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INSTALLATION SECTION

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Contents

INST01-10 1. Subsystem Configuration Outline
INST01-10 1.1 General Information
INST01-10 1.1.1 Model List
INST01-50 1.1.2 Configuration and number of necessary options
INST01-60 1.1.2.1 Shared memory capacity and number of necessary options
INST01-70 1.1.2.2 Cache memory capacity and number of necessary options
INST01-80 1.1.2.3 Relation between Shared Memory and Cache Memory
INST01-90 1.1.2.4 Frame addition and option(s) required for it
INST01-120 1.1.3 Specifications
INST01-130 1.1.4 Environmental Specifications
INST01-140 1.1.5 Power requirement
INST01-150 1.1.6 Service Clearance and Floor Cutout
INST01-190 1.1.7 Layout
INST01-210 1.1.8 Power and Grounding Check
INST01-210 1.1.8.1 Facility power check
INST01-220 1.1.8.2 Facility grounding check
INST01-230 1.2 Drive Expansion Sequence

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INST02-10 2. Installation and De-installation procedure
INST02-10 2.1 New Installation Procedure Table
INST02-40 2.2 Non-Disruptive Installation Procedure Table
INST02-60 2.3 Non-Disruptive De-installation Procedure Table
INST02-80 2.4 Disruptive Installation Procedure Table
INST02-90 2.5 Disruptive De-installation Procedure Table
INST02-100 2.6 Trouble shooting for errors in install SVP procedure
INST02-100 2.6.1 ECC group + LDEV
INST02-120 2.6.2 Number of Channel
INST02-130 2.6.3 Cache Capacity
INST02-150 2.6.4 SM Capacity
INST02-160 2.7 Trouble shooting for errors in de-install SVP procedure
INST02-160 2.7.1 ECC group + LDEV
INST02-170 2.7.2 Number of Channel
INST02-180 2.7.3 Cache Capacity
INST02-190 2.7.4 SM Capacity
INST02-200 2.8 (Blank)
INST02-210 2.9 Availability of Installation and De-installation
INST02-270 2.10 New Installation procedures without the pre-installation at a customer site
INST02-270 2.10.1 Application
INST02-280 2.10.2 Conditions to use these procedures
INST02-290 2.10.3 Procedures
INST02-410 2.11 Obstacle part replacement procedure in install
INST02-410 2.11.1 Replacement procedure when PCB could not be restoring
INST02-420 2.12 Troubleshooting at the time of new installation

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INST03-01-10 3. Hardware Installation
INST03-01-10 3.1 Common Item of Installation and De-Installation
INST03-01-10 3.1.1 How to removal/attachment the Bezel
INST03-01-30 3.1.2 How to open/close the cover
INST03-01-60 3.1.3 Attaching the Wrist Strap
INST03-02-10 3.2 UNPACKING AND INSPECTION
INST03-02-20 3.2.1 Unpacking
INST03-02-20 3.2.1.1 Rack Frame
INST03-03-10 3.3 Installation of 19-inch Rack (DKC-F515I-FRMR)
INST03-03-10 3.3.1 Parts List
INST03-03-20 3.3.2 Installation Procedure of 19-inch Rack
INST03-04-10 3.4 Installation of Control Frame (DKC515I-5)
INST03-04-10 3.4.1 Parts List
INST03-04-30 3.4.2 Installation Procedure of Control Frame (RSD Rack Frame)
INST03-04-180 3.4.3 Installation Procedure of Control Frame (HDS Rack Frame)
INST03-04-310 3.4.4 Installation Procedure of Bezel
INST03-05-10 3.5 Installation of Disk Chassis (DKC-F515I-B2R)
INST03-05-10 3.5.1 Parts List
INST03-05-30 3.5.2 Installation Procedure of Disk Chassis (RSD Rack Frame)
INST03-05-270 3.5.3 Installation Procedure of Disk Chassis (HDS Rack Frame)
INST03-05-270 3.5.3.1 Standard Configuration
INST03-05-490 3.5.3.2 In case of TagmaStore AMS/WMS installed configuration
INST03-05-710 3.5.4 Installation Procedure of Bezel
INST03-05-710 3.5.4.1 In case of Standard Configuration
INST03-05-740 3.5.4.2 In case of TagmaStore AMS/WMS installed Configuration
INST03-06-10 3.6 Installation of 1U Filler Panel (DKC-F515I-FIPR)
INST03-06-20 3.6.1 Installation Procedure of 1U Filler Panel
INST03-07A-10 3.7 Installation of Channel Adapter
INST03-07A-10 3.7.1 Installation of Serial 16-port Adapter (DKC-F510I-16S/16SR)
INST03-07B-10 3.7.2 Installation of Fibre 8/16/32-port High Performance Adapter (DKC-F510I-16HS/32HS/8HSR/16HSR/32HSR/32FSR/ 8FS2R/16FS2R/32FS2R)
INST03-07C-10 3.7.3 Installation of Mainframe Fibre 8/16-port Adapter (DKC-F510I-8MS/8ML/8MSR/8MLR/16MSR/16MLR/ 16MFSR/16MFLR/16MFL4R)
INST03-07D-10 3.7.4 Installation of NAS 8-port Adapter (DKC-F510I-8NS/8NSR)
INST03-07E-10 3.7.5 Installation of iSCSI 8-port Adapter (DKC-F510I-8ISR)
INST03-08-10 3.8 Changing of Fibre SFP Transceiver (DKC-F510I-1HL/1HS/1HLR/1HSR/1FLR/1FSR/1FL4R)
INST03-09A-10 3.9 Installation of Shared Memory and Cache Memory
INST03-09A-10 3.9.1 Installation of Additional Shared Memory (DKC-F510I-S1G/S1GR/S2GR, DKC-F515I-LGABR)
INST03-09B-10 3.9.2 Installation of Additional Cache Memory (DKC-F510I-C4G/C4GR/C8GR, DKC-F515I-LGABR)

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INST03-09C-10 3.9.3 Change CM Module group size
INST03-10-10 3.10 Installation of MIX Adapter, DEV Interface Cable and HDD Canister (DKC-F515I-MIX2R/MIX4R/UC0R/UC1R/UC4R/EXC0R/EXC2R, DKU-F505I-72KS/72JSR/72KSR/146JS/146JSR/146KSR/300JSR/300KSR/400JSR/72K1R/146J1R/146K1R/300J1R)
INST03-10-30 3.10.1 Flowchart
INST03-10A-10 3.10.2 When performing addition of the data/spare HDD canister (DKU-F505I-72KS/72JSR/72KSR/146JS/146JSR/146KSR/300JSR/300KSR/400JSR/72K1R/146J1R/146K1R/300J1R)
INST03-10B-10 3.10.3 (Blank)
INST03-10C-10 3.10.4 When performing addition of the data/spare HDD canister, MIX and DEV interface cable that accompanies the addition of the HDD Box in case of Standard Configuration (DKC-F515I-MIX2R/MIX4R/UC0R/UC1R/EXC0R, DKU-F505I-72KS/72JSR/72KSR/146JS/146JSR/146KSR/300JSR/300KSR/400JSR/72K1R/146J1R/146K1R/300J1R)
INST03-10C-20 3.10.4.1 Installation Procedure of DEV Interface Cable connects DKC and DKU-R0 (DKC-F515I-UC0R)
INST03-10C-60 3.10.4.2 Installation Procedure of DEV Interface Cable connects DKU-RK0 and DKU-RK1 (DKC-F515I-UC1R)
INST03-10C-130 3.10.4.3 Installation Procedure of DEV Interface Cable connects DKU-R1 and DKU-R2 (DKC-F515I-EXC0R)
INST03-10C-190 3.10.4.4 SVP pre procedure (Setting up the New Device Structure Information)
INST03-10C-330 3.10.4.5 Installation Procedure of MIX Adapter (DKC-F515I-MIX2R/MIX4R) (Only new installation)
INST03-10C-370 3.10.4.6 Installation Procedure of HDD Canister (DKU-F505I-72KS/72JSR/72KSR/146JS/146JSR/146KSR/300JSR/300KSR/400JSR/72K1R/146J1R/146K1R/300J1R)
INST03-10C-450 3.10.4.7 Connection of DEV Interface Cable (DKC-F515I-UC1R/EXC0R)
INST03-10C-490 3.10.4.8 SVP post procedure
INST03-10C-510 3.10.4.9 Attachment of Covers (DKC-F515I-UC0R/UC1R/EXC0R)

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INST03-10D-10 3.10.5 When performing addition of the data/spare HDD canister, MIX and DEV interface cable that accompanies the addition of the HDD Box in case of TagmaStore AMS/WMS installed configuration (DKC-F515I-MIX2R/MIX4R/UC0R/UC1R/UC4R/EXC2R, DKU-F505I-72KS/72JSR/72KSR/146JS/146JSR/146KSR/ 300JSR/300KSR/400JSR/72K1R/146J1R/146K1R/300J1R)
INST03-10D-20 3.10.5.1 Installation Procedure of DEV Interface Cable connects DKC and DKU-R0 (DKC-F515I-UC0R)
INST03-10D-60 3.10.5.2 Installation Procedure of DEV Interface Cable (DKC-F515I-EXC2R)
INST03-10D-180 3.10.5.3 Installation Procedure of DEV Interface Cable (DKC-F515I-UC4R)
INST03-10D-220 3.10.5.4 Installation Procedure of DEV Interface Cable (DKC-F515I-UC1R)
INST03-10D-260 3.10.5.5 SVP pre procedure (Setting up the New Device Structure Information)
INST03-10D-400 3.10.5.6 Installation Procedure of MIX Adapter (DKC-F515I-MIX2R/MIX4R) (Only new installation)
INST03-10D-450 3.10.5.7 Installation Procedure of HDD Canister (DKU-F505I-72KS/72JSR/72KSR/146JS/146JSR/146KSR/ 300JSR/300KSR/400JSR/72K1R/146J1R/146K1R/300J1R)
INST03-10D-550 3.10.5.8 Connection of DEV Interface Cable (DKC-F515I-UC1R/UC4R/EXC2R)
INST03-10D-580 3.10.5.9 SVP post procedure
INST03-10D-600 3.10.5.10 Attachment of Covers (DKC-F515I-UC0R/UC1R/UC4R/EXC2R)
INST03-11-10 3.11 Installation of Modem Card for Remote Maintenance (DKC-F510I-MDMR)
INST03-11-10 3.11.1 Parts List
INST03-11-20 3.11.2 Installation Procedure of Modem Card for Remote Maintenance
INST03-12-10 3.12 Power ON/OFF Procedure
INST03-12-10 3.12.1 Power ON Procedure
INST03-12-40 3.12.2 Power OFF Procedure
INST03-13-10 3.13 Mounting on Rack Frame
INST03-13-20 3.13.1 Mounting lifter on rack frame
INST03-13-30 3.13.2 Mounting subsystem on rack frame
INST03-14-10 3.14 Installation of Additional Battery (DKC-F515I-LGABR)
INST03-15-10 3.15 CHA/MIX PCB type change procedure

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INST04-01-10 4. Hardware De-Installation
INST04-01-10 4.1 De-Installation of DEV Interface Cable and HDD Canister (DKC-F515I-UC1R/UC4R/EXC0R/EXC2R, DKU-F505I-72KS/72JSR/72KSR/146JS/146JSR/146KSR/300JSR/300KSR/400JSR/72K1R/146J1R/146K1R/300J1R)
INST04-01-30 4.1.1 Flowchart
INST04-01A-10 4.1.2 When performing removal of the data/spare HDD canister (DKU-F505I-72KS/72JSR/72KSR/146JS/146JSR/146KSR/300JSR/300KSR/400JSR/72K1R/146J1R/146K1R/300J1R)
INST04-01B-10 4.1.3 (Blank)
INST04-01C-10 4.1.4 When performing removal of the data/spare HDD canister and DEV interface cable that accompanies the Removal of the HDD Box in case of Standard Configuration (DKC-F515I-UC1R/EXC0R, DKU-F505I-72KS/72JSR/72KSR/146JS/146JSR/146KSR/300JSR/300KSR/400JSR/72K1R/146J1R/146K1R/300J1R)
INST04-01C-20 4.1.4.1 Removal of Covers (DKC-F515I-UC1R/EXC0R)
INST04-01C-40 4.1.4.2 Setting up the New Device Structure Information
INST04-01C-90 4.1.4.3 De-Installation Procedure of HDD Canister
INST04-01C-150 4.1.4.4 (Blank)
INST04-01C-200 4.1.4.5 (Blank)
INST04-01C-230 4.1.4.6 De-Installation Procedure of DEV Interface Cable connects DKU-RK0 and DKU-RK1 (DKC-F515I-UC1R)
INST04-01C-280 4.1.4.7 De-Installation Procedure of DEV Interface Cable connects DKU-RK1 and DKU-RK2 (DKC-F515I-EXC0R)
INST04-01C-330 4.1.4.8 SVP post procedure (Making sure of completion of the removal)
INST04-01C-360 4.1.4.9 Attachment of Covers (DKC-F515I-UC1R/EXC0R)
INST04-01D-10 4.1.5 When performing removal of the data/spare HDD canister and DEV interface cable that accompanies the Removal of the HDD Box in case of TagmaStore AMS/WMS installed configuration (DKC-F515I-UC1R/UC4R/EXC2R, DKU-F505I-72KS/72JSR/72KSR/146JS/146JSR/146KSR/300JSR/300KSR/400JSR/72K1R/146J1R/146K1R/300J1R)
INST04-01D-20 4.1.5.1 Removal of Covers (DKC-F515I-UC1R/UC4R/EXC2R)
INST04-01D-40 4.1.5.2 Setting up the New Device Structure Information
INST04-01D-90 4.1.5.3 De-Installation Procedure of HDD Canister
INST04-01D-170 4.1.5.4 De-Installation Procedure of DEV Interface Cable (DKC-F515I-EXC2R)
INST04-01D-290 4.1.5.5 De-Installation Procedure of DEV Interface Cable (DKC-F515I-UC4R)
INST04-01D-320 4.1.5.6 De-Installation Procedure of DEV Interface Cable (DKC-F515I-UC1R)

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INST04-01D-350 4.1.5.7 SVP post procedure (Making sure of completion of the removal)
INST04-01D-380 4.1.5.8 Attachment of Covers (DKC-F515I-UC1R/UC4R/EXC0R)
INST04-02-10 4.2 De-Installation of Disk Chassis (DKC-F515I-B2R)
INST04-02-10 4.2.1 Parts List
INST04-02-30 4.2.2 De-Installation Procedure of Disk Chassis
INST04-02-30 4.2.2.1 In case of Standard Configuration
INST04-02-51 4.2.2.2 In case of TagmaStore AMS/AWS installed configuration
INST04-02-60 4.2.3 De-Installation Procedure of Disk Chassis (RSD Rack Frame)
INST04-02-220 4.2.4 De-Installation Procedure of Disk Chassis (HDS Rack Frame)
INST04-02-220 4.2.4.1 Standard Configuration
INST04-02-360 4.2.4.2 In case of TagmaStore AMS/AWS installed configuration
INST04-03A-10 4.3 De-Installation of Shared Memory and Cache Memory
INST04-03A-10 4.3.1 De-Installation of Additional Shared Memory (DKC-F510I-S1G/S1GR/S2GR, DKC-F515I-LGABR)
INST04-03B-10 4.3.2 De-Installation of Additional Cache Memory (DKC-F510I-C4G/C4GR/C8GR, DKC-F515I-LGABR)
INST04-04A-10 4.4 De-Installation of Channel Adapter
INST04-04A-10 4.4.1 De-Installation of Serial 16-port Adapter (DKC-F510I-16S/16SR)
INST04-04B-10 4.4.2 De-Installation of Fibre 8/16/32-port High Performance Adapter (DKC-F510I-16HS/32HS/8HSR/16HSR/32HSR/32FSR/ 8FS2R/16FS2R/32FS2R)
INST04-04C-10 4.4.3 De-Installation of Mainframe Fibre 8/16-port Adapter (DKC-F510I-8MS/8ML/8MSR/8MLR/16MSR/16MLR/ 16MFSR/16MFLR/16MFL4R)
INST04-04D-10 4.4.4 De-Installation of NAS 8-port Adapter (DKC-F510I-8NS/8NSR)
INST04-04E-10 4.4.5 De-Installation of iSCSI 8-port Adapter (DKC-F510I-8ISR)
INST04-05-10 4.5 De-Installation of Control Frame (DKC515I-5/5R)
INST04-05-10 4.5.1 Parts List
INST04-05-60 4.5.2 De-Installation Procedure of Bezel
INST04-05-90 4.5.3 De-Installation Procedure of Control Frame (RSD Rack Frame)
INST04-05-190 4.5.4 De-Installation Procedure of Control Frame (HDS Rack Frame)
INST04-06-10 4.6 De-Installation of 19-inch Rack (DKC-F515I-FRMR)
INST04-06-10 4.6.1 Parts List
INST04-06-20 4.6.2 De-Installation Procedure of 19-inch Rack
INST04-07-10 4.7 De-Installation of Modem Card for Remote Maintenance (DKC-F510I-MDMR)
INST04-07-10 4.7.1 Parts List
INST04-07-20 4.7.2 De-Installation Procedure of Modem Card for Remote Maintenance
INST04-08-10 4.8 De-Installation of 1U Filler Panel (DKC-F515I-FIPR)
INST04-08-20 4.8.1 De-Installation Procedure of 1U Filler Panel
INST04-09-10 4.9 De-Installation of Additional Battery (DKC-F515I-LGABR)

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INST05-10 5. SVP procedure
INST05-10 5.1 INDEX
INST05-20 5.2 New Installation SVP Procedure
INST05-20 5.2.1 TOD Setting and Set IP Address
INST05-80 5.2.2 Configuration Information Definition
INST05-340 5.2.2.1 LDEV ID setting procedure when the emulation types of different systems coexist
INST05-340 5.2.2.1.1 Coexistence in units of parity group
INST05-360 5.2.2.1.2 Coexistence in a parity group
INST05-370 5.2.3 Check Procedure
INST05-410 5.2.4 Refer Configuration
INST05-520 5.3 Change Configuration SVP Procedure
INST05-520 5.3.1 Setting up the New Device Structure Information
INST05-530 5.3.1.1 System Option
INST05-560 5.3.1.2 DCR Configuration
INST05-610 5.3.1.3 CVS Configuration
INST05-850 5.3.1.4 LUN Management
INST05-1560 5.3.2 Emulation Type Change
INST05-1640 5.4 System Tuning SVP Procedure
INST05-1640 5.4.1 System Tuning

INST06-10 6. TPF Installation procedures
INST06-10 6.1 Preparations
INST06-20 6.2 Operations

INST07-10 7. Appendix: Storage Capacity and Cache Capacity, and the number of required options
INST07-10 7.1 Standard Configuration
INST07-20 7.2 Required SM Capacity and Installing Location of SM Module
INST07-100 7.3 Table of content
INST07-110 7.3.1 Standard Configuration for RAID5 (3D+1P)
INST07-190 7.3.2 Standard Configuration for RAID1 (2D+2D)
INST07-270 7.3.3 Standard Configuration for RAID6 (6D+2P)
INST07-330 7.3.4 Standard Configuration for RAID5 (7D+1P)
INST07-390 7.4 Universal Volume Manager applied

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1. Subsystem Configuration Outline

1.1 General Information

1.1.1 Model List

Table 1.1.1-1 shows the model list of DKC515I.
A model that comply RoHS directive has "R" in the end of model number.

Notice: There are two kinds of models: a "model that conforms to the RoHS" and a "model that does not conform to the RoHS." When selecting a model, make a correct selection referring to "Notes on Conformity to the RoHS" on page INST01-41.

Table 1.1.1-1 Model List of DKC515I

No.	Model Number	Model Name	Major Part	Remarks
1	DKC515I-5 (RoHS not applied) DKC515I-5R (RoHS applied)	Control Frame	DKC Part • SVP × 1 • SH406-A (DKC-PNL) × 1 • SH407-A (SSVP/MN) × 1 • DKC PS × 4 • Battery Box × 2 • DKC FAN (1) ASSY × 2 • DKC FAN (2) ASSY × 2 • LAN Cable × 2 • MRP Cable × 2 • INLET CABLE × 5 • LR021-A (Logic PL) × 1 • WP535-A (BASE PCB) × 2	This model name does not include 19 inch Rack (DKC-F515I-FRMR).
2	DKC-F515I-LGABR	Additional Battery	• Battery Box × 2	*1
3	DKC-F515I-UC0R	Device Interface Cable connects DKC and DKU-R0	• HSSDC Cable × 8 • MRP Cable × 4	
4	DKC-F515I-UC1R	Device Interface Cable connects DKU-R0 and DKU-R1	• HSSDC Cable × 8 • MRP Cable × 4	
5	DKC-F515I-UC4R	Device Interface Cable	• HSSDC Cable × 8 • MRP Cable × 4	Use when TagmaStore AMS/ WMS mounted configuration.

(To be continued)

*1: This is an indispensable option that is to be installed when the subsystem configuration is one of the following.
- ■ Add one set of this option when it corresponds to one of the following two conditions
  - • Shared memory (DKC-F510I-S1G/S1GR/S2GR) quantity are 4 sets or more
  - • Cache memory (DKC-F510I-C4G/C4GR/C8GR) quantity are 4 sets or more
- ■ Add one set of this option when it corresponds to one of the following condition
  - • Cache memory (DKC-F510I-C4G/C4GR/C8GR) quantity are 8 sets

However, when the installing slot of the battery is vacant, the battery option can be added alone.

