



## When to inspect DLT media

We recommend inspecting media whenever loading it into an autoloader or standalone drive. This may not always be possible, but you must inspect media when:

- Drive fails as soon as a cartridge is loaded
- Repeated periodic drive failures
- Media from unknown background
- Media has been dropped

Taking a few moments to check the condition of the cartridges, and verifying that their leaders are not torn or damaged, will save repeated failures and help ensure uninterrupted backup. With DLTtape technology, the tape drive engages onto the cartridge leader and pulls the media into the drive (see Figure 1), this is known as a latch leader method. If the cartridge has been damaged, and this leader in the cartridge is damaged, the drive can, in some cases, cause load or fatal errors and require the drive to be replaced.

**If you see any of the errors below or have any other reason to believe the media is damaged DO NOT load the media into the tape drive or library.**

Figure 1: Tape drive engages cartridge leader

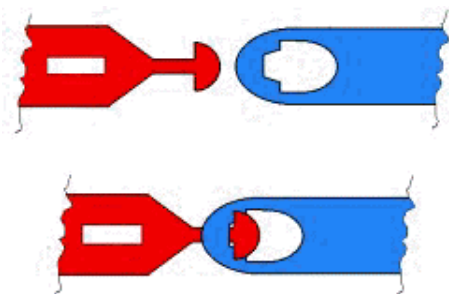
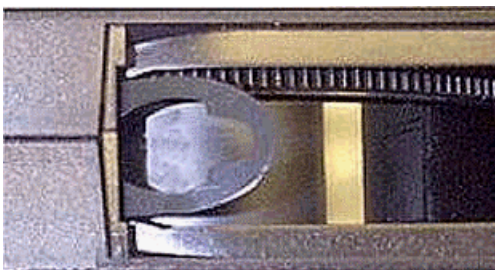


Figure 2: Cartridge leader

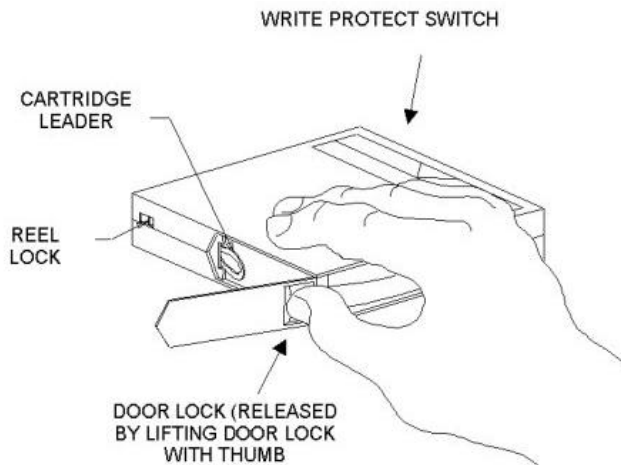


The cartridge leader, as shown below in Figure 2, is key to the functionality of the tape drive. To verify that the cartridge leader is not damaged, open the cartridge door. To do this, gently release the spring loaded door lock and open the door (see Figure 3).

**CAUTION: Never touch the cartridge leader with bare hands, as this may cause drive head contamination.**

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Figure3: Opening the cartridge door



## What to check during media inspection

Figure 4: Cartridge has unspooled



Inside the tape cartridge are reel locks that prevent the media spool from moving or spinning when the cartridge is not loaded into a tape drive. If the cartridge has been dropped, it is possible for these reel locks to become damaged. The image below (see Figure 4) shows a tape where the reel locks have failed and the cartridge has un-spooled inside the cartridge. This has caused the cartridge leader to be misplaced. This media should be discarded.

Figure 5: Leader spooled out of the cartridge



An easy way to verify that the reel locks are good is to shake the media gently, if the cartridge rattles discard the media. Another example of failed reel locks can be found in the image below (see Figure 5), where the leader has spooled out of the cartridge.

