

# ***INSTALLATION SECTION***

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# 1. Subsystem Configuration Outline

## 1.1 General Information

### 1.1.1 Model List

(1) Model list of DKC615I

Table 1.1.1-1 shows the model list of DKC615I.

Table 1.1.1-1 Model List of DKC615I

No.	Model Number	Model Name	Major Part	Remarks
1	DKC615I-5	Control Frame	<u>DKC Part</u> <ul style="list-style-type: none"> <li>• SVP × 1</li> <li>• DKCPANEL × 1</li> <li>• SSVP/MN × 1</li> <li>• DKC PS × 4</li> <li>• Battery Box × 2</li> <li>• DKC FAN (1) ASSY × 2</li> <li>• DKC FAN (2) ASSY × 2</li> <li>• LAN Cable × 2</li> <li>• MRP Cable × 2</li> <li>• Logic PL × 1</li> <li>• CSW(WP630-A) × 2</li> </ul>	This model name doesn't contain Power cables, Channel Adapters (CHA), Disk Adapter (DKA), Cache Memory (CM), Shared Memory(SM) and 19 inch Rack. *1
2	DKC-F615I-B2	Disk Chassis	<ul style="list-style-type: none"> <li>• HDD BOX × 2</li> <li>• DKUPS × 4</li> <li>• HDD PL × 2</li> <li>• FSW × 4</li> </ul>	
3	DKC-F615I-SBX	Additional SVP/Battery Chassis	<ul style="list-style-type: none"> <li>• SB BOX × 1</li> <li>• SBFAN × 1</li> <li>• SBADP × 1</li> </ul>	
4	DKC-F615I-UC0	Device Interface Cable (DKC to DKU-R0)	<ul style="list-style-type: none"> <li>• HSSDC Cable × 8</li> <li>• MRP Cable × 4</li> </ul>	
5	DKC-F615I-UC1	Device Interface Cable (DKU-R0 to DKU-R1)	<ul style="list-style-type: none"> <li>• HSSDC Cable × 8</li> <li>• MRP Cable × 4</li> </ul>	
6	DKC-F615I-EXC0	Device Interface Cable (DKU-R1 to DKU-R2)	<ul style="list-style-type: none"> <li>• HSSDC Cable × 8</li> <li>• MRP Cable × 4</li> </ul>	
7	DKC-F615I-LGAB	Additional Battery	<ul style="list-style-type: none"> <li>• Battery Box × 2</li> </ul>	*2

(To be continued)

\*1: SVP (Windows Vista is installed) corresponding to IPv6 is installed as a standard for products with the serial number of 35001 to 37999.

\*2: This option must be added based on the following specifications:

■ Add 1set of this option to DKC615I-5 when either of the following two conditions is met:

- Cache memory capacity is from 20GB to 64GB.
- Shared memory capacity is 10GB or more.

■ Add 1set of this option to DKC-F615I-SBX when cache memory capacity is 80GB or more. However, when the installing slot of the battery is vacant, the battery option can be added alone.

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No.	Model Number	Model Name	Major Part	Remarks
8	DKC-F615I-SX	Shared Memory Adapter	• WP652-A × 2	
9	DKC-F610I-CX	Cache Memory Adapter	• WP641-A × 2	
10	DKC-F610I-C4G	Cache Memory Module (4GB)	• SH454-C × 4	
11	DKC-F610I-C8G	Cache Memory Module (8GB)	• SH454-E × 4	
12	DKC-F610I-C16G	Cache Memory Module (16GB)	• SH454-G × 4	
13	DKC-F610I-S2GQ	Shared Memory Module (2GB)	• SH453-C × 4	
14	DKC-F610I-S4GQ	Shared Memory Module (4GB)	• SH453-E × 4	
15	DKC-F610I-DKA	Disk Adapter	• WP620-A × 1 SH444-A × 2 ] × 2	
16	DKC-F610I-EDKA	Encrypt Disk Adapter	• WP620-B × 1 SH444-A × 2 ] × 2	
17	DKC-F610I-8FS	Fibre 8-port Adapter (1-4Gbps)	• WP610-B × 1 SH444-A × 2 ] × 2	
18	DKC-F610I-16FS	Fibre 16-port Adapter (1-4Gbps)	• WP610-A × 1 SH444-A × 2 ] × 2	
19	DKC-F610I-8S	Serial 8-port Adapter	• WP612-A × 1 SH343-C × 2 ] × 2	
20	DKC-F610I-8MFS	Mainframe Fibre 8-port Adapter (Short Wavelength 1-4Gbps)	• WP611-A × 1 SH444-A × 2 ] × 2	
21	DKC-F610I-8MFL	Mainframe Fibre 4-port Adapter (Long Wavelength 1-4Gbps)	• WP611-B × 1 SH444-A × 2 ] × 2	
22	DKC-F610I-1FL	Fibre SFP Transceiver (Long Wavelength 4G)	• Transceiver for Fibre Long Wave × 1	
23	DKC-F610I-1FS	Fibre SFP Transceiver (Short Wavelength 4G)	• Transceiver for Fibre Short Wave × 1	
24	DKC-F610I-8US	Fibre 8-port Adapter (2-8Gbps)	• WP614-B × 1 SH444-B × 2 ] × 2	
25	DKC-F610I-1UL	Fibre SFP Transceiver (Long Wavelength 8G)	• Transceiver for Fibre Long Wave × 1	
26	DKC-F610I-1US	Fibre SFP Transceiver (Short Wavelength 8G)	• Transceiver for Fibre Short Wave × 1	
27	DKC-F615I-BCH	Bezel kit for HDS (DKC)	• Bezel (8U) × 1 • Bezel (2U) × 1	
28	DKC-F615I-BUH	Bezel kit for HDS (DKU)	• Bezel (6U) × 2	
29	DKC-F615I-BSH	Bezel kit for HDS (SVP/BAT)	• Bezel (2U) × 1	
30	DKC-F615I-BCP	Bezel kit for HP (DKC)	• Bezel (8U) × 1 • Bezel (2U) × 1	
31	DKC-F615I-BUP	Bezel kit for HP (DKU)	• Bezel (6U) × 2	
32	DKC-F615I-BSP	Bezel kit for HP (SVP/BAT)	• Bezel (2U) × 1	

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No	Model Number	Model Name	Major Part	Remarks
33	DKC-F615I-BCS	Bezel kit for SUN (DKC)	<ul style="list-style-type: none"> <li>• Bezel (8U) × 1</li> <li>• Bezel (2U) × 1</li> </ul>	
34	DKC-F615I-BUS	Bezel kit for SUN (DKU)	<ul style="list-style-type: none"> <li>• Bezel (6U) × 2</li> </ul>	
35	DKC-F615I-BSS	Bezel kit for SUN (SVP/BAT)	<ul style="list-style-type: none"> <li>• Bezel (2U) × 1</li> </ul>	
36	DKC-F615I-FIS6	6U Filler Panel for SUN	<ul style="list-style-type: none"> <li>• Bezel (6U) × 1</li> <li>• Blank PNL (6U) ASSY × 1</li> </ul>	
37	DKC-F610I-SVP	SVP High Reliability Support Kit	<ul style="list-style-type: none"> <li>• SVP (XP) × 1</li> <li>• FDD (USB) × 1</li> </ul>	*3
38	DKC-F610I-SVPV	SVP High Reliability Support Kit (IPv6)	<ul style="list-style-type: none"> <li>• SVP (VISTA) × 1</li> <li>• FDD (USB) × 1</li> </ul>	*4
39	DKC-F610I-MDM	Modem Card Kit	<ul style="list-style-type: none"> <li>• MODEM Card</li> <li>• TEL Cable</li> <li>• MODEM Cable Coupler</li> <li>• CD-ROM (Driver)</li> </ul>	
40	DKC-F610I-IPV6	IPv6 Upgrade Kit	<ul style="list-style-type: none"> <li>• Windows Vista Business</li> <li>• DVD-R × 1</li> <li>• FD × 2</li> </ul>	
41	DKC-F615I-PLUC	DKC Power Cord Kit (1-phase 10A for USA)	<ul style="list-style-type: none"> <li>• Power Cord × 4</li> </ul>	
42	DKC-F615I-PHUC	DKU Power Cord Kit (1-phase 10A for USA)	<ul style="list-style-type: none"> <li>• Power Cord × 8</li> </ul>	
43	DKC-F615I-PLEC	DKC Power Cord Kit (1-phase 10A for Europe)	<ul style="list-style-type: none"> <li>• Power Cord × 4</li> </ul>	
44	DKC-F615I-PHEC	DKU Power Cord Kit (1-phase 10A for Europe)	<ul style="list-style-type: none"> <li>• Power Cord × 8</li> </ul>	
45	DKC-F605I-72KS	1 HDD Canister (72GB/15kmin <sup>-1</sup> /4G-FC) (Multi vendor)	<ul style="list-style-type: none"> <li>• HDU600-72KSFC × 1</li> </ul>	
46	DKC-F605I-146KS	1 HDD Canister (146GB/15kmin <sup>-1</sup> /4G-FC) (Multi vendor)	<ul style="list-style-type: none"> <li>• HDU600-146KSFC × 1</li> </ul>	

(To be continued)

\*3: Unable to use this option for DKC615I-5 with SVP corresponding to IPv6 installed. However, it is able to use this option with DKC-F610I-IPV6 installed.

\*4: Unable to use this option for DKC615I-5 with non-IPv6-compliant SVP installed.

(Continued from the preceding page)

No	Model Number	Model Name	Major Part	Remarks
47	DKC-F605I-300JS	1 HDD Canister (300GB/10kmin <sup>-1</sup> /2G-FC) (Multi vendor)	• HDU600-300JSFC × 1	
48	DKC-F605I-300KM	1 HDD Canister (300GB/15kmin <sup>-1</sup> /4G-FC) (Multi vendor)	• HDU600-300KMFC × 1	
49	DKC-F605I-300KS	1 HDD Canister (300GB/15kmin <sup>-1</sup> /4G-FC) (Seagate)	• HDU600-300KSFC × 1	
50	DKC-F605I-400JS	1 HDD Canister (400GB/10kmin <sup>-1</sup> /4G-FC) (Multi vendor)	• HDU600-400JSFC × 1	
51	DKC-F605I-450KS	1 HDD Canister (450GB/15kmin <sup>-1</sup> /4G-FC) (Multi vendor)	• HDU600-450KSFC × 1	
52	DKC-F605I-600KS	1 HDD Canister (600GB/15kmin <sup>-1</sup> /4G-FC) (Multi vendor)	• HDU600-600KSFC × 1	
53	DKC-F605I-0R7HS	1 HDD Canister (750GB/7.2kmin <sup>-1</sup> /4G-FC) (Multi vendor)	• HDU600-0R7HSFC × 1	
54	DKC-F605I-1R0HS	1 HDD Canister (1TB/7.2kmin <sup>-1</sup> /4G-FC) (Multi vendor)	• HDU600-1R0HSFC × 1	
55	DKC-F605I-2R0HS	1 HDD Canister (2TB/7.2kmin <sup>-1</sup> /4G-FC) (Multi vendor)	• HDU600-2R0HSFC × 1	
56	DKC-F605I-72S1	1 SSD Canister (72GB/4G-FC)	• SSD600-72S1FC × 1	
57	DKC-F605I-146S1	1 SSD Canister (146GB/4G-FC)	• SSD600-146S1FC × 1	
58	DKC-F605I-200S1	1 SSD Canister (200GB/4G-FC)	• SSD600-200S1FC × 1	
59	DKC-F605I-400S1	1 SSD Canister (400GB/4G-FC)	• SSD600-400S1FC × 1	

## (2) Disk drive model

SVP displays each drive model as the following table.

Disk drive model	SVP screen	Available Back-end fibre Transfer Rate	FC/SATA HDD
SDT2A-S72FC	SDT2A-S072FC	2Gbps / 4Gbps	FC HDD
DKS2E-K72FC	DKS2E-K072FC	2Gbps / 4Gbps	FC HDD
DKS2F-K72FD	DKS2F-K072FC	2Gbps / 4Gbps	FC HDD
DKS2G-K72FD	DKS2G-K072FC	2Gbps / 4Gbps	FC HDD
DKR2F-K72FC	DKR2F-K072FC	2Gbps / 4Gbps	FC HDD
DKR2G-K72FC	DKR2G-K072FC	2Gbps / 4Gbps	FC HDD
DKR2J-K72FD	DKR2J-K072FC	2Gbps / 4Gbps	FC HDD
SDT2A-S146FC	SDT2A-S146FC	2Gbps / 4Gbps	FC HDD
DKS2E-K146FC	DKS2E-K146FC	2Gbps / 4Gbps	FC HDD
DKS2F-K146FC	DKS2F-K146FC	2Gbps / 4Gbps	FC HDD
DKS2G-K146FD	DKS2G-K146FC	2Gbps / 4Gbps	FC HDD
DKR2F-K146FC	DKR2F-K146FC	2Gbps / 4Gbps	FC HDD
DKR2G-K146FC	DKR2G-K146FC	2Gbps / 4Gbps	FC HDD
DKR2J-K146FD	DKR2J-K146FC	2Gbps / 4Gbps	FC HDD
SDT2A-S200FC	SDT2A-S200FC	2Gbps / 4Gbps	FC HDD
SDT2C-S200FC	SDT2C-S200FC	2Gbps / 4Gbps	FC HDD
DKS2D-J300FC	DKS2D-J300FC	2Gbps	FC HDD
DKR2F-J300FC	DKR2F-J300FC	2Gbps	FC HDD
DKR2G-J300FC	DKR2G-J300FC	2Gbps	FC HDD
DKR2J-J300FC	DKR2J-J300FC	2Gbps	FC HDD
DKS2E-K300FC	DKS2E-K300FC	2Gbps / 4Gbps	FC HDD
DKS2F-K300FC	DKS2F-K300FC	2Gbps / 4Gbps	FC HDD
DKS2G-K300FC	DKS2G-K300FC	2Gbps / 4Gbps	FC HDD
DKR2G-K300FC	DKR2G-K300FC	2Gbps / 4Gbps	FC HDD
DKR2H-K300FC	DKR2H-K300FC	2Gbps / 4Gbps	FC HDD
DKR2J-K300FC	DKR2J-K300FC	2Gbps / 4Gbps	FC HDD
SDT2A-S400FC	SDT2A-S400FC	2Gbps / 4Gbps	FC HDD
SDT2C-S400FC	SDT2C-S400FC	2Gbps / 4Gbps	FC HDD
DKS2E-J400FC	DKS2E-J400FC	2Gbps / 4Gbps	FC HDD
DKS2G-J400FD	DKS2G-J400FC	2Gbps / 4Gbps	FC HDD
DKS2F-K450FC	DKS2F-K450FC	2Gbps / 4Gbps	FC HDD
DKS2G-K450FC	DKS2G-K450FC	2Gbps / 4Gbps	FC HDD
DKR2H-K450FC	DKR2H-K450FC	2Gbps / 4Gbps	FC HDD
DKR2J-K450FC	DKR2J-K450FC	2Gbps / 4Gbps	FC HDD
DKS2G-K600FC	DKS2G-K600FC	2Gbps / 4Gbps	FC HDD
DKR2J-K600FC	DKR2J-K600FC	2Gbps / 4Gbps	FC HDD

(To be continued)

(Continued from the preceding page)

Disk drive model	SVP screen	Available Back-end fibre Transfer Rate	FC/SATA HDD
DKS2A-H0R7AT	DKS2A-H0R7AT	2Gbps / 4Gbps	SATA HDD
DKR2B-H0R7AT	DKR2B-H0R7AT	2Gbps / 4Gbps	SATA HDD
DKR2C-H0R7AD	DKR2C-H0R7AT	2Gbps / 4Gbps	SATA HDD
DKR2D-H0R7AD	DKR2D-H0R7AT	2Gbps / 4Gbps	SATA HDD
DKR2B-H1R0AT	DKR2B-H1R0AT	2Gbps / 4Gbps	SATA HDD
DKR2C-H1R0AD	DKR2C-H1R0AT	2Gbps / 4Gbps	SATA HDD
DKR2D-H1R0AD	DKR2D-H1R0AT	2Gbps / 4Gbps	SATA HDD
DKS2C-H2R0AT	DKS2C-H2R0AT	2Gbps / 4Gbps	SATA HDD
DKR2C-H2R0AT	DKR2C-H2R0AT	2Gbps / 4Gbps	SATA HDD
DKR2D-H2R0AT	DKR2D-H2R0AT	2Gbps / 4Gbps	SATA HDD

[Back-end Fibre (DKA-HDD) transfer rate and setting condition of disk type]

- When you set the Back-end Fibre (DKA-HDD) transfer rate to 4Gbps, you cannot set the disk type of which only 2Gbps is usable for the disk type connected to the DKA.
- The Back-end Fibre transfer rate can be changed by System Tuning.  
However, this operation requires PS OFF/ON. When the disk type of which only 2Gbps is usable is set to the DKA of the change target, you cannot change the Back-end Fibre (DKA-HDD) transfer rate.

## (3) SVP screen display and conversion table of option type names

## • SVP screen display of CHA

Model Number	SVP screen
DKC-F610I-8S	8S Serial 4ch-4mp
DKC-F610I-8MFS, DKC-F610I-8MFL	8M Mfibre 4ch-4mp
DKC-F610I-16FS	16FS Fibre 8ch-4mp
DKC-F610I-8FS	8FS Fibre 4ch-4mp
DKC-F610I-8US	8US Fibre 4ch-4mp

## • SVP screen display of DKA

Model Number	SVP screen
DKC-F610I-DKA	DKF 4MP
DKC-F610I-EDKA	EDKF 4MP

## • SVP screen display of Cache memory

Model Number	SVP screen	
DKC-F610I-C4G	CMG 2048 MByte (C4G)	*1
DKC-F610I-C8G	CMG 4096 MByte (C8G)	*1
DKC-F610I-C16G	CMG 8192 MByte (C16G)	*1

\*1: In the SVP screen, the capacity of each cluster is displayed.

## • SVP screen display of Shared memory

Model Number	SVP screen	
DKC-F610I-S2GQ	512MByte	*2
DKC-F610I-S4GQ	1024MByte	*2

\*2: In the SVP screen, the capacity of each sheet is displayed.

## 1.1.2 Configuration and number of necessary options

**NOTICE:**

1. When the number of CUs is added accompanying the HDD installation, there is a case that expansion of shared memory is required. If necessary, see [INST03-11A-10](#).
2. Required shared memory capacity is determined by cache memory capacity, the number of LDEV, and the kind of program product to apply. Furthermore, when connecting an external storage, required shared memory capacity differs.

### 1.1.2.1 Shared memory capacity and number of necessary options

Shared memory capacity and corresponding number of options required are shown in Table 1.1.2-1.

Table 1.1.2-1 Shared memory capacity and number of necessary options

Shared memory Capacity	Number of options			
	DKC-F610I- S2GQ	DKC-F610I- S4GQ	DKC-F610I- S2GQ/S4GQ Mix	DKC-F615I- LGAB
2 GB	1	—	—	—
4 GB	2	1	—	—
6 GB	3	—	—	—
8 GB	4	2	2/1	—
10 GB	—	—	1/2, 3/1	1
12 GB	—	3	2/2	1
14 GB	—	—	1/3	1
16 GB	—	4	—	1

### 1.1.2.2 Cache memory capacity and number of necessary options

Cache memory capacities and corresponding number of options required are shown in Table 1.1.2-2.

Table 1.1.2-2 Cache memory capacity and number of necessary options

Cache Memory Capacity	Number of options			
	DKC-F610I-C4G	DKC-F610I-C8G	DKC-F610I-C16G	DKC-F615I-LGAB
4 GB	1	—	—	—
8 GB	2	1	—	—
12 GB	3	—	—	—
16 GB	4	2	1	—
20 GB	5	—	—	1
24 GB	6	3	—	1
28 GB	7	—	—	1
32 GB	8	4	2	1
40 GB	—	5	—	1
48 GB	—	6	3	1
56 GB	—	7	—	1
64 GB	—	8	4	1
80 GB	—	—	5	2
96 GB	—	—	6	2
112 GB	—	—	7	2
128 GB	—	—	8	2

### 1.1.2.3 Relation between Shared Memory and Cache Memory

Required shared memory capacity is determined by cache memory capacity, the number of LDEV, and the kind of program product to apply.

For the details, refer to '7.2 Required SM Capacity and Installing Location of SM Module' ([INST07-20](#)).

### 1.1.2.4 Subsystem configurations and numbers of options required

#### 1. In case of the standard configuration that uses HDDs

The subsystem configuration and numbers of required options for each model are shown below.

The SBX-Chassis must be installed immediately above the DKC615I-5. So, it will be required to leave a 2U gap between the DKC and the DKU-RK0 if customers have possibility to install the 2nd SVP or to install cache memory is 80GB or more.

