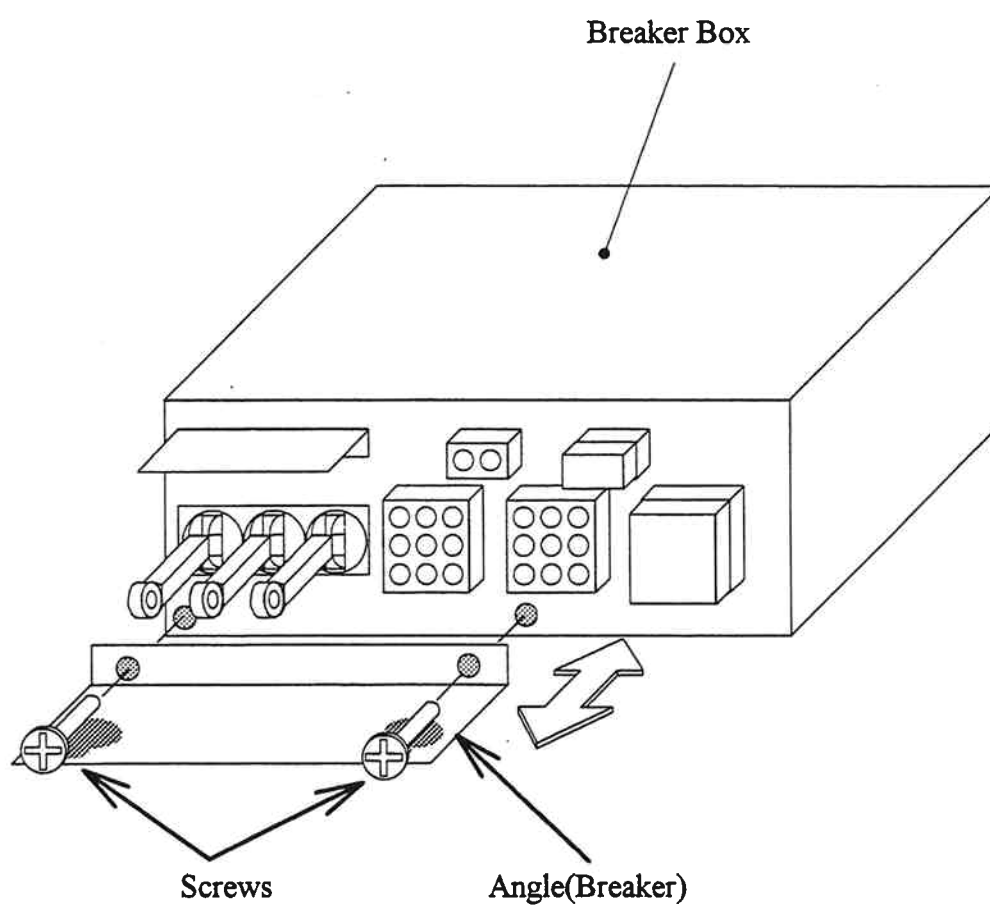


Fig. 5 Replacement of Angle(Breaker)

4. New Breaker Box Attachment

a. Turn off the circuit breakers (CB201, CB202, CB203) on a new Breaker Box.

b. Attach a new Breaker Box. Secure the Breaker Box with the screws.

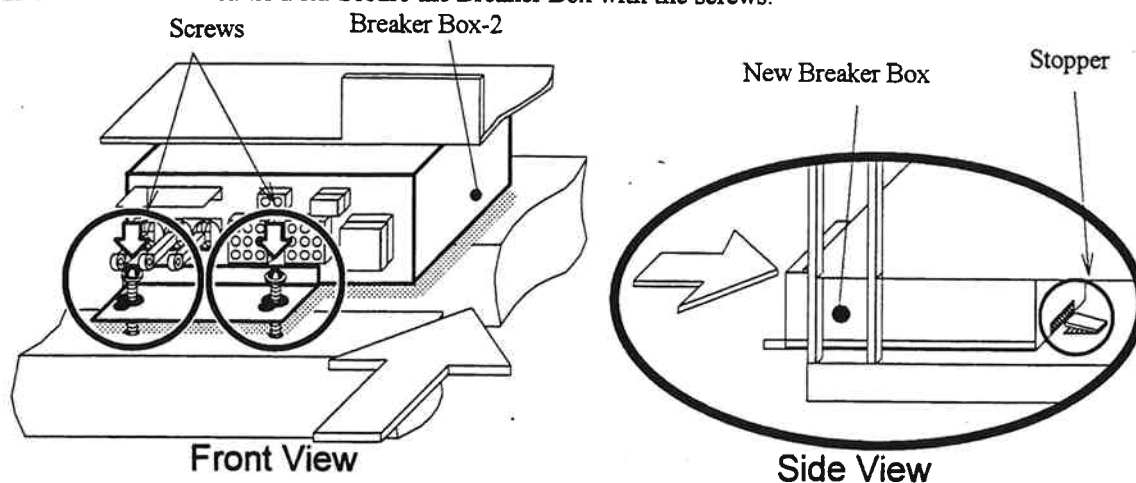


Fig. 6 Attachment of Breaker Box-2

c. Connect the connectors. Refer to Table 2 and Fig. 7.

Table 2 Breaker Box-2 Connectors

No.	Connector No.	Cable No.		Remarks
1	J200	P200-2	AC BOX-R11	
2	J201	P201-2	Dummy connector or Cache Box-2 and 1	option
3	J204	P204-2	PWRCTL-1	

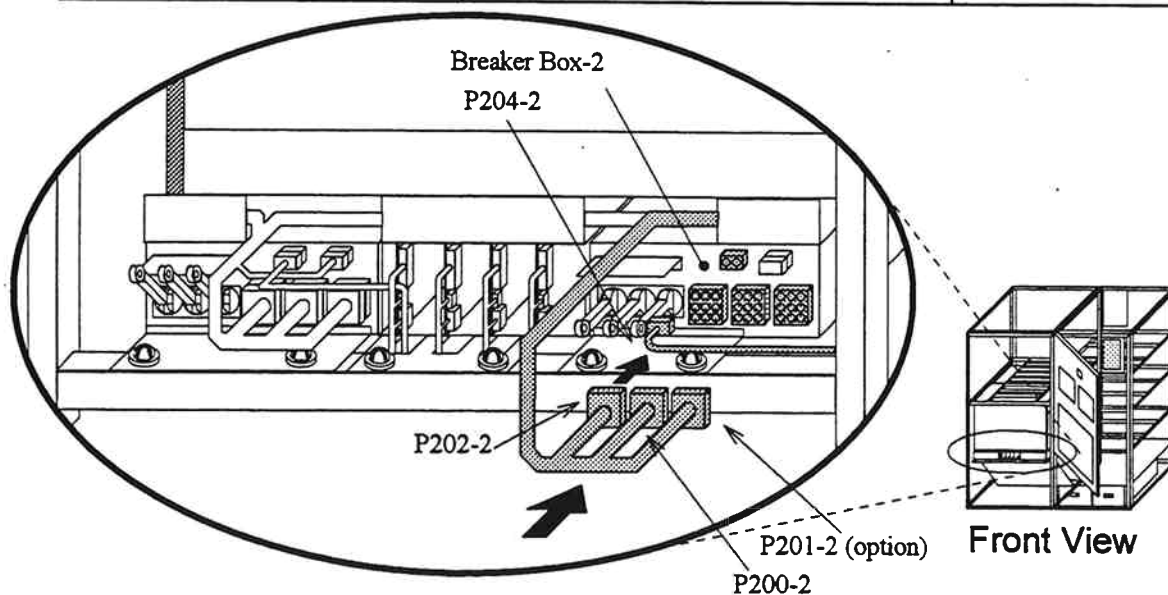


Fig. 7 Cable Connection of Breaker Box-2

d. Logic PS Box Cover 2 attachment

Attach Logic PS Cover 2. Refer to SECTION 3.3.1.8 LOGIC PS BOX COVER 2 [INST03-90]

5. Powering On the Replacement Component

- a. Turn on all the circuit breakers in the reverse order of powering off. Refer to Table 1 [REP03-830]

- b. Turn "IND TEST / CHK RST" switch in CE panel to "CHK RST".

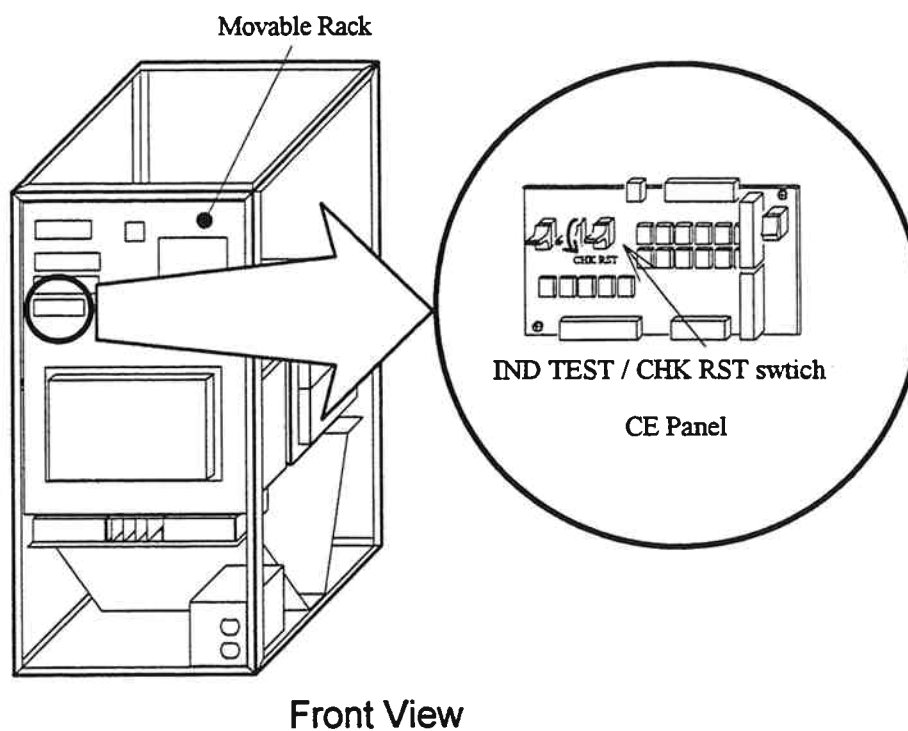


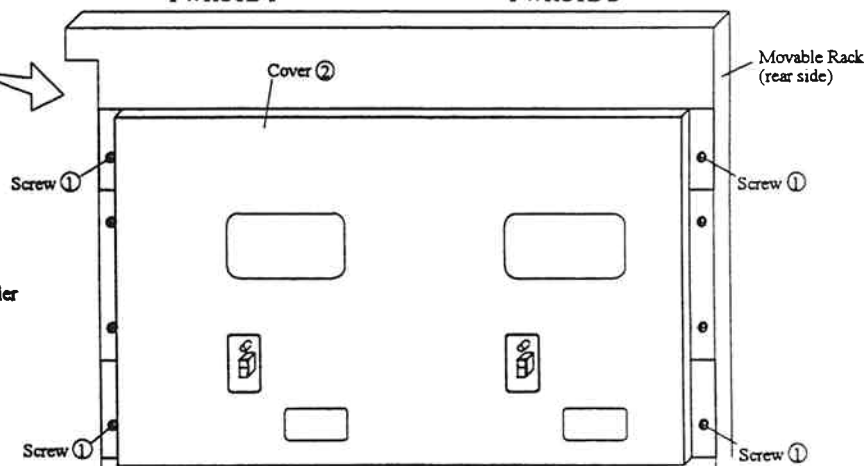
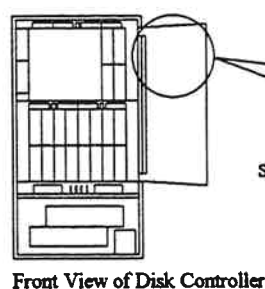
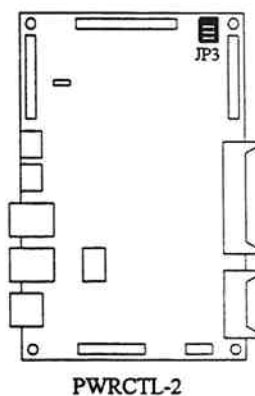
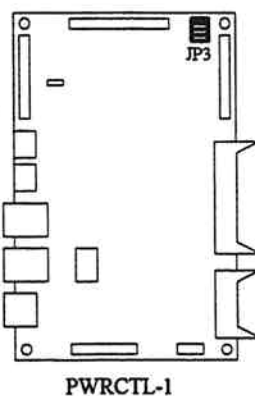
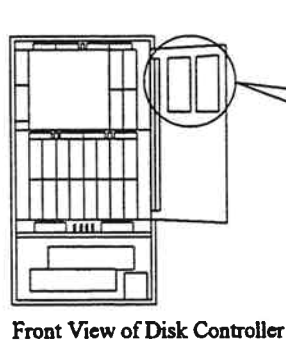
Fig. 8 Setting of IND TEST / CHK RST Switch

6. Jumper Setting

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.

- Set the jumper plugs on PWRCTL-1 and PWRCTL-2 as indicated in the table below.
- Attach the cover② and fasten the four screws①.

Location No.	No Cache Box installed	Cache Box installed
PWRCTL-1	JP3	JP3
PWRCTL-2	JP3	JP3



7. Go to SVP post-procedure t3 [REP04-360].

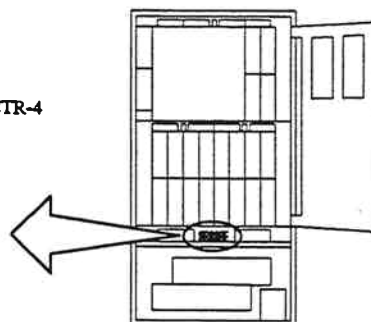
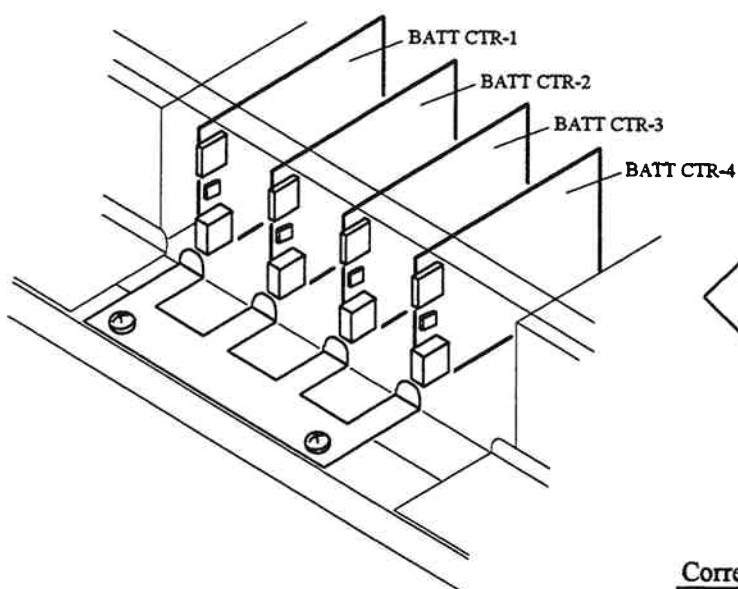
[HARDWARE T14]

◆ Battery Box

[Related Procedure]

SVP procedure	Title & Sheet No.	Remarks
SVP pre-procedure	Pre-procedure AREP02-10	Refer to REP01-150.
	Pre-procedure T3REP02-550	
SVP post-procedure	Post-procedure t3REP04-360	Refer to REP01-150.

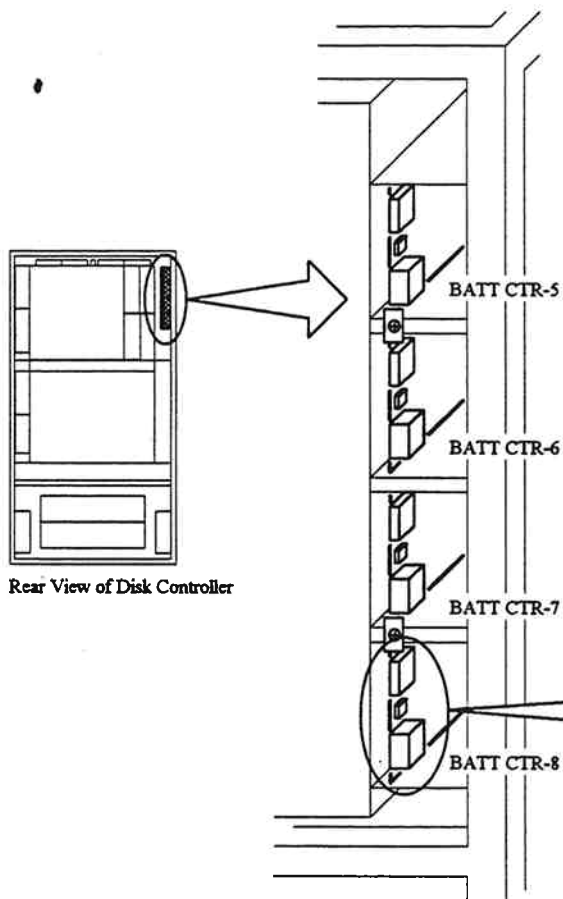
1. Disconnect the cables of the battery controller PCB that corresponds to the battery box in numerical order(①-③).



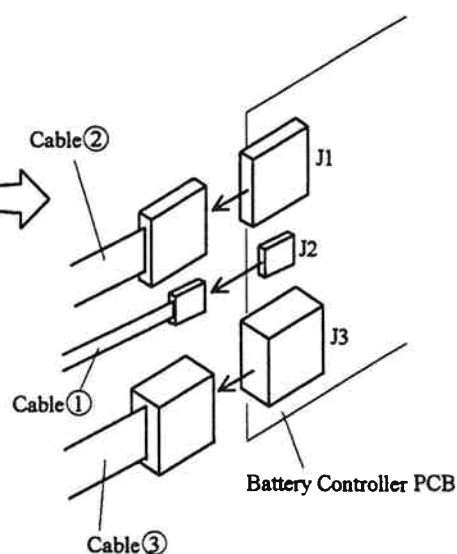
Front View of Disk Controller
(Movable Rack is opened.)

Correspondence table

No.	Battery box	Battery controller PCB
1	BATTERY-1	BATT CTR-1
2	BATTERY-2	BATT CTR-2
3	BATTERY-3	BATT CTR-3
4	BATTERY-4	BATT CTR-4
5	BATTERY-5	BATT CTR-5
6	BATTERY-6	BATT CTR-6
7	BATTERY-7	BATT CTR-7
8	BATTERY-8	BATT CTR-8

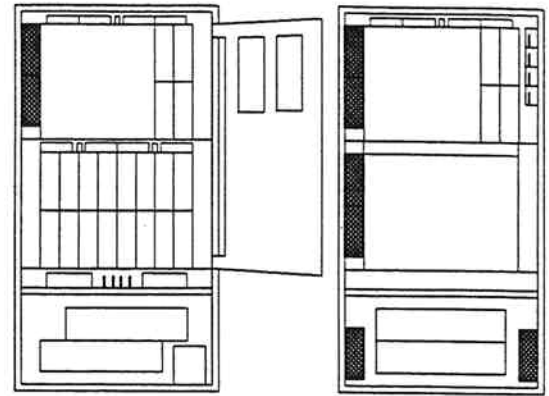


Rear View of Disk Controller



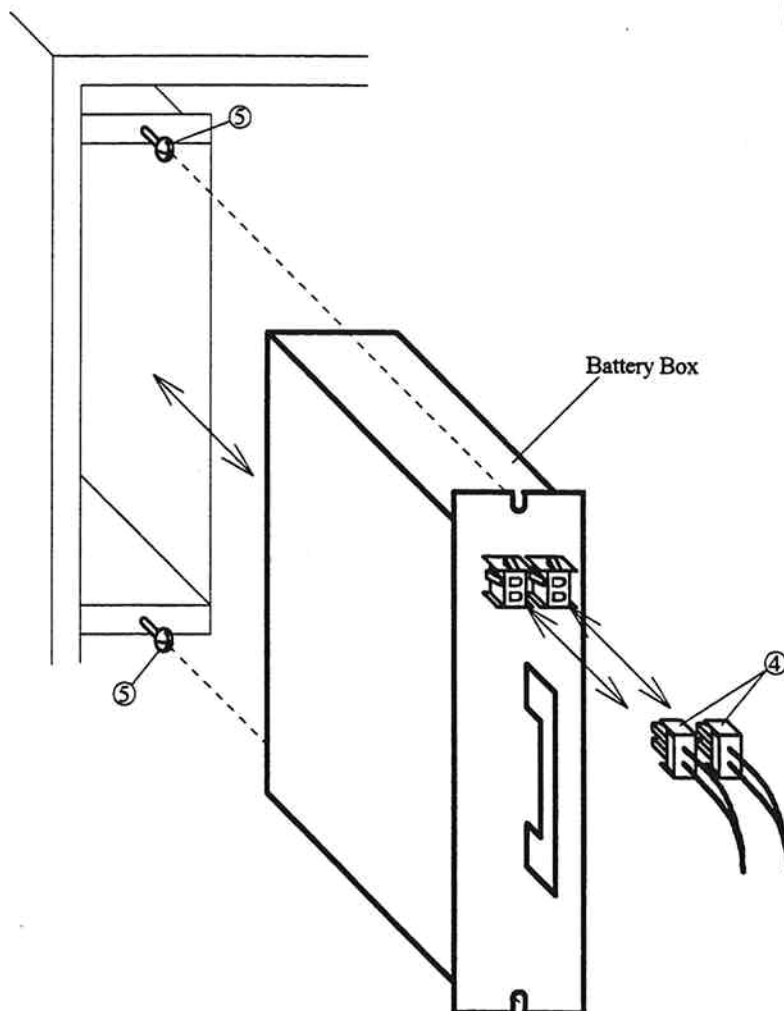
2. The following figure shows the correct way to replace the battery box.

- a. Disconnect the two cables④.
- b. Loosen the two screws⑤.
- c. Replace the battery box and fasten the screw⑤
- d. Connect the cables④.

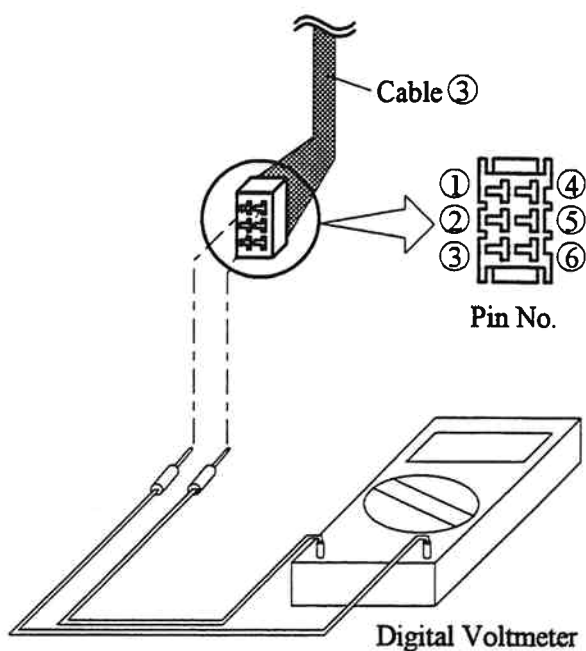


Front View of Disk Controller
(Movable Rack is opened.)

Rear View of
Disk Controller



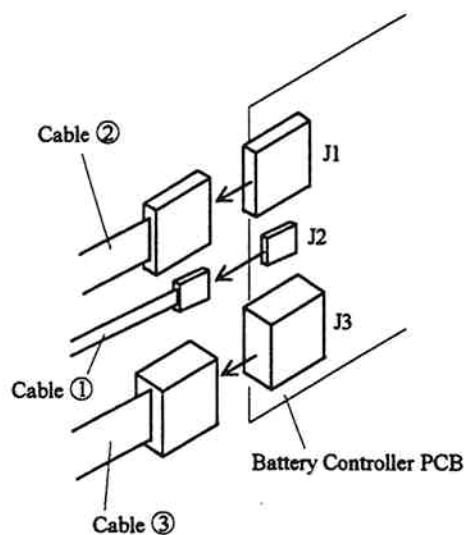
3. Insert the pins of the digital voltmeter into the cable③ removed from battery controller PCB in step 1 to make sure that battery voltage is within the allowable voltage.



Voltage Checkpoint and Allowable Voltage

No.	Pin No.		Allowable battery voltage
	-	+	
1	④	①	3.0V through 5.0V
2	⑤	②	3.0V through 5.0V

4. Connect the cables removed from battery controller PCB in step 1 in the reverse order(③-①).



5. Go to SVP post procedure t3 [REP04-360].

[HARDWARE T15]

◆ Battery Controller PCB

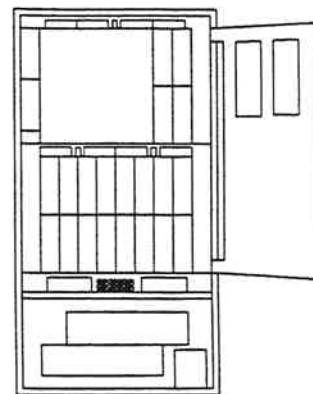
[Related Procedure]

SVP procedure	Title & Sheet No.	Remarks
SVP pre-procedure	Pre-procedure AREP02-10	Refer to REP01-150.
	Pre-procedure T3REP02-550	
SVP post-procedure	Post-procedure t3REP04-360	Refer to REP01-150.

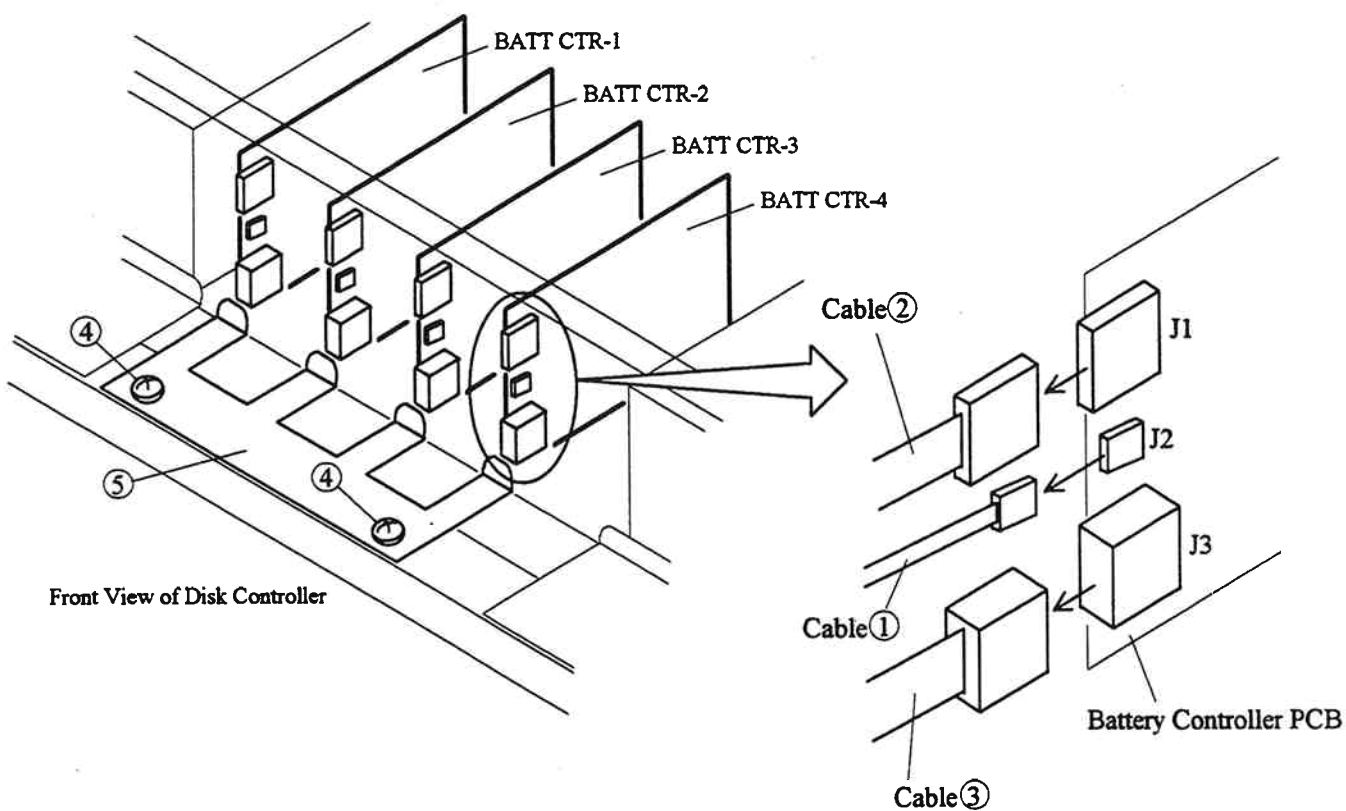
BATT CTR-1 through BATT CTR-4

1. The following figure shows the correct way to replace the battery controller PCB.

- a. Disconnect the cables in the numerical order(①-③).
- b. Loosen the two screws④.
- c. Remove the plate⑤.
- d. Replace the battery controller PCB.
- e. Attach the plate⑤ and fasten the screws④.
- f. Connect the cables in the reverse order(③-①) of disconnecting.



Front View of Disk Controller
(Movable Rack is opened.)

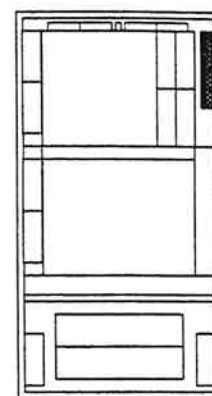


2. Go to SVP post procedure t3 [REP04-360].

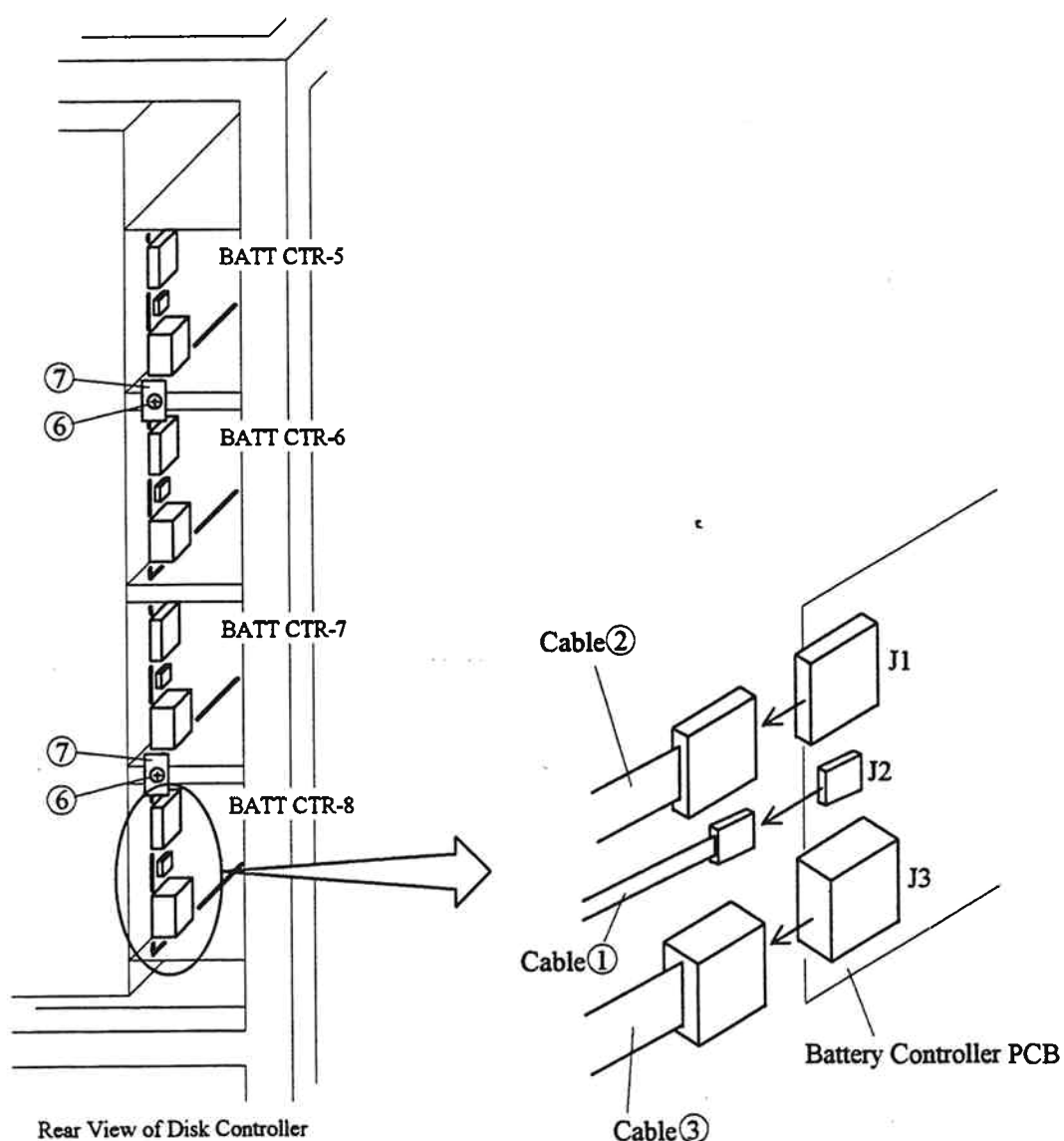
BATT CTR-5 through BATT CTR-8

1. The following figure shows the correct way to replace the battery controller PCB.

- a. Disconnect the cables in the numerical order(①-③).
- b. Loosen the screw⑥.
- c. Shift the plate⑦.
- d. Replace the battery controller PCB.
- e. Return the plate ⑦ and fasten the screws⑥.
- f. Connect the cables in the reverse order(③-①) of disconnecting.



Rear View of
Disk Controller



2. Go to SVP post procedure t3 [REP04-360].

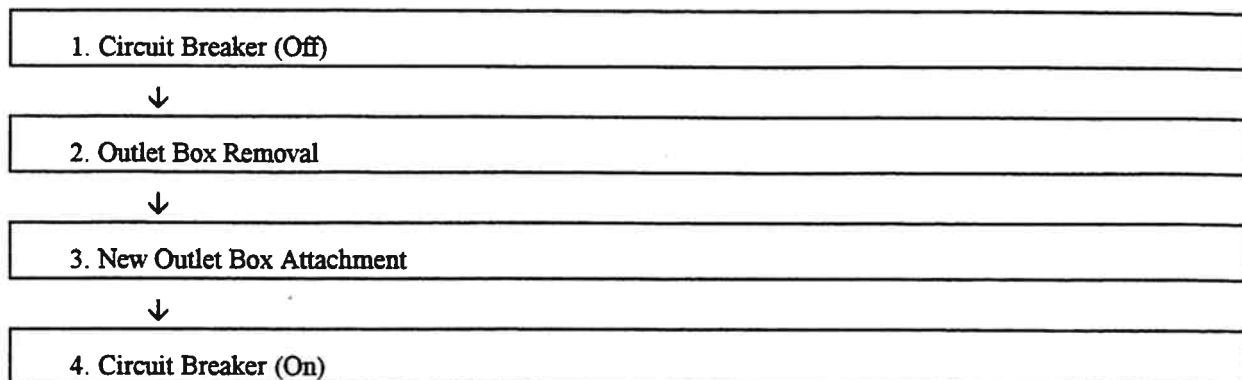
[HARDWARE T16]

◆ OUTLET BOX

[Related Procedure]

SVP procedure	Title & Sheet No.	Remarks
SVP pre-procedure	Pre-procedure AREP02-10	Refer to REP01-150.
	Pre-procedure T1REP02-390	
SVP post-procedure	Post-procedure t1REP04-210	Refer to REP01-150.

Flowchart



1. Circuit Breaker (Off)

 WARNING
Be Careful with Electric Shock

- The power of 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.

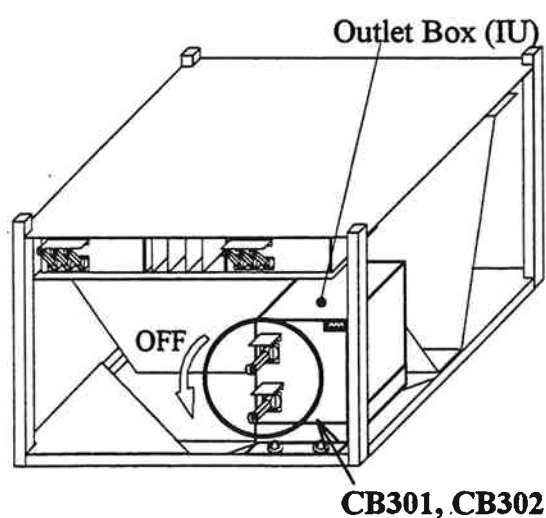
 CAUTION
Mind Your Head

- Be sure to mind your head during operation, or you might hit your head against the movable rack, which causes injury.

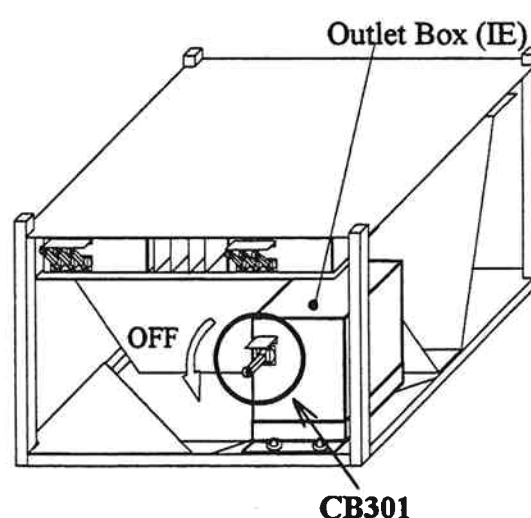
- a. Turn off the circuit breakers in the Disk Controller.

• Circuit Breakers to be Turned Off When Replacing Outlet Box

No.	Unit	Location No.	Breaker No.	Remarks
1	Disk Controller	Outlet Box	CB301	Failure to turn off may result in an electric shock.
2	Disk Controller	Outlet Box	CB302	Failure to turn off may result in an electric shock. DKC210IU Only



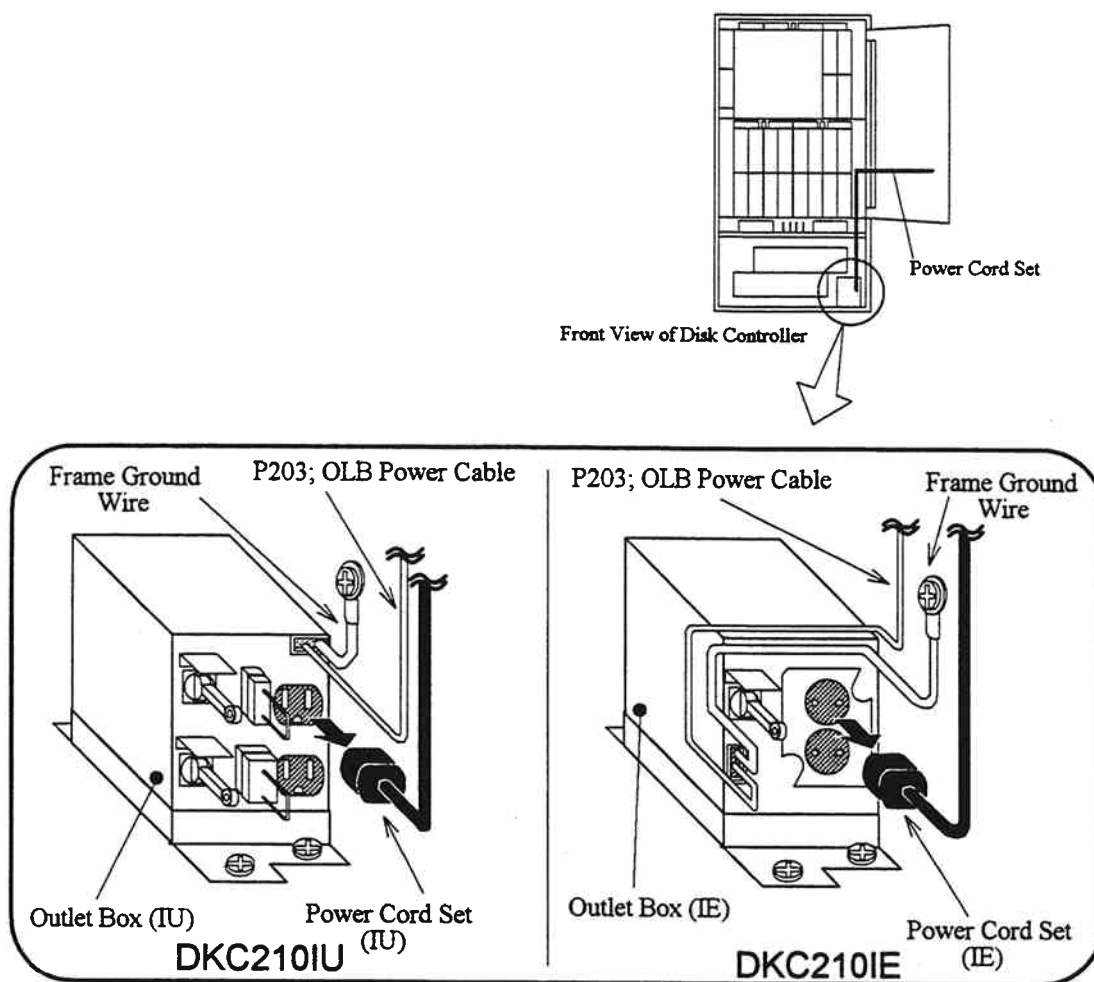
DKC210IU



DKC210IE

2. Outlet Box Removal

- a. Remove Logic PS Cover 2. Refer to SECTION 3.3.1.8 LOGIC PS BOX COVER 2 [INST03-90].
- b. Detach the power cord set(s) from the Outlet Box.

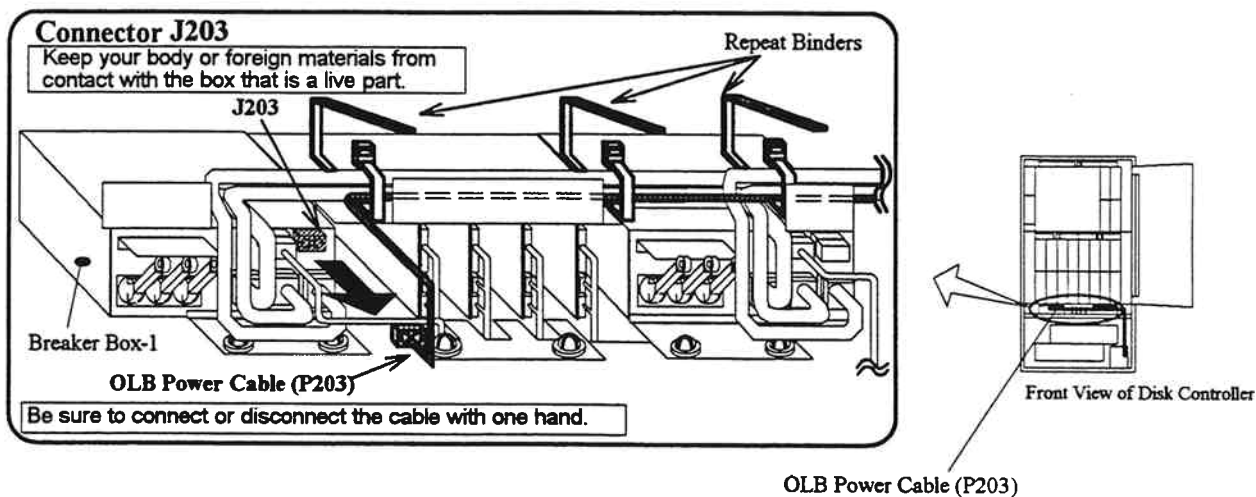


- c. Detach the OLB power cable (P203) from Breaker Box-1 and loosen the three repeat binders that fasten the OLB power cable (P203).

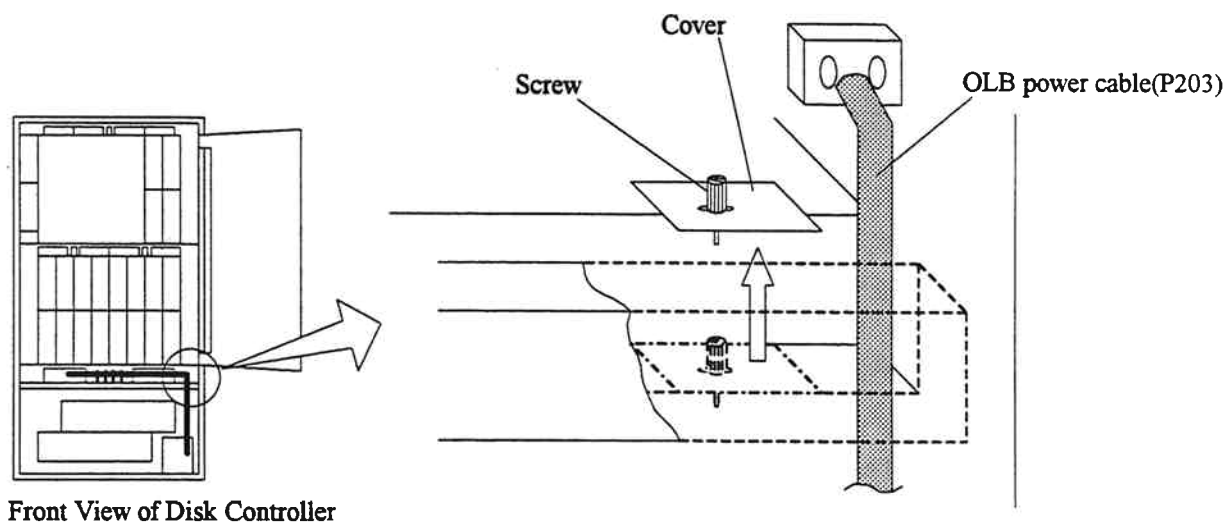
! WARNING

Be Careful with Electric Shock

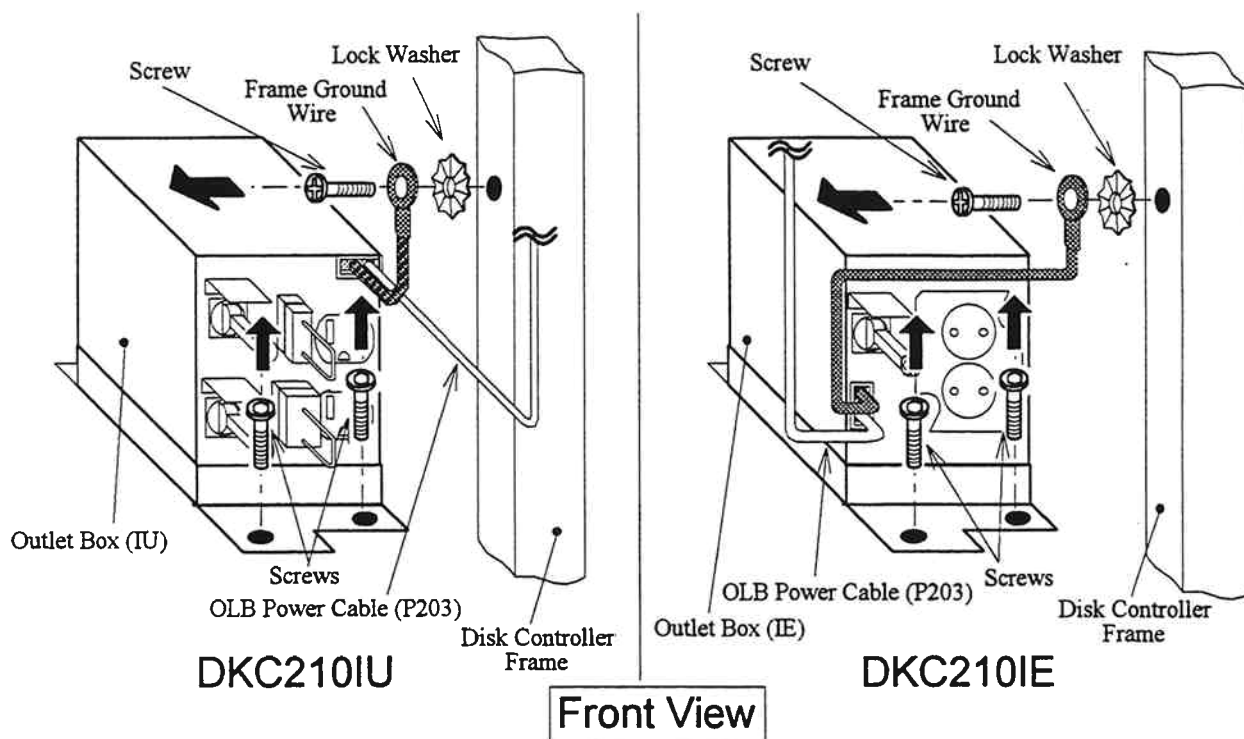
- Be sure to turn off the circuit breakers (CB301 and CB302) on Outlet Box before operation.
- The connector J203 on Breaker Box-1 is a live part. So be sure to keep tools and parts such as a screwdriver and screw from contact with the connector.
- The connector J203 on Breaker Box-1 is a live part. So be sure to keep tools and parts such as a screwdriver and screw from contact with the connector.