Figure 6: Cartridge hub



Another area to check is that the cartridge hub is seated correctly in the cartridge and that it is spring-loaded. Gently press the media hub as shown below (see Figure 6). It should return to the correctly seated position. If it does not, or there is no spring return of the hub, then discard the cartridge.

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**Figure 7: Cartridge leader no longer visible**



In Figure 7, the cartridge has been severely damaged. The cartridge leader is no longer visible. Again, this media should be discarded immediately.

**Figure 8: Damaged media**



In Figure 8, the loop is no longer visible, although damaged media can be seen wrapped around the spool.

**Figure 9: Snapped leader loop**

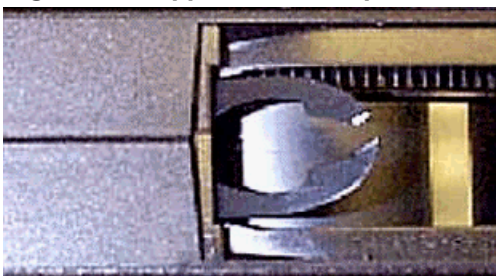


Figure 9 shows a cartridge with a snapped leader loop. Cartridges like this should be discarded immediately. Sometimes it can be difficult to see a snap or tear in the cartridge leader. An easy way to check is to use a ballpoint pen (not a pencil) to gently check the tension of the leader.

## Summary

To recap, following are the actions described above for checking a cartridge:

1. Check the case for signs of drop damage, cracks in the casing, and so on.
2. Ensure the cartridge is intact with no missing screws.
3. Ensure the door lock works properly and is spring-loaded.
4. Ensure the write-protect switch is moveable but remains in place when set to a position.
5. Check the cartridge leader is intact, using a ball-point pen if necessary.
6. Check the hub is centred in the cartridge and is spring loaded.
7. Ensure that there are no labels on the cartridge other than in the label slot.

Shake the cartridge gently, and if there are any rattles, discard the cartridge.

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**NOTE:** The images used in this document are from sites where customers have been experiencing frequent drive failures. By eliminating these bad cartridges from their media pool, the failure rate was reduced.

# Media Compatibility

## Cleaning Tape to Drive

|            | SDLT CleaningTape | DLT1 CleaningTape | CleaningTape III |
|------------|-------------------|-------------------|------------------|
| SDLT 220   | yes               | no                | no               |
| DLT1       | no                | yes               | no               |
| DLT 8000   | no                | no                | yes              |
| DLT 7000   | no                | no                | yes              |
| DLT 4000   | no                | no                | yes              |
| DLT 2000xt | no                | no                | yes              |
| DLT 2000   | no                | no                | yes              |

## Media Type to Drive and Drive Format

|               | DLTtape™ III          | DLTtape IIIxt           | DLTtape IV  | Super DLTtape™ I |
|---------------|-----------------------|-------------------------|---|------------------|
| DLTtape drive |                       |                         |   |                  |
| DLT 2000      | yes                   |                         |   |                  |
| DLT 2000xt    | formatted as DLT 2000 | yes                     |   |                  |
| DLT 4000      | formatted as DLT 2000 | formatted as DLT 2000xt | yes   |                  |
| DLT 7000      | formatted as DLT 2000 | formatted as DLT 2000xt | yes, and formatted as DLT 4000                                |                  |
| DLT 8000      | formatted as DLT 2000 | formatted as DLT 2000xt | yes, and formatted as DLT 7000 and DLT 4000                   |                  |
| DLT1          |                       |                         | yes, and formatted as DLT 4000                                |                  |
| SDLT 220      |                       |                         | read only, formatted as DLT1, DLT 8000, DLT 7000 and DLT 4000 | yes              |

By following general handling procedures, conducting careful visual inspections of tape cartridges on a regular, ongoing basis, and making sure that tape cartridges are stored within their environmental limits, you will greatly reduce any chance that you will experience problems with your tape cartridges or cause damage to your DLT tape system.

## Respect your media as much as you do your data.

If you have any further questions or concern contact Pyramid Technology at 978-823-0700

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