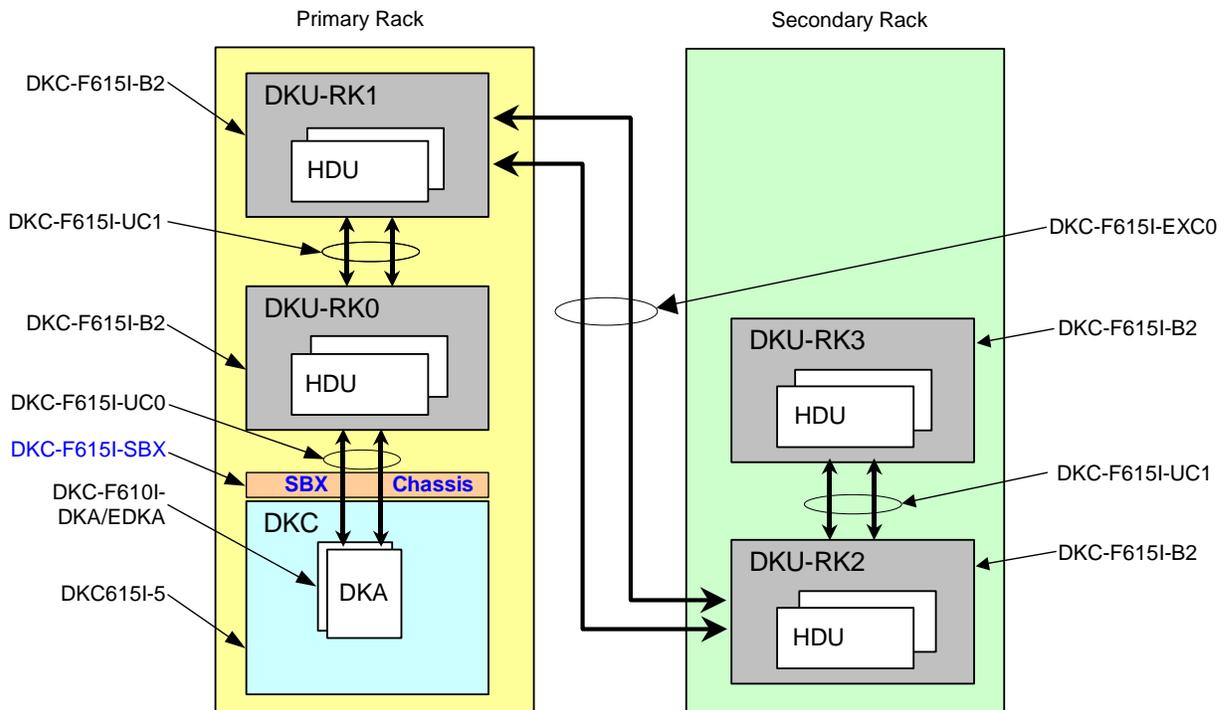


Fig. 1.1.2.4-1 Subsystem configurations and required device interface cable options

The rack layout and required options are shown in the following table.

Table 1.1.2.4-1 Frame layout and required options

No.	Required Number of Options								
	19-inch Rack		DKC615I-5	DKC-F615I-				DKC-F610I-DKA/EDKA	HDD/SSD *1
	Primary Rack	Secondary Rack		B2	UC0	UC1	EXC0		
1	1	—	1	1	1	0	0	1	60/32
2	1	—	1	2	1	1	0	1	120/32
3	1	1	1	3	1	1	1	1	180/32
4	1	1	1	4	1	2	1	1	240/32

\*1: The maximum number of installable HDDs includes the spare drive(s).

The maximum number of installable SSDs does not include the spare drive(s).

The maximum number of installable HDDs includes the SSDs.

## 2. In case of the diskless configuration

The subsystem configuration and numbers of required options for each model are shown below.

In case of the diskless configuration, always install DKC-F610I-DKA/EDKA.

The SBX-Chassis must be installed immediately above the DKC615I-5. So, it will be required to leave a 2U gap between the DKC and the DKC if customers have possibility to install the 2nd SVP or to install cache memory is 80GB or more.

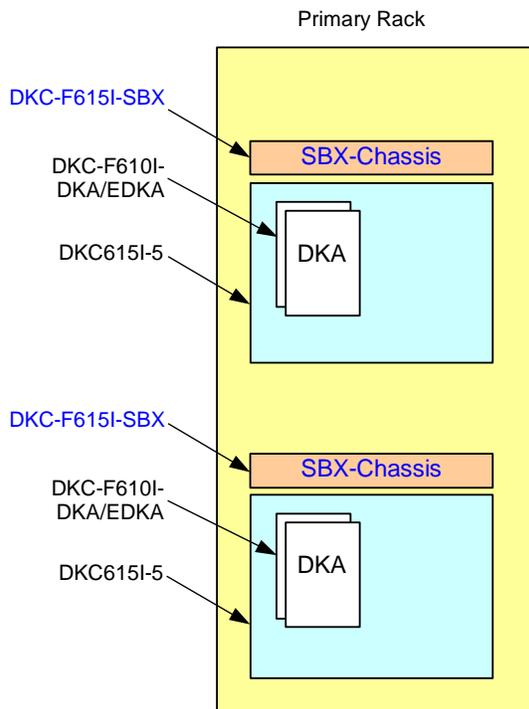


Fig. 1.1.2.4-2 Subsystem configurations

Required options are shown in the following table.

Table 1.1.2.4-2 Frame layout and required options

No.	Required Number of Options		
	DKC615I-5	DKC-F610I-DKA/EDKA	19-inch Rack
1	1	1	1
2	2	2	1

### 3. RAID Group Installation Order

#### (1) Order of HDD installation in Disk Chassis

It installs in "0E" in turn from HDD location "00".

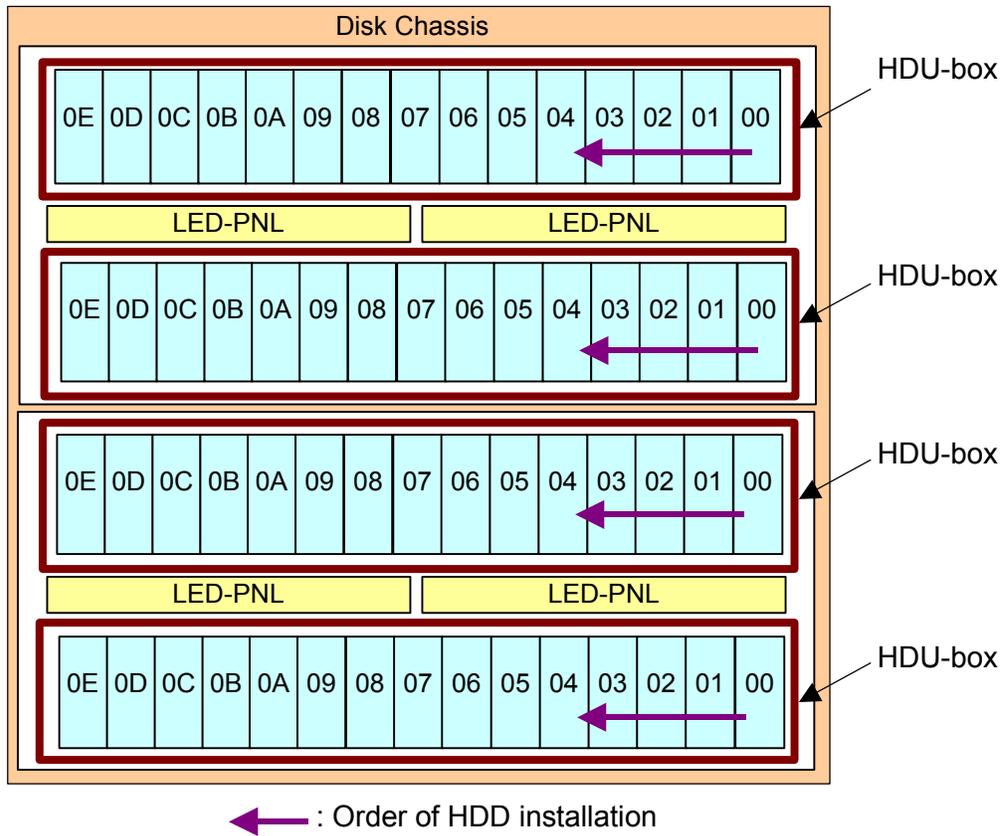


Fig. 1.1.2.4-3 HDD installation order to the HDU box

## (2) Order of HDD installation in the subsystem

The installation order of the Disk Chassis and HDDs that connects with DKA is as follows.

DKA → DKU-RK0 → DKU-RK1 → DKU-RK2 → DKU-RK3

The relation of connection of DKA to HDU in the disk chassis is shown in the following figure.

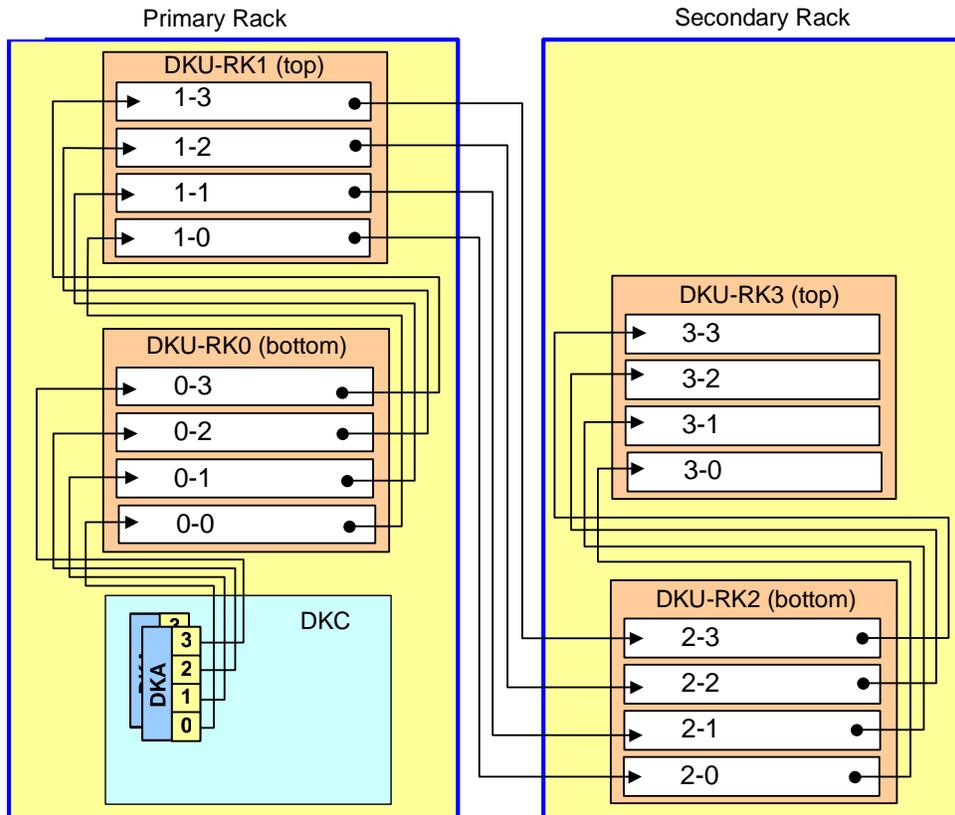


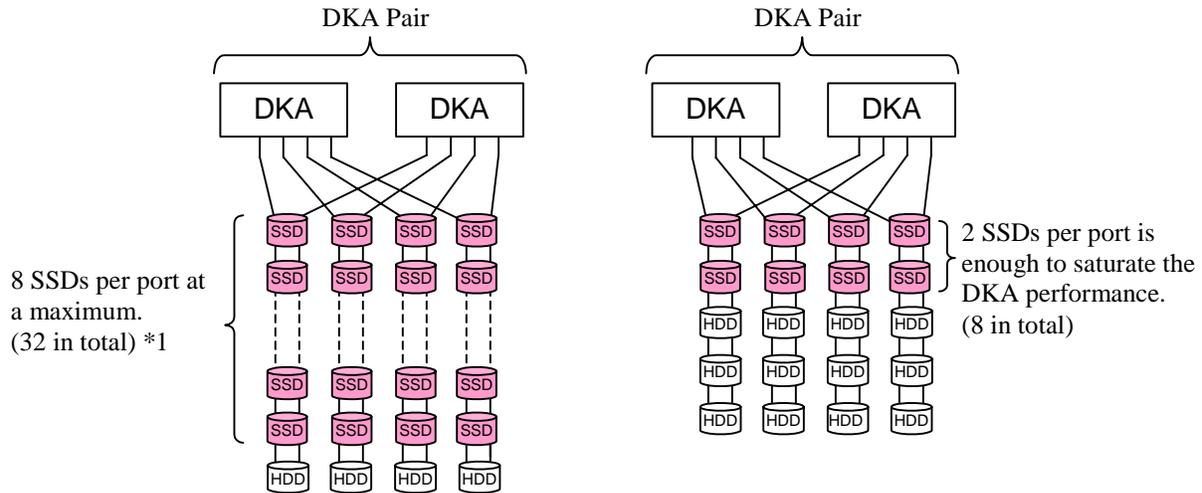
Fig. 1.1.2.4-4 Connection order of HDU

### 1.1.2.5 Notes for installing Flash Drives

Up to 8 Flash Drives (SSD) can be connected per 1 port in Disk Adapter (DKA). However, it is recommended to connect 2 Flash Drives or less if the performance is more important.

Flash Drive and HDD can be mixed, and the location to install Flash Drive is not restricted.

However, it is not recommended to connect Flash Drives to DKA set at a speed of 2Gbps because Flash Drives cannot achieve the specific performance of a high-speed response.



\*1: The number of spare drive is not included.

Fig. 1.1.2.5-1 Flash Drive Installing Specifications

### 1.1.3 Specifications

#### (1) Physical Specifications

The DKC615I physical specifications are shown in the following table:

Table 1.1.3-1 DKC615I Physical Specifications

No.	Model Number	Weight (kg)	Heat Output (kW)	Power Consumption (kVA)	Dimension (mm)			Air Flow (m <sup>3</sup> /min.)
					Width	Depth	Height	
1	DKC615I-5	70	0.291	0.300	455	800	438	4.3
2	DKC-F615I-B2	80.5	0.233	0.240	455	647	522	5.0
3	DKC-F615I-SBX	13	0.012	0.013	455	800	84	1.3
4	DKC-F615I-LGAB	11	0.015	0.015	—	—	—	—
5	DKC-F615I-BCH	2.6	—	—	—	—	—	—
6	DKC-F615I-BUH	3.2	—	—	—	—	—	—
7	DKC-F615I-BSH	0.7	—	—	—	—	—	—
8	DKC-F615I-BCP	8.7	—	—	—	—	—	—
9	DKC-F615I-BUP	14.2	—	—	—	—	—	—
10	DKC-F615I-BSP	3.2	—	—	—	—	—	—
11	DKC-F615I-BCS	2.6	—	—	—	—	—	—
12	DKC-F615I-BUS	3.2	—	—	—	—	—	—
13	DKC-F615I-BSS	0.7	—	—	—	—	—	—
14	DKC-F615I-FIS6	3.0	—	—	—	—	—	—
15	DKC-F615I-PLUC	2.0	—	—	—	—	—	—
16	DKC-F615I-PHUC	4.0	—	—	—	—	—	—
17	DKC-F615I-PLEC	1.5	—	—	—	—	—	—
18	DKC-F615I-PHEC	2.5	—	—	—	—	—	—
19	DKC-F615I-UC0	3.2	—	—	—	—	—	—
20	DKC-F615I-UC1	2.1	—	—	—	—	—	—
21	DKC-F615I-EXC0	6.2	—	—	—	—	—	—
22	DKC-F615I-SX	1.2	0.005	0.005	—	—	—	—
23	DKC-F610I-S2GQ	0.08	0.013	0.013	—	—	—	—
24	DKC-F610I-S4GQ	0.08	0.013	0.013	—	—	—	—
25	DKC-F610I-DKA	2.6	0.097	0.100	—	—	—	—
26	DKC-F610I-EDKA	2.6	0.099	0.102	—	—	—	—
27	DKC-F610I-CX	2.2	0.005	0.005	—	—	—	—
28	DKC-F610I-C4G	0.08	0.015	0.015	—	—	—	—
29	DKC-F610I-C8G	0.08	0.019	0.020	—	—	—	—
30	DKC-F610I-C16G	0.08	0.019	0.020	—	—	—	—
31	DKC-F610I-SVP	4.1	0.073	0.075	—	—	—	—
32	DKC-F610I-SVPV	4.1	0.073	0.075	—	—	—	—
33	DKC-F610I-MDM	0.07	0.006	0.006	—	—	—	—

(To be continued)

(Continued from the preceding page)

No.	Model Number	Weight (kg)	Heat Output (kW)	Power Consumption (kVA)	Dimension (mm)			Air Flow (m <sup>3</sup> /min.)
					Width	Depth	Height	
34	DKC-F610I-8FS	2.8	0.130	0.135	—	—	—	—
35	DKC-F610I-16FS	3.0	0.146	0.150	—	—	—	—
36	DKC-F610I-8S	2.7	0.146	0.150	—	—	—	—
37	DKC-F610I-8MFS	3.0	0.146	0.150	—	—	—	—
38	DKC-F610I-8MFL	3.0	0.146	0.150	—	—	—	—
39	DKC-F610I-1FL	0.02	—	—	—	—	—	—
40	DKC-F610I-1FS	0.02	—	—	—	—	—	—
41	DKC-F610I-8US	3.0	0.146	0.150	—	—	—	—
42	DKC-F610I-1UL	0.02	—	—	—	—	—	—
43	DKC-F610I-1US	0.02	—	—	—	—	—	—
44	DKC-F605I-72KS	0.9	0.020	0.021	—	—	—	—
45	DKC-F605I-146KS	0.9	0.020	0.021	—	—	—	—
46	DKC-F605I-300JS	0.9	0.020	0.021	—	—	—	—
47	DKC-F605I-300KM	0.9	0.020	0.021	—	—	—	—
48	DKC-F605I-300KS	0.9	0.020	0.021	—	—	—	—
49	DKC-F605I-400JS	0.9	0.020	0.021	—	—	—	—
50	DKC-F605I-450KS	0.9	0.020	0.021	—	—	—	—
51	DKC-F605I-600KS	0.9	0.020	0.021	—	—	—	—
52	DKC-F605I-0R7HS	0.9	0.018	0.019	—	—	—	—
53	DKC-F605I-1R0HS	0.9	0.019	0.020	—	—	—	—
54	DKC-F605I-2R0HS	0.9	0.019	0.020	—	—	—	—
55	DKC-F605I-72S1	0.5	0.010	0.011	—	—	—	—
56	DKC-F605I-146S1	0.5	0.010	0.011	—	—	—	—
57	DKC-F605I-200S1	0.5	0.013	0.014	—	—	—	—
58	DKC-F605I-400S1	0.5	0.013	0.014	—	—	—	—

### 1.1.4 Environmental Specifications

The environmental specifications are shown in the following table.

Item	Condition		
	Operating <sup>*1</sup>	Non-operation <sup>*2</sup>	Shipping & Storage <sup>*3</sup>
Temperature (°C)	16 to 32	-10 to 43	-25 to 60
Relative Humidity (%) <sup>*4</sup>	20 to 80	8 to 90	5 to 95
Max. Wet Bulb (°C)	26	27	29
Temperature Deviation (°C/hour)	10	10	20
Vibration <sup>*5</sup>	5 to 10Hz: 0.25mm 10 to 300Hz: 0.49m/s <sup>2</sup>	5 to 10Hz: 2.5mm 10 to 70Hz: 4.9m/s <sup>2</sup> 70 to 99Hz: 0.05mm 99 to 300Hz: 9.8m/s <sup>2</sup>	Sine Vibration: 4.9m/s <sup>2</sup> , 5min. <sup>*6</sup> At the resonant frequency with the highest displacement found between 3 to 100Hz
			Random Vibration: 0.147m <sup>2</sup> /s <sup>3</sup> , 30min, 5 to 100Hz <sup>*7</sup>
Shock	—	78.4m/s <sup>2</sup> , 15ms	Horizontal: Incline Impact 1.22m/s <sup>*8</sup>
			Vertical: Rotational Edge 0.15m <sup>*9</sup>
Altitude	-60 to 3,000m		—

- \*1: Environmental specification for operating condition should be satisfied before the disk subsystem is powered on. Maximum temperature of 32°C should be strictly satisfied at air inlet portion.  
Recommended temperature range is 21 to 24°C.
- \*2: Non-operating condition includes both packing and unpacking conditions unless otherwise specified.
- \*3: On shipping/storage condition, the product should be packed with factory packing.
- \*4: No condensation in and around the drive should be observed under any conditions.
- \*5: The above specifications of vibration apply to all three axes.
- \*6: See ASTM D999-01 The Methods for Vibration Testing of Shipping Containers.
- \*7: See ASTM D4728-01 Test Method for Random Vibration Testing of Shipping Containers.
- \*8: See ASTM D5277-92 Test Method for Performing Programmed Horizontal Impacts Using an Inclined Impact Tester.
- \*9: See ASTM D6055-96 Test Methods for Mechanical Handling of Unitized Loads and Large Shipping Cases and Crates.

## 1.1.5 Power requirement

Specifications of the power facilities necessary to supply power to the subsystem are shown below.

### 1. Input Voltage and Input Frequency Requirements

The input voltage and input frequency are as follows.

#### (1) Single phase AC input

Frequency	Input Voltages (AC)	Conditions	Tolerance (%)
60Hz ± 2Hz	200V, 208V or 230V	1 Phase 2 Wire + Ground	+6% or -8%
50Hz ± 3Hz	200V, 220V, 230V or 240V	1 Phase 2 Wire + Ground	+6% or -8%

This unit does not apply to IT power system.

#### (2) Circuit Breaker and Plug

Circuit breaker rating and the number of plugs are shown in the following table.

Primary Rack		Secondary Rack	
Rating	Number of Plug	Rating	Number of Plug
20A	4	20A	2 <sup>*1</sup> / 4 <sup>*2</sup>

\*1: When one Disk Chassis (DKC-F615I-B2) is installed.

\*2: When two Disk Chassis (DKC-F615I-B2) are installed.

### 2. Circuit Breaker and PDU

(1) Use PDU with the circuit breaker.

(2) When PDU without a circuit breaker is used.