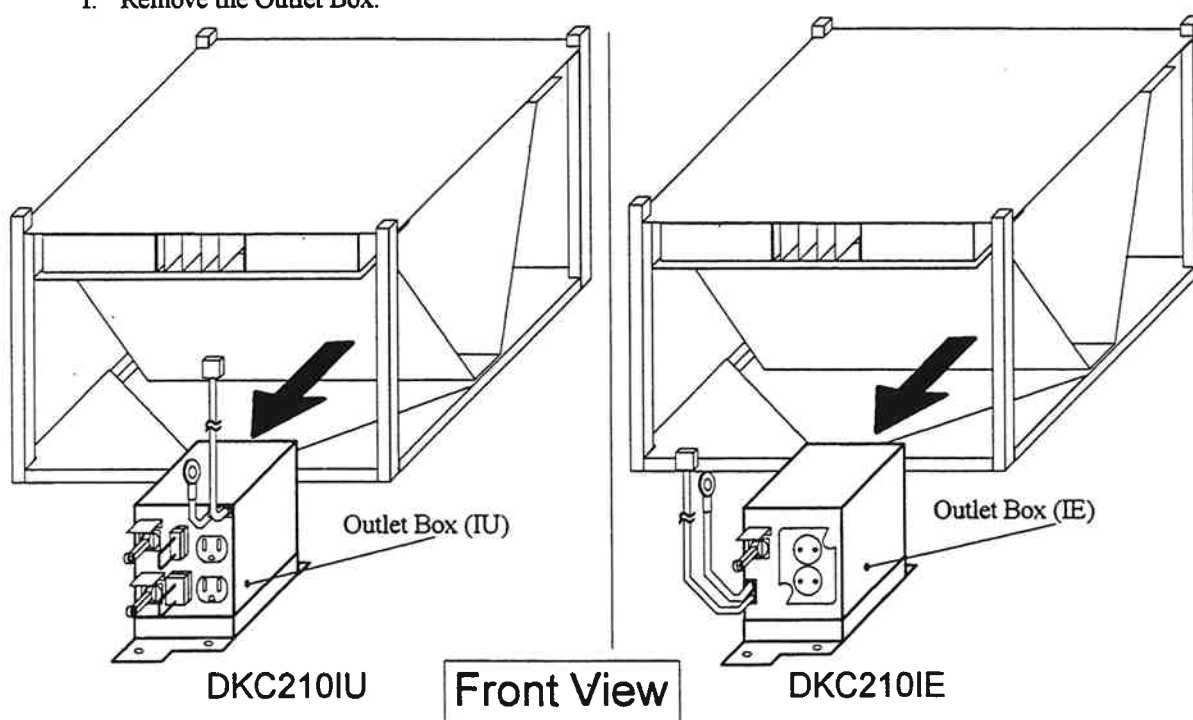
- d. Remove the cover and draw the OLB power cable(P203).



- e. Detach the Outlet Box frame ground wire from the Disk Controller frame. Remove the two screws that fasten the Outlet Box.

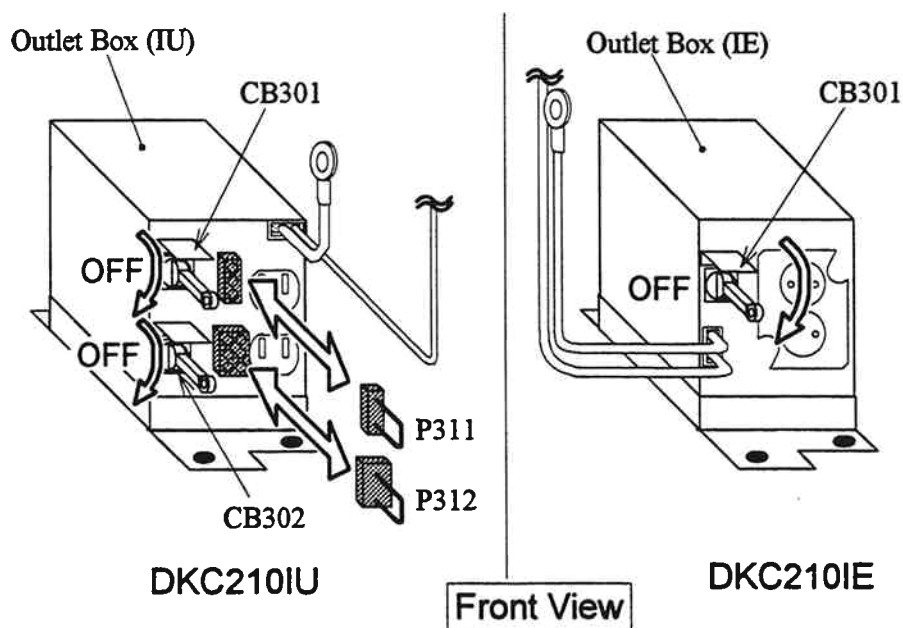


- f. Remove the Outlet Box.



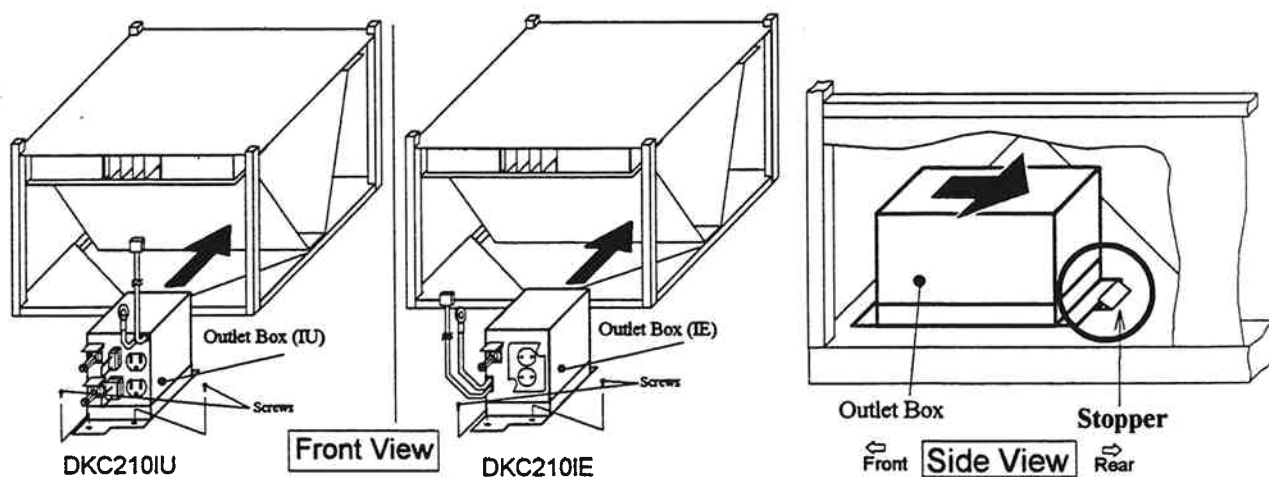
3. Outlet Box Attachment

- a. Detach the jumper connectors (P311, P312) from the failed Outlet Box. And then, attach the jumper connectors (P311, P312) to spare Outlet Box. (Only for DKC210IU)
- b. Turn off the circuit breaker(s) (CB301, CB302) on the spare Outlet Box.



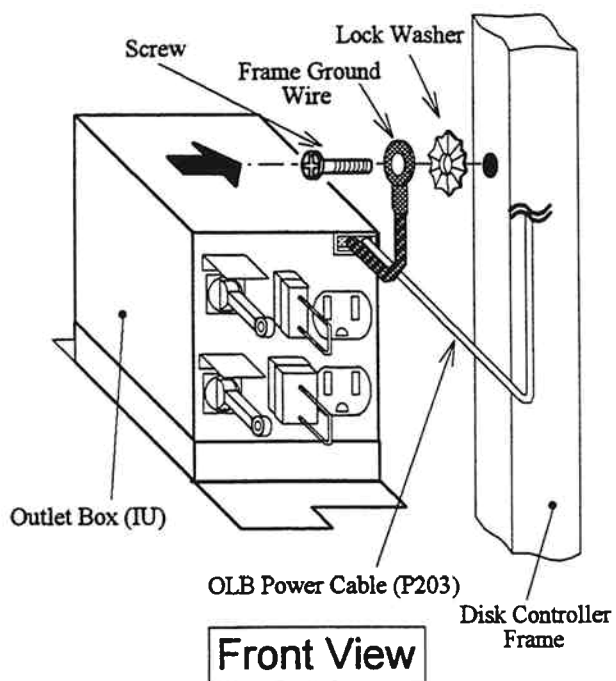
- c. Insert the Outlet Box to the stopper position located at the bottom of the Disk Controller. And then fix the Outlet Box with two screws.

Notice: Hold the Outlet Box until it is fixed with the screws so as to prevent from its falling.

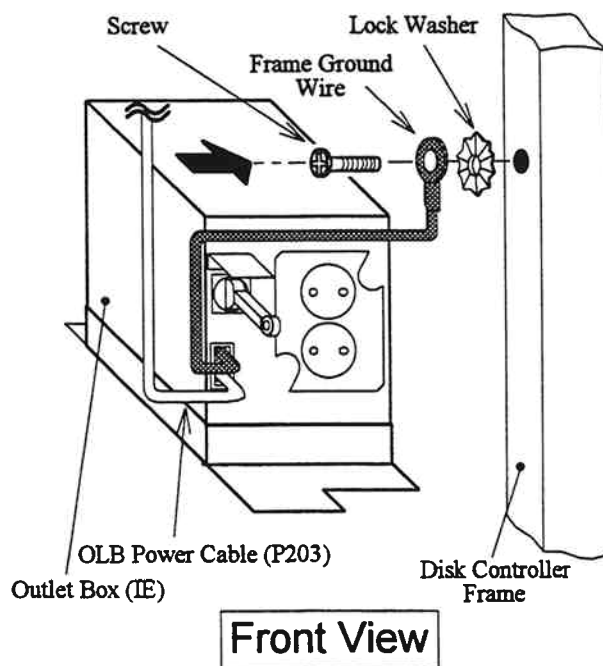


- d. Attach the frame ground wire to the Disk Controller frame, using the screw and lock washer.

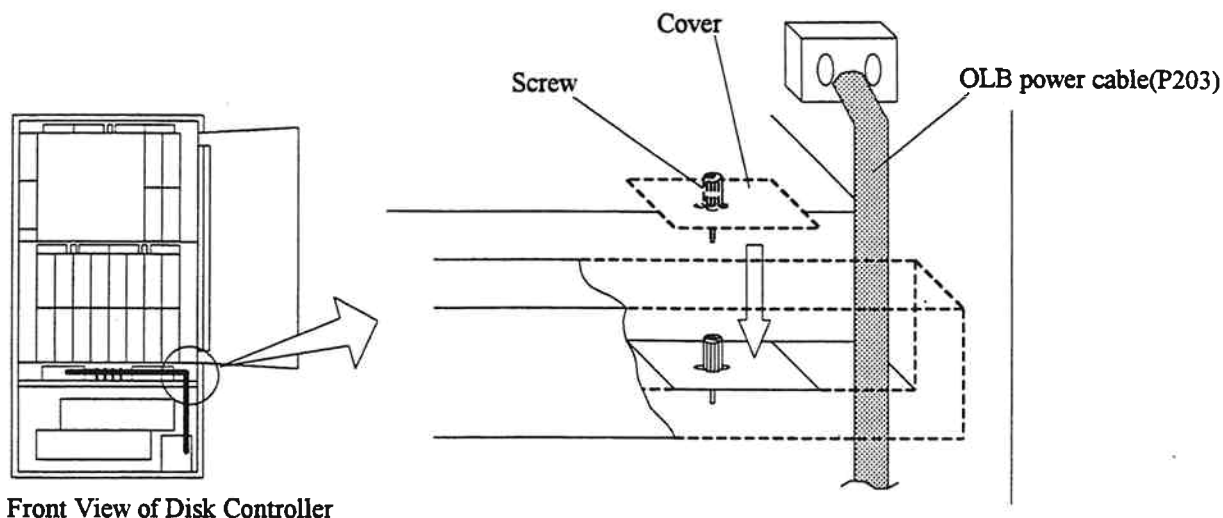
DKC210IU



DKC210IE



- e. Pass the OLB power cable(P203) and attach the cover.



- f. Insert the Outlet Box connector as it was.

Bind the OLB power cable (P203) with the three repeat binders.

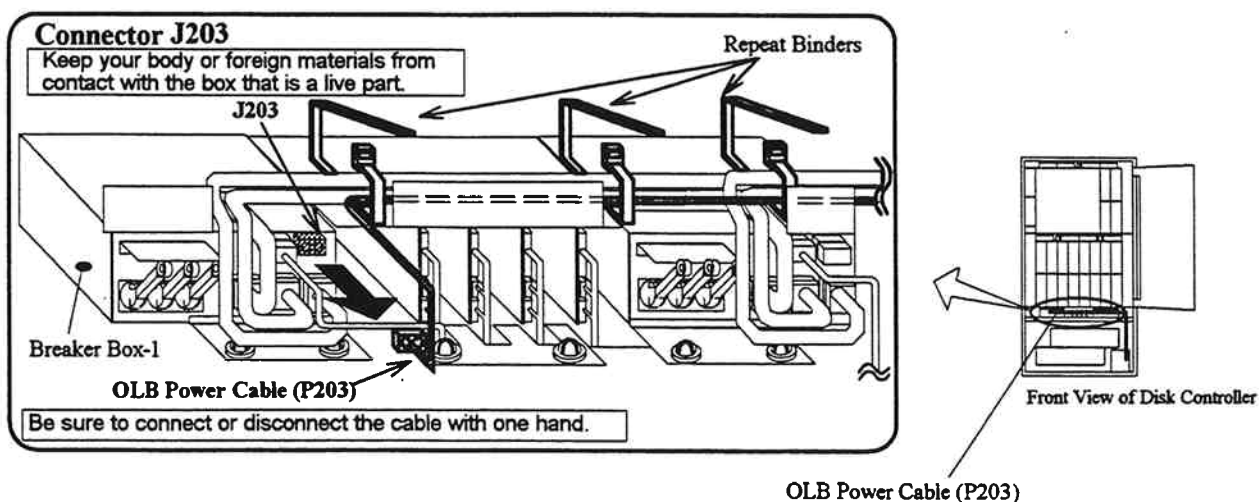
Connect the OLB power cable (P203) to Breaker Box-1.

WARNING

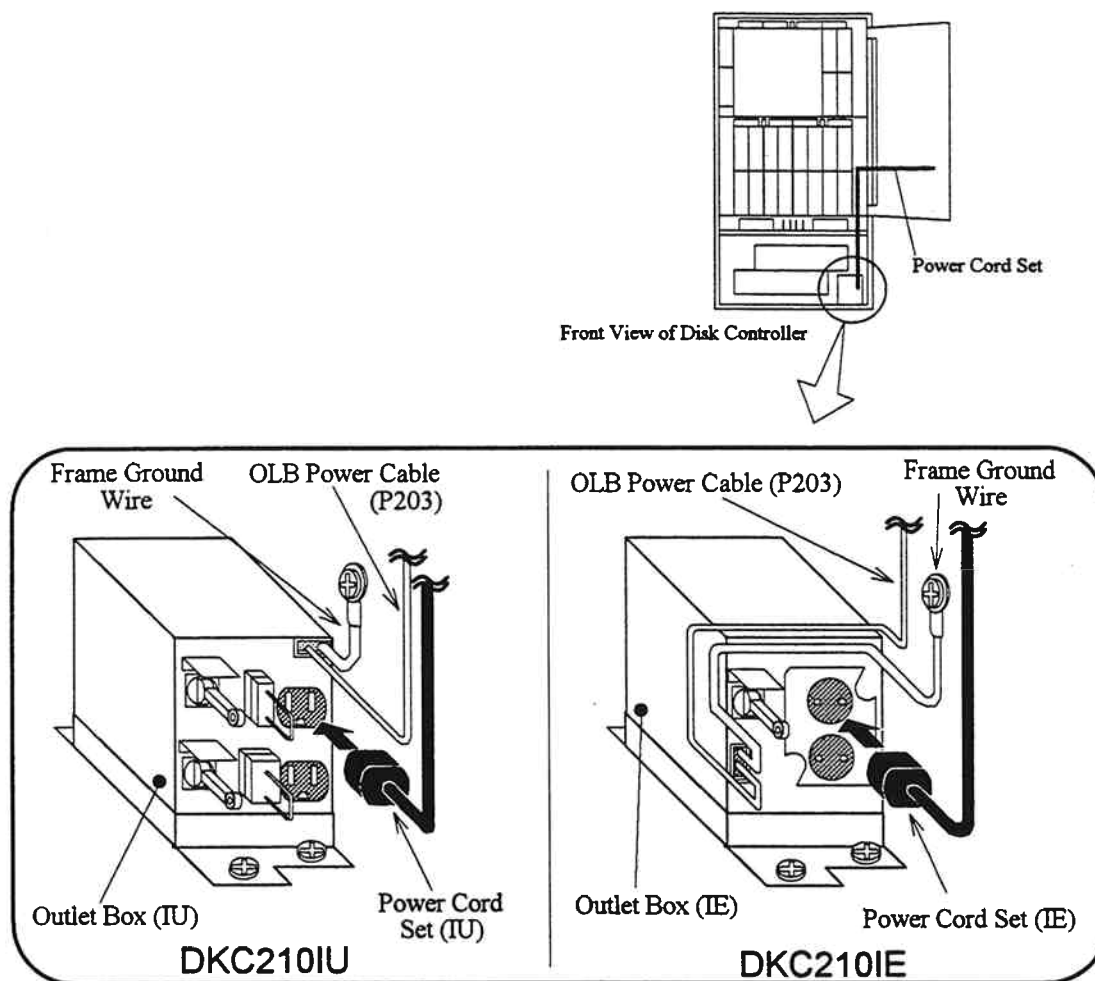
Be Careful with Electric Shock

- Be sure to turn off the circuit breakers (CB301 and CB302) on Outlet Box before operation.
- The connector J203 on Breaker Box-1 is a live part. So be sure to keep tools and parts such as a screwdriver and screw from contact with the connector.
- Be sure to connect or disconnect the power cable P203 for the Outlet Box with one hand. This can prevent an electric current from flowing between your arms if you touch the live part of the J203.

Location No.	Cable No.	Connector No.	Remarks
Breaker Box-1	P203	J203	OLB Power Cable



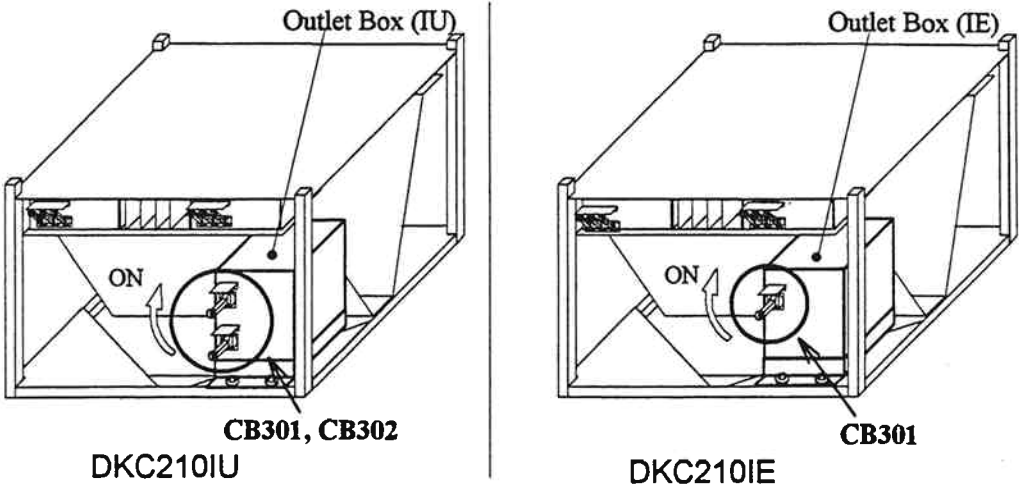
- g. Attach the power cord set(s) from the Outlet Box.



- h. Attach Logic PS Cover 2. Refer to SECTION 3.3.1.8 LOGIC PS BOX COVER 2 [INST03-90].

4. Circuit Breaker (On)

- a. Turn on the circuit breakers in the Disk Controller.



• Circuit Breakers to be Turned On After Replacing Outlet Box

No.	Unit	Location No.	Breaker No.	Remarks
1	Disk Controller	Outlet Box	CB301	
2	Disk Controller	Outlet Box	CB302	DKC210IU Only

5. Go to SVP post-procedure t1 [REP04-210].

[HARDWARE T17]

◆ PS(DKC)

[Related Procedure]

SVP procedure	Title & Sheet No.	Remarks
SVP pre-procedure	Pre-procedure AREP02-10	Refer to REP01-160.
	Pre-procedure T3REP02-550	
SVP post-procedure	Post-procedure t3REP04-360	Refer to REP01-160.

Notice

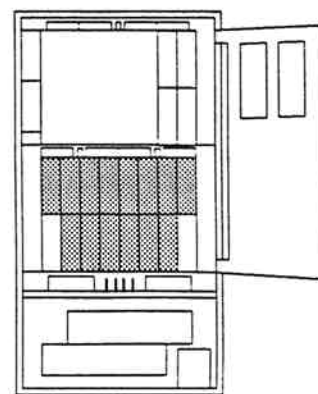
When you install the Redundant Power Supply for the DKC210I-5E, DKC210I-0E or DKC with the DKC-F210-5E installed, you can't use the HS05060C-PX of the CL Redundant Power Supply.

You must use the HS05070C-V type for the Redundant Power Supply.

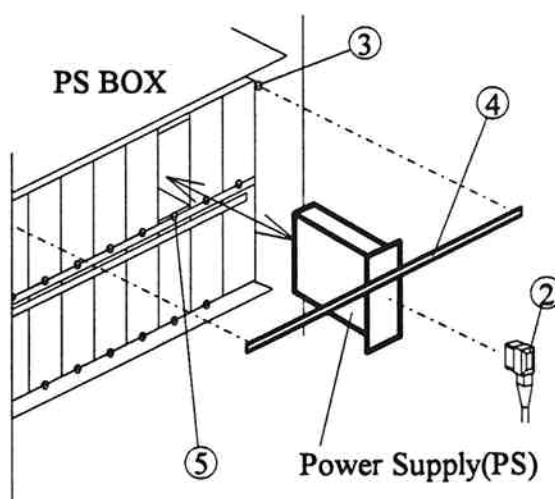
In PS Box

1. The following figure shows the correct way to replace the power supply(PS).

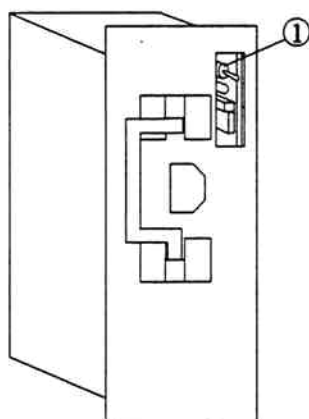
- a. Set PS Enable/Disable Switch① to (DOWN) Disable.
- b. Disconnect the inlet cable②.
- c. Loosen the two screws③ and remove the support④.
- d. Loosen the screw⑤ and remove the failed PS.
- e. Confirm that PS Enable/Disable Switch① of spare PS is set to Disable.
- f. Insert the spare PS and fasten the screw⑤.
- g. Attach the support④ and fasten the two screws③.
- h. Connect the inlet cable②.
- i. Set PS Enable/Disable Switch① to (UP) Enable.



Front View of Disk Controller
(Movable Rack is opened.)

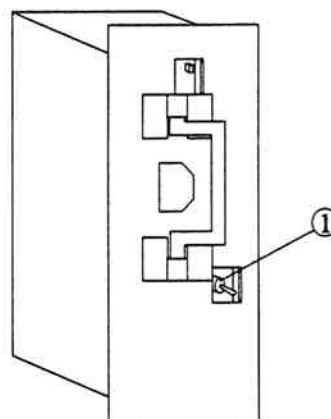


Front view of Disk Controller



Part No. 5479609-A,B,C,D,

ED5479653-1



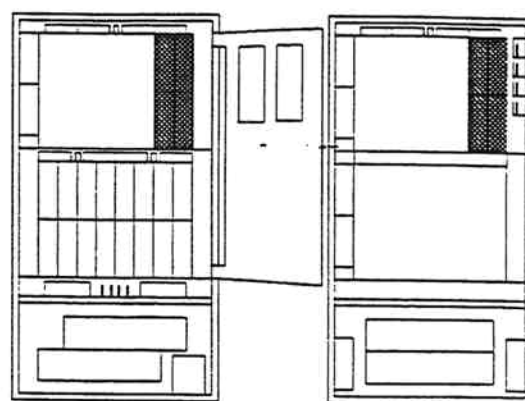
Part No. 5479654-A,B,C,D

2. Go to SVP post procedure t3 [REP04-360].

In Cache Box

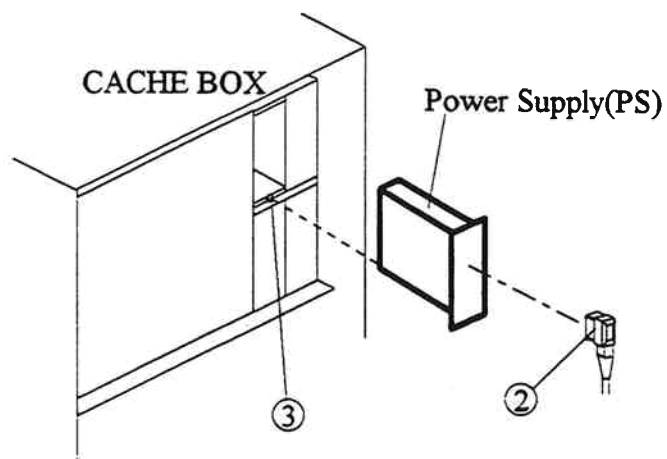
1. The following figure shows the correct way to replace the power supply(PS).

- a. Set PS Enable/Disable Switch① to (DOWN) Disable.
- b. Disconnect the inlet cable②.
- c. Loosen the screw③ and remove the failed PS.
- d. Confirm that PS Enable/Disable Switch① of spare PS is set to Disable.
- e. Insert the spare PS and fasten the screw③.
- f. Connect the inlet cable②.
- g. Set PS Enable/Disable Switch① to (UP) Enable.

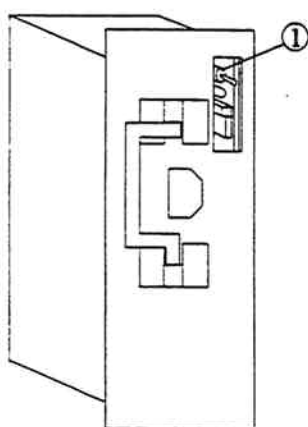


Front View of Disk Controller
(Movable Rack is opened.)

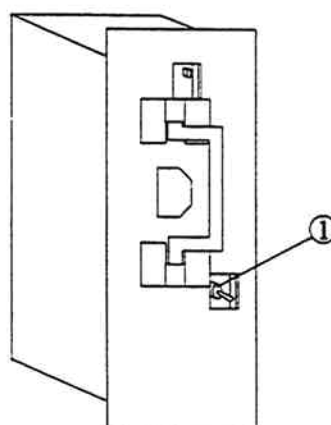
Rear View of
Disk Controller



Front or Rear View of Disk Controller



Part No. 5479609-A,B



Part No. 5479654-A,B

2. Go to SVP post procedure t3 [REP04-360].

[HARDWARE T18]

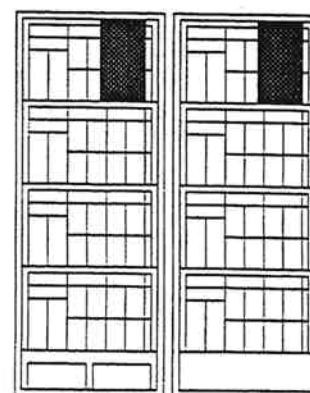
◆ DKU MN

[Related Procedure]

SVP procedure	Title & Sheet No.	Remarks
SVP pre-procedure	Pre-procedure AREP02-10 Pre-procedure T4REP02-650	Refer to REP01-170.
SVP post-procedure	Post-procedure t4REP04-410	Refer to REP01-170.

1. The following figure(Fig. T18-1) and table(Table T18-1) show the correct way to replace the DKUMN PCB.

- Set Enable/Disable Switch① to Disable on the DKUMN PCB.
- Disconnect all cables.
- Remove the four screws② or Latches.
- Replace the DKUMN PCB.
- Fasten the four screws② and connect all the cables.



Front view of
DKU205

Rear view of
DKU205

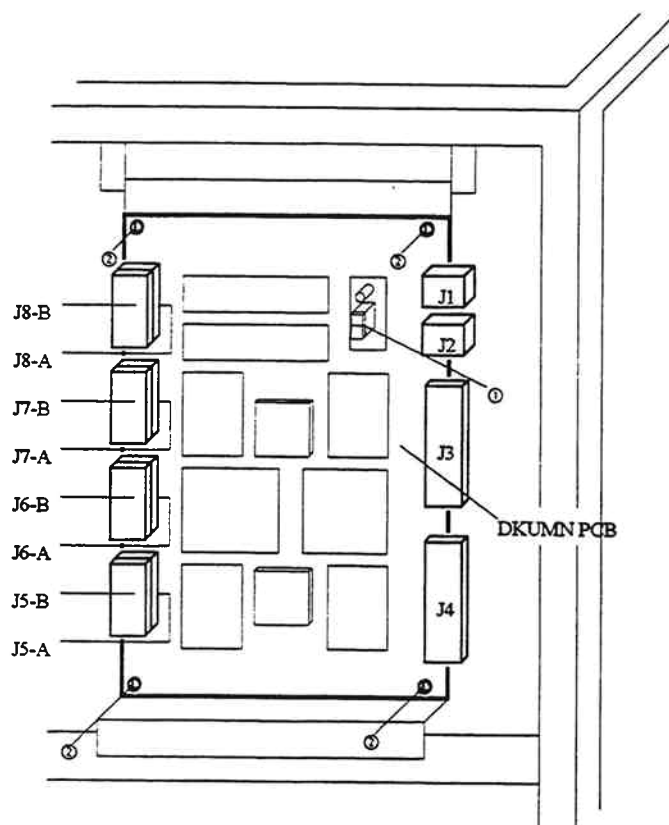


Fig. T18-1 Replacement of DKUMN PCB

Table T18-1 Connection of DKUMN PCB Cables

No.	Connector No.	DKUMN- R1F	DKUMN- R1R	DKUMN- L1F	DKUMN- L1R	DKUMN- R2F	DKUMN- R2R	DKUMN- L2F	DKUMN- L2R
1	J1	P1-1	P1-2	P1-1	P1-2	P1-1	P1-2	P1-1	P1-2
2	J2	P2-1R	P2-2R	P2-1L	P2-2L	-	-	-	-
3	J3	P3-1	P3-2	P3-1	P3-2	-	-	-	-
4	J4	P4-1R	P4-2R	P4-1L	P4-2L	P4-1R	P4-2R	P4-1L	P4-2L
5	J5-A	P5A-1	P5A-2	P5A-1	P5A-2	P5A-1	P5A-2	P5A-1	P5A-2
6	J5-B	P5B-1	P5B-2	P5B-1	P5B-2	P5B-1	P5B-2	P5B-1	P5B-2
7	J6-A	P6A-1	P6A-2	P6A-1	P6A-2	P6A-1	P6A-2	P6A-1	P6A-2
8	J6-B	P6B-1	P6B-2	P6B-1	P6B-2	P6B-1	P6B-2	P6B-1	P6B-2
9	J7-A	P7A-1	P7A-2	P7A-1	P7A-2	P7A-1	P7A-2	P7A-1	P7A-2
10	J7-B	P7B-1	P7B-2	P7B-1	P7B-2	P7B-1	P7B-2	P7B-1	P7B-2
11	J8-A	P8A-1	P8A-2	P8A-1	P8A-2	P8A-1	P8A-2	P8A-1	P8A-2
12	J8-B	P8B-1	P8B-2	P8B-1	P8B-2	P8B-1	P8B-2	P8B-1	P8B-2

2. Set the switches and jumpers

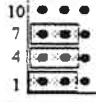
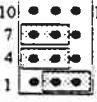
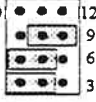
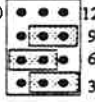
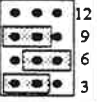
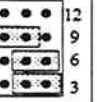
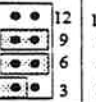
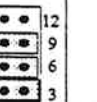
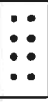
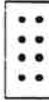
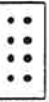
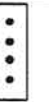
- a. Set the switches and install the jumpers on the DKUMN PCBs as indicated in the table below (tables T18-2 and T18-3).
- b. Set Enable/Disable Switch ① to Enable on the DKUMN PCB.

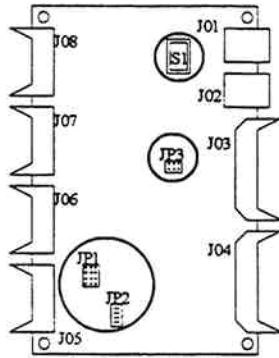
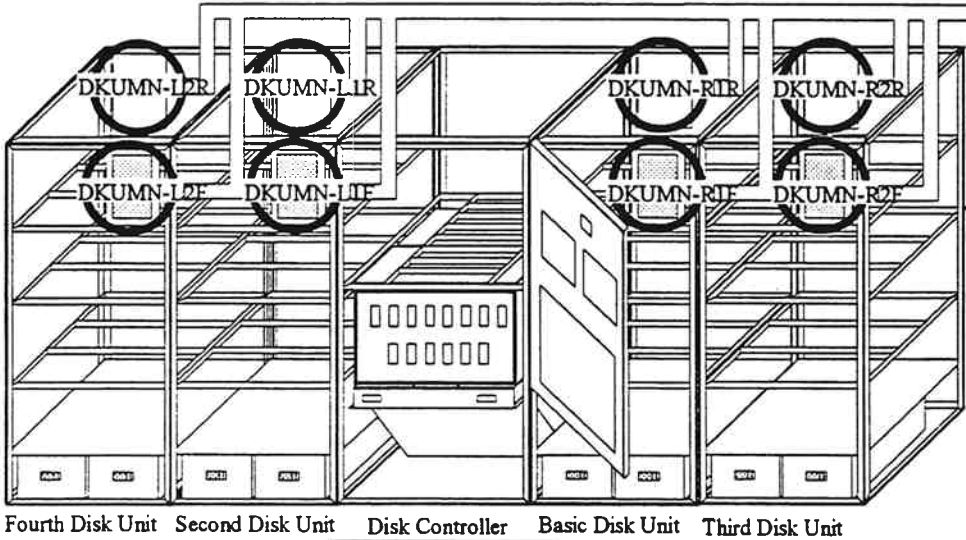
Table T18-2 DKUMN PCB Jumper Plug Positions

No.	Location No.	S1	JP1(#1,#2,#3)	JP1(#4,#5,#6)	JP1(#7,#8,#9)	JP2	Remarks
1	DKUMN-R1F	DISABLE	#1-#2 SHORT	#4-#5 SHORT	#7-#8 SHORT	Not Used	Basic
2	DKUMN-R1R	DISABLE	#2-#3 SHORT	#4-#5 SHORT	#7-#8 SHORT	Not Used	Disk Unit
3	DKUMN-L1F	DISABLE	#1-#2 SHORT	#4-#5 SHORT	#8-#9 SHORT	Not Used	Second
4	DKUMN-L1R	DISABLE	#2-#3 SHORT	#4-#5 SHORT	#8-#9 SHORT	Not Used	Disk Unit
5	DKUMN-R2F	DISABLE	#1-#2 SHORT	#5-#6 SHORT	#7-#8 SHORT	Not Used	Third
6	DKUMN-R2R	DISABLE	#2-#3 SHORT	#5-#6 SHORT	#7-#8 SHORT	Not Used	Disk Unit
7	DKUMN-L2F	DISABLE	#1-#2 SHORT	#5-#6 SHORT	#8-#9 SHORT	Not Used	Fourth
8	DKUMN-L2R	DISABLE	#2-#3 SHORT	#5-#6 SHORT	#8-#9 SHORT	Not Used	Disk Unit

No.	Location No.	Additional HDU Box Installed		No Additional HDU Box Installed		Remarks
		JP3(#1,#2,#3)	JP3(#4,#5,#6)	JP3(#1,#2,#3)	JP3(#4,#5,#6)	
1	DKUMN-R1F	#1-#2 SHORT	#4-#5 SHORT	#1-#2 SHORT	#5-#6 SHORT	Basic
2	DKUMN-R1R	#1-#2 SHORT	#4-#5 SHORT	#2-#3 SHORT	#4-#5 SHORT	Disk Unit
3	DKUMN-L1F	#1-#2 SHORT	#4-#5 SHORT	#1-#2 SHORT	#5-#6 SHORT	Second
4	DKUMN-L1R	#1-#2 SHORT	#4-#5 SHORT	#2-#3 SHORT	#4-#5 SHORT	Disk Unit
5	DKUMN-R2F	#1-#2 SHORT	#4-#5 SHORT	#1-#2 SHORT	#5-#6 SHORT	Third
6	DKUMN-R2R	#1-#2 SHORT	#4-#5 SHORT	#2-#3 SHORT	#4-#5 SHORT	Disk Unit
7	DKUMN-L2F	#1-#2 SHORT	#4-#5 SHORT	#1-#2 SHORT	#5-#6 SHORT	Fourth
8	DKUMN-L2R	#1-#2 SHORT	#4-#5 SHORT	#2-#3 SHORT	#4-#5 SHORT	Disk Unit

Table T18-3 DKUMN PCB Jumper Plug Positions

	1	2	3	4	5	6	7	8	Remarks
	DKUMN-R1F	DKUMN-R1R	DKUMN-L1F	DKUMN-L1R	DKUMN-R2F	DKUMN-R2R	DKUMN-L2F	DKUMN-L2R	
S1	DISABLE	DISABLE	DISABLE	DISABLE	DISABLE	DISABLE	DISABLE	DISABLE	-
JP1									-
JP2									-
	Not Used	Not Used	Not Used	Not Used	Not Used	Not Used	Not Used	Not Used	
JP3									Additional HDU Box Installed
									No Additional HDU Box Installed
	Basic Disk Unit		Second Disk Unit		Third Disk Unit		Fourth Disk Unit		-



3. Go to post-PROCEDURE t4 (REP04-410).

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[HARDWARE T19]

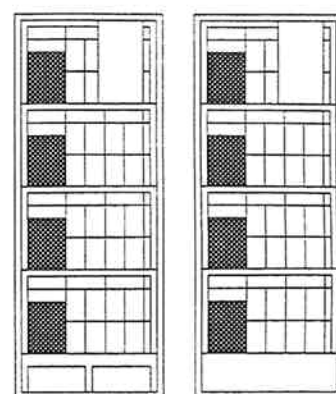
◆ PS(DKU)

[Related Procedure]

SVP procedure	Title & Sheet No.	Remarks
SVP pre-procedure	Pre-procedure AREP02-10	Refer to REP01-170.
	Pre-procedure T4REP02-650	
SVP post-procedure	Post-procedure t4REP04-410	Refer to REP01-170.

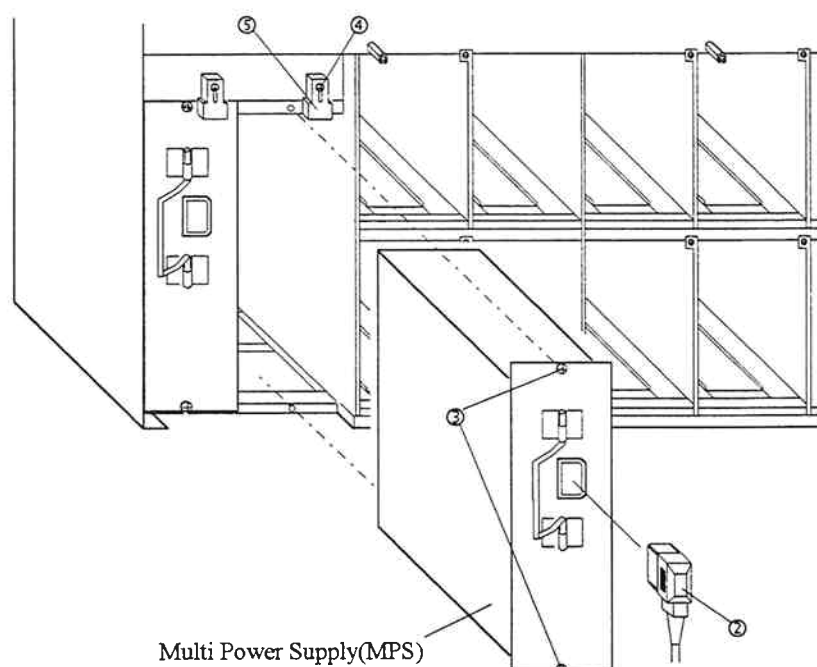
1. The following figure shows the correct way to replace the multi power supply(MPS).

- a. Set PS Enable/Disable Switch① to (DOWN) Disable.
- b. Disconnect the inlet cable② and remove the two screws③.
- c. Loosen the screw④ and move up the rubber absorber⑤.
- d. Remove the multi power supply(MPS).
- e. Confirm that PS Enable/Disable Switch① of the spare PS is set to Disable.
- f. With the rubber absorber⑤ set down, insert the spare PS. Shock caused by the insertion is absorbed by the rubber absorber⑤.
- g. With the rubber absorber⑤ set up, push the MPS into the HDU box until secure. Then lower rubber absorber⑤ and secure it with the screw④.
- h. Secure the MPS with the two screws③ and connect the inlet cable②.
- i. Set PS Enable/Disable Switch① to (UP) Enable.

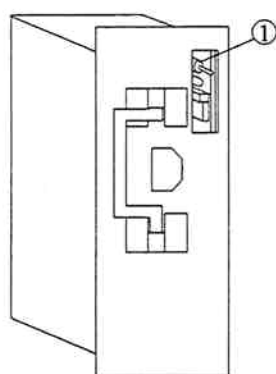


Front View of
Disk Unit

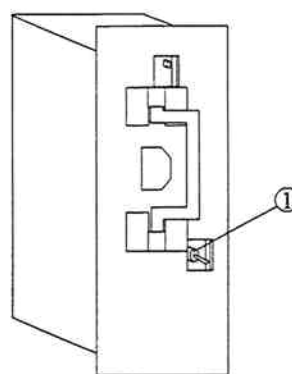
Rear View of
Disk Unit



Multi Power Supply(MPS)



HS300-04C-P



HS300-04C-V/HS300-04C-R/TSF300-HS

2. Go to SVP post procedure t4 [REP04-410].

[HARDWARE T20]

◆ FAN(DKU)

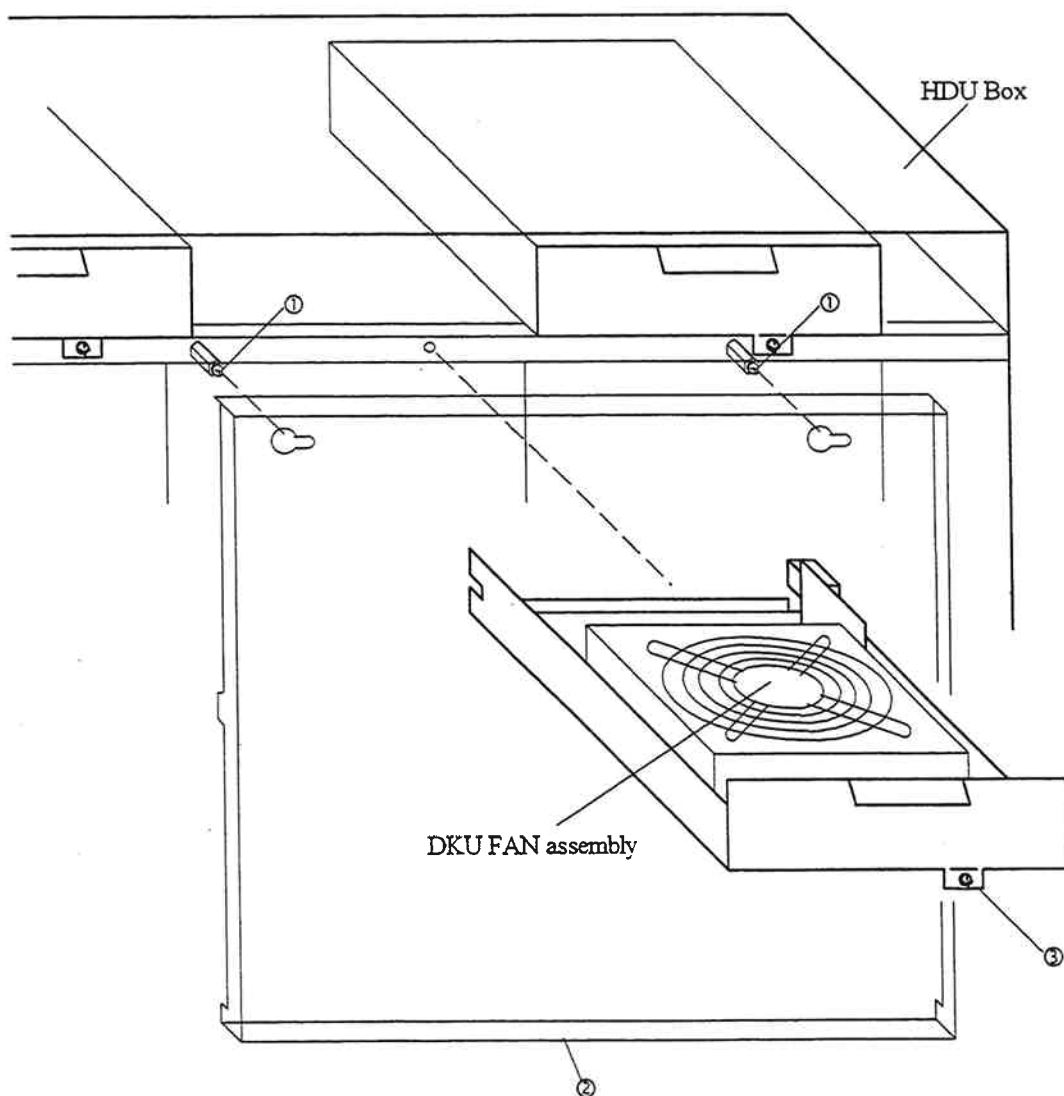
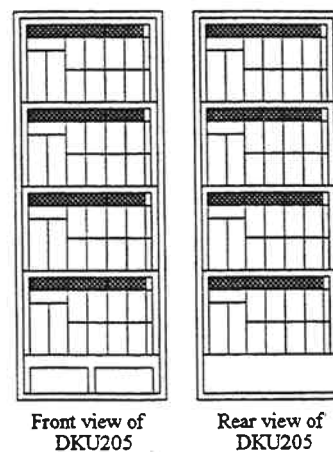
[Related Procedure]

SVP procedure	Title & Sheet No.	Remarks
SVP pre-procedure	Pre-procedure AREP02-10 Pre-procedure T4REP02-650	Refer to REP01-170.
SVP post-procedure	Post-procedure t4REP04-410	Refer to REP01-170.

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 DKU FAN assembly.

- a. Loosen the screws① and remove the acrylic cover②.
- b. Remove the screws③.
- c. Replace the DKU FAN assembly.
- d. Fasten the screws③.
- e. Attach the acrylic cover②.



2. Go to SVP post procedure t4 [REP04-410].

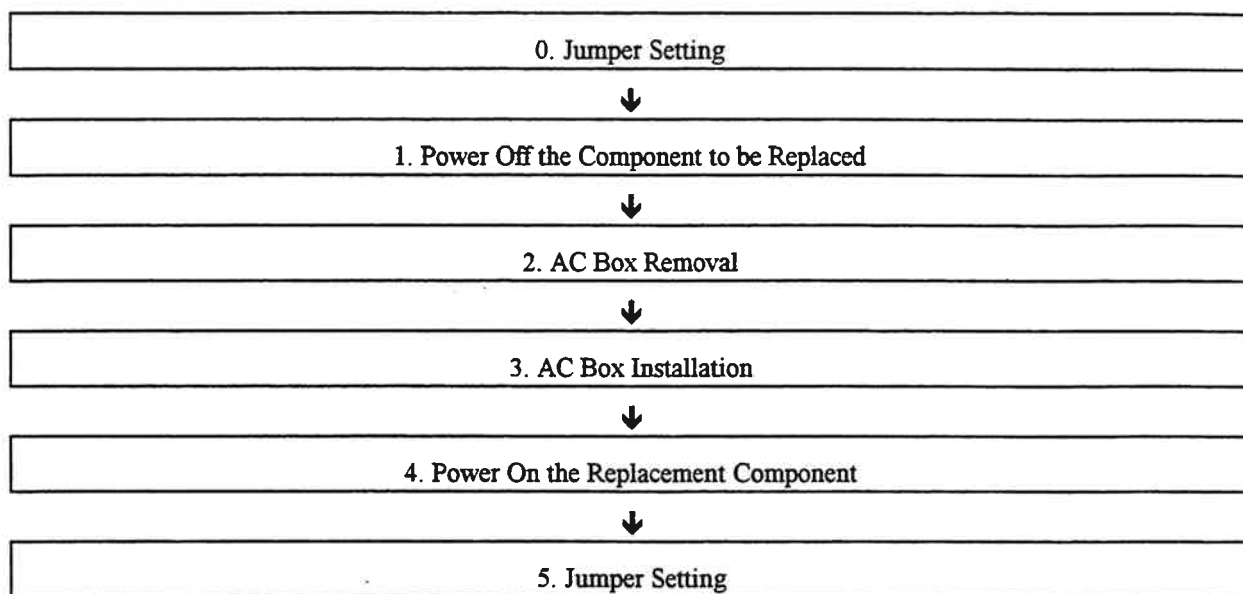
[HARDWARE T21]

◆AC BOX-R10

[Related Procedure]

SVP procedure	Title & Sheet No.	Remarks
SVP pre-procedure	Pre-procedure AREP02-10	Refer to REP01-170.
	Pre-procedure T4REP02-650	
SVP post-procedure	Post-procedure t4REP04-410	Refer to REP01-170.