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(Continued from the preceding page)

No.	Model Number	Model Name	Major Part	Remarks
6	DKC-F515I-EXC0R	Device Interface Cable connects DKU-R1 and DKU-R2	• HSSDC Cable × 8 • MRP Cable × 4	
7	DKC-F515I-EXC2R	Device Interface Cable	• HSSDC Cable × 8 • MRP Cable × 4	Use when TagmaStore AMS/ WMS mounted configuration.
8	DKC-F515I-FRMR	19-inch Rack	• RACK FRAME • Door (REAR/SIDE) • PDU × 4	
9	DKC-F515I-B2R	Disk Chassis	• HDD BOX × 2 • DKU PS × 4 • LR022× 2 • SH404-A × 4 (FSW)	
10	DKC-F515I-MIX2R	MIX Adapter (Fibre 16-port, Disk Adapter 8-port)	• WP525-B × 1 SH343-B × 4] × 2	
11	DKC-F515I-MIX4R	MIX 4G-Adapter (4Gbps Fibre 16-port, Disk Adapter 8-port)	• WP526-A × 1 SH343-B × 4] × 2	
12	DKC-F510I-C4G (RoHS not applied)	Additional Cache Memory Module (4GB)	• SH342-A/C × 4	
	DKC-F510I-C4GR		• SH342-C × 4	
13	DKC-F510I-S1G (RoHS not applied)	Additional Shared Memory Module (1GB)	• SH341-A/C × 2	
	DKC-F510I-S1GR		• SH341-C × 2	
14	DKC-F510I-C8GR	Additional Cache Memory Module (8GB)	• SH342-D × 4	
15	DKC-F510I-S2GR	Additional Shared Memory Module (2GB)	• SH341-D × 2	
16	DKC-F510I-16S (RoHS not applied)	Serial 16-port Adapter	• WP512-A/B × 1 SH343-A/B × 4] × 2	
	DKC-F510I-16SR		• WP512-B × 1 SH343-B × 4] × 2	
17	DKC-F510I-8MS (RoHS not applied)	Mainframe Fibre 8-port Adapter for Short Wavelength (1-2Gbps)	• WP515-A/C × 1 SH343-A/B × 4] × 2	
	DKC-F510I-8MSR		• WP515-C × 1 SH343-B × 4] × 2	
18	DKC-F510I-8ML (RoHS not applied)	Mainframe Fibre 4-port Adapter for Long Wavelength (1-2Gbps)	• WP515-B/D × 1 SH343-A/B × 4] × 2	
	DKC-F510I-8MLR		• WP515-D × 1 SH343-B × 4] × 2	

(To be continued)

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No	Model Number	Model Name	Major Part	Remarks
19	DKC-F510I-16MSR	Mainframe Fibre 16-port Adapter for Short Wavelength (1-2Gbps)	• WP514-C × 1 SH343-B × 4] × 2	
20	DKC-F510I-16MLR	Mainframe Fibre 16-port Adapter for Long Wavelength (1-2Gbps)	• WP514-D × 1 SH343-B × 4] × 2	
21	DKC-F510I-8HSR	Fibre 8-port High Performance Adapter (1-2Gbps)	• WP513-E × 1 SH343-B × 2] × 2	
22	DKC-F510I-16HS (RoHS not applied)	Fibre 16-port High Performance Adapter (1-2Gbps)	• WP513-A/C × 1 SH343-A/B × 2] × 2	
	DKC-F510I-16HSR		• WP513-C × 1 SH343-B × 2] × 2	
23	DKC-F510I-32HS (RoHS not applied)	Fibre 32-port High Performance Adapter (1-2Gbps)	• WP513-B/D × 1 SH343-A/B × 4] × 2	
	DKC-F510I-32HSR		• WP513-D × 1 SH343-B × 4] × 2	
24	DKC-F510I-32FSR	Fibre 32-port High Performance Adapter (1-4Gbps)	• WP518-D × 1 SH343-B × 4] × 2	
25	DKC-F510I-8NS (RoHS not applied)	NAS 8-port Adapter for Short Wavelength (1.25Gbps)	• WP517-A/C × 1 SH343-A/B × 1] × 2	
	DKC-F510I-8NSR		• WP517-C × 1 SH343-B × 1] × 2	
26	DKC-F510I-8ISR	iSCSI 8-port Adapter for Short Wavelength (1.25Gbps)	• WP516-B × 1 SH343-B × 2] × 2	
27	DKC-F510I-8FS2R	Fibre 8-port Adapter 2 (1-4Gbps)	• WP518-G × 1 SH343-B × 2] × 2	
28	DKC-F510I-16FS2R	Fibre 16-port Adapter 2 (1-4Gbps)	• WP518-E × 1 SH343-B × 2] × 2	
29	DKC-F510I-32FS2R	Fibre 32-port Adapter 2 (1-4Gbps)	• WP518-F × 1 SH343-B × 4] × 2	
30	DKC-F510I-16MFSR	Mainframe Fibre 16-port Adapter for Short Wavelength (1-4Gbps)	• WP514-E × 1 SH343-B × 4] × 2	
31	DKC-F510I-16MFLR	Mainframe Fibre 16-port Adapter for Long Wavelength (1-4Gbps)	• WP514-F × 1 SH343-B × 4] × 2	
32	DKC-F510I-16MFL4R	Mainframe Fibre 16-port Adapter for Long Wave (1-4Gbps: Max. 4km)	• WP514-H × 1 SH343-B × 4] × 2	
33	DKC-F510I-1HL (RoHS not applied)	Fibre SFP Transceiver for Long Wavelength	• Transceiver for Fibre Long Wave × 1	
	DKC-F510I-1HLR		• Transceiver for Fibre Long Wave × 1	
34	DKC-F510I-1HS (RoHS not applied)	Fibre SFP Transceiver for Short Wavelength	• Transceiver for Fibre Short Wave × 1	
	DKC-F510I-1HSR		• Transceiver for Fibre Short Wave × 1	

(To be continued)

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(Continued from the preceding page)

No	Model Number	Model Name	Major Part	Remarks
35	DKC-F510I-1FLR	Fibre SFP Transceiver for Long Wavelength (1-4Gbps)	• Transceiver for Fibre Long Wave × 1	
36	DKC-F510I-1FSR	Fibre SFP Transceiver for Short Wavelength (1-4Gbps)	• Transceiver for Fibre Short Wave × 1	
37	DKC-F510I-1FL4R	Fibre SFP Transceiver for Long Wavelength (1-4Gbps: Max. 4km)	• Transceiver for Fibre Long Wave × 1	
38	DKC-F510I-MDMR	Modem Card for Remote Maintenance	• Modem Card	
39	DKC-F515I-BCHR	Bezel kit for HDS (DKC)	• Transceiver for Fibre Long Wave × 1	
40	DKC-F515I-BUHR	Bezel kit for HDS (DKU)	• Bezel (12U) × 1	
41	DKC-F515I-BCPR	Bezel kit for HP (DKC)	• Bezel (12U) × 1 • Bezel (4U) × 1	
42	DKC-F515I-BUPR	Bezel kit for HP (DKU)	• Bezel (12U) × 1	
43	DKC-F515I-FIPR	1U Filler Panel for HP	• Filler Panel × 1	
44	DKC-F515I-BCSR	Bezel kit for SUN (DKC)	• Bezel (12U) × 1 • Bezel (4U) × 1	
45	DKC-F515I-BUSR	Bezel kit for SUN (DKU)	• Bezel (12U) × 1	
46	DKU-F505I-72JSR	1 HDD Canister	• HDD Canister × 1	
47	DKU-F505I-72KS (RoHS not applied)	1 HDD Canister (72GB/15kmin^{-1}/Multi vendor)	• HDU500-72KSFC/ 72K1FC/72K2FC × 1	
	DKU-F505I-72KSR	1 HDD Canister (72GB/15kmin^{-1}/Multi vendor)	• HDU500-72KSFC/ 72K1FC/72K2FC × 1	
48	DKU-F505I-72K1R	1 HDD Canister (72GB/15kmin^{-1}/Seagate)	• HDU500-72K1FC × 1	
49	DKU-F505I-146JS (RoHS not applied)	1 HDD Canister (146GB/10kmin^{-1}/Multi vendor)	• HDU500-146JSFC/ 146J1FC/146J2FC × 1	
	DKU-F505I-146JSR	1 HDD Canister (146GB/10kmin^{-1}/Multi vendor)	• HDU500-146JSFC/ 146J1FC/146J2FC × 1	
50	DKU-F505I-146J1R	1 HDD Canister (146GB/10kmin^{-1}/HGST)	• HDU500-146J1FC × 1	
51	DKU-F505I-146KSR	1 HDD Canister (146GB/15kmin^{-1}/Multi vendor)	• HDU500-146KSFC/ 146K1FC/146K2FC × 1	
52	DKU-F505I-146K1R	1 HDD Canister (146GB/15kmin^{-1}/Seagate)	• HDU500-146K1FC × 1	
53	DKU-F505I-300JSR	1 HDD Canister (300GB/10kmin^{-1}/Multi vendor)	• HDU500-300JSFC/ 300J1FC/300J2FC × 1	
54	DKU-F505I-300J1R	1 HDD Canister (300GB/10kmin^{-1}/HGST)	• HDU500-300J1FC × 1	
55	DKU-F505I-300KSR	1 HDD Canister (300GB/15kmin^{-1}/Multi vendor)	• HDU500-300K1FC × 1	
56	DKU-F505I-400JSR	1 HDD Canister (400GB/10kmin^{-1}/Multi vendor)	• HDU500-400J1FC × 1	

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SVP displays each drive model as the table (written at THEORY section “3.7 Inter Mix of Drives and Emulation types”).

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[Notes on Conformity to the RoHS]

Whether a subsystem conforms to the RoHS or not is judged from a model name of a Control Frame. When the Control Frame model name represents unconformity to the RoHS, the subsystem concerned does not conform to the RoHS and when it represents conformity to the RoHS, the subsystem concerned conforms to the RoHS.

(1) Subsystem that does not conform to the RoHS
When a subsystem does not conform to the RoHS, both “options that conform to the RoHS” and “options that do not conform to the RoHS” can be installed in it.

Subsystem that does not conform to the RoHS

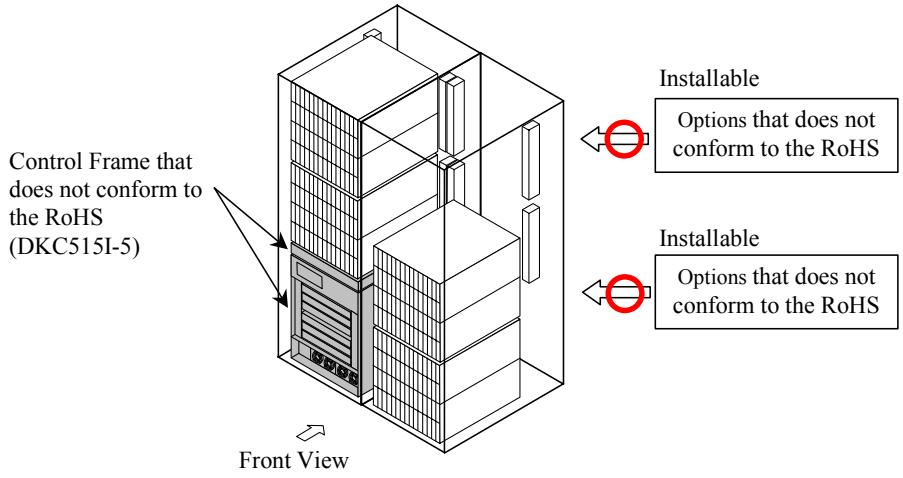

Fig. 1.1.1-1 Subsystem That Does Not Conform to RoHS

(2) Subsystem that conforms to the RoHS
When a subsystem conforms to the RoHS, only “options that conform to the RoHS” can be installed in it.

Subsystem that conforms to the RoHS

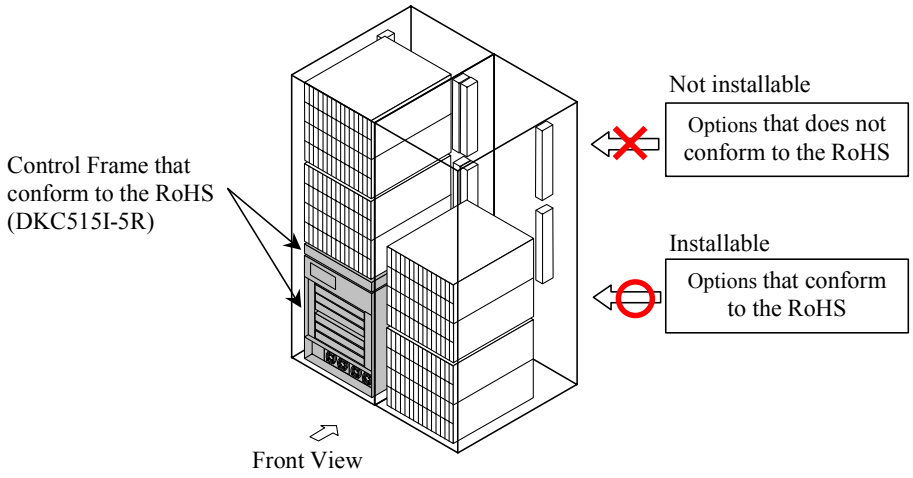

Fig. 1.1.1-2 Subsystem That Conform to RoHS

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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 INST03-09A-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.

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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-F510I-S1G/S1GR	DKC-F515I-LGABR	DKC-F510I-S2GR	DKC-F515I-LGABR
1 GB	1	—	—	—
2 GB	2	—	1	—
3 GB	3	—	—	—
4 GB	4	1	2	—
5 GB	5	1	—	—
6 GB	6	1	3	—
7 GB	—	—	—	—
8 GB	—	—	4	1

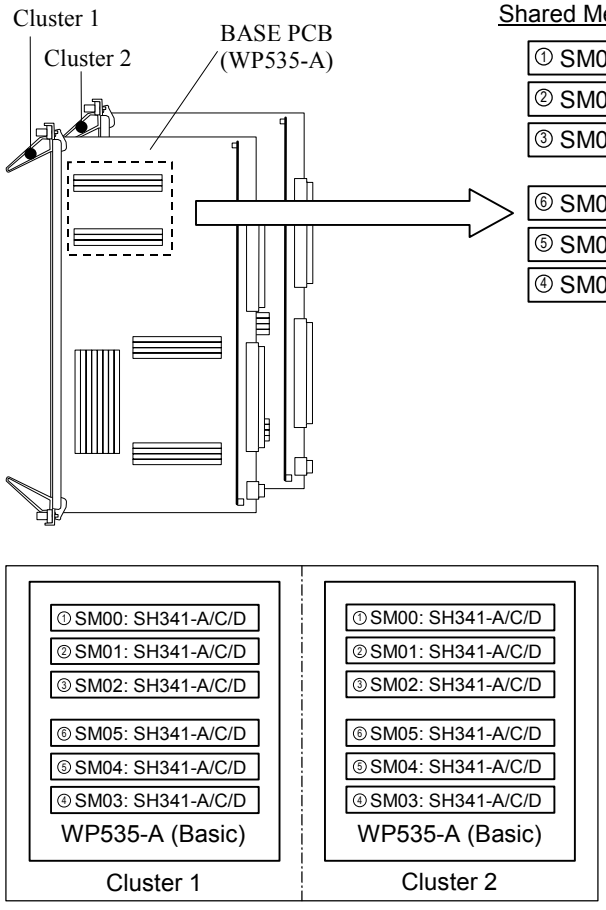

Fig. 1.1.2-1 Location of Shared Memory Module

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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-F510I-C4G/C4GR	DKC-F515I-LGABR	DKC-F510I-C8GR	DKC-F515I-LGABR
4 GB	1	—	—	—
8 GB	2	—	1	—
12 GB	3	—	—	—
16 GB	4	1	2	—
20 GB	5	1	—	—
24 GB	6	1	3	—
28 GB	7	1	—	—
32 GB	8	2	4	1
40 GB	—	—	5	1
48 GB	—	—	6	1
56 GB	—	—	7	1
64 GB	—	—	8	2

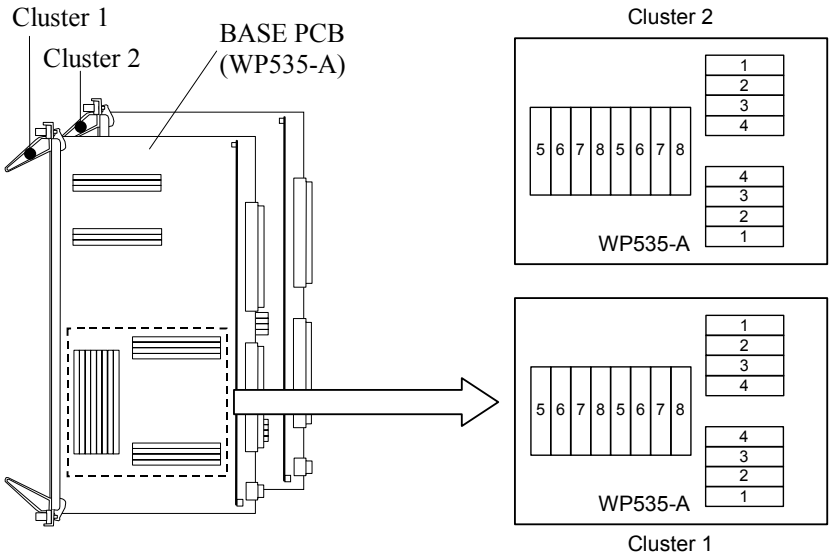

Fig. 1.1.2-2 Location of Cache Memory Module

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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. Furthermore, when connecting an external storage, required shared memory capacity differs.
Required shared memory capacity is determined with reference to the table indicated at the following table.

No.	Program Product application situation			Number of CU	Reference Table	
	True Copy or Shadow Image or Universal Replicator or Volume Migration or Hi-Copy (*1)	TPF or E-Copy	Flash Copy Version2 or COW Snapshot (*1)		Page	Table number
1	Not Applied	Not Applied	Not Applied	1-4 (to 1,024LDEV)	INST07-40	Table 7.2-1
				5-64 (to 16,384LDEV)		
2	Applied	Not Applied	Not Applied	1-4 (to 1,024LDEV)	INST07-50	Table 7.2-2
				5-64 (to 16,384LDEV)		
3	Not Applied	Applied	Not Applied	1-4 (to 1,024LDEV)	INST07-60	Table 7.2-3
				5-64 (to 16,384LDEV)		
4	Applied	Applied	Not Applied	1-4 (to 1,024LDEV)	INST07-70	Table 7.2-4
				5-64 (to 16,384LDEV)		
5	Applied	Not Applied	Applied	1-4 (to 1,024LDEV)	INST07-80	Table 7.2-5
				5-64 (to 16,384LDEV)		
6	Applied	Applied	Applied	1-4 (to 1,024LDEV)	INST07-90	Table 7.2-6
				5-64 (to 16,384LDEV)		

*1: TrueCopy : TC
ShadowImage : SI
Universal Replicator : UR
Volume Migration : VM
Flash Copy Version2 : FCV2
COW Snapshot : COW

Please note that location of shared memory module varies according to the purpose such as additional cache installation or additional LDEV installation.
In the case of Disk-less configuration, please refer to the description of “External Storage support”.

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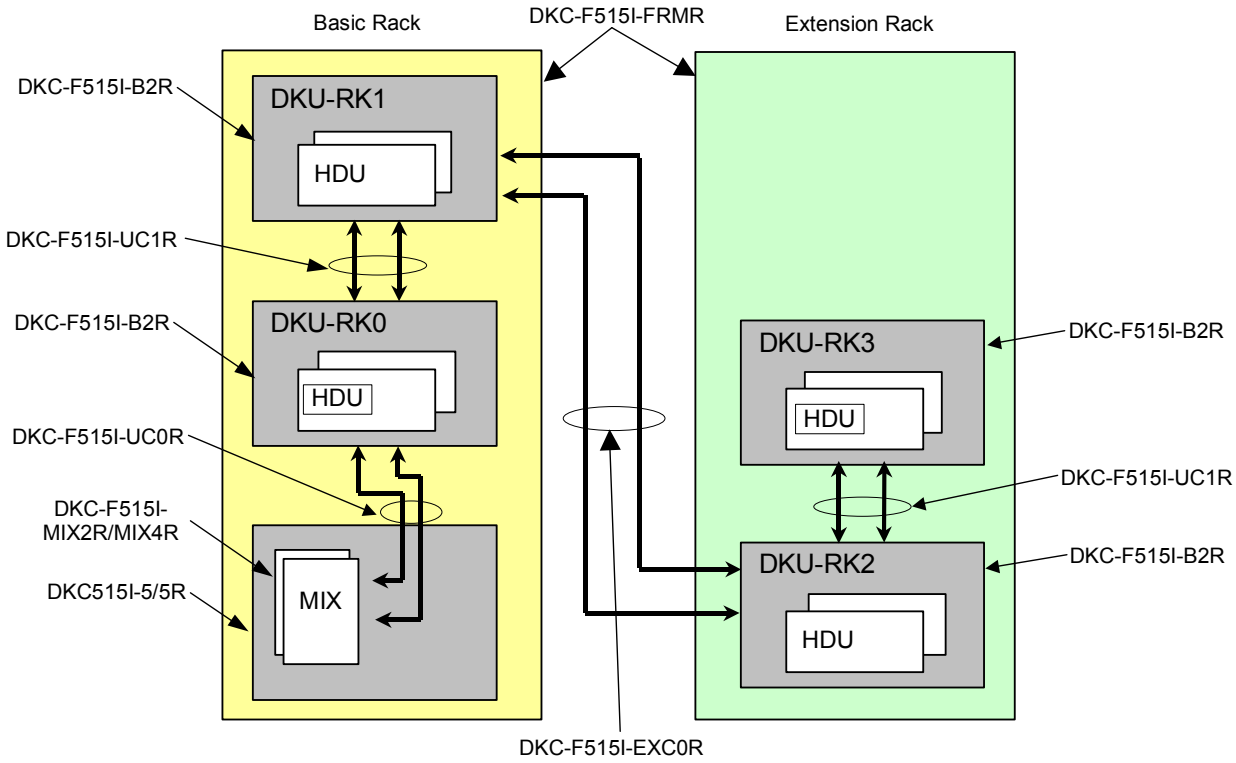
1.1.2.4 Frame addition and option(s) required for it

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



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

No.	Required Number of Options								
	(DKC-F515I-FRMR)		DKC515I -5/5R	DKC-F515I-					HDD *1
	Basic Rack	Extension Rack		MIX2R/ MIX4R	B2R	UC0R	UC1R	EXC0R	
1	1	—	1	1	1	1	0	0	60
2	1	—	1	1	2	1	1	0	120
3	1	1	1	1	3	1	1	1	180
4	1	1	1	1	4	1	2	1	240

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

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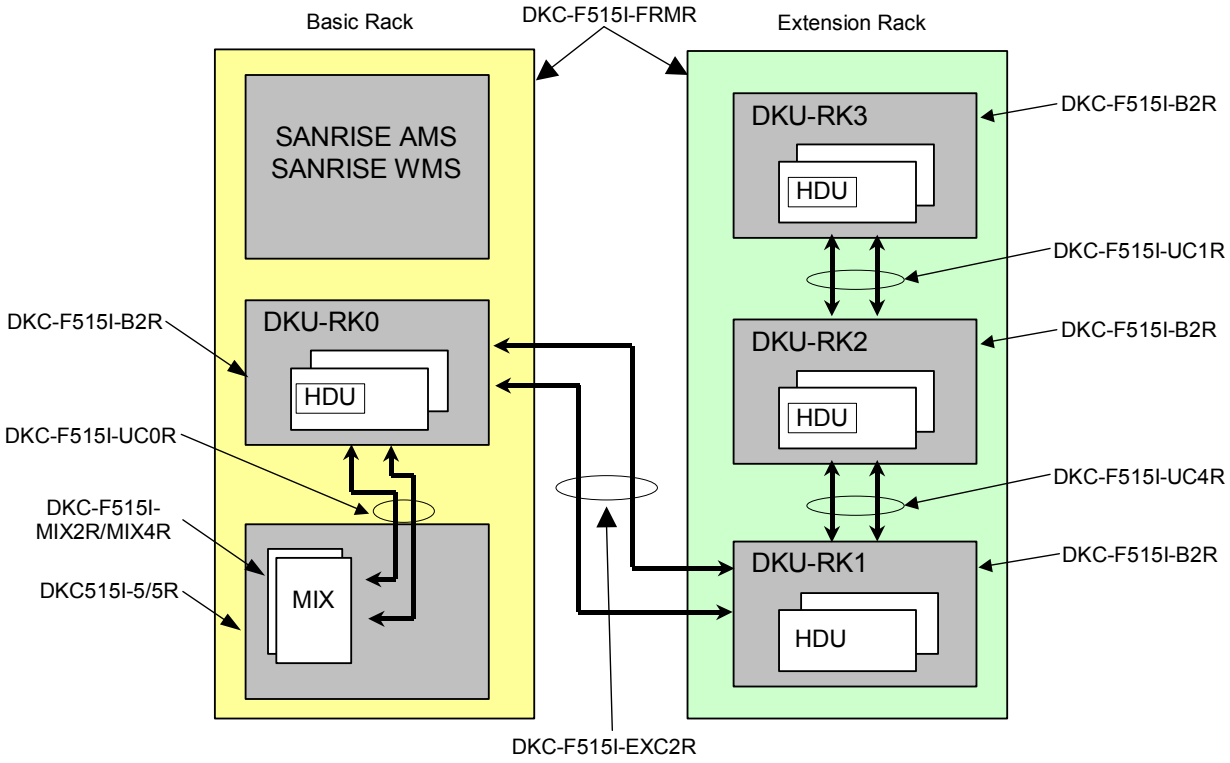
2. In case of TagmaStore AMS/WMS installed configuration

TagmaStore AMS/ WMS can be mounted to only basic racks, not to extension racks. The subsystem configuration and numbers of required options for each model are shown below.