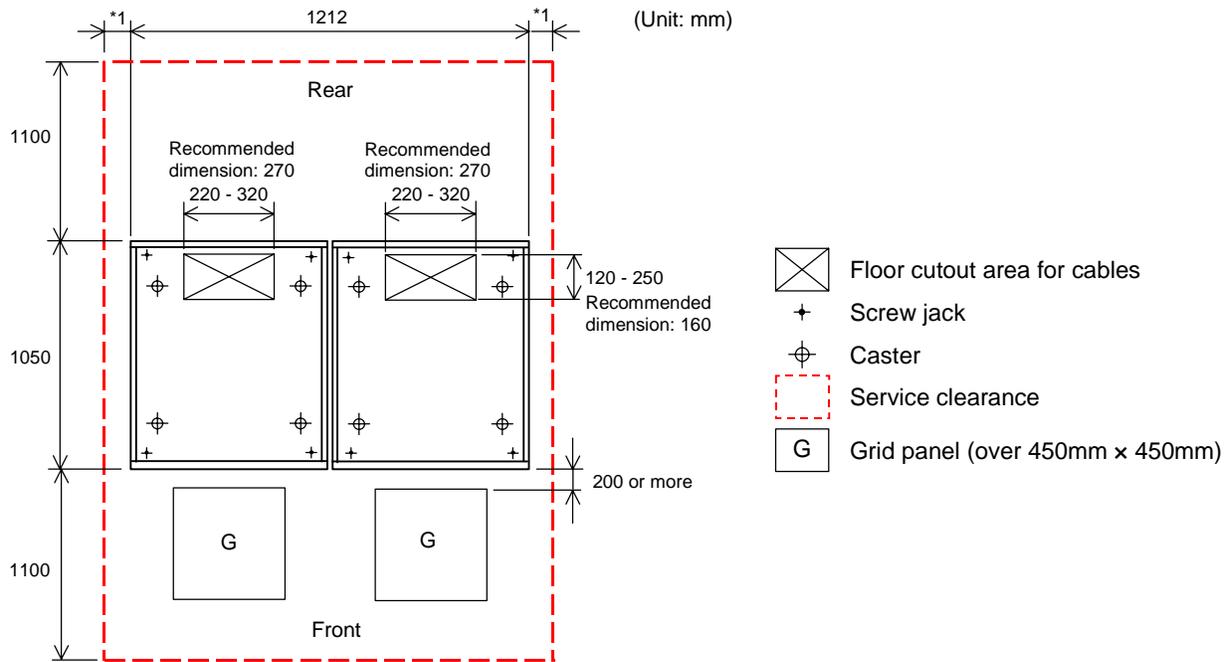
Circuit Breaker of the following rating is required to install in PDP.

- Circuit Breaker Rating : Max.20A

The power will be supplied to PDU via circuit breaker (Max.20A).



(2) Twin Rack Configuration



\*1: The proper side clearance dimensions should be secured corresponding to the 19-inch rack specifications.

Fig. 1.1.6-2 Service clearances and floor cutouts for twin rack configuration

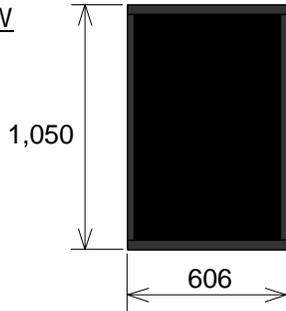
Blank Sheet

Blank Sheet

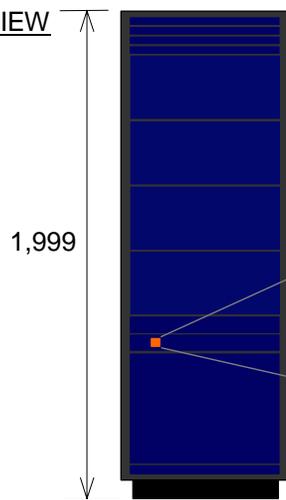
### 1.1.7 Layout

#### (1) DKC615I Layout

TOP VIEW



FRONT VIEW



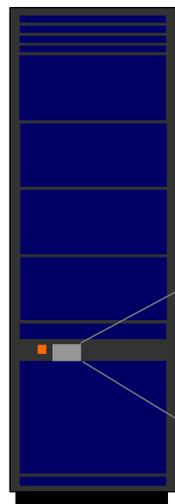
REAR VIEW



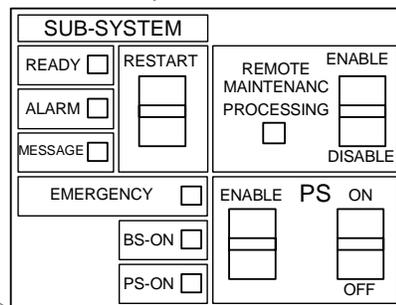
(Unit: mm)



FRONT VIEW



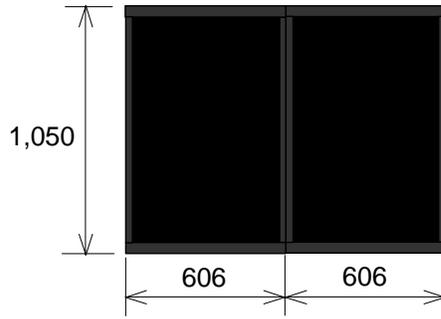
**Operator Panel**



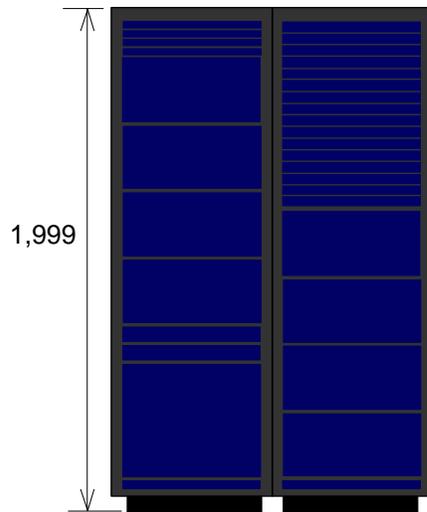
(2) Twin Rack Configuration of Disk Subsystem

TOP VIEW

(Unit: mm)



FRONT VIEW



### 1.1.8 Facility grounding check

The subsystem must meet all of the following three conditions of installation for GROUNDING.

- a. An insulated grounding conductor that is identical in size and insulation material and thickness to the grounded and ungrounded branch-circuit supply conductors. It should be green, with or without yellow stripes, and is to be installed as a part of the branch circuit that supplies the unit or system.
- b. The grounding conductor mentioned in item (a.), should be grounded to earth at the service equipment or other acceptable building earth ground such as the building frame in the case of a high rise steel-frame structure.
- c. The attachment-plug receptacles in the vicinity of the unit or system are all to be a grounding type. The grounding conductors serving these receptacles should be connected to earth ground at the service equipment or other acceptable building earth ground such as the building frame in the case of a high-rise steel-frame structure.

## 1.2 Drive Expansion Sequence

Caution of disk drive and flash drive installation

DKC615I supports disk drives (HDD) and flash drives (SSD) at data transfer rate of 2Gbps and 4Gbps, and the DKA must be set transfer rate to HDDs/SSDs in subsystem configuration.

DKC615I controls a maximum of 240 HDD by one DKA pair.

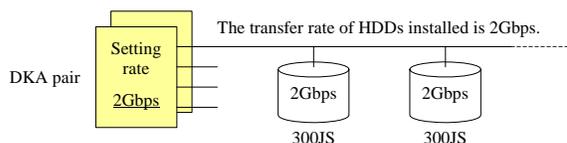
### 1. Caution in new installation

The rotation, data transfer rate of HDD/SSD, and setting data transfer rate of DKA supported in DKC615I, are shown in the following table.

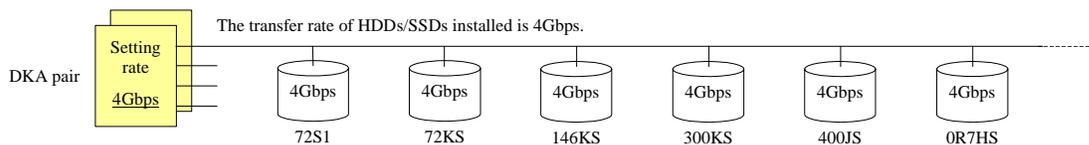
Possible transfer rate of each HDD/SSD type

Model Name	HDD/SSD	Capacity/Rotation	Date transfer rate	Setting data transfer rate of DKA	
				2Gbps	4Gbps
DKC-F605I-300JS	FC HDD	300GB/10kmin <sup>-1</sup>	2Gbps	Yes	No
DKC-F605I-72KS	FC HDD	72GB/15kmin <sup>-1</sup>	4Gbps	Yes	Yes
DKC-F605I-146KS	FC HDD	146GB/15kmin <sup>-1</sup>	4Gbps	Yes	Yes
DKC-F605I-300KM/300KS	FC HDD	300GB/15kmin <sup>-1</sup>	4Gbps	Yes	Yes
DKC-F605I-400JS	FC HDD	400GB/10kmin <sup>-1</sup>	4Gbps	Yes	Yes
DKC-F605I-450KS	FC HDD	450GB/15kmin <sup>-1</sup>	4Gbps	Yes	Yes
DKC-F605I-600KS	FC HDD	600GB/15kmin <sup>-1</sup>	4Gbps	Yes	Yes
DKC-F605I-0R7HS	SATA HDD	750GB/7.2kmin <sup>-1</sup>	4Gbps	Yes	Yes
DKC-F605I-1R0HS	SATA HDD	1TB/7.2kmin <sup>-1</sup>	4Gbps	Yes	Yes
DKC-F605I-2R0HS	SATA HDD	2TB/7.2kmin <sup>-1</sup>	4Gbps	Yes	Yes
DKC-F605I-72S1	SSD	72GB/—	4Gbps	Yes	Yes
DKC-F605I-146S1	SSD	146GB/—	4Gbps	Yes	Yes
DKC-F605I-200S1	SSD	200GB/—	4Gbps	Yes	Yes
DKC-F605I-400S1	SSD	400GB/—	4Gbps	Yes	Yes

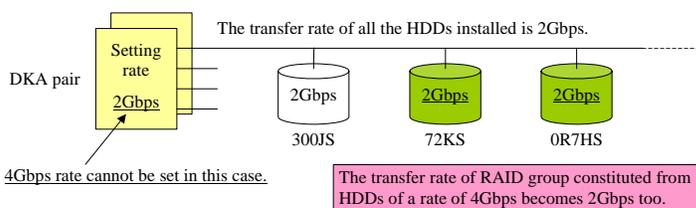
- The DKA is set rate as 2Gbps when only the HDDs of a transfer rate of 2Gbps are installed in it.



- The DKA is set rate as 4Gbps when only the HDDs/SSDs of a transfer rate of 4Gbps are installed in it.



- The DKA is set rate as 2Gbps when the HDDs of transfer rates of 2Gbps and 4Gbps are intermingled and installed.



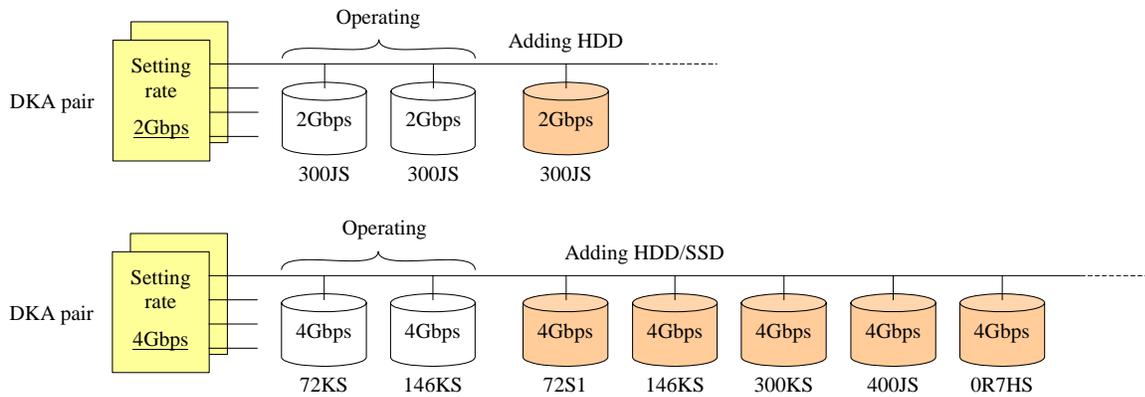
2. Caution of adding disk drives and flash drives

Take care about the following restriction matters when adding HDDs/SSDs at a different rate with the rate of operating DKA.

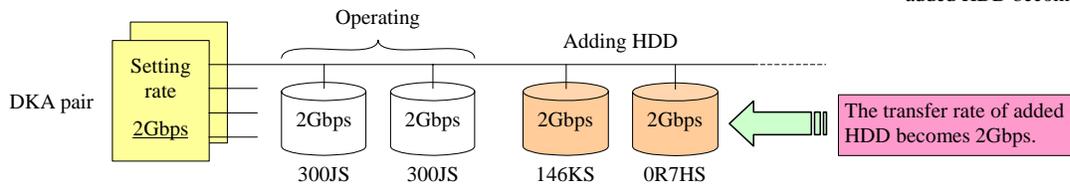
Relation between setting rate of operating DKA and added HDD/SSD

Case	Setting rate of DKA	Added HDD/SSD	Non-disruptive service	Rate after adding	Remarks
①	2Gbps	2Gbps	Yes	2Gbps	
②	4Gbps	4Gbps	Yes	4Gbps	
③	2Gbps	4Gbps	Yes	2Gbps	The transfer rate of added HDD is 2Gbps.
④	4Gbps	2Gbps	No	2Gbps	After PS-Off/On, the transfer rate of added HDD is 2Gbps.

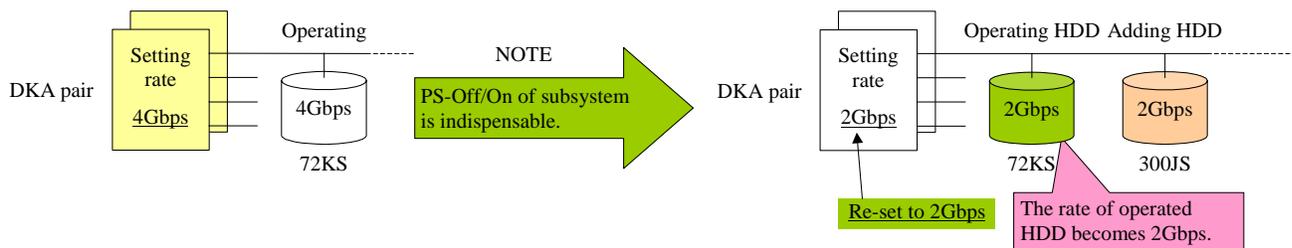
- It is possible to add HDD/SSD at the same rate as the setting rate of DKA during subsystem operation.



- It is possible to add HDD at a rate of 4Gbps to the DKA at a setting rate of 2Gbps during operation, but the transfer rate of added HDD becomes 2Gbps.



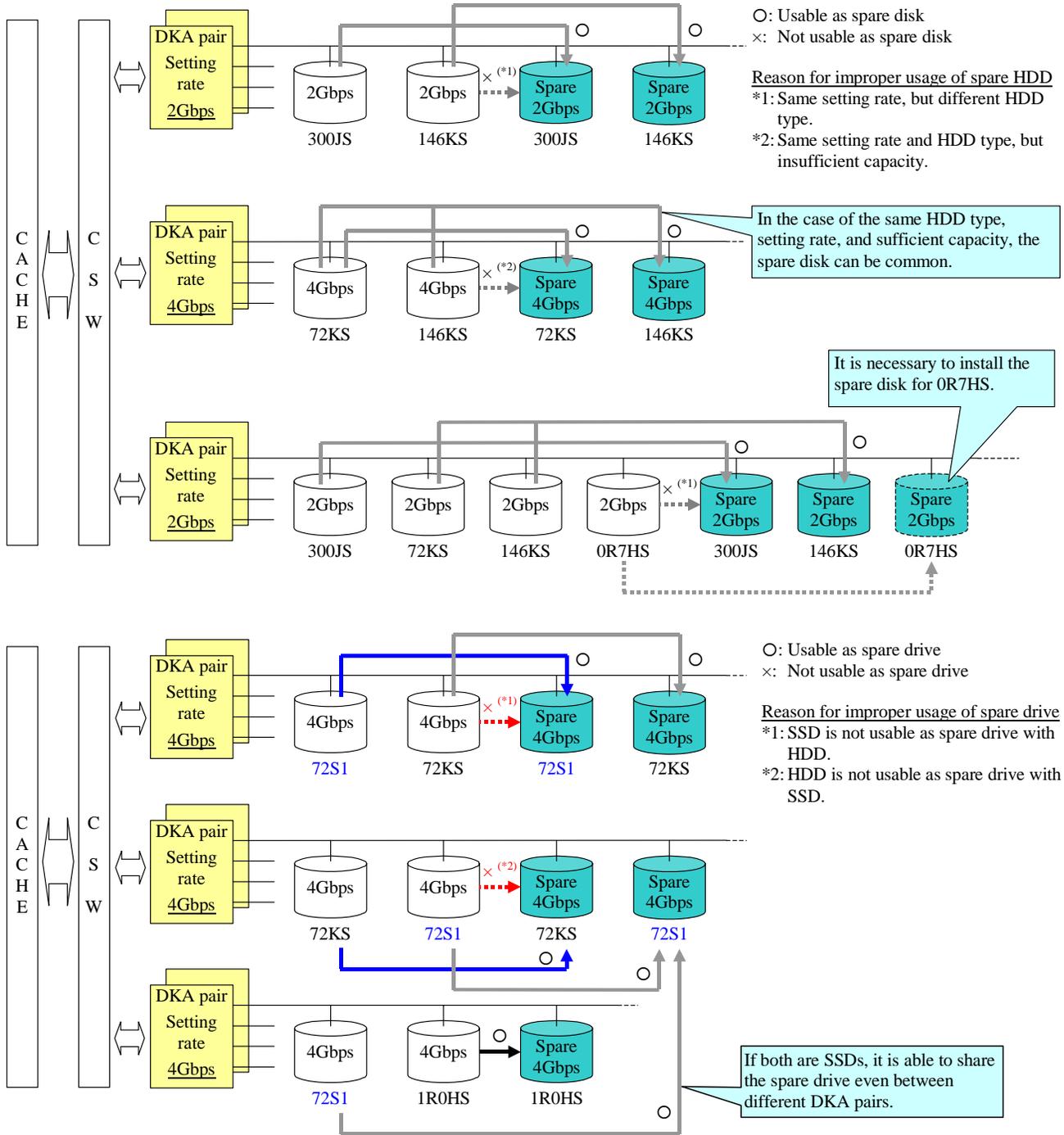
- It is impossible to add HDD at a rate of 2Gbps to the DKA at a setting rate of 4Gbps during operation. PS-Off/On of subsystem is indispensable.



Note: Non-disruptive service doesn't apply to the case of adding 2Gbps HDD to the DKA at a setting rate of 4Gbps.  
 Sequence: change rate of DKA to 2Gbps → PS-Off → PS-On → put 2Gbps HDD into the slot → operation.

3. Caution of spare disk installation

The HDD, which is usable as spare disk, must be the same type of HDD (rotation) and set as the same data transfer rate.



## 4. Recommended subsystem configuration

DKC615I controls a maximum of 240 HDD by one DKA pair.

When the disk drives of different types are intermixed within a subsystem according to customers' request, based on the features, such as performance, cost, etc. of each disk drive, the following installation rules are recommended.

- Intermingling of disk drives

Please do not make disk drive of a different transfer rate within a subsystem intermingled.

When disk drives connected to the same DKA at 2Gbps and 4Gbps transfer rate intermingle, all the disk drives connected to this DKA operate at a rate of 2Gbps.

- Installation of spare disks

Installing many <sup>\*1</sup> (more than 1) spare disks with the same type (rotation and data transfer rate) as RAID group per DKA is recommended. (\*1: 1 spare disk for 32 disk drives.)

- Adding to operating subsystem

When adding RAID group to operating subsystem, it is necessary to confirm the consistency between the transfer rate of added HDD and setting rate of DKA.

Table 1.2-1 Setting rate of DKA pair and type of installed HDD

DKA pair		300JS			72KS			146KS			300KM/ KS		400JS		450KS		600KS		Remarks
Setting rate	HDD	2G bps	2G bps	4G bps	2G bps	4G bps	2G bps	4G bps	2G bps	4G bps									
4Gbps	Data	×		●		○		○		○		○		○		○			
	Spare	×		●		○		○		○		○		○		○			
2Gbps	Data	●	○	□	○	□	○	□	○	□	○	□	○	□	○	□			
	Spare	●	○	□	○	□	○	□	○	□	○	□	○	□	○	□			
Installation number in total																			

DKA pair		0R7HS		1R0HS		2R0HS		72S1		146S1		200S1		400S1		Remarks
Setting rate	HDD	2G bps	4G bps													
4Gbps	Data		○		○		○		○		○		○		○	Impossible installation of 300JS
	Spare		○		○		○		○		○		○		○	
2Gbps	Data	○	□	○	□	○	□	○	□	○	□	○	□	○	□	The transfer rate of 72KS/146KS/ 300KM/300KS/400JS/450KS/ 600KS/0R7HS/1R0HS/2R0HS/72S1/ 146S1/200S1/400S1 is 2Gbps
	Spare	○	□	○	□	○	□	○	□	○	□	○	□	○	□	
Installation number in total																

(examples) ●: Installation finished  
 □: Transfer rate is 2Gbps

○: Possible installation  
 ×: Impossible installation

The order in which DKC-F605I-72KS/146KS/300JS/300KM/300KS/400JS/450KS/600KS/0R7HS/1R0HS/2R0HS/72S1/146S1/200S1/400S1 units are to be installed in Fig. 1.2-1 to Fig. 1.2-3.

In case of RAID1(4D+4D), two RAID groups of RAID1(2D+2D) are concatenated and composed. Each RAID1(2D + 2D) can be arranged under the control of an arbitrary DKA pair though the arrangement of each RAID1(2D+2D) is similar to below-mentioned RAID1(2D+2D).