Flowchart



AC BOX-R10

0. Jumper Setting

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.

Set the jumper plugs on PWRCTL-1 and PWRCTL-2 as indicated in the table below.

Table 0 Installation of Jumper plugs in PWRCTL

Location No.	No Cache Box	Cache Box
PWRCTL-1	JP3	JP3
PWRCTL-2	JP3	JP3

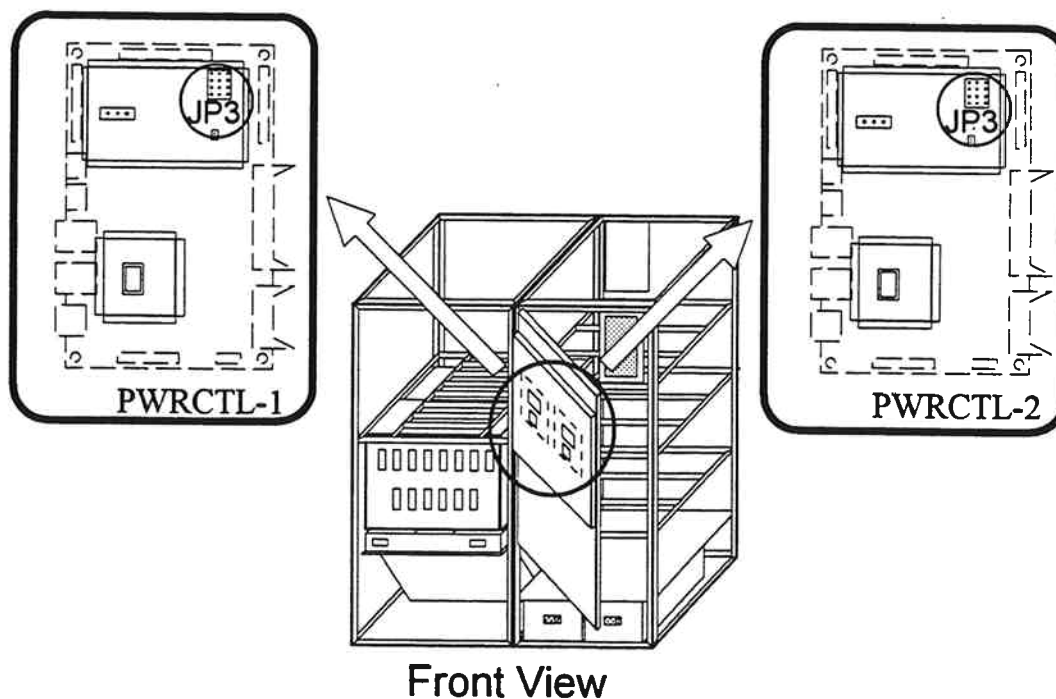


Fig. 0 Installation of Jumper Plugs in PWRCTL

1. Power Off the Component to be Replaced

 WARNING**Be Careful with Electric Shock**

- The power of 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.

 CAUTION**Mind Your Head**

- Be sure to mind your head during operation, or you might hit your head against the movable rack, which causes injury.

Table 1 Circuit Breakers to be Turned Off When Replacing AC BOX-R10

No.	Unit	Location No.	Breaker No.	Remarks
1	Disk Controller	Outlet Box	CB301	
2	Disk Controller	Outlet Box	CB302	DKC210IU Only
3	Disk Controller	Breaker Box-1	CB201	
4	Disk Controller	Breaker Box-1	CB202	
5	Disk Controller	Breaker Box-1	CB203	
6	Basic Disk Unit	AC BOX-R10	CB101	
7	Basic Disk Unit	AC BOX-R10	CB102	
8	Basic Disk Unit	AC BOX-R10	CB103	
9	Circuit breakers on the power distribution panel in the plant that are connected to the AC BOX-R10.			Failure to turn off may result in an electric shock

- a. Turn off the circuit breakers in the Disk Controller. Refer to Table 1 and Fig. 1

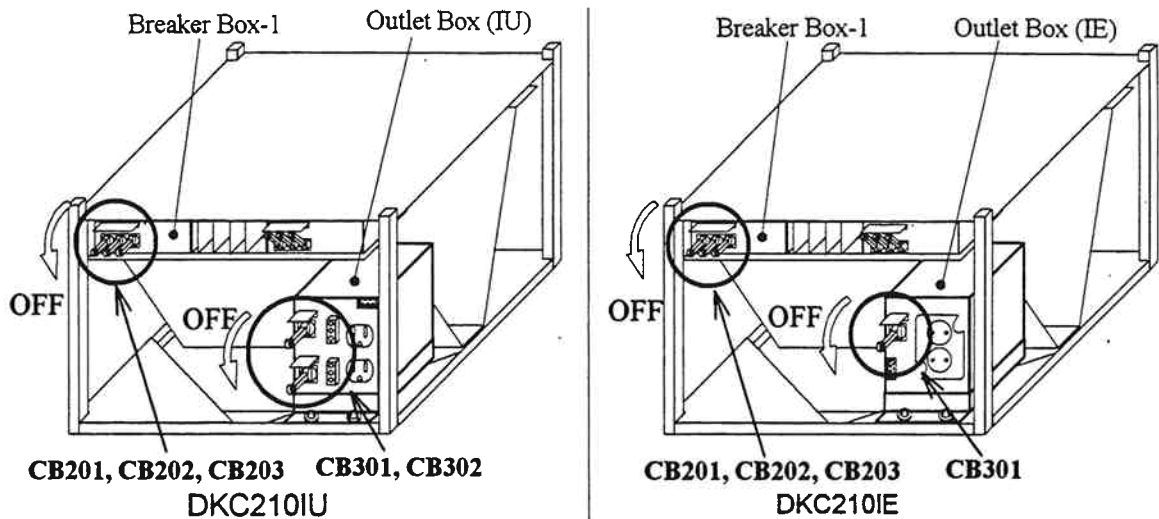


Fig. 1 Circuit Breakers to be Turned Off When Replacing Outlet Box.

- b. Turn off the circuit breakers (CB101, CB102, CB103) on AC BOX-R10 in the Basic Disk Unit.

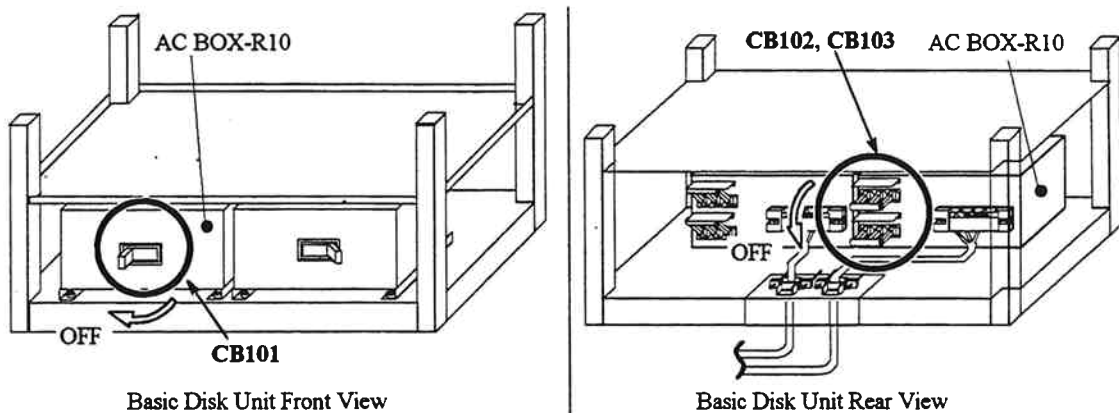


Fig. 2 Circuit Breakers to be Turned Off When Replacing Outlet Box.

- c. Turn off the circuit breakers on the power distribution panel in the plant that are connected to AC BOX-R10.

Failure to turn off may result in an electric shock.

2. AC Box Removal

- a. Remove the plate from the rear of the Disk Unit as illustrated in Fig. 3.

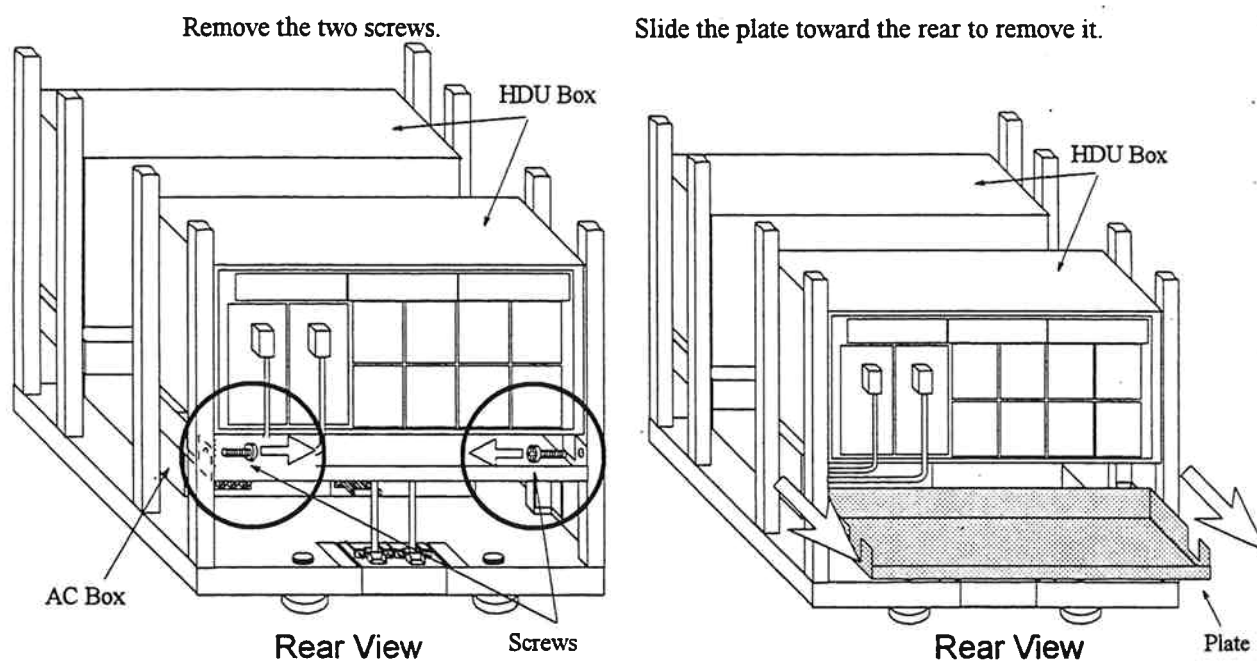


Fig. 3 Removal of Plate

- b. Unplug cable connectors P101-1, P102-1, and P103-1 from AC BOX-R10.



WARNING

Be Careful with Electric Shock

- Be sure to turn off the breaker on the power distribution panel connected to AC BOX-R10 before operation.

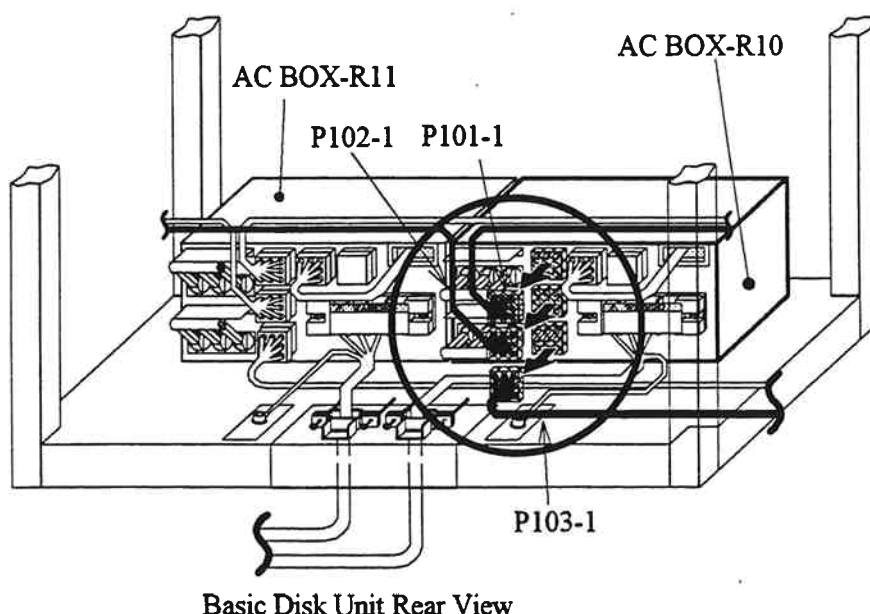


Fig. 4 Disconnection of Cable Connectors from AC BOX-R10

- c. Remove the terminal block cover and disconnect the AC power cable.

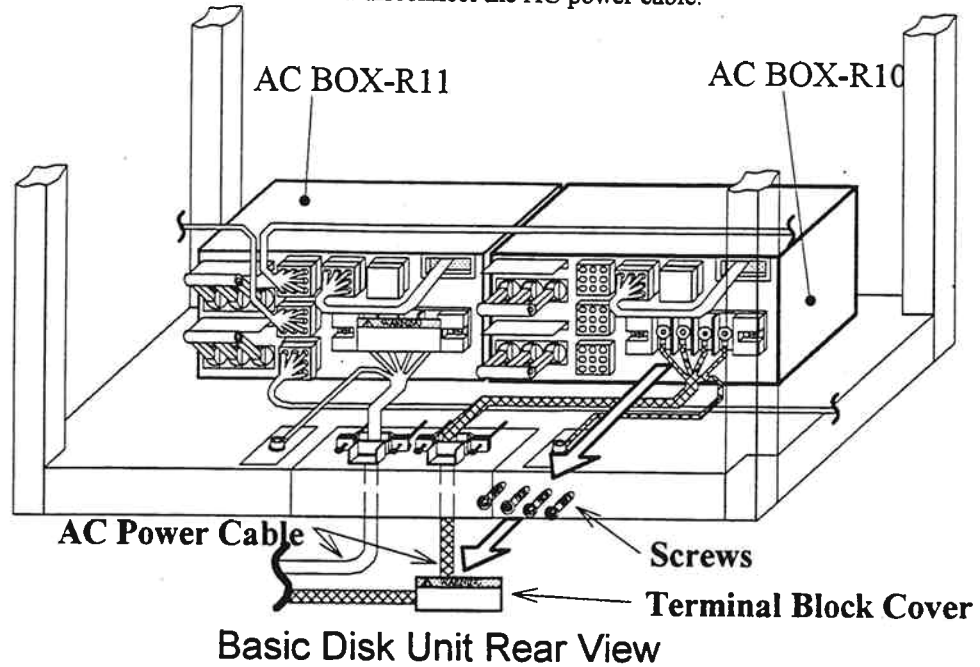


Fig. 5 Disconnection of AC Power Cable

- d. Remove two screws from the front panel of AC BOX-R10.

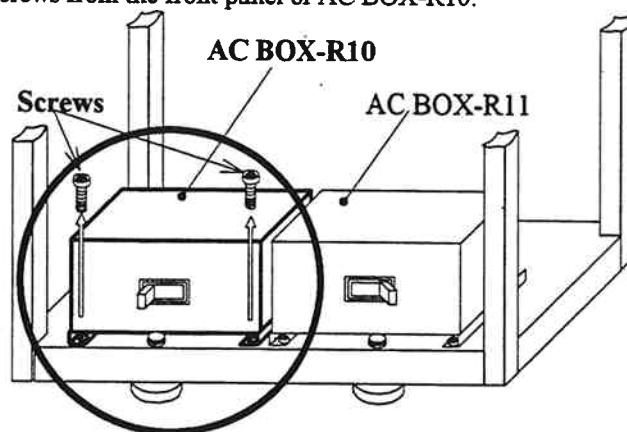


Fig. 6 Removal of Screws on AC BOX-R10

- e. Slide AC BOX-R10 backward and pull it out.

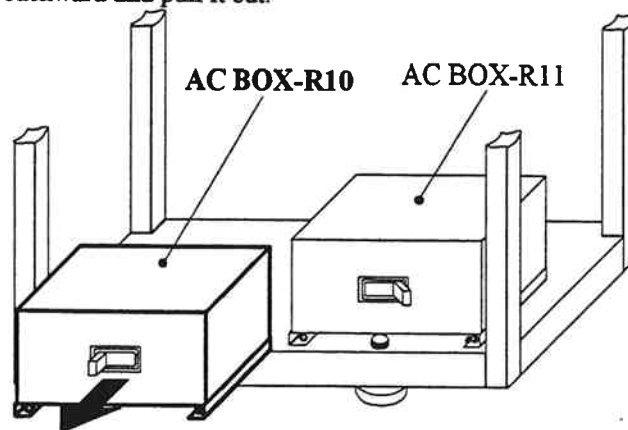


Fig. 7 Removal of AC BOX-R10

3. New AC Box Installation

- a. Check that the circuit breakers (CB101, CB102, CB103) on the new AC Box are turned off.

- b. Slide the new AC Box from the front to the rear.

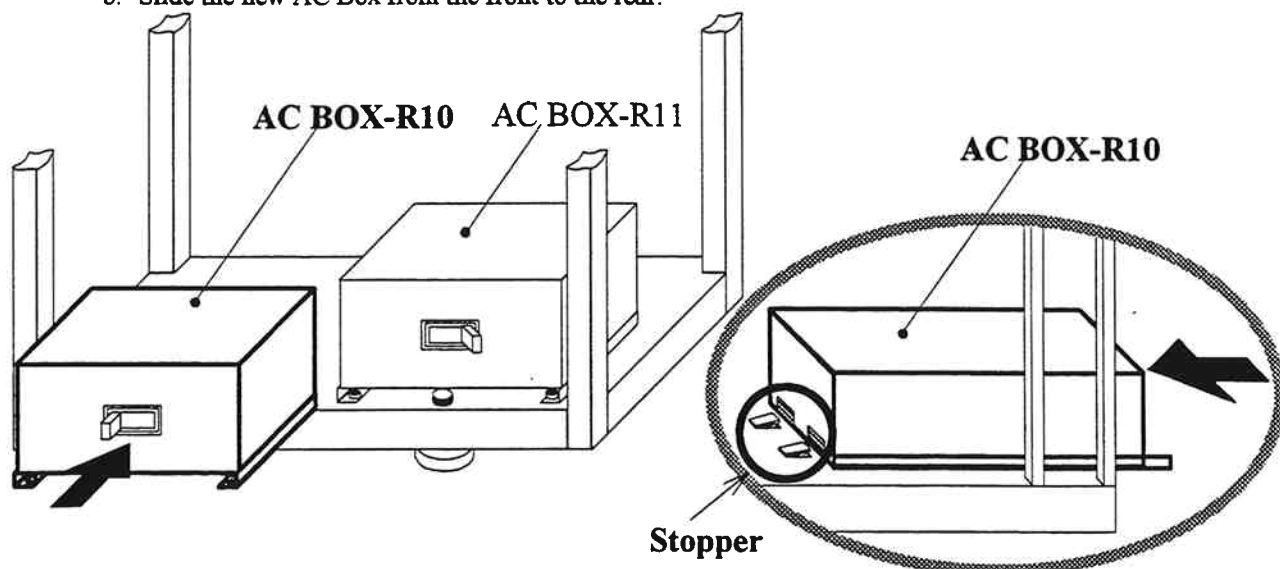


Fig. 8 Installation of New AC Box

- c. Secure AC BOX-R10 at the front with the screws.

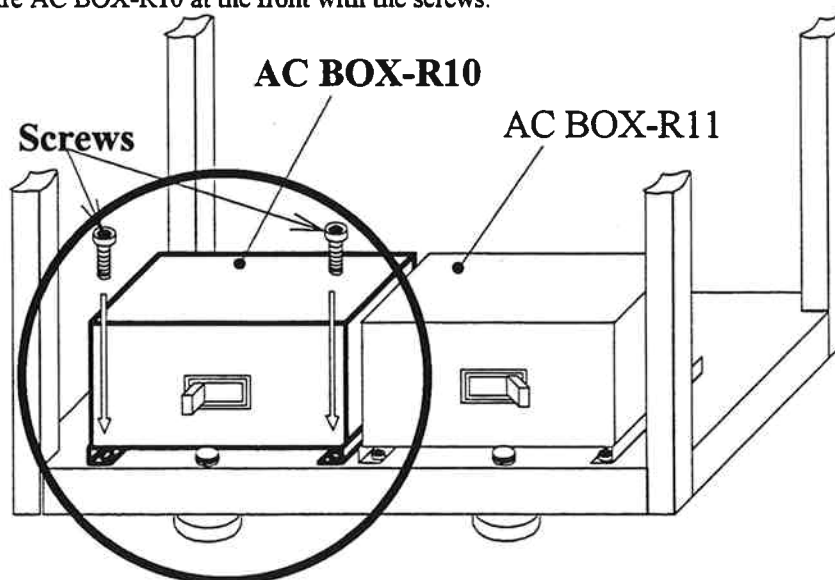


Fig. 9 Attachment of AC BOX-R10

- d. Connect the AC power cable to the terminal block. Attach the terminal block cover.

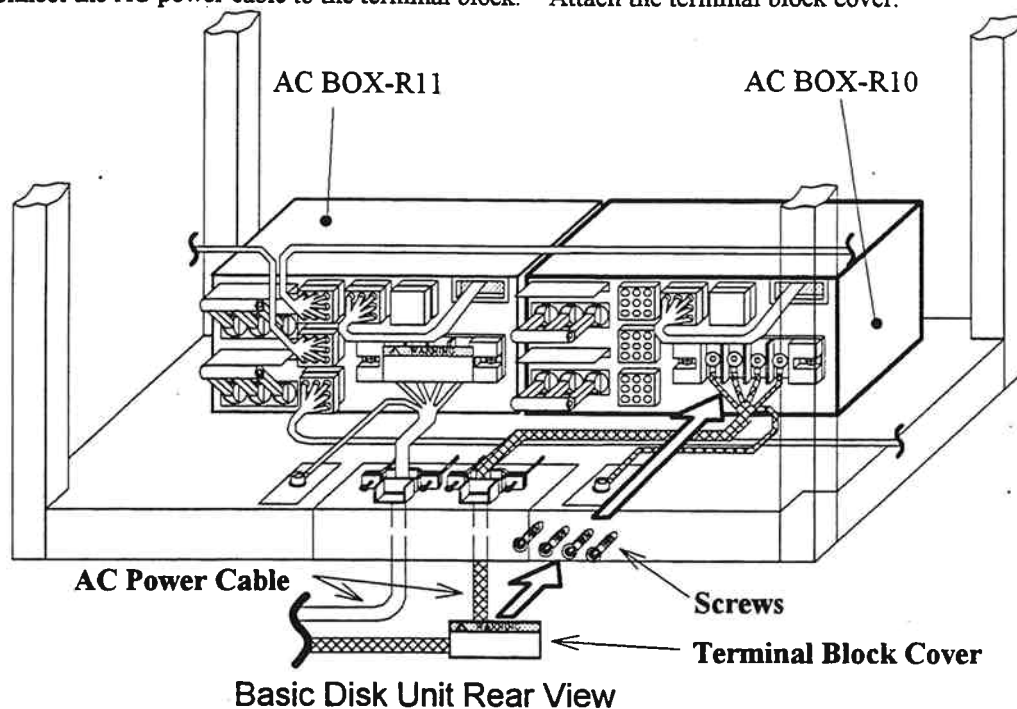


Fig. 10 Connection of AC Power Cable

Table 2 AC Power Cable Conductors and Jumper Cable (P104) Locations

No.	Model Number	Input Voltage	AC Power Cable Conductors	Jumper Cable (P104) Location	Remarks
1	DKU205IU	200-240Vac	4 (R,S,T,FG)	J104-1	J104-2 Dummy Connector
2	DKU205IE	380-415Vac	5 (R,S,T,N,FG)	J104-2	J104-1 Dummy Connector

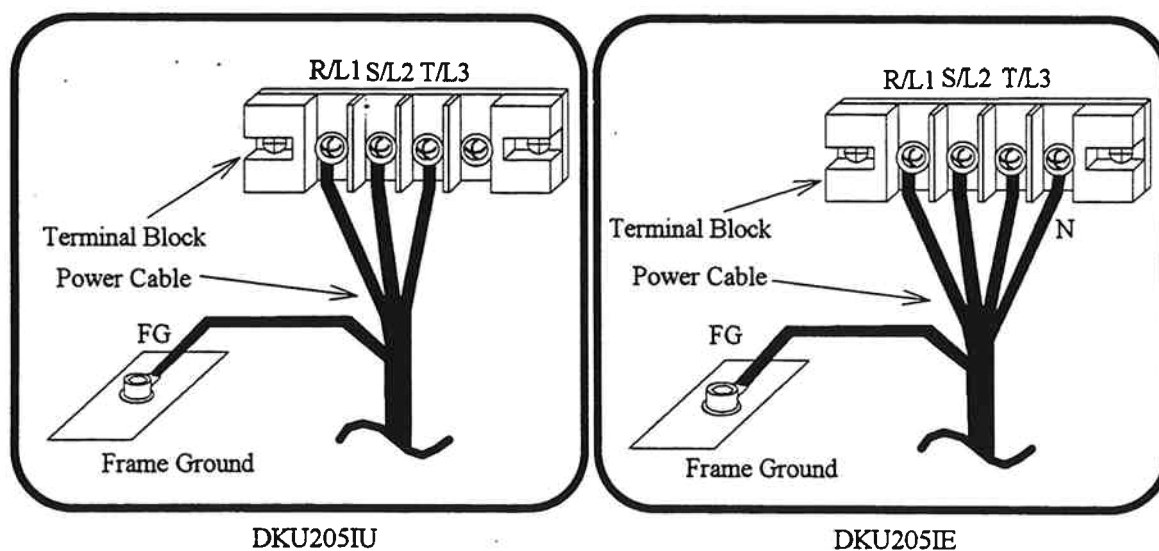
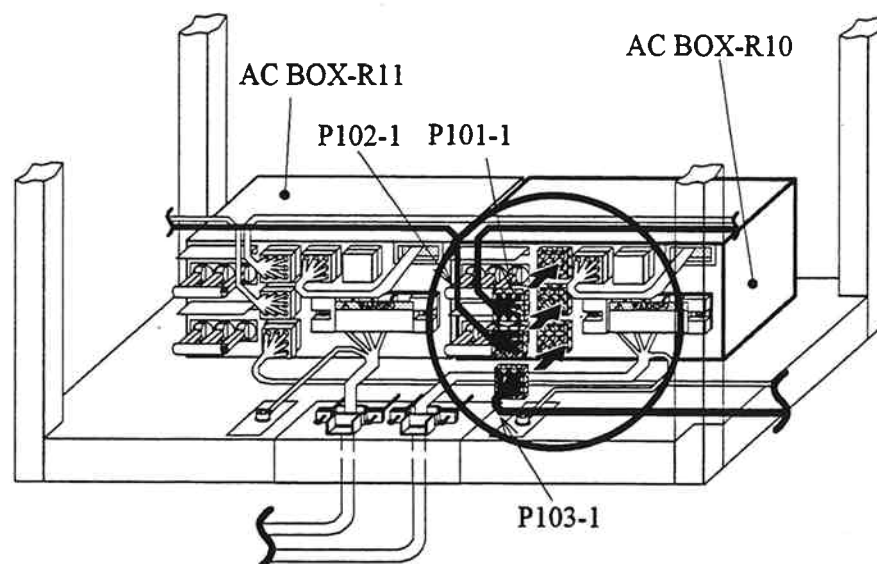


Fig. 11 Connection of AC Power Cable to Terminal Block

e. Connect the cables listed in Table 3.

Table 3 Cable Connection of AC BOX-R10

No.	Cable No.	AC Box	Remarks
1	P101-1	J101	
2	P102-1	J102	
3	P103-1	J103	
4	P104	J104-1	DKU205IU
		J104-2	DKU205IE
5	Dummy Connector	J104-2	DKU205IU
		J104-1	DKU205IE



Basic Disk Unit Rear View

Fig. 12 Cable Connection of AC BOX-R10

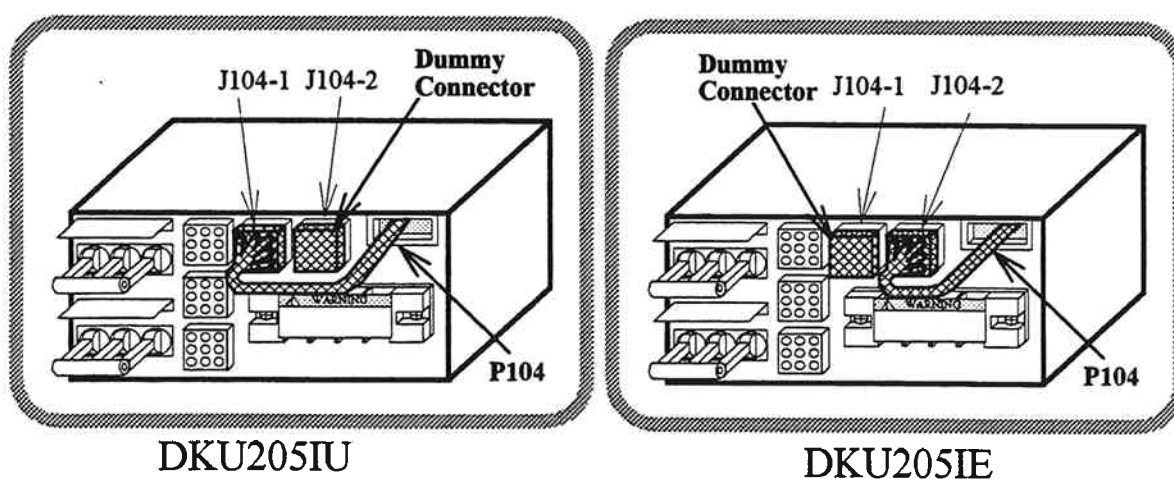


Fig. 13 Setting of Jumper Cable P104

f. Attach the plate.

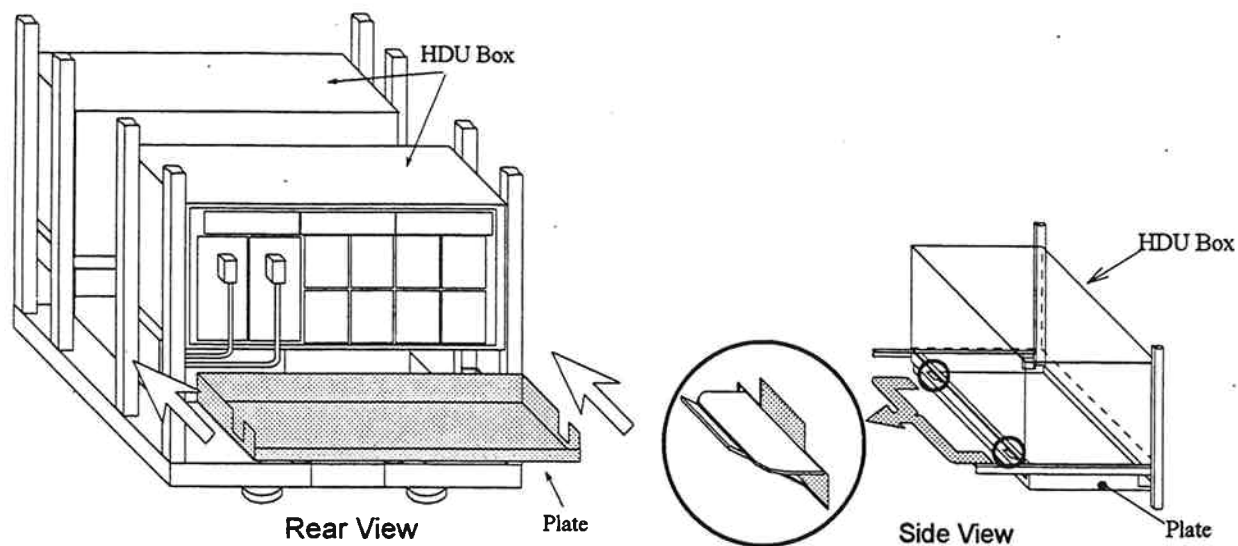


Fig. 14 Attachment of Plate

g. Secure the plate with the screws.

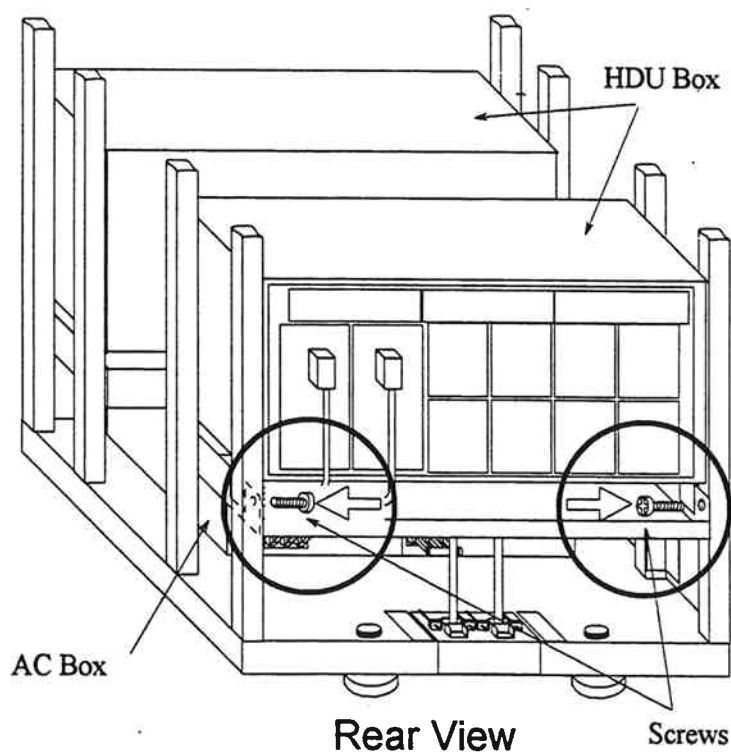


Fig. 15 Attachment of Plate

4. Power On the Replacement Component

- a. Turn on the circuit breakers on the power distribution panel that are connected to AC BOX-R10.
- b. Turn on all the circuit breakers on AC BOX-R10.
- c. Turn on all the circuit breakers listed in Table 1 [REP03-1150].
- d. Turn "IND TEST / CHK RST" switch on the CE panel to "CHK RST".

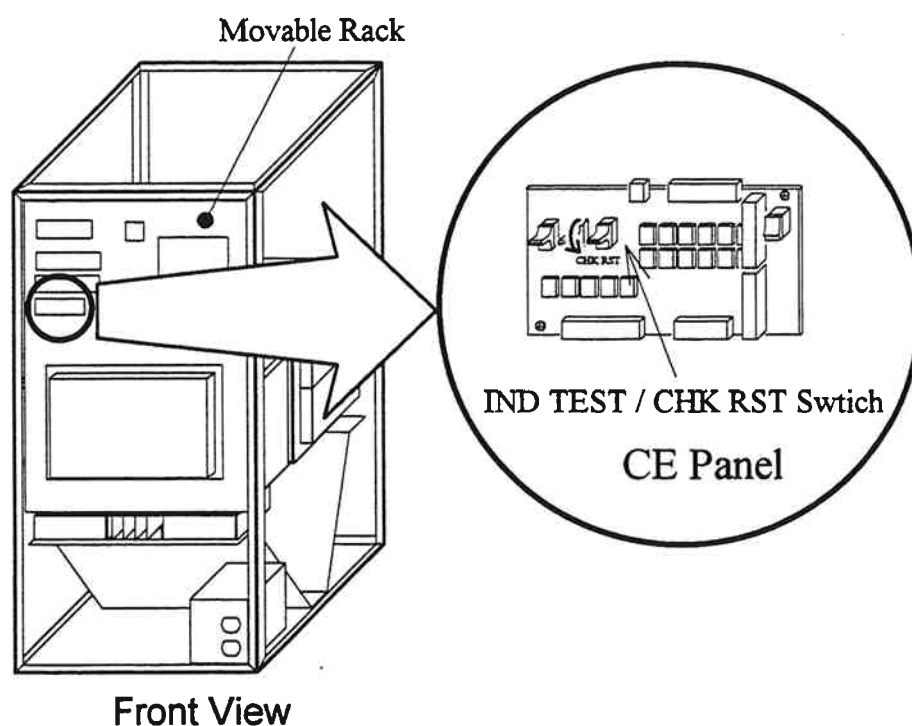


Fig. 16 Setting of IND TEST / CHK RST Switch

5. Jumper Setting

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.

Set the jumper plugs on PWRCTL-1 and PWRCTL-2 as indicated in the table below.

Table 4 Installation of Jumper plugs in PWRCTL

Location No.	No Cache Box	Cache Box
PWRCTL-1		
PWRCTL-2		

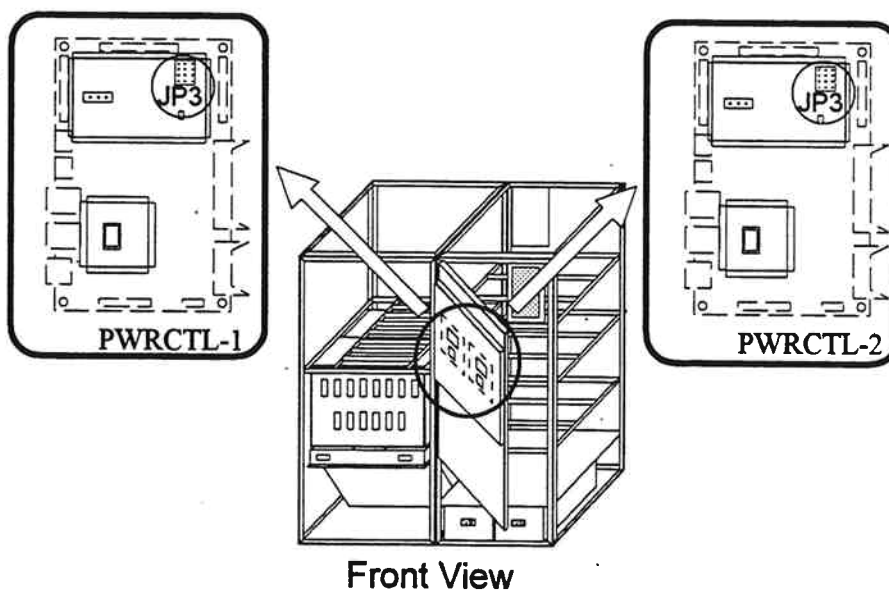


Fig. 17 Installation of Jumper Plugs in PWRCTL

6. Go to SVP post-procedure t4 [REP04-410].

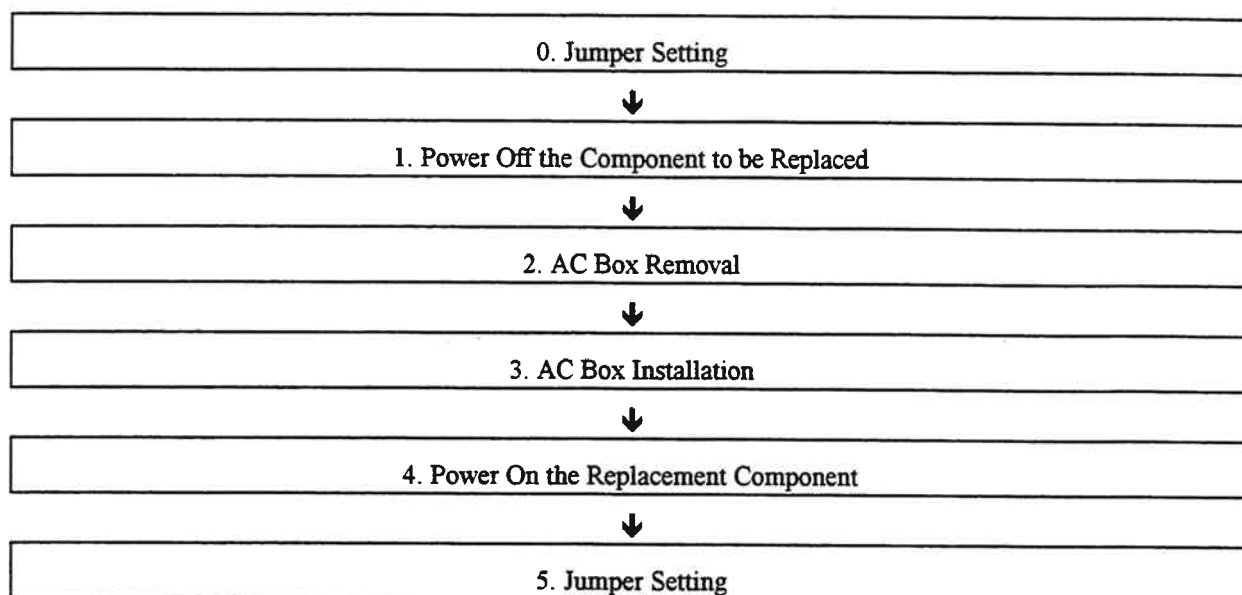
[HARDWARE T22]

◆AC BOX (except AC BOX-R10)

[Related Procedure]

SVP procedure	Title & Sheet No.	Remarks
SVP pre-procedure	Pre-procedure AREP02-10	Refer to REP01-170.
	Pre-procedure T4REP02-650	
SVP post-procedure	Post-procedure t4REP04-410	Refer to REP01-170.

Flowchart



AC BOX-R11

0. Jumper Setting

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.

Set the jumper plugs on PWRCTL-1 and PWRCTL-2 as indicated in the table below.

Table 0 Installation of Jumper plugs in PWRCTL

Location No.	No Cache Box	Cache Box
PWRCTL-1	JP3	JP3
PWRCTL-2	JP3	JP3

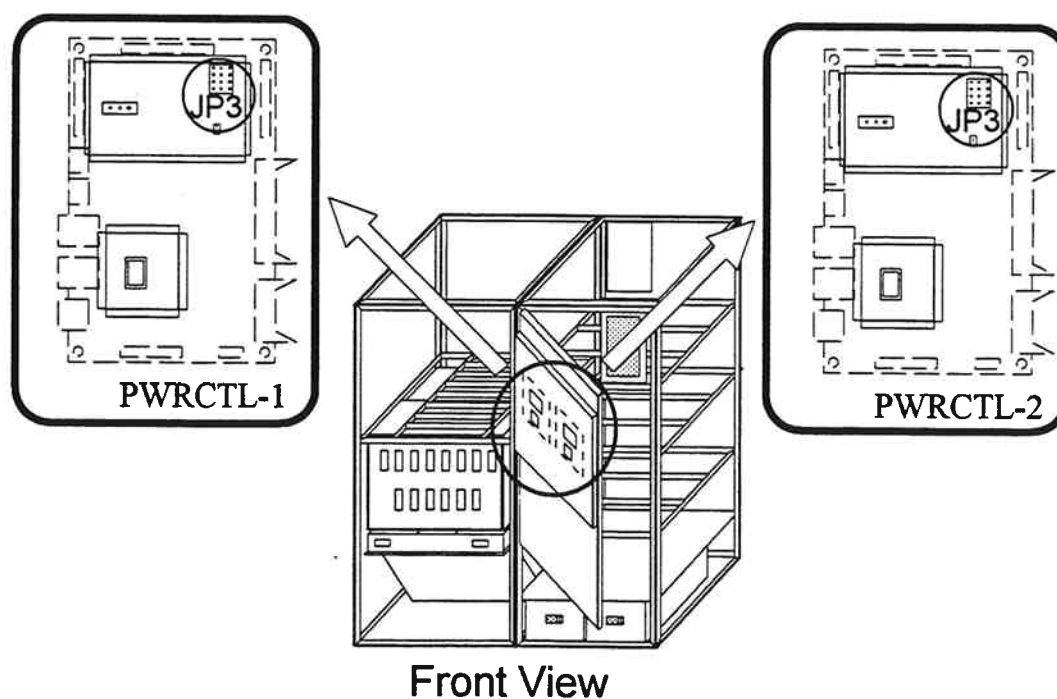


Fig. 0 Installation of Jumper Plugs in PWRCTL

1. Power Off the Component to be Replaced

 WARNING**Be Careful with Electric Shock**

- The power of 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.

 CAUTION**Mind Your Head**

- Be sure to mind your head during operation, or you might hit your head against the movable rack, which causes injury.

Table 1 Circuit Breakers to be Turned Off When Replacing AC BOX-R11

No.	Unit	Location No.	Breaker No.	Remarks
1	Disk Controller	Breaker Box-2	CB201	
2	Disk Controller	Breaker Box-2	CB202	
3	Disk Controller	Breaker Box-2	CB203	
4	Basic Disk Unit	AC BOX-R11	CB101	
5	Basic Disk Unit	AC BOX-R11	CB102	
6	Basic Disk Unit	AC BOX-R11	CB103	
7	Circuit breakers on the power distribution panel in the plant that are connected to the AC BOX-R11.			Failure to turn off may result in an electric shock.

- a. Turn off all the circuit breakers (CB201, CB202, CB203) on Breaker Box-2.

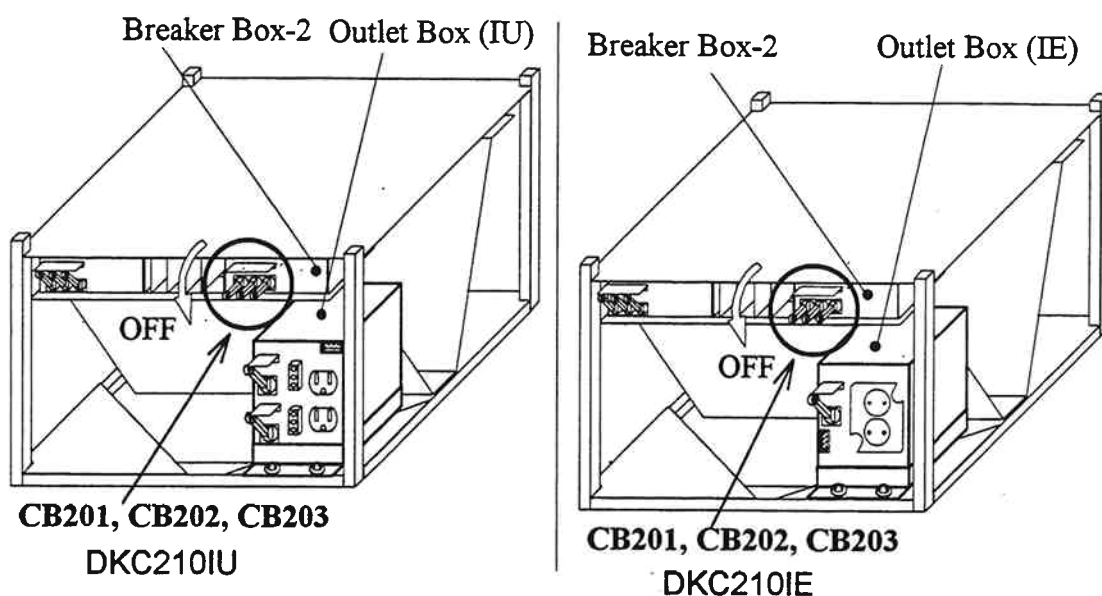


Fig. 1 Circuit Breakers to be Turned Off When Replacing AC BOX-R11

- b. Turn off all the circuit breakers (CB101, CB102, and CB103) on AC BOX-R11.

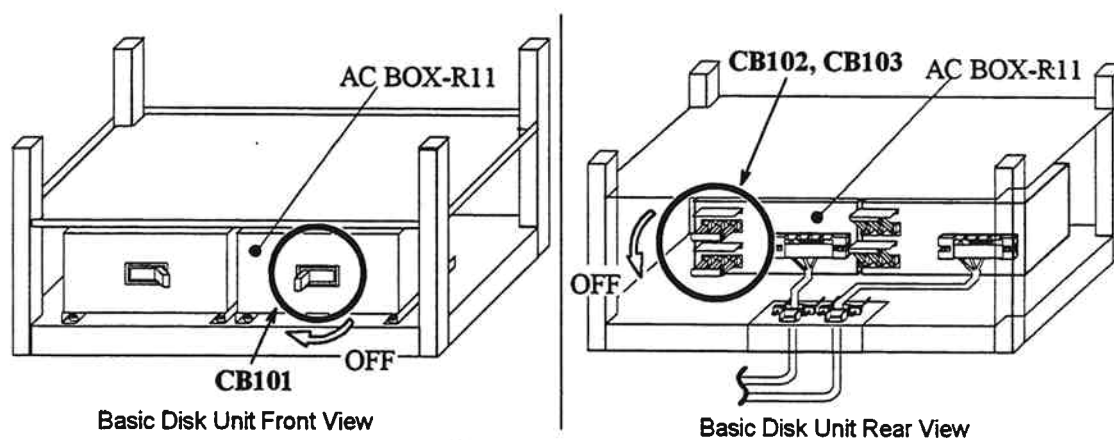


Fig. 2 Circuit Breakers to be Turned Off When Replacing AC BOX-R11

- c. Turn off the circuit breakers on the power distribution panel in the plant that are connected to AC BOX-R11.