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

No.	Required Number of Options									
	(DKC-F515I-FRMR)		DKC515I -5/5R	DKC-F515I-						HDD *1
	Basic Rack	Extension Rack		MIX2R/ MIX4R	B2R	UC0R	UC1R	UC4R	EXC2R	
1	1	—	1	1	1	1	0	0	0	60
2	1	1	1	1	2	1	0	0	1	120
3	1	1	1	1	3	1	0	1	1	180
4	1	1	1	1	4	1	1	1	1	240

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

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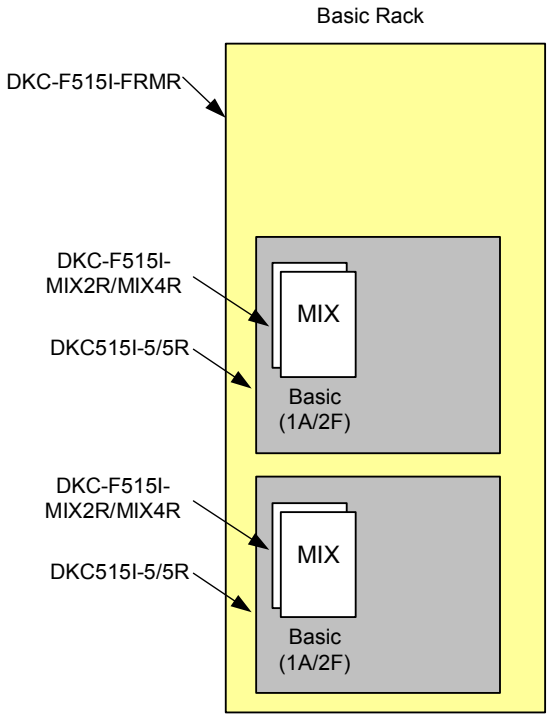
3. In case of Disk-less configuration

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



Required options are shown in the following table.

No.	Required Number of Options		
	(DKC-F515I-FRMR) Basic Rack	DKC515I-5/5R	DKC-F515I-MIX2R/MIX4R
1 (*1)	1	1	1
2 (*2)	1	2	2

*1: When a DKC is installed.

*2: When two DKCs are installed.

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4. RAID Group Installation Order

(1) Order of HDD installation in Disk Chassis

It installs in “0E” in turn from HDD location “00”.

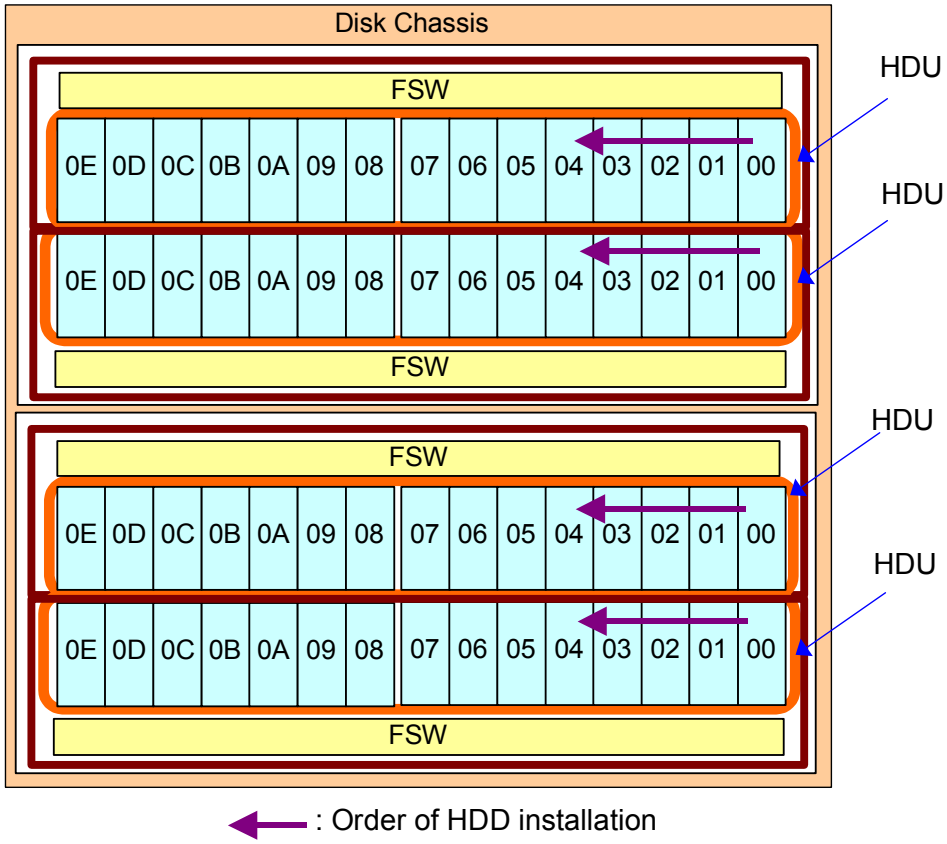

Fig. 1.1.2.4-1 Installation Order in HDD

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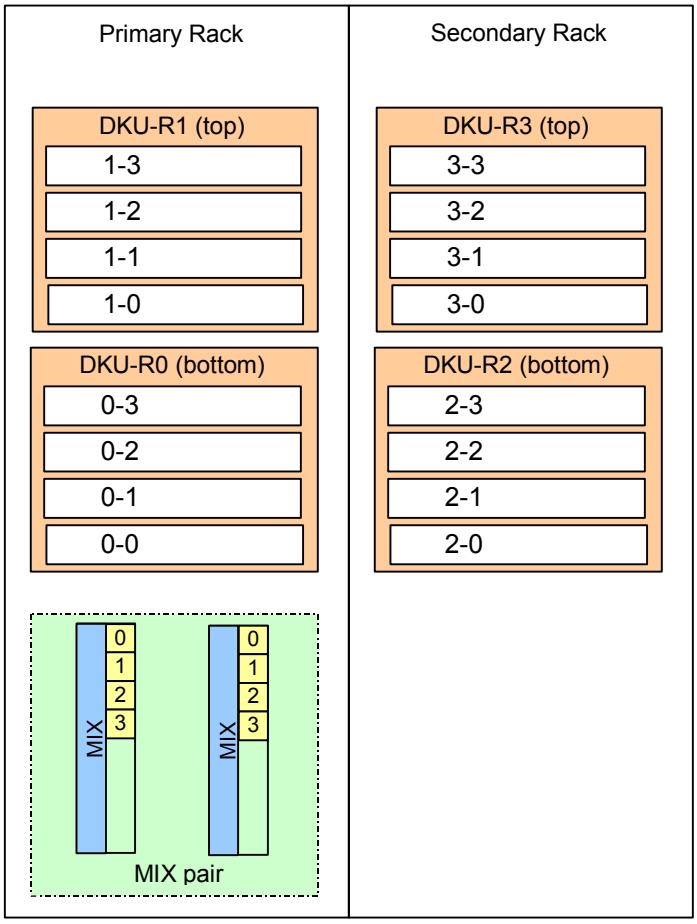
(2) Order of HDD installation in the subsystem

The installation order of the Disk Chassis and HDDs which connects with MIX-PCB is as follows.

MIX pair (1A/2F) → DKU-R0 → DKU-R1 → DKU-R2 → DKU-R3

The relation of connection of MIX-PCB and HDU in the disk chassis is shown in the following figure.



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1.1.3 Specifications

(1) Physical Specifications

The DKC515I physical specifications are shown in the following table:

Table 1.1.3-1 DKC515I Physical Specifications

No.	Model Number	Weight (kg)	Heat Output (kW)	Power Consumption (kVA)	Dimension (mm)			Air Flow (m^3/min.)
					Width	Depth	Height	
1	DKC515I-5/5R	82.0	0.638	0.658	480	648	703 *1	7.0
2	DKC-F515I-FRMR	180	—	—	610	925	1920	—
3	DKC-F515I-B2R	66.0	0.100	0.103	480	648	522	8.0
4	DKC-F515I-BCHR	4.3	—	—	—	—	—	—
5	DKC-F515I-BUHR	3.0	—	—	—	—	—	—
6	DKC-F515I-BCPR	4.3	—	—	—	—	—	—
7	DKC-F515I-BUPR	3.0	—	—	—	—	—	—
8	DKC-F515I-FIPR	0.4	—	—	—	—	—	—
9	DKC-F515I-BCSR	4.3	—	—	—	—	—	—
10	DKC-F515I-BUSR	3.0	—	—	—	—	—	—
11	DKC-F515I-MIX2R	5.0	0.370	0.381	—	—	—	—
12	DKC-F515I-MIX4R	5.0	0.380	0.392	—	—	—	—
13	DKC-F515I-LGABR	8.0	0.044	0.045	—	—	—	—
14	DKC-F510I-C4G/C4GR	0.2	0.014	0.014	—	—	—	—
15	DKC-F510I-S1G/S1GR	0.06	0.011	0.012	—	—	—	—
16	DKC-F510I-C8GR	0.2	0.014	0.014	—	—	—	—
17	DKC-F510I-S2GR	0.06	0.014	0.014	—	—	—	—
18	DKC-F515I-UC0R	2.5	—	—	—	—	—	—
19	DKC-F515I-UC1R	1.5	—	—	—	—	—	—
20	DKC-F515I-UC4R	1.5	—	—	—	—	—	—
21	DKC-F515I-EXC0R	4.3	—	—	—	—	—	—
22	DKC-F515I-EXC2R	4.3	—	—	—	—	—	—
23	DKC-F510I-16S/16SR	5.4	0.313	0.323	—	—	—	—
24	DKC-F510I-8MS/8MSR	5.7	0.346	0.356	—	—	—	—
25	DKC-F510I-8ML/8MLR	5.7	0.346	0.356	—	—	—	—
26	DKC-F510I-16MSR	5.6	0.35	0.361	—	—	—	—
27	DKC-F510I-16MLR	5.6	0.35	0.361	—	—	—	—
28	DKC-F510I-8HSR	4.6	0.273	0.281	—	—	—	—
29	DKC-F510I-16HS/16HSR	5.0	0.287	0.296	—	—	—	—
30	DKC-F510I-32HS/32HSR	5.8	0.382	0.394	—	—	—	—
31	DKC-F510I-32FSR	5.8	0.382	0.394	—	—	—	—

(To be continued)

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(Continued from the preceding page)

No.	Model Number	Weight (kg)	Heat Output (kW)	Power Consumption (kVA)	Dimension (mm)			Air Flow (m^3/min.)
					Width	Depth	Height	
32	DKC-F510I-8FS2R	4.6	0.273	0.281	—	—	—	—
33	DKC-F510I-16FS2R	5.0	0.287	0.296	—	—	—	—
34	DKC-F510I-32FS2R	5.8	0.382	0.394	—	—	—	—
35	DKC-F510I-16MFLR	5.7	0.36	0.371	—	—	—	—
36	DKC-F510I-16MFSR	5.7	0.36	0.371	—	—	—	—
37	DKC-F510I-16MFL4R	5.7	0.36	0.371	—	—	—	—
38	DKC-F510I-1HL/1HLR	0.02	—	—	—	—	—	—
39	DKC-F510I-1HS/1HSR	0.02	—	—	—	—	—	—
40	DKC-F510I-1FLR	0.02	—	—	—	—	—	—
41	DKC-F510I-1FSR	0.02	—	—	—	—	—	—
42	DKC-F510I-1FL4R	0.02	—	—	—	—	—	—
43	DKC-F510I-8NS/8NSR	6.5	0.446	0.46	—	—	—	—
44	DKC-F510I-8ISR	4.2	0.198	0.204	—	—	—	—
45	DKC-F510I-MDMR	0.04	0.006	0.006	—	—	—	—
46	DKU-F505I-72KS	1.1	0.022	0.024	—	—	—	—
47	DKU-F505I-72KSR	1.0	0.022	0.024	—	—	—	—
	DKU-F505I-72K1R							
48	DKU-F505I-146JS/146JSR	1.0	0.023	0.025	—	—	—	—
	DKU-F505I-146J1R							
49	DKU-F505I-146KSR	1.0	0.023	0.025	—	—	—	—
	DKU-F505I-146K1R							
50	DKU-F505I-300JSR	1.0	0.023	0.025	—	—	—	—
	DKU-F505I-300J1R							
51	DKU-F505I-300KSR	1.0	0.023	0.025	—	—	—	—
52	DKU-F505I-400JSR	1.0	0.023	0.025	—	—	—	—

*1: This includes the thickness of SVP (43.2mm).

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1.1.4 Environmental Specifications

The environmental specifications are shown in the following table.

Item	Condition		
	Operating [*1]	Non-operation [*2]	Shipping & Storage [*3]
Temperature (ºC)	16 to 32	-10 to 43	-25 to 60
Relative Humidity (%) [*4]	20 to 80	8 to 90	5 to 95
Max. Wet Bulb (ºC)	26	27	29
Temperature Deviation (ºC/hour)	10	10	20
Vibration [*5]	5 to 10Hz: 0.25mm 10 to 300Hz: 0.49m/s^2	5 to 10Hz: 2.5mm 10 to 70Hz: 4.9m/s^2 70 to 99Hz: 0.05mm 99 to 300Hz: 9.8m/s^2	4.9m/s^2, 15min. At four most severe resonance between 5 to 200Hz [*6]
Shock	—	78.4m/s^2, 15ms	Horizontal: Incline Impact 1.22m/s [*7] Vertical: Rotational Edge 0.1m [*8]
Acoustic level [*9]	65dB	—	—

*1: Environmental specification for operating condition should be satisfied before the disk subsystem is powered on. Maximum temperature of 32ºC should be strictly satisfied at air inlet portion.
Recommended temperature range is 21 to 24ºC.

*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 D5277-92 Test Method for Performing Programmed Horizontal Impacts Using an Inclined Impact Tester.

*8: See ASTM D6055-96 Test Methods for Mechanical Handling of Unitized Loads and Large Shipping Cases and Crates.

*9: Measurement Condition: The point 1m far from floor and surface of the product.

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

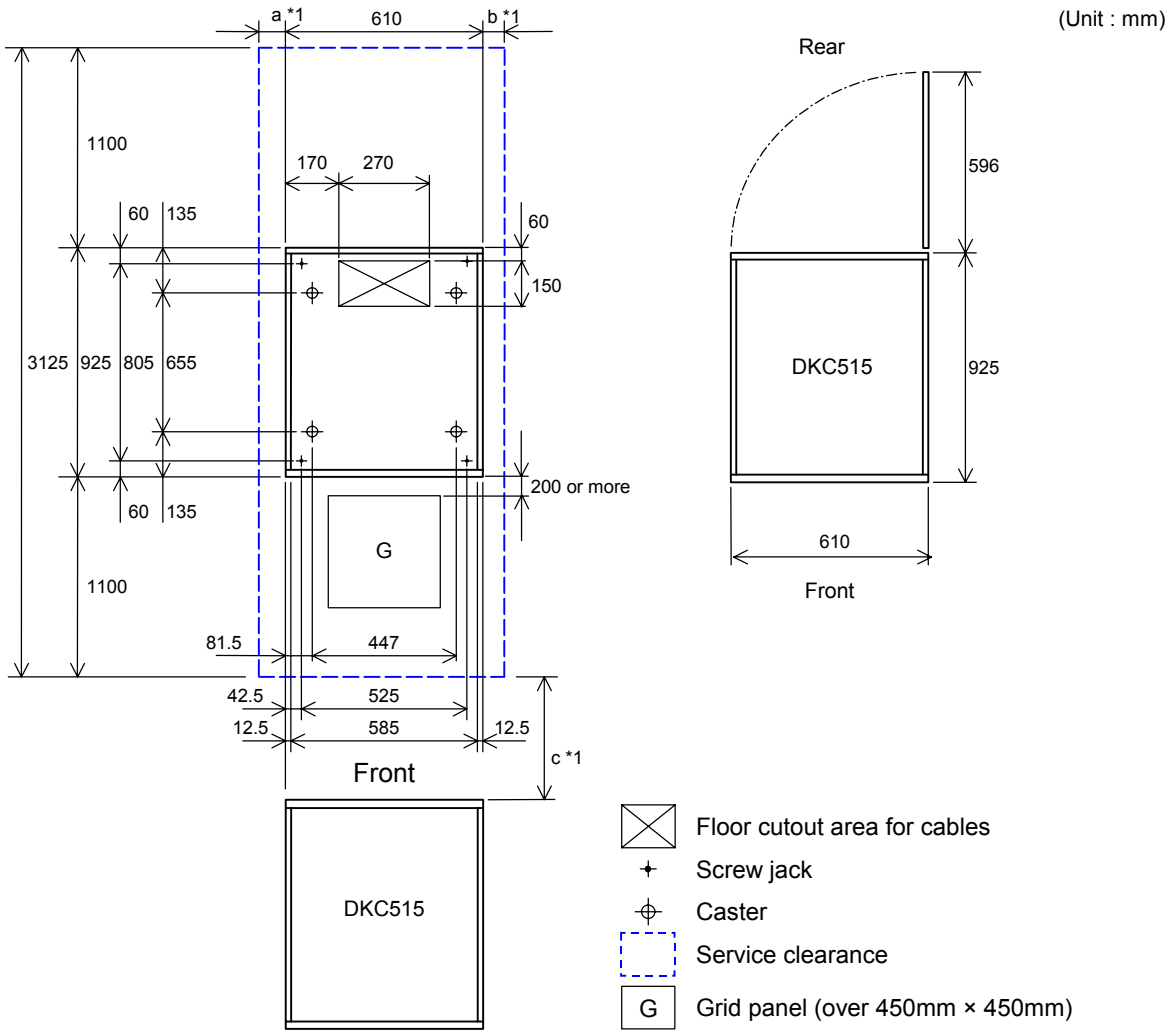
Model	Primary Rack		Secondary Rack	
	Rating	Number of Plug	Rating	Number of Plug
Single Phase	20A	4	20A	2 [*1] / 4 [*2]

*1: When one Disk Chassis (DKC-F515I-B2R) is installed.
*2: When two Disk Chassis (DKC-F515I-B2R) are installed.

1.1.6 Service Clearance and Floor Cutout

(1) Single Rack Configuration

The service clearance is the space for CE work. Never use this space for storage of any article to prevent damage.



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*1: Clearance (a+b) depended on the floor load rating and clearance c.
Floor load rating and required clearances are shown below.

Table 1.1.6-1 Floor Load Rating for Service Clearances (Single Rack)

Floor load rating (kg/m^2)	Required clearance (a + b) m				
	Clearance (c) m				
	C = 0	C = 0.2	C = 0.4	C = 0.6	C = 1.0
500	0.1	0	0	0	0
450	0.2	0.1	0.1	0	0
400	0.3	0.2	0.2	0.1	0
350	0.5	0.4	0.3	0.3	0.2
300	0.9	0.7	0.6	0.5	0.4

Give clearance of 100mm on both sides of the subsystem when the kick plates are to be attached after the subsystem is installed. However, when the subsystems of the same type are to be installed adjacently to each other, a clearance between the subsystems may be 100mm.

*2: Dimensions in parentheses show allowable range of the floor cutout dimensions.
Basically, position the floor cutout in the center of the subsystem.
However, the position may be off-center as long as the cutout allows smooth entrance of an external cable (check the relation between the positions of the cutout and the opening on the bottom plate of the subsystem) and it is within the allowable range.

*3: This dimension varies depending on the floor cutout dimensions.

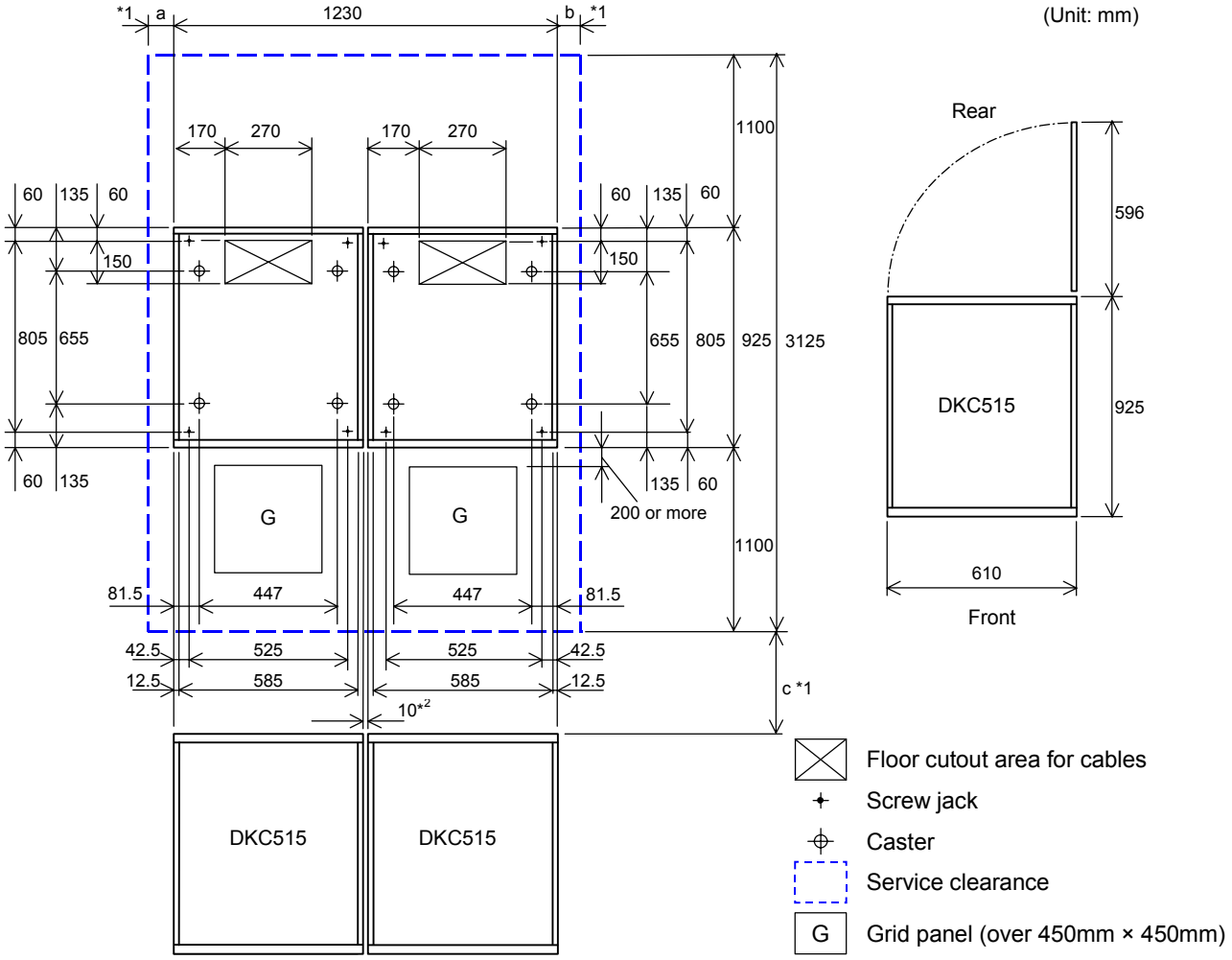
Note: 1. Actual clearances for installation should be decided after consulting with construction specialist responsible for installation building, as they could vary depending on the size/layout of the system and building conditions.

2. When various configurations of subsystems are arranged in a row, clearance values based on the largest subsystem configuration should be used.

3. From the viewpoint of maintenance operations, it is suggested that Clearance (c) be made as large as possible.

(2) Twin Rack Configuration

The service clearance is the space for CE work. Never use this space for storage of any article to prevent damage.



*1: Clearance (a + b) depend on the floor load rating and clearance c. Floor load rating and required clearances are shown below.

*2: When installing a rack in parallel, vacate a 10 mm crack.

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Table 1.1.6-2 Floor Load Rating for Service Clearances (Twin Rack Configuration)

Floor load rating (kg/m^2)	Required clearance (a + b) m				
	Clearance (c) m				
	C = 0	C = 0.2	C = 0.4	C = 0.6	C = 1.0
500	0	0	0	0	0
450	0.2	0.1	0	0	0
400	0.5	0.3	0.2	0.1	0
350	0.8	0.6	0.5	0.3	0.1
300	1.4	1.2	1.0	0.8	0.5

Note: 1. Actual clearances for installation should be decided after consulting with construction specialist responsible for installation building, as they could vary depending on the size/layout of the system and building conditions.