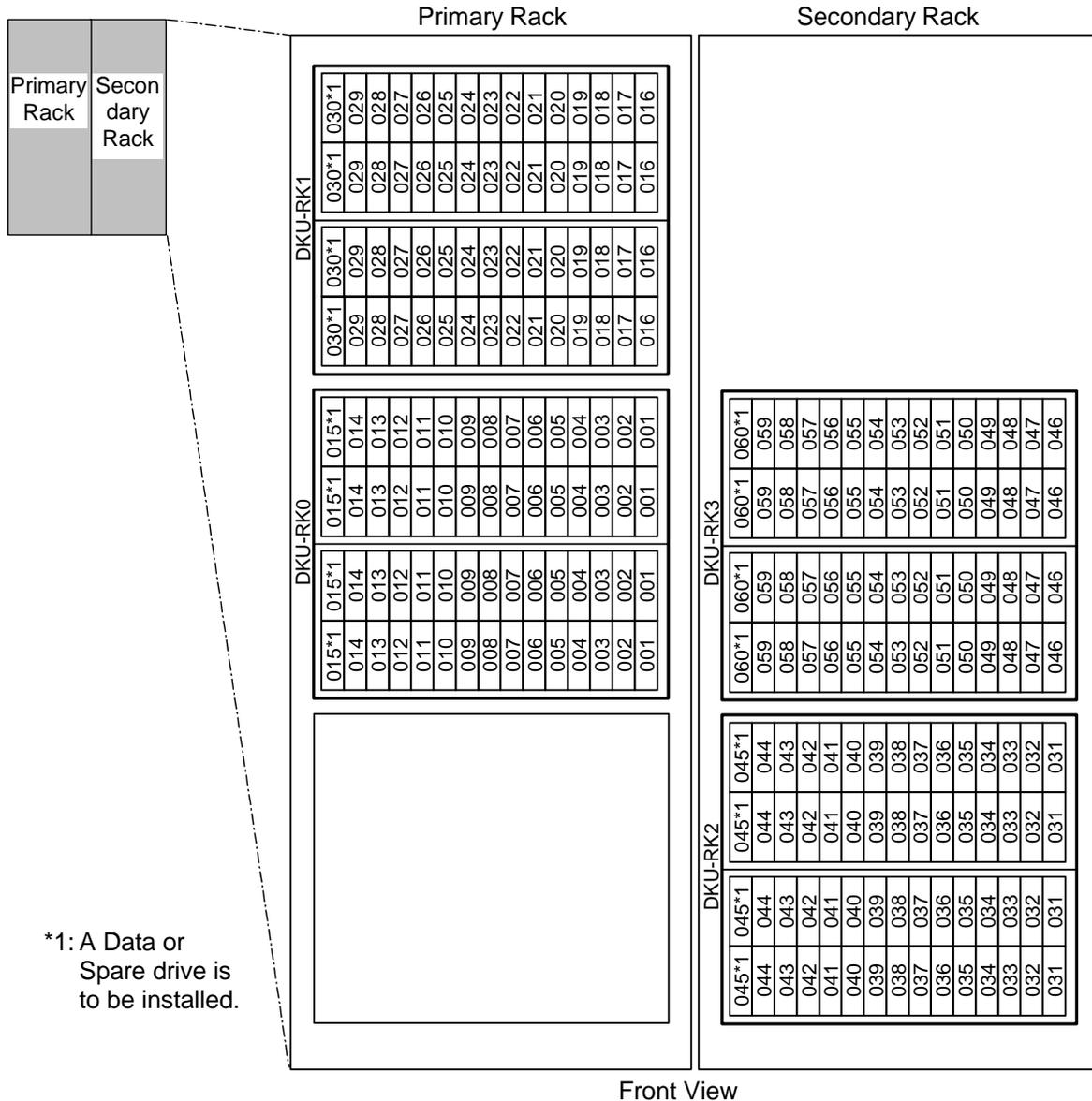
The source (7D+1P) can be arranged under the optional DKA pair as well as RAID1(4D+4D) for two concatenation and four concatenation of RAID5(7D+1P).

However, it is recommended to arrange it under the control of the same DKA pair because there is a possibility that the state of the load is different in each DKA pair.

No.	Model Number	Model Name	Remarks
1	DKC-F6051-72KS/146KS/300JS/300KM/300KS/400JS/450KS/600KS/0R7HS/1R0HS/2R0HS × 4	1 HDD Canister	
2	DKC-F6051-72S1/146S1/200S1/400S1 × 4	1 SSD Canister	(Note)

Note: Installable up to 32 SSDs at a maximum per subsystem  
(8 SSDs at a maximum per 1 port in DKA)

(1) RAID5 (3D+1P) / RAID1 (2D+2D)



The mounting forms of DKU-RKx differ by each customer site.

Fig. 1.2-1 (3D+1P/2D+2P) Data Drive/Parity Drive Expansion Sequence

The relationship between HDDs/SSDs installation order and RAID group number is shown in the Table 1.2-1.

Table 1.2-2 Relation between HDDs/SSDs installation order and RAID group number (3D+1P/2D+2D)

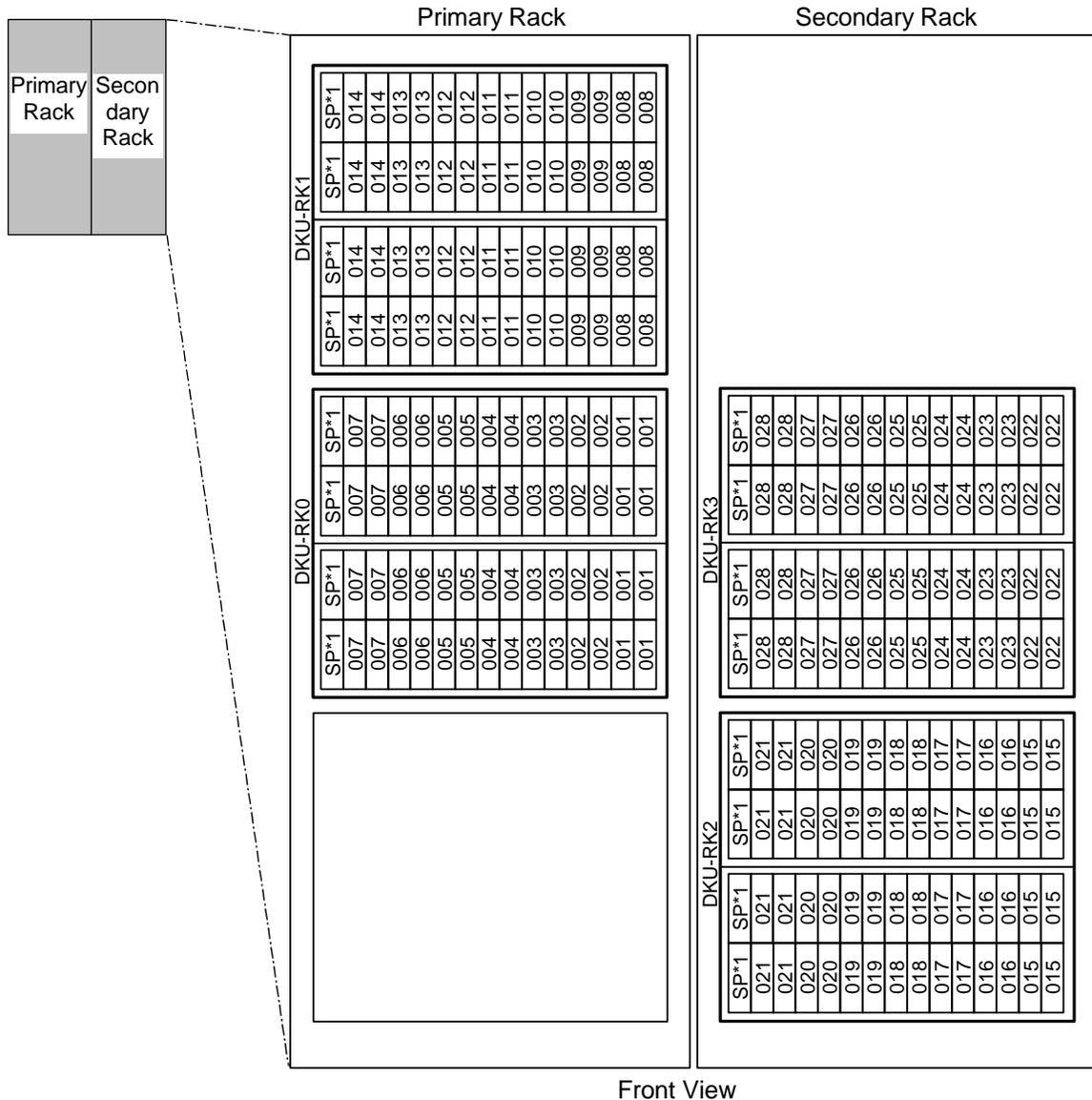
DKU-RK0		DKU-RK1		DKU-RK2		DKU-RK3	
Installation Order	RAID Group No.						
001	1-01	016	2-01	031	3-01	046	4-01
002	1-02	017	2-02	032	3-02	047	4-02
003	1-03	018	2-03	033	3-03	048	4-03
004	1-04	019	2-04	034	3-04	049	4-04
005	1-05	020	2-05	035	3-05	050	4-05
006	1-06	021	2-06	036	3-06	051	4-06
007	1-07	022	2-07	037	3-07	052	4-07
008	1-08	023	2-08	038	3-08	053	4-08
009	1-09	024	2-09	039	3-09	054	4-09
010	1-10	025	2-10	040	3-10	055	4-10
011	1-11	026	2-11	041	3-11	056	4-11
012	1-12	027	2-12	042	3-12	057	4-12
013	1-13	028	2-13	043	3-13	058	4-13
014	1-14	029	2-14	044	3-14	059	4-14
015 *1 (Spare)	1-15/ Spare	030 *1 (Spare)	2-15/ Spare	045 *1 (Spare)	3-15/ Spare	060 *1 (Spare)	4-15/ Spare

\*1: A data or spare drive is to be installed.

No.	Model Number	Model Name	Remarks
1	DKC-F6051-72KS/146KS/300JS/300KM/300KS/400JS/450KS/600KS/0R7HS/1R0HS/2R0HS × 8	1 HDD Canister	
2	DKC-F6051-72S1/146S1/200S1/400S1 × 8	1 SSD Canister	(Note)

Note: Installable up to 32 SSDs at a maximum per subsystem  
(8 SSDs at a maximum per 1 port in DKA)

(2) RAID5 (7D+1P) / RAID6 (6D+2P)



Front View

\*1: To be left vacant or spare drive is to be installed.

The mounting forms of DKU-RKx differ by each customer site.

Fig. 1.2-2 (7D+1P/6D+2P) Data Drive/Parity Drive Expansion Sequence

The relationship between HDDs/SSDs installation order and RAID group number is shown in the Table 1.2-2.

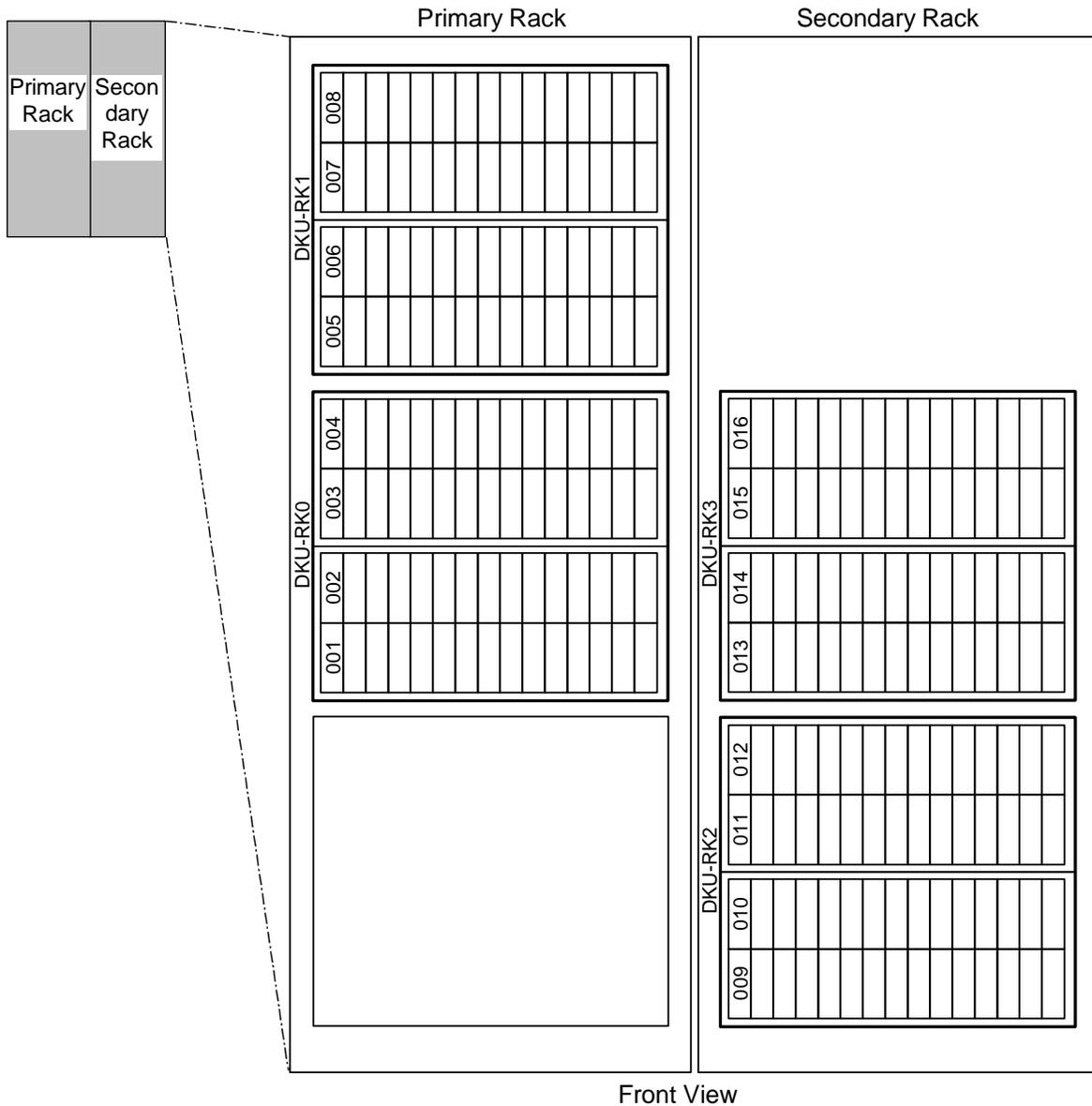
Table 1.2-3 Relation between HDDs/SSDs installation order and RAID group number (7D+1P/6D+2P)

DKU-RK0		DKU-RK1		DKU-RK2		DKU-RK3	
Installation Order	RAID Group No.						
001	1-01	008	2-01	015	3-01	022	4-01
002	1-03	009	2-03	016	3-03	023	4-03
003	1-05	010	2-05	017	3-05	024	4-05
004	1-07	011	2-07	018	3-07	025	4-07
005	1-09	012	2-09	019	3-09	026	4-09
006	1-11	013	2-11	020	3-11	027	4-11
007	1-13	014	2-13	021	3-13	028	4-13
Spare *1	Spare						

\*1: To be left vacant or spare drive is to be installed.

No.	Model Number	Model Name	Remarks
1	DKC-F605I-72KS/146KS/300JS/300KM/300KS/400JS/450KS/600KS/0R7HS/1R0HS/2R0HS × 1	1 HDD Canister	Spare Drive
2	DKC-F605I-72S1/146S1/200S1/400S1 × 1	1 SSD Canister	Spare Drive

(3) Spare Drive



Front View

The mounting forms of DKU-RKx differ by each customer site.

Fig. 1.2-3 Spare Drive Expansion Sequence (1/3)

Table 1.2-4 Relation between HDDs/SSDs installation order and Spare Drive number

DKU-RK0			DKU-RK1			DKU-RK2			DKU-RK3		
Installation Order	B4 No.	Spare drive No.	Installation Order	B4 No.	Spare drive No.	Installation Order	B4 No.	Spare drive No.	Installation Order	B4 No.	Spare drive No.
001	1st	Spare1	005	2nd	Spare1	009	3rd	Spare1	013	4th	Spare1
002	1st	Spare2	006	2nd	Spare2	010	3rd	Spare2	014	4th	Spare2
003	1st	Spare3	007	2nd	Spare3	011	3rd	Spare3	015	4th	Spare3
004	1st	Spare4	008	2nd	Spare4	012	3rd	Spare4	016	4th	Spare4

## 2. Installation and De-installation procedure

### 2.1 New Installation Procedure Table

Note: Perform the new installation in numerical order shown in the following table.  
Proceed to the next work neglecting unnecessary ones.

When installing Subsystem for the first time, perform all hardware installation procedures before initiating the installation through SVP procedure. Skip the next procedure when the procedure is not necessary.

If any problems arise during the following procedure, isolate failure part with analysis of SIM log or SSB log. If neither SIM log nor SSB log has been created, re-check the general procedure and see TROUBLE SHOOTING SECTION.

Precaution on New Installation

Table 2.1-1 New Installation Procedure Table

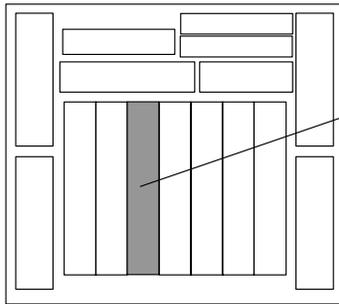
No.	Working Item	Model Number	Page
1	Unpacking and Inspection	—	<a href="#">INST03-02-10 through</a>
2	Rack Frame Installation	—	See frame installation manual.
3	Disk Subsystem Unit Installation (DKC615I-5)	←	<a href="#">INST03-04-10 through 150</a>
4	DKC Power Cord Kit Installation (DKC-F615I-PLUC/PLEC)	←	<a href="#">INST03-08-10 through 70</a>
5	Additional SVP/Battery Chassis Installation (DKC-F615I-SBX)	←	<a href="#">INST03-05-10 through 140</a>
6	Disk Chassis Installation (DKC-F615I-B2)	←	<a href="#">INST03-06-10 through 190</a>
7	DKU Power Cord Kit Installation (DKC-F615I-PHUC/PHEC)	←	<a href="#">INST03-08-80 through 180</a>
8	Channel Adapter Installation (DKC-F610I-8S/8FS/16FS/8US/8MFS/8MFL)	8S	<a href="#">INST03-09A-10 through 150</a> (Only Hardware Procedure)
		8FS/16FS/ 8US	<a href="#">INST03-09B-10 through 150</a> (Only Hardware Procedure)
		8MFS/8MFL	<a href="#">INST03-09C-10 through 150</a> (Only Hardware Procedure)

(To be continued.)

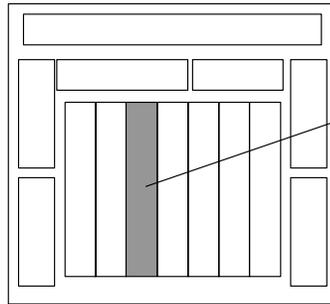
(Continued from preceding sheet.)

No.	Working Item	Model Number	Page
9	Changing of Fibre SFP Transceiver (DKC-F610I-1FL/1FS/1UL/1US)	←	<a href="#">INST03-10-10 through 80</a>
10	Shared memory Installation (DKC-F610I-S2GQ/S4GQ, DKC-F615I-SX/LGAB)	←	<a href="#">INST03-11A-10 through 370</a> (Only Hardware Procedure)
11	Cache memory Installation (DKC-F610I-CX/C4G/C8G/C16G, DKC-F615I-LGAB)	←	<a href="#">INST03-11B-10 through 310</a> (Only Hardware Procedure)
11A	Simultaneous Installation of Additional Shared Memory and Additional Cache Memory (DKC-F610I-S2GQ/S4GQ/CX/C4G/C8G/C16G, DKC-F615I-SX/LGAB)	←	<a href="#">INST03-11C-10 through 550</a> (Only Hardware Procedure)
12	DEV Interface Cable, Disk Adapter and HDD/SSD Canister Installation (DKC-F615I-UC0/UC1/EXC0, DKC-F610I-DKA/EDKA, DKC-F605I-72KS/146KS/300JS/300KM/300KS/400JS/450KS/600KS/OR7HS/1R0HS/2R0HS/72S1/146S1/200S1/400S1)	←	<a href="#">INST03-12-10 through 12B-630</a> (Only Hardware Procedure)
13	SVP High Reliability Support Kit and MODEM Card Installation (DKC-F610I-SVP/SVPV/MDM)	←	<a href="#">INST03-13-10 through 670</a> (Only Hardware Procedure)
14	Additional Battery Installation (DKC-F615I-LGAB)	←	<a href="#">INST03-14-10 through 100</a> (Only Hardware Procedure)
15	Filler Panel and Bezel Kit Installation (DKC-F615I-FIS6/BSS)	←	<a href="#">INST03-17-10 through 90</a>
16	SVP "New Installation" Procedure	—	<a href="#">INST02-280</a>
17	END	—	—

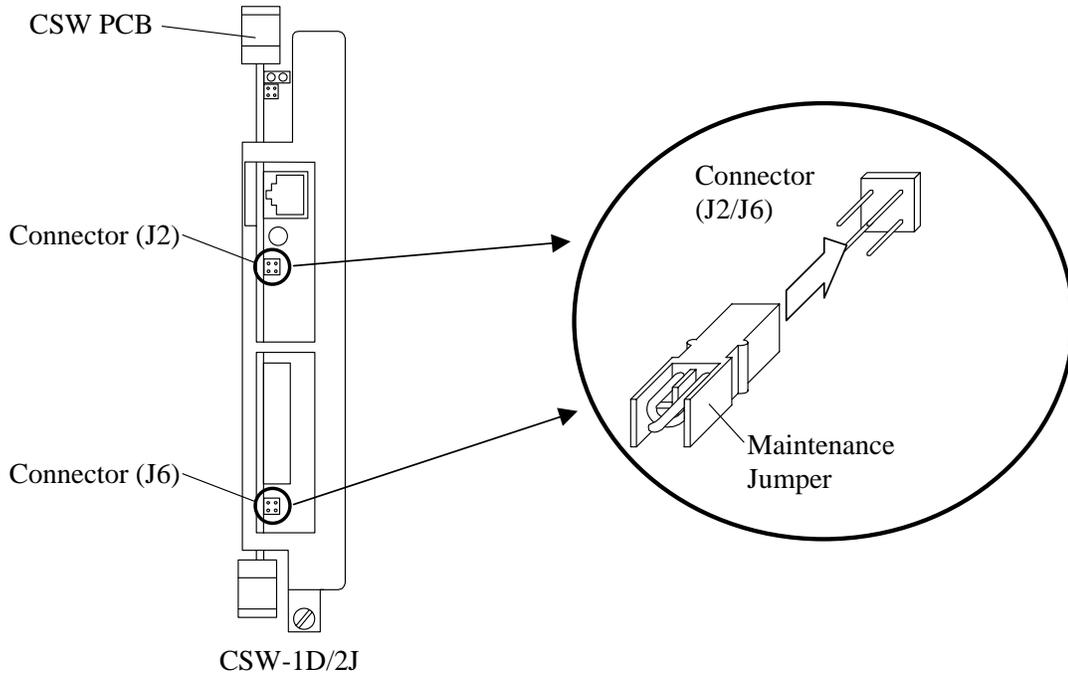
Note: The Maintenance Jumpers of the CE Mode Connectors (J2 and J6).