Failure to turn off may result in an electric shock.

2. AC Box Removal

- a. Remove the plate from the rear of the Disk Unit as illustrated in Fig. 3.

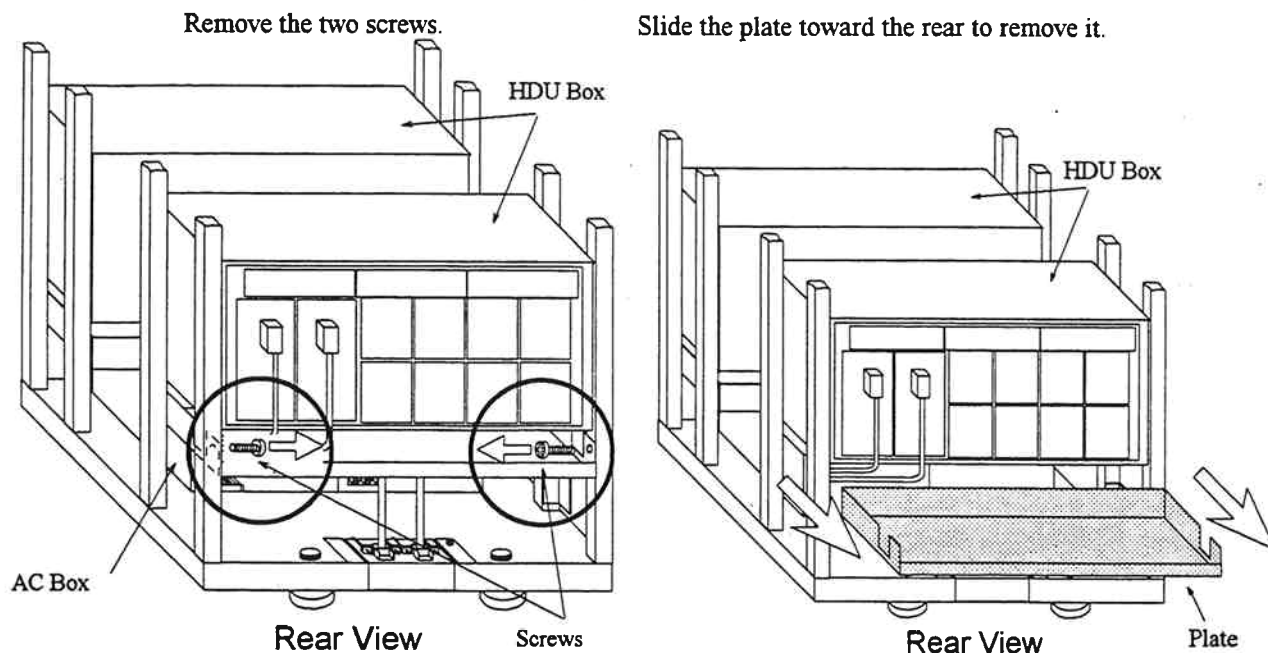


Fig. 3 Removal of Plate

- b. Unplug cable connectors P101-2, P102-2, and P103-2 from AC BOX-R11

WARNING

Be Careful with Electric Shock

- Be sure to turn off the breaker on the power distribution panel connected to AC BOX-R11 before operation.

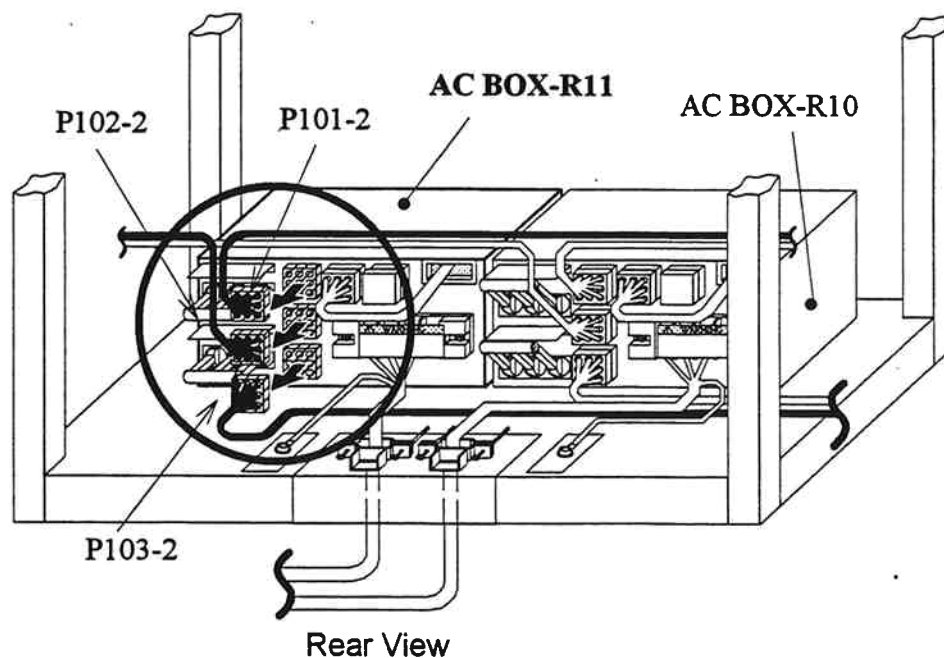


Fig. 4 Disconnection of Cable Connectors from AC BOX-R11

- c. Remove the terminal block cover and disconnect the AC power cable.

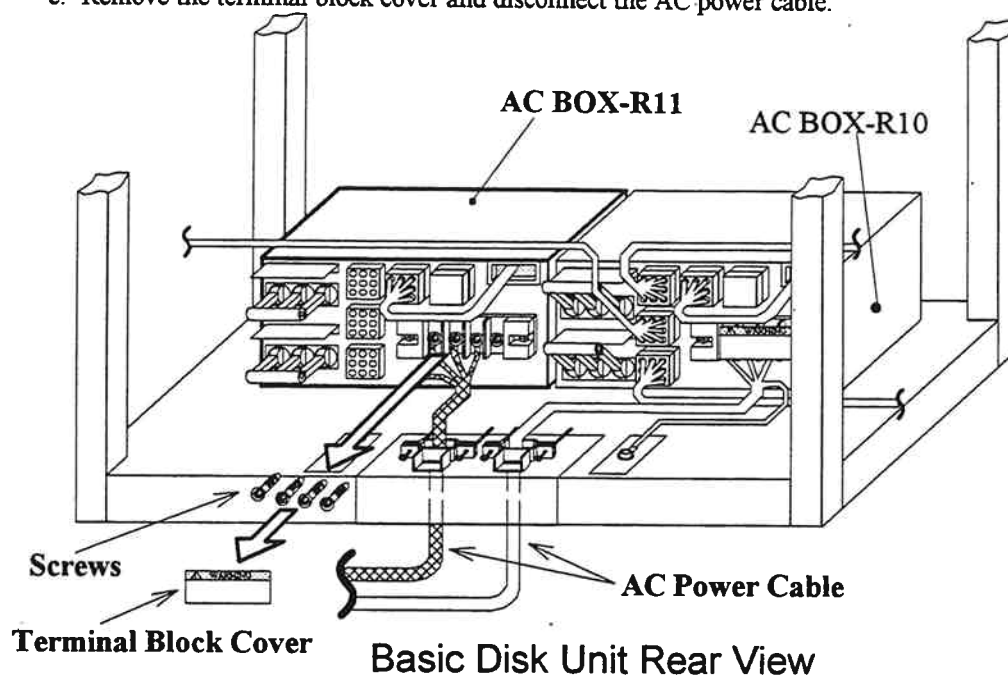


Fig. 5 Disconnection of AC Power Cable

- d. Remove the two screws from the front panel of AC BOX-R11.

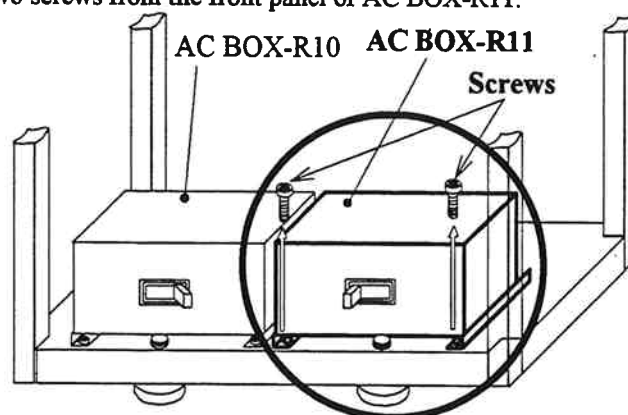


Fig. 6 Removal of Screws on AC BOX-R11

- e. Slide the AC BOX-R11 backward and pull it out.

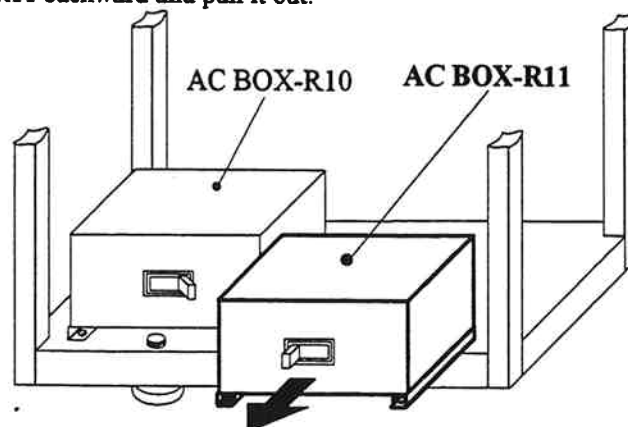


Fig. 7 Removal of AC BOX-R11

3. New AC Box Installation

- a. Check that the circuit breakers (CB101, CB102, CB103) on the new AC Box are turned off.

- b. Slide the AC BOX-R11 from the front to the rear.

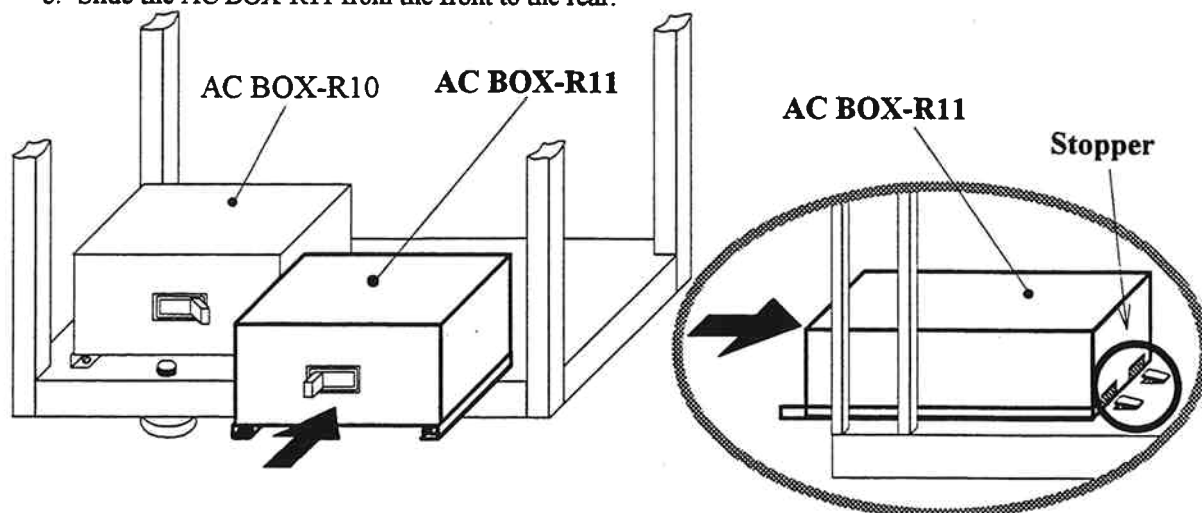


Fig. 8 Installation of AC BOX

- . Secure AC BOX-R11 at the front with the screws.

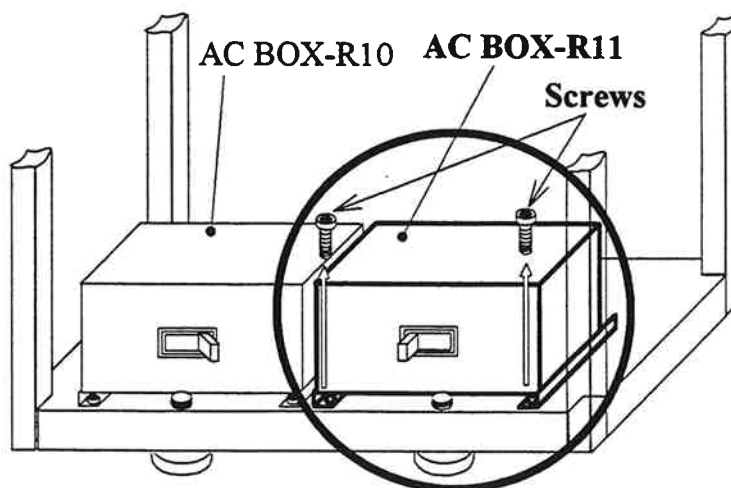


Fig. 9 Attachment of AC BOX-R11

- d. Connect the AC power cable to the terminal block. Attach the terminal block cover.

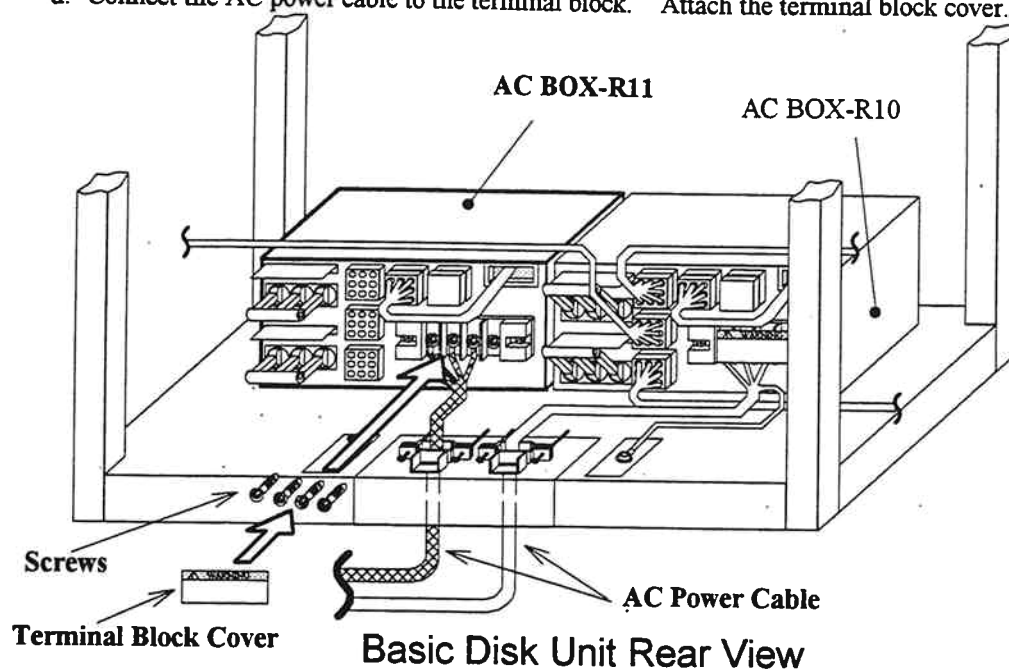


Fig. 10 Connection of AC Power Cable

Table 2 AC Power Cable Conductors and Jumper Cable (P104) Locations

No.	Model Number	Input Voltage	AC Power Cable Conductors	Jumper Cable (P104) Location	Remarks
1	DKU205IU	200-240Vac	4 (R,S,T,FG)	J104-1	J104-2 Dummy Connector
2	DKU205IE	380-415Vac	5 (R,S,T,N,FG)	J104-2	J104-1 Dummy Connector

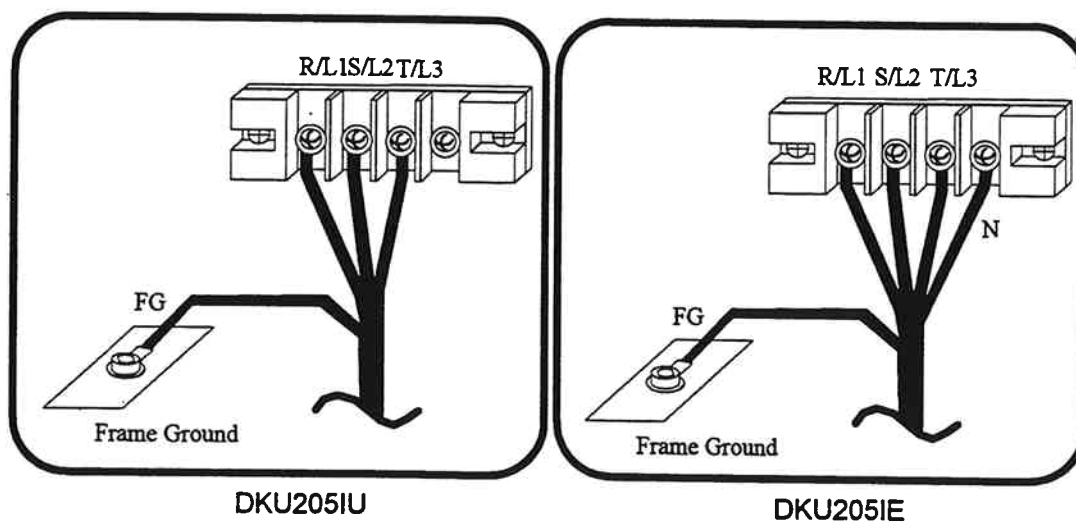
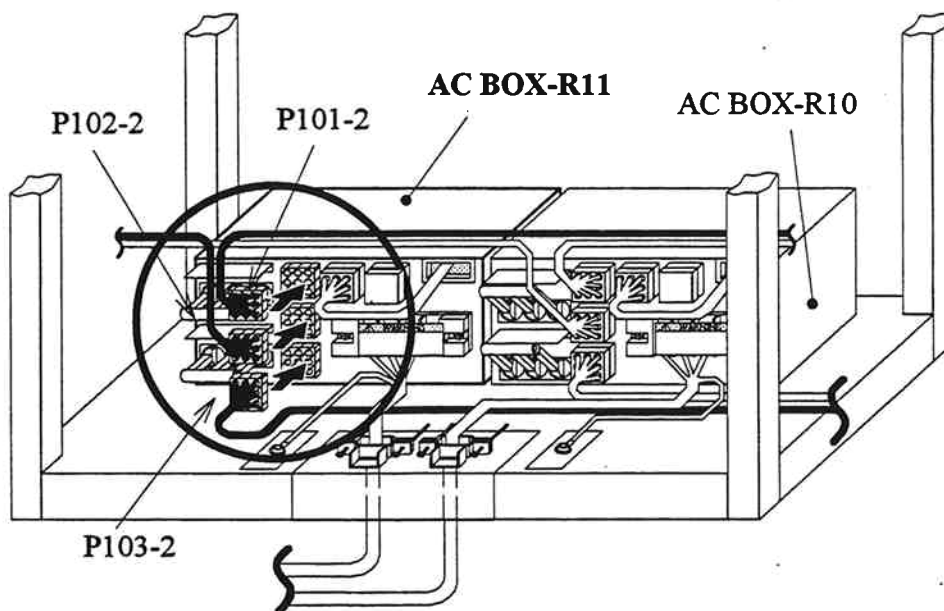


Fig. 11 Connection of AC Power Cable to Terminal Block

e. Connect the cables listed in Table 3.

Table 3 Cable Connection of AC BOX-R11

No.	Cable No.	Connector No.	Remarks
1	P101-1	J101	
2	P102-1	J102	
3	P104	J104-1	DKU205IU
		J104-2	DKU205IE
4	Dummy Connector	J104-2	DKU205IU
		J104-1	DKU205IE



Basic Disk Unit Rear View

Fig. 12 Cable Connection of AC BOX-R11

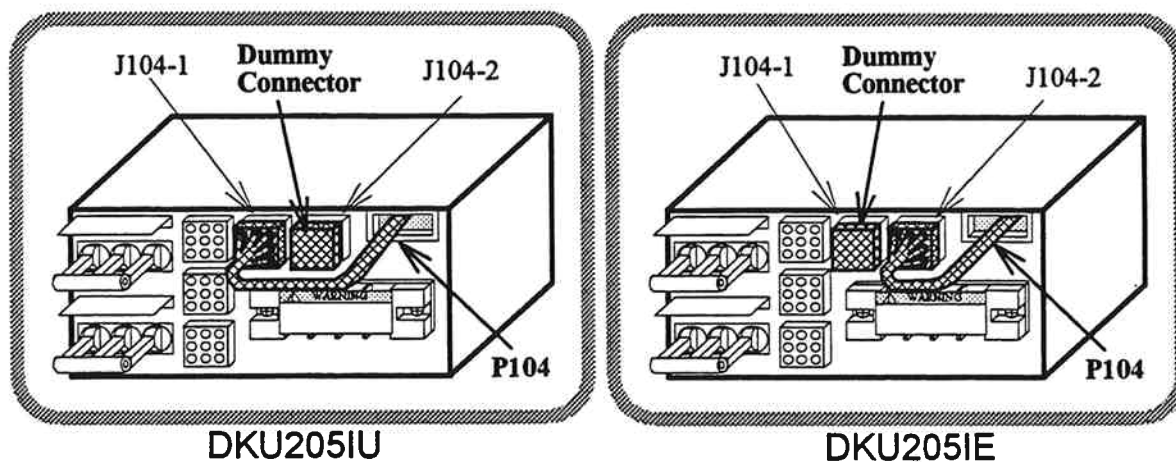


Fig. 13 Setting of Jumper Cable P104

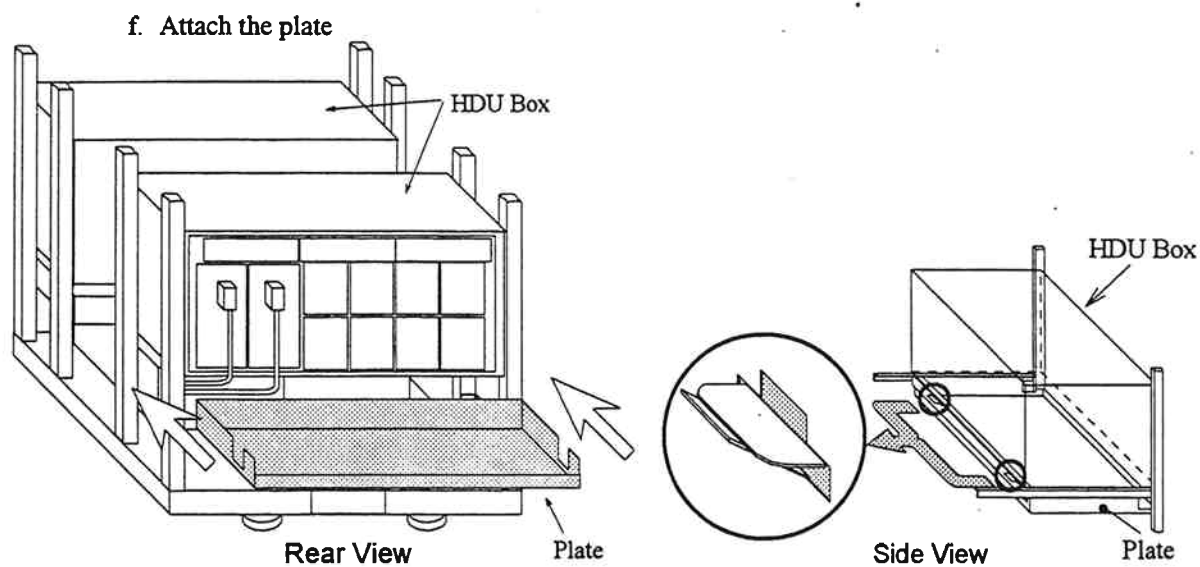


Fig. 14 Attachment of Plate

g. Secure the plate with the screws.

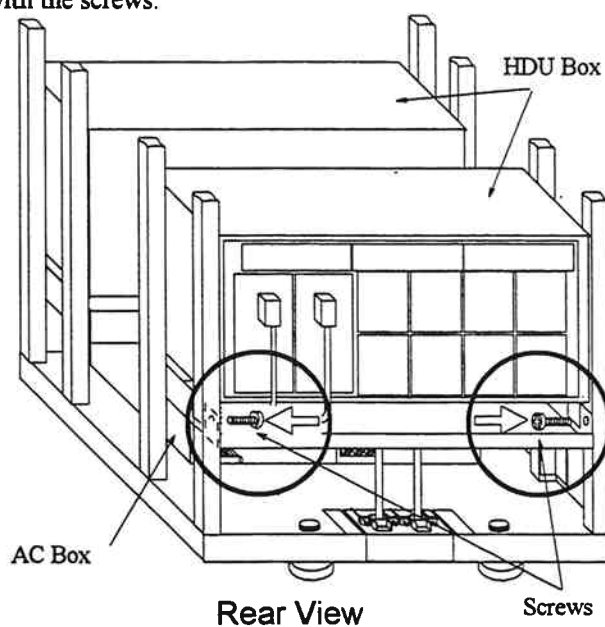


Fig. 15 Attachment of Plate

4. Power On the Replacement Component

- a. Turn on the circuit breakers on the power distribution panel that are connected to AC BOX-R11.
- b. Turn on all the circuit breakers on AC BOX-R11.
- c. Turn on all the circuit breakers listed in Table 1 [REP03-1240].
- d. Turn "IND TEST / CHK RST" switch on the CE panel to "CHK RST".

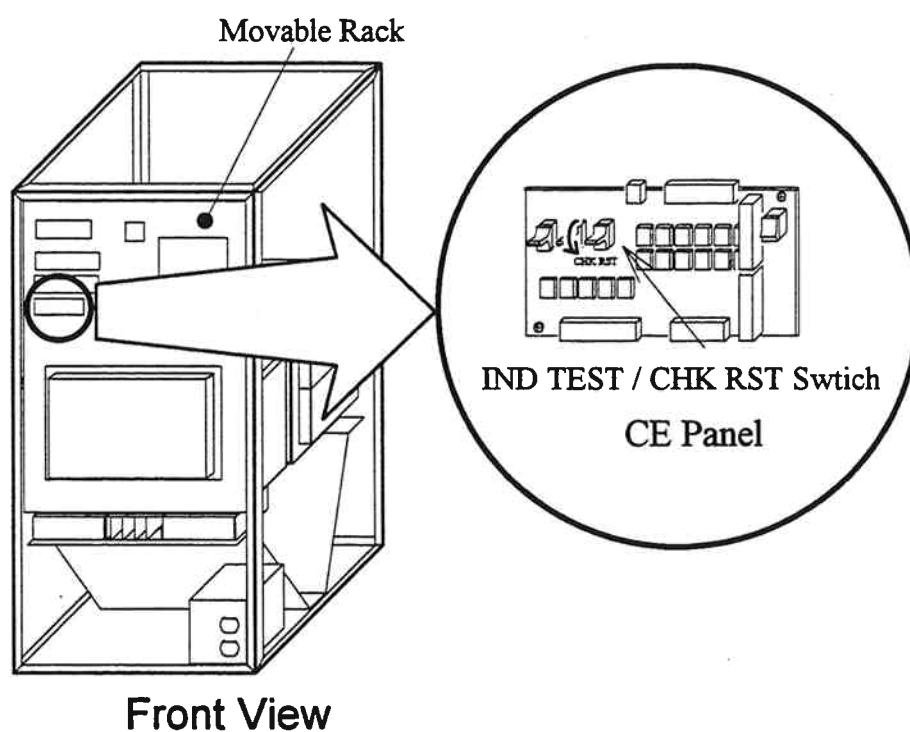


Fig. 16 Setting of IND TEST / CHK RST Switch

5. Jumper Setting

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.

Set the jumper plugs on PWRCTL-1 and PWRCTL-2 as indicated in the table below.

Table 4 Installation of Jumper Plugs in PWRCTL

Location No.	No Cache Box	Cache Box
PWRCTL-1		
PWRCTL-2		

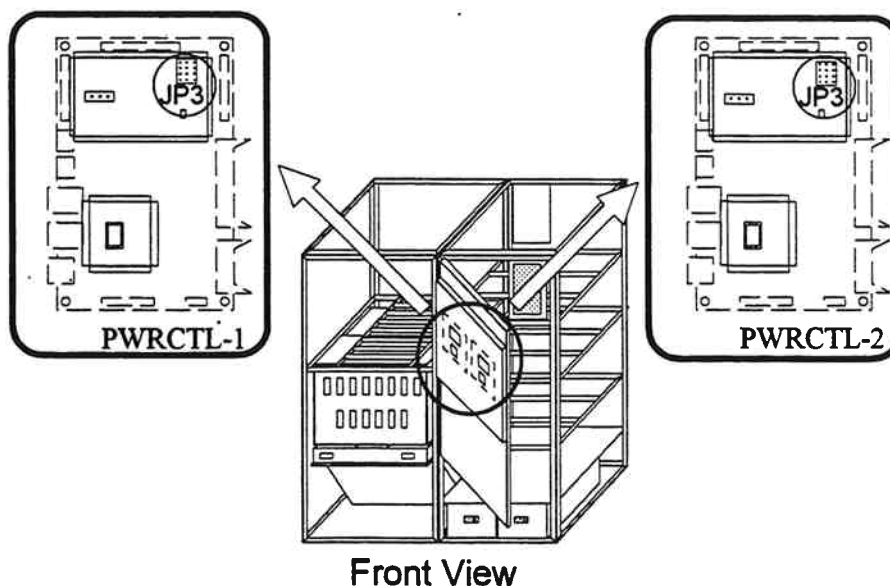


Fig. 17 Installation of Jumper Plugs in PWRCTL

6. Go to SVP post-procedure t4 [REP04-410].

Other AC Boxes

(AC BOX-R20, AC BOX-R21, AC BOX-L10, AC BOX-L11, AC BOX-L20, AC BOX-21)

WARNING

Be Careful with Electric Shock

- The power of 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.

1. Power Off the Component to be Replaced

- a. Turn off the circuit breakers for the AC Box to be replaced (CB101, CB102, and CB103).

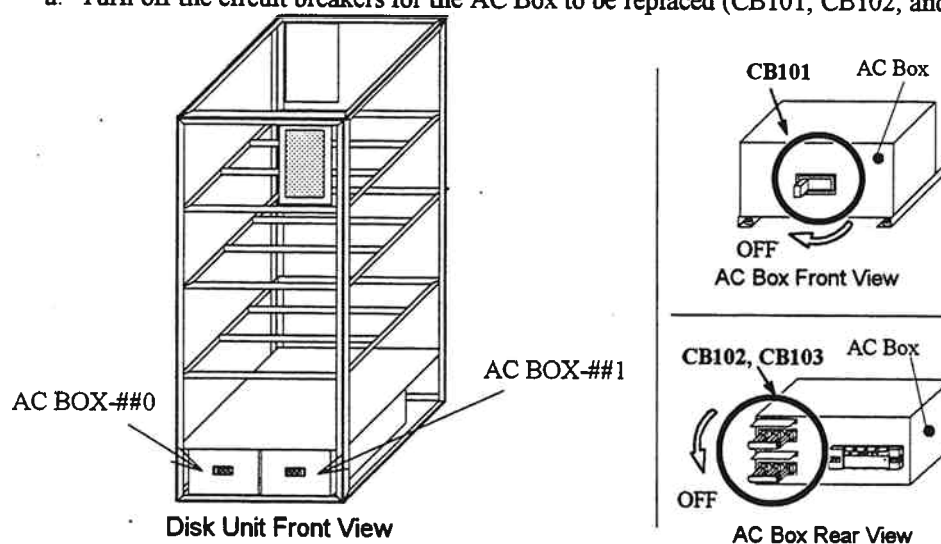


Fig. 16 AC Box Location

- b. Turn off the circuit breakers on the power distribution panel in the plant that are connected to the AC Box to be replaced.

Failure to turn off may result in an electric shock.

2. AC Box Removal

- a. Remove the plate from the rear of the Disk Unit as illustrated in Fig. 17

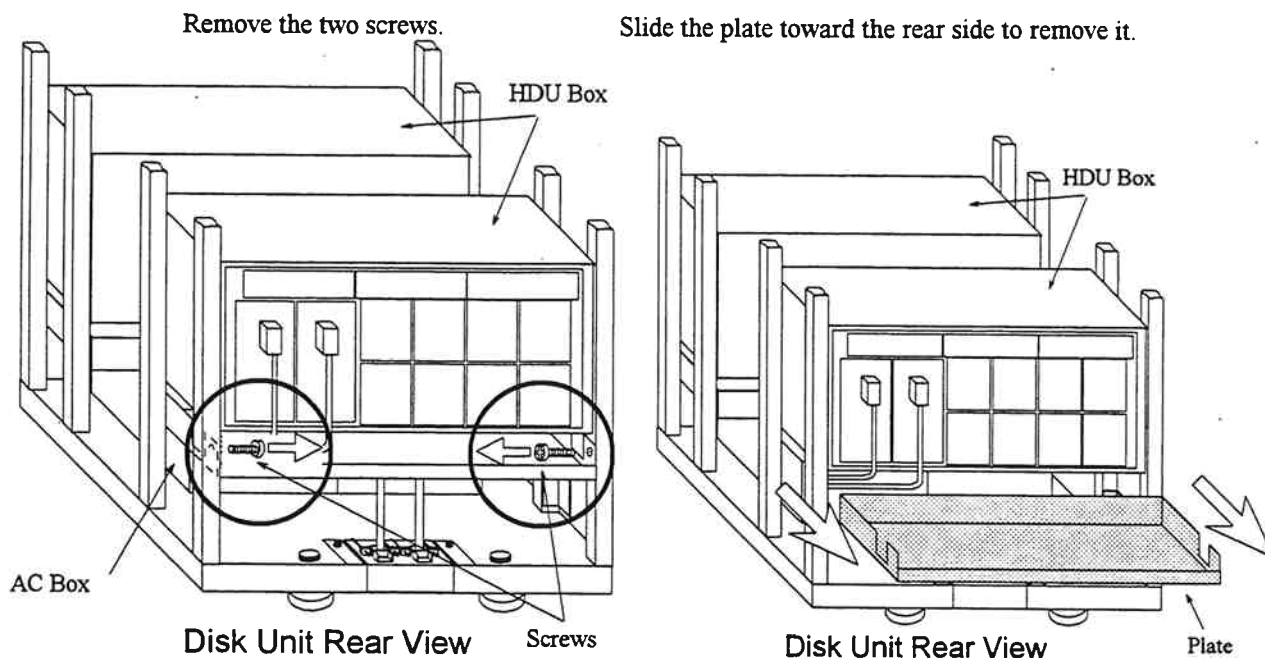


Fig. 17 Removal of Plate



WARNING

Be Careful with Electric Shock

- Be sure to turn off the breaker on the power distribution panel connected to replaced AC BOX.

- b. Unplug cable connectors P101-1 and P102-1 from the AC Box to be replaced.

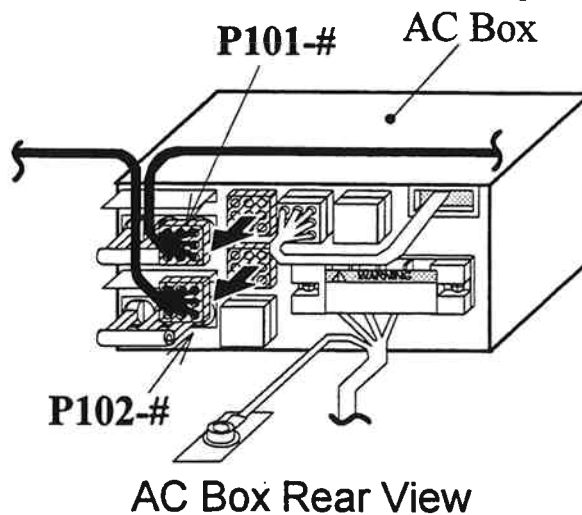


Fig. 18 Disconnection of Cable Connectors from AC Box

- c. Remove the terminal block cover and disconnect the AC power cable.

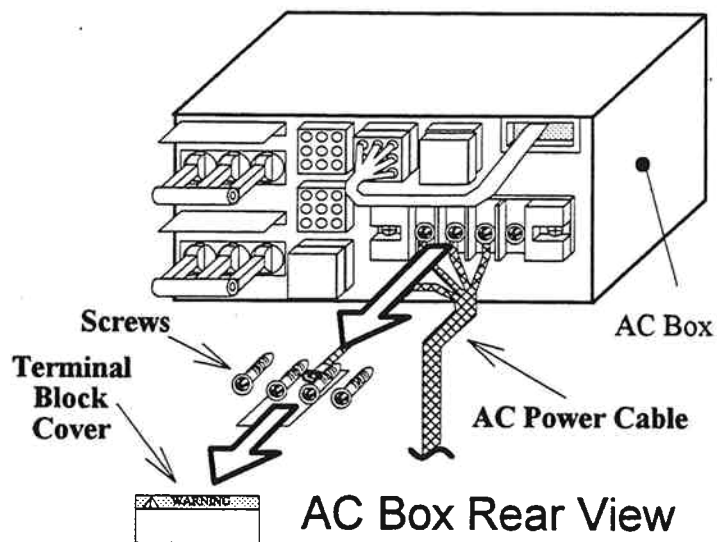


Fig. 19 Disconnection of AC Power Cable

- d. Remove the two screws from the front panel of the AC Box to be replaced.
Slide the AC Box to be replaced backward and pull it out.

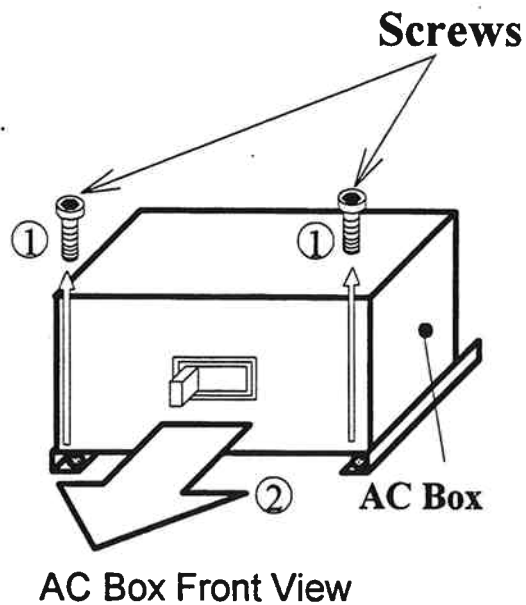


Fig. 20 Disconnection of AC Power Cable

3. New AC Box Installation

- a. Check that the circuit breakers (CB101, CB102, CB103) on the new AC Box are turned off.
- b. Slide the replacement AC Box from the front to the rear.

Secure the replacement AC Box at the front side with the screws.

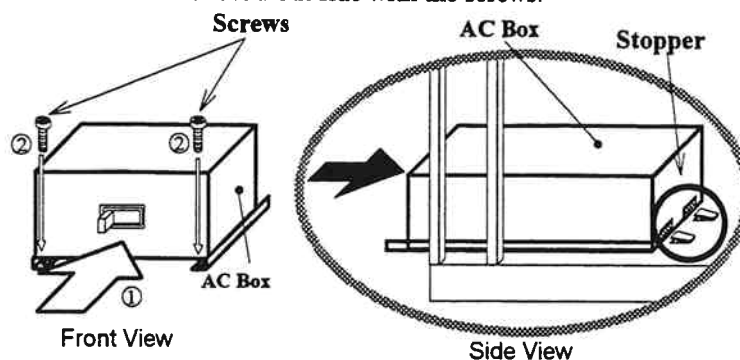


Fig. 21 New AC Box Installation

- c. Connect the AC power cable to the terminal block. Replace the terminal block cover.

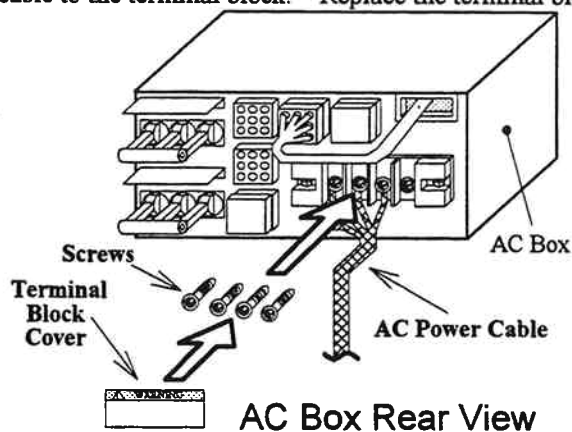


Fig. 22 Connection of AC Power Cable

Table 4 AC Power Cable Conductors and Jumper Cable (P104) Locations

No.	Model Number	Input Voltage	AC Power Cable Conductors	Jumper Cable (P104) Location	Remarks
1	DKU205IU	200-240Vac	4 (R,S,T,FG)	J104-1	J104-2 Dummy Connector
2	DKU205IE	380-415Vac	5 (R,S,T,N,FG)	J104-2	J104-1 Dummy Connector

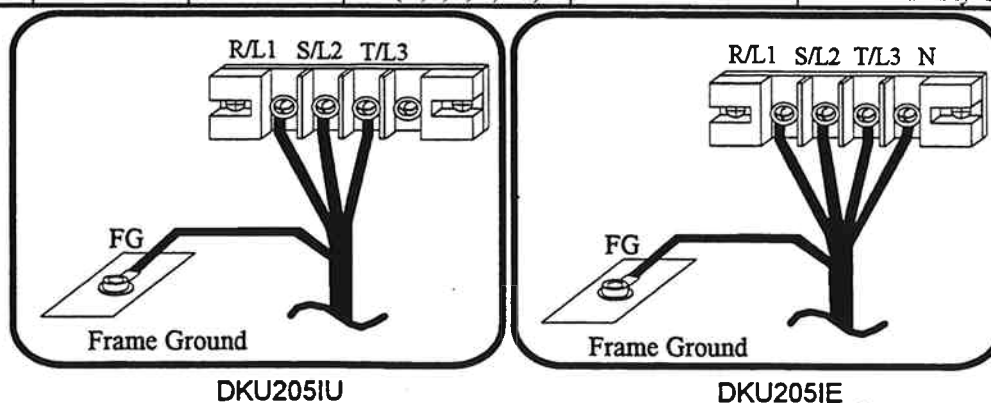


Fig. 23 Connection of AC Power Cable to Terminal Block

d. Connect the cables listed in Table 5.

Table 5 AC Box Cables

No.	Cable No.	Connector No.	Remarks
1	P101-#	J101	
2	P102-#	J102	
3	P104	J104-1	DKU205IU
		J104-2	DKU205IE
4	Dummy Connector	J104-2	DKU205IU
		J104-1	DKU205IE
5	Dummy Connector	J103	

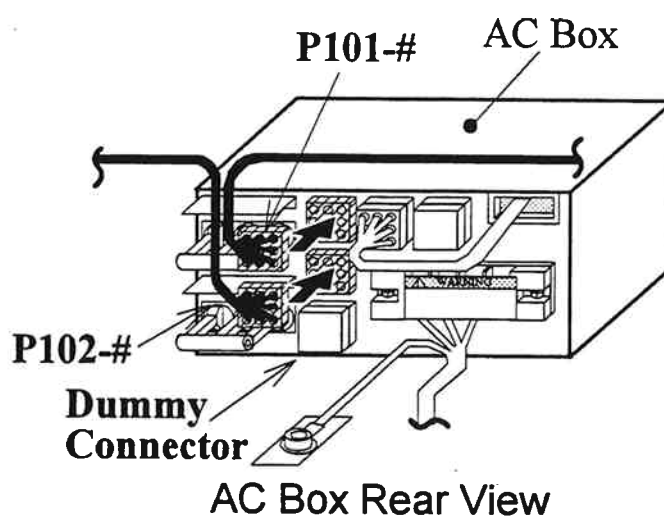


Fig. 24 Cable Connection of AC Box

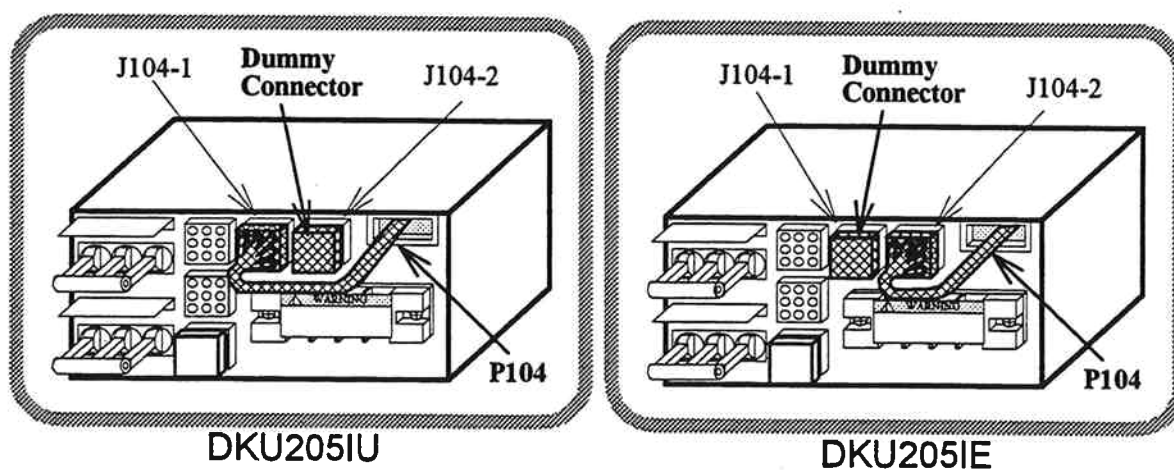


Fig. 25 Setting of Jumper Cable P104

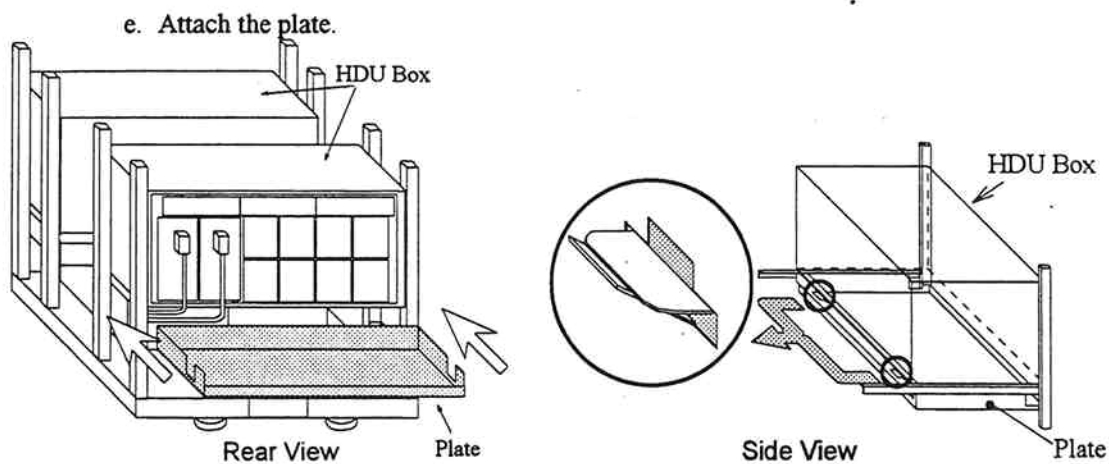


Fig. 26 Attachment of Plate

f. Secure the plate with the screws.

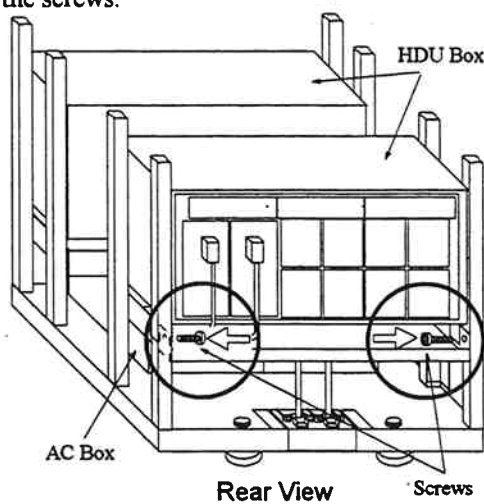


Fig. 27 Attachment the Plate

4. Power On the Replacement Component

- a. Turn on the circuit breakers on the power distribution panel that are connected to the replacement AC Box.
- b. Turn on all the circuit breakers on the replacement AC Box.