2. When various configurations of subsystems are arranged in a row, clearance values based on the largest subsystem configuration should be used.

3. From the viewpoint of maintenance operations, it is suggested that Clearance (c) be made as large as possible.

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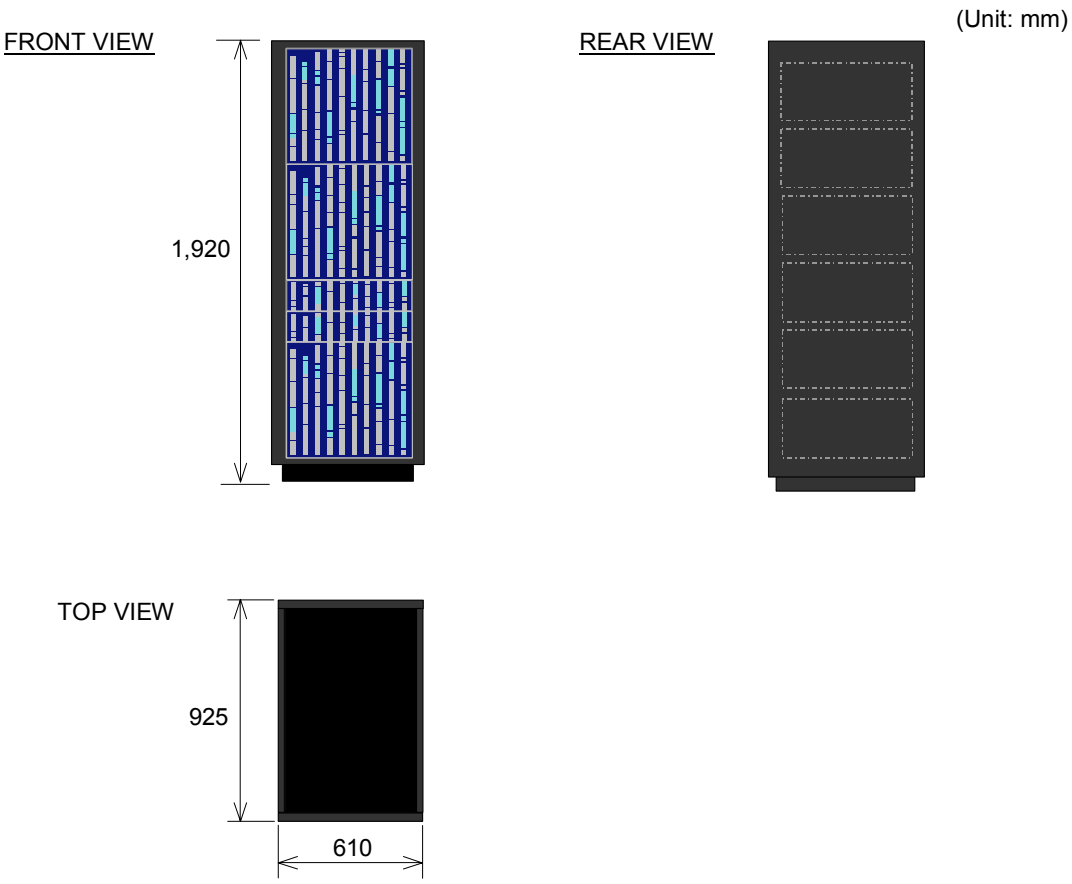
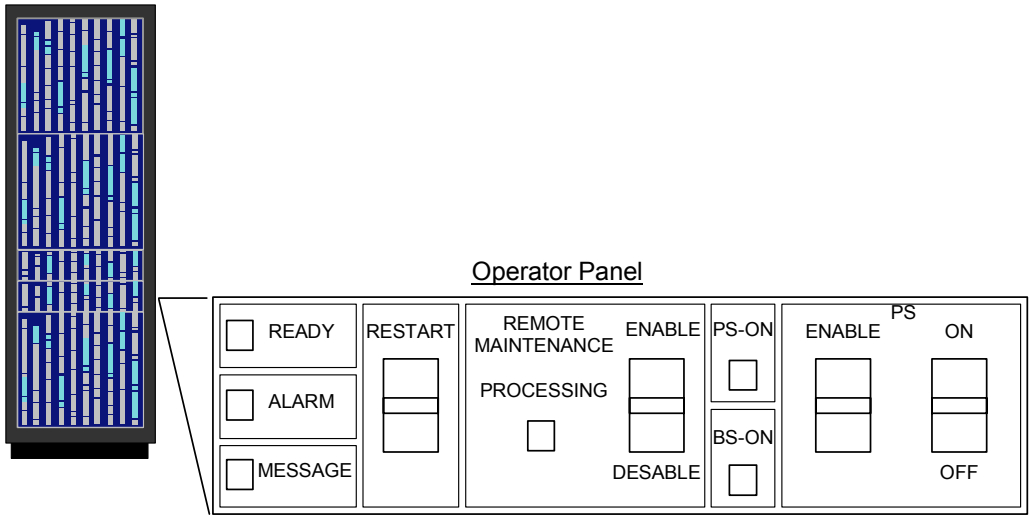
1.1.7 Layout

(1) DKC515I Layout

(Unit: mm)





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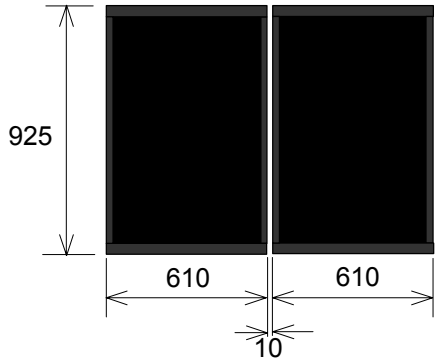
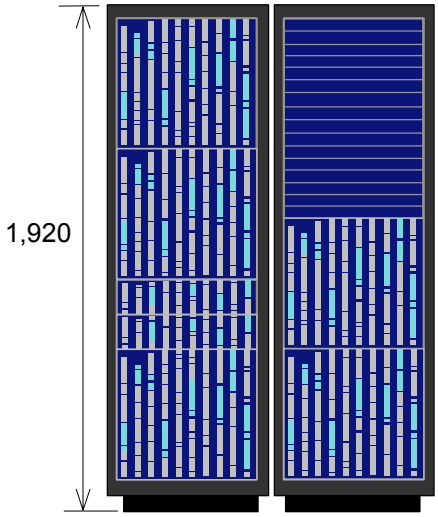
(2) Twin Rack Configuration of Disk Subsystem

TOP VIEW

(Unit: mm)



FRONT VIEW



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1.1.8 Power and Grounding Check

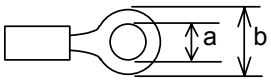
1.1.8.1 Facility power check

1. AC Power Cable Plug and Receptacle (only for 60Hz)
   AC power cable plug and receptacle for 60Hz are following part number or equivalent.

Model	Plug			Receptacle	
	Rating	Maker	Part Number	Maker	Part Number
Single phase	20A and over	MARINCO	L6-30P	—	L6-30R

2. AC Power Cable and Terminal Specifications (only for 50Hz)
   AC power cable and terminal specifications for 50Hz are following table.

Model	Power Cable Size	Terminal	
		Internal Diameter	External Diameter
		a	b
Single phase	AWG 12#	6.4mm	12.0mm



Terminal

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1.1.8.2 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.

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1.2 Drive Expansion Sequence

The order in which DKU-F505I-72KS/72JSR/72KSR/146JS/146JSR/146KSR/300JSR/300KSR/400JSR/72K1R/146J1R/146K1R/300J1R units are to be installed in Fig. 1.2-1 to Fig. 1.2-3A.

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.

NOTICE:
- Specifications for the selection of the spare HDD are shown below.
  A sparing of an HDD with a smaller capacity for an HDD with a larger capacity is possible.
  However, there are some cases in which an HDD cannot be assigned depending on the drive type as shown in the table below.

Copy source data HDD \ Copy destination spare HDD	DKR2x-JxxFx DKS2x-JxxFx	DKR2x-KxxFx DKS2x-KxxFx
DKR2x-JxxFx DKS2x-JxxFx	A spare HDD can be assigned when the following condition is satisfied. Capacity of a copy source data HDD ≤ Capacity of a copy destination spare HDD.	Assignment cannot be done.
DKR2x-KxxFx DKS2x-KxxFx	Assignment cannot be done.	A spare HDD can be assigned when the following condition is satisfied. Capacity of a copy source data HDD ≤ Capacity of a copy destination spare HDD.

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No.	Model Number	Model Name	Data and Parity
1	DKU-F505I-72KS/72JSR/72KSR/146JS/146JSR/146KSR/ 300JSR/300KSR/400JSR/72K1R/146J1R/146K1R/300J1R × 4	1 HDD Canister	

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

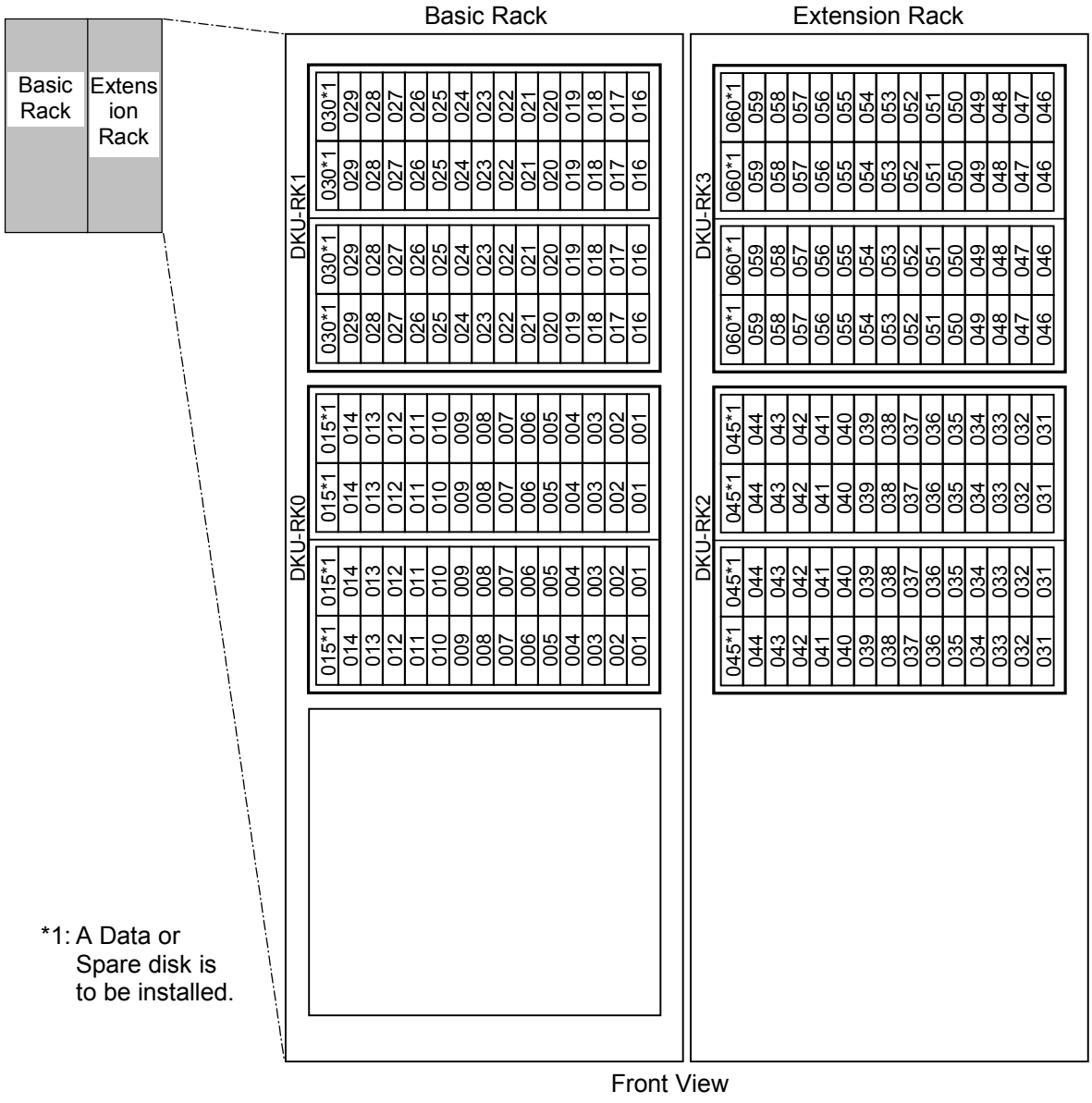

Fig. 1.2-1 (3D+1P/2D+2D) Data Drive/Parity Drive Expansion Sequence (In case of Standard Configuration)

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

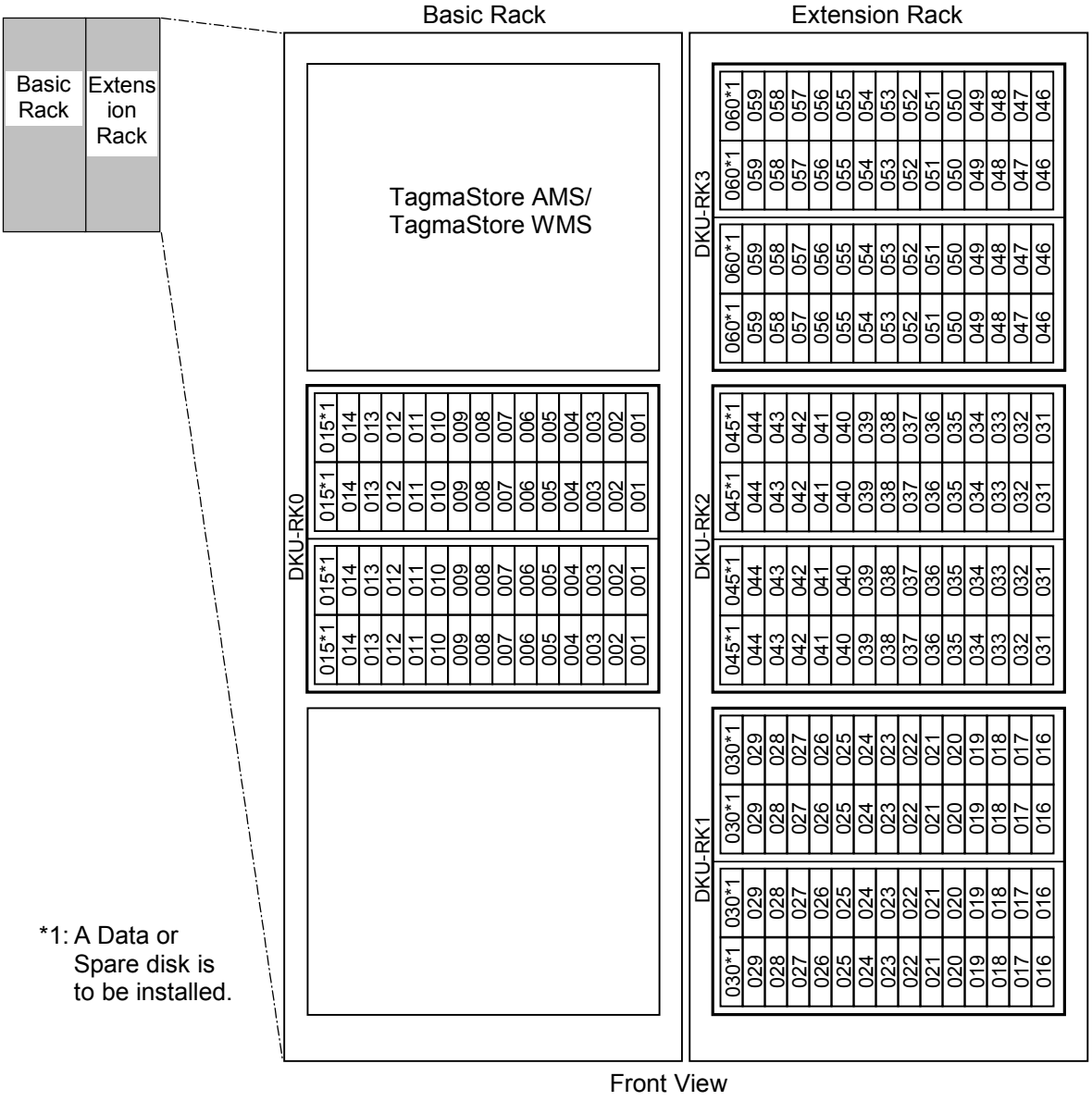

Fig. 1.2-1A (3D+1P/2D+2D) Data Drive/Parity Drive Expansion Sequence
(In case of TagmaStore AMS/WMS installed configuration)

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

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

DKU-RK0		DKU-RK1		DKU-RK2		DKU-RK3	
Installation Order	RAID Group No.	Installation Order	RAID Group No.	Installation Order	RAID Group No.	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 disk is to be installed.

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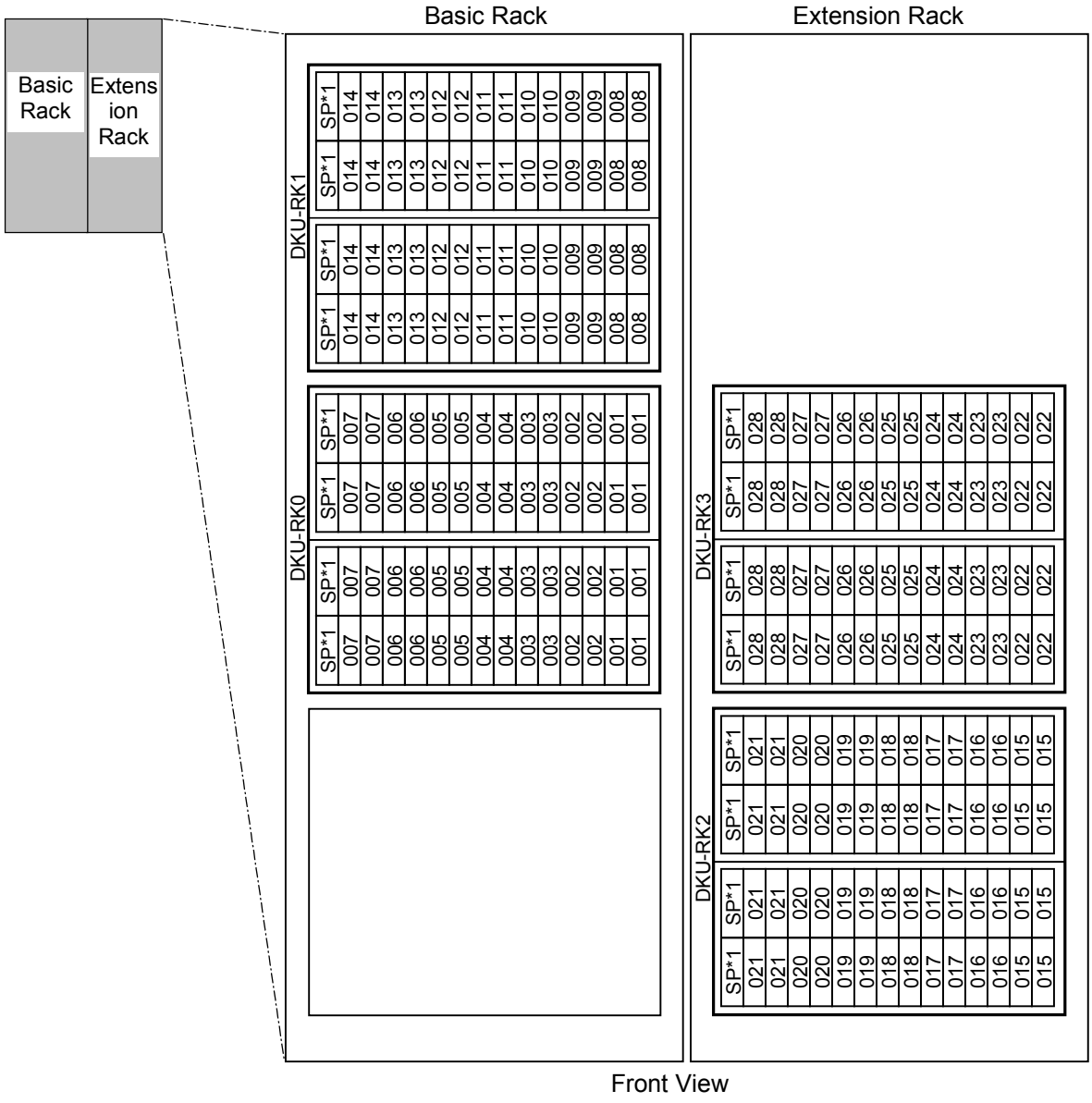
No.	Model Number	Model Name	Data and Parity
1	DKU-F505I-72KS/72JSR/72KSR/146JS/146JSR/146KSR/ 300JSR/300KSR/400JSR/72K1R/146J1R/146K1R/300J1R × 8	1 HDD Canister	

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



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

Fig. 1.2-2 (6D+2P/7D+1P) Data Drive/Parity Drive Expansion Sequence (In case of Standard Configuration)

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

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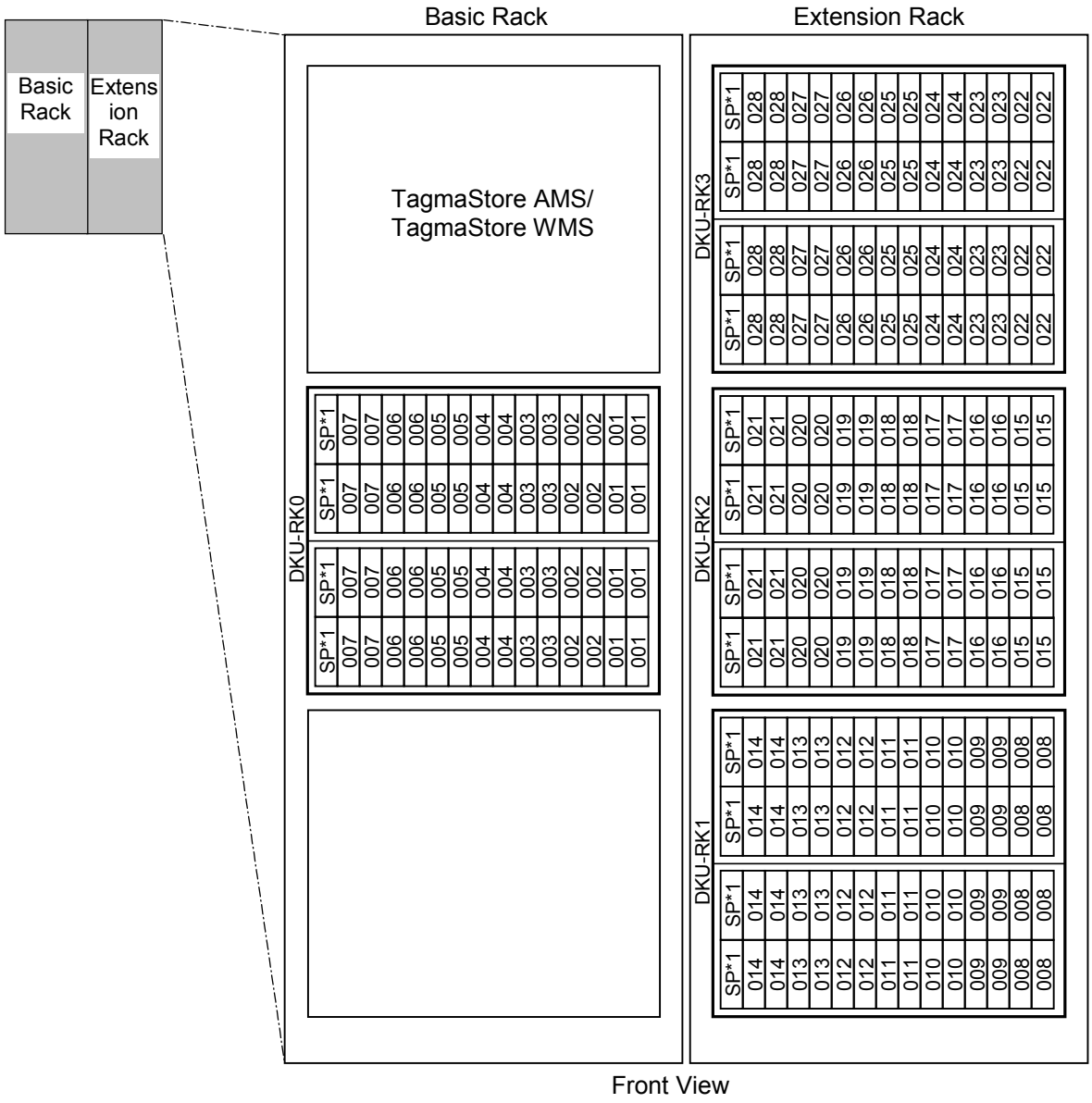

*1: To be left vacant or spare disk is to be installed.