Front View of DKCBOX



Rear View of DKCBOX



## 2.2 Non-Disruptive Installation Procedure Table

Note: A serious failure will occur if the works are not done in numerical order shown in the table.

Perform the non-disruptive addition of the options in numerical order (from No.1 to No.17) shown in the table below. Neglect a unnecessary work and proceed to the next work.

Install additional non-disruptive options according to the flow shown below. This work is completed by installing additional hardware for each option and performing SVP-controlled installation.

If a fault occurs during or after additional installation, see [INST02-100](#) to locate a faulty unit and take action. If any other message than the list is displayed, see the SVP Message section.

### Precautions on Non-Disruptive Installation

- “Non-Disruptive” means that the subsystem is connected to the host (OS). Non-Disruptive Installation shall be done with the subsystem power ON. However, the subsystem may be disconnected from the host (OS).
- When the type of the CHAs is changed (e.g. from serial to fibre channel), de-install the old CHAs temporarily before installing new CHAs.

Table 2.2-1 Non-Disruptive Installation Procedure Table

No.	Working Item	Model Number	Page
1	Display the SVP initial screen	←	<a href="#">SVP01-10 through</a>
2	Confirm the micro-version	—	<a href="#">OPTVER01-10</a>
3	Control Frame Installation (DKC615I-5)	←	<a href="#">INST03-04-10 through 150</a>
4	DKC Power Cord Kit Installation (DKC-F615I-PLUC/PLEC)	←	<a href="#">INST03-08-10 through 70</a>
5	Shared memory Installation (DKC-F610I-S2GQ/S4GQ, DKC-F615I-SX/LGAB)	←	<a href="#">INST03-11A-10 through 370</a>
6	Channel Adapter Installation (DKC-F610I-8S/8FS/16FS/8US/8MFS/8MFL)	8S	<a href="#">INST03-09A-10 through 150</a>
		8FS/16FS/8US	<a href="#">INST03-09B-10 through 150</a>
		8MFS/8MFL	<a href="#">INST03-09C-10 through 150</a>

(To be continued.)

(Continued from preceding sheet.)

No.	Working Item	Model Number	Page
7	Changing of Fibre SFP Transceiver (DKC-F610I-1FL/1FS/1UL/1US)	←	INST03-10-10 through 80
8	Cache memory Installation (DKC-F610I-CX/C4G/C8G/C16G, DKC-F615I-LGAB)	←	INST03-11B-10 through 310
8A	Simultaneous Installation of Additional Shared Memory and Additional Cache Memory (DKC-F610I-S2GQ/S4GQ/CX/C4G/C8G/C16G, DKC-F615I-SX/LGAB)	←	INST03-11C-10 through 550
9	Rack Frame Installation	—	See frame installation manual.
10	Disk Chassis Installation (DKC-F615I-B2) Perform the installation of the Extension Rack, setting of the FSW jumper, setting of the DKUPS switch, and connection of the power cable.	←	INST03-06-10 through 190
11	DKU Power Cord Kit Installation (DKC-F615I-PHUC/PHEC)	←	INST03-08-80 through 180
12	POWER ON of Secondary Rack	—	INST03-15-40
Note	<b>Caution: When the addition of the Disk Chassis is accompanied, perform the work No.9 (Rack Frame Installation) and the work No.10 (Disk Chassis Installation) and the work No.11 (DKU Power Cord Kit Installation) and the work No.12 (POWER ON of Extension Rack) beforehand.</b>		
Note	<b>Check CU number and necessary shared memory capacity, and make sure whether expansion of shared memory is necessary (See INST07-20 ~ 110). If necessary, see INST03-11A-10.</b>		
Note	<b>If FC HDD and SATA HDD are concurrently installed, and LDEV Format is performed, the FC HDD is unavailable until Format of the SATA HDD is completed. In this case, install the HDDs separately, first the FC HDD, and then the SATA HDD. To identify FC HDD/SATA HDD, please refer to INST01-40.</b>		
Note	<b>For performing LDEV Format after installing an HDD, Quick Format can be selected. When Quick Format is performed, make sure that the system disk is already installed in the current configuration. (To check to see if the system disk is installed, refer to SVP03-260 through 340 (3.6.1 List of Group Information).)</b>		
13	DEV Interface Cable, DKA and HDD/SSD Canister Installation (DKC-F615I-UC0/UC1/EXC0, DKC-F610I-DKA/EDKA, DKC-F605I-72KS/146KS/300JS/300KM/300KS/400JS/450KS/600KS/0R7HS/1R0HS/2R0HS/72S1/146S1/200S1/400S1)	←	INST03-12-10 through 12B-630
14	SVP High Reliability Support Kit and MODEM Card Installation (DKC-F610I-SVP/SVPV/MDM)	←	INST03-13-10 through 670
15	Additional Battery Installation (DKC-F615I-LGAB)	←	INST03-14-10 through 100
16	IPv6 Upgrade Kit Installation (DKC-F610I-IPV6)	←	INST03-18-10 through 250
17	Filler Panel and Bezel Kit Installation (DKC-F615I-FIS6/BSS)	←	INST03-17-10 through 90
18	END	—	—

## 2.3 Non-Disruptive De-installation Procedure Table

Note: A serious failure occurs if the works are not done in numerical order shown in the table.  
Perform the non-disruptive removal of the options in numerical order (from No.1 to No.15) shown in the table below. Neglect an unnecessary work and proceed to the next work.

This work is completed by removing hardware for each option and performing SVP-controlled removal.

When De-Installation has been all done, make sure that all the removed units are displayed as “empty” and that the other units are normal (See the STATUS Section).

If a fault occurs during or after removal, see [INST02-170](#) to locate a faulty unit and take action. If any other message than the list is displayed, see the SVP Message section.

### Precautions on Non-Disruptive De-Installation

- “Non-Disruptive” means that the subsystem is connected to the host (OS). Non-Disruptive De-Installation shall be done with the subsystem power ON. However, the subsystem may be disconnected from the host (OS).

Table 2.3-1 Non-Disruptive De-installation Procedure Table

No.	Working Item	Model Number	Page
1	Display the SVP initial screen	←	<a href="#">SVP01-10 through</a>
1A	Filler Panel and Bezel Kit De-Installation (DKC-F615I-FIS6/BSS)	←	<a href="#">INST04-11-10 through 90</a>
2	DEV Interface Cable, DKA and HDD/SSD Canister De-Installation (DKC-F615I-UC0/UC1/EXC0, DKC-F610I-DKA/EDKA, DKC-F605I-72KS/146KS/300JS/300KM/300KS/400JS/450KS/600KS/OR7HS/1R0HS/2R0HS/72S1/146S1/200S1/400S1)	←	<a href="#">INST04-01-10 through 01B-380</a>
Note	<b>Proceed to the work No.3 after performing the work No.2. The system goes down if the power supply of the Disk chassis to be removed in the work No.3 is turned off without performing an option removal work, that is, the work No.2.</b>		
3	Disk Chassis De-Installation (DKC-F615I-B2) <b>Turn off the power supply of the Disk chassis.</b>	←	<a href="#">INST04-02-10 through 130</a>
4	DKU Power Cord Kit De-Installation (DKC-F615I-PHUC/PHEC)	←	<a href="#">INST04-07-70 through 130</a>
5	Rack frame De-Installation <b>Turn off the main breaker of the Secondary Rack.</b>	—	See frame installation manual.
6	Shared memory De-Installation (DKC-F610I-S2GQ/S4GQ, DKC-F615I-SX/LGAB)	←	<a href="#">INST04-03A-10 through 390</a>
7	Cache memory De-Installation (DKC-F610I-CX/C4G/C8G/C16G, DKC-F615I-LGAB)	←	<a href="#">INST04-03B-10 through 300</a>
7A	4.3.3 Simultaneous De-Installation of Additional Shared Memory and Additional Cache Memory (DKC-F610I-S2GQ/S4GQ/CX/C4G/C8G/C16G, DKC-F615I-SX/LGAB)	←	<a href="#">INST04-03C-10 through 540</a>

(To be continued.)

(Continued from preceding sheet.)

No.	Working Item	Model Number	Page
8	Channel Adapter De-Installation (DKC-F610I-8S/8FS/16FS/8US/8MFS/8MFL)	8S	<a href="#">INST04-04A-10 through 150</a>
		8FS/16FS/ 8US	<a href="#">INST04-04B-10 through 150</a>
		8MFS/8MFL	<a href="#">INST04-04C-10 through 150</a>
9	Changing of Fibre SFP Transceiver (DKC-F610I-1FL/1FS/1UL/1US)	←	<a href="#">INST03-10-10 through 80</a>
10	IPv6 Upgrade Kit De-Installation (DKC-F610I-IPV6)	←	<a href="#">INST04-12-10 through 120</a>
11	SVP High Reliability Support Kit and MODEM Card De-Installation (DKC-F610I-SVP/SVPV/MDM)	←	<a href="#">INST04-09-10 through 250</a>
12	Additional Battery De-Installation (DKC-F615I-LGAB)	←	<a href="#">INST04-10-10 through 110</a>
13	Additional SVP/Battery Chassis De-Installation (DKC-F615I-SBX)	←	<a href="#">INST04-06-10 through 130</a>
14	DKC Power Cord Kit De-Installation (DKC-F615I-PLUC/PLEC)	←	<a href="#">INST04-07-10 through 60</a>
15	Control Frame De-Installation (DKC615I-5)	←	<a href="#">INST04-05-10 through 130</a>
16	END	—	—

## 2.4 Disruptive Installation Procedure Table

Note: Perform the disruptive de-installation of options in numerical order shown in the following table. Proceed to the next work neglecting unnecessary ones.

If a fault occurs during or after additional installation, see [INST02-100](#) to locate a faulty unit and take action. If any other message than the list is displayed, see the SVP Message section.

### Precautions on Disruptive Installation

- “Disruptive” means that the subsystem is disconnected from the host (OS). Disruptive Installation shall be done with the subsystem power OFF.

Table 2.4-1 Disruptive Installation Procedure Table

No.	Working Item	Model Number	Page
1	Display the SVP initial screen	←	<a href="#">SVP01-10 through</a>
2	Confirm the micro-version		<a href="#">OPTVER01-10</a>
3	POWER OFF of Disk Subsystem	—	<a href="#">INST03-15-50 through 70</a>
4	POWER ON of Disk Subsystem	—	<a href="#">INST03-15-10 through 30</a>
5	END	—	—

## 2.5 Disruptive De-installation Procedure Table

Note: Perform the disruptive de-installation of options in numerical order shown in the following table. Proceed to the next work neglecting unnecessary ones.  
Remove additional disruptive options according to the flow shown below.

When De-Installation has been all done, make sure that all the removed units are displayed as “empty” and that the other units are normal (See the STATUS Section).

If a fault occurs during or after removal, see [INST02-170](#) to locate a faulty unit and take action. If any other message than the list is displayed, see the SVP Message section.

### Precautions on Disruptive De-Installation

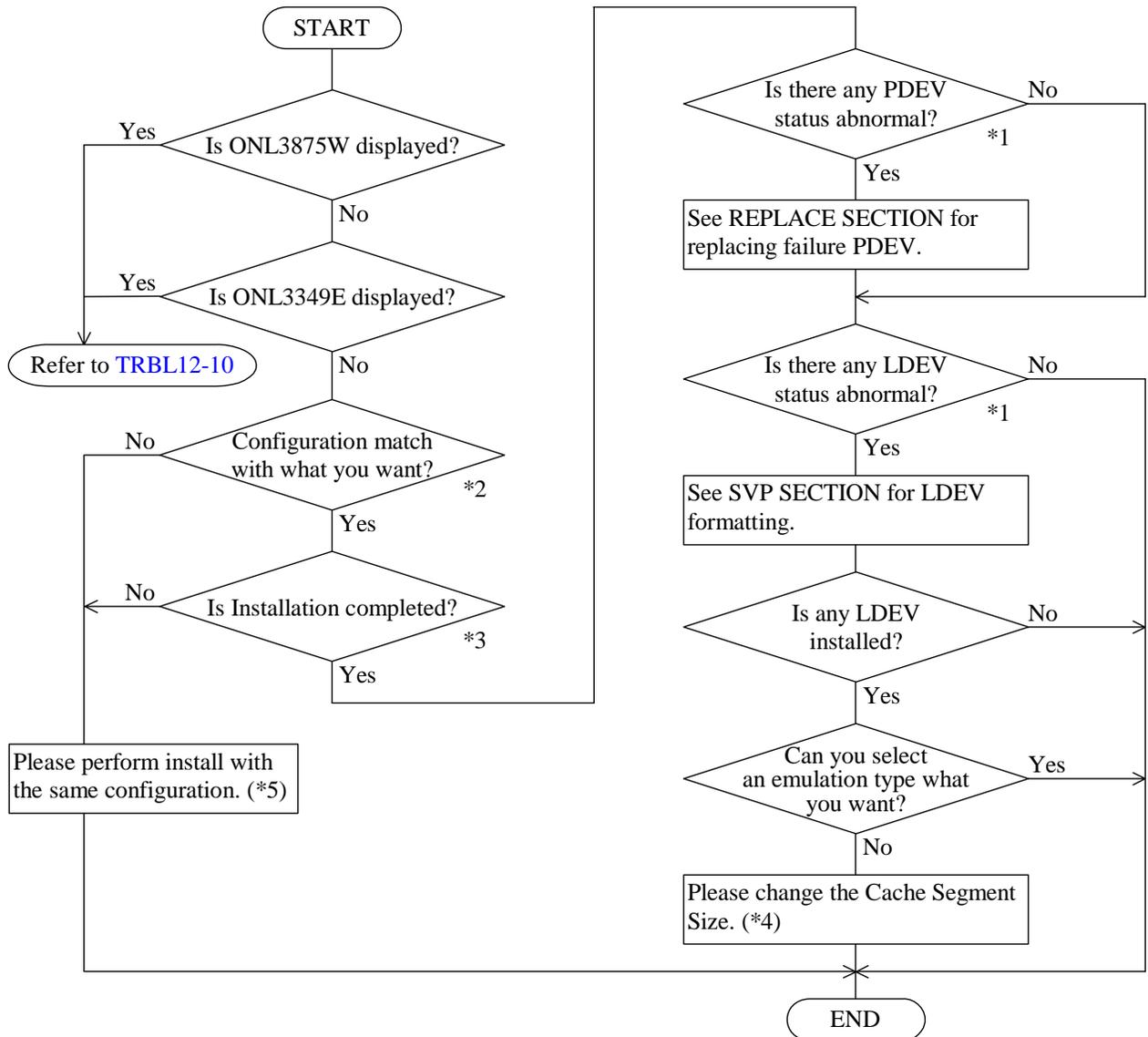
- “Disruptive” means that the subsystem is disconnected from the host (OS). Disruptive De-installation shall be done with the subsystem power OFF.

Table 2.5-1 Disruptive De-installation Procedure Table

No.	Working Item	Model Number	Page
1	Display the SVP initial screen	←	<a href="#">SVP01-10 through</a>
2	POWER OFF of Disk Subsystem	—	<a href="#">INST03-15-50 through 70</a>
3	POWER ON of Disk Subsystem	—	<a href="#">INST03-15-10 through 30</a>
4	END	—	—

## 2.6 Trouble shooting for errors in install SVP procedure

### 2.6.1 ECC group + LDEV



\*1: Select (CL) [Maintenance] in the 'SVP' Window.

\*2: Select (CL) [Install] – [Refer Configuration] in the 'SVP' Window.

\*3: Wasn't INS2450E displayed when select (CL) [Install] – [Change Configuration] in the 'SVP' Window?

## \*4: [Procedure]

- (1) Select “Cache Segment Size” in the “System Option” Window.  
(Refer [SVP02-1100](#))

Table 2.6.1-1 Cache Segment Size and that support emulation type

Cache Segment Size	Emulation Type
48 K byte	3380-K/3, H6586-K, F642X-H
58 K byte	3390-M/L/9/3/2, K-6588-3/9
64 K byte	All

Note: When you select some LDEV emulation types of different Cache Segment Size in a subsystem, Cache Segment Size treated with the subsystem is the maximum value.

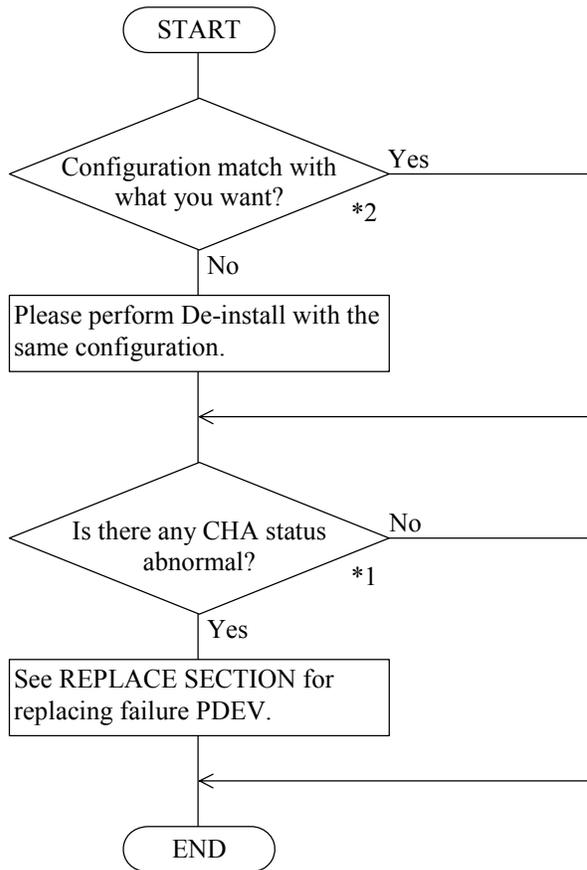
- (2) Replace SM-1SA and SM-2SB.  
SM PK is used that has been used.  
(Refer [REP03-80](#))

## \*5: There is a case where you cannot change the type of spare drive.

In that case, please install again with the same configuration except for the spare drive.

After this operation is complete, please uninstall the spare drive and install the spare drive again.

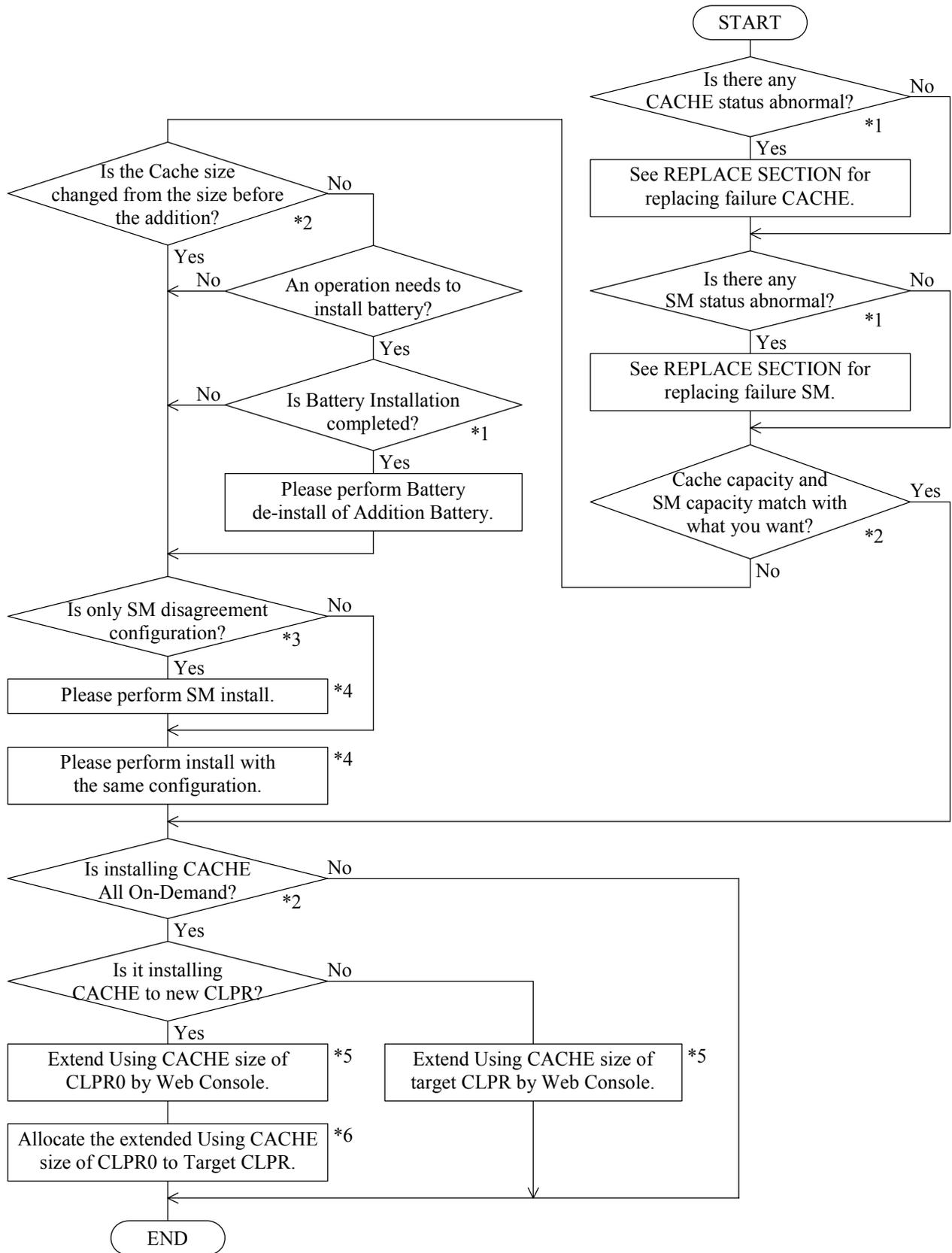
## 2.6.2 Number of Channel



\*1: Select (CL) [Maintenance] in the 'SVP' Window.

