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*Platinum Partner*



# Protect Your Asset

## Proper Media Care

- 1
- 2
- 3
- 4
- 5

How to care for, handle, inspect and ship your Quantum media cartridges.

## Why Media Care Is Important

Quantum media cartridges are engineered to be reliable, robust and durable. They are manufactured to withstand up to a million head passes, and have an archive life of up to 30 years.

Follow the guidelines in this booklet to get the most from your tape.

The safety of your data relies on proper care and handling.

1

### Get To Know Your Cartridge

- Cartridge features

2

### Media Care Overview

- Protecting your cartridge
- If you drop your cartridge
- Proper storage conditions
- Labeling your cartridge

3

### Visual Inspection

- When to perform a visual inspection
- Performing a visual inspection
- Spotting a damaged cartridge

4

### Shipping Cartridges

- How to pack and ship cartridges

5

### Quick Guide: Do's and Don'ts

- A quick and easy guide to caring for your media

## 1

### Get To Know Your Cartridge

#### DLTtape and Super DLTtape Cartridge Features

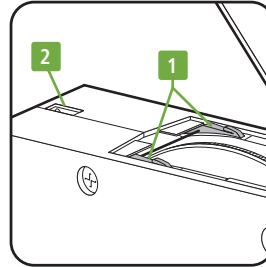
##### 1 Tape Leader Buckle

Buckles with drive leader to pull media from cartridge.

**DLTtape cartridges** (Mylar loop)

**Super DLTtape cartridges**

(plastic buckle with metal pin)



Super DLTtape

##### 2 Reel Lock

Prevents media reel in the cartridge from spinning when the cartridge is not loaded in a drive. This ensures that proper media tension is maintained.

##### 3 Cartridge Hub

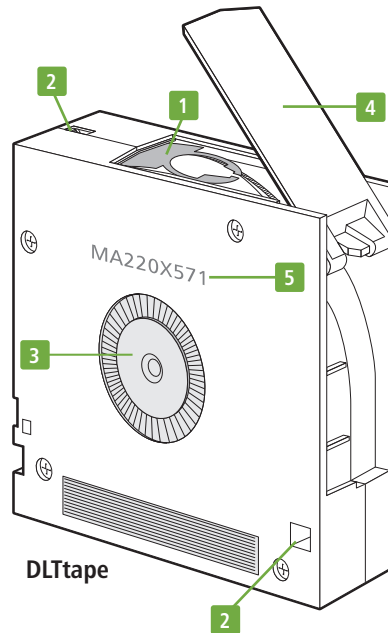
Mechanical interconnect between the cartridge and the drive reel motor.

##### 4 Cartridge Door

Provides access to the tape leader.

##### 5 Serial Number

May be needed for identification purposes if you call for service.



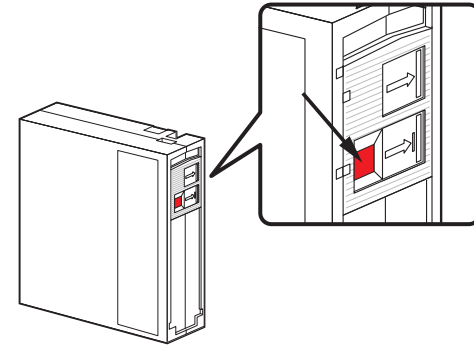
DLTtape

#### Write Protect Switch

Prevents overwrite or erasure of data. You can change the position of the write protect switch at any time.

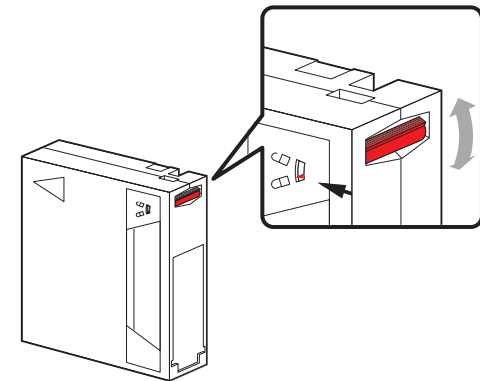
##### DLTtape and Super DLTtape

Write protected – slide switch down toward label area. Orange indicator should be displayed.



##### DLTtape VS1 and DLT VS160/V4 Cleaning Cartridge

Write protected - indicator on top points to closed lock



## 1.1

### Get To Know Your Cartridge

#### Ultrium LTO Cartridge Features

##### 1 Tape Leader Pin

Metal pin connects with grabber arm to pull media from cartridge.

##### 2 Reel Lock

Prevents media reel in the cartridge from spinning when the cartridge is not loaded in a drive. This ensures that proper media tension is maintained.