Fig. 1.2-2A (6D+2P/7D+1P) Data Drive/Parity Drive Expansion Sequence
(In case of TagmaStore AMS/WMS installed configuration)

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

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

DKU-RK0		DKU-RK1		DKU-RK2		DKU-RK3	
Installation Order	RAID Group No.	Installation Order	RAID Group No.	Installation Order	RAID Group No.	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	Spare *1	Spare	Spare *1	Spare	Spare *1	Spare

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

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No.	Model Number	Model Name	Data and Parity
1	DKU-F505I-72KS/72JSR/72KSR/146JS/146JSR/146KSR/ 300JSR/300KSR/400JSR/72K1R/146J1R/146K1R/300J1R × 1	1 HDD Canister	Spare Drive

(3) Spare HDD

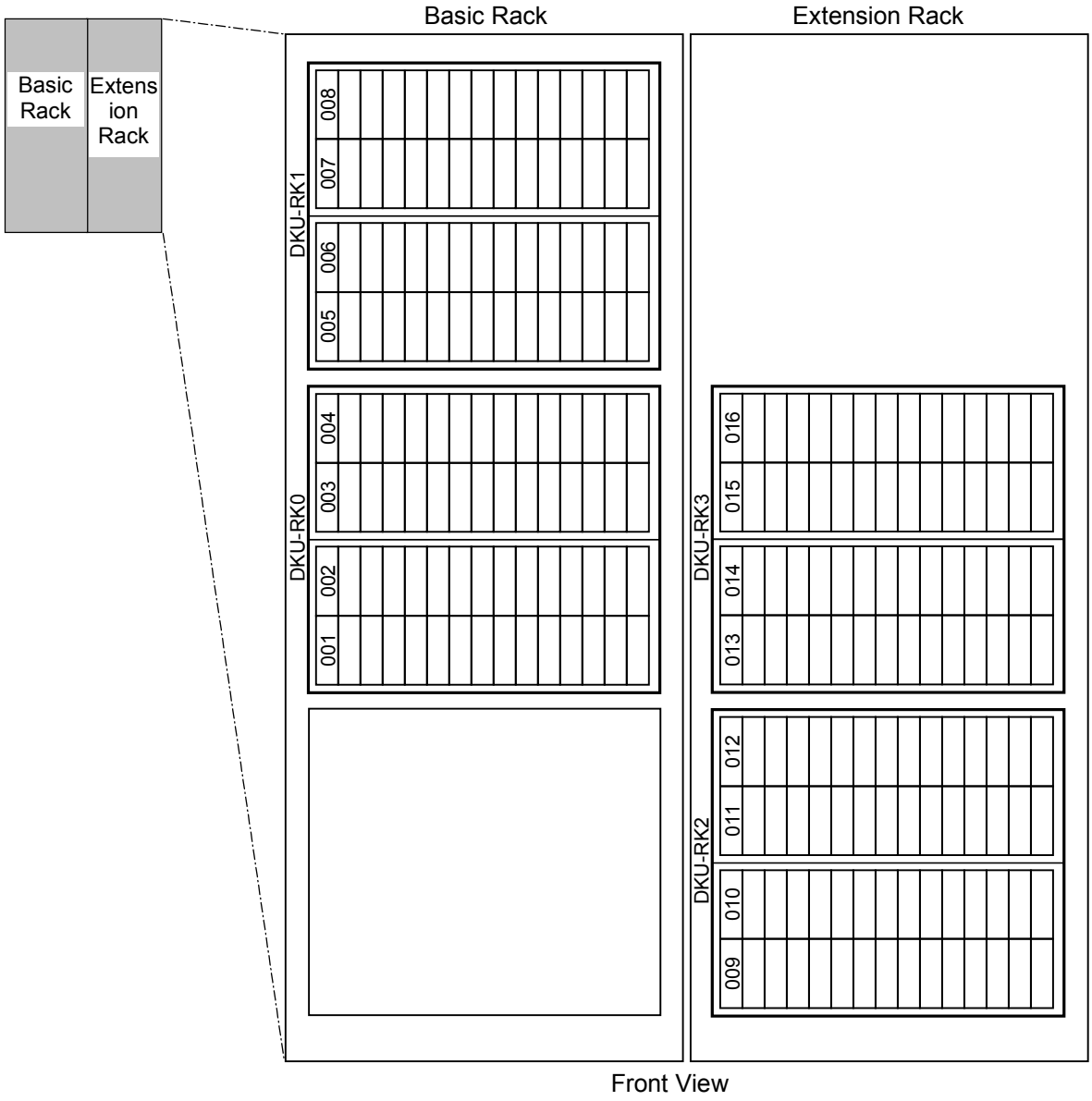

Fig. 1.2-3 Spare Drive Expansion Sequence (In case of Standard Configuration)

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Fig. 1.2-3A Spare Drive Expansion Sequence
(In case of TagmaStore AMS/WMS installed configuration)

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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	—	INST03-02-10 through 50
2	19-inch Rack Installation (DKC-F515I-FRMR)	←	INST03-03-10 through 60
3	Disk Subsystem Unit Installation (DKC-F515I-5/5R)	←	INST03-04-10 through 330
4	HDD BOX Kit Installation (DKC-F515I-B2R)	←	INST03-05-10 through 760
5	Channel Adapter Installation (DKC-F510I-16S/8MS/8ML/16HS/32HS/8NS/16SR/ 8MSR/8MLR/16MSR/16MLR/16MFSR/16MFLR/ 16MFL4R/8HSR/16HSR/8FS2R/16FS2R/32FS2R/ 32HSR/32FSR/8NSR/8ISR)	16S/16SR	INST03-07A-10 through 130 (Only Hardware Procedure)
		16HS/32HS/ 8HSR/16HSR/ 32HSR/ 32FSR/ 8FS2R/ 16FS2R/ 32FS2R	INST03-07B-10 through 130 (Only Hardware Procedure)
		8MS/8ML/ 8MSR/8MLR/ 16MSR/ 16MLR/ 16MFSR/ 16MFLR/ 16MFL4R	INST03-07C-10 through 120 (Only Hardware Procedure)
		8NS/8NSR	INST03-07D-10 through 120 (Only Hardware Procedure)
		8ISR	INST03-07E-10 through 120 (Only Hardware Procedure)

(To be continued.)

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(Continued from preceding sheet.)

No.	Working Item	Model Number	Page
6	Changing of Fibre SFP Transceiver (DKC-F510I-1HL/1HS/1HLR/1HSR/1FLR/1FSR/ 1FL4R)	←	INST03-08-10 through 80
7	Shared memory Installation (DKC-F510I-S1G/S1GR/S2GR, DKC-F515I-LGABR)	←	INST03-09A-10 through 380 (Only Hardware Procedure)
8	Cache memory Installation (DKC-F510I-C4G/C4GR/C8GR, DKC-F515I-LGABR)	←	INST03-09B-10 through 270 (Only Hardware Procedure)
9	DEV Interface Cable, MIX Adapter and HDD Canister Installation (DKC-F515I-MIX2R/MIX4R/UC0R/UC1R/UC4R/ EXC0R/EXC2R, DKU-F505I-72KS/72JSR/72KSR/ 146JS/146JSR/146KSR/300JSR/300KSR/400JSR/ 72K1R/146J1R/146K1R/300J1R)	←	INST03-10-10 through 10D-610 (Only Hardware Procedure)
10	MODEM Card Installation (DKC-F510-MDMR)	←	INST03-11-10 through 60 (Only Hardware Procedure)
11	Additional Battery Installation (DKC-F515I-LGABR)	←	INST03-14-10 through 80 (Only Hardware Procedure)
12	1U Filler Panel Installation (DKC-F515I-FIPR)	←	INST03-06-10 through 30
13	SVP “New Installation” Procedure	—	INST02-270
14	END	—	—

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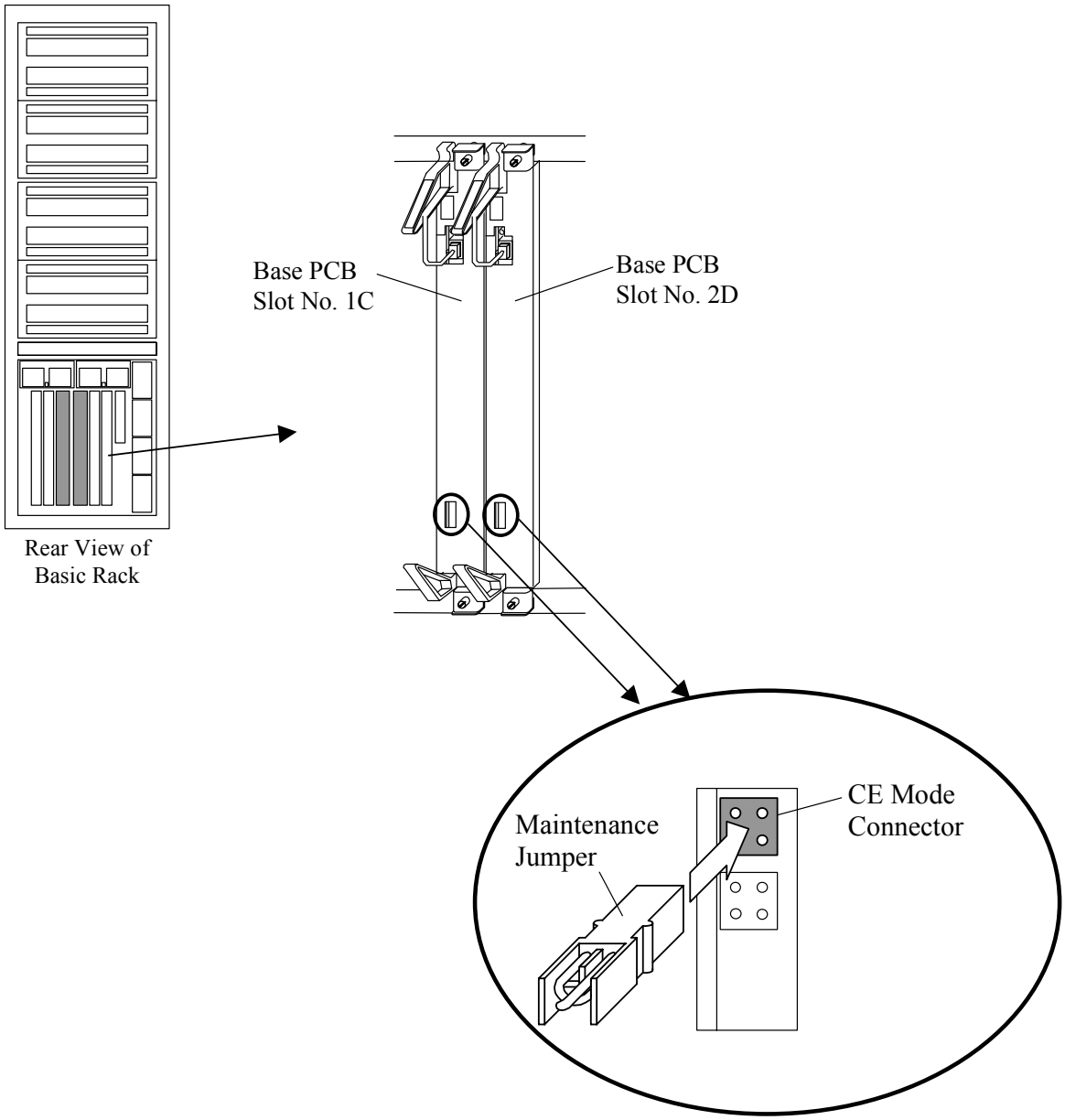
Note: The Maintenance Jumper of the CE Mode Connector (JP13).



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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.15) 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	←	SVP01-10 through
2	Confirm the micro-version	—	OPTVER01-10
2A	Control Frame Installation (DKC515I-5/5R)	←	INST03-04-10 through 330
3	Channel Adapter, Installation	16S/16SR	INST03-07A-10 through 130
	(DKC-F510I-16S/8MS/8ML/16HS/32HS/8NS/16SR/ 8MSR/8MLR/16MSR/16MLR/16MFSR/16MFLR/ 16MFL4R/8HSR/16HSR/8FS2R/16FS2R/32FS2R/ 32HSR/32FSR/8NSR/8ISR)	16HS/32HS/ 8HSR/16HSR/ 32HSR/ 32FSR/ 8FS2R/ 16FS2R/ 32FS2R	INST03-07B-10 through 130
		8MS/8ML/ 8MSR/8MLR/ 16MSR/ 16MLR/ 16MFSR/ 16MFLR/ 16MFL4R	INST03-07C-10 through 120
		8NS/8NSR	INST03-07D-10 through 120
		8ISR	INST03-07E-10 through 120
3a	CHA/MIX PCB type change (DKC-F510I-8MS/8ML/16HS/32HS/8MSR/8MLR/ 16MSR/16MLR/16MFSR/16MFLR/16MFL4R/8HSR/ 16HSR/32HSR/32FSR/8FS2R/16FS2R/32FS2R)	←	INST03-15-10 through 170

(To be continued.)

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(Continued from preceding sheet.)

No.	Working Item	Model Number	Page
4	Changing of Fibre SFP Transceiver (DKC-F510I-1HL/1HS/1HLR/1HSR/1FLR/1FSR/ 1FL4R)	←	INST03-08-10 through 80
5	Shared memory Installation (DKC-F510I-S1G/S1GR/S2GR, DKC-F515I-LGABR)	←	INST03-09A-10 through 380
6	Cache memory Installation (DKC-F510I-C4G/C4GR/C8GR, DKC-F515I-LGABR)	←	INST03-09B-10 through 270
6a	Change CM Module group size (DKC-F510I-C4G/C4GR/C8GR)	←	INST03-09C-10 through 130
7	19-inch Rack Installation (DKC-F515I-FRMR)	←	INST03-03-10 through 30
8	Disk Chassis Installation (DKC-F515I-B2R) Perform the installation of the Extension Rack, setting of the FSW jumper, setting of the DKUPS switch, and connection of the power cable.	←	INST03-05-10 through 760
Note	**Caution: When the addition of the Disk Chassis is accompanied, perform the work No.7 (19-inch Rack Installation) and the work No.8 (Disk Chassis Installation) and the work No.9 (POWER ON of Extension Rack) beforehand.**		
Note	**Check CU number and necessary shared memory capacity, and make sure whether expansion of shared memory is necessary (See INST07-20 ~ 90). If necessary, see INST03-09A-10.**		
9	POWER ON of Extension Rack	—	INST03-12-30
10	DEV Interface Cable, MIX Adapter and HDD Canister Installation (DKC-F515I-MIX2R/MIX4R/UC0R/UC1R/UC4R/ EXC0R/EXC2R, DKU-F505I-72KS/72JSR/72KSR/ 146JS/146JSR/146KSR/300JSR/300KSR/400JSR/ 72K1R/146J1R/146K1R/300J1R)	←	INST03-10-10 through 10D-610
11	MODEM Card Installation (DKC-F510I-MDMR)	←	INST03-11-10 through 60
12	Additional Battery Installation (DKC-F515I-LGABR)	←	INST03-14-10 through 80
13	1U Filler Panel Installation (DKC-F515I-FIPR)	—	INST03-06-10 through 30
14	Setup on SVP Installation	—	NAS03-110
15	NAS OS Installation	—	NAS03-310
16	END	—	—

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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.12) 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 INST02-160 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	←	SVP01-10 through
2	1U Filler Panel De-Installation (DKC-F515I-FIPR)	←	INST04-08-10 through 30
3	DEV Interface Cable, MIX Adapter and HDD Canister De-Installation (DKC-F515I-MIX2R/MIX4R/UC0R/UC1R/UC4R/EXC0R/EXC2R, DKU-F505I-72KS/72JSR/72KSR/146JS/146JSR/146KSR/300JSR/300KSR/400JSR/72K1R/146J1R/146K1R/300J1R)	←	INST04-01-10 through 01D-390
Note	**Proceed to the work No.4 after performing the work No.3.** **The system goes down if the power supply of the HDD Box to be removed in the work No.4 is turned off without performing an option removal work, that is, the work No.3.**		
4	HDD Box Kit De-Installation (DKC-F515I-B2R) **Turn off the power supply of the HDD Box.**	←	INST04-02-10 through 490
5	19-inch Rack De-Installation (DKC-F515I-FRMR) **Turn off the main breaker of the Extension Rack.**	←	INST04-06-10 through 60
6	Shared memory De-Installation (DKC-F510I-S1G/S1GR/S2GR, DKC-F515I-LGABR)	←	INST04-03A-10 through 400
7	Cache memory De-Installation (DKC-F510I-C4G/C4GR/C8GR, DKC-F515I-LGABR)	←	INST04-03B-10 through 270

(To be continued.)

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(Continued from preceding sheet.)

No.	Working Item	Model Number	Page
8	Channel Adapter De-Installation (DKC-F510I-16S/8MS/8ML/16HS/32HS/8NS/16SR/ 8MSR/8MLR/16MSR/16MLR/16MFSR/16MFLR/ 16MFL4R/8HSR/16HSR/8FS2R/16FS2R/32FS2R/ 32HSR/32FSR/8NSR/8ISR)	16S/16SR	INST04-04A-10 through 140
		16HS/32HS/ 8HSR/16HSR/ 32HSR/ 32FSR/ 8FS2R/ 16FS2R/ 32FS2R	INST04-04B-10 through 140
		8MS/8ML/ 8MSR/8MLR/ 16MSR/ 16MLR/ 16MFSR/ 16MFLR/ 16MFL4R	INST04-04C-10 through 140
		8NS/8NSR	INST04-04D-10 through 140
		8ISR	INST04-04E-10 through 140
9	Changing of Fibre SFP Transceiver (DKC-F510I-1HL/1HS/1HLR/1HSR/1FLR/1FSR/ 1FL4R)	←	INST03-08-10 through 80
10	MODEM Card De-Installation (DKC-F510I-MDMR)	←	INST04-07-10 through 60
11	Additional Battery De-Installation (DKC-F515I-LGABR)	←	INST04-09-10 through 80
12	Control Frame De-Installation (DKC-F515I-5/5R)	←	INST04-05-10 through 270
13	END	—	—

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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	←	SVP01-10 through
2	Confirm the micro-version		OPTVER01-10
3	POWER OFF of Disk Subsystem	—	INST03-12-40 through 50
4	POWER ON of Disk Subsystem	—	INST03-12-10 through 20
5	END	—	—

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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 INST02-160 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	←	SVP01-10 through
2	POWER OFF of Disk Subsystem	—	INST03-12-40 through 50
3	POWER ON of Disk Subsystem	—	INST03-12-10 through 20
4	END	—	—

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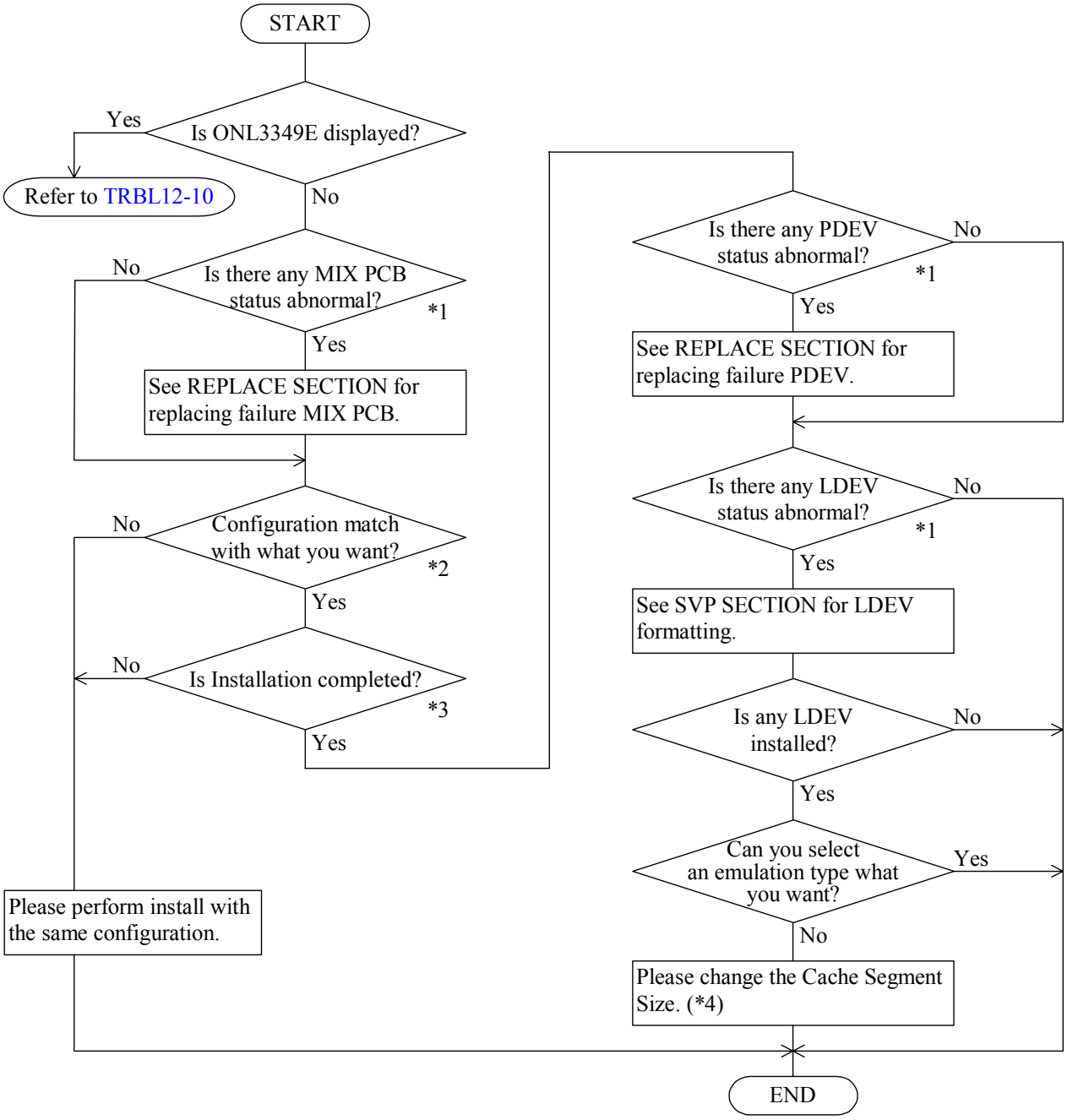
2.6 Trouble shooting for errors in install SVP procedure

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 INS2450I displayed when select (CL) [Install] – [Change Configuration] in the 'SVP' Window?