5. Go to SVP post-procedure t4 [REP04-410].

[HARDWARE T23]

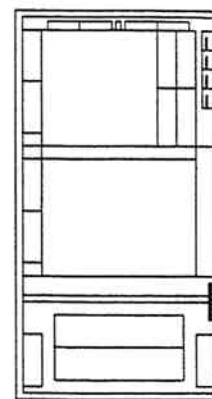
◆ RS CONN

[Related Procedure]

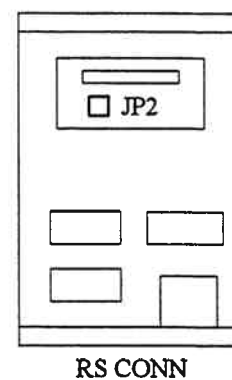
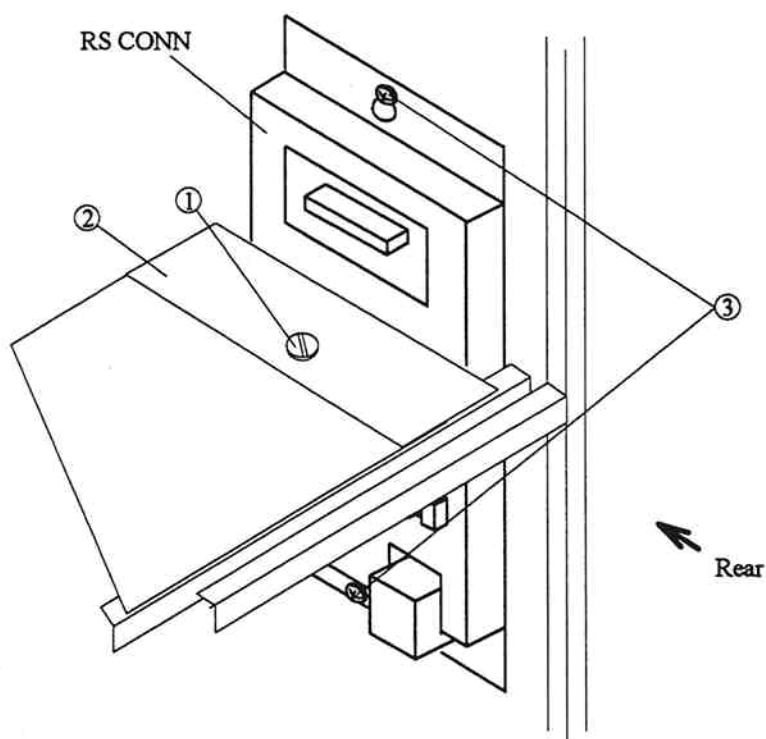
SVP procedure	Title & Sheet No.	Remarks
SVP pre-procedure	Pre-procedure AREP02-10	Refer to REP01-150.
	Pre-procedure T1REP02-390	
SVP post-procedure	Post-procedure t1REP04-210	Refer to REP01-150.

1. The following figure shows the correct way to replace the RS CONN.

- a. Disconnect all cables from RS CONN.
- b. Loosen the screw① and remove the plate②.
- c. Loosen two screws③ and remove RS CONN.
- d. Set the jumper socket(JP2) of the spare PCB to the same positions as those of failed PCB.
- e. Attach the RS CONN and fasten two screws③.
- e. Attach the plate② and connect the cables.



Rear View of Disk Controller



2. Go to SVP post procedure t1 [REP04-210].

[HARDWARE T24]

◆ SVP and LAN Card

[Related Procedure]

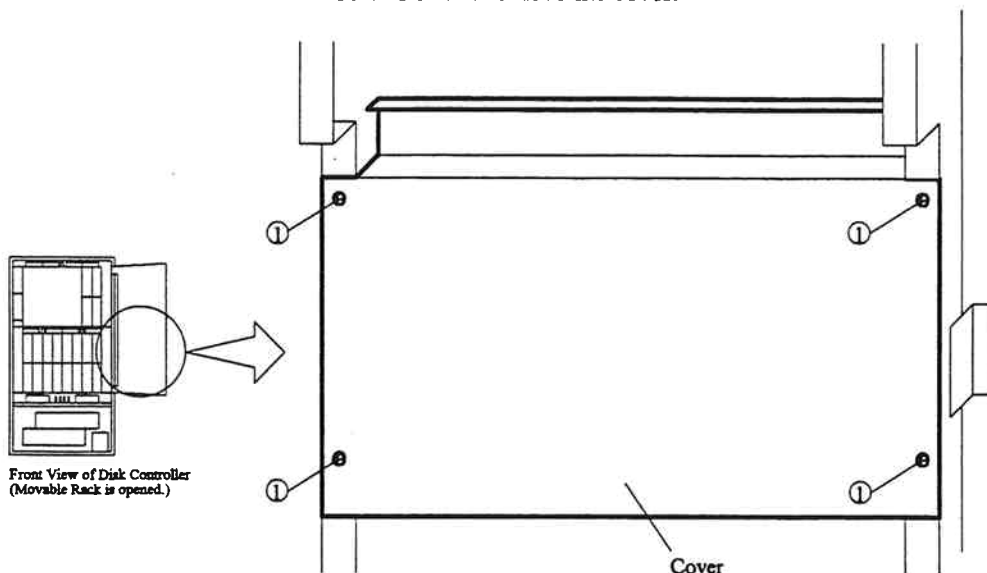
SVP procedure	Title & Sheet No.	Remarks
SVP pre-procedure	Pre-procedure AREP02-10	Refer to REP01-150.
	Pre-procedure T1REP02-390	
SVP post-procedure	Post-procedure t1REP04-210	Refer to REP01-150.

1. Turn off the SVP.

- a. Press the [Ctrl]+[Alt] keys+the power button.

2. Remove the cover

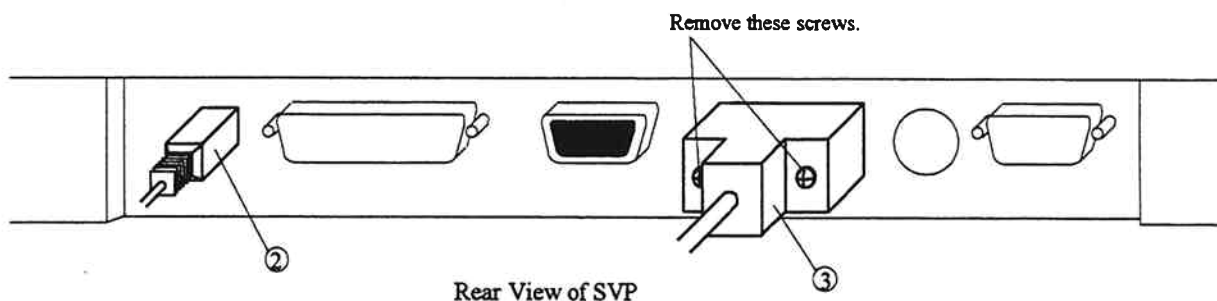
- a. Loosen the four screws① and remove the cover.



Movable Rack(rear side)

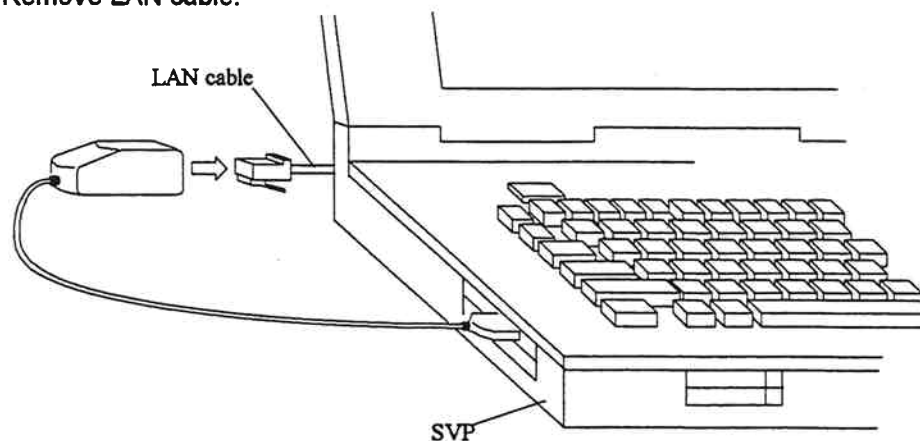
3. Disconnect the cables

- a. Disconnect the cables② and ③ from the SVP.

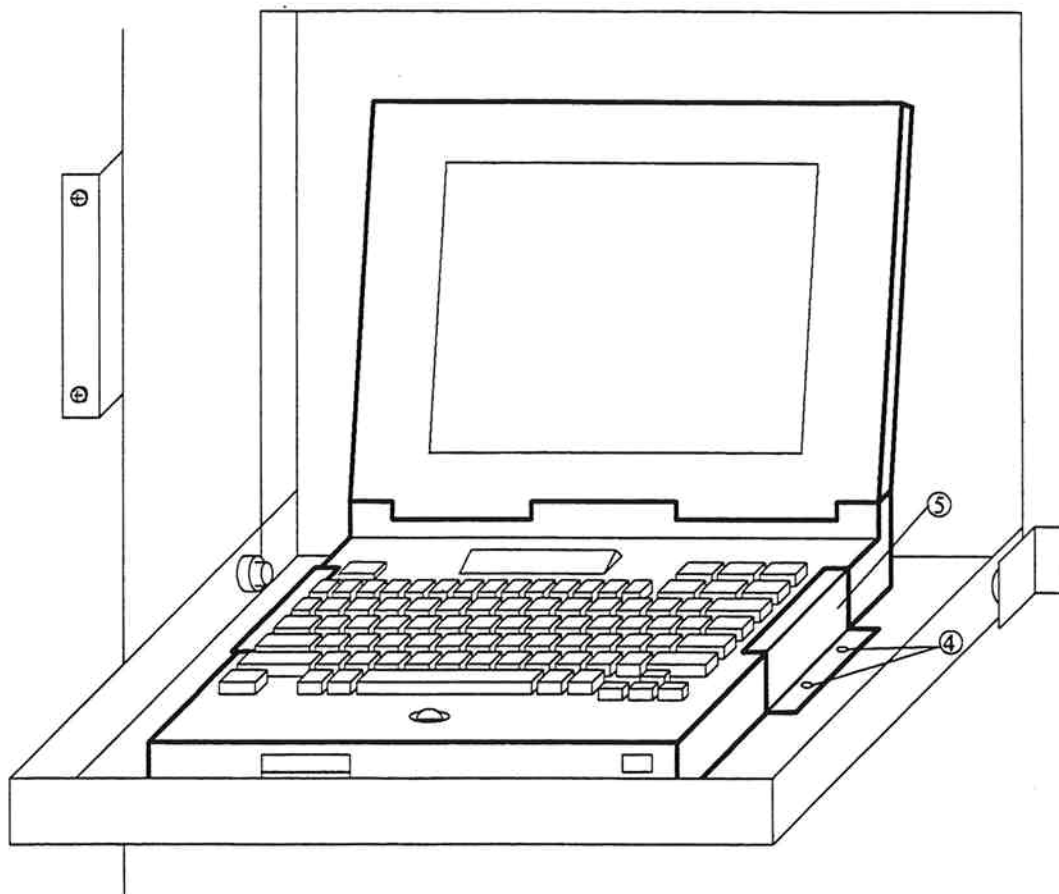


Rear View of SVP

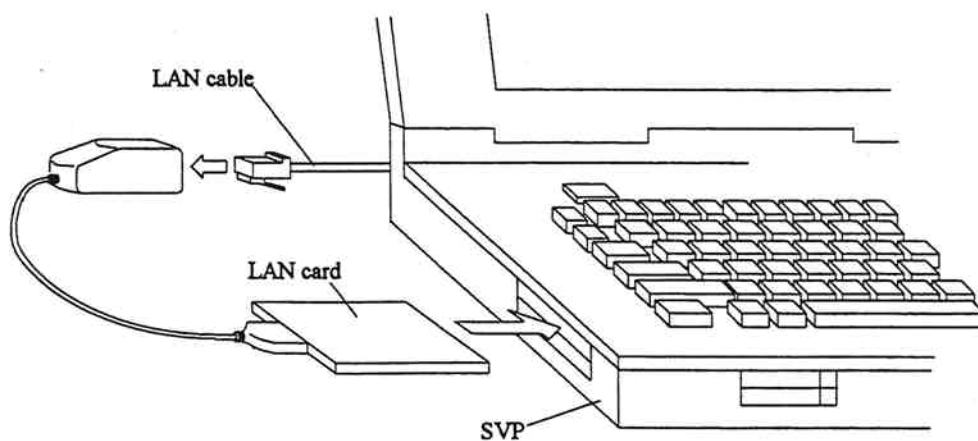
4. Remove LAN cable.



5. The following figure shows the correct way to replace the SVP.
- Loosen the two screws④ with a torque driver, and slide the plate⑤ which fixes the side of SVP.
 - Replace the SVP and attach the plate⑤.
 - Connect the cables removed in step 3.



6. Insert the spare LAN card and connect the LAN cable.



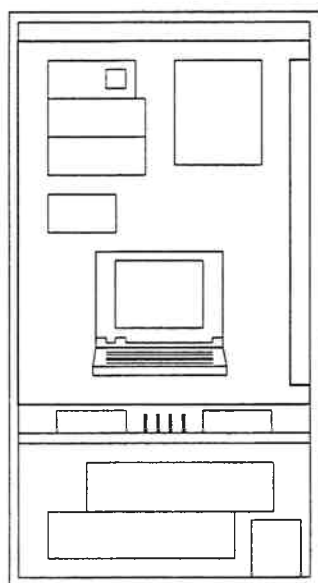
7. Go to SVP post procedure t1 [REP04-210].

[HARDWARE T25]

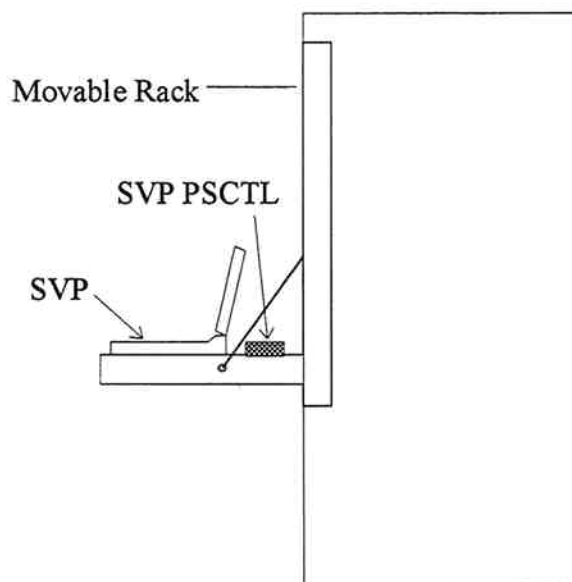
◆ SVP PSCTL

[Related Procedure]

SVP procedure	Title & Sheet No.	Remarks
SVP pre-procedure	Pre-procedure AREP02-10 Pre-procedure T1REP02-390	Refer to REP01-150.



Front View of Disk Controller
(Movable Rack is closed)

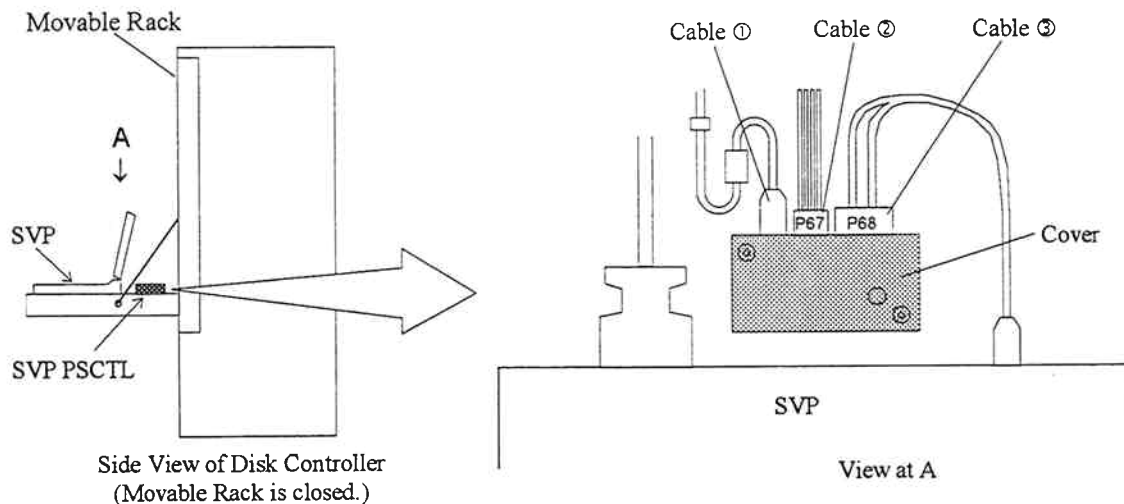


Side View of Disk Controller
(Movable Rack is closed)

1. Turn off the SVP.
 - a. Press the [Ctrl]+[Alt] keys+the power button.

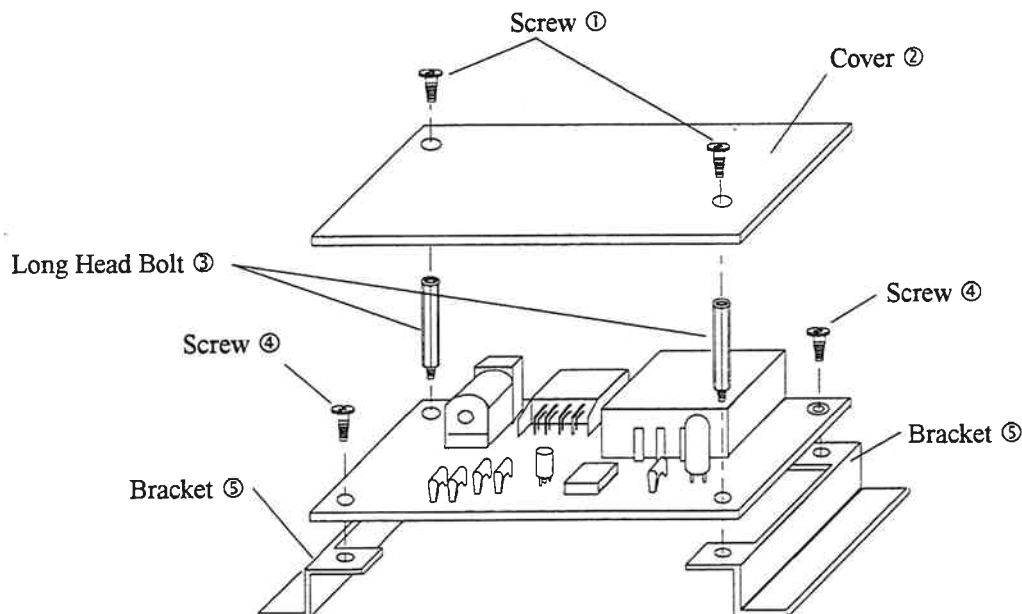
2. Disconnect the cables

- a. Disconnect the cables ① through ③ from the SVP PSCTL.



3. The following figure shows the correct way to replace the SVP PSCTL.

- a. Remove the two screws ① and remove the cover ②.
 - b. Remove the two Long Head Bolts ③.
 - c. Remove the two screws ④ and remove the failed PCB from the bracket ⑤.
 - d. Attach the spare PCB to the bracket ⑤ and fasten the two screws ④.
 - e. Fasten the two Long Head Bolts ③ and attach the cover ② removed in step a. and fasten the two screws ①.



4. Connect the cable.

- a. Connect the cables removed in step 2.

[HARDWARE M]

◆ CACHE Back Board(LP471-A)

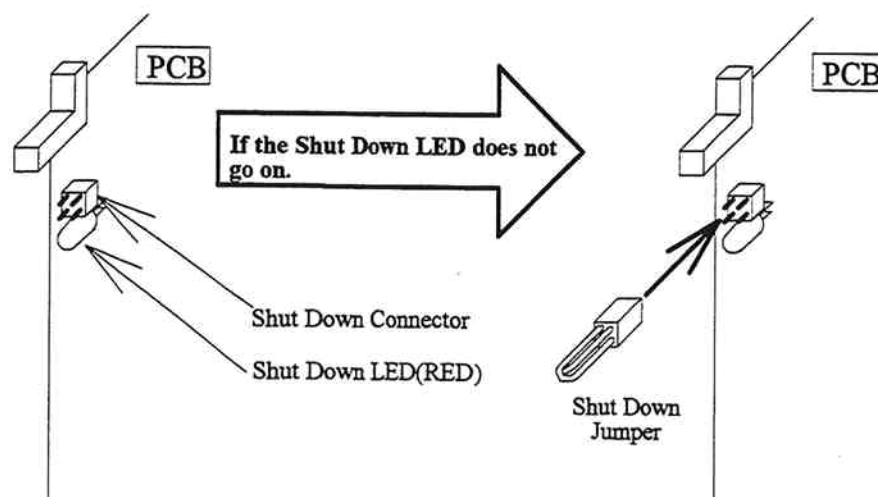
- Cache Box-1
- Cache Box-2

[Related Procedure]

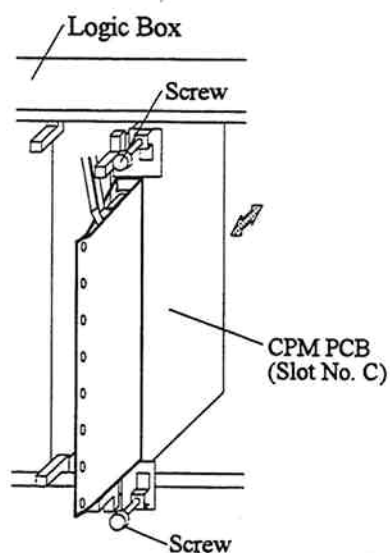
SVP procedure	Title & Sheet No.	Remarks
SVP pre-procedure	Pre-procedure AREP02-10 Pre-procedure FREP02-210	Refer to REP01-140.
SVP post-procedure	Post-procedure eREP04-120	Refer to REP01-140.

Replacement of Cache Back Board (Cache Box-1)

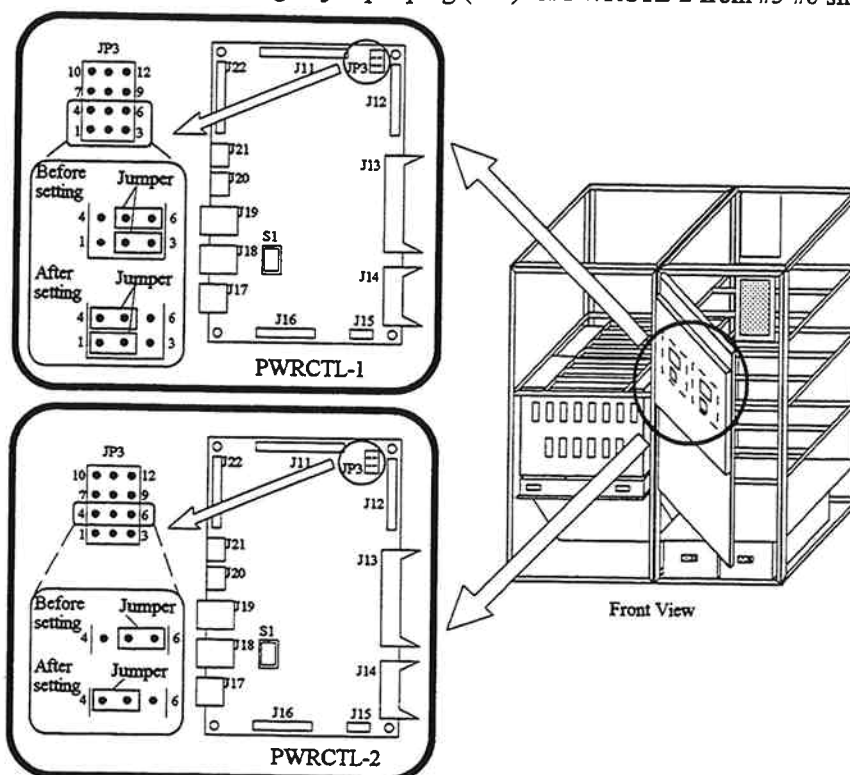
1. Check that the Shut Down LEDs of the CPM PCB (Logic Box Slot No. C) is lit. If it is not lit, insert the Shut Down Jumper into the Shut Down Connector. (only hot replace)



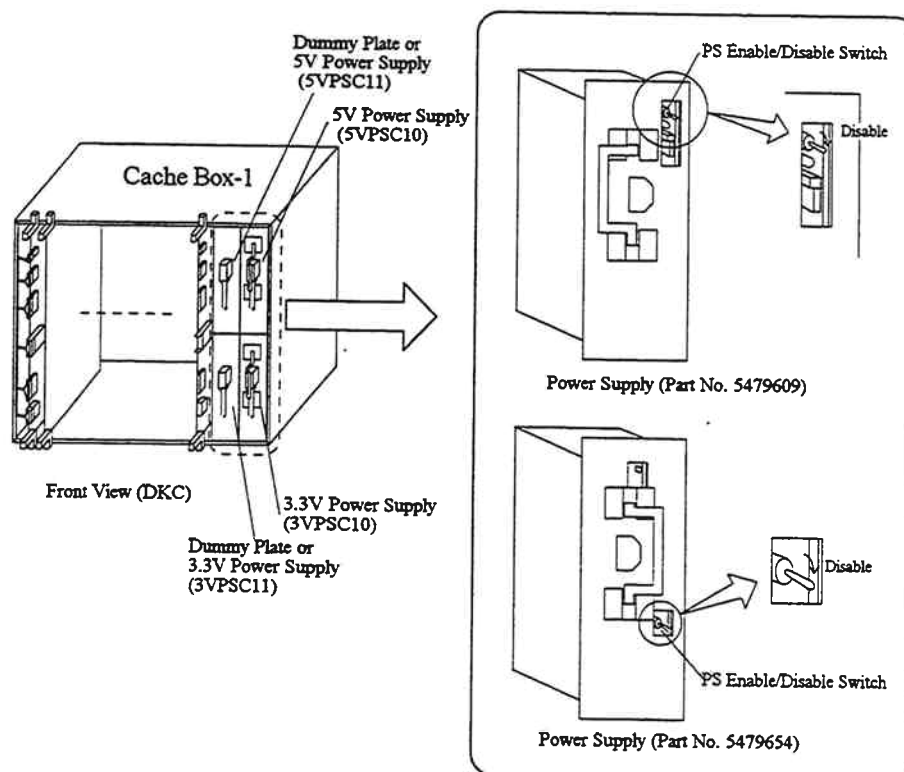
2. Remove and insert the CPM PCB of the Slot No. C.
 - a. Remove the two screws and remove the CPM PCB (Logic Box Slot No. C) main edge from the back board.
 - b. Remove the Shut Down Jumper if it is mounted.
 - c. Insert the CPM PCB main edge completely into the back board and fasten the two screws.



3. Change the jumper settings for PWRCTL-1 and PWRCTL-2.
- a. Change the settings of jumper plug (JP3) for PWRCTL-1 from #2-#3 short to #1-#2 short and from #5-#6 short to #4-#5 short. Also, change the setting of jumper plug (JP3) for PWRCTL-2 from #5-#6 short to #4-#5 short.

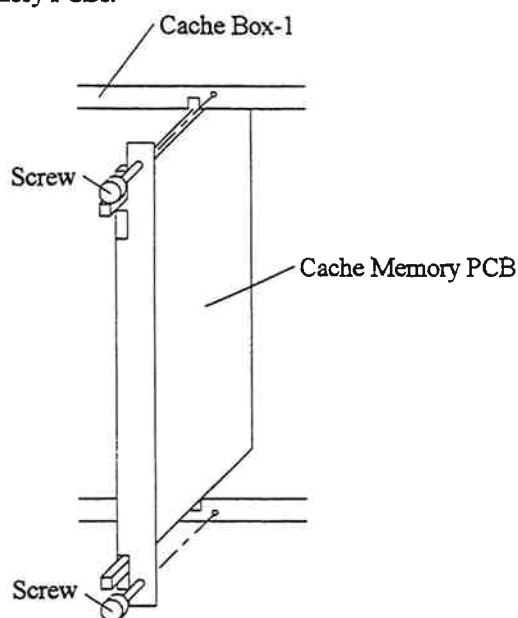


4. Set the PS Enable/Disable Switch on the 5V and 3.3V Power Supplies to Disable.



5. Remove the Cache Memory PCBs.

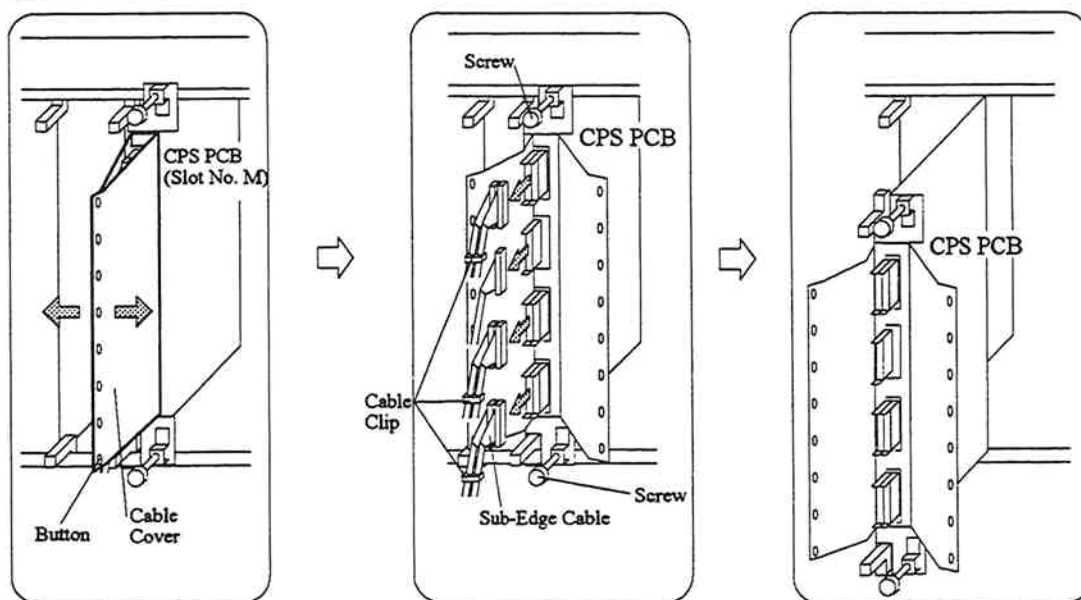
- a. Remove the screws of the Cache Memory PCBs installed in any of the Slot No. D through L.
- b. Remove the Cache Memory PCBs.



6. Remove the CPS PCB of the Slot No. M from the Cache Box-1.

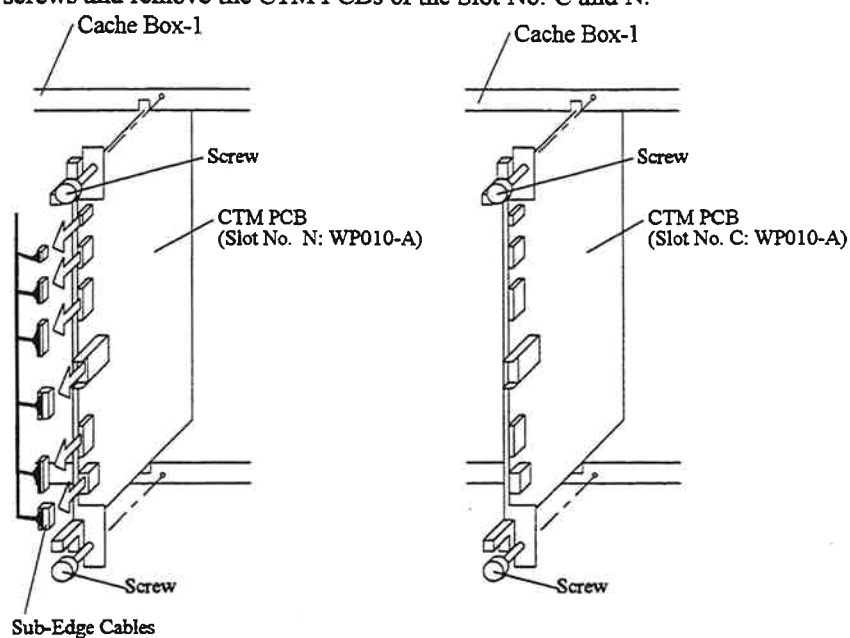
- a. Unfasten the cable cover buttons to open the cable cover.
- b. Remove the cable clips and remove the sub-edge cables from the CPS PCB.
- c. Remove two screws and remove the CPS PCB from the Cache Box-1.

Cache Box-1



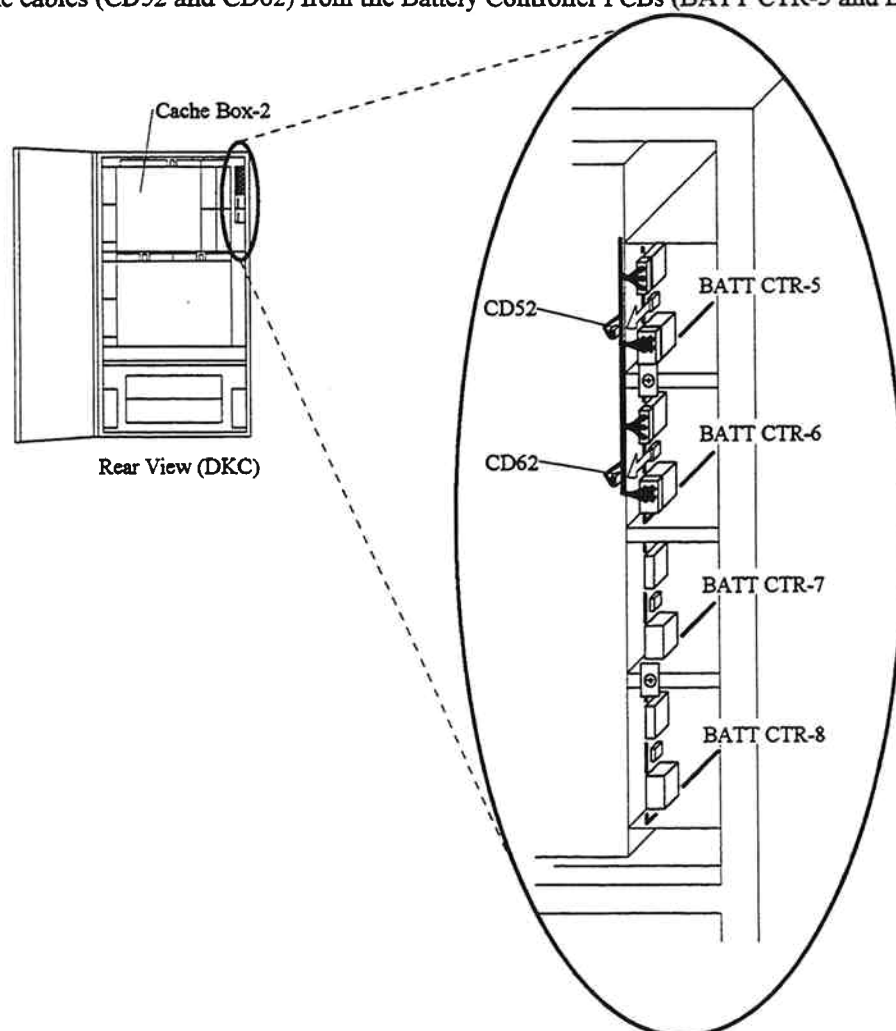
7. Remove the CTM PCBs.

- a. Remove the sub-edge cables from the CTM PCB of the Slot No. N.
- b. Remove the screws and remove the CTM PCBs of the Slot No. C and N.

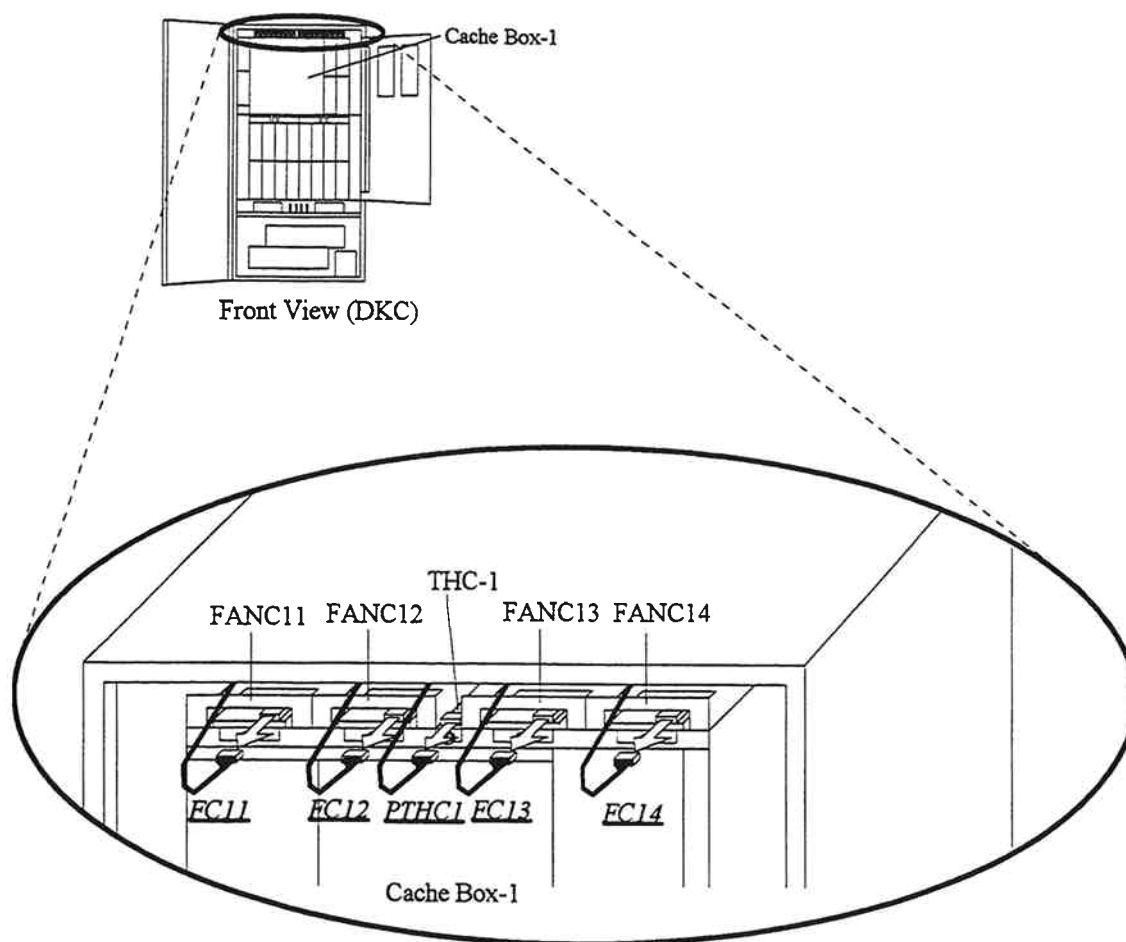


8. Remove the cables from the corresponding parts.

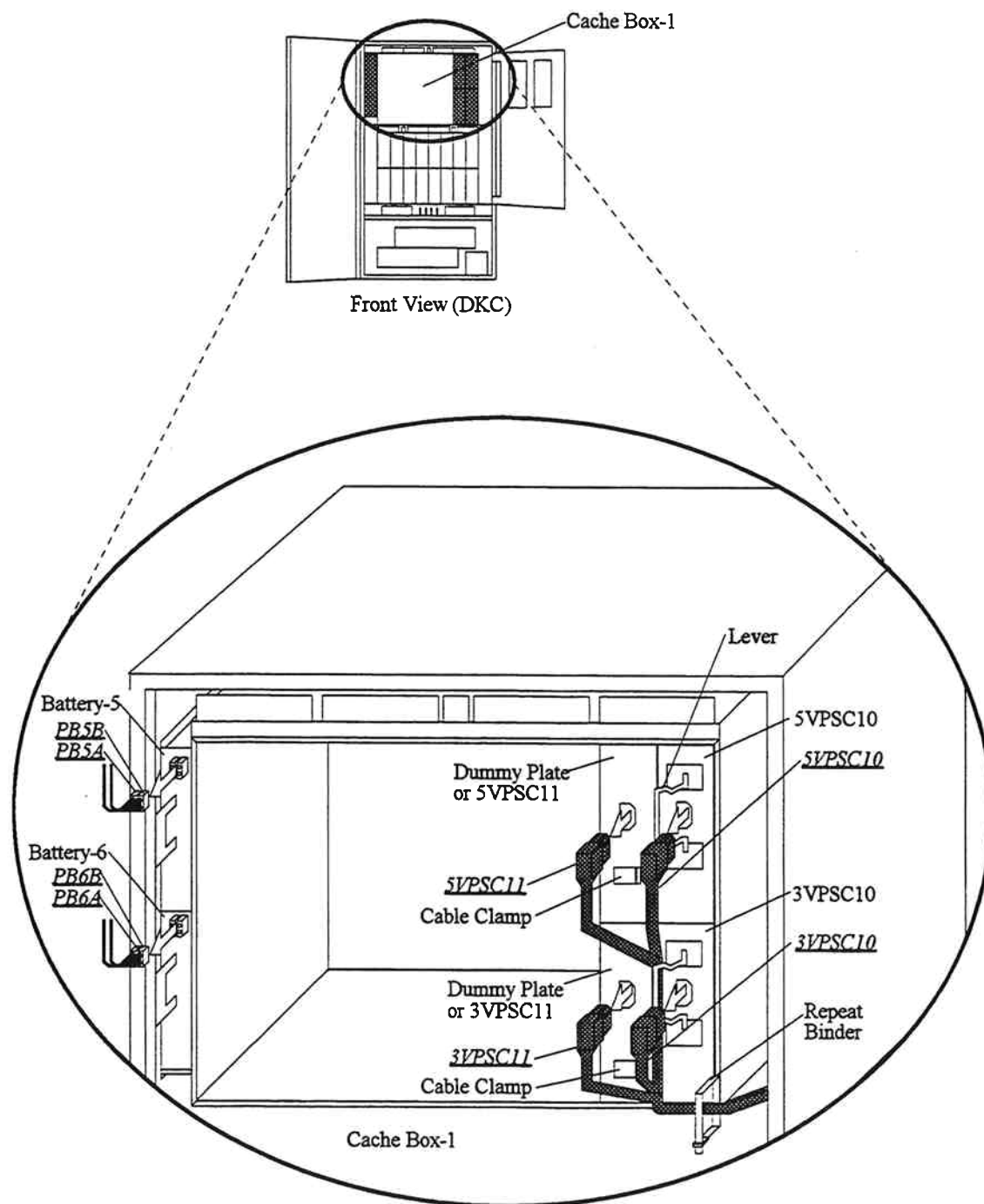
- a. Remove the cables (CD52 and CD62) from the Battery Controller PCBs (BATT CTR-5 and BATT CTR-6).



- b. Remove the cables (FC11, FC12, FC13 and FC14) from the FAN Assemblies (FANC11, FANC12, FANC13 and FANC14).
- c. Remove the cable (PTHC1) from the Thermostat Assembly (THC-1).



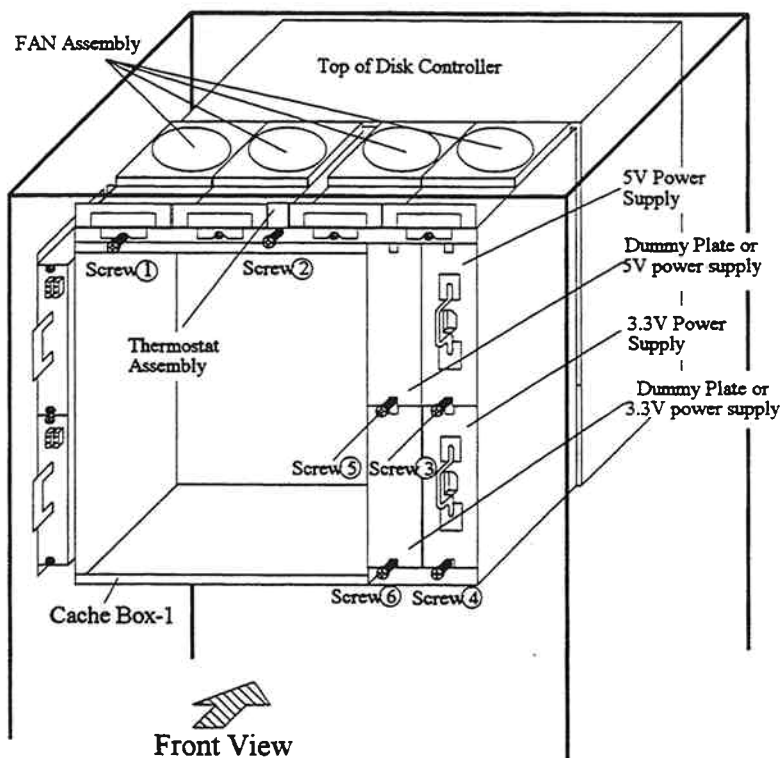
- d. Remove the power supply lever (5VPSC10 and 3VPSC10) and remove the inlet cables (5VPSC10 and 3VPSC10).
- e. If the Cache redundant power supply (DKC-F210I-72) is not installed, remove the cable clamps of the dummy plates and remove the inlet cables (5VPSC11 and 3VPSC11).
If the Cache redundant power supply (DKC-F210I-72) is installed, remove the power supply lever (5VPSC11 and 3VPSC11) and remove the inlet cables (5VPSC11 and 3VPSC11).
- f. Open the repeat binder to remove the inlet cables.
- g. Remove the cables (PB5A, PB5B, PB6A and PB6B) from the Battery Assemblies (Battery-5 and Battery-6).



9. Remove the parts from the Cache Box-1.

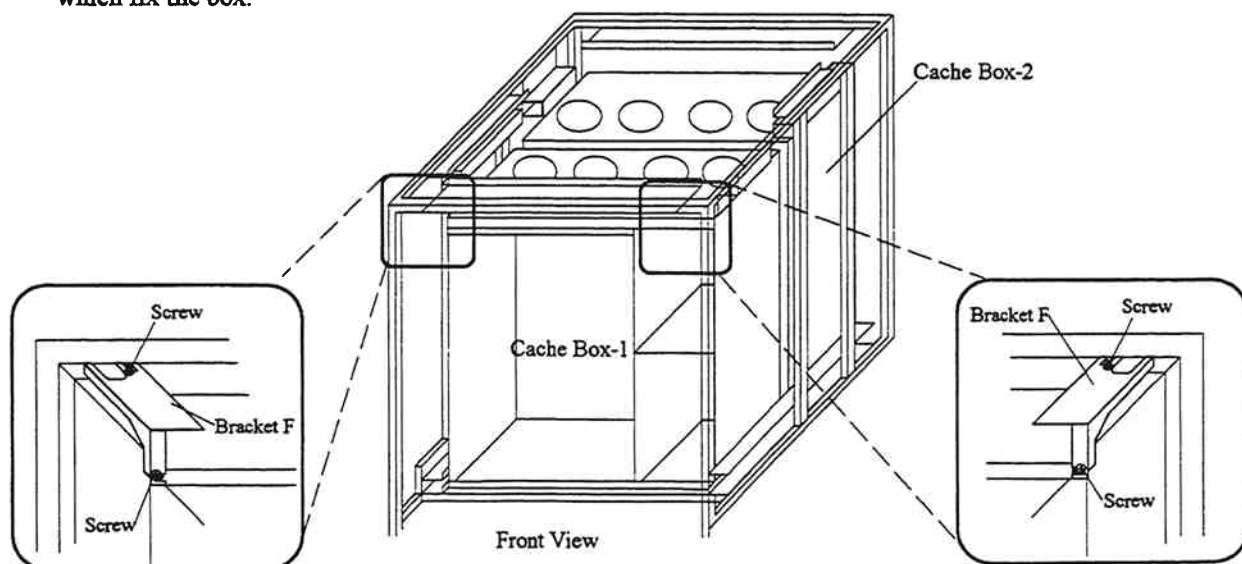
- a. Loosen screw ① and remove the Fan Assembly (4 assemblies per box).
- b. Loosen screw ② and remove the Thermostat Assembly (1 assembly per box).
- c. Loosen screws ③ and ④ and remove the 5V and 3.3V Power Supplies (1 each per box).
- d. If the Cache redundant power supply (DKC-F210I-72) is not installed, loosen screws ⑤ and ⑥ and remove the dummy plates.

If the Cache redundant power supply (DKC-F210I-72) is installed, loosen screws ⑤ and ⑥ and remove the 5V and 3.3V power supplies.