##### 3 Cartridge Hub

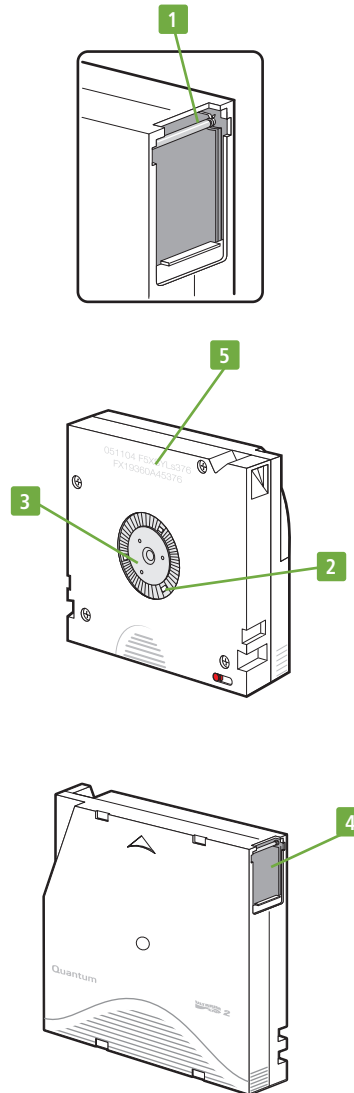
Mechanical interconnect between the cartridge and the drive reel motor.

##### 4 Cartridge Door

Provides access to the tape leader.

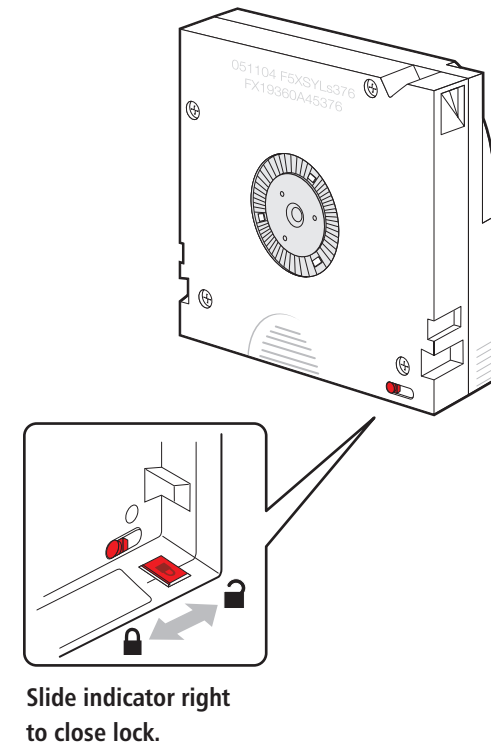
##### 5 Serial Number

May be needed for identification purposes if you call for service.



#### Write Protect Switch

Prevents overwrite or erasure of data. You can change the position of the write protect switch at any time.



## 1.2

### Get To Know Your Cartridge

#### DAT and DDS Cartridge Features

**1 Dual Reel Tape**

Media goes back and forth between supply and take-up hubs within cartridge.

**2 Cartridge Door**

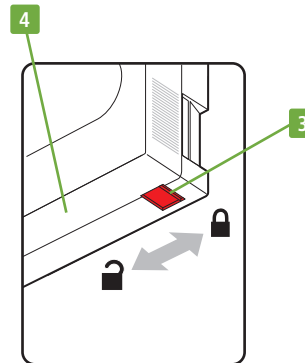
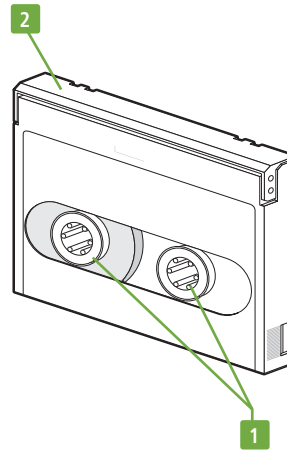
Provides access to the tape leader. The door should be closed.

**3 Write Protect Tab**

Prevents overwrite or erasure of data. You can change the position of the write protect switch at any time.

**4 Serial Number**

May be needed for identification purposes if you call for service.