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*4: [Procedure]

(1) Select “Cache Segment Size” in the “System Option” Window.
(Refer SVP02-1050)

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 BASE-1C and BASE-2D.
BASE PCB is used that has been used.
(Refer REP03-90)

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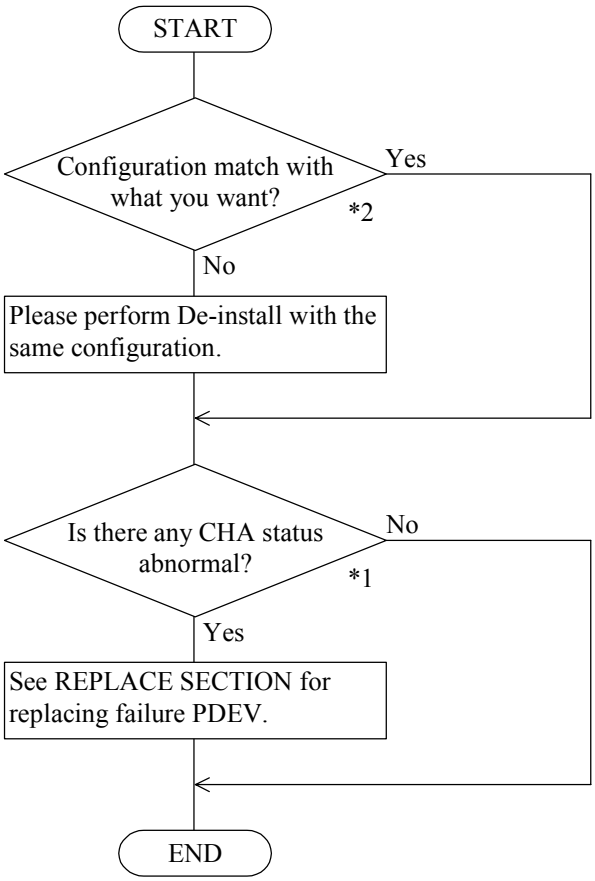
2.6.2 Number of Channel



*1: Select (CL) [Maintenance] in the 'SVP' Window.
It is no problem that "OS Status" will be failed when CHA(4NS) is installed because NAS OS is not installed yet.

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

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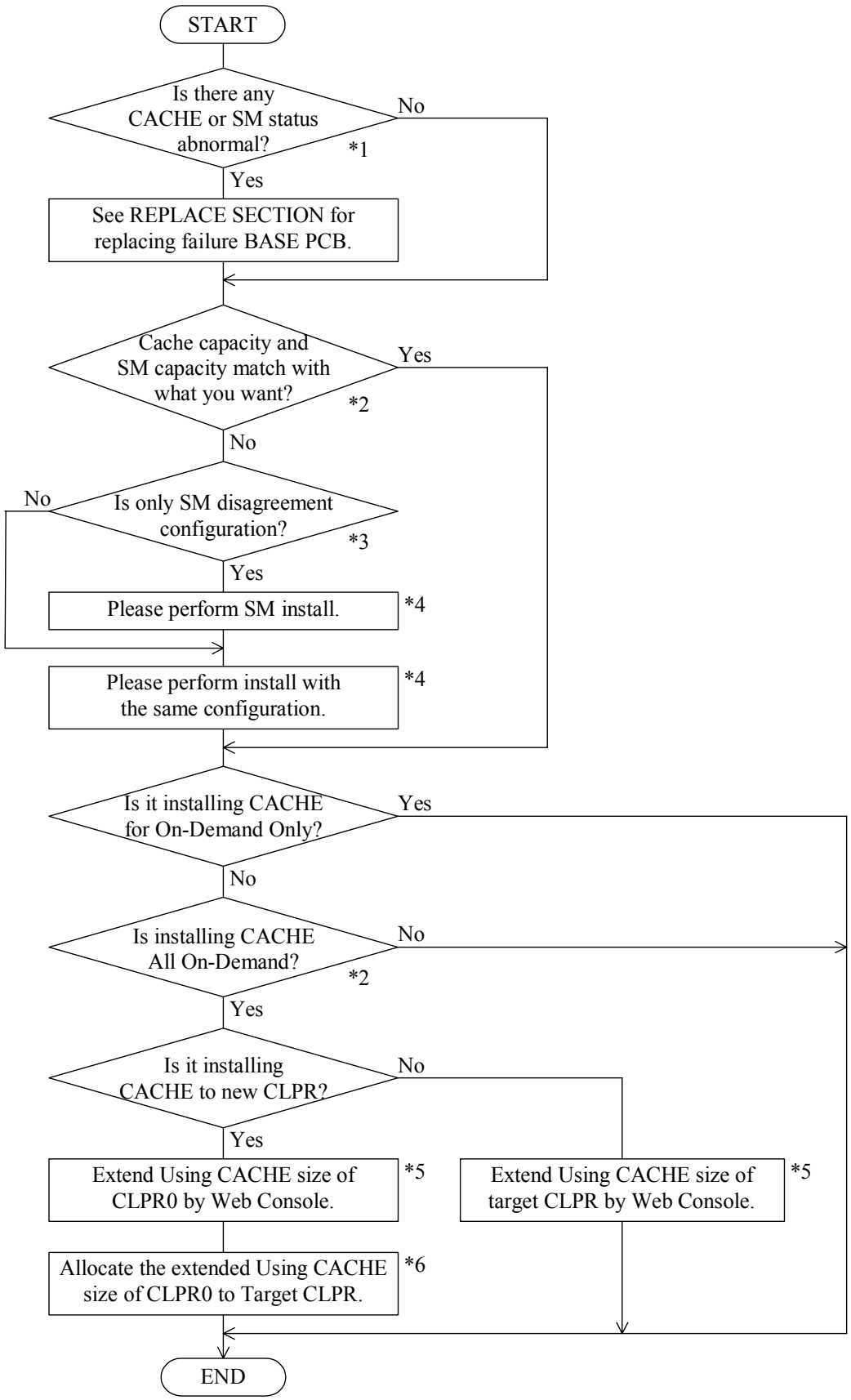
2.6.3 Cache Capacity



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*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 INS2566I displayed when select (CL) [Install] – [Change Configuration] 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] – [Just in Time] in the 'SVP' Window.
Extend Cache memory reference to [Remote Console – Storage Navigator User's Guide] – 3.9.3. If this operation is performed, SIM will occur. It is not problem based on on-demand extension.

*6: Select (CL) [Web Console] – [Partition Definition] in the 'SVP' Window.
Extend Cache memory reference to [Remote Console – Virtual Partition Manager User's Guide] – 4.3.

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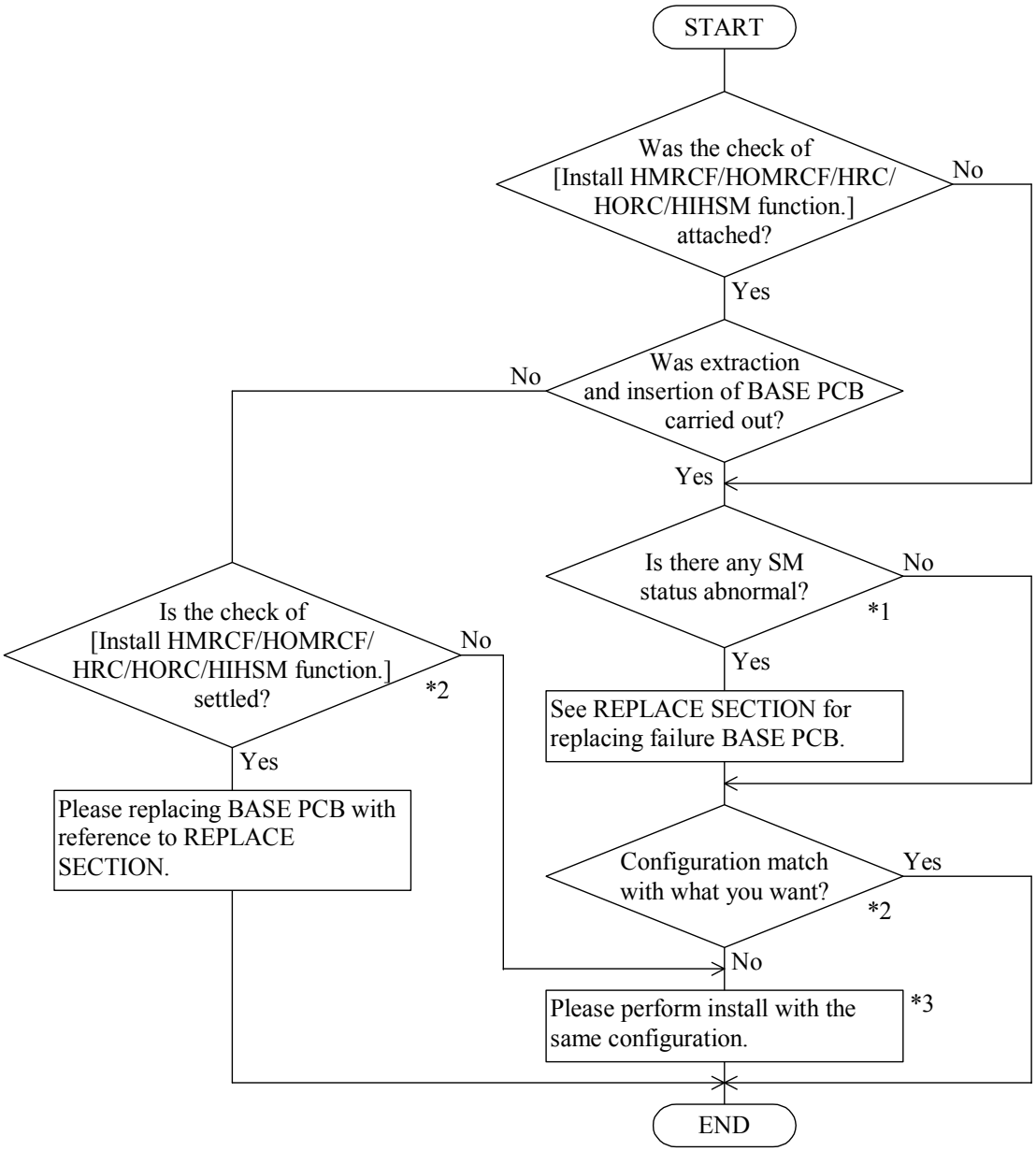
2.6.4 SM Capacity



*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.

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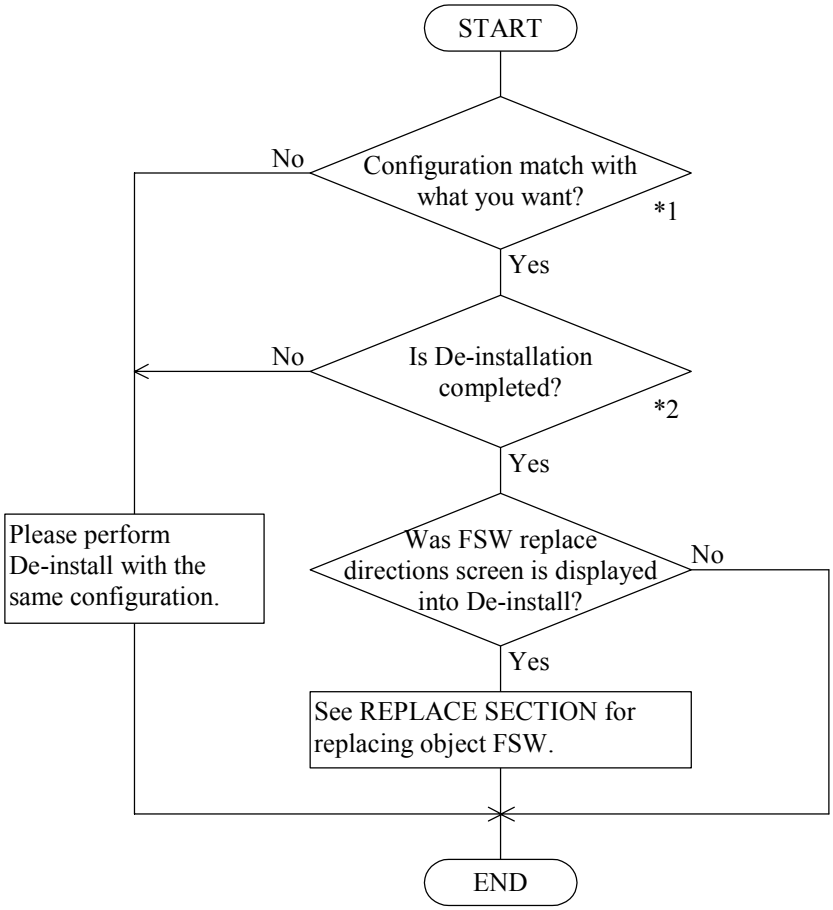
2.7 Trouble shooting for errors in de-install SVP procedure

2.7.1 ECC group + LDEV



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

*2: Wasn't INS2450I displayed when select (CL) [Install] – [Change Configuration] in the 'SVP' Window?

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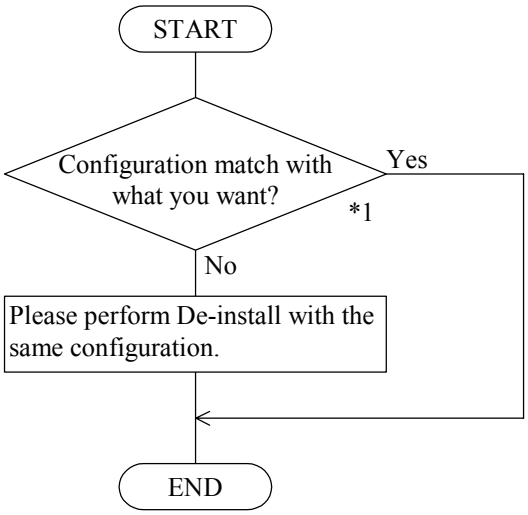
2.7.2 Number of Channel



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

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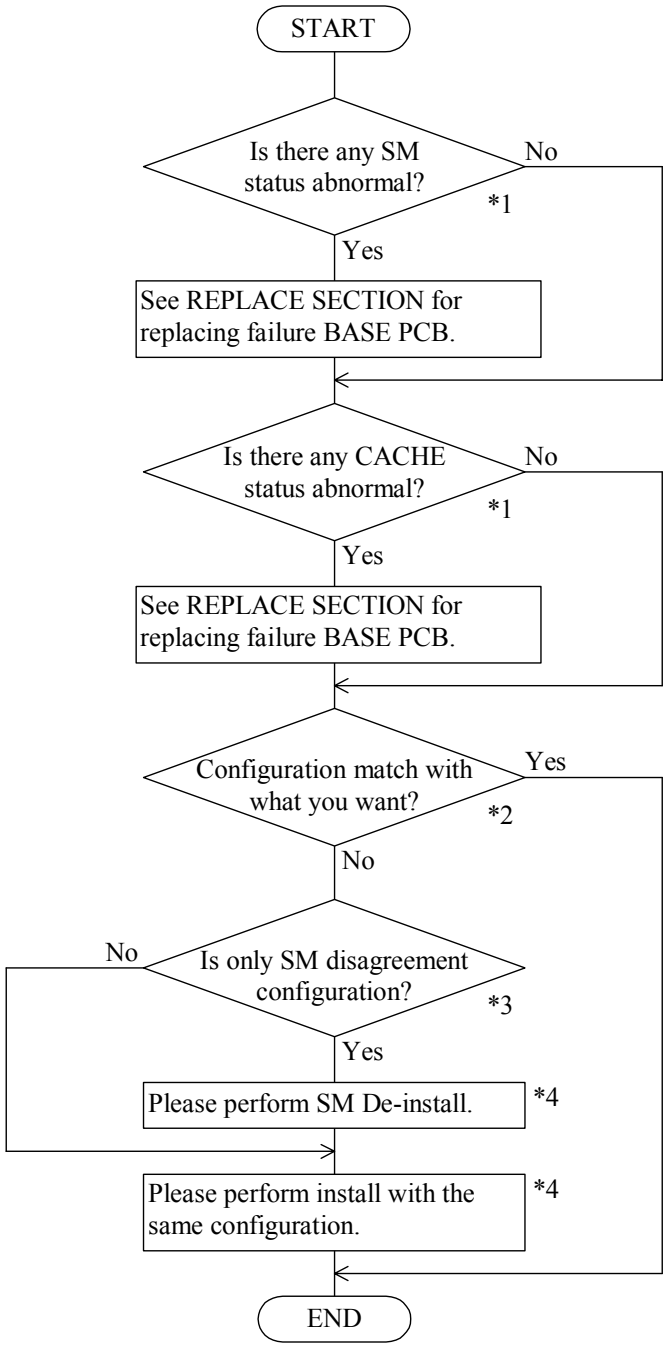
2.7.3 Cache Capacity



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

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

*3: 'Was INS2566I displayed when select (CL) [Install] – [Change Configuration] 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.

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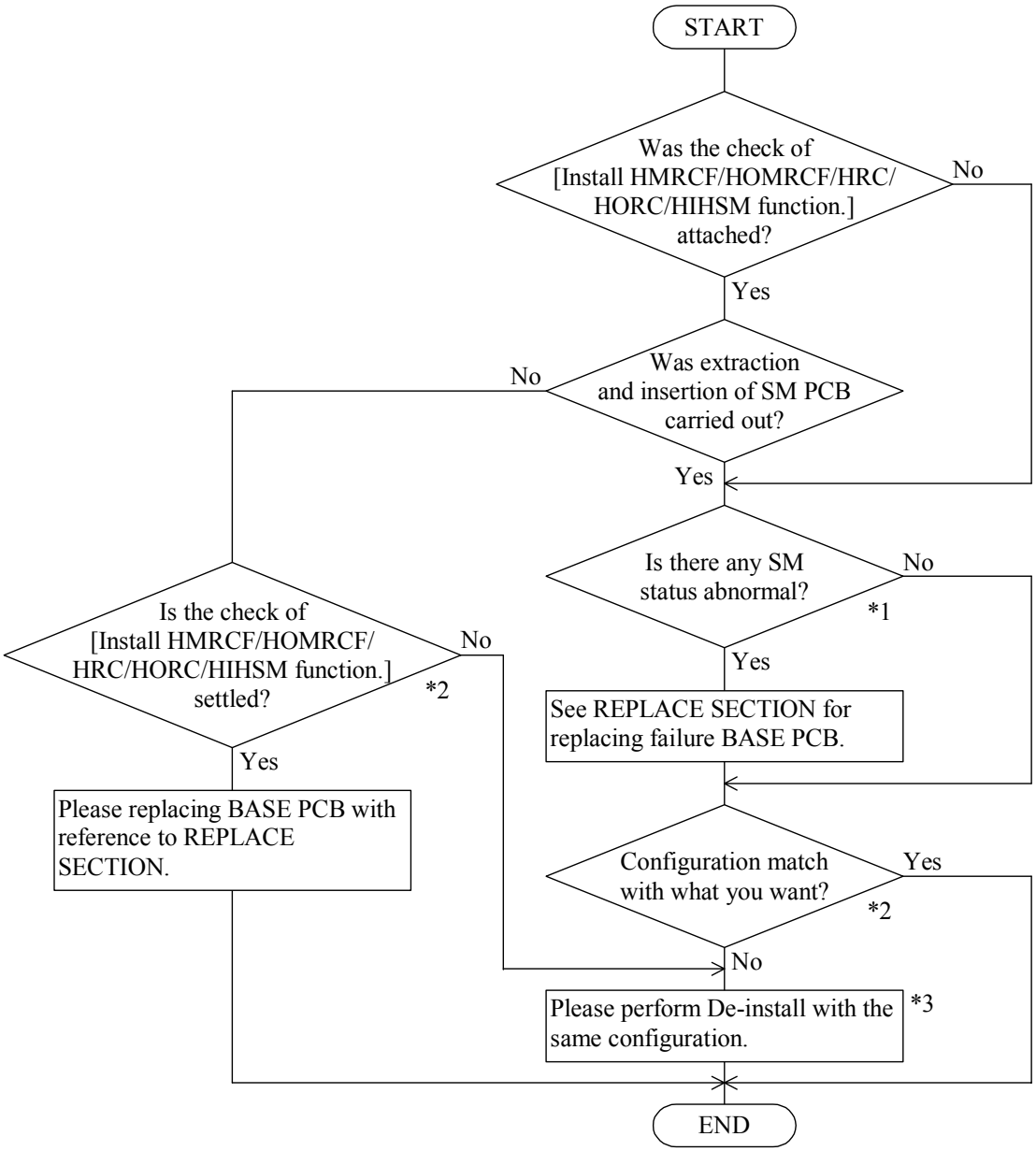
2.7.4 SM Capacity



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

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

*3: 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.

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2.8 (Blank)

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2.9 Availability of Installation and De-installation

(1) Availability of the Installation and De-installation when HRC/HORC is used

Component	Maintenance Type	Condition	HRC path established		During initial copy		After completing initial copy	
			MCU	RCU	MCU	RCU	MCU	RCU
HDD canister	Installation	—	×	×	×	×	×	×
	De-installation	—	× (*)	×	SVP2031W (*)	SVP2034W	SVP2031W (*)	SVP2034W
BASE	Installation	—	×	×	SVP2059W	SVP2079W	× (**)	×
	De-installation	—	×	×	SVP2059W	SVP2079W	× (**)	×
CHE or CHF	Installation	With Alternate path.	×	×	× (***)	× (***)	× (***)	× (***)
		Without Alternate path.	×	×	× (***)	× (***)	× (***)	× (***)
	De-installation	With Alternate path.	×	×	×	SVP2038W	×	SVP2038W
		Without Alternate path.	×	×	SVP2073W	SVP2038W	SVP2074W	SVP2038W

(To be continued)

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(Continued from preceding sheet)

Component	Maintenance Type	Condition	Suspend		Suspending		Deleting	
			MCU	MCU	RCU	RCU	MCU	RCU
HDD canister	Installation	—	×	×	×	×	×	×
	De-Installation	—	SVP2031W (*)	SVP2034W	SVP2031W (*)	SVP2034W	SVP2031W (*)	SVP2034W
BASE	Installation	—	×	×	× (**)	×	× (**)	×
	De-Installation	—	×	×	× (**)	×	× (**)	×
CHE or CHF	Installation	With Alternate path.	× (***)	× (***)	× (***)	× (***)	× (***)	× (***)
		Without Alternate path.	× (***)	× (***)	× (***)	× (***)	× (***)	× (***)
	De-Installation	With Alternate path.	×	SVP2038W	×	SVP2038W	×	SVP2038W
		Without Alternate path.	SVP2075W	SVP2038W	SVP2075W	SVP2038W	SVP2075W	SVP2038W

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

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.

* : 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.

** : 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.

*** : When the different 'DKC – Emulation –Type' of CHE is installed, SVP displays a warning message with SVP 3289W.

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(2) Availability of the Installation and De-installation when HODM is used

Component	Maintenance Type	Condition	HODM path established		During initial copy		Waiting to be erased	
			MCU	RCU	MCU	RCU	MCU	RCU
HDD canister	Installation	—	×		×		×	
	De-installation	—	× (*)		SVP2031W (*)		SVP2031W (*)	
BASE	Installation	—	×		SVP2059W		×	
	De-installation	—	×		SVP2059W		×	
CHE	Installation	With Alternate path.	×		×		×	
		Without Alternate path.	×		×		×	
	De-installation	With Alternate path.	×		×		×	
		Without Alternate path.	×		SVP2076W		SVP2078W	
CHF	Installation	—	×		×		×	
	De-installation	—	×		×		×	

Component	Maintenance Type	Condition	Suspend		During for R-Vol Erasing		Erasing Error	
			MCU	RCU	MCU	RCU	MCU	RCU
HDD canister	Installation	—	×		×		×	
	De-installation	—	SVP2031W (*)		SVP2031W (*)		SVP2031W (*)	
BASE	Installation	—	×		×		×	
	De-installation	—	×		×		×	
CHE	Installation	With Alternate path.	×		×		×	
		Without Alternate path.	×		×		×	
	De-installation	With Alternate path.	×		×		×	
		Without Alternate path.	SVP2077W		SVP2078W		SVP2078W	
CHF	Installation	—	×		×		×	
	De-installation	—	×		×		×	

× : Maintenance is available

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

* : 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.

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(3) Availability of the System tuning when HRC/HODM/HORC is used.
It is impossible to change the DKCNo, SSID, or DKC Emulation type by system tuning when HRC, HODM or HORC is used.