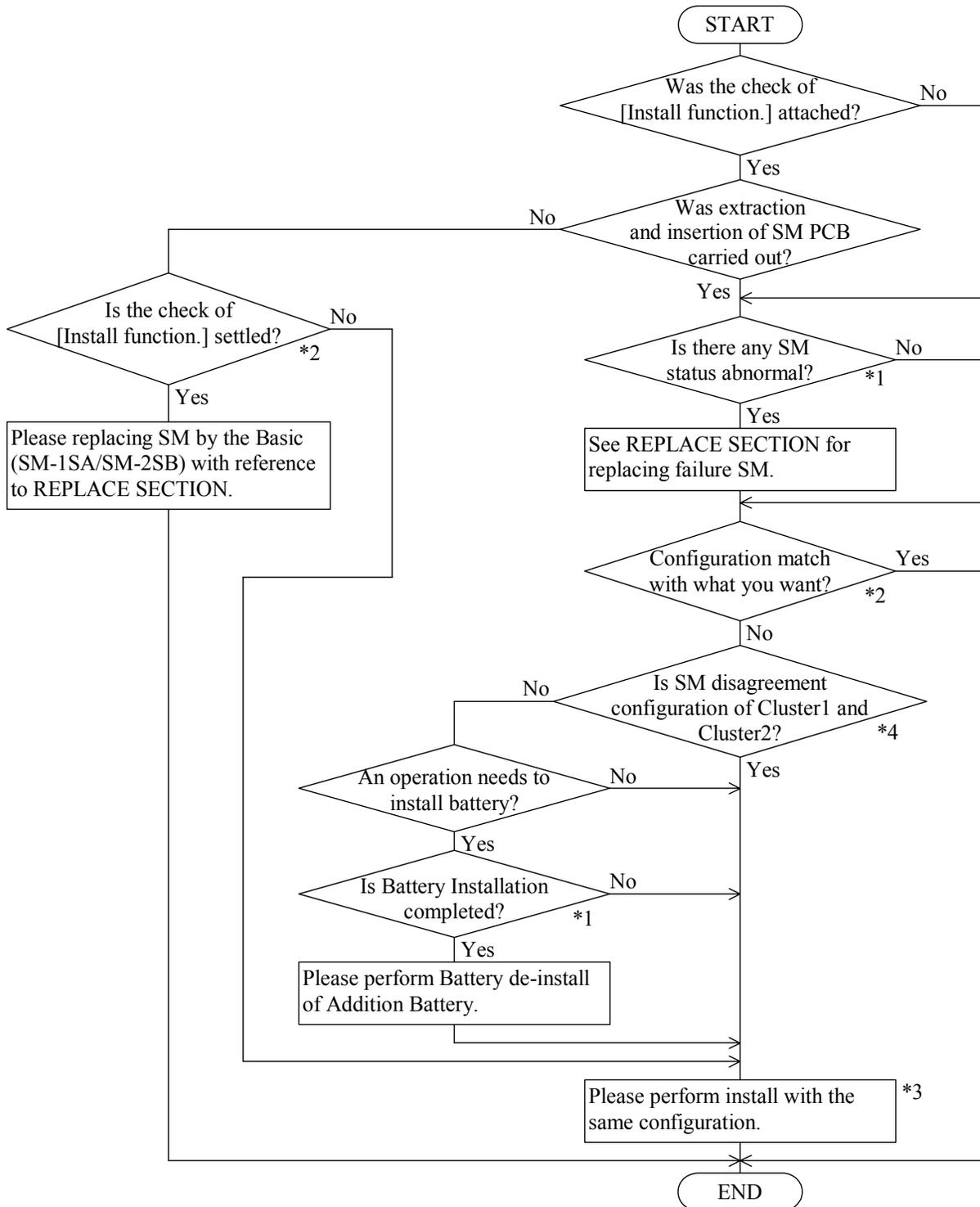
\*2: Select (CL) [Install] – [Refer Configuration] in the 'SVP' Window.

### 2.6.3 Cache Capacity



- \*1: Select (CL) [Maintenance] in the ‘SVP’ Window.
- \*2: Select (CL) [Install] – [Refer Configuration] in the ‘SVP’ Window. Cache capacity may be on-demand capacity.
- \*3: Was INS2566W displayed when select (CL) [Install] – [Change Configuration] – [Installation] in the ‘SVP’ Window?
- \*4: The installation of the cluster 1 may be completed depending on the contents of the installation failure. In this case, if the installation is performed again, processing will begin from the cluster 2.
- \*5: Select (CL) [Web Console] – [Environmental Settings] – [On-Demand] in the ‘SVP’ Window. (Refer [WEB05-10](#))
- \*6: Select (CL) [Web Console] – [Environmental Settings] – [Partition Definition ] in the ‘SVP’ Window.  
Extend Cache memory reference to [Remote Console – Virtual Partition Manager User’s Guide] – 4.3.

## 2.6.4 SM Capacity



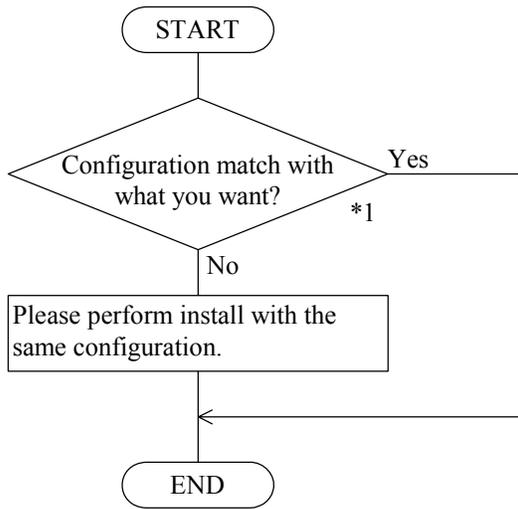
\*1: Select (CL) [Maintenance] in the 'SVP' Window.

\*2: Select (CL) [Install] – [Refer Configuration] in the 'SVP' Window.

\*3: The installation of the cluster 1 may be completed depending on the contents of the installation failure. In this case, if the installation is performed again, processing will begin from the cluster 2.

\*4: Was INS2566W displayed when select (CL) [Install] – [Change Configuration] – [Installation] in the 'SVP' Window?

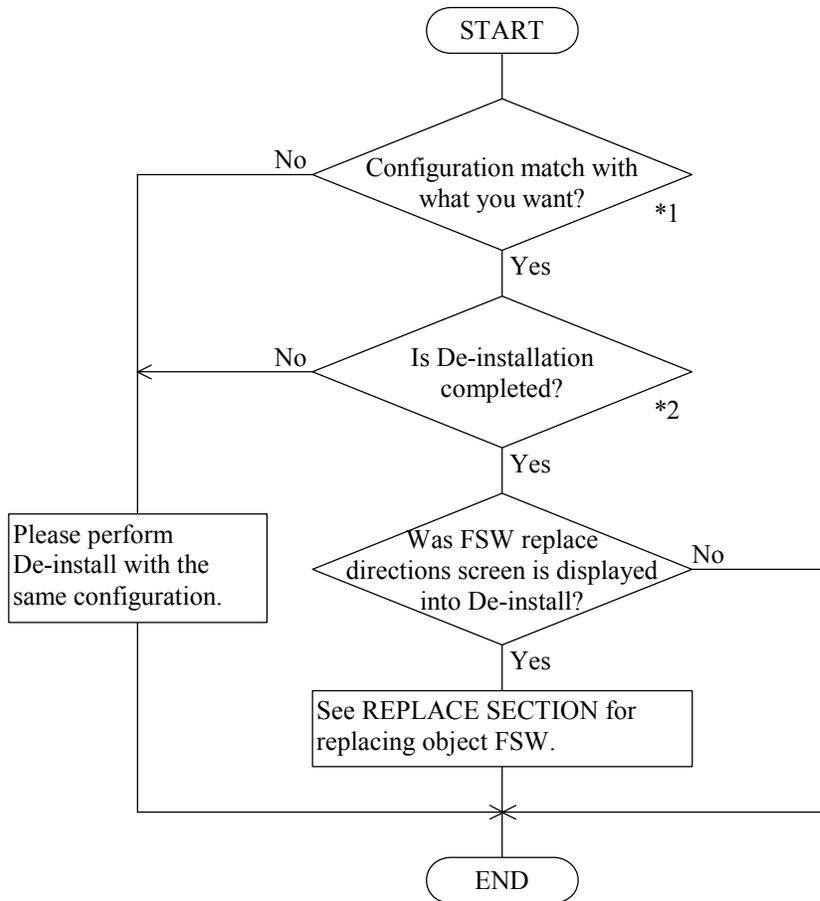
## 2.6.5 Power Supply



\*1: Select (CL) [Install] – [Refer Configuration] in the 'SVP' Window.

## 2.7 Trouble shooting for errors in de-install SVP procedure

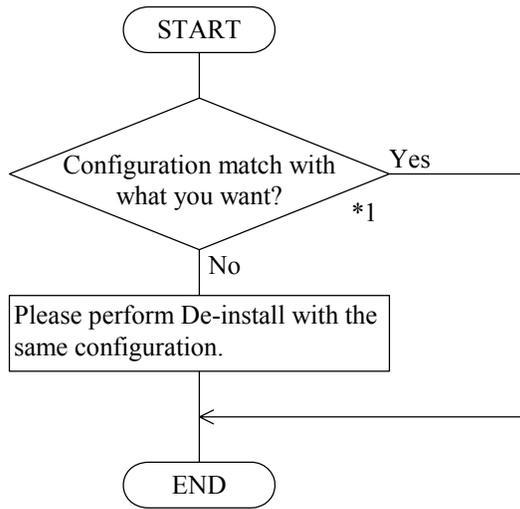
### 2.7.1 ECC group + LDEV



\*1: Select (CL) [Install] – [Refer Configuration] in the ‘SVP’ Window.

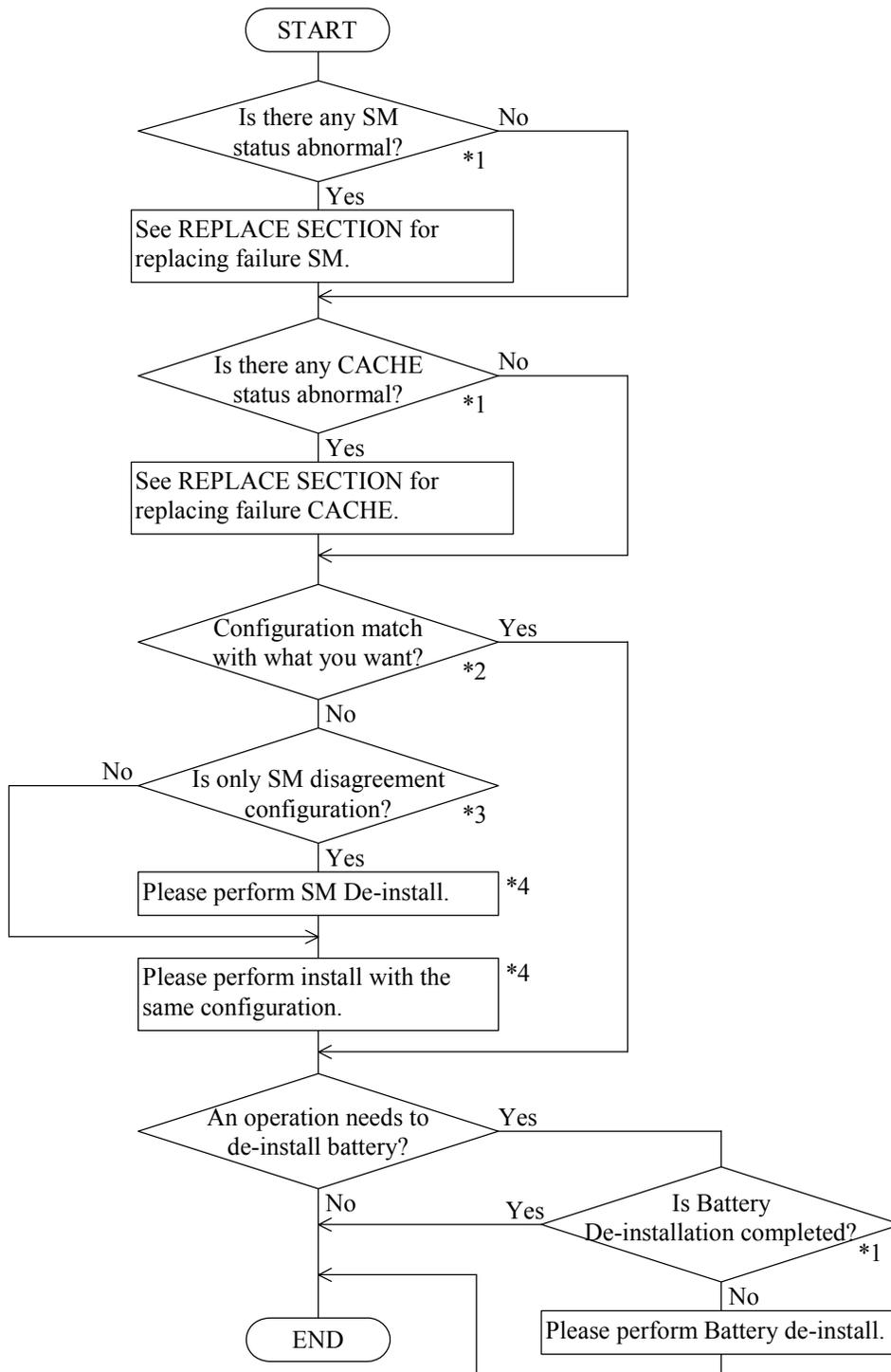
\*2: Wasn’t INS2450E displayed when select (CL) [Install] – [Change Configuration] in the ‘SVP’ Window?

## 2.7.2 Number of Channel



\*1: Select (CL) [Install] – [Refer Configuration] in the ‘SVP’ Window.

## 2.7.3 Cache Capacity



\*1: Select (CL) [Maintenance] in the 'SVP' Window.

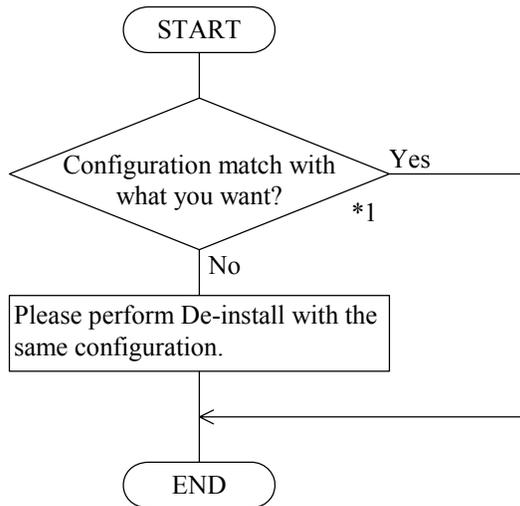
\*2: Select (CL) [Install] – [Refer Configuration] in the 'SVP' Window.

\*3: Was INS2566W displayed when select (CL) [Install] – [Change Configuration] – [De-installation] in the 'SVP' Window?

\*4: The de-installation of the cluster 1 may be completed depending on the contents of the de-installation failure. In this case, if the de-installation is performed again, processing will begin from the cluster 2.



## 2.7.5 Power Supply



\*1: Select (CL) [Install] – [Refer Configuration] in the ‘SVP’ Window.

## **2.8 (Blank)**

## 2.9 Availability of Installation and De-installation

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

PP	Status		HDD Canister			Cache PCB	CHA			DKA	
			DATA		SPARE		Installation/De-installation	Installation/De-installation	De-installation		
			Installation	De-installation	Installation/De-installation	Installation/De-installation			With/Without Alternate path	With Alternate path	Without Alternate path
HRC/ HORC (*6)	HRC path established	MCU	×	× (*1)	×	×	×	×	×	×	×
		RCU	×	×	×	×	×	×	×	×	×
	During initial copy	MCU	×	SVP2031W (*1)	×	SVP2059W	×	×	×	SVP2073W	×
		RCU	×	SVP2034W	×	SVP2079W	×	×	SVP2038W	SVP2038W	×
	After completing initial copy	MCU	×	SVP2031W (*1)	×	×	×	×	×	SVP2074W	×
		RCU	×	SVP2034W	×	×	×	×	SVP2038W	SVP2038W	×
	Suspend	MCU	×	SVP2031W (*1)	×	×	×	×	×	SVP2075W	×
		RCU	×	SVP2034W	×	×	×	×	SVP2038W	SVP2038W	×
	Suspending	MCU	×	SVP2031W (*1)		×	×	×	×	SVP2075W	×
		RCU	×	SVP2034W		×	×	×	SVP2038W	SVP2038W	×
	Deleting	MCU	×	SVP2031W (*1)		×	×	×	×	SVP2075W	×
		RCU	×	SVP2034W		×	×	×	SVP2038W	SVP2038W	×

(To be continued)

(Continued from preceding sheet)

PP	Status		HDD Canister			Cache PCB	CHA			DKA	
			DATA		SPARE		Installation/De-installation	Installation/De-installation	Installation/De-installation		
			Installation	De-installation	Installation/De-installation	Installation/De-installation				Installation/De-installation	With/Without Alternate path
UR (JNL-GROUP)	HRC path established	MCU									
		RCU	×	×	×	×	×	×	×	×	×
	Initial	MCU	×	SVP3825W	×	×	×	×	×	×	×
		RCU									
	Active	MCU	×	SVP3825W	×	×	×	×	×	×	×
		RCU									
	Halt	MCU	×	SVP3825W		×	×	×	×	×	×
		RCU									
	Halting	MCU	×	SVP3825W	×	×	×	×	×	×	×
		RCU									
	Stop	MCU	×	SVP3825W	×	×	×	×	×	×	×
		RCU									
Stopping	MCU	×	SVP3825W	×	×	×	×	×	×	×	
	RCU										
UR (DATA-VOL)	HRC path established	MCU	×	×	×	×	×	×	×	×	×
		RCU	×	×	×	×	×	×	×	×	×
	During initial copy	MCU	×	SVP2031W	×	SVP2059W	×	SVP3848W	SVP3848W	×	×
		RCU	×	SVP2034W	×	SVP2079W	×	×	SVP2073W	×	×
	After completing initial copy	MCU	×	SVP2031W	×	×	×	SVP3848W	SVP3848W	×	×
		RCU	×	SVP2034W	×	×	×	×	SVP2074W	×	×
	Suspend	MCU	×	SVP2031W	×	×	×	SVP3848W	SVP3848W	×	×
		RCU	×	SVP2034W	×	×	×	×	SVP2075W	×	×
	Suspending	MCU	×	SVP2031W	×	×	×	SVP3848W	SVP3848W	×	×
		RCU	×	SVP2034W	×	×	×	×	SVP2075W	×	×
	Deleting	MCU	×	SVP2031W	×	×	×	SVP3848W	SVP3848W	×	×
		RCU	×	SVP2034W	×	×	×	×	SVP2075W	×	×

(To be continued)

(Continued from preceding sheet)

PP	Status		HDD Canister			Cache PCB	CHA	DKA
			DATA		SPARE			
			Installation	De-installation	Installation/ De-installation	Installation/ De-installation	Installation/ De-installation	Installation/ De-installation
HMRCF	Reserve	—	×	SVP2485W	×	×	×	×
	Pending/ Resync/ SP-Pend	S-VOL	×	SVP2485W	×	SVP2486W	×	×
		T-VOL	×	SVP2485W	×		×	×
	Duplex	S-VOL	×	SVP2485W	×	×	×	×
		T-VOL	×	SVP2485W	×	×	×	×
	Split	S-VOL	×	SVP2485W	×	×	×	×
		T-VOL	×	SVP2485W	×	×	×	×
	Suspend	S-VOL	×	SVP2485W	×	×	×	×
		T-VOL	×	SVP2485W	×	×	×	×
	FlashCopy (R)	During copy	S-VOL	×	SVP2485W	×	×	×
T-VOL			×	SVP2485W	×	SVP2486W	×	×
NOCOPY		S-VOL	×	SVP2485W	×	×	×	×
		T-VOL	×	SVP2485W	×	×	×	×
FlashCopy (R) version 2	During copy	S-VOL	×	SVP2485W	×	×	×	×
		T-VOL	×	SVP2485W	×	SVP2486W	×	×
	NOCOPY	S-VOL	×	SVP2485W	×	×	×	×
		T-VOL	×	SVP2485W	×	×	×	×
	Incremental FlashCopy	S-VOL	×	SVP2485W	×	×	×	×
		T-VOL	×	SVP2485W	×	×	×	×
XRC	During initial copy	Primary	×	(*4)	×	(*5)	×	×
		Secondary	×	(*4)	×	×	×	×
	Established	Primary	×	(*4)	×	(*5)	×	×
		Secondary	×	(*4)	×	×	×	×
	Suspend	Primary	×	(*4)	×	(*5)	×	×
		Secondary	×	(*4)	×	×	×	×

- × : Maintenance is available.
- SVPXXXXW : Maintenance is not available based on the specification. Refer to SVP MESSAGE SECTION.
- \*1: If CU which all HDEV's are deleted from by this operation exists and there is registration of RCU in this CU, SVP will display a warning message with SVP2466W.
- \*2: For HRC ASYNC Pairs, a maintenance with the cache blockage is recommended to operate with capacities of Sidefile and Write Pending Data being 20% below. If the above maintenance is Performed with high capacities of Sidefile and Write Pending Data, the operation will take long and way cause impact such as MIH occurrence on the host operation.  
Refer to "Monitoring" in the SVP SECTION for the Sidefile monitor.
- \*3: When the different 'DKC – Emulation –Type' of CHA is installed, SVP displays a warning message with SVP3289W.
- \*4: When a maintenance operation is needed while XRC is being used, XRC should be stopped before the maintenance operation.
- \*5: When a maintenance operation is needed while XRC is being used, I/O's for XRC pair volumes or XRC itself should be stopped before the maintenance operation.  
If the maintenance operation must be done while XRC is being used, you must confirm that the usage of Sidefile monitor is less than 20% of total Cache capacity by monitoring each combination of MPPK and CLPR usage before you start the maintenance operation. Only when the usage of Sidefile monitor is less than 20% of total Cache capacity, you can proceed the maintenance operation.  
Refer to SVP SECTION "2.4 Monitoring" ([SVP02-190](#)) about Sidefile monitor.  
Select the [Monitor] icon in the 'SVP' window.  
Next select the [Monitor] menu in the 'Information' window and select [start....].  
Next select the 'Sidefile' box in the 'Item' menu in the 'Monitoring' window and select [OK].
- \*6: It is impossible to change the DKC No, SSID, or DKC Emulation type by system tuning when TrueCopy for Mainframe or TrueCopy is used.