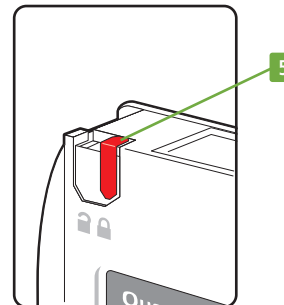
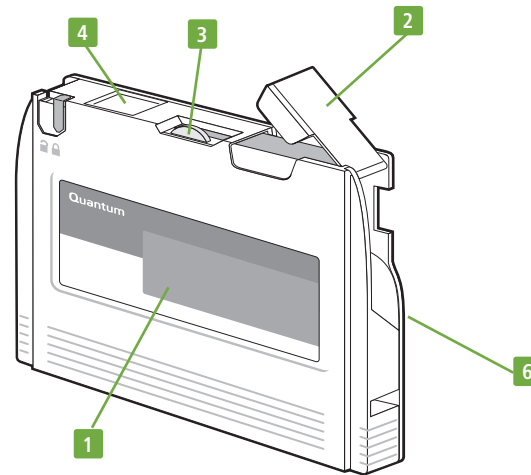
Slide indicator right to close lock.

## 1.3

### Get To Know Your Cartridge

#### Travan Cartridge Features

- 1 Dual Reel Tape**  
Media goes back and forth between supply and take-up hubs within cartridge.
- 2 Cartridge Door**  
Provides access to the tape leader.
- 3 Drive Roller**  
Used by the drive to control media position and tension.
- 4 End Sense Sensor**  
Used by the drive to determine the beginning and end of the tape.
- 5 Write Protect Switch**  
Prevents overwrite or erasure of data. You can change the position of the write protect switch at any time.
- 6 Serial Number (printed on bottom)**  
May be needed for identification purposes if you call for service.



Slide indicator right to close lock.

## 2

### Media Care Overview

#### Protecting Your Cartridge



- Protect cartridges from shock, vibration, moisture and magnetic fields.
- Keep cartridges in protective cases and store vertically when not in use.
- Ensure that no loose labels in the storage container stick to the bottom of the cartridge, covering the hub.
- Never touch the tape or tape leader. Dust and oils from skin can contaminate the tape and affect performance.
- Avoid direct sunlight – it can deform cartridge and/or ruin media.
- Allow cartridge 24 hours to adjust to the present operating temperature and humidity before use.

#### If You Drop Your Cartridge

- Inspect case for any signs of cracks or protruding material.
- Open cartridge door to check for damage. See Section 4 – Visual Inspection.
- **If damage is present**  
Do not insert cartridge in tape drive. Discard and/or contact the manufacturer.
- **If cartridge appears usable**  
Transfer data to a new cartridge and discard the old one.

#### Media Usage/Durability

- The usage or durability of your media is influenced by its care and handling as described in this document.
- Many of the newer drives monitor the usage of the media and will alert you as to when to replace a cartridge. Refer to your drive documentation for available alerts or software utilities.
- The table below shows the usage specification for each media type. The actual amount can vary depending on drive wear, environmental factors and media handling.

#### Proper Storage Conditions

Media Type	Media Use	Proper Conditions
DLTape Super DLTape Ultrium LTO Travan	Non-archival Storage	<ul style="list-style-type: none"> <li>• Between 60°F and 90°F (16°C and 32°C)</li> <li>• Between 20% and 80% relative humidity</li> </ul>
	Archive Storage (for one or more years)	<ul style="list-style-type: none"> <li>• Between 73°F±9°F (23°C±5°C)</li> <li>• Between 40% and 60% relative humidity</li> </ul>
DAT/DDS	Non-archival Storage	<ul style="list-style-type: none"> <li>• Between 41°F and 90°F (5°C and 32°C)</li> <li>• Between 20% and 60% relative humidity</li> </ul>
	Archive Storage (for one or more years)	<ul style="list-style-type: none"> <li>• Between 73°F±9°F (23°C±5°C)</li> <li>• Between 40% and 60% relative humidity</li> </ul>

Media Type	Full Tape Uses Specification
DLT, DLT VS, DLT-V	Up to 200
Super DLT, DLT-S	Up to 260
LTO Ultrium	Up to 260
DAT/DDS	Up to 100
Travan	Up to 75

## 2.1

### Media Care Overview

#### Labeling Your Cartridge



- Use the Quantum provided labels with your cartridge. Never use non-standard adhesive labels or Post-it® type notes.
- Use barcode labels designed specifically for your cartridge.
- To avoid drive/cartridge damage, make sure only one label is stuck to the designated label area of the cartridge. Multiple labels may cause jamming.
- Do not write directly on the cartridge.
- Write in pen, not pencil. Pencil can contaminate the tape path. Never use a grease pencil to write on the label or write directly on cartridge.

