For more information about these informational messages, see the *IBM TS7700 Series Operator Informational Messages White Paper*, WP101689.

IBM 3592 tape drive failure (TS7700T)

When the TS7700 determines that one of its tape drives is not operating correctly and requires service (because of read/write errors, fiber interface, or another hardware-related reason), the drive is marked offline and an IBM SSR must be engaged. The following intervention- required message is displayed on the Library Manager Console:

```
CBR3750I MESSAGE FROM LIBRARY lib: Device xxx made unavailable by a VTS. (VTS z)
```

Operation of the TS7700 continues with a reduced number of drives until the repair action on the drive is complete. To recover, the IBM SSR repairs the failed tape drive and makes it available for the TS7700 to use it again.

Physical volume in read-only status

The message `OP0123 Physical volume in read-only status due to successive media errors` reports that a specific cartridge that belongs to the TS7700T exceeded the media error threshold, encountered a permanent error during write or read operations, or is damaged. The faulty condition is reported by the tape drive to the cluster, and the cartridge is flagged Read-Only by the running cluster code. A read-only status means that new data is not written to that suboptimal media.

By default, this cartridge is corrected by an internal function of the TS7700 named Automated ROR. Make sure that the IBM SSR includes enabled Automated ROR in the cluster. Automated ROR is the process by which hierarchical storage management (HSM) recalls all active data from a particular physical volume that exceeded its error thresholds, encountered a permanent error, or is damaged.

This process extracts all active data (in the active logical volumes) that is contained in that read-only cartridge. When all active logical volumes are successfully retrieved from that cartridge, the Automated ROR process ejects the suboptimal physical cartridge from the tape library, which ends the recovery process with success. Messages `OP0100 A read-only status physical volume xxxxxx has been ejected` or `OP0099 Volser XXXXXX was ejected during recovery processing` reports that the volume was ejected successfully.

After the ejection is complete, the cartridge VOLID is removed from the TS7700 physical cartridges inventory.

> **Note:** By design, the tape attach TS7700 never ejects a cartridge that contains any active data. The requirement to eject a physical cartridge is to move off all active data to another physical cartridge in the same pool, and only then the cartridge can be ejected.

If Automated ROR process successfully ejects a read-only cartridge, no other actions are needed, except inserting a new cartridge to replace the ejected cartridge.

The ROR ejection task runs at a low priority to avoid causing any impact on the production environment. The complete process, from cartridge being flagged Read-Only to the `OP0100 A read-only status physical volume xxxxxx has been ejected` message, which signals the end of the process, can take several hours (typically one day to complete).

If the process fails to retrieve the active logical volumes from that cartridge because of a damaged media or unrecoverable read error, the next actions depend on the current configuration that is implemented in this cluster, whether stand-alone or part of a multi-cluster grid.