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## **2.10 New Installation procedures without the pre-installation at a customer site**

### **2.10.1 Application**

These procedures are applied to a new installation without the pre-installation at a customer site or the pre-installation at the warehouse as shown below.

- Installing the micro programs into the DKC subsystem. Its version must be appropriate one.
- Installing the configuration information which is appropriate to the customer.

If these procedures are used in other cases, their processes are not assured.

## 2.10.2 Conditions to use these procedures

These procedures can be used in the following conditions:

- ① The installation of the Hardware parts (for example, the connections of cables, power supplies and so on) have been finished. (For the Hardware installation, refer to “2.1 New Installation Procedure Table” ([INST02-10](#) ~ [INST02-20](#)) of Maintenance Manual.)
- ② The PC (SVP) is installed and can be used. (For the SVP installation, refer to “[REP04-420](#) ~ [REP04-750](#)” of Maintenance Manual.)

## 2.10.3 Procedures

### (1) Summary

The procedures are divided roughly into 4 processes.

- ① Pre-processing (the installation of the micro-programs into the SVP HD : (1)-(8) in the following flow)
- ② Execution of “New Installation” by the SVP. (By this procedure, the micro-programs and Fixed Minimum configuration are installed into PCBs (packages). : (9)-(19) in the following flow)
- ③ Execution of “Define Configuration and Install” by the SVP.(By this procedure, the customer’s configurations are defined.) : ((20)-(30) in the following flow)
- ④ Others ((31)-(50) in the following flow)

### (2) Processing Flow

The processing flow of the new installation is as follow:

START

- (1)-0 Back up the current Config in the Config media of the same value.
- (1)-1 Check the size of the Cache, SM DIMM, CU number and IP address with the DKC and remember them for later use in step (30)-1, (30)-2.
- (1)-2 Turn off the "POWER ON/OFF" switch on the DKCPANEL.
- (1)-3 Make sure the breaker is off (DKU and DKC). (If it is "on", turn off the PDU after the SVP is shut down.).  
[Breaker:INST03-15-50 ~ 70 , SVP Shut Down:SVP01-190]
- (1)-4 If the PUBLIC (SNMP Web Console) or INT (ASSIST) or MODEM cables in the SVP are connected, disconnect them. Do not disconnect other cables. [LOC04-40]

- (2) Turn on the breaker (DKU and DKC) and wait for the SVP ready to use.  
(Don't turn on the "POWER ON/OFF" switch on the DKCPANEL)  
[Power ON procedures of Disk Subsystem:INST03-15-10 ~ INST03-15-20]

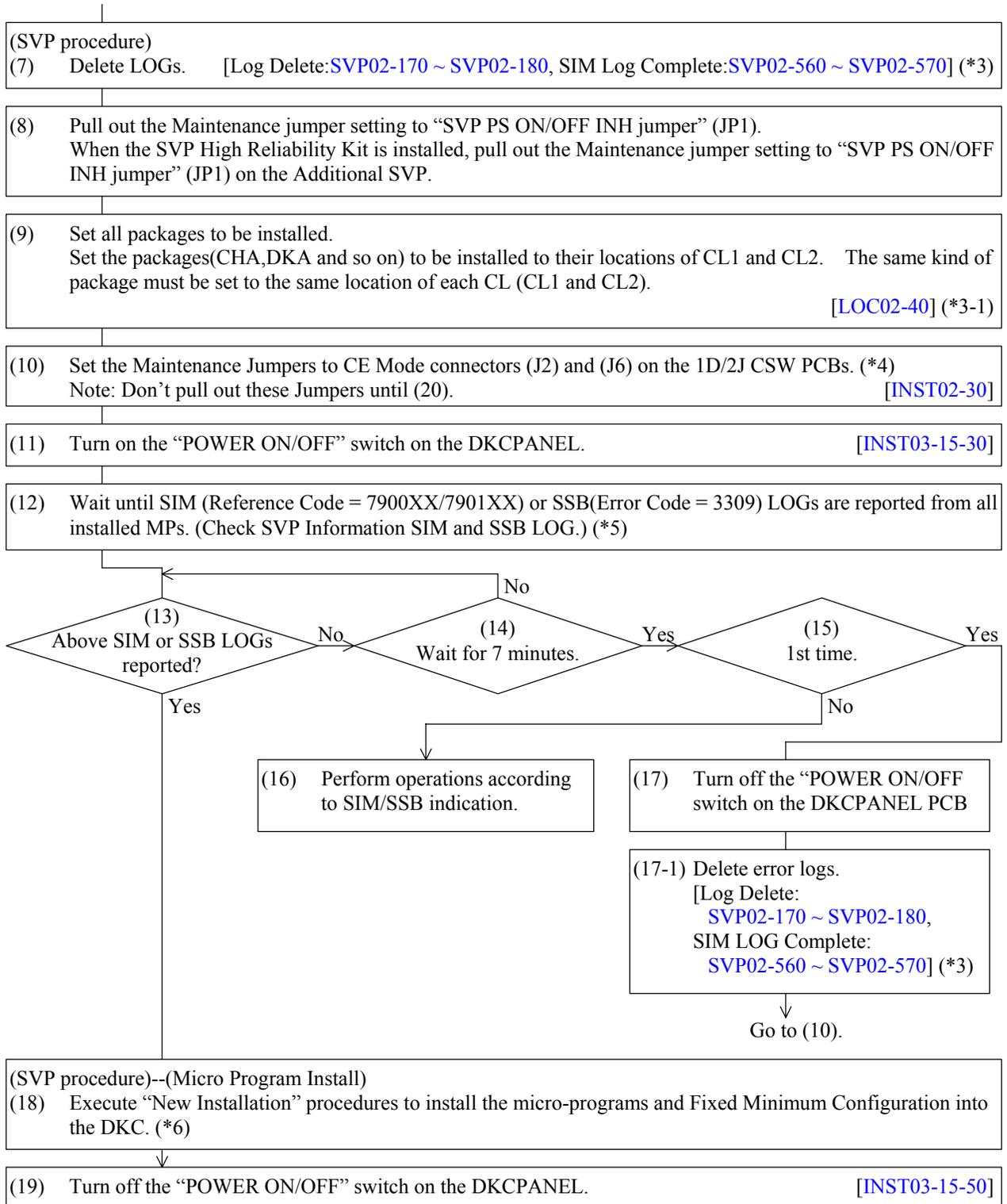
- (3) Set the Maintenance jumper to "SVP PS ON/OFF INH jumper" (JP1).  
When the SVP High Reliability Kit is installed, set the Maintenance jumper to "SVP PS ON/OFF INH jumper" (JP1) on the Additional SVP. [LOC06-30]

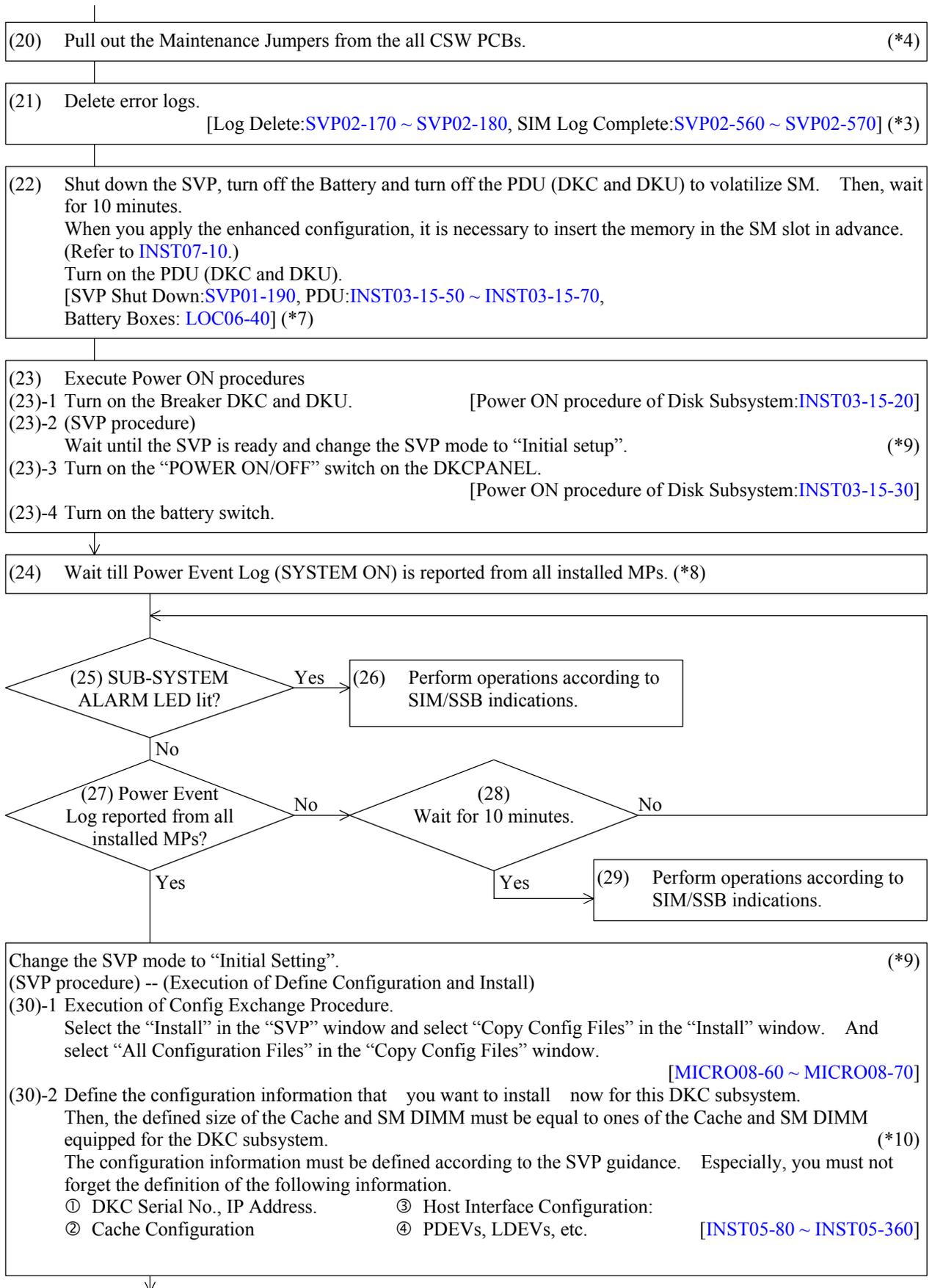
- (SVP procedure)
- (4) Set TOD  
(At this time, "Communication Error" may occur. You can ignore the error.) [INST05-20 ~ INST05-40]

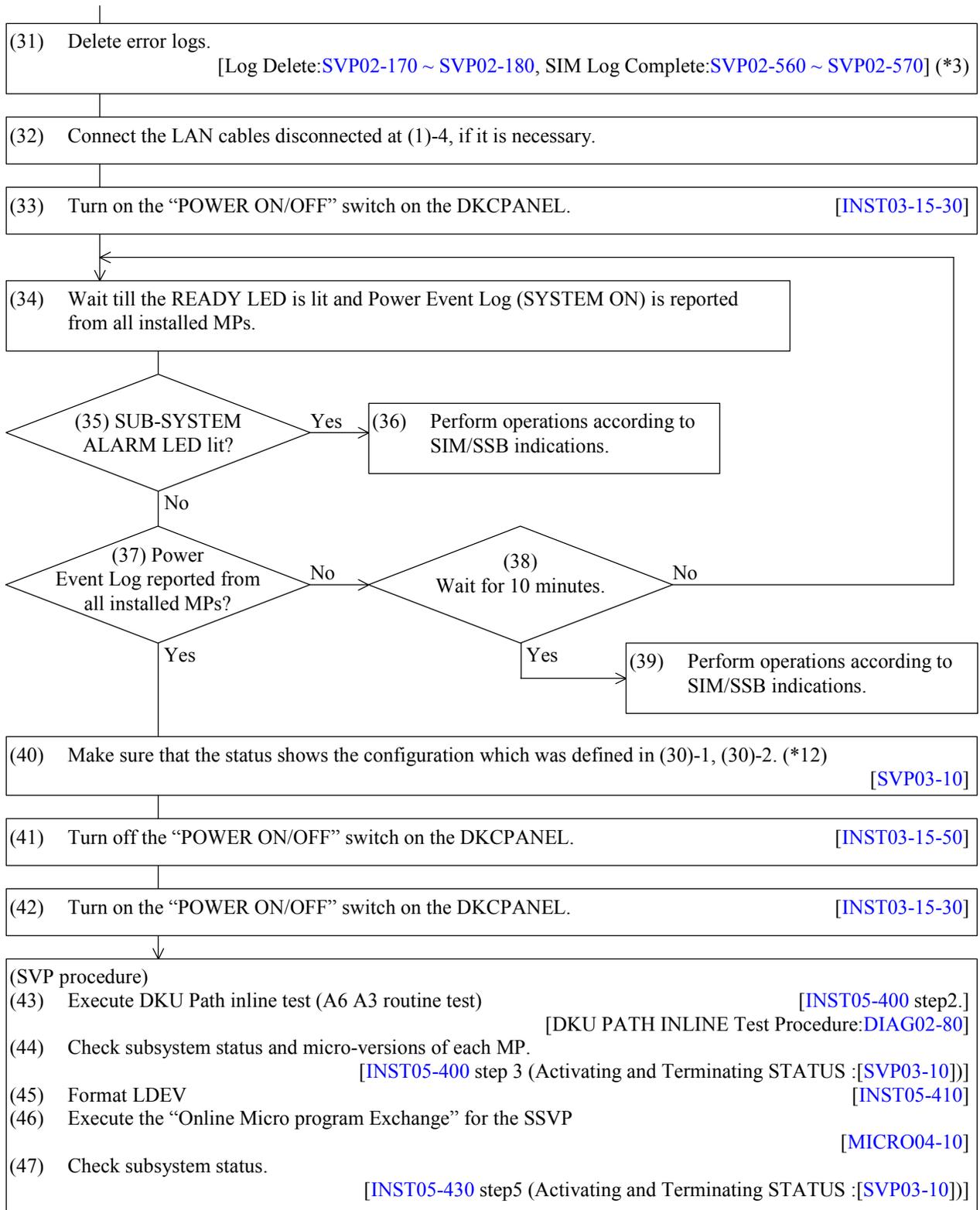
- (SVP procedure)
- (5) Execute the following procedures: (\*15)  
[Install micro-programs and configuration to the HD to the SVP] [REP04-450 ~ REP04-640]
- step0: Connect to the SVP display from the client PC by the remote desktop.
- step1: Prepare the CD-ROM. (\*1)
- step2: Click "START" on the task bar and select "Control Panel"- "Add or Remove Programs".  
Uninstall JRE, Apache, and Perl.
- step3: Insert the CD-ROM disk into the client PC's drive.
- step4: Enter the following command: \\tsclient\E\setup.exe (enter).  
\* In the case client PC's CD-ROM drive is "E:".  
Select [CD-R] to install configuration information from CD-R, when the message CNF4061i.  
Enter the key code of the configuration information when the message CNF4055i, and then click [OK]. (\*14)  
Insert the second CD-R (OSS), and select [OK].  
This operation causes the "SVP Reboot". Then wait few minutes and reconnect by the remote desktop.
- step5: Remove the CD-ROM from the client PC's drive.

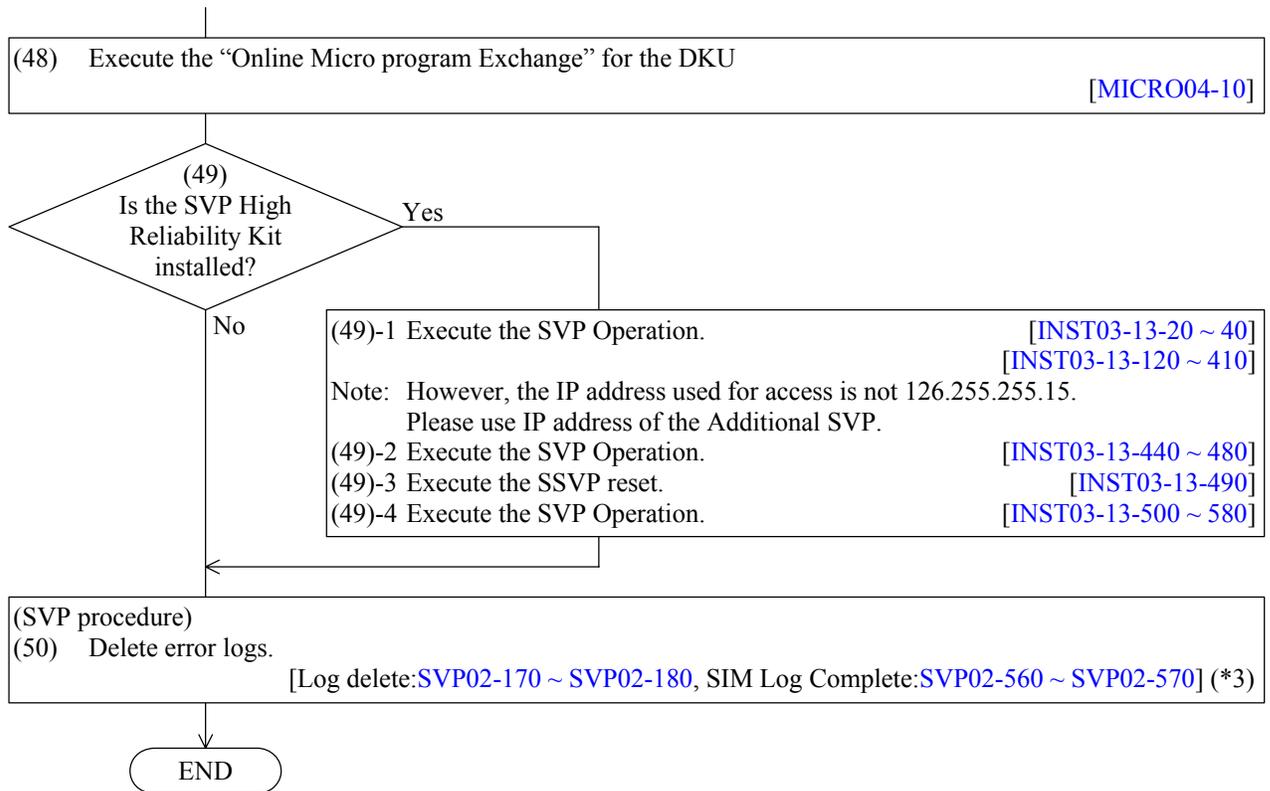
- (SVP procedure)
- (6) Set IP Address  
IP Address must be 126.255.255.15 and Subnet mask must be 255.0.0.0. Also, "Target" must be "SVP".  
(Don't select "SVP and DKC" as the "Target". [INST05-50 ~ INST05-70] (\*2)  
Besides, do not select "Use Duplex SVP" in the "External IP Address" box.  
Config BackUp is accompanies.









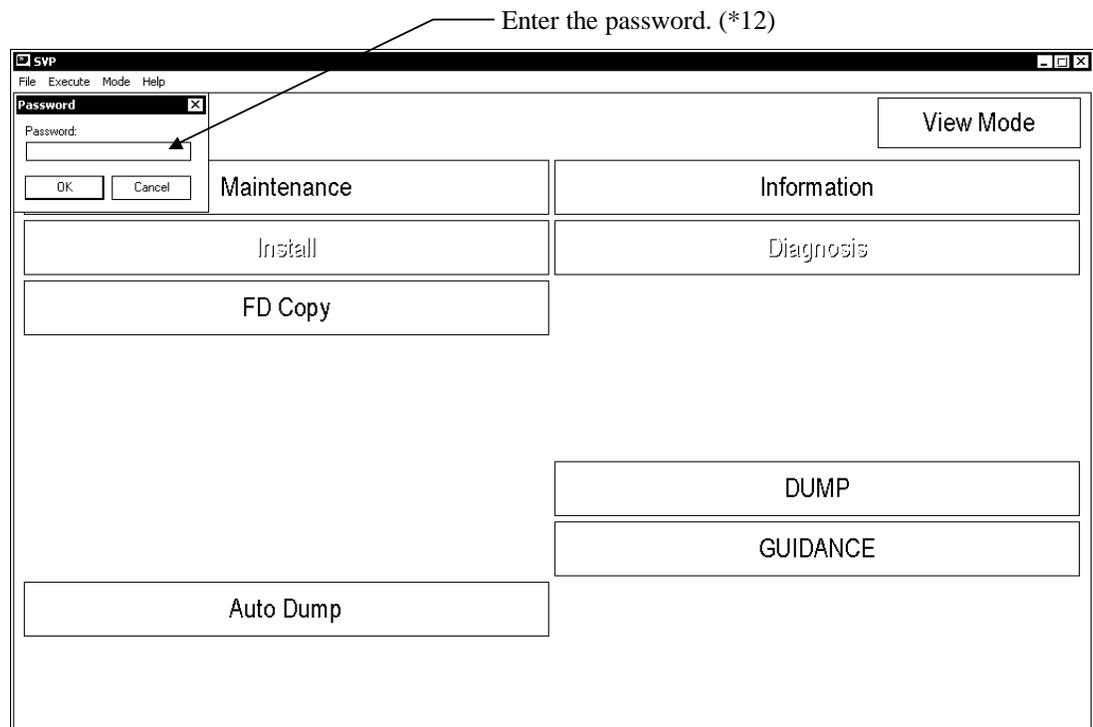


- \*1 : The CD-ROM includes the micro-programs and configuration information to be installed into the DKC subsystem.
- \*2 : Even if the “IP Address” is “126.255.255.15” and the “Subnet Mask” is “255.0.0.0” on the screen of “Set IP Address”, be sure to select “OK” and reply “OK” to the message “This will reboot SVP.”.
- \*3 : It’s necessary to execute the procedure of “SIM Log Complete” before deleting the SIM data.
- \*3-1: At least, a pair of CHAs must be installed in the front and back box PCB locations.  
Also, a pair of DKAs must be installed in the front and back box PCB locations.
- \*4 : Refer to the following about the Maintenance Jumpers.
  - “INST02-30 Note”
- \*5 : Count SSB Logs (Error Code = 3309). The number is same as the number of the installed MPs.

