

*(This is the customer's troubleshooting document for the 9176. It is to be posted on the CRC under "Disk Storage" with the 9176 materials. It provides the customer with guidance in determining which part has failed.)*

## **9176 Troubleshooting Information**

Prior to filling out the troubleshooting information below, please review the User's Guides for the product.

1. For the 9176 Controller module, refer to the *StorageTek 9176 Disk Controller User's Guide*, document number 95955.
2. For the 9170 Disk Array, refer to the *StorageTek 9170 Disk Array User's Guide*, document number 95960.
3. Refer also to the appropriate StorageTek 9176 Object Manager - Installation and Support Guide for your Operating System.

## **9176 Troubleshooting Matrix**

By submitting this form to StorageTek the customer agrees to either return the defective unit within 15 days of receiving the replacement, or to pay list price for the replacement unit.

### **Step One:**

*Note: all fields in Step One are required.*

Please provide the following information:

Customer name:

Contact name:

Phone number:

Email address:

Serial number of the failing unit (e.g. the 9176 Controller Unit or the 9170 Disk Array Enclosure):

Host Operating System level and revision:

917x firmware level and revision:

### **Step Two:**

*Note: fields are required for all errors indicated by LED's.*

Please provide information on any **9176 Controller Tray LED's** indicating an error status (See the *StorageTek 9176 Disk Controller User's Guide*, Section Two, document number 95955, above).

Fill in the blanks as requested.

**Front Indicator Lights: Controller Canister**

	Status: e.g., on, off, blinking
Power Indicator	
Fault Indicator	
Heartbeat Indicator	

**Front Indicator Lights: Controller Fan Canister**

	Status: e.g., on, off, blinking
Power Indicator	
Power Supply Fault Indicator	
Controller Fan Indicator	
Controller Fault Indicator	
Fast Write Cache Indicator	

**Front Indicator Lights: Battery Canister**

	Status: e.g., on, off
Fault-A Indicator	
Full Charge-A Indicator	
Fault-B Indicator	
Full Charge-B Indicator	

**Rear Indicator Lights: Interface Card Canisters (Host Side)**

	Status: e.g., on, off
Interface Fault Indicator	
Bypass Fault Indicator	
Loop Good Indicator	

**Rear Indicator Lights: Fan/Communications Canister**

	Status: e.g., on, off
Fan/Comm. Fault Indicator	

**Rear Indicator Lights: Interface Card Canister (Drive Side)**

	Status: e.g., on, off
Interface Fault Indicator	
Bypass Fault Indicator	
Loop Good Indicator	

**Rear Indicator Lights: Power Supply Canisters**

	Status: e.g., on, off
Power Supply Indicator	

Please provide information on any **9170 Disk Array LED's** indicating an error status (See the *StorageTek 9170 Disk Array User's Guide* (Introduction), document number 95960, above).

Fill in the blanks as requested.

**Front Indicator Lights: Drive Module Status Lights**

	Status: e.g., on, off, blinking
Power On Indicator	
Activity Indicator	
Fault and Identification Indicator	

**Rear Indicator Lights: Channel Card Module**

	Status: e.g., on, off, blinking
ESM heartbeat	
Opposite card detected	
ESM accessed	
(Engineering Use Only; ignore)	
Loop Status Indicator (2)	

**Step Three:**

*Note: this is a required field.*

Please provide any host-generated error messages indicating a problem with the host channel connection to the disk unit. The host sees the disks as logical volumes. A host-generated message indicates that the host is experiencing problems communicating with the disk through the channel, or that an excessive number of channel errors are occurring. If the host loses access to the disk through the channel connection, then any host messages regarding the disk will refer only to the logical volume(s).

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**Step Four:**

*Note: these are required fields.*

Please provide any messages **generated by the StorageTek 9176 Object Manager software** indicating a problem. *Note: Refer to the appropriate Object Manager Support manual for your Operating System.*

**Major Event Log**

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**NVSRAM dump**

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**Profile**

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