#### Proper Labeling

Media Type	Label Location	
DLTtape & Super DLTtape	Slide label <b>ONLY</b> into molded track on the back of the cartridge	
Ultrium LTO	Stick one label <b>ONLY</b> in the indented area on the back of the cartridge	
DAT/DDS	Stick one label in the indented area on the back and/or top of the cartridge	
Travan	Stick one label in the indented area on the back and/or top of the cartridge	

## 3

### Visual Inspection

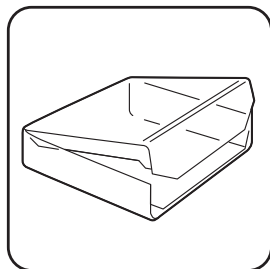
#### When To Perform a Visual Inspection

- Best practices: Each time a tape is loaded or changed.
- When a tape cartridge is dropped or subjected to a hard physical shock.
- When a shipment of tapes show any signs of shipping damage.
- If the drive becomes inoperable after loading a tape.
- If a drive error occurs, inspect the current and previous cartridge used in that drive.

#### How To Perform a Visual Inspection

- Go through all inspection steps in Group 1, 2 and 3 (see following pages).
- If issues are found in Group 1 only and no issues found in Groups 2 or 3 then use cartridge with caution.
- Monitor software log for media degradation.
- Consider copying the data onto a new cartridge and retiring the old cartridge.
- If any issues are found in Group 2 or 3, then retire the media and use a different cartridge.

#### Protective Case Inspection (All Media Types)



##### Case

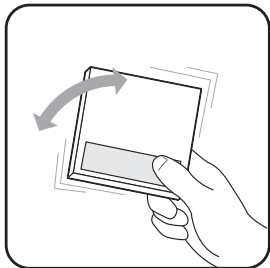
Inspect the protective case for cracks, chips, distortion, or other signs of damage.

## 3.1

### Visual Inspection

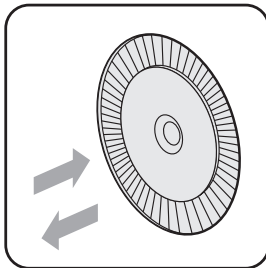
#### Visual Inspection

#### DLTtape and Super DLTtape External Cartridge Inspection



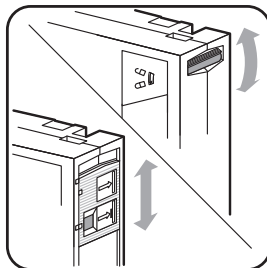
##### Cartridge

Inspect the exterior of the cartridge for chips, cracks, dents or missing screws. Gently shake the cartridge, listening for rattles or loose pieces.



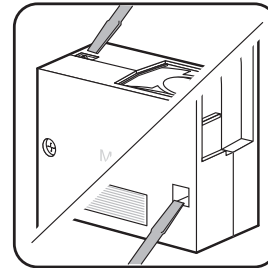
##### Cartridge Hub

Confirm that the spring-loaded hub on the bottom of the cartridge is centered. Press the hub. It should spring back if operating properly. Operation of the reel locks may release the hub and re-center.



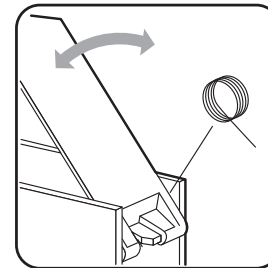
##### Write Protection Switch

Move the switch. It should be able to snap into write-protected mode and write-enabled mode.



##### Reel Locks

Check that both reel locks are visible. Verify operation using a small flat blade screwdriver. The reel locks should spring back when released.



##### Cartridge Door

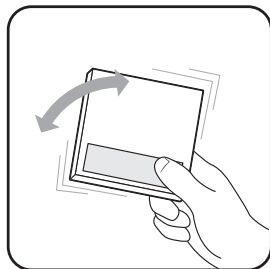
Ensure the door is movable and that the spring is present.

## 3.2

### Visual Inspection

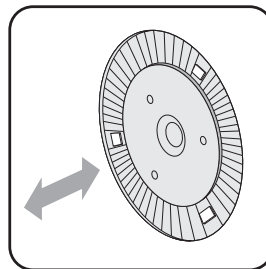
#### Visual Inspection

##### Ultrium LTO External Cartridge Inspection



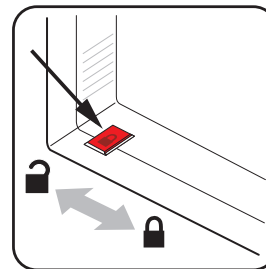
###### Cartridge

Inspect the exterior of the cartridge for chips, cracks, dents or missing screws. Gently shake the cartridge, listening for rattles or loose pieces.