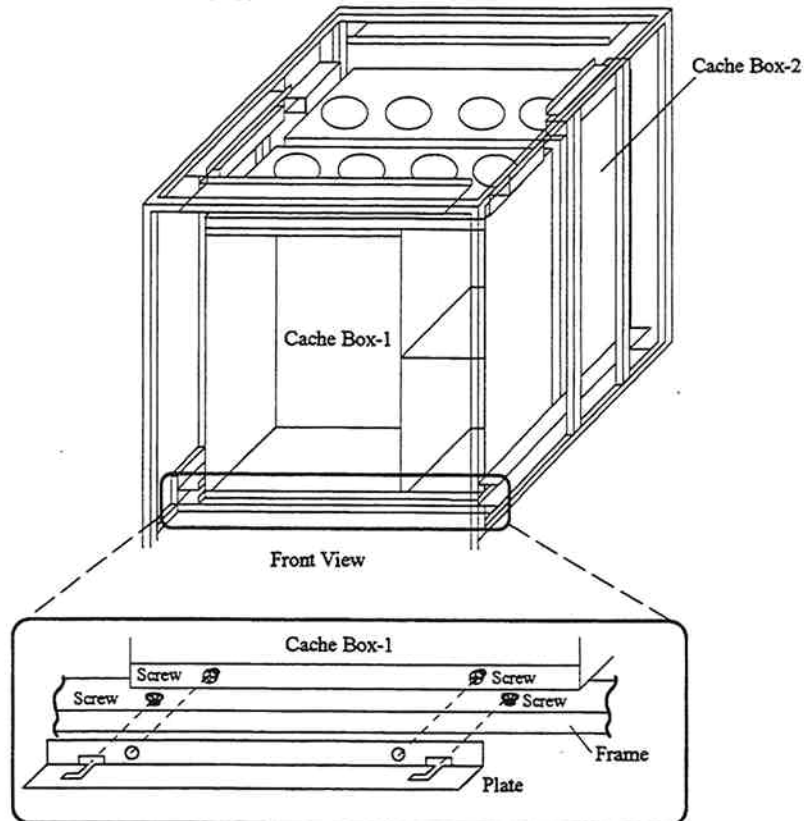


10. Remove the Cache Box-1.

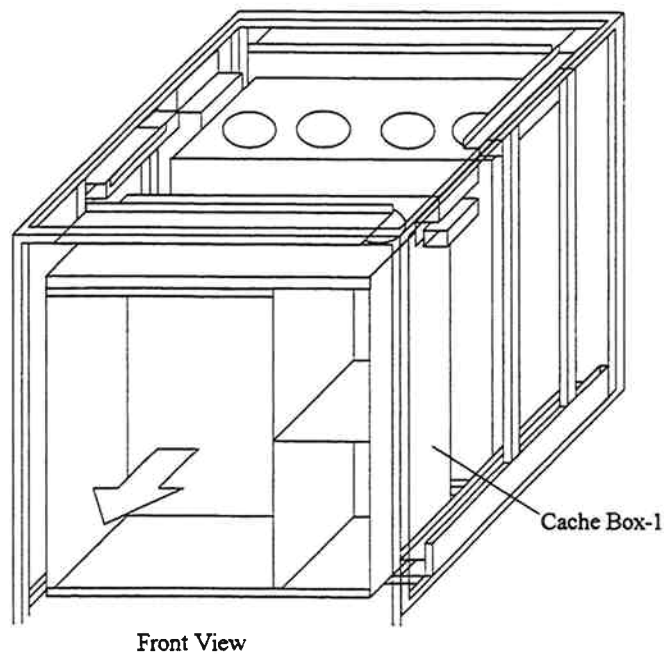
- a. Loosen the four screws at the top of Cache Box-1 (in the front side) and on the frame. Remove the two brackets which fix the box.



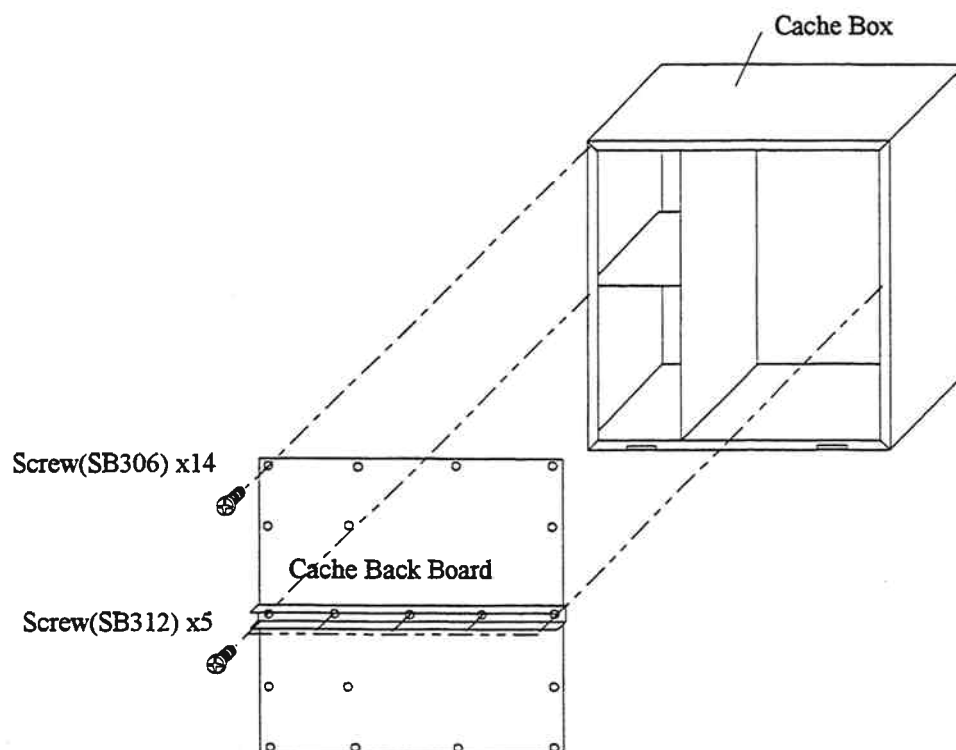
- b. Loosen the four screws at the bottom of Cache Box-1 (in the front side) and on the frame. Remove the plate which fixes the box. Fasten the four screws.



- c. Remove the Cache Box-1 from the front side.

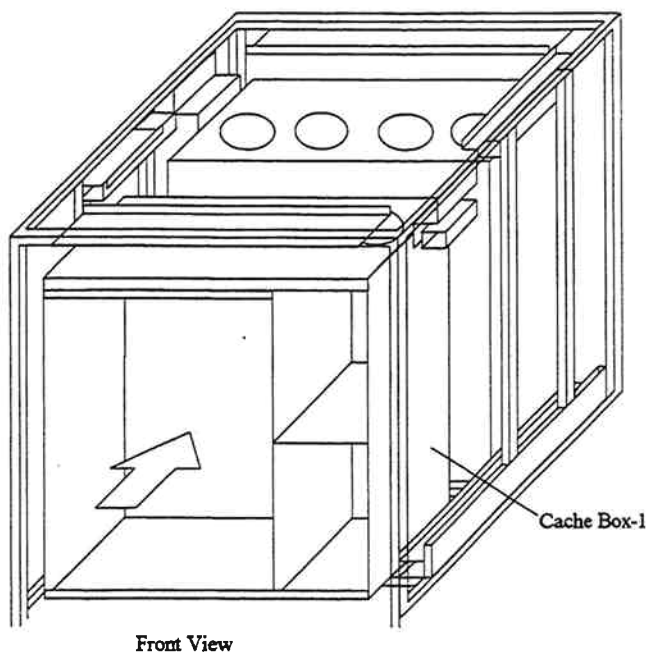


11. Remove fourteen screws(SB306) and five screws(SB312), and then replace the Cache back board.

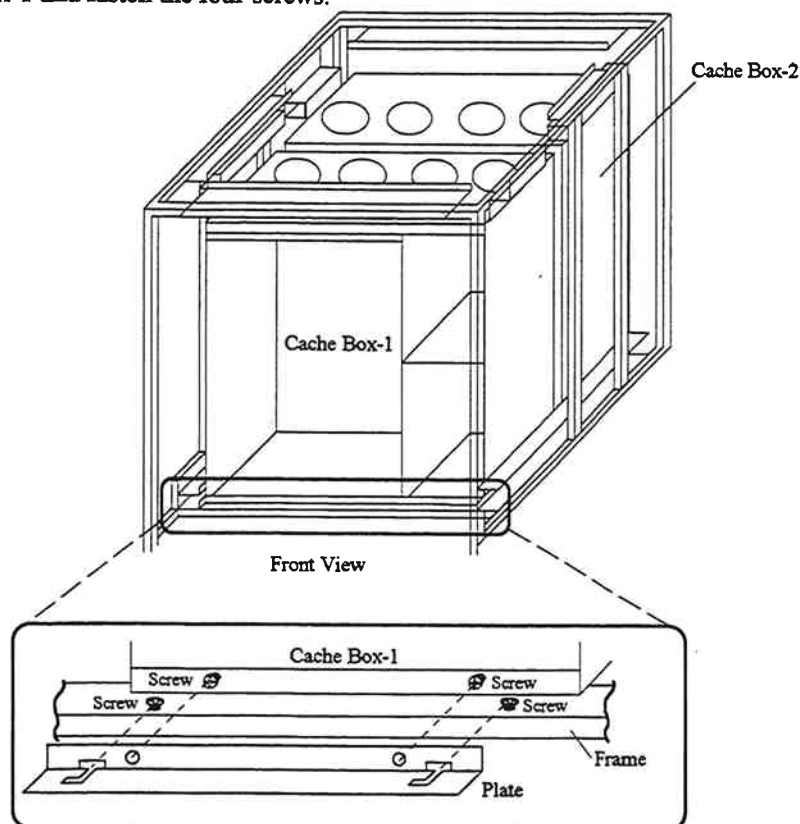


12. Insert the Cache Box-1.

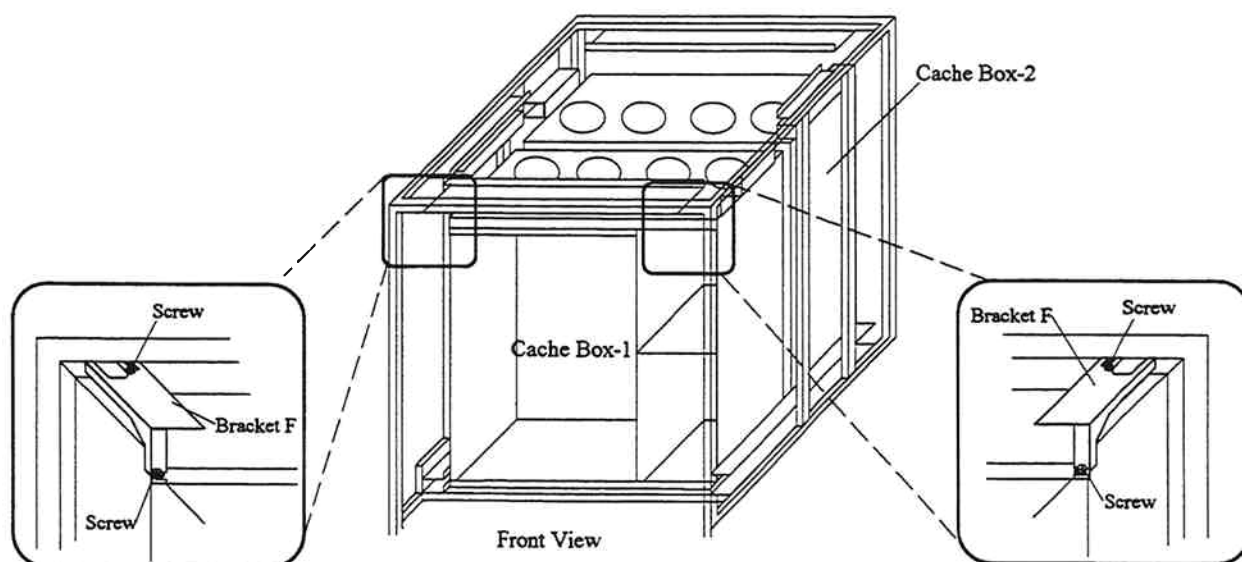
a. Insert Cache Box-1 from the front side.



- b. Loosen the four screws at the bottom of Cache Box-1 (in the front side) and on the frame. Attach the plate to fix the Cache Box-1 and fasten the four screws.



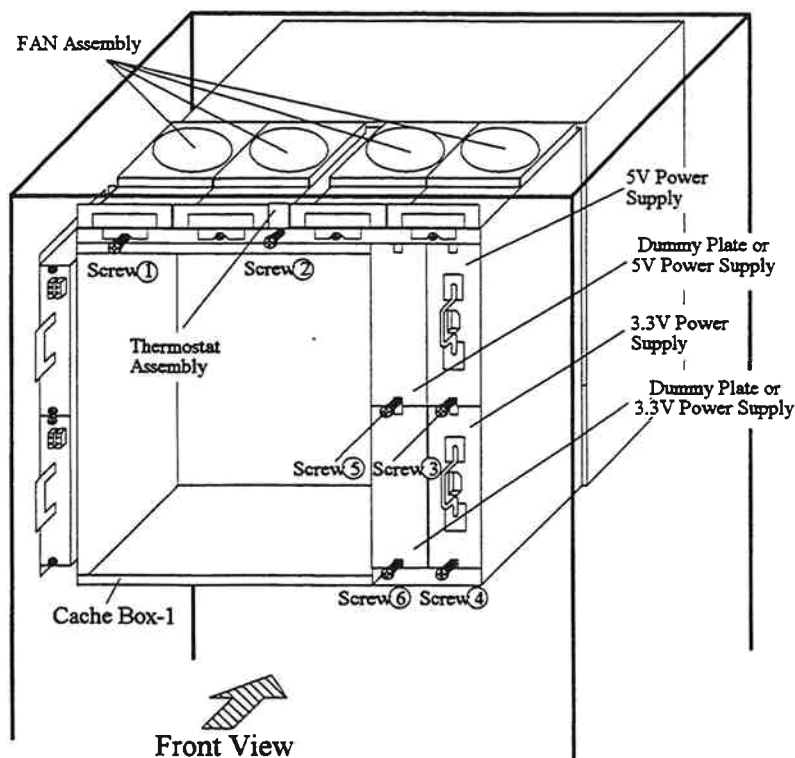
- c. Loosen the four screws at the top of the Cache Box-1 (in the front side) and on the frame. Attach the two brackets to fix the Cache Box and fasten the four screws.



13. Install the Cache 1 parts on the Cache Box-1.

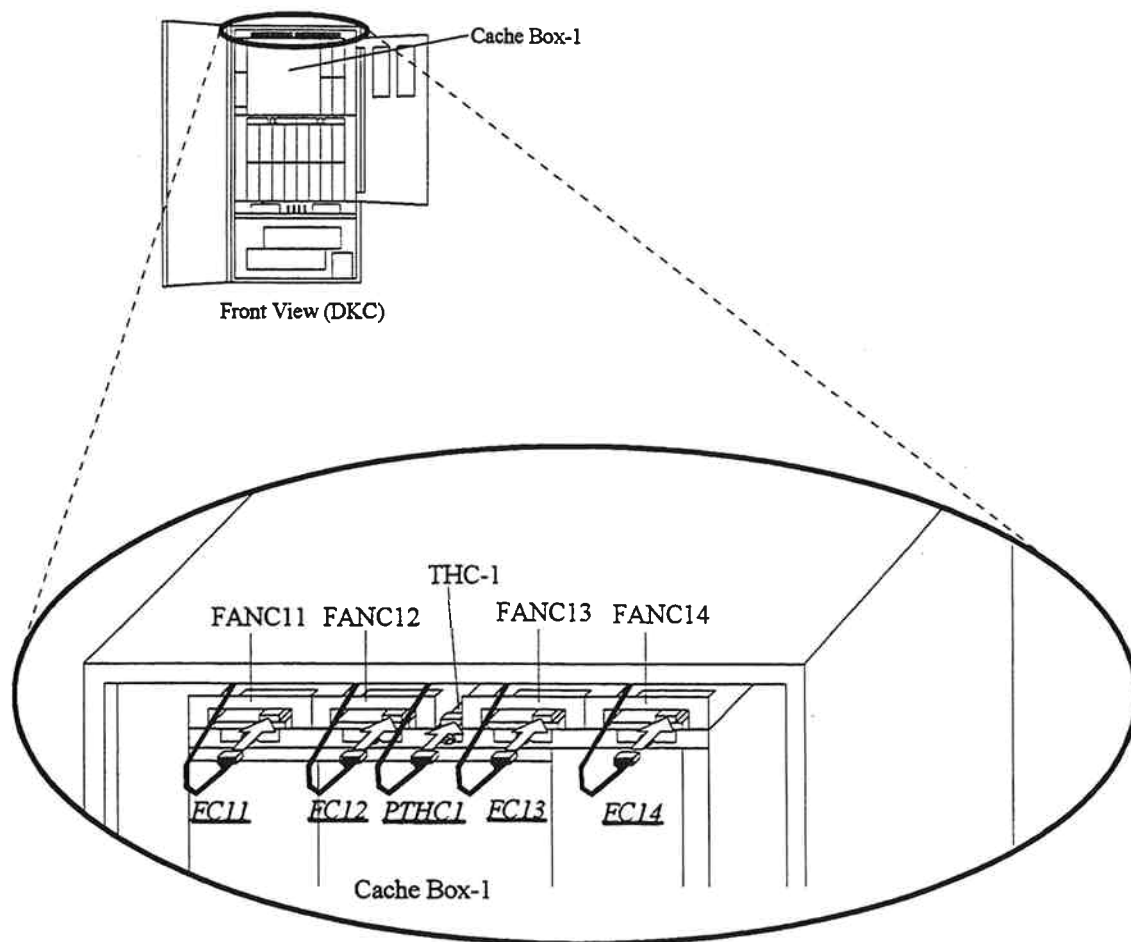
- a. Install and secure the Fan Assembly with screw ① (4 assemblies per box).
- b. Install and secure the Thermostat Assembly with screw ② (1 assembly per box).
- c. Install and secure Power Supplies with screws ③ and ④ (1 each per box).
- d. If the Cache redundant power supply (DKC-F210I-72) is not installed, attach the dummy plates and fasten screws ⑤ and ⑥.

If the Cache redundant power supply (DKC-F210I-72) is installed, attach the 5V and 3.3V Power Supplies and fasten screws ⑤ and ⑥.

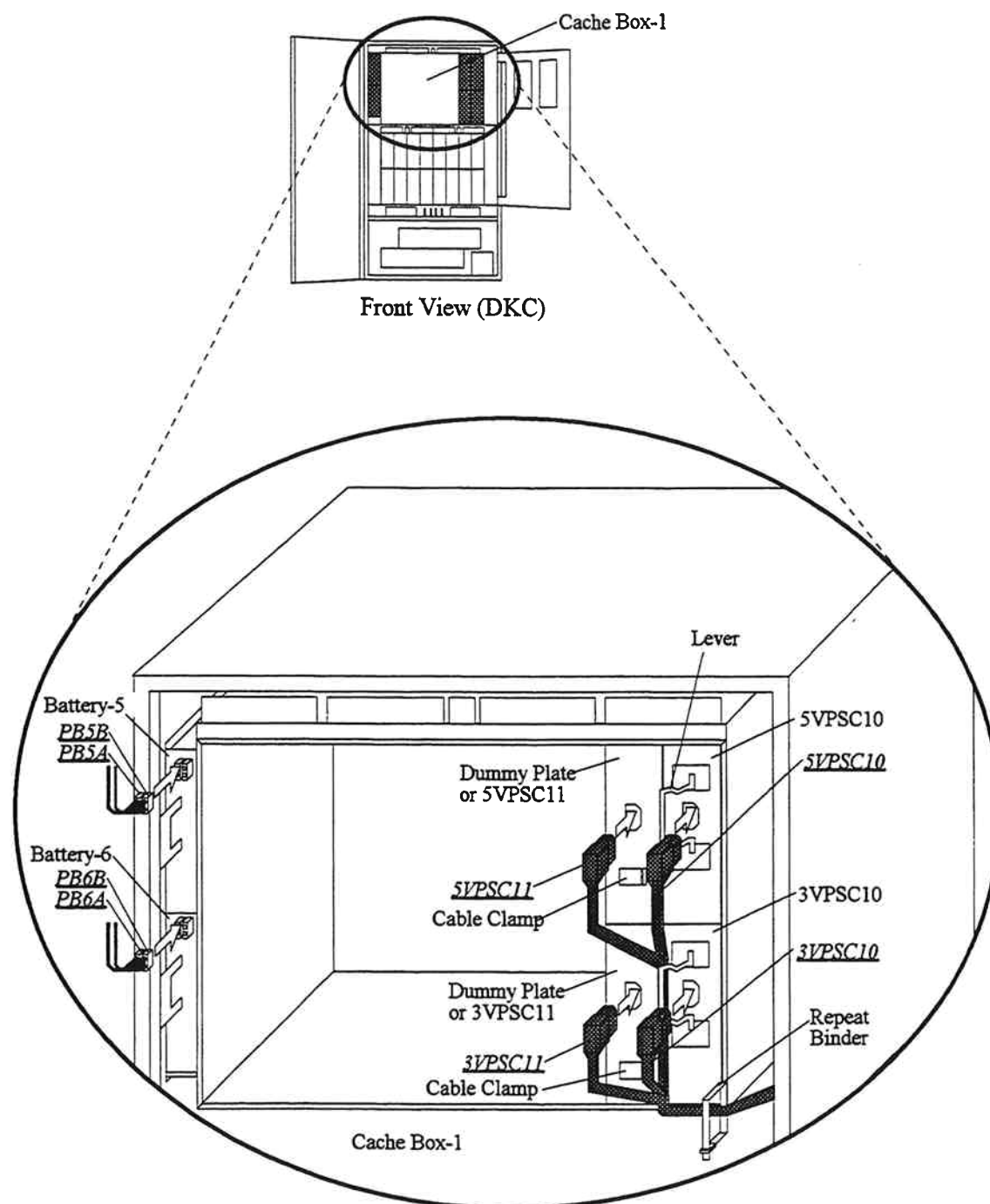


14. Connect the cables into the corresponding parts.

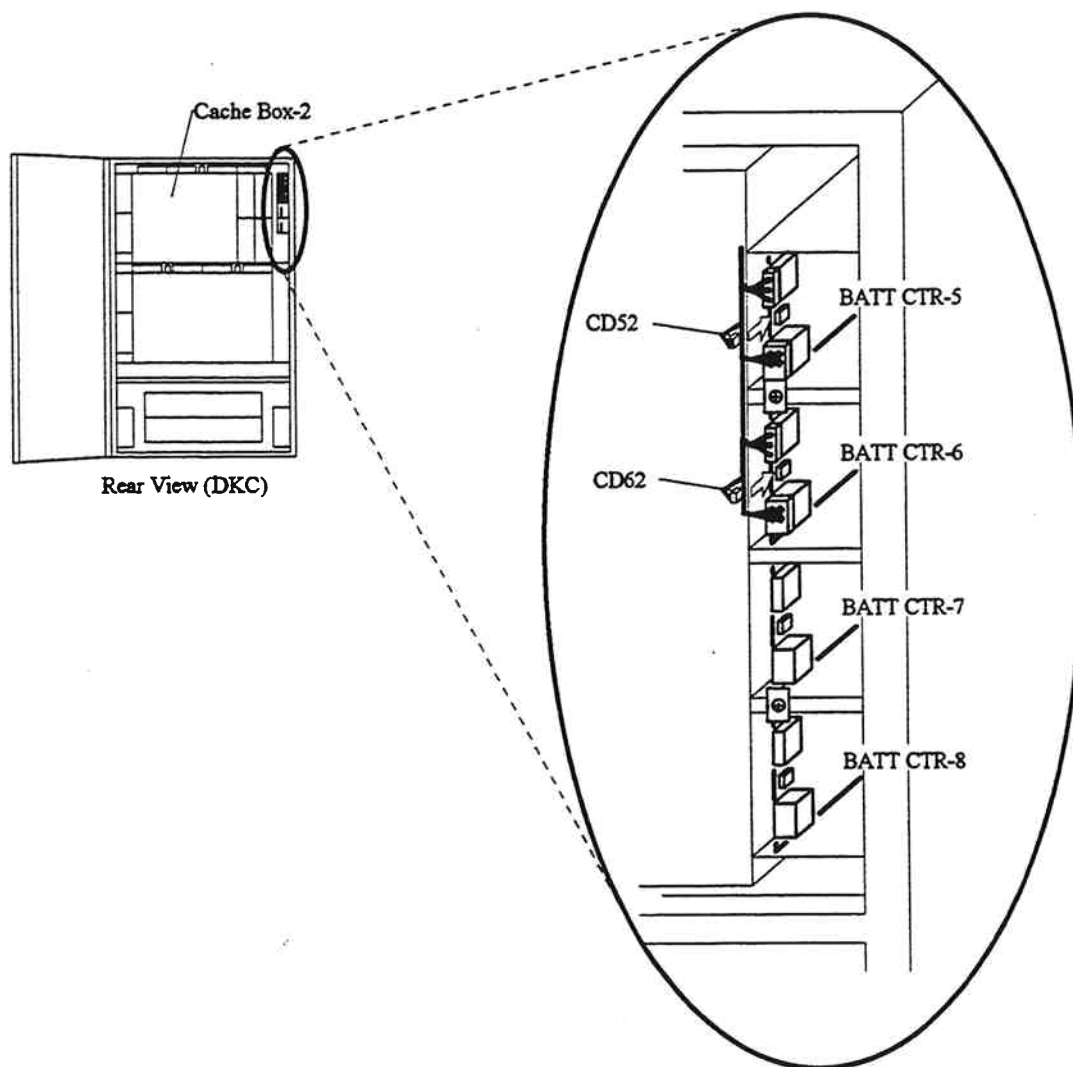
- a. Connect the cables (FC11, FC12, FC13, and FC14) into the FAN Assemblies (FANC11, FANC12, FANC13, and FANC14), respectively.
- b. Connect the cable (PTHC1) into the Thermostat Assembly (THC-1).



- c. Connect the inlet cables (5VPSC10, 3VPSC10) into the power supplies (5VPSC10 and 3VPSC10), respectively and lock them with the lever.
- d. If the Cache redundant power supply (DKC-F210I-72) is not installed, attach the inlet cables (5VPSC11 and 3VPSC11) to the dummy plates and secure them with the cable clamps.
If the Cache redundant power supply (DKC-F210I-72) is installed, attach the inlet cables (5VPSC11 and 3VPSC11) to the power supplies (5VPSC11 and 3VPSC11) and secure them with the lever.
- e. Bind the inlet cables with the repeat binder.
- f. Connect the cables (PB5A, PB5B, PB6A and PB6B) into the Battery Assemblies (Battery-5 and Battery-6).

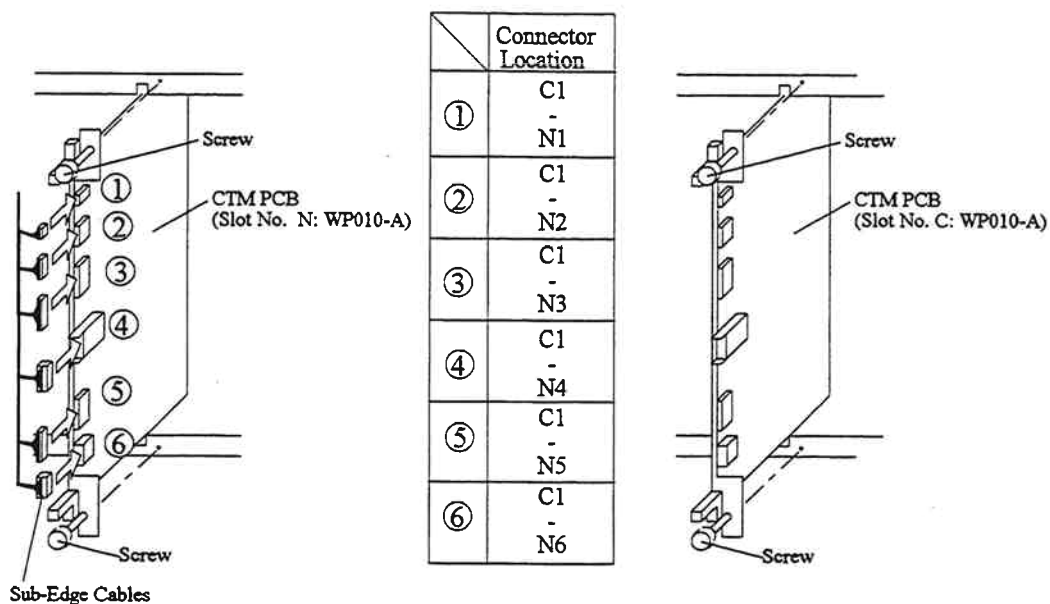


g. Connect the cables (CD52 and CD62) into the Battery Controller PCBs (BATT CTR-5 and BATT CTR-6).



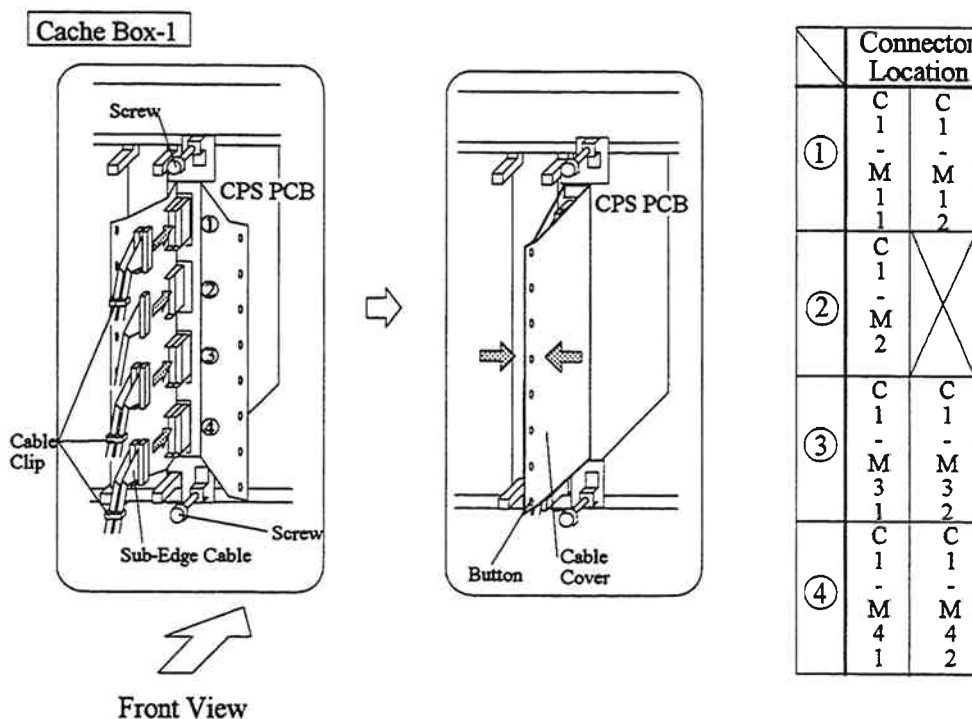
15. Insert the CTM PCBs.

- Insert the CTM PCBs of the Slot No. N and C and fasten the screws.
- Connect the sub-edge cables into the CTM PCB of the Slot No. N.



16. Insert the CPS PCB.

- Insert the CPS PCB into the Cache Box-1 and fasten the two screws.
- Connect the sub-edge cables to the PCB and fix them with the cable clips.
- Fasten the cable cover buttons to close the cable cover.

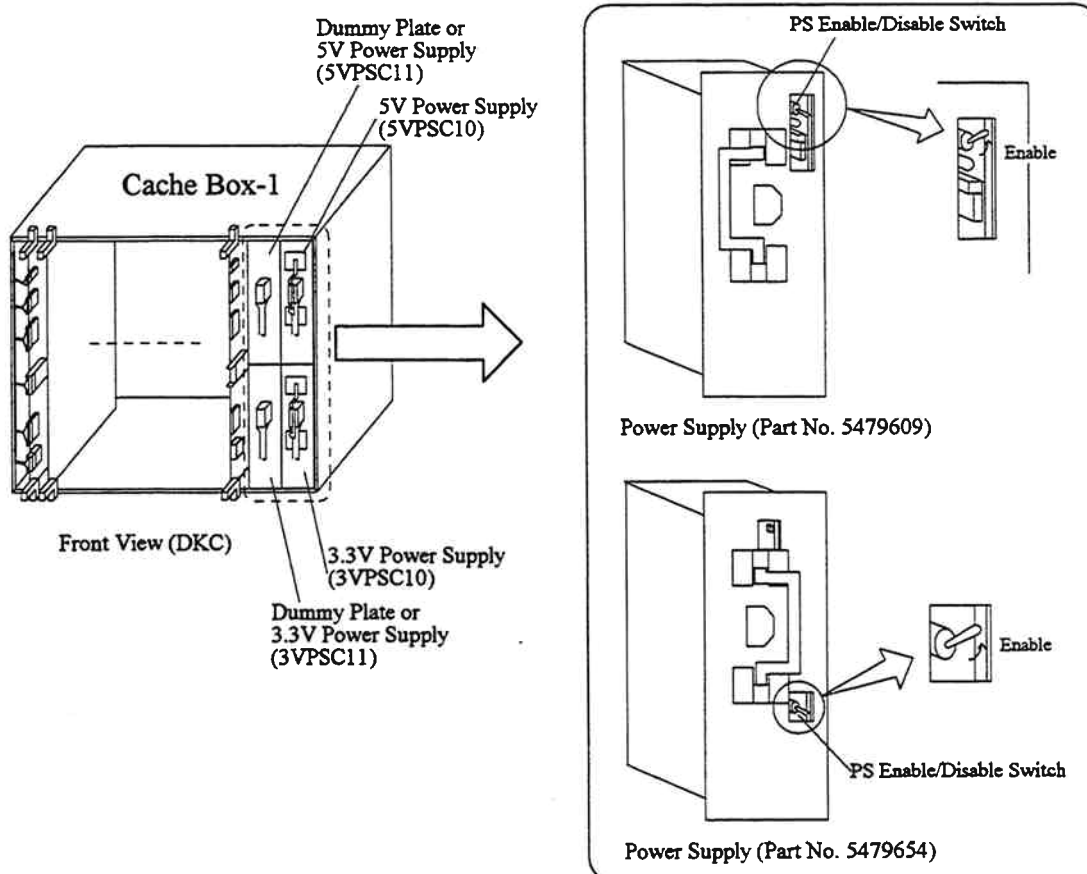


17. Insert the removed Cache Memory PCBs into the Cable Box-1 and fasten the screws.

Cache Box-1 PCB LOCATION

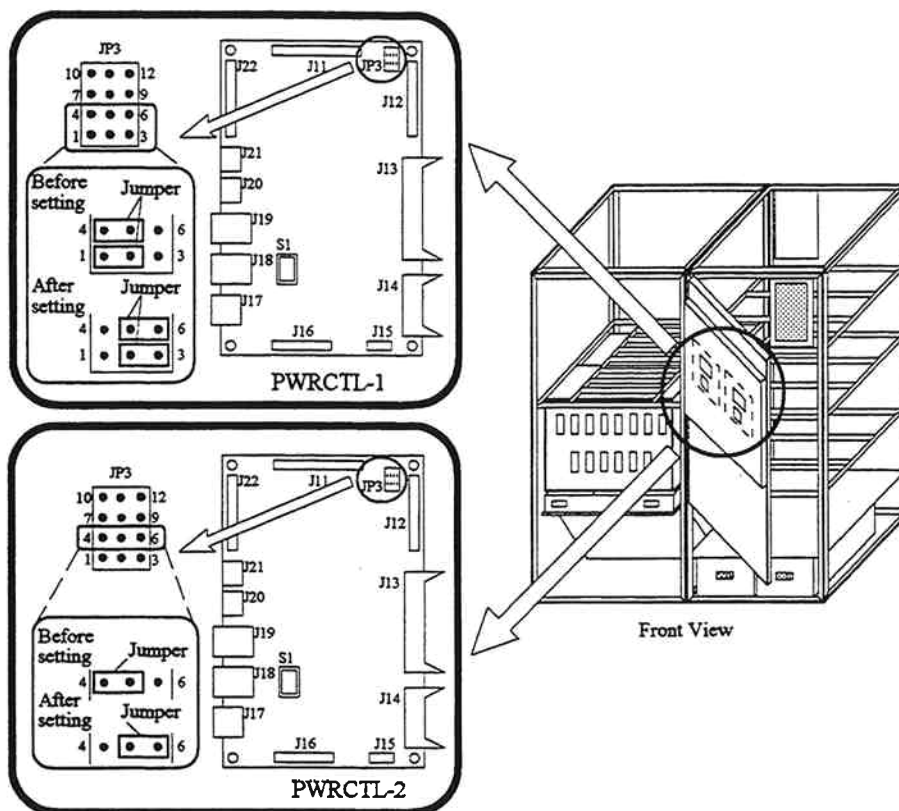
L	K	J	H	G	F	E	D	Slot No.
W	W	W	W	W	W	W	W	PCB Name
P	P	P	P	P	P	P	P	
0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	
8	8	8	8	8	8	8	8	
-	-	-	-	-	-	-	-	
B	B	B	B	B	B	B	A	
/	/	/	/	/	/	/	/	
W	W	W	W	W	W	W	W	
P	P	P	P	P	P	P	P	
0	0	0	0	0	0	0	0	
1	1	1	1	1	1	1	1	
8	8	8	8	8	8	8	8	
-	-	-	-	-	-	-	-	
B	B	B	B	B	B	B	A	

18. Set the PS Enable/Disable Switch on the 5V and 3.3V Power Supplies to Enable.



19. Change the jumper settings for PWRCTL-1 and PWRCTL-2.

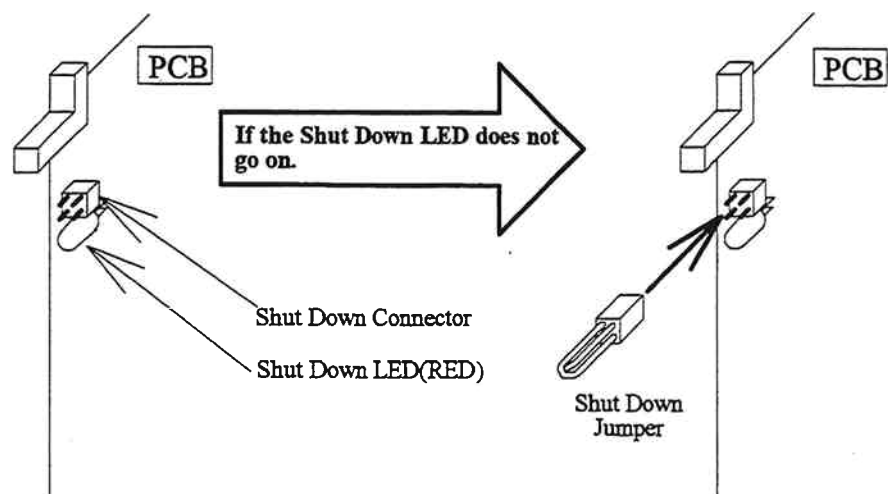
- a. Change the settings of jumper plug (JP3) for PWRCTL-1 from #1-#2 short to #2-#3 short and from #4-#5 short to #5-#6 short. Also, change the setting of jumper plug (JP3) for PWRCTL-2 from #4-#5 short to #5-#6 short.



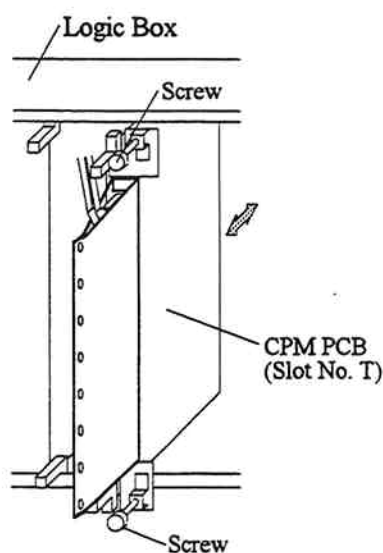
20. Go to SVP post procedure e [REP04-120].

Replacement of Cache Back Board (Cache Box-2)

1. Check that the Shut Down LEDs of CPM PCB (Logic Box Slot No. T) is lit. If is not lit, connect the Shut Down Jumper to the Shut Down Connector. (only hot replace)

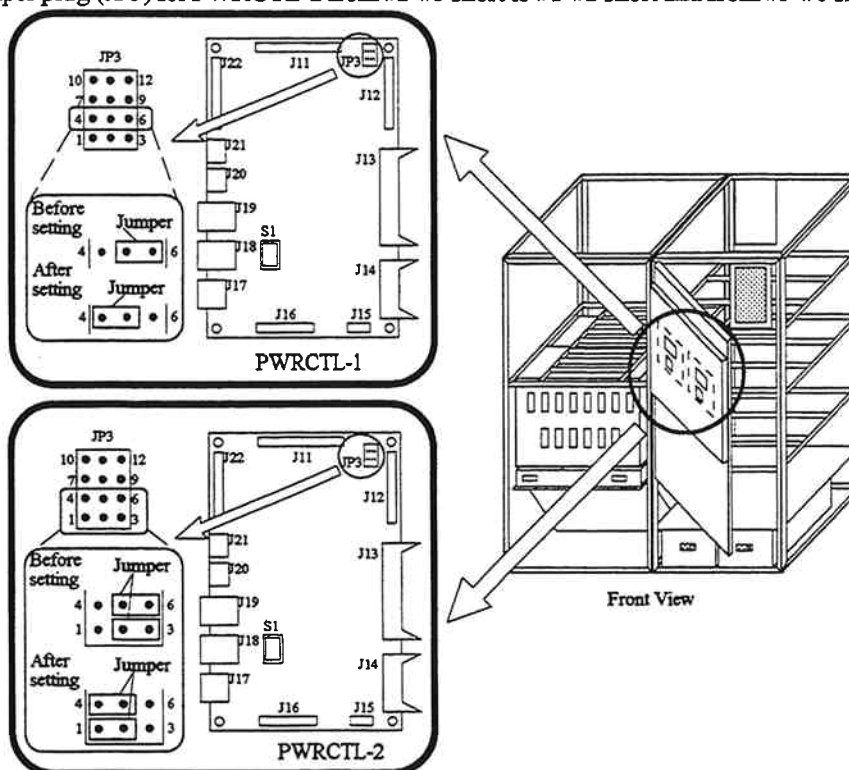


2. Remove and insert the CPM PCB of the Slot No. T.
 - a. Remove the two screws and remove the CPM PCB (Logic Box Slot No. T) main edge from the back board.
 - b. Remove the Shut Down Jumper if it is mounted.
 - c. Insert the CPM PCB main edge completely into the back board.

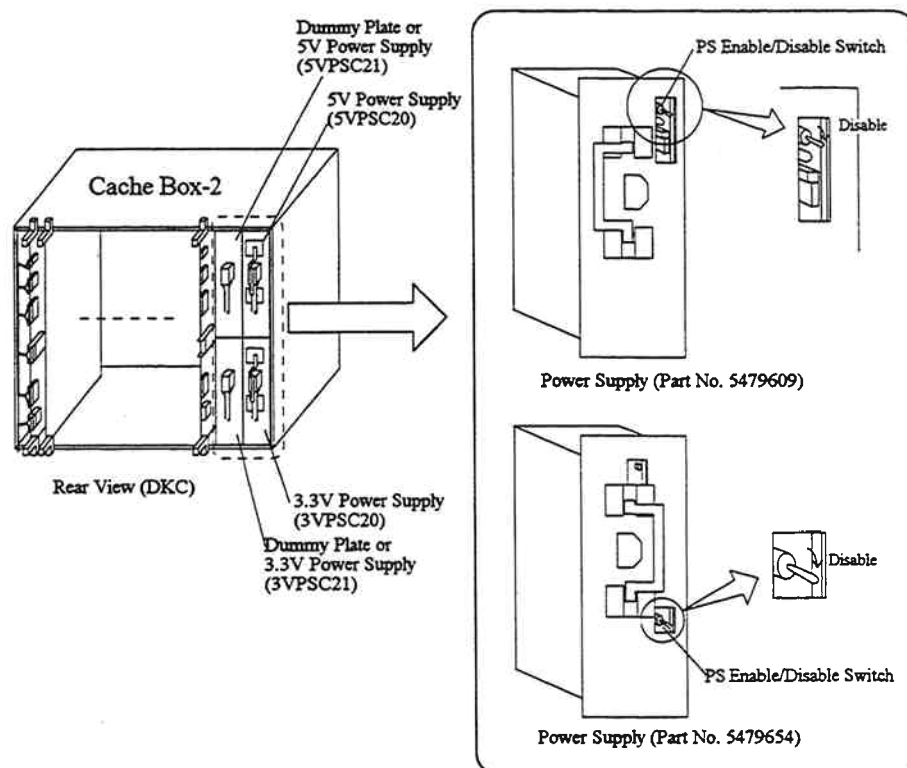


3. Change the jumper settings for PWRCTL-1 and PWRCTL-2.

- a. Change the setting of jumper plug (JP3) for PWRCTL-1 from #5-#6 short to #4-#5 short. Also, change the settings of jumper plug (JP3) for PWRCTL-2 from #2-#3 short to #1-#2 short and from #5-#6 short to #4-#5 short.

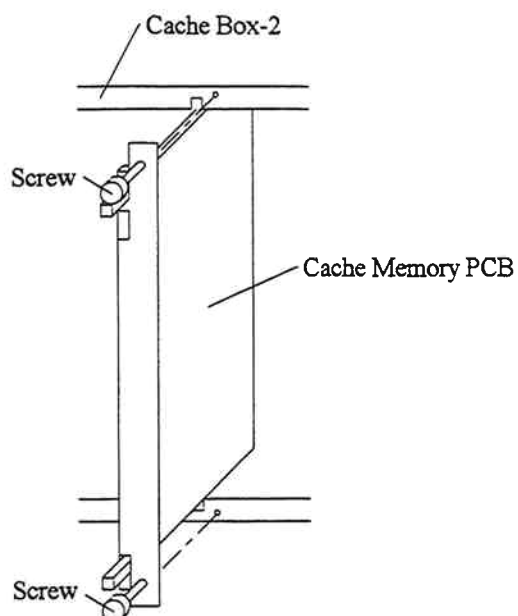


4. Set the PS Enable/Disable Switch on the 5V and 3.3V Power Supplies to Disable.



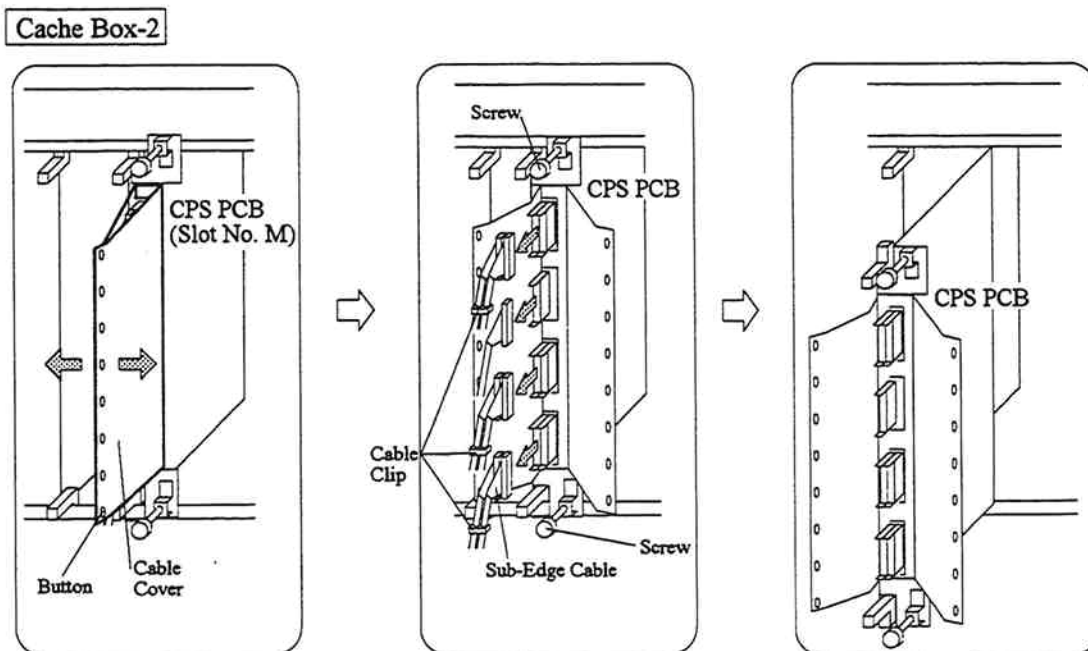
5. Remove the Cache Memory PCBs.

- a. Remove the screws of the Cache Memory PCBs installed in any of the Slot No. D through L.
- b. Remove the Cache Memory PCBs.



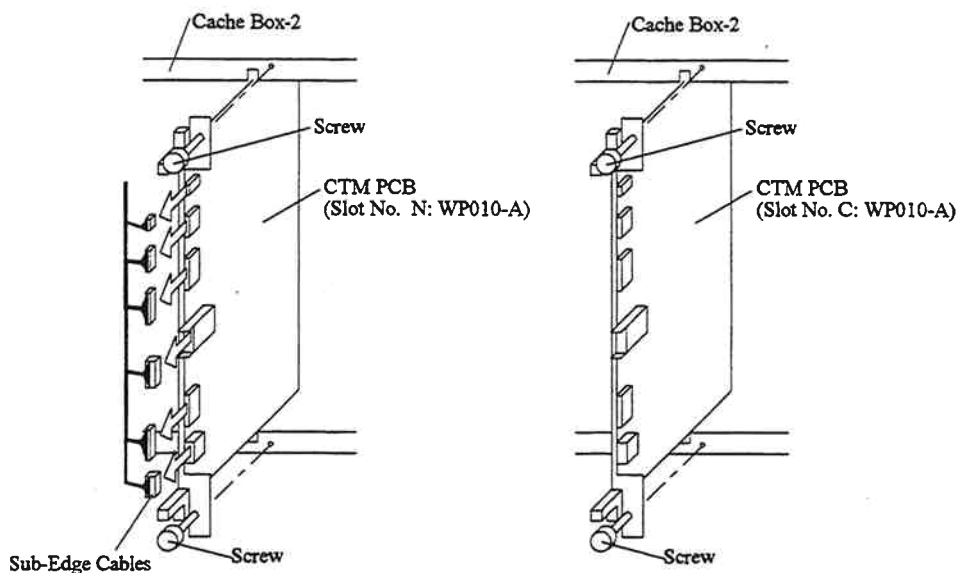
6. Remove the CPS PCB of the Slot No. M.

