

Jensen KATS

CONVEX ELITE III DISK SUBSYSTEM SERVICE PLAN



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8/2/93

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1 PRODUCT DESCRIPTION

1.1 General

The Elite III Disk Subsystem consists of the following:

1. 3 G/Byte 5 1/4" IPI2 Disk Drive.
2. Disk Drive Assembly with Power Supply.

2 PROGRAM OVERVIEW

2.1 Marketing Strategy

Elite III is the next generation of disk drives that Convex will offer as the primary disk drive offering.

2.2 Manufacturing Strategy

The manufacturing strategy is to purchase the disk drive and enclosure parts from various vendors. The disk drive and enclosure parts will be intergrated and tested by manufacturing.

2.3 Product Schedule

Elite III Disk Subsystem is scheduled to start production shipments in the end of Q2, 1993.

3 EQUIPMENT SPECIFICATIONS

3.1 Space Requirements

	Width Inches (mm)	Depth Inches (mm)	Height Inches (mm)	Weight Pounds (Kg)
Disk Drive (only)	5.75 (146.0)	8.6 (218.0)	3.25 (83.0)	9.0 (4.1)
Disk Drive & Power Supply In Assembly	4.07 (103.0)	24.98 (635.0)	6.33 (161.0)	21.0 (9.5)

3.2 Power Requirements

	Voltage	Frequency	Phase	Current
Drive Assembly	100-240	50-60 Hz	1 Phase	1.0 A

4 Environmental Requirements

4.1 The Elite III Disk Subsystem operates in a computer room environment. There is a need for supplemental cooling systems to keep the system functioning properly.

	Recommended Operating Range	Maximum Rate of Change
Temperature	50° to 113° F (5° to 45° C)	68° F/Hour (20° C/hour)
Humidity	5 to 95% non-condensing	10%/hour

4.2 Altitude

Maximum Operating Altitude is 10,000ft (3050 m)

4.3 Air Conditioning (per unit)

Watts	Btu/hr	Kcals/hr
102.6	350.0	88.2

5 SERVICE

5.1 Overview

5.1.1 The Individual Field Replaceable Units (FRU) are shown in Section 13 of this document. Failing FRU's will be detected by various operating system and diagnostic tools available to the Convex Field Service Engineer and the Technical Assistance Center.

5.1.2 Remote diagnostics of the Elite III Disk Subsystem is supported.

5.2 Level of repair

The drive assembly will be repaired to the FRU level in the field. The faulty FRU will then be tagged and returned to the factory for processing. FRU's supplied by outside Vendors will be returned to the them for repair.

5.3 Repair Techniques

Drive fault isolation will involve the use of internal power-up diagnostics, standalone offline diagnostics, operating system error messages, and online diagnostics and exercisers. This diagnostic capability will allow definition of Elite III Disk Subsystem problems to the FRU level in rapid fashion.

6 DIAGNOSTICS

6.1 Internal

Internal power-up diagnostics are executed each time the drive assembly is powered up.

6.2 External Indications

The workstation has 4 LED indicators, Power, Write Protect, Disk Activity and Drive Error, which will pulsate an error code.

6.3 Offline Diagnostics

Offline diagnostics are available at the Service Processor (SPU) level. "ldcfmt" is the program used to format, verify and slip sectors on the disk drive..

6.4 On Line Diagnostics

"ldcfmt" is also available at the ConvexOS level.

6.5 Diagnostic Approach

Operating system error messages will be the initial method of fault isolation. This may be followed by using "ldcfmt" if operating system error messages are not sufficient to determine the faulty FRU.

7 Support

7.1 Support Levels

First level of support will be provided by the Field Engineer assigned to the account. The next level of support will be provided by the Technical Assistance Center.

7.2 Response Time

For purposes of planning, the maximum response time is estimated to be 4 hours and is measured from the time the call is placed by the customer until a Convex representative begins diagnosis of the incident.

8 INSTALLATION

8.1 The local field organization will coordinate the activities required for the installation.

8.1.1 The prime responsibility will be with the Field Engineering organization. Convex Field Personnel will install the system at the customer site. They will also be responsible for coordinating the time and resources for the install with the customer. The install action will be recorded through the call dispatch system with the appropriate action code.

9 MODIFICATION

9.1 Modifications to the Elite III Disk Subsystem will be in the form of Field Modification Instructions, which are technical changes.

9.1.1 Field upgrades will be provided through the ECN/FMI process. Field upgrades will be scheduled and controlled by Field Support Logistics under technical advisement of Hardware Product Support.

9.2 Modification Control Procedures

9.2.1 Modifications will be handled as upgrades for major changes. Modification activities will be tracked via the Technical Assistance Center.

10 DOCUMENTATION REQUIREMENTS

10.1 The following documentation will be available to support the Elite III Disk Subsystem:

Description	Convex Part Number
Convex Elite III Service Guide	081-010230-000
Seagate Elite Disc Drive ST43200K User's Manual (IPI Interface)	900-000702-001
Seagate Product Specification, Elite 3 IPI	900-000618-001

11 TRAINING REQUIREMENTS

11.1 Convex Supplied

Training on the Elite III Disk Subsystem will be included the Convex I/O Training course offered by the Convex Education Center.

12 FIELD REPORTING

12.1 Methods

The current method for reporting problems will continue to be used with the Elite III Disk Subsystem. The Technical Assistance Center will record data to allow performance analysis of the Elite III Disk Subsystem.

13 FIELD SPARES

13.1 The following table is the FRU list:

Part Number	*	Description
550-002230-297	H,O	Formatted Disk Drive (HDA Only)
200-001046-200	H,A	Power Supply
411-001385-200	H,A	Front Panel Control Board
500-000544-200	H,A	Fan Assembly
312-000555-001	H,A	Air Filter
602-500059-200	H	Internal Data Cable
603-070010-200	H	DC Power Cable Harness
601-160004-200	H	Disk Drive to Front Panel Cable
603-010029-200	H	Ground Strap
603-030042-200	H	AC Power Cable Harness

* Suggested Stocking Location

O = Office A = Area

H = Headquarters

14 TOOLS/TEST EQUIPMENT

14.1 Standard Tools

The Standard Convex Field Engineers Tool Kit will be utilized

Description	Convex Part Number
Tool Kit, Specialized	900-000523-001
Fluke Meter	902-000002-001

14.2 Standard Test Equipment

Standard tools and test equipment available to the Field Engineer in the standard FE tool kit and available at service offices are all that are required to maintain the Elite III Disk Subsystem in the field.

14.3 Special Tools and Test Equipment

No special tools or test equipment are needed to maintain the Elite III Disk Subsystem in the field.

15 SOFTWARE

15.1 Software Requirements

The Convex C-Series System must be running a minimum of V10.1 or V10.2 of ConvexOS and IDC V6.0.