\*6 : The procedures of “New Installation” are as follows.

- (1) Return to the SVP window.
- (2) Press the following keys at the same time to change the mode to “Initial Setting”.  
[SHIFT], [CTRL], [I]
- (3) Enter the password.

This password must be used only for this procedure. Don't use for other purposes without approval by the technical support division or the factory.

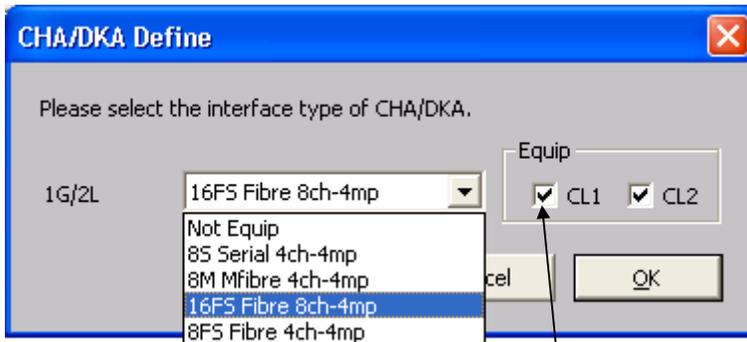
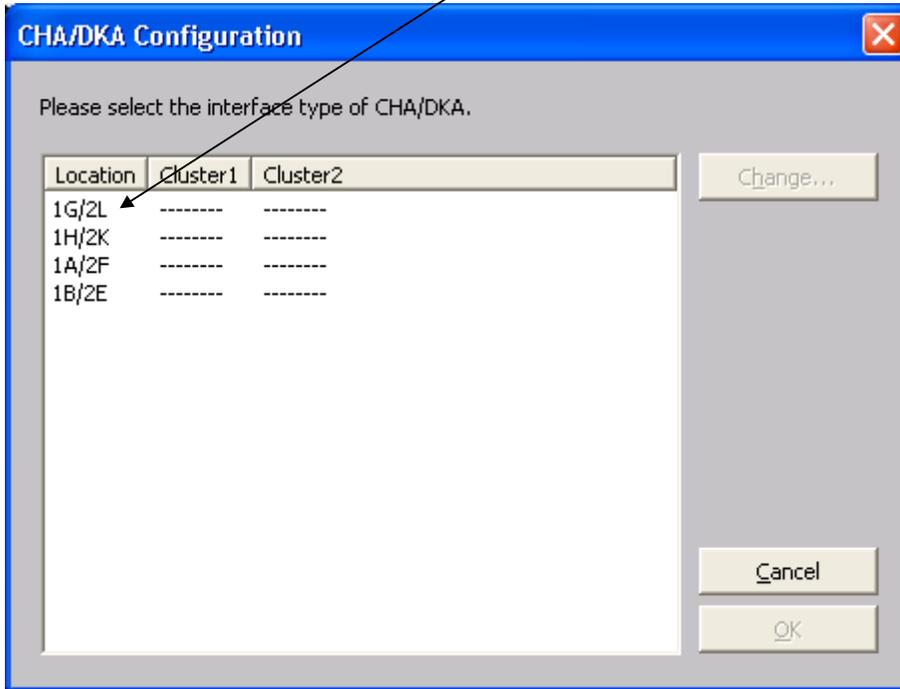


- (4) Select “Install”.
- (5) <Install Window>  
Select “Micro Program Install”.
- (6) <Menu Dialog Window>  
Select “New Installation”.
- (7) Select “Yes” to the following message.  
“Are you sure you want to execute new installation?”
- (8) <New Installation PCB configuration Window>  
After (7), the following window is displayed. At the window, specify as follows:
  - ① Select the package type (host interface and so on) of the current packages setting in their locations of “CHA” or “DKA”.
  - ② Select “All microprograms”. (“Fixed Minimum Configuration” should be selected automatically.) (\*13)
  - ③ Select “OK” after finishing the above specifications.

[Example of operations]

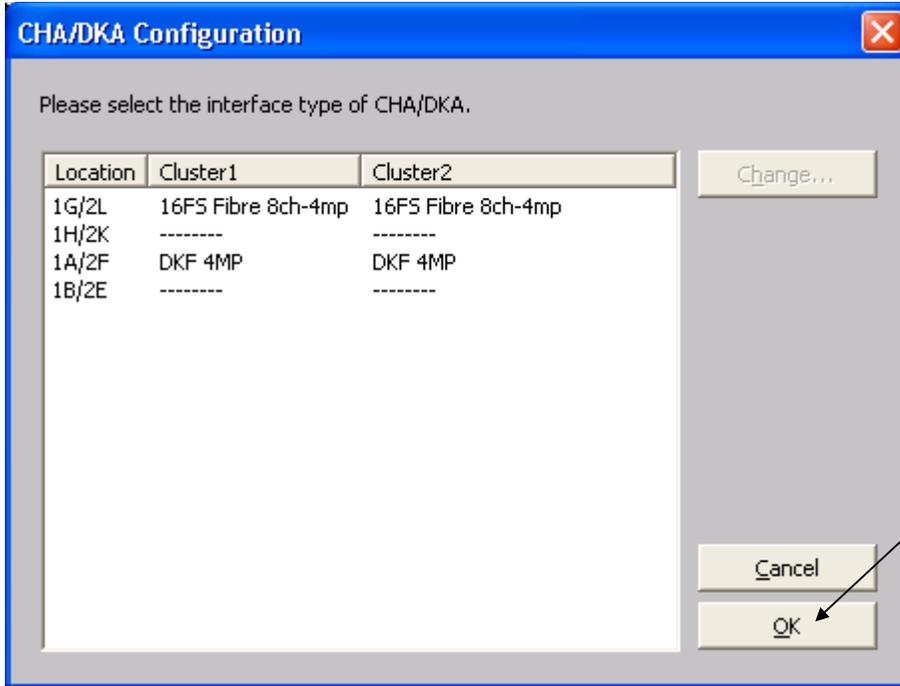
- Select installed PCB type

Click here, and the PCB select dialogue is displayed.



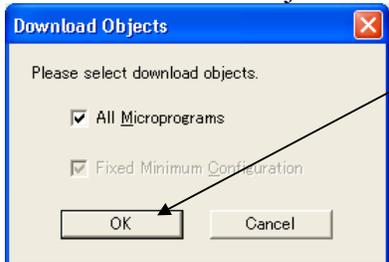
Check the check boxes according to the CHA or DKA installed status for each PCB location.

Select one that matches the CHA or DKA type installed for each PCB location.



Select OK.

- Select Download object.



Select OK.

- (9) The message, “[INS3302i] New installation finished normally.”, is output.  
Then, click “OK”, and the “Installation window” is closed.  
(Till the message, “[INS3302i] New installation finished normally.”, is output, you must not select “Cancel” in the “Shell Batch Execute Status” window. If “Cancel” is selected, this process is interrupted. If “Cancel” is selected by a mistake operation, try again from (6) of [INST02-310](#).)  
(If the message “[INS3005E] New installation process failed.” was output, try again from the step (6) of [INST02-310](#).)
- \*7 : The following SIM Logs are output by turning off the battery switches.  
SIM Logs: bf5010, bf5210, bf5020, bf5220  
But you can ignore them.
- \*8 : At this time, the initializing processings of the DKC subsystem are performed by using the minimum configuration. The minimum configuration is the special configuration for the New Installation Procedure (\*13). So, the READY LED is not lit. Also, the SIM Log (3073XX, 3173XX, 3990XX, 3D90XX, AC50XX and FFE800) may be output if the current configuration is different from the “Fixed Minimum Configuration”. But they should be ignored. And you should not select “Maintenance” in “SVP window” until the Define Configuration Procedure is performed at step (30)-1, (30)-2.
- \*9: Press the following keys at the same time to change the mode to “Initial Setting”.  
[SHIFT], [CTRL], [I]  
And input the password. (\*12)
- \*10: In this definition, specify the actual DKC Serial Number.  
Also, “IP Address” should be specified as follows:
- ① Specifying the IP Address according to the DKC Serial Number Select “Based on Serial Number”, and the IP Address will be assigned automatically.
  - ② Specifying the IP Address according to the magic number.  
Select “Based on Magic Number” and specify a magic number. Then, the IP Address will be assigned automatically.
  - ③ Specifying in option  
Select “Specified” and specify the optional address for the IP Address.  
And, the defined value for the size of the Cache and SM DIMM should be equal to the value that was confirmed at (1) in the processing flow. After the configuration information is defined, Turn on the “POWER ON/OFF” switch of the DKC and the reboot of the SVP will be executed.

\*11: Surely, check the following status:

- (1) the condition of each PCB status.----- PCB Kind/Normal or not/etc
- (2) the micro-program version

\*12: For the password, ask the technical support division. And use it with their approval.

\*13: The “Fixed Minimum configuration” is a temporary configuration to unify the condition of the power-on processing in Step (23) and is not concerned with the current configuration. It is used only in “New Installation” procedure.

The following information is defined in the “Fixed Minimum Configuration”.

① Basic DKC Configuration (1G/2L for “CHA”, 1A/2F for “DKA”)

IP Address = 126.255.255.xx

8S Serial 4ch-4mp for Host interface configuration

4mp for the DKA

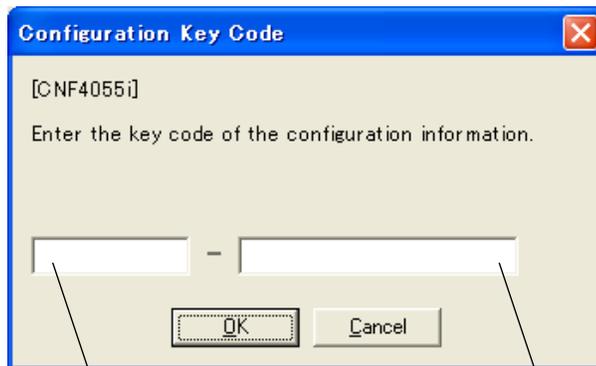
② Option PCBs Configuration : None (No equip)

③ Cache size : 4 GB for each side.

④ SM size : 1 GB for each side.

⑤ LDEV/PDEV/LCP Configuration : None

\*14: The following tables show all the configuration key codes.



Configuration Model
Rack

Type	Configuration key code
/00	TagmaStore
/07	TagmaStoreF
/10	XP24000
/15	TPF24000
/17	XP24000F
/50	TPF

\*15: SIM (BFE3A2: SVP duplication setting defect) will be create.

But you can ignore it.

## 2.11 Obstacle part replacement procedure in install

### 2.11.1 Replacement procedure when PCB could not be restoring

(1)

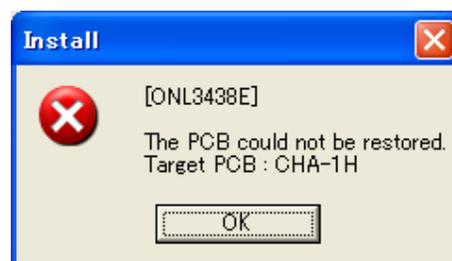
The following messages are displayed when PCB could not be restoring.

When “The PCB could not be restored because the PCB type was incorrect. Target PCB : \*\*\*\*” is displayed, please check the PCB type. (The target PCB location is displayed on Target PCB : \*\*\*\*.)



Please select(CL) [OK] after a check.

When “The PCB could not be restored. Target PCB : \*\*\*\*” is displayed, please check the PCB. (The target PCB location is displayed on Target PCB : \*\*\*\*.)



Please select(CL) [OK] after a check.

(2)

“Are you sure you want to replace the PCB that could not be restored?” is displayed.

When the maintenance parts to replace exist, please select [Yes]. → Go to (3)

When the maintenance parts to replace do not exist, please select [No] and refer to trouble shooting for errors in install. ([INST02-100](#), [INST02-120](#))



(3)

“Please replace the PCB, and then select OK. Target PCB : \*\*\*\*” is displayed. (The target PCB location is displayed on Target PCB : \*\*\*\*.)

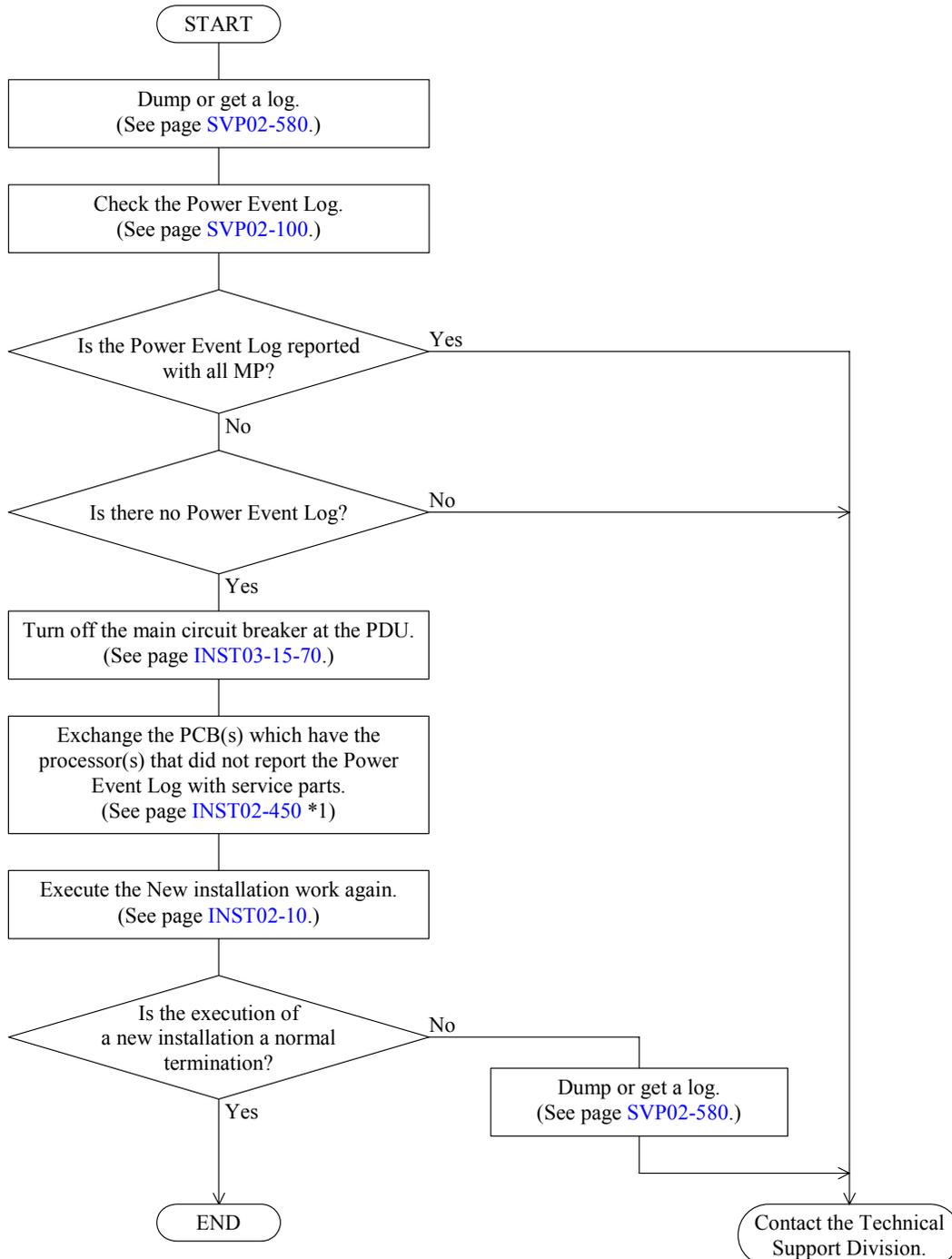
Please select OK(CL), after replacing the target PCB.



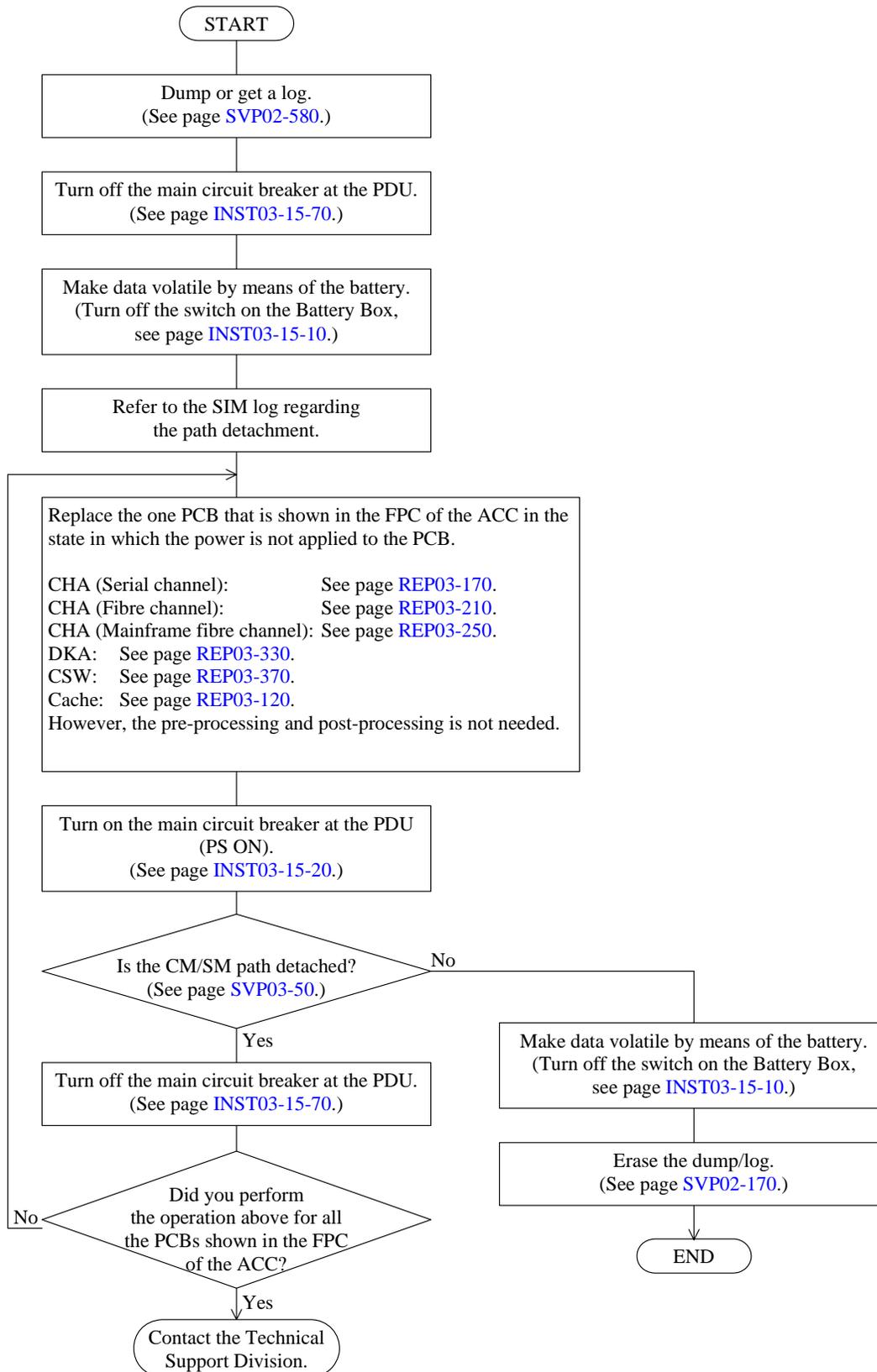
It returns to the former install section.

## 2.12 Troubleshooting at the time of new installation

(1) When the ALARM LED comes on



## (2) When the CM/SM path is detached



- \*1: Pulling out of the processor PCB  
DKA: Refer to “Removing disk adapter PCB” on page [REP03-350](#).  
CHA: • Serial 4-port adapter Refer to page [INST04-04A-120](#).  
• Fibre 4/8-port adapter Refer to page [INST04-04B-120](#).  
• Mainframe fibre 4-port adapter Refer to page [INST04-04C-120](#).
- \*2: Insertion of the processor PCB  
DKA: Refer to “Adding disk adapter PCB” on page [REP03-360](#).  
CHA: • Serial 4-port adapter Refer to page [INST03-09A-60](#).  
• Fibre 4/8-port adapter Refer to page [INST03-09B-60](#).  
• Mainframe fibre 4-port adapter Refer to page [INST03-09C-60](#).
- \*3: Pulling out of the cache PCB  
Refer to page [INST04-03B-100](#).
- \*4: Insertion of the cache PCB  
Refer to page [INST03-11B-140](#).