- a. Unfasten the cable cover buttons to open the cable cover.
- b. Remove the cable clips and remove the sub-edge cables from the CPS PCB.
- c. Remove the two screws and remove the CPS PCB from the Cache Box-2.



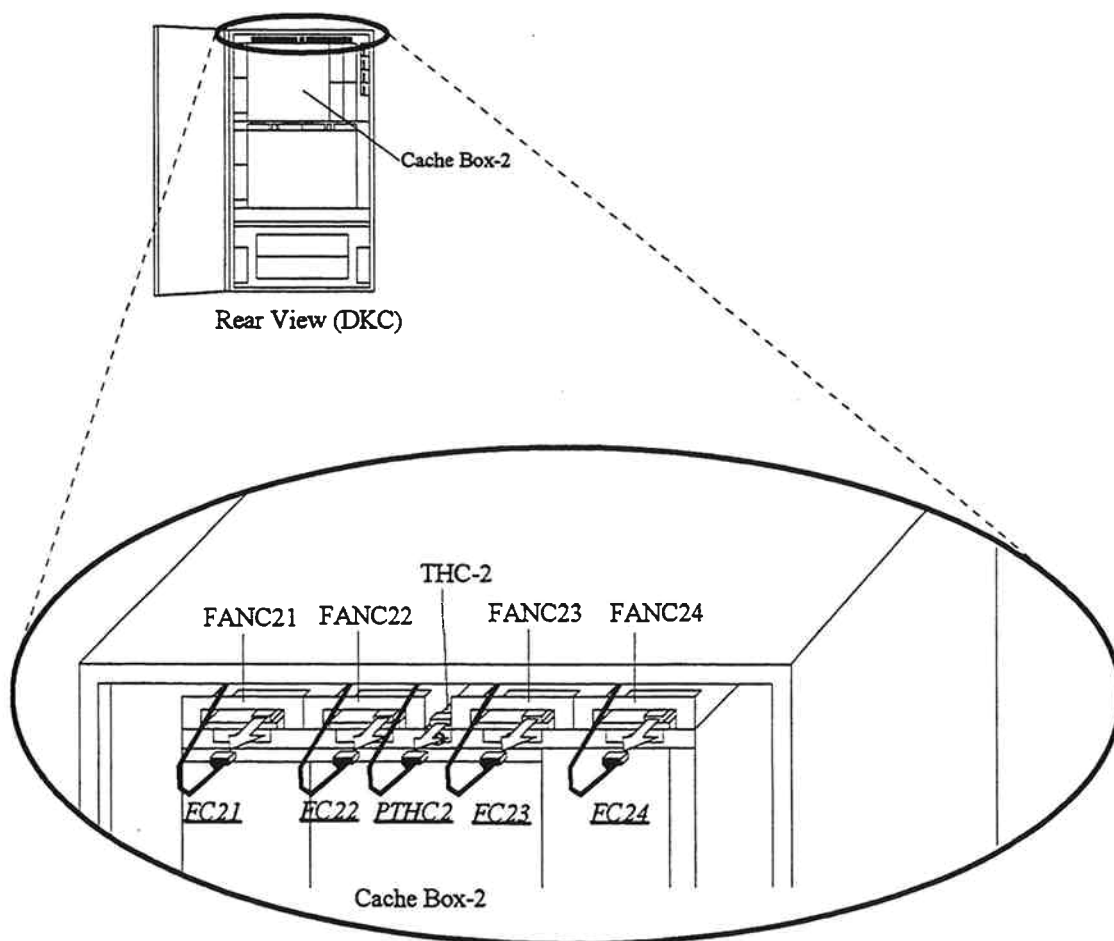
7. Remove the CTM PCBs.

- a. Remove the sub-edge cables from the CTM PCB of the Slot No. N.
- b. Remove the screws and remove the CTM PCBs of the Slot No. C and N.

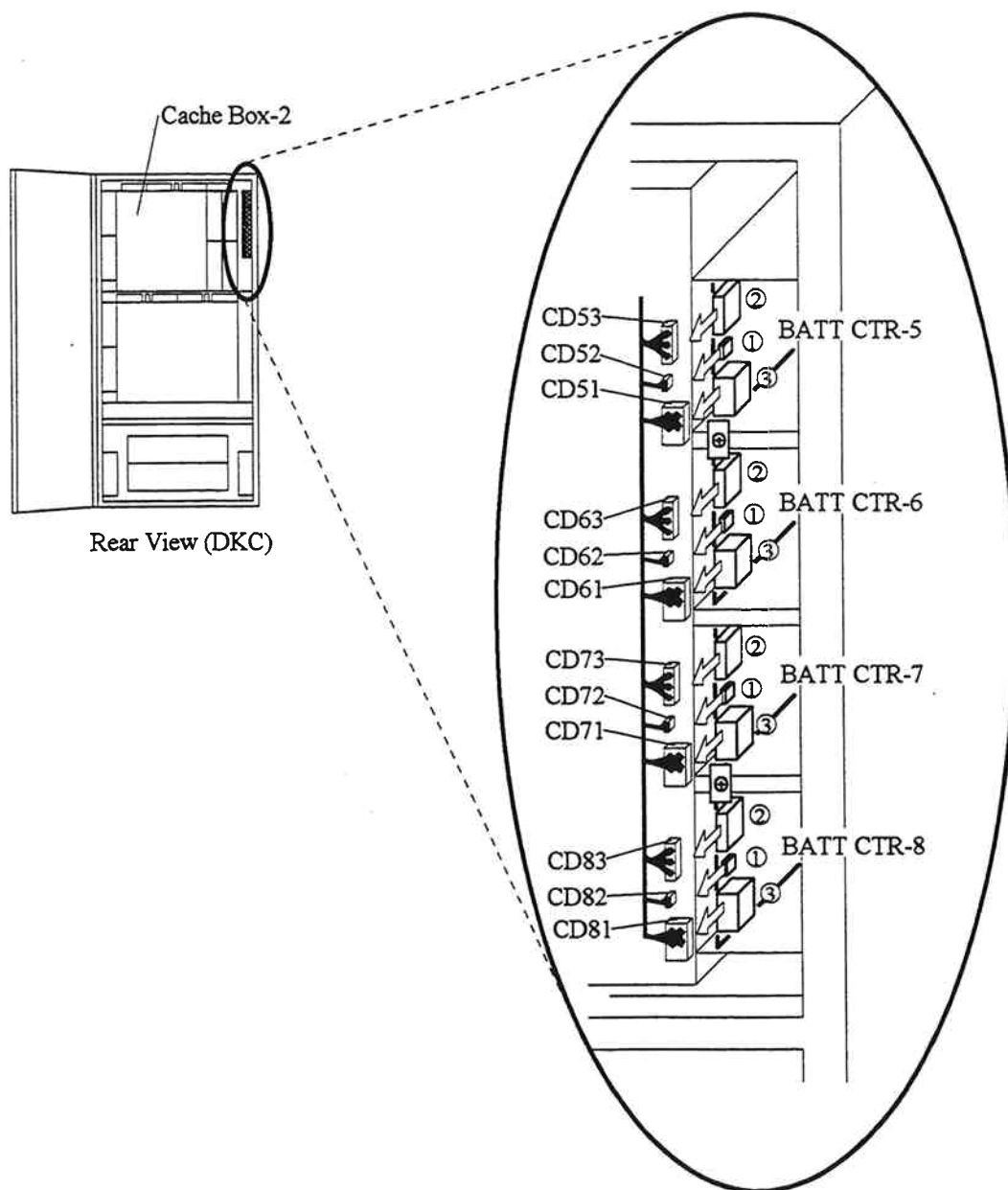


8. Remove the cables from the corresponding parts.

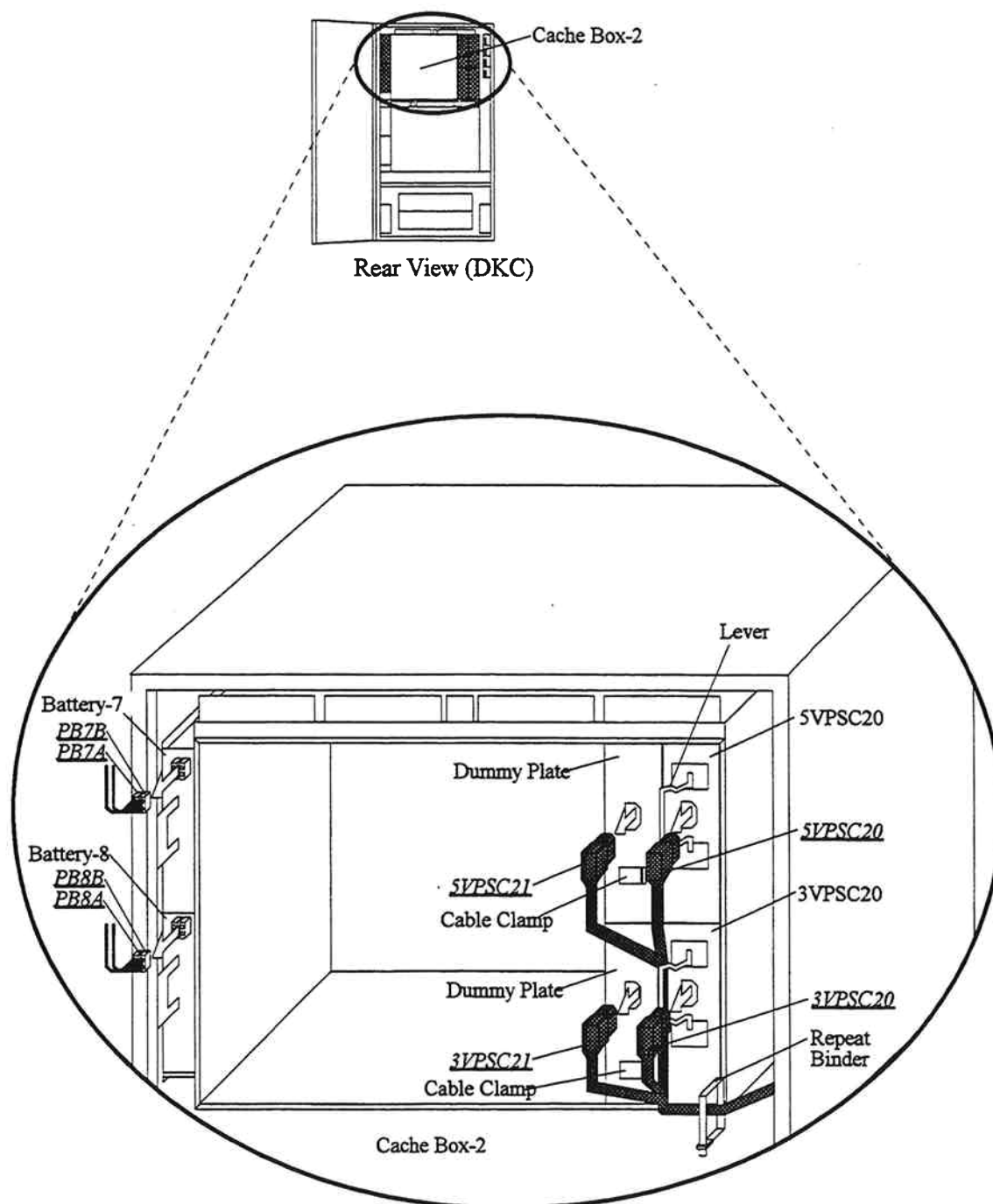
- a. Remove the cables (FC21, FC22, FC23 and FC24) from the FAN Assemblies (FANC21, FANC22, FANC23 and FANC24).
- b. Remove the cable (PTHC2) from the Thermostat Assembly (THC-2).



- c. Remove the cables (CD51 to CD53, CD61 to CD63, CD71 to CD73, CD81 to CD83) from the Battery Controller PCBs (BATT CTR-5, BATT CTR-6, BATT CTR-7 and BATT CTR-8) . Be sure to remove these cables in the order of ①, ②, and ③.

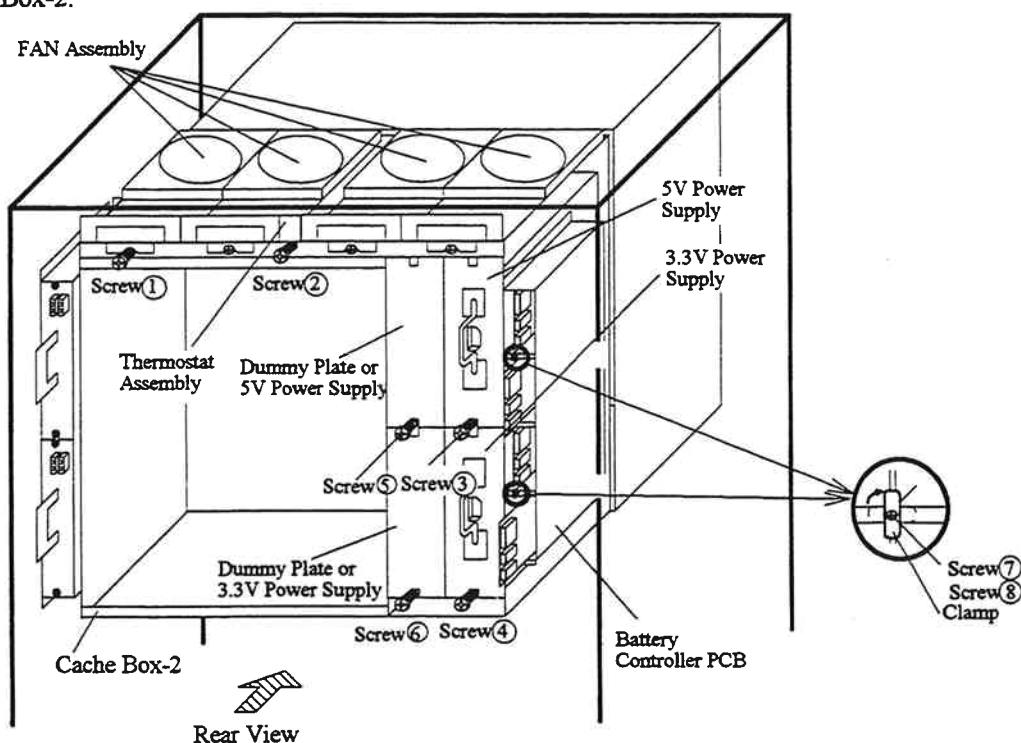


- d. Remove the power supply lever (5VPSC20 and 3VPSC20) and remove the inlet cables (5VPSC20 and 3VPSC20).
- e. If the Cache redundant power supply (DKC-F210I-72) is not installed, remove the cable clamps of the dummy plates and remove the inlet cables (5VPSC21 and 3VPSC21).
If the Cache redundant power supply (DKC-F210I-72) is installed, remove the power supply lever (5VPSC21 and 3VPSC21) and remove the inlet cables (5VPSC21 and 3VPSC21).
- f. Open the repeat binder to remove the inlet cables.
- g. Remove the cables (PB7A, PB7B, PB8A and PB8B) from the Battery Assemblies (Battery-7 and Battery-8).



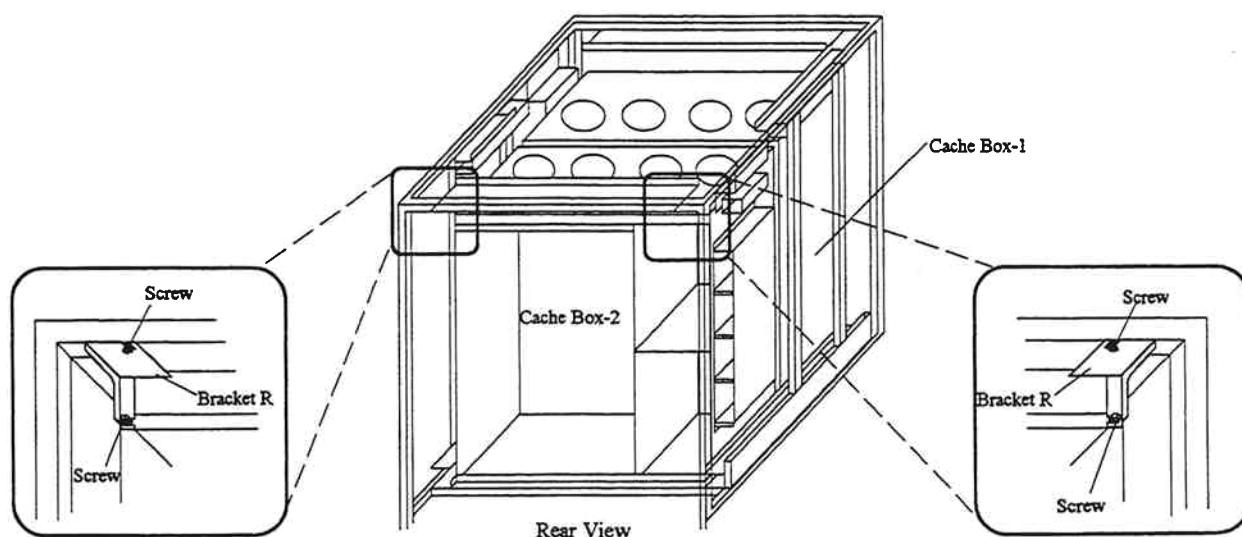
9. Remove the Cache 2 parts from the Cache Box-2.

- Loosen screw ① and remove the Fan Assembly (4 assemblies per box).
 - Loosen screw ② and remove the Thermostat Assembly (1 assembly per box).
 - Loosen screws ③ and ④ and remove the 5V and 3.3V Power Supplies (1 each per box).
 - If the Cache redundant power supply (DKC-F210I-72) is not installed, loosen screws ⑤ and ⑥ and remove the dummy plates.
- If the Cache redundant power supply (DKC-F210I-72) is installed, loosen screws ⑤ and ⑥ and remove the 5V and 3.3V power supplies.
- Loosen the screws ⑦ and ⑧. Rotate the clamp 90 degrees, and remove the Battery Controller PCBs from the Cache Box-2.

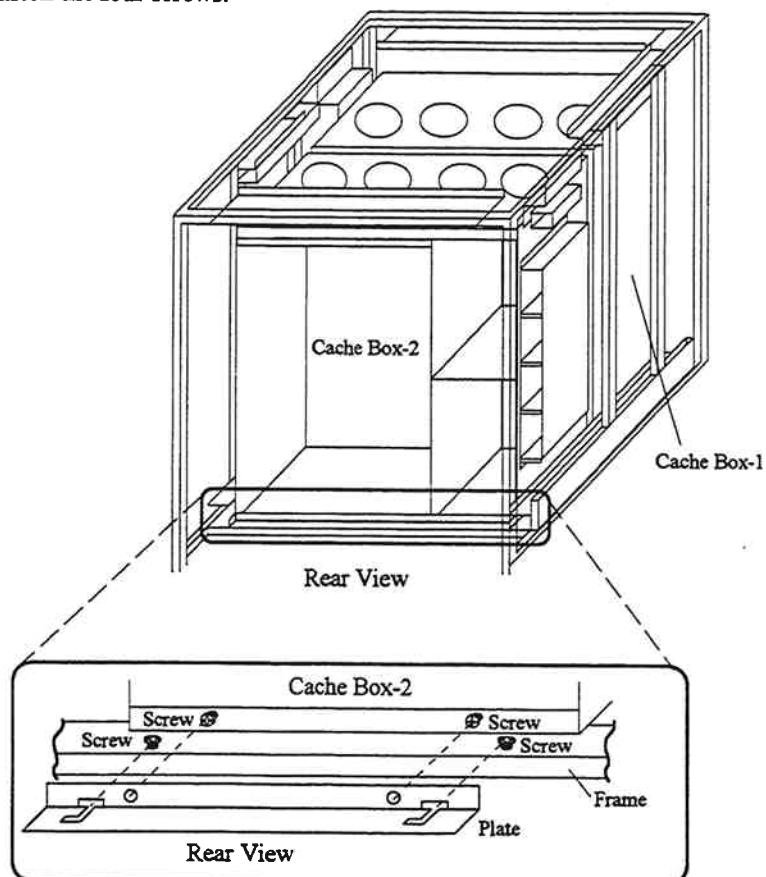


10. Remove the Cache Box-2.

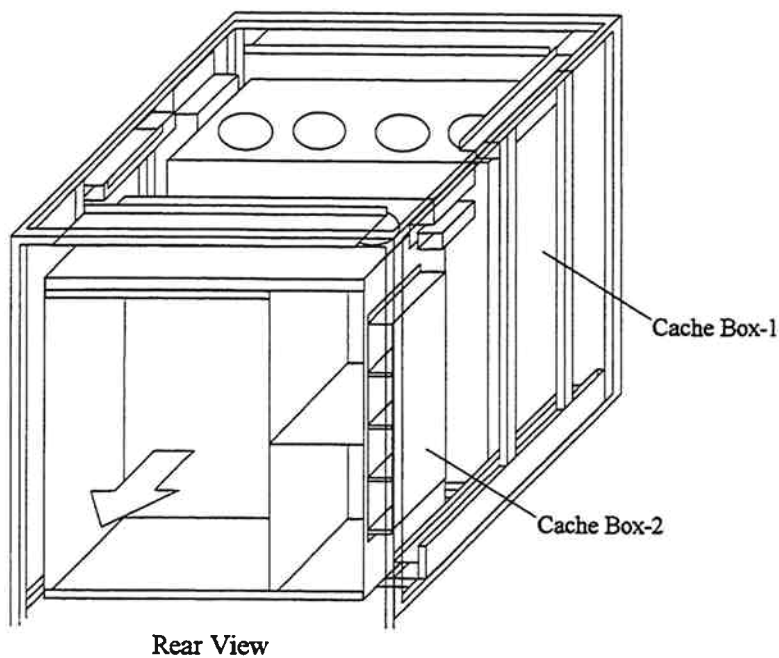
- Loosen the four screws at the top of Cache Box-2 (in the front side) and on the frame. Remove the two brackets which fix the box. Fasten the four screws.



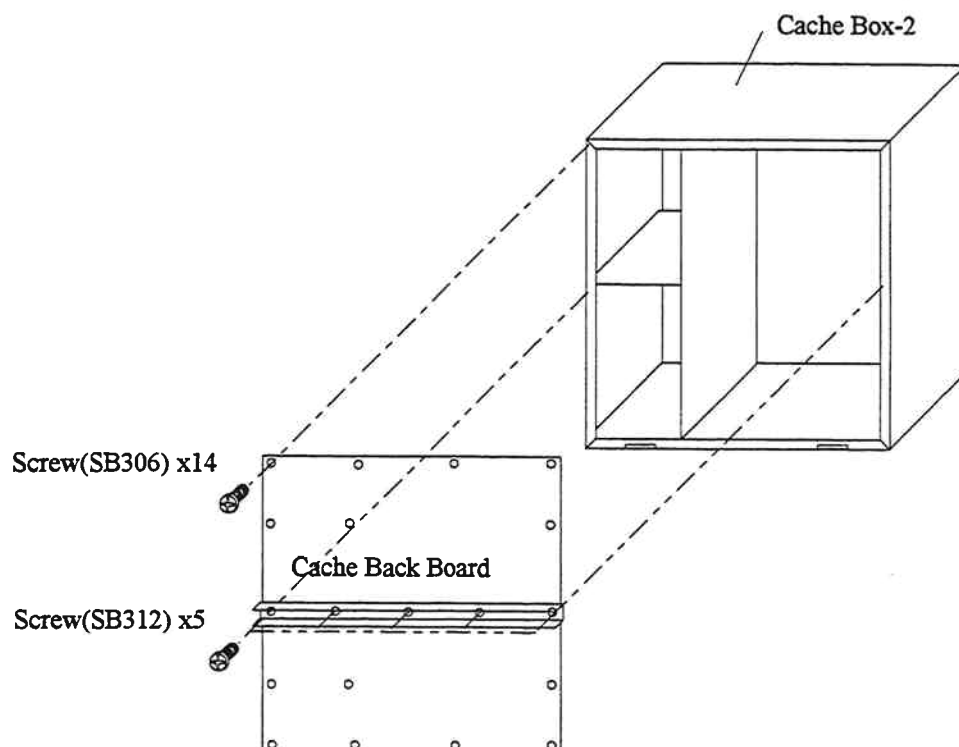
- b. Loosen the four screws at the bottom of Cache Box-2 (in the front side) and on the frame. Remove the plate which fixes the box. Fasten the four screws.



- c. Remove the Cache Box-2 from the rear side.

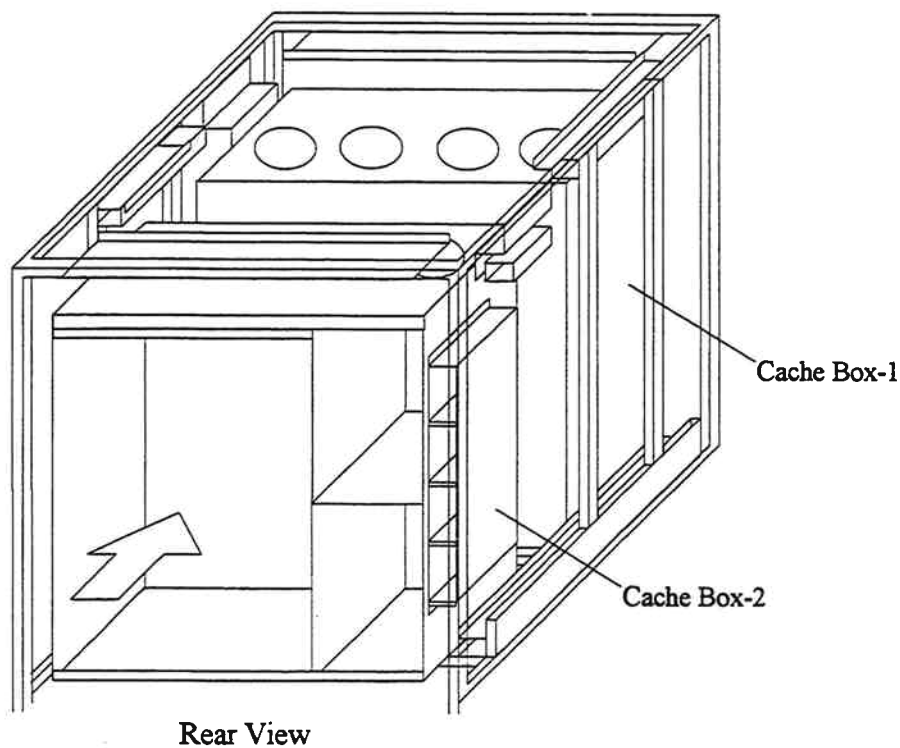


11. Remove fourteen screws(SB306) and five screws(SB312), and then replace the Cache back board.

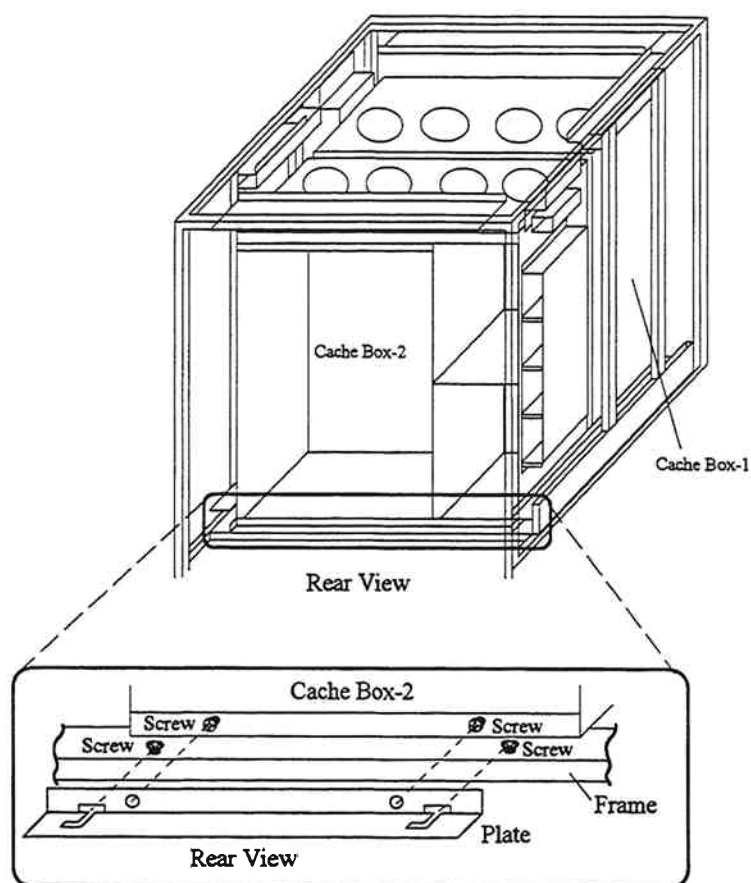


12. Insert the Cache Box-2.

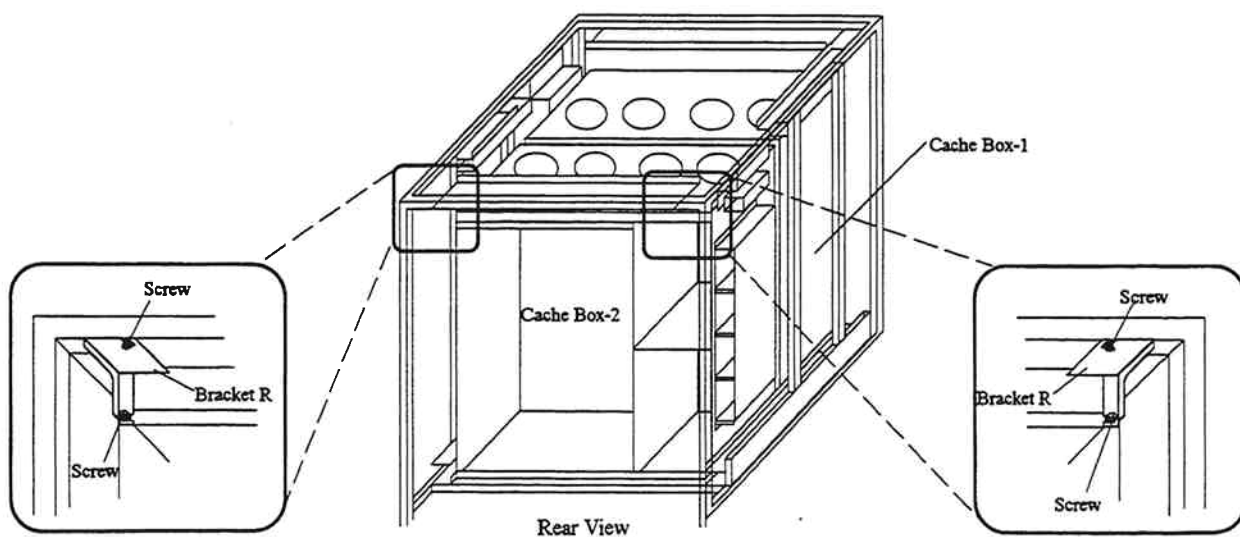
a. Insert the Cache Box-2 from the rear side of the frame.



- b. Loosen the four screws at the bottom of Cache Box-2 (in the rear side) and on the frame. Attach the plate to fix the Cache Box-2 and fasten the four screws.



- c. Loosen the four screws at the top of the Cache Box-2 (in the rear side) and on the frame. Attach the two brackets to fix the Cache Box-2 and fasten the four screws.

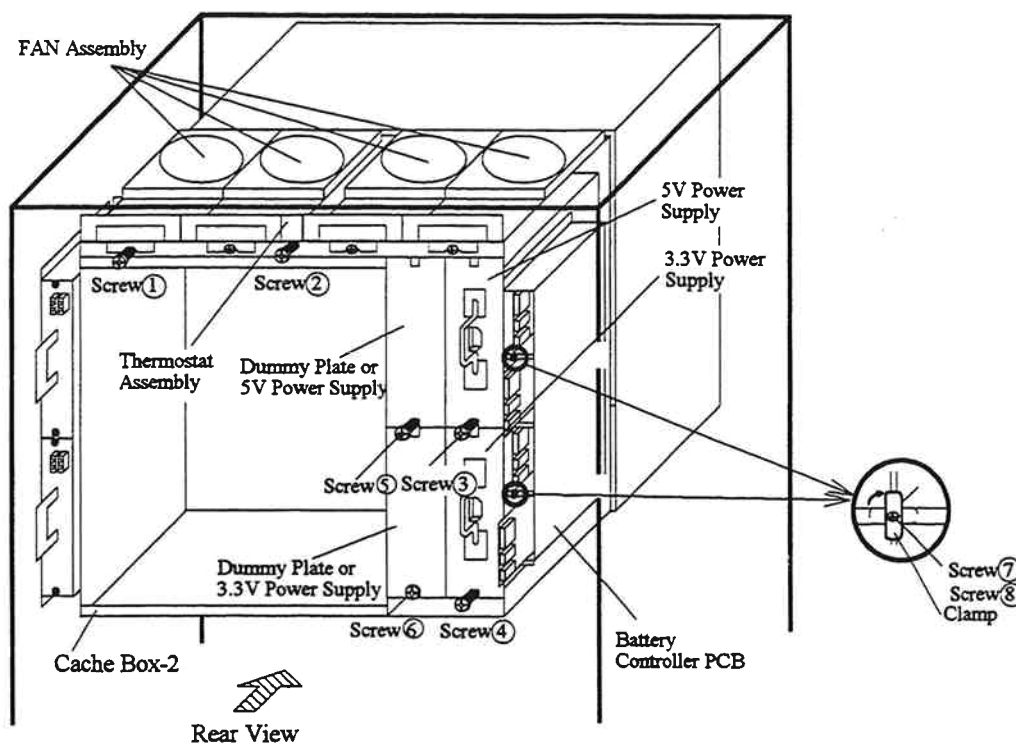


13. Install the parts on the Cache Box-2.

- Install and secure the Fan Assembly with screw ① (4 assemblies per box).
- Install and secure the Thermostat Assembly with screw ② (1 assembly per box).
- Install and secure power supplies with screws ③ and ④ (1 each per box).
- If the Cache redundant power supply (DKC-F210I-72) is not installed, attach the dummy plates and secure screws ⑤ and ⑥ (2 each per box).

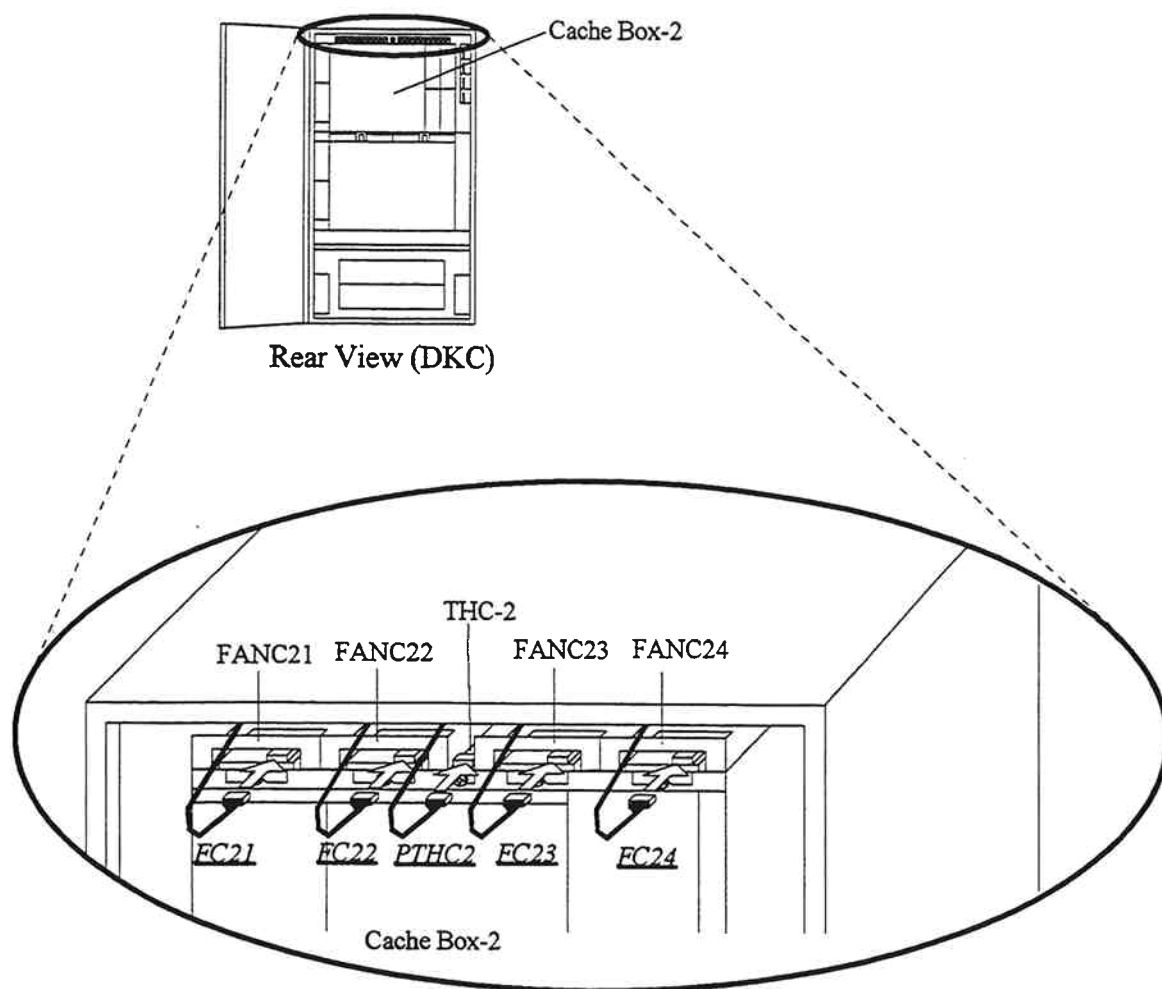
If the Cache redundant power supply (DKC-F210I-72) is installed, attach the 5V and 3.3V power supplies and secure screws ⑤ and ⑥.

- Loosen the screws ⑦ and ⑧. Attach the Battery Controller PCBs to the Cache Box-2, rotate the clamp 90 degrees, and secure the screws ⑦ and ⑧.

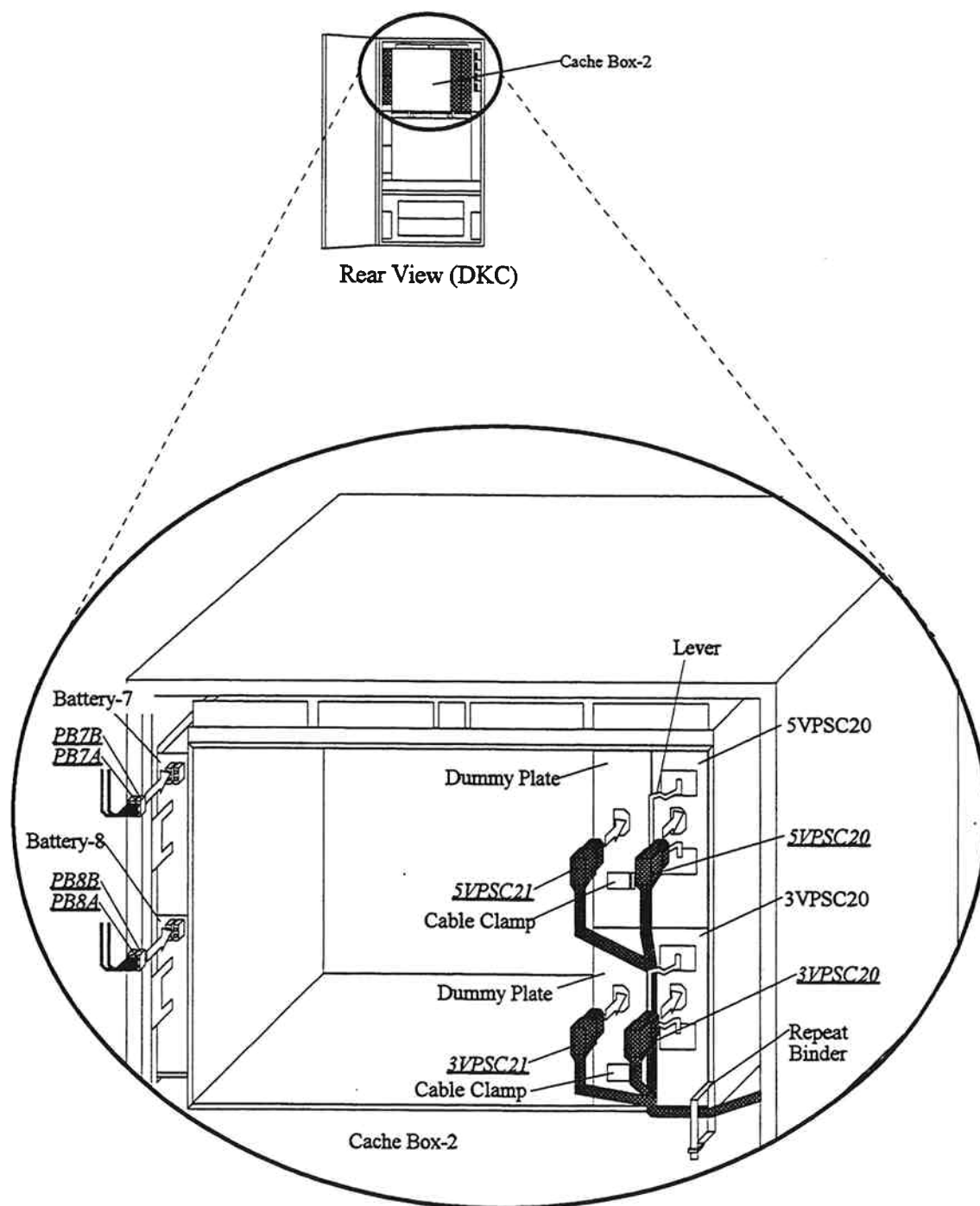


14. Connect the cables into the corresponding parts.

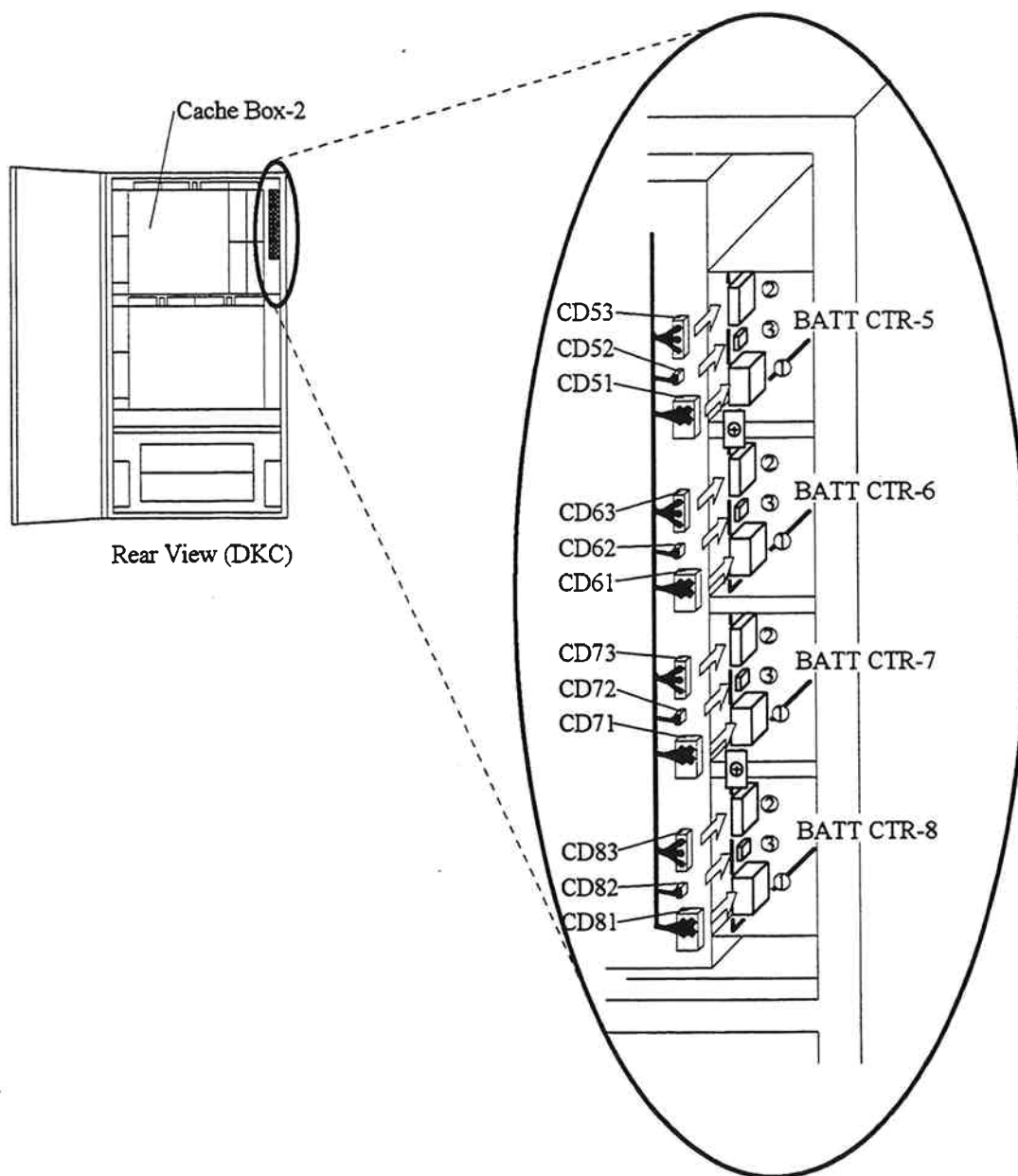
- a. Connect the cables (FC21, FC22, FC23 and FC24) into the FAN Assemblies (FANC21, FANC22, FANC23 and FANC24), respectively.
- b. Connect the cable (PTHC2) into the Thermostat Assembly (THC-2).



- c. Connect the inlet cables (5VPSC20 and 3VPSC20) into the power supplies (5VPSC20 and 3VPSC20), respectively and lock them with the lever.
- d. If the Cache redundant power supply (DKC-F210I-72) is not installed, attach the inlet cables (5VPSC21 and 3VPSC21) to dummy plates and secure them with the cable clamp.
If the Cache redundant power supply (DKC-F210I-72) is installed, attach the inlet cables (5VPSC21 and 3VPSC21) to the power supply (5VPSC21 and 3VPSC21) and them with the lever.
- e. Bind the inlet cables with the repeat binder.
- f. Connect the cables (PB7A, PB7B, PB8A and PB8B) into the Battery Assemblies (Battery-7 and Battery-8).

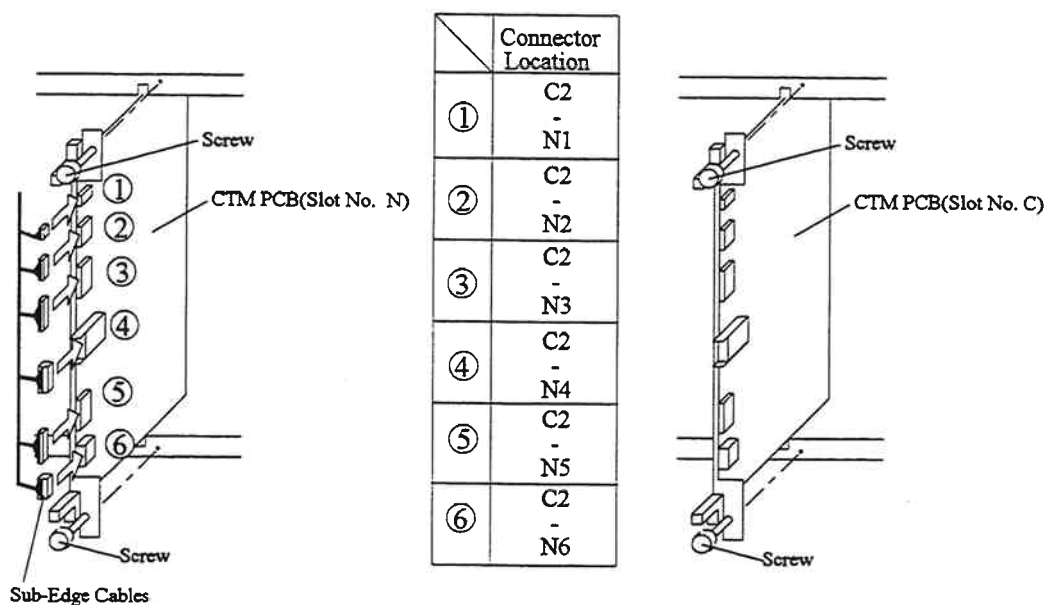


- g. Connect the cables (CD51-CD53, CD61-CD63, CD71-CD73 and CD81-CD83) into the Battery Controller PCBs (BATT CTR-5, BATT CTR-6, BATT CTR-7 and BATT CTR-8). Connect the cables in the order of ①, ②, and ③.