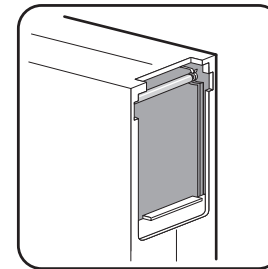
###### Cartridge Hub/Reel Locks

Confirm that the spring-loaded hub on the bottom of the cartridge is centered. Press the hub. It should spring back if operating properly. Operation of the reel locks may release the hub and re-center. Check that the reel locks are visible and out. The Hub should not turn.



###### Write Protection Switch

Move the switch. It should be able to snap into write-protected mode and write-enabled mode.



###### Cartridge Door

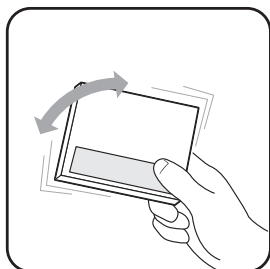
Ensure the door is moveable and springs closed.

## 3.3

### Visual Inspection

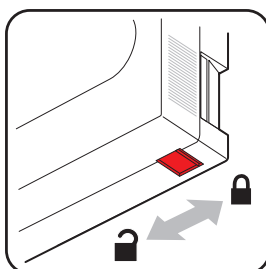
#### Visual Inspection

##### DAT/DDS External Cartridge Inspection



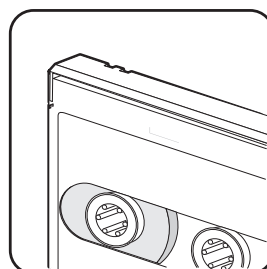
###### Cartridge

Inspect the exterior of the cartridge for chips, cracks, dents or missing screws. Gently shake the cartridge, listening for loose pieces.



###### Write Protection Tab

Move the tab. It should be able to snap into write-protected mode and write-enabled mode.



###### Cartridge Door

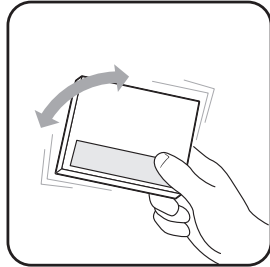
Ensure the door is locked and closed.

## 3.4

### Visual Inspection

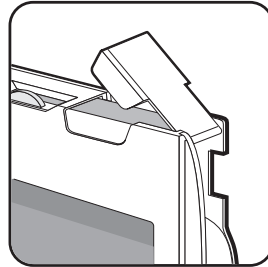
#### Visual Inspection

##### Travan External Cartridge Inspection



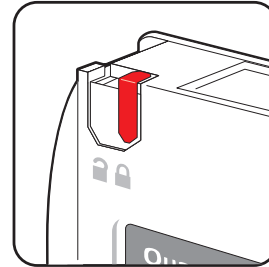
###### Cartridge

Inspect the exterior of the cartridge for chips, cracks, dents or missing screws. Gently shake the cartridge, listening for rattles or loose pieces.



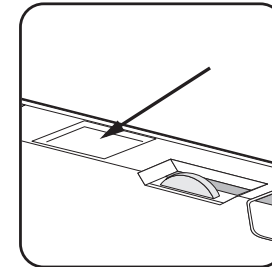
###### Cartridge Door

Ensure the door is moveable and springs closed.



###### Write Protection Switch

Move the switch. It should be able to snap into write-protected mode and write-enabled mode.



###### End Sense Sensor

Make sure the sensor window is clean and not badly scratched.

##### Tape Retensioning

NOTE: Travan data cartridges sometimes require periodic media retensioning to operate properly within your tape drive. Restoring proper tension ensures the drive head is making good contact with the tape media.

Refer to your drive user's guide for how, and when, to perform retensioning.

##### Some of the following circumstances may require retensioning:

Make sure the media has acclimated to the local temperature before retensioning.

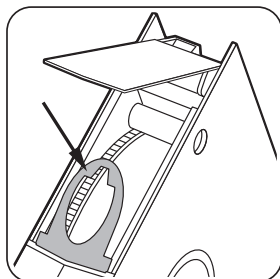
- The cartridge is being used for the first time.
- The cartridge has been exposed to major temperature changes.
- The cartridge has not been used in some time (over a month).
- The cartridge was dropped; assess the damage and either retension or replace.

## 3.5

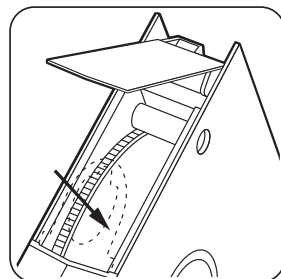
### Visual Inspection: Spotting a Damaged Cartridge

#### Visual