(4) Availability of the online maintenance when HMRCF is used

Component	Maintenance Type	Condition	HMRCF Reserve Volume	Pending/Resync/ SP-Pend		Duplex		Split		Suspend	
				S-VOL	T-VOL	S-VOL	T-VOL	S-VOL	T-VOL	S-VOL	T-VOL
HDD canister (DATA)	Installation	—	×	×		×		×		×	
	De-installation	—	SVP2485W	SVP2485W		SVP2485W		SVP2485W		SVP2485W	
HDD canister (SPARE)	Installation	—	×	×		×		×		×	
	De-installation	—	×	×		×		×		×	
BASE	Installation	—	×	SVP2486W		×		×		×	
	De-installation	—	×	SVP2486W		×		×		×	
CHA	Installation	—	×	×		×		×		×	
	De- installation	—	×	×		×		×		×	
MIX	Installation	—	×	×		×		×		×	
	De-Installation	—	×	×		×		×		×	

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(5) Availability of the Installation and De-installation when HRC/HORC is used

JNL-GROUP

Component	Maintenance Type	Condition	HRC path established		Initial		Active	
			MCU	RCU	MCU	RCU	MCU	RCU
HDD canister	Installation	—	×	×	×	×	×	×
	De-installation	—	×	×	SVP3825W	SVP3825W	SVP3825W	SVP3825W
BASE	Installation	—	×	×	×	×	×	×
	De-installation	—	×	×	×	×	×	×
CHE or CHF	Installation	With Alternate path	×	×	×	×	×	×
		Without Alternate path	×	×	×	×	×	×
	De-installation	With Alternate path	×	×	×	×	×	×
		Without Alternate path	×	×	×	×	×	×

Component	Maintenance Type	Condition	Halt		Halting	
			MCU	RCU	MCU	RCU
HDD canister	Installation	—	×	×	×	×
	De-installation	—	SVP3825W	SVP3825W	SVP3825W	SVP3825W
BASE	Installation	—	×	×	×	×
	De-installation	—	×	×	×	×
CHE or CHF	Installation	With Alternate path	×	×	×	×
		Without Alternate path	×	×	×	×
	De-installation	With Alternate path	×	×	×	×
		Without Alternate path	×	×	×	×

Component	Maintenance Type	Condition	Stop		Stopping	
			MCU	RCU	MCU	RCU
HDD canister	Installation	—	×	×	×	×
	De-installation	—	SVP3825W	SVP3825W	SVP3825W	SVP3825W
BASE	Installation	—	×	×	×	×
	De-installation	—	×	×	×	×
CHE or CHF	Installation	With Alternate path	×	×	×	×
		Without Alternate path	×	×	×	×
	De-installation	With Alternate path	×	×	×	×
		Without Alternate path	×	×	×	×

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DATA-VOL

Component	Maintenance Type	Condition	HRC path established		During initial copy		After completing initial copy	
			MCU	RCU	MCU	RCU	MCU	RCU
HDD canister	Installation	—	×	×	×	×	×	×
	De-installation	—	×	×	SVP2031W	SVP2034W	SVP2031W	SVP2034W
BASE	Installation	—	×	×	SVP2059W	SVP2079W	×	×
	De-installation	—	×	×	SVP2059W	SVP2079W	×	×
CHE or CHF	Installation	With Alternate path	×	×	×	×	×	×
		Without Alternate path	×	×	×	×	×	×
	De-installation	With Alternate path	×	×	SVP3848W	× (*1)	SVP3848W	× (*1)
		Without Alternate path	×	×	SVP3848W	SVP2073W (*1)	SVP3848W	SVP2074W (*1)

Component	Maintenance Type	Condition	Suspend		Suspending		Deleting	
			MCU	RCU	MCU	RCU	MCU	RCU
HDD canister	Installation	—	×	×	×	×	×	×
	De-installation	—	SVP2031W	SVP2034W	SVP2031W	SVP2034W	SVP2031W	SVP2034W
BASE	Installation	—	×	×	×	×	×	×
	De-installation	—	×	×	×	×	×	×
CHE or CHF	Installation	With Alternate path	×	×	×	×	×	×
		Without Alternate path	×	×	×	×	×	×
	De-installation	With Alternate path	SVP3848W	× (*1)	SVP3848W	× (*1)	SVP3848W	× (*1)
		Without Alternate path	SVP3848W	SVP2075W (*1)	SVP3848W	SVP2075W (*1)	SVP3848W	SVP2075W (*1)

× : Maintenance is available

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

*1: When RCU-TARGET is defined in port(s) of CHA to be maintained, SVP displays a warning message with SVP 3289W.

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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.

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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 "REP04-330 ~ REP04-740" of Maintenance Manual.)

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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)-(20) in the following flow)

③ Execution of "Define Configuration and Install" by the SVP.(By this procedure, the customer's configurations are defined.) : ((21)-(32) in the following flow)

④ Others ((33)-(50) in the following flow)

(2) Processing Flow

The processing flow of the new installation is as follow:

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START

(1)-0 Back up the current Config in the ConfigFD 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 (31)-1, (31)-2.
(1)-2 Turn off the "POWER ON/OFF" switch on the DKC Panel.
(1)-3 Make sure the breaker is off (DKU and DKC). (If it is "on", turn off the breaker after the SVP is shut down.).
[Breaker:INST03-12-40 ~ 50 , SVP Shut Down:SVP01-110]
(1)-4 If the PUBILIC LAN (SNMP Web Console) or NEXT UNIT or MODEM cables are connected on the SVP, disconnect them. Do not disconnect the Console PC cable or the cables plugged into J83 and J84 on the SVP.
[LOC04-50]

(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 DKC Panel)
[Power ON procedures of Disk Subsystem:INST03-12-10 ~ INST03-12-20]

(3) Set the Maintenance jumper to "SVP PS ON/OFF INH jumper" (JP1).
[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:
[Install micro-programs and configuration to the HD to the SVP]
[REP04-360 ~ REP04-610]
step1: Prepare the CD-ROM and CONFIG FD. (*1)
step2: Insert the CD-ROM disk into its drive.
step3: Click "START" on the task bar and select "Uninstallation of Apache, and Perl on the SVP, before insert the CD-ROM.".
step4: Enter the following command: e:\setup.exe (enter)
(Set the CONFIG FD (use the BackUp Config of (1)-0) when the message, "Please insert the Config FD in the FDD.", is output, and then click "OK". Also, remove the CONFIG FD when "Please remove Config FD in the FDD" message is output. And then, click "OK".
This operation causes the "SVP Reboot". And soon, the "SVP window" is displayed.)
step5: Remove the CD-ROM from its 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 ~ INST05-60] (*2)
Besides, do not select "Use Duplex SVP" in the "External IP Address" box.
Config BackUp is accompanies.

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(SVP procedure)
(7) Delete LOGs. [Log Delete:SVP02-180 ~ SVP02-190, SIM LogComplete:SVP02-520 ~ SVP02-530] (*3)

(8) Pull out the Maintenance jumper setting to "SVP PS ON/OFF INH jumper" (JP1).

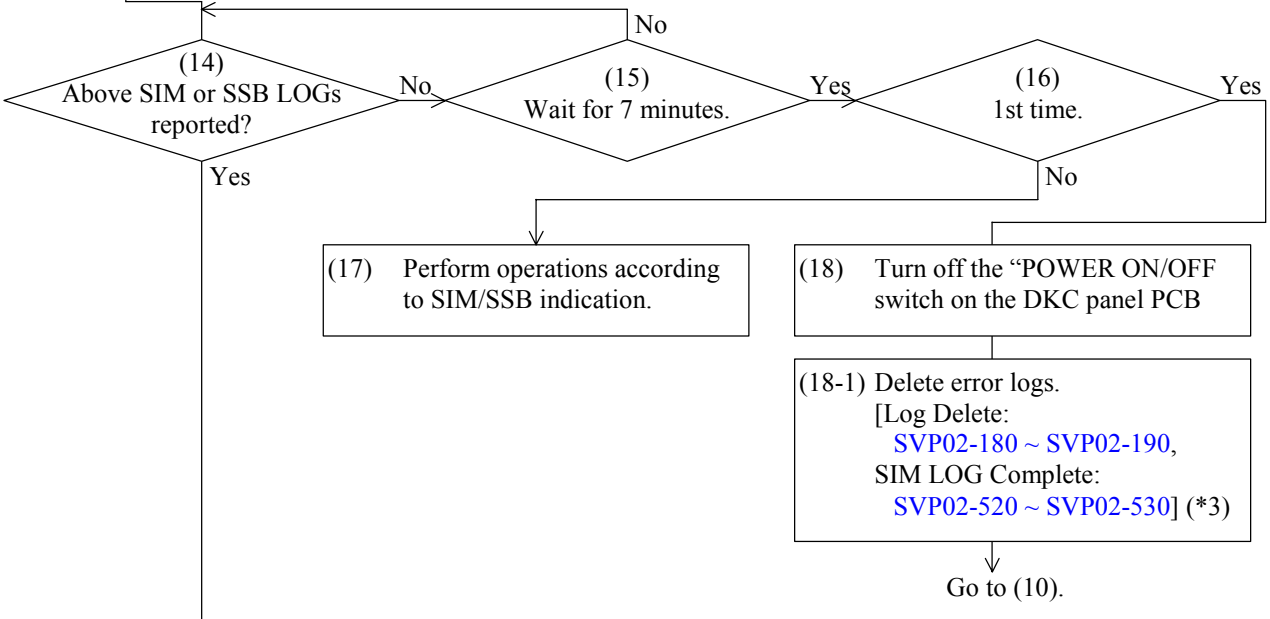
(9) Set all packages to be installed.
Set the packages(CHA, MIX and so on) to be installed to their locations of CL1 and CL2. The same kind of package must be set to the same location of each CL (CL1 and CL2).
[LOC02-30] (*3-1)

(10) Set the Maintenance Jumpers to CE Mode connectors (JP13) on the rear all BASE PCBs. (*4)
[INST02-30]

(11) Turn on the "POWER ON/OFF" switch on the DKC Panel. [INST03-12-30]

(12) After 45 seconds, pull out the Maintenance Jumpers from the BASE PCBs when the MESSAGE LED is lit after the step (11) was done. Also, after pulling out the Maintenance Jumpers from the BASE PCBs, insert the Maintenance Jumpers to CE Mode connectors (JP13) on the BASE PCBs again within 30 seconds. The MESSAGE LED is illuminated for about 90 seconds. (*5)

(13) Wait until SIM (Reference Code = 7900XX/7901XX) or SSB(Error Code = 3309) LOGs are reported from all installed MPs. (Check SVP Information SIM and SSB LOG.) (*6)



(SVP procedure)--(Micro Program Install)
(19) Execute "New Installation" procedures to install the micro-programs and Fixed Minimum Configuration into the DKC. (*7)

(20) Turn off the "POWER ON/OFF" switch on the DKC Panel. [INST03-12-40]

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(21) Pull out the Maintenance Jumpers from the all BASE PCBs. (*4)

(22) Delete error logs.
[Log Delete:SVP02-180 ~ SVP02-190, SIM Log Complete:SVP02-520 ~ SVP02-530] (*3)

(23) Shut down the SVP, turn off the Battery and turn off the Breaker (DKC and DKU) to volatilize SM. Then, wait for 10 minutes.
Turn on the Breaker (DKC and DKU).
[SVP Shut Down:SVP01-110, Breaker:INST03-12-40 ~ INST03-12-50,
Battery Boxes: LOC06-40] (*8)

(24) Execute Power ON procedures
(24)-1 Turn on the Breaker DKC and DKU. [Power ON procedure of Disk Subsystem:INST03-12-10, 20]
(24)-2 (SVP procedure)
Wait until the SVP is ready and change the SVP mode to "Initial setup". (*10)
(24)-3 Turn on the "POWER ON/OFF" switch on the DKC Panel.
[Power ON procedure of Disk Subsystem:INST03-12-20]
(24)-4 Turn on the battery switch.

(25) Wait till Power Event Log (SYSTEM ON) is reported from all installed MPs. (*9)

(26) SUB-SYSTEM ALARM LED lit?
Yes → (27) Perform operations according to SIM/SSB indications.
No

(28) Power Event Log reported from all installed MPs?
No → (29) Wait for 10 minutes.
No → (26)
Yes → (29)
Yes → (30) Perform operations according to SIM/SSB indications.

Change the SVP mode to "Initial Setting". (*10)
(SVP procedure) -- (Execution of Define Configuration and Install)
(31)-1 Execution of Config Exchange Procedure.
Select the "Install" in the "SVP" window and select "Copy Config Files" in the "Install" window. And select "All Configuration Files" in the "Copy Config Files" window.
Note: Be sure to state that the ConfigFD of new µ to be replaced is used.
[MICRO-FC08-60 ~ MICRO-FC08-70]
(31)-2 Define the configuration information that you want to install now for this DKC subsystem.
Then, the defined size of the Cache and SM DIMM must be equal to ones of the Cache and SM DIMM equipped for the DKC subsystem. (*11)
The configuration information must be defined according to the SVP guidance. Especially, you must not forget the definition of the following information.
① DKC Serial No., IP Address.
② Cache Configuration
③ Host Interface Configuration:
④ PDEVs, LDEVs, etc. [INST05-80 ~ INST05-330]

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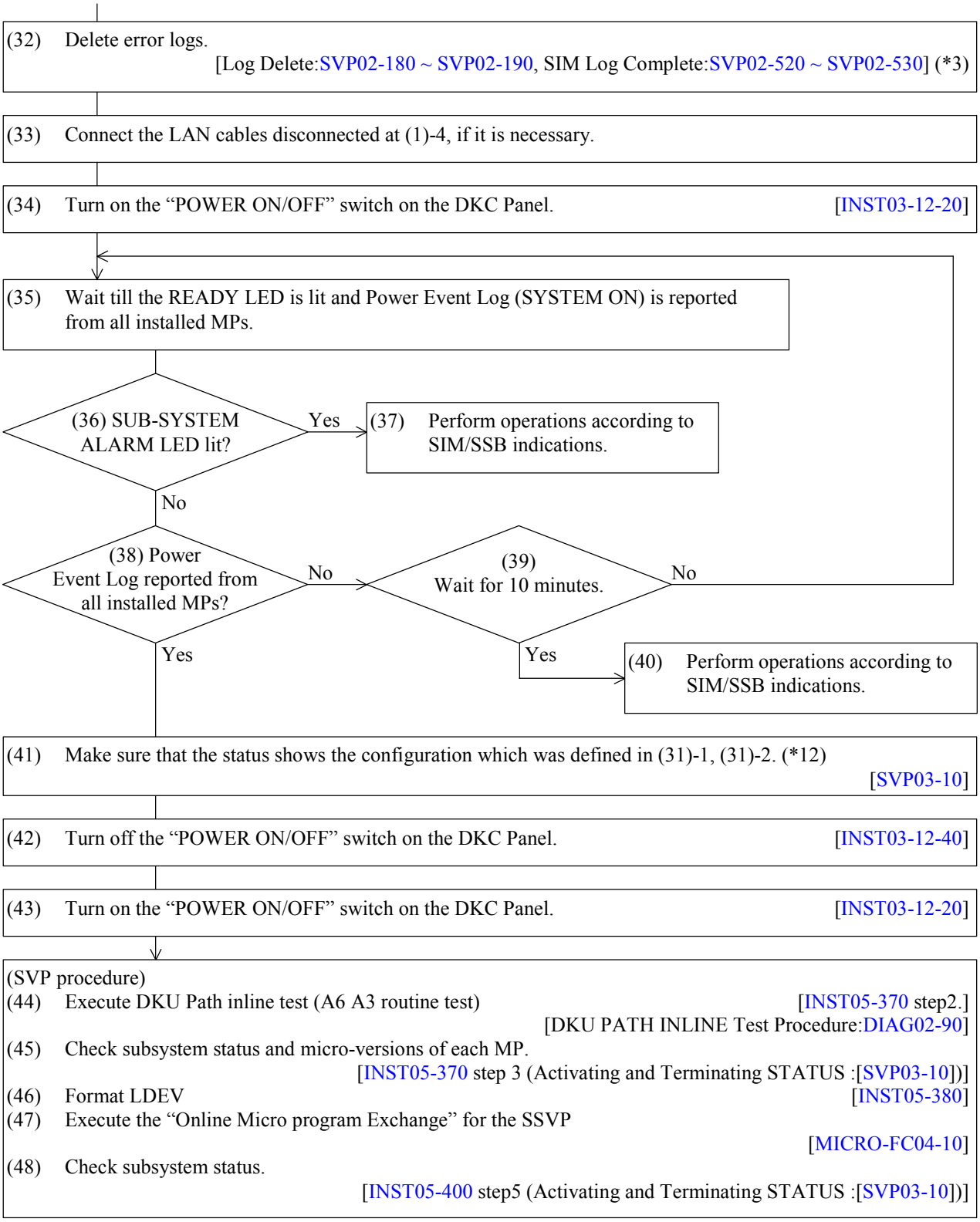

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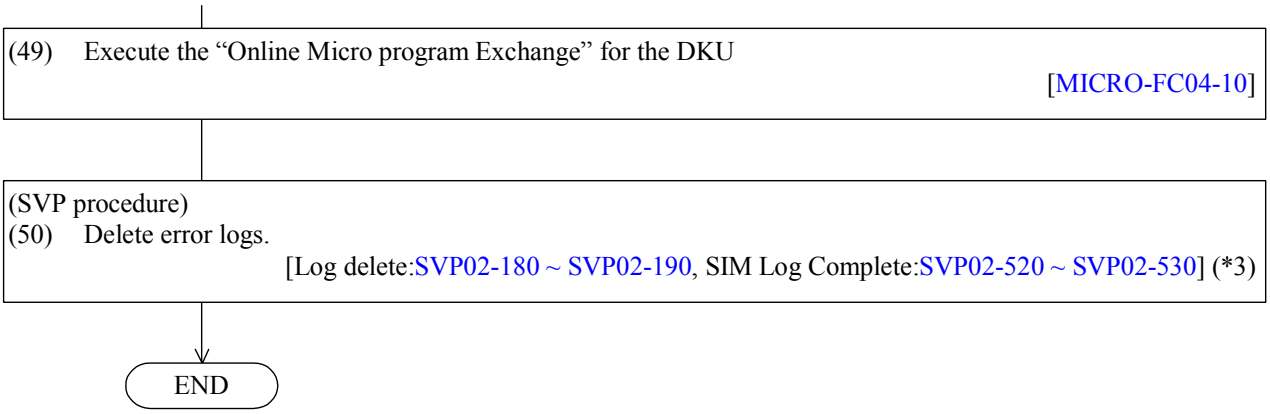

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*1 : The CD-ROM includes the micro-programs to be installed into the DKC subsystem. And the FD should correspond to the micro-program version.

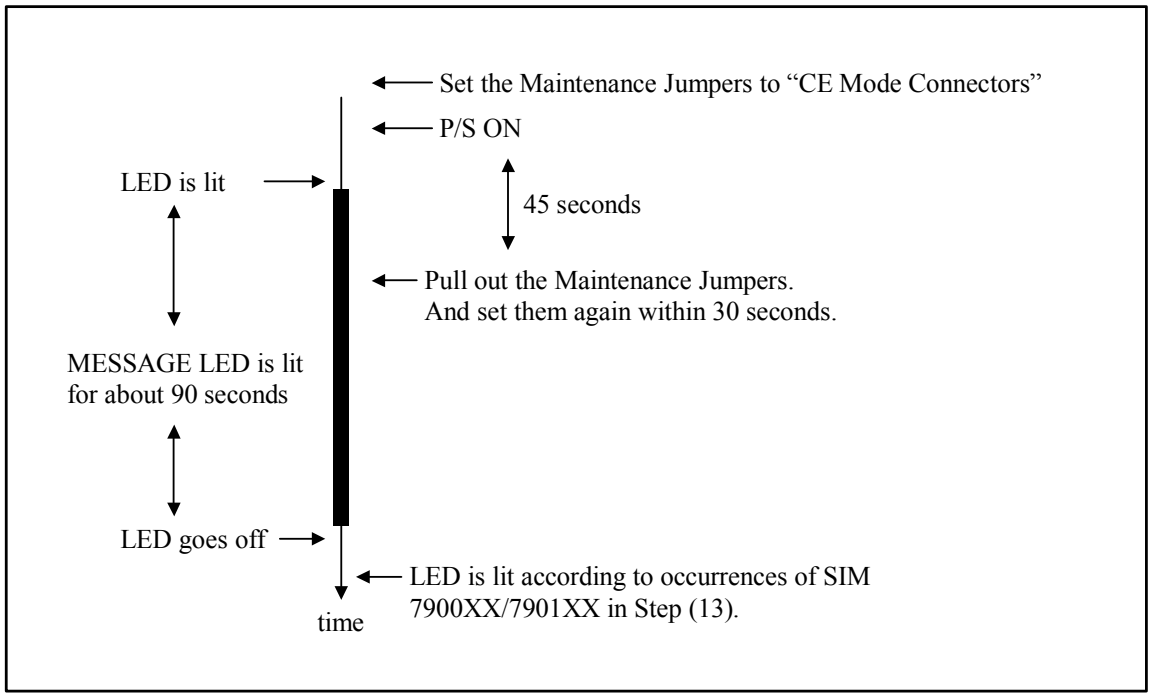
*2 : Even if the “IP Address” is “126.255.255.15” and the “Subnet Mask” is “255.0.0.0” on the screen of “Set IP Address”, be sure to select “OK” and reply “OK” to the message “This will reboot SVP.”.

*3 : It’s necessary to execute the procedure of “SIM Log Complete” before deleting the SIM data.

*3-1: At least, a pair of MIX must be installed in the front and back box PCB locations.

*4 : Refer to the following about the Maintenance Jumpers.
- “INST02-30 Note”

*5 : The detail of the jumper operation is as follows.
(1) Turn on the “POWER ON/OFF” switch.
(2) At 45 seconds after (1), pull out the Maintenance Jumpers from the BASE PCBs.
(3) Insert the Maintenance Jumpers to the CE Mode connectors (JP13) on the BASE PCBs again quickly (within 30 seconds) after pulling out the Jumpers at (2). MESSAGE LED must be lighting during operations (2) and (3).



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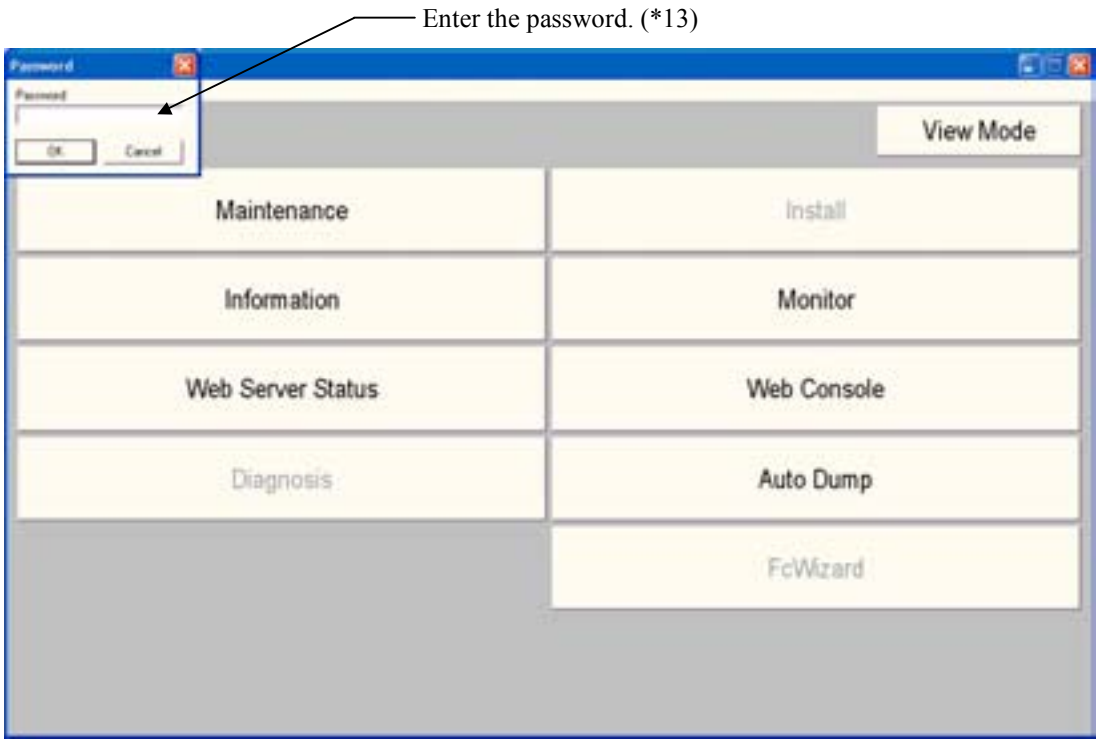
*6 : Count SSB Logs (Error Code = 3309). The number is same as the number of the installed MPs.