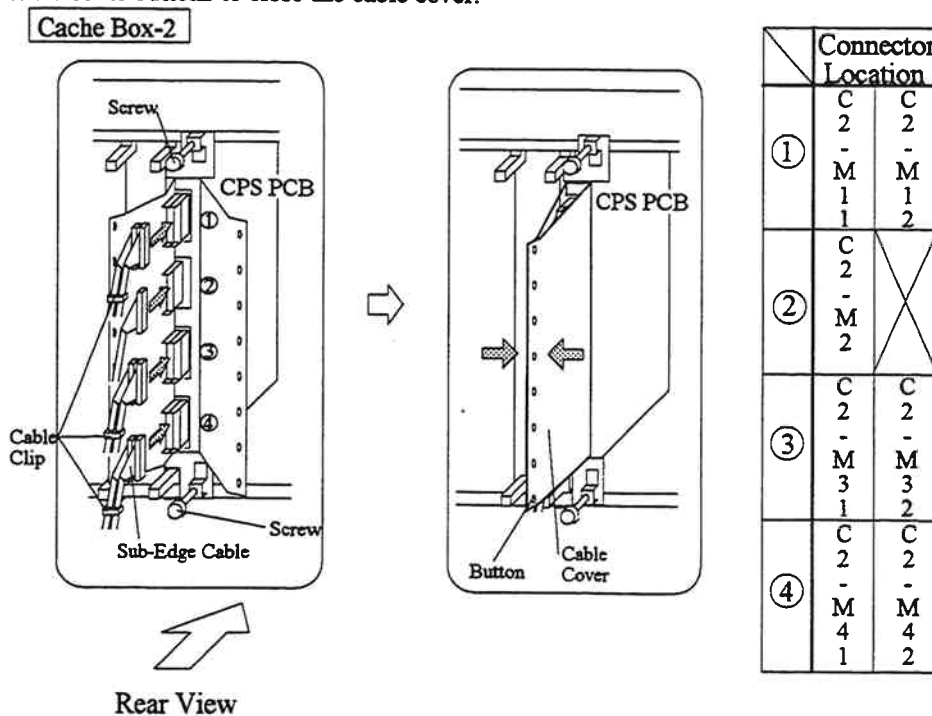
15. Insert the CTM PCBs.

- Insert the CTM PCBs of the Slot No. N and C and fasten the screws.
- Connect the sub-edge cables into the CTM PCB of the Slot No. N.



16. Insert the CPS PCB.

- Insert the CPS PCB into the Cache Box-2 and fasten the two screws.
- Connect the sub-edge cables to the PCB and fix them with the cable clips.
- Fasten the cable cover buttons to close the cable cover.

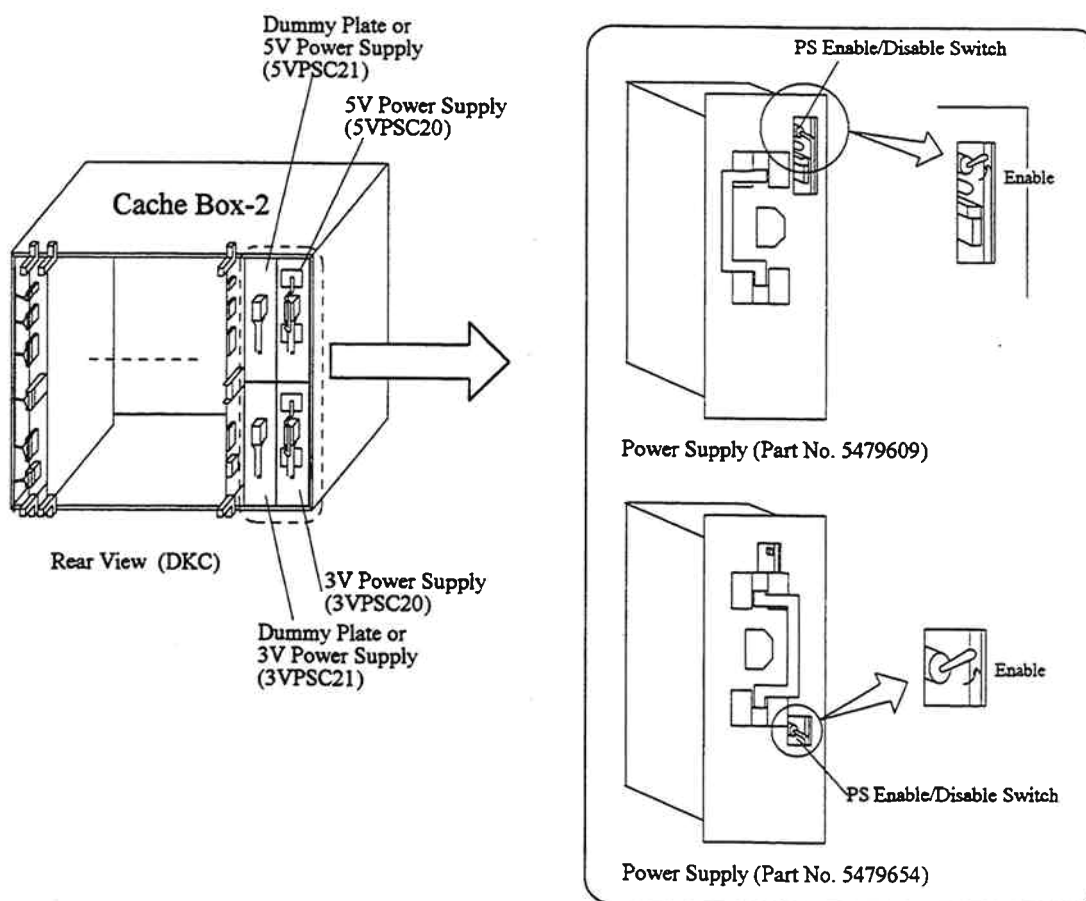


17. Insert the removed Cache Memory PCBs into the Cache Box-2 and fasten the screws.

Cache Box-2 PCB LOCATION

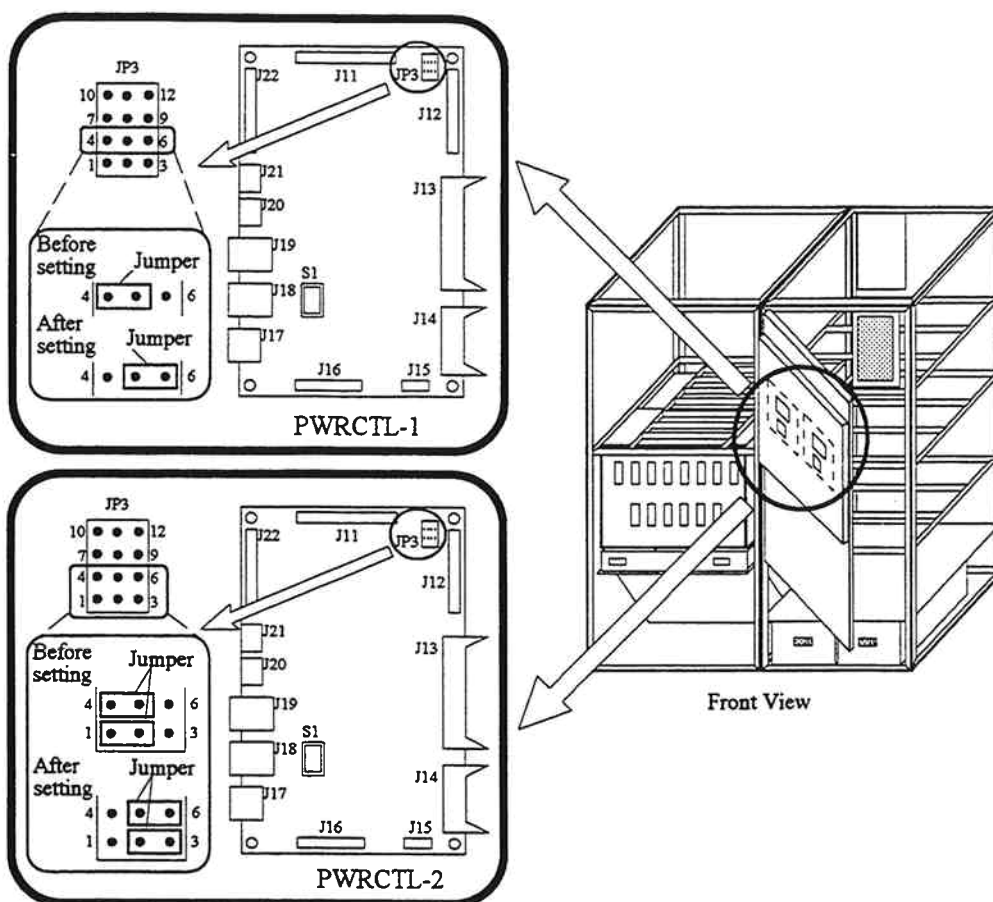
L	K	J	H	G	F	E	D	Slot No.
W	W	W	W	W	W	W	W	PCB Name
P	P	P	P	P	P	P	P	
0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	
8	8	8	8	8	8	8	8	
-	-	-	-	-	-	-	-	
B	B	B	B	B	B	B	A	
/	/	/	/	/	/	/	/	
W	W	W	W	W	W	W	W	
P	P	P	P	P	P	P	P	
0	0	0	0	0	0	0	0	
1	1	1	1	1	1	1	1	
8	8	8	8	8	8	8	8	
-	-	-	-	-	-	-	-	
B	B	B	B	B	B	B	A	

18. Set the PS Enable/Disable Switch on the 5V and 3.3V Power Supplies to Enable.



19. Change the jumper settings for PWRCTL-1 and PWRCTL-2.

- a. Change the setting of jumper plug (JP3) for PWRCTL-1 from #4-#5 short to #5-#6 short. Also, change the settings of jumper plug (JP3) for PWRCTL-2 from #1-#2 short to #2-#3 short and from #4-#5 short to #5-#6 short.



20. Go to SVP post procedure e [REP04-120].

[HARDWARE N]

◆ CTM(Cache Terminator) PCB,Cache Box

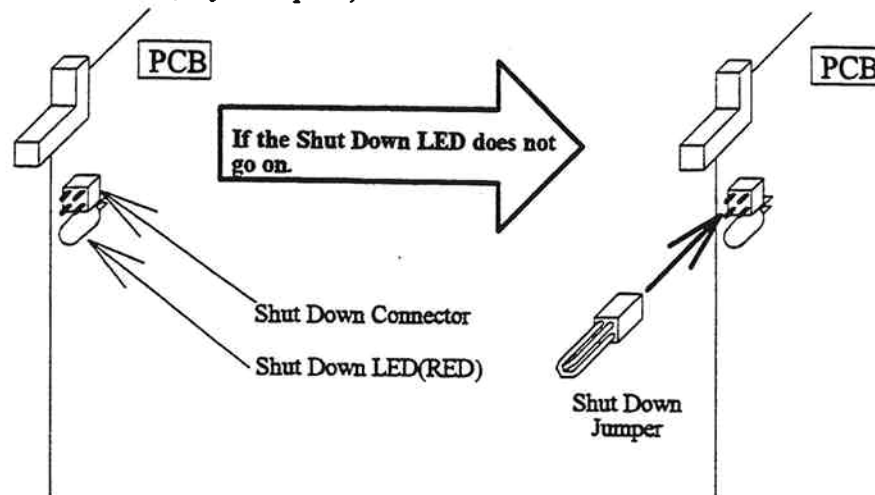
- CTM PCB(WP010-A), Cache Box-1 REP03-1740
- CTM PCB(WP010-A), Cache Box-2 REP03-1790

[Related Procedure]

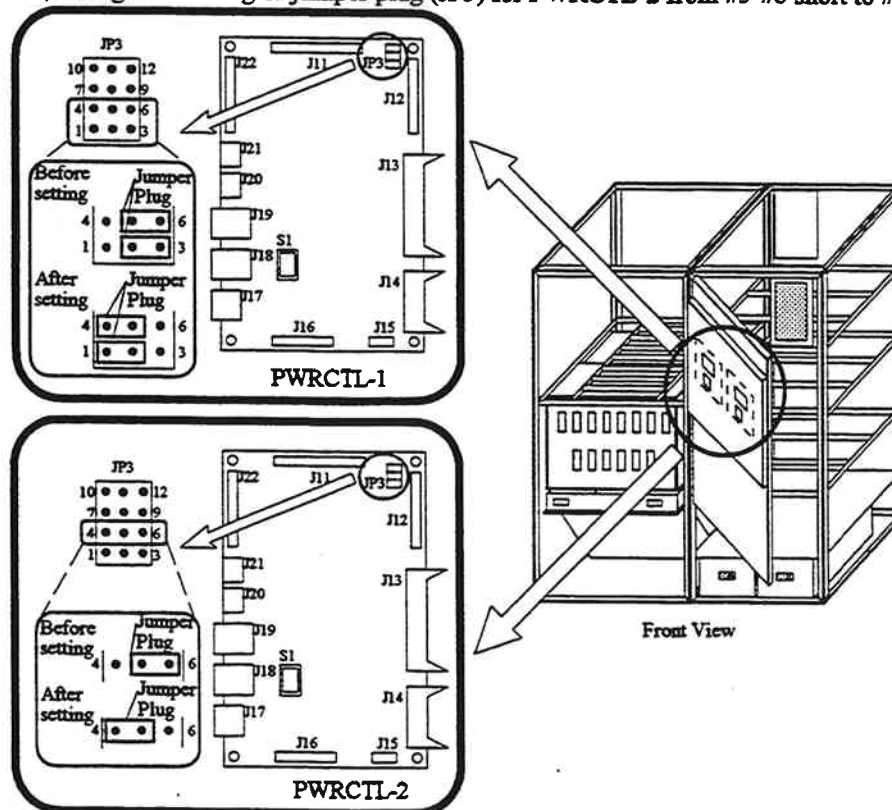
SVP procedure	Title & Sheet No.	Remarks
SVP pre-procedure	Pre-procedure AREP02-10	Refer to REP01-140.
	Pre-procedure FREP02-210	
SVP post-procedure	Post-procedure eREP04-120	Refer to REP01-140.

Replacement of the CTM PCB (Cache Box-1)

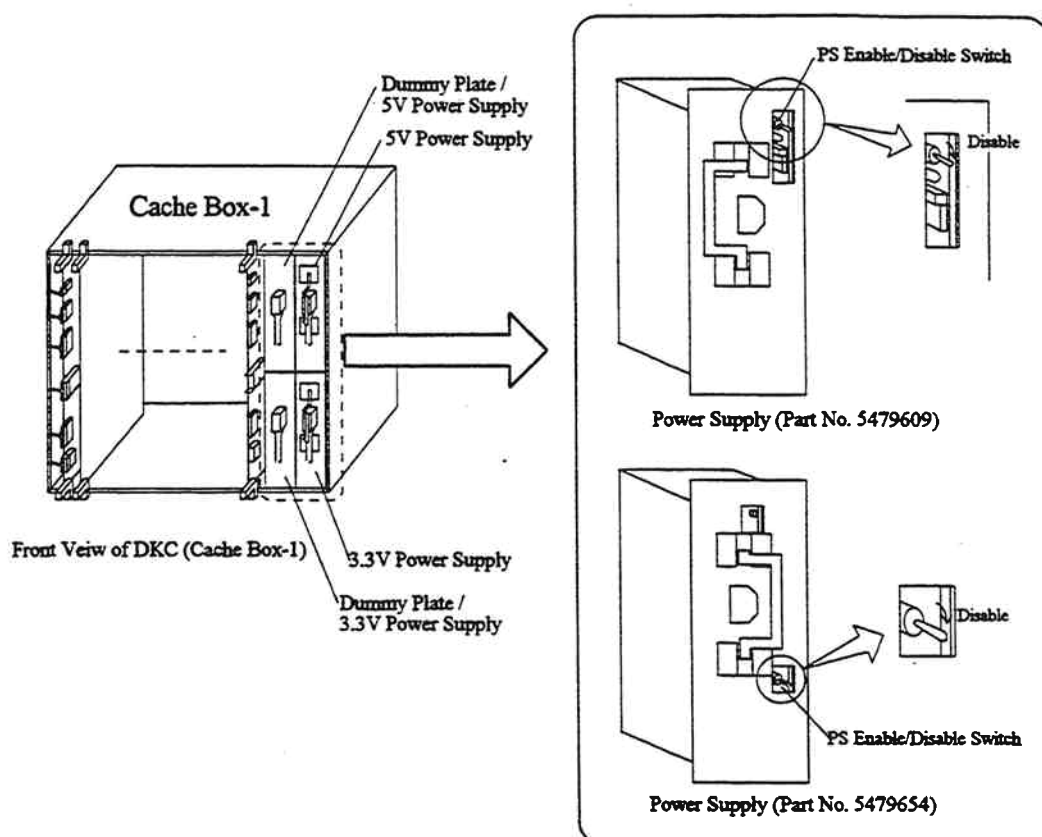
1. Check that the Shut Down LED of CPM PCB (Logic Box slot no. C) is on. If not, connect the Shut Down Jumper to the Shut Down Connector. (only hot replace)



2. Remove the two screws and remove the CPM PCB (Logic Box slot no. C) main edge from the back board.
3. Remove the Shut Down Jumper if it is mounted.
4. Insert the CPM PCB main edge completely into the back board and fasten the two screws.
5. Change the settings of jumper plug (JP3) for PWRCTL-1 from #2-#3 short to #1-#2 short and from #5-#6 short to #4-#5 short. Also, change the setting of jumper plug (JP3) for PWRCTL-2 from #5-#6 short to #4-#5 short.

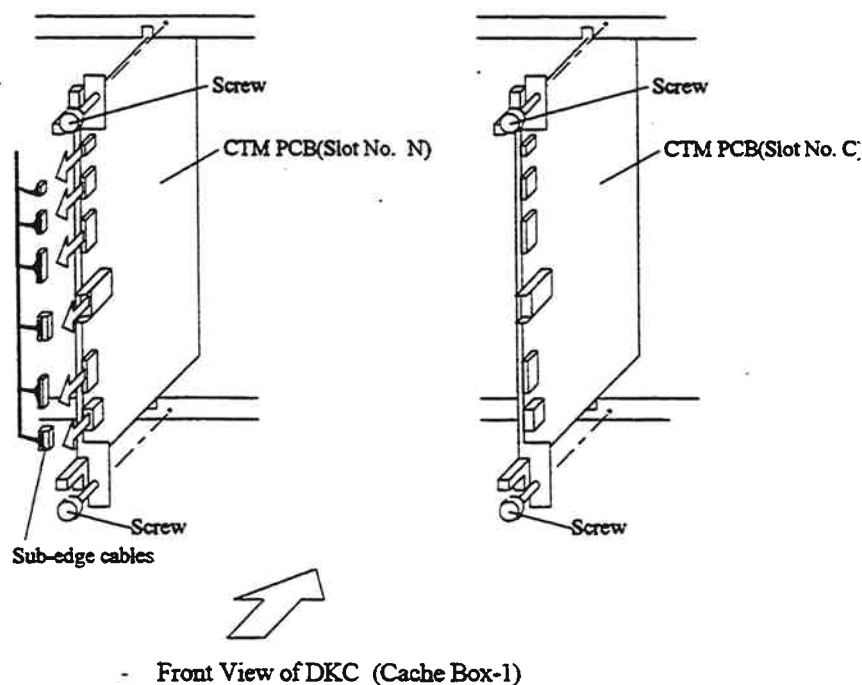


6. Set the PS Enable/Disable Switch on the 5V and 3.3V Power Supplies to Disable.



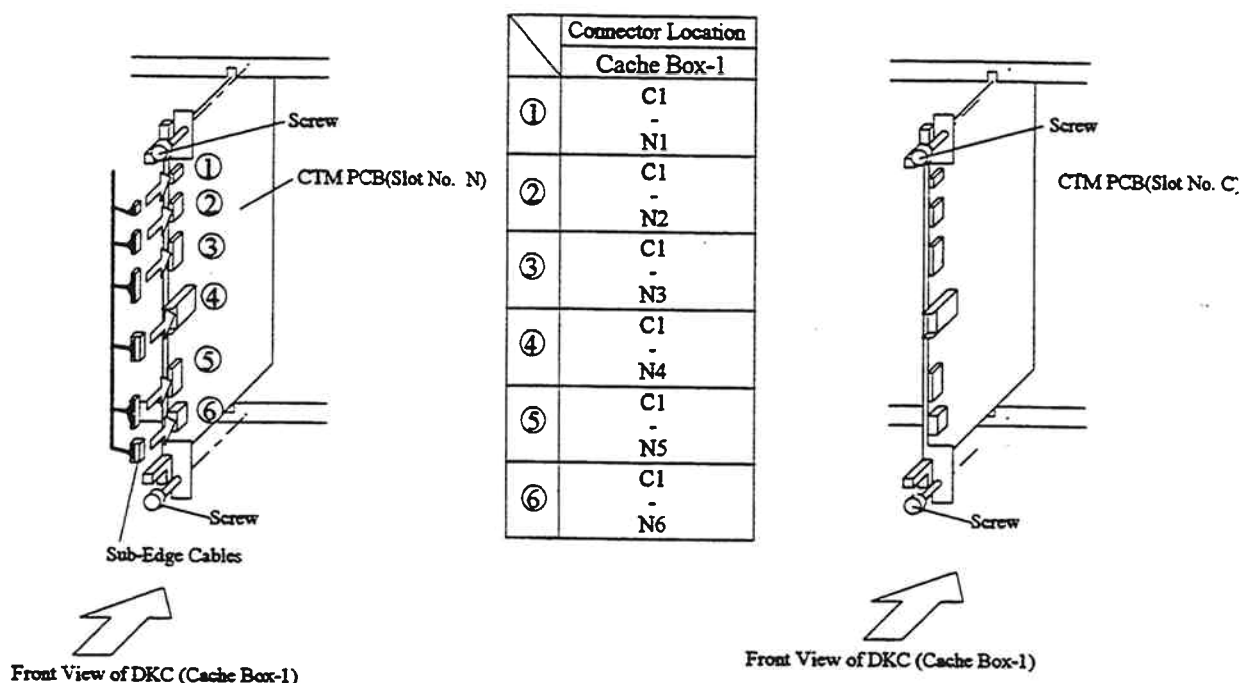
7. Remove the CTM PCB.

- If the Slot No. of the failed CTM PCB is N, disconnect the sub-edge cables from the PCB.
- Remove the screws and remove the failed CTM PCB.

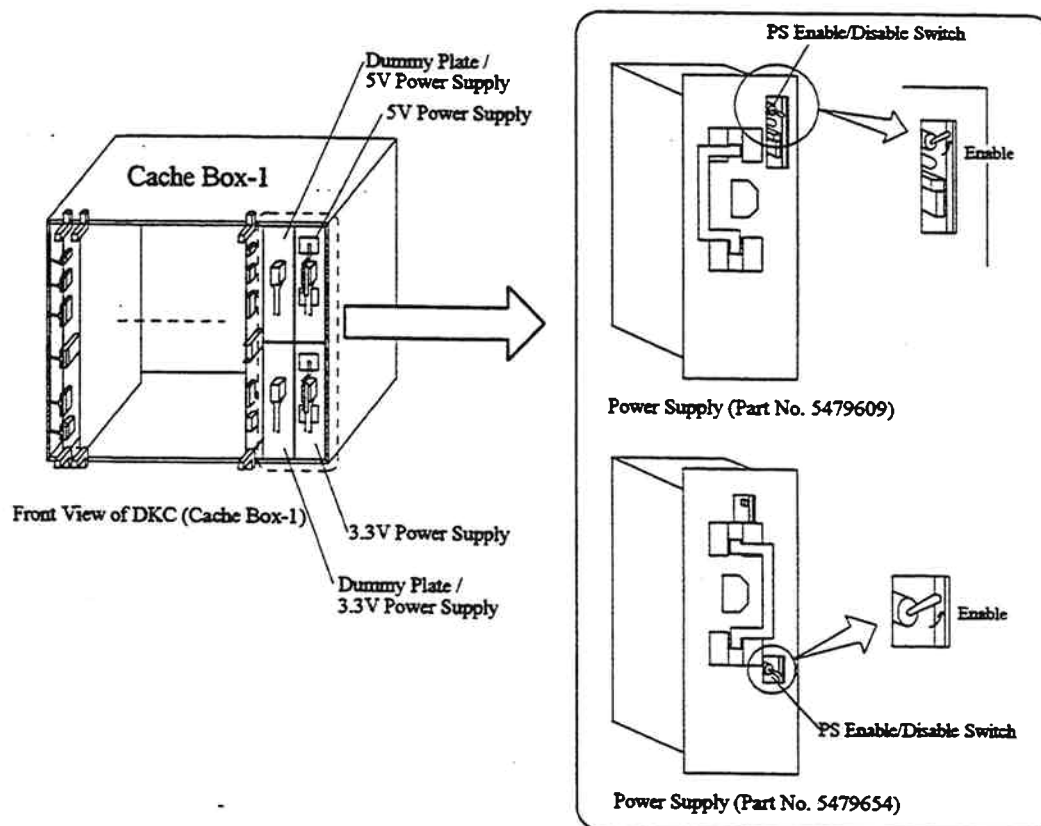


8. Insert the CTM PCB.

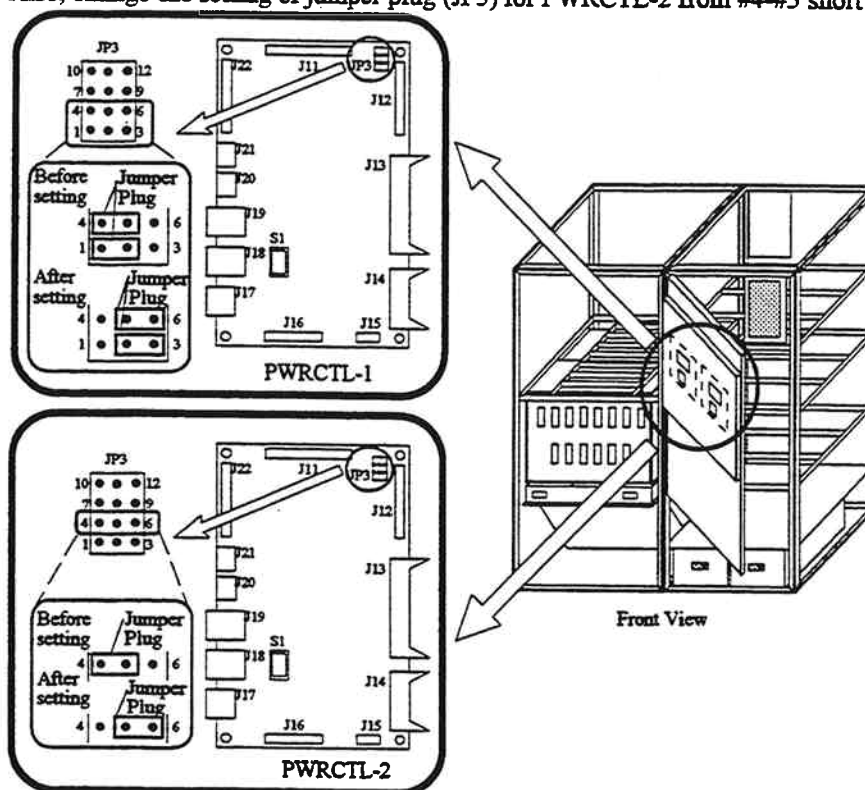
- Insert the spare CTM PCB and fasten the screws.
- If the Slot No. of the spare CTM PCB is N, connect the sub-edge cables to the PCB.



9. Set the PS Enable/Disable Switch on the 5V and 3.3V Power Supplies to Enable.



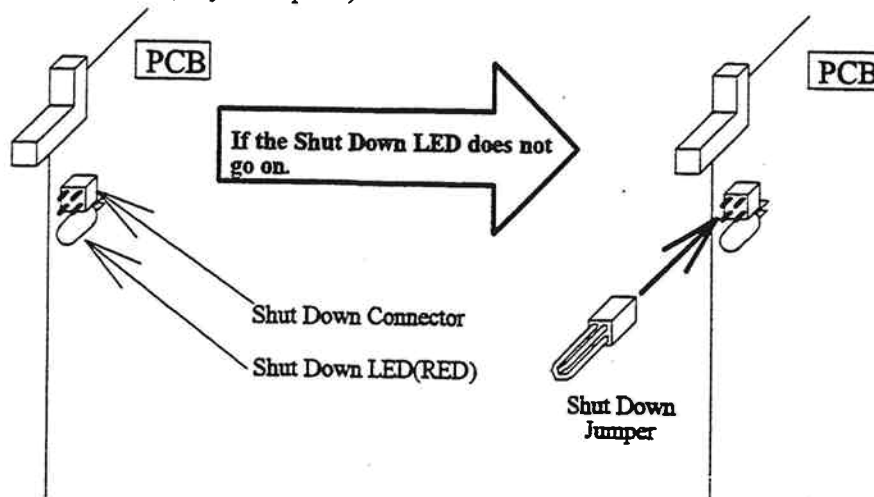
10. Change the settings of jumper plug (JP3) for PWRCTL-1 from #1-#2 short to #2-#3 short and from #4-#5 short to #5-#6 short. Also, change the setting of jumper plug (JP3) for PWRCTL-2 from #4-#5 short to #5-#6 short.



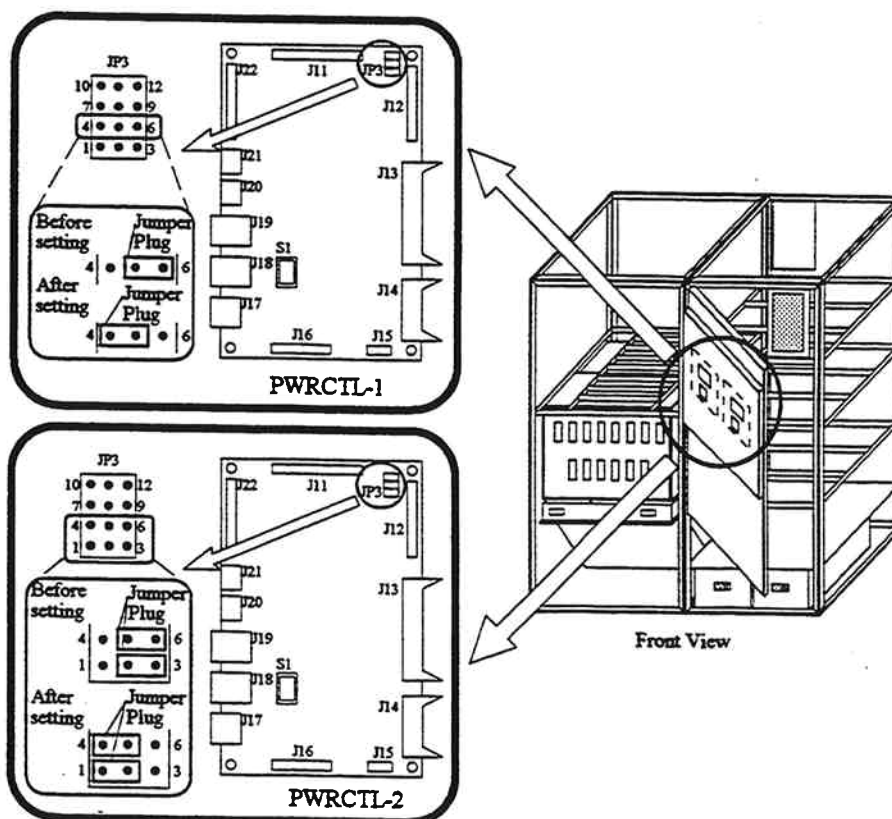
11. Go to SVP post procedure e [REP04-120].

Replacement of the CTM PCB (Cache Box-2)

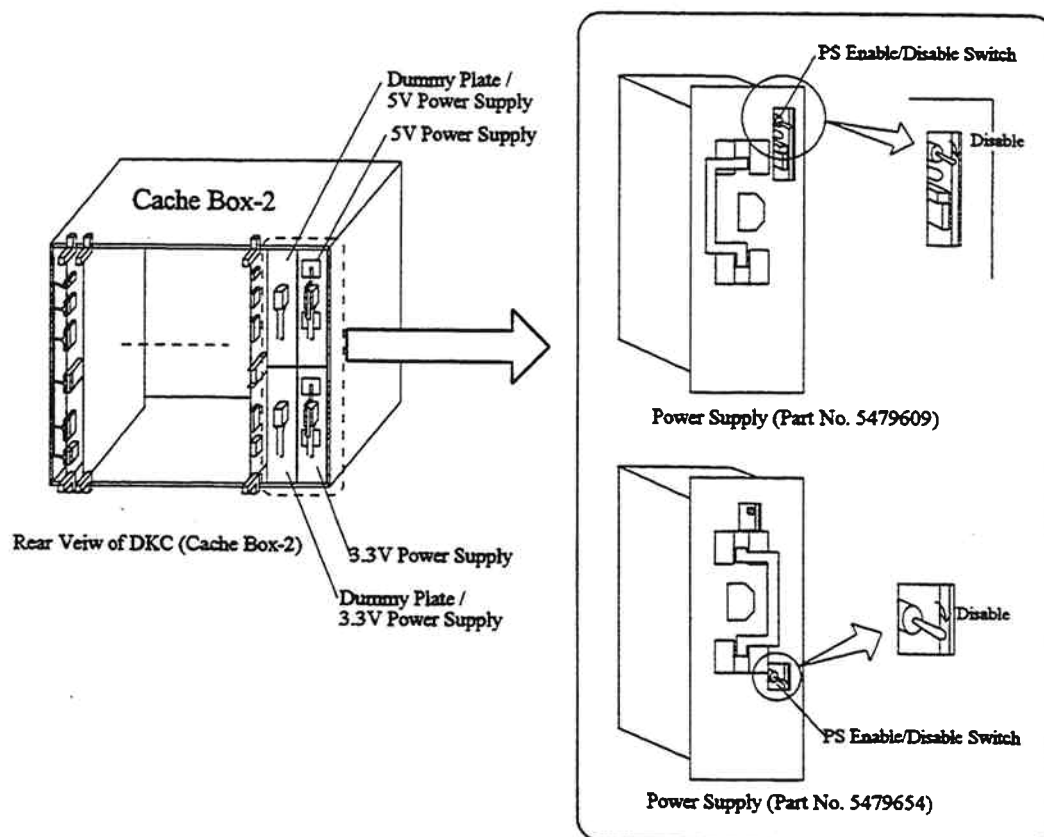
1. Check that the Shut Down LED of CPM PCB (Logic Box slot no. T) is on. If not, connect the Shut Down Jumper to the Shut Down Connector. (only hot replace)



2. Remove the two screws and remove the CPM PCB (Logic Box slot no. T) main edge from the back board.
3. Remove the Shut Down Jumper if it is mounted.
4. Insert the CPM PCB main edge completely into the back board and fasten the two screws.
5. Change the jumper setting of jumper plug (JP3) for PWRCTL-1 from #5-#6 short to #4-#5 short. Also, change the settings for PWRCTL-2 from #2-#3 short to #1-#2 short and from #5-#6 short to #4-#5 short.

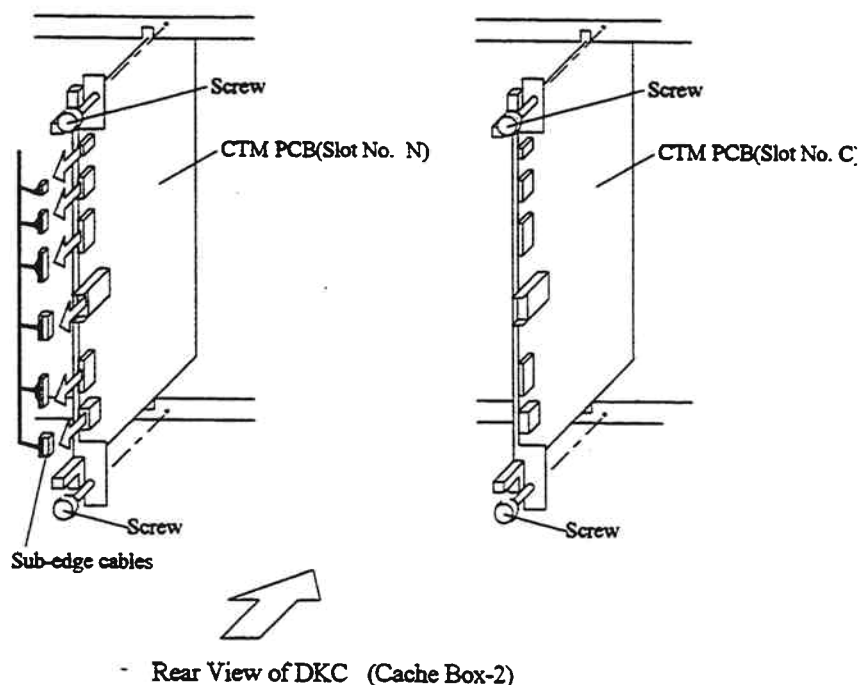


6. Set the PS Enable/Disable Switch on the 5V and 3.3V Power Supplies to Disable.



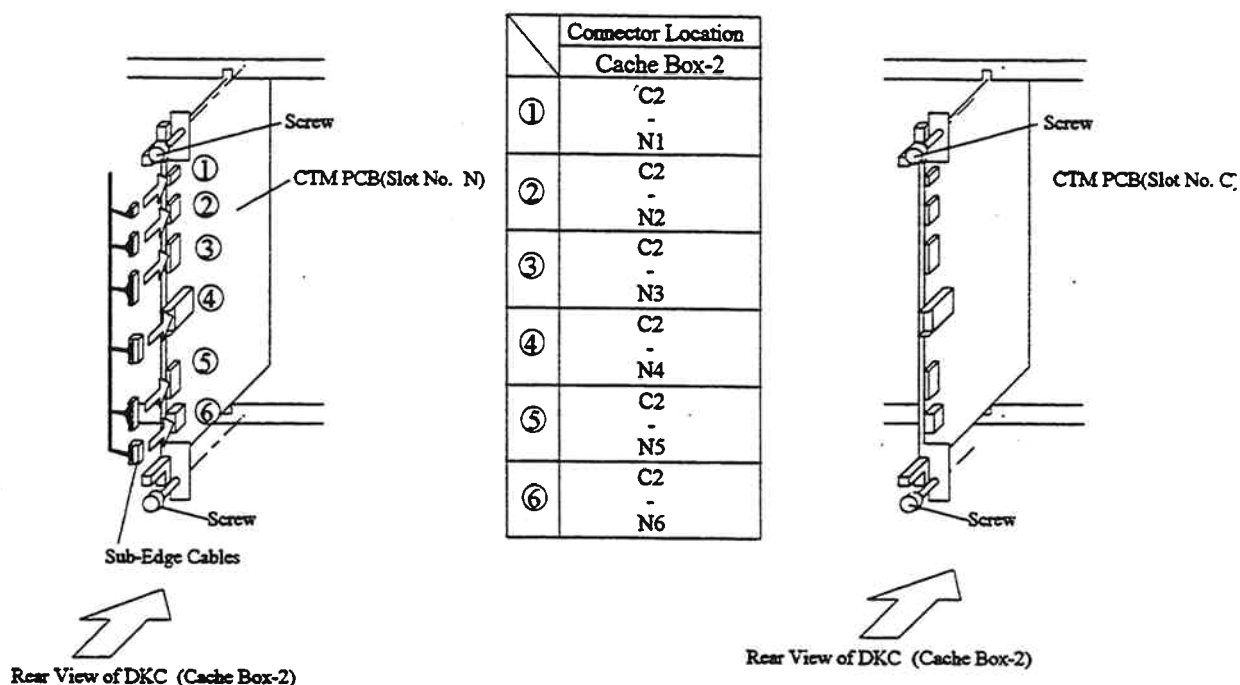
7. Remove the CTM PCB.

- If the Slot No. of the failed CTM PCB is N, disconnect the sub-edge cables from the PCB.
- Remove the screws and remove the failed CTM PCB.

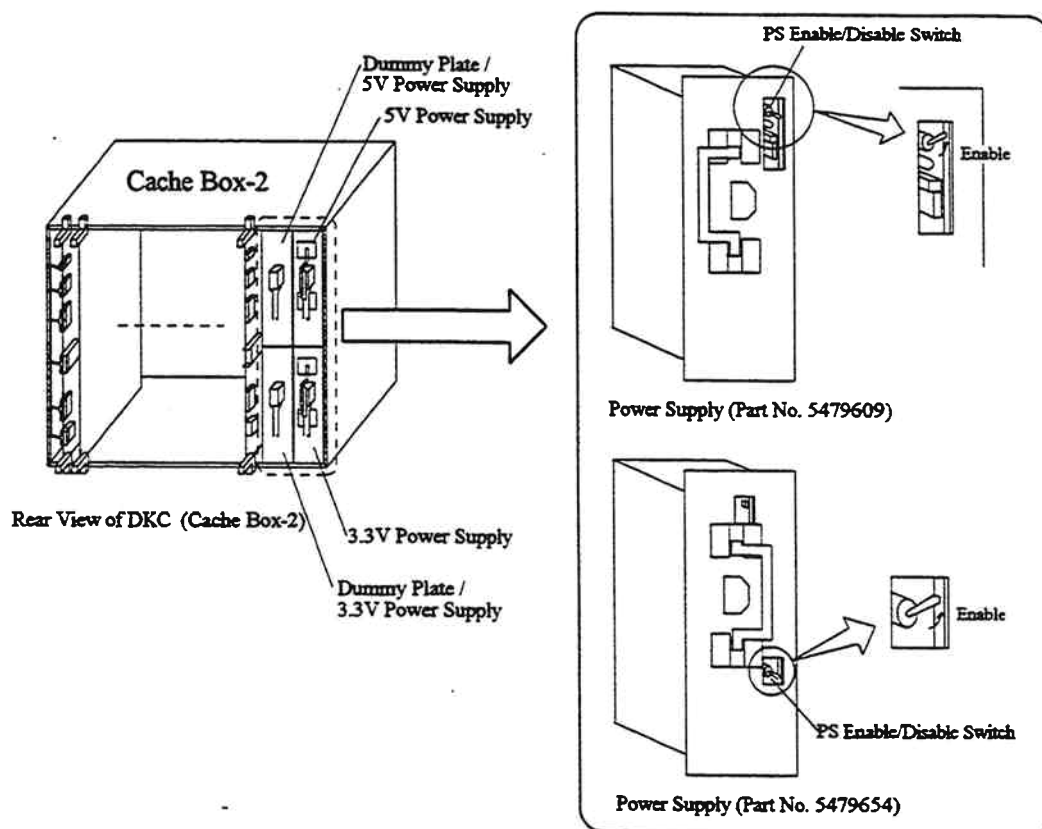


8. Insert the CTM PCB.

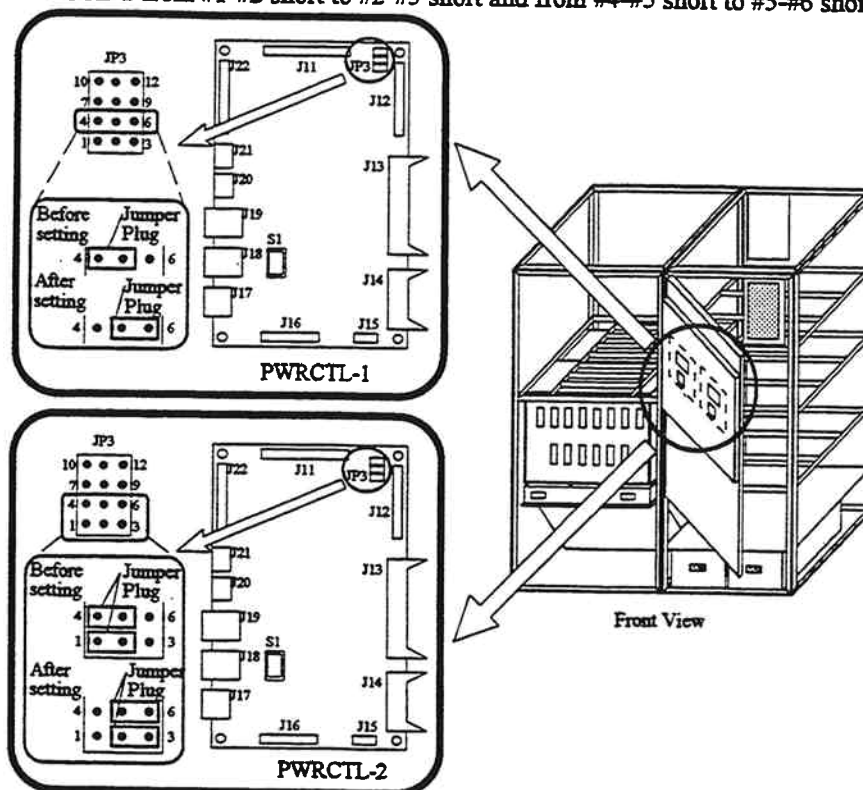
- a. Insert the spare CTM PCB and fasten the screws.
- b. If the Slot No. of the spare CTM PCB is N, connect the sub-edge cables to the PCB.



9. Set the PS Enable/Disable Switch on the 5V and 3.3V Power Supplies to Enable.



10. Change the jumper setting of jumper plug (JP3) for PWRCTL-1 from #4-#5 short to #5-#6 short. Also, change the settings for PWRCTL-2 from #1-#2 short to #2-#3 short and from #4-#5 short to #5-#6 short.



11. Go to SVP post procedure e [REP04-120].

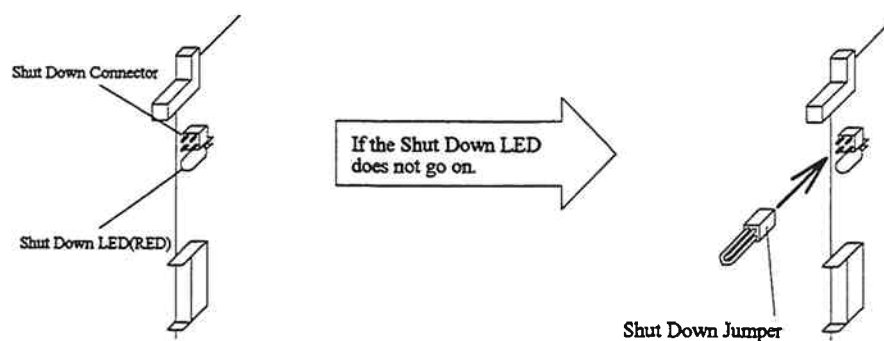
[HARDWARE P]

◆ CHA : SCSI

[Related Procedure]

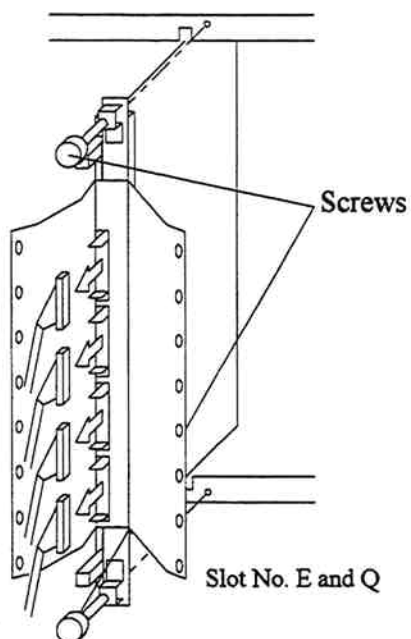
SVP procedure	Title & Sheet No.	Remarks
SVP pre-procedure	Pre-procedure AREP02-10	Refer to REP01-140.
	Pre-procedure HREP02-300	BUS blocking: pre A - pre J
	Pre-procedure JREP02-381	Others: pre A - pre H
SVP post-procedure	Post-procedure fREP04-150	Refer to REP01-140.
	Post-procedure iREP04-203	BUS blocking: post i Others: post f

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

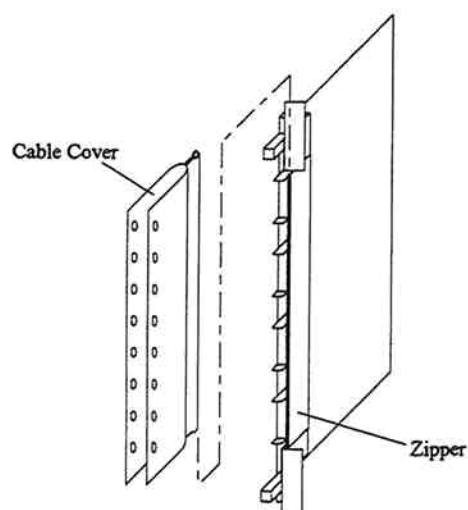


2. Remove the PCB.

- a. Disconnect the CH cables from the failed Channel Adapter PCB.
- b. Remove the two screws and remove the failed Channel Adapter PCB.
- c. If the Shut Down Jumper is used, remove it.



3. Remove the cable cover from the failed PCB, and then attach the cable cover to the spare PCB.



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

5. Connect the CH cables to the spare PCB. Then fix the cable cover with buttons.

6. Go to SVP post procedure.

BUS blocking: Go to post i [REP04-203].

Others: Go to post f [REP04-150].