START SECTION

Contents

NOTICE:
- **All Maintenance Procedures Start from Here!**
- **Use the maintenance manual corresponding to the micro-program version of the maintained storage system.**

1. Precautions

- All maintenance operations to be performed on this storage system are controlled through the SVP. When taking maintenance actions, carefully read this maintenance manual to avoid operation mistakes.
- The storage system is designed so that troubles are isolated using the action code (ACC). If no ACC is presented, isolate the trouble based on TROUBLE SHOOTING SECTION.
- The service personnel should read THEORY OF OPERATION SECTION and understand its contents.

1.1 How to Use This Maintenance Manual

When servicing the storage system by using this manual, select the item to be checked from the START ENTRY TABLE in START SECTION and follow the instructions given in the corresponding test procedure.

NOTE: Each SVP screen on this maintenance manual is a sample, and it may not be the same as the actual screen.

2. Start Entry Table

Select the test item to be executed on this storage system and follow the instructions given on the indicated pages.

	Test Item	Go To
A. Error Analysis		
A-1	Analyzing errors with ACC	TRBL03-10
A-2	Analyzing errors without ACC	TRBL03-40
A-3	Analyzing electric system errors (alarm, breaker trip, power-on failure, etc.)	TRBL03-90 TRBL03-200 ~ 270
A-4	Analyzing PC (SVP) errors	TRBL03-150
A-5	Analyzing SVP Messages	SVPMSG01-10
A-6	ACC analysis in SSB	ACC01-10
A-7	PIN track recovery	TRBL06-130
A-9	Recovery procedure for Common SAS Error	TRBL04-10
A-10	Recovery procedure for LAN Error	TRBL04-40
A-11	Recovery procedure for the Replacement of CHB/DKB	TRBL04-70
A-12	Recovery procedure for micro-program replacement failure	MICRO06-10
A-13	Recovery procedure for MPB replacement failure	TRBL04-110
A-14	Recovery procedure for cache Both-side failure	TRBL04-120
A-15	Message “Internal storage system status is under maintenance...” was displayed during maintenance by the SVP.	TRBL04-130
A-16	Recovery procedure for drive restoration failure	TRBL04-140
A-17	Recovery procedure for installing failure	INST02-330
A-18	DIAG Trouble shooting	DIAG05-10
B. Status Display		
B-1	Displaying processor and path block status and drive copy status	SVP03-10
C. Installation		
C-0	Storage system Configuration Outline	INST01-10
C-1	New Installation Procedure Table	INST02-10
C-2	Non-Disruptive Installation Procedure Table	INST02-40
C-3	Non-Disruptive De-Installation Procedure Table	INST02-60
C-4	Disruptive Installation Procedure Table	INST02-80
C-5	Disruptive De-installation Procedure Table	INST02-90
C-6	Attachment/Removal Procedure of CE Laptop PC	INST03-01-150
D. Microprogram FC		
D-1	Performing micro-program FC (Off-line)	MICRO03-10
D-2	Performing micro-program FC (On-line)	MICRO04-10
D-3	Performing MP Install	MICRO05-10
D-4	Performing configuration exchange	MICRO08-10

	Test Item	Go To
E. Part Replacement		
E-1	Replacing parts	REP00-10
E-2	Periodic replacing	PERIOD01-10
E-3	Periodic checking	PERIOD01-10
F. SVP Panel Manipulation		
F-1	Getting SVP panel manipulation information	SVP01-10
F-2	Checking log information	SVP02-30
F-3	Log delete	SVP02-180
F-4	Monitoring	SVP02-200
F-5	Checking Online read margin (ORM) information	SVP02-330
F-6	Setting SIM report level	SVP02-500
F-7	Management of drive threshold values	SVP02-520
F-8	SIM Log Complete	SVP02-590
F-9	Performing AutoDump	SVP02-610
F-10	Performing Logical Device Maintenance	SVP02-790
F-11	Display the Pinned Track	SVP02-1070
F-12	System Option	SVP02-1170
G. Diagnostics		
G-1	Performing CUDG4	DIAG04-10
G-2	Performing HDD INLINE	DIAG04-90
H. Others		
H-1	Knowing outline of this storage system	THEORY01-10