*7 : 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 "MIX".
② Select "All microprograms". ("Fixed Minimum Configuration" should be selected automatically.) (*14)
③ Select "OK" after finishing the above specifications.

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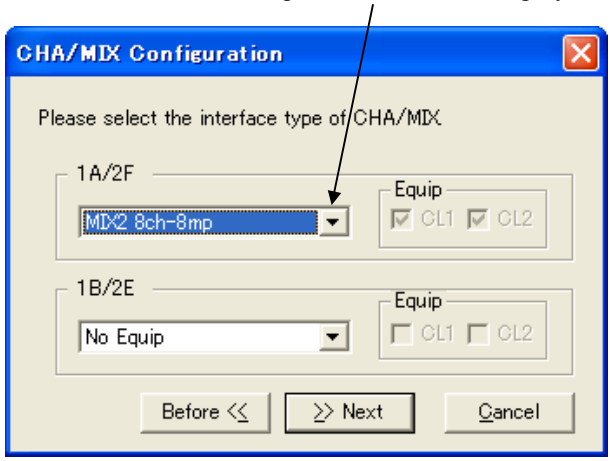
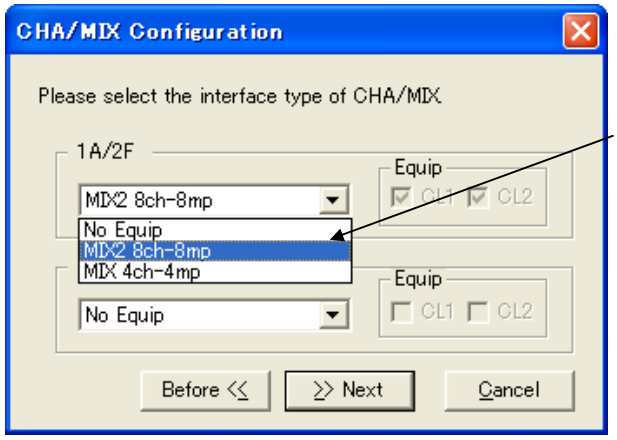
[Example of operations]

- Select installed PCB type

Click here, and the pull-down menu is displayed.





Select one that matches the MIX type installed for PCB location.

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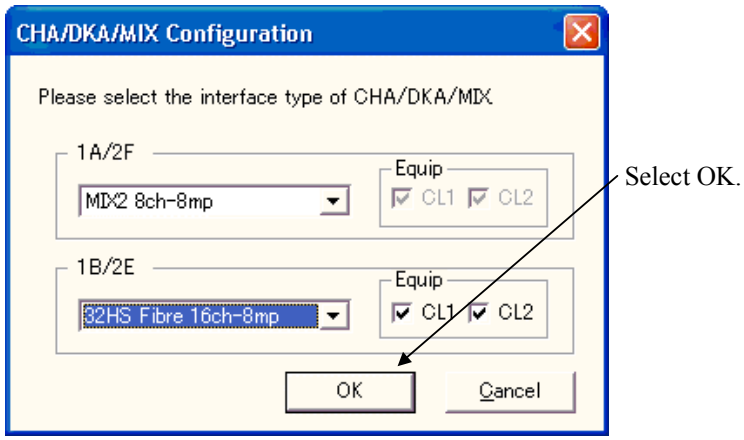
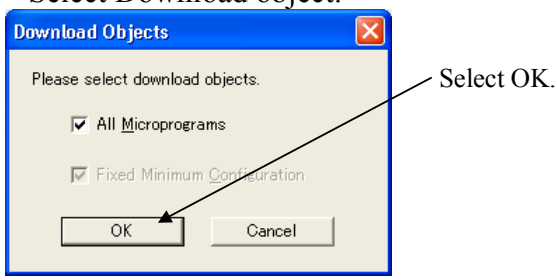


• Select Download object.



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(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 INST02-300.)

*8 : The following SIM Logs are output by turning off the battery switches.
SIM Logs: bf5010, bf5210, bf5020, bf5220
But you can ignore them.

*9 : 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 (*14). So, the READY LED is not lit. Also, the SIM Log (3073XX, 3173XX, 3990XX, 3D90XX 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 (31)-1, (31)-2.

*10: Press the following keys at the same time to change the mode to "Initial Setting".
[SHIFT], [CTRL], [I]
And input the password. (*13)

*11: 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.

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*12: Surely, check the following status:
(1) the condition of each PCB status.----- PCB Kind/Normal or not/etc
(2) the micro-program version

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

*14: The "Fixed Minimum configuration" is a temporary configuration to unify the condition of the power-on processing in Step (24) 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 (1A and 2F for "MIX")
IP Address = 126.255.255.xx

② Option PCBs Configuration : None (No equip)

③ Cache size : 1024 MB for each side.

④ SM size : 512 MB for each side.

⑤ LDEV/PDEV/LCP Configuration : None

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2.11 Obstacle part replacement procedure in install

2.11.1 Replacement procedure when PCB could not be restoring

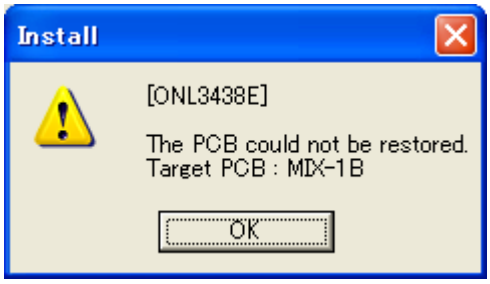
(1)

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 t he 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 : ****.)

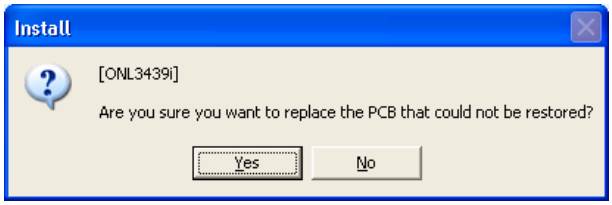


Please select(CL) [OK] after a check.

---

(2)

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

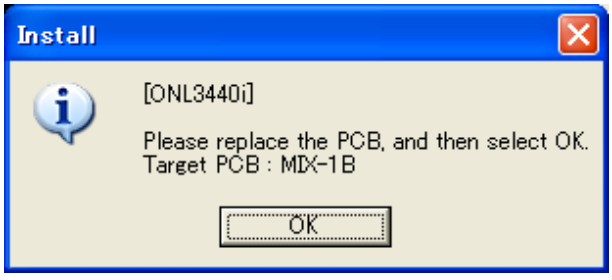


When the maintenance parts to replace exist, please select [Yes]. → Go to (3)
When the maintenance parts to replace do not exist, please select [No] and refer to trouble shooting for errors in install.

---

(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.

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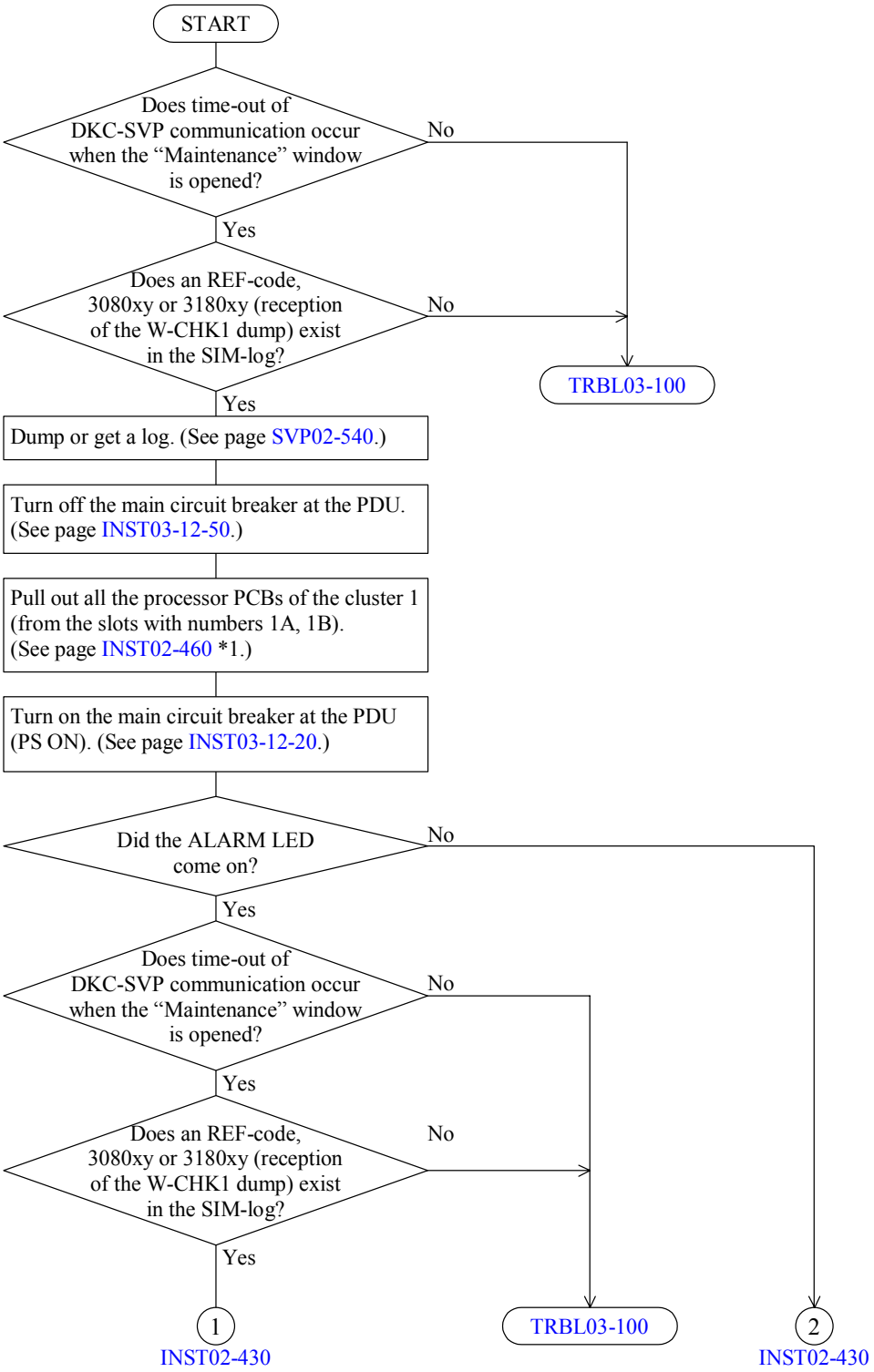
2.12 Troubleshooting at the time of new installation

(1) When the ALARM LED comes on



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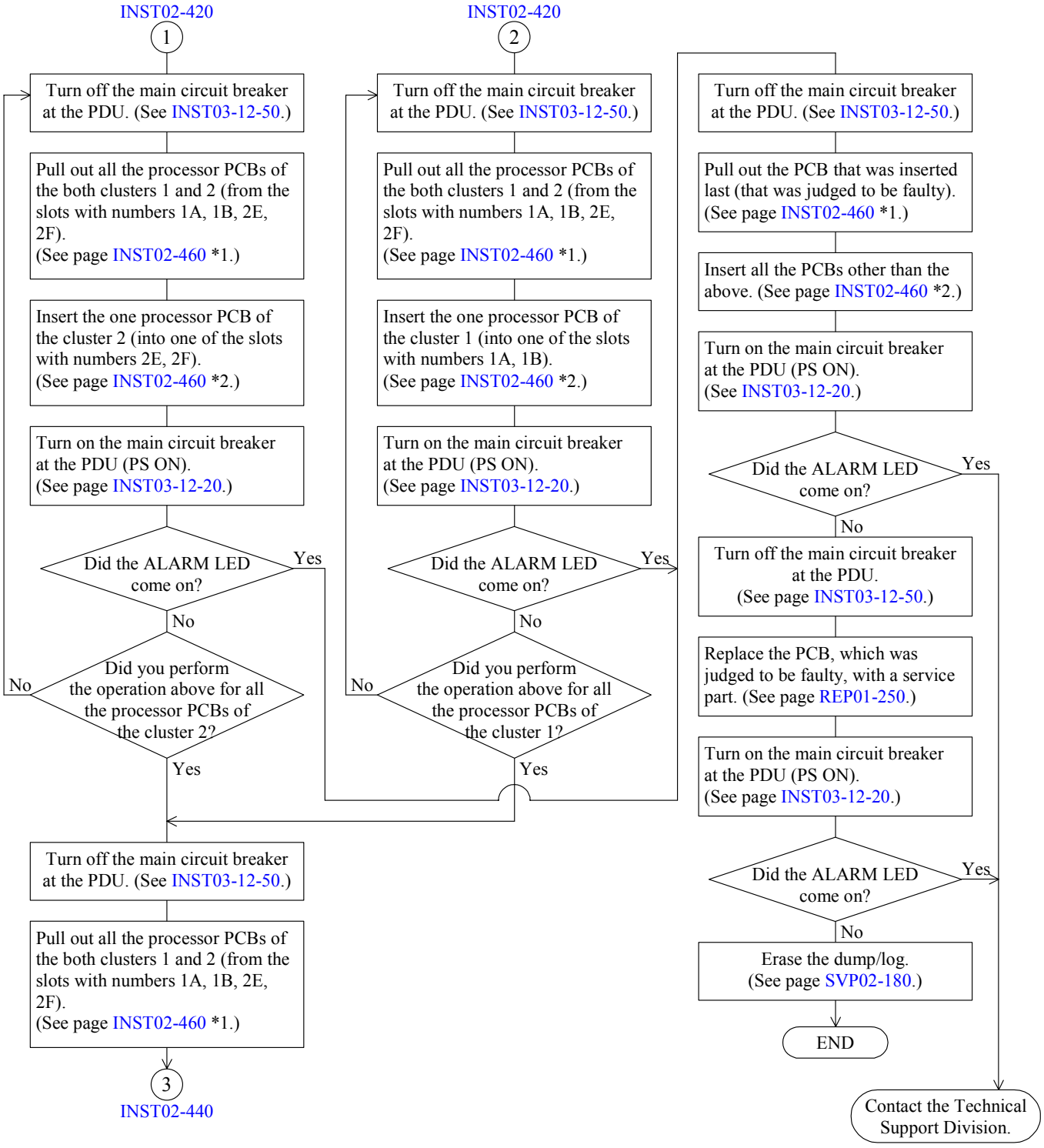

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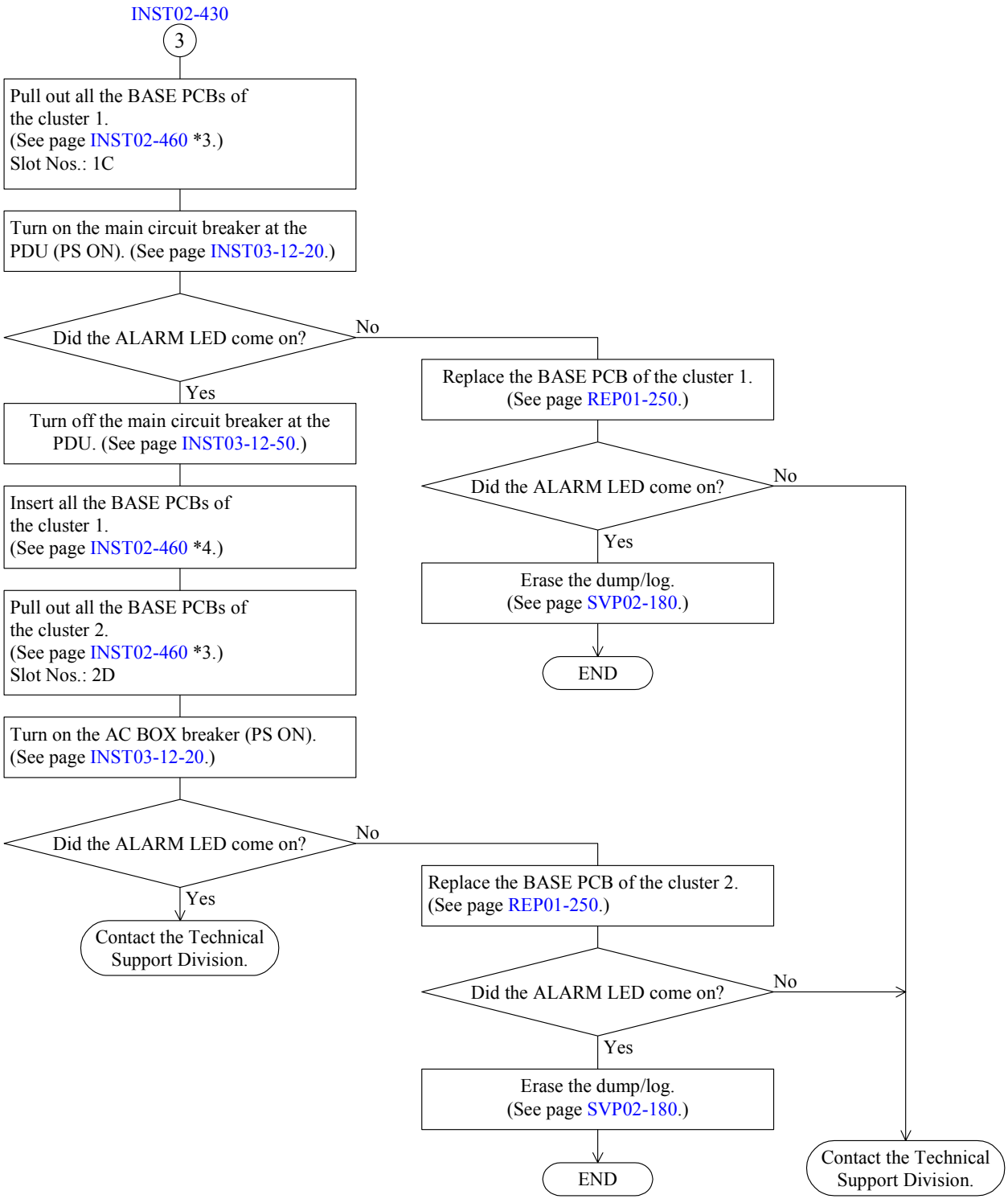

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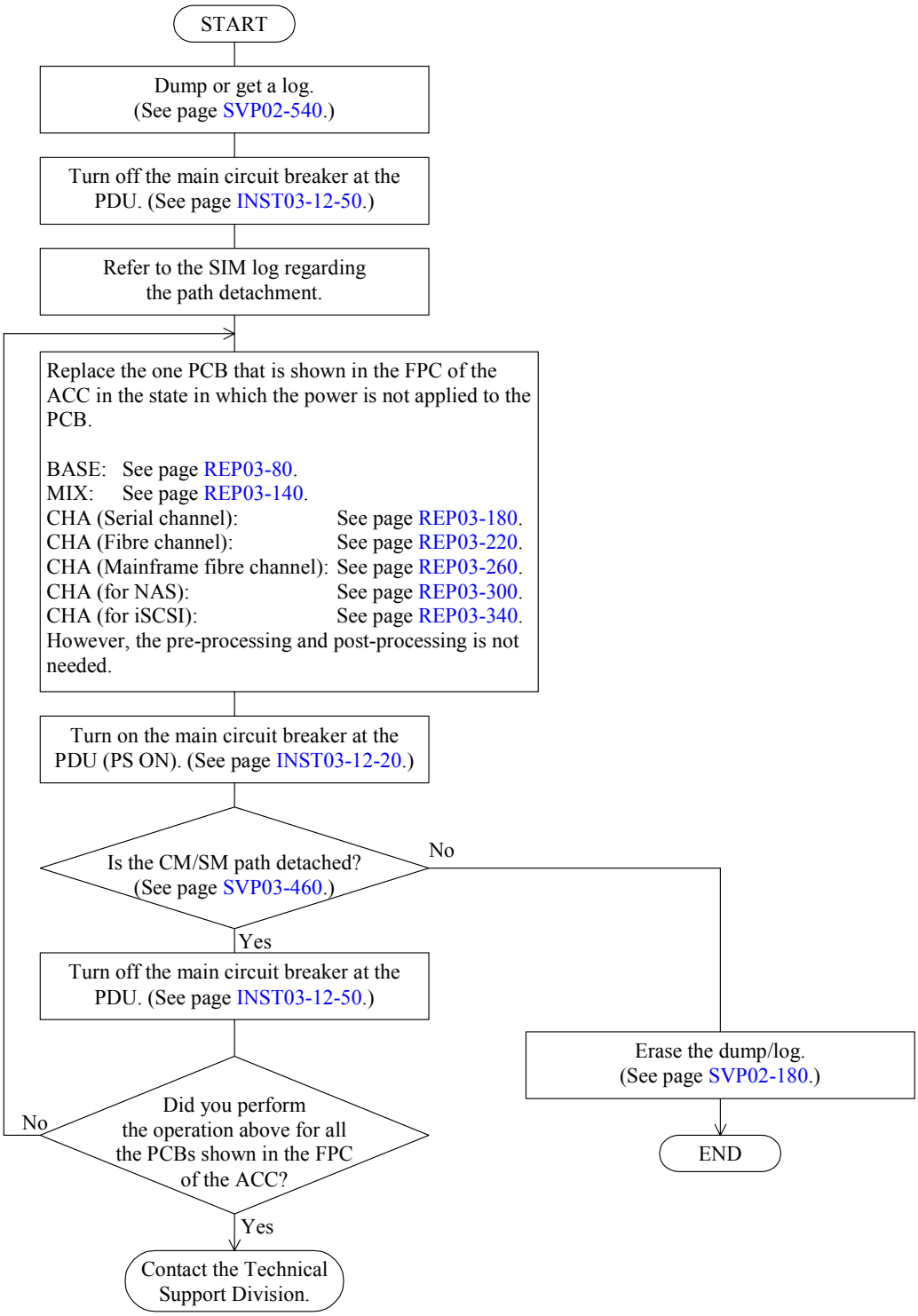
(2) When the CM/SM path is detached



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*1: Pulling out of the processor PCB

MIX: Refer to page REP03-160.

CHA:
- Serial 16-port adapter — Refer to page INST04-04A-60.
- Fibre 16/32-port adapter — Refer to page INST04-04B-60.
- Mainframe fibre 8/16-port adapter — Refer to page INST04-04C-60.
- NAS 8-port adapter — Refer to page INST04-04D-60.
- iSCSI 16-port adapter — Refer to page INST04-04E-60.

*2: Insertion of the processor PCB

MIX: Refer to page REP03-170.

CHA:
- Serial 16-port adapter — Refer to page INST03-07A-70.
- Fibre 16/32-port adapter — Refer to page INST03-07B-70.
- Mainframe fibre 8/16-port adapter — Refer to page INST03-07C-60.
- NAS 8-port adapter — Refer to page INST03-07D-60.
- iSCSI 16-port adapter — Refer to page INST03-07E-60.

*3: Pulling out of the BASE PCB

Refer to page INST04-03A-70, 220.

*4: Insertion of the BASE PCB

Refer to page INST03-09A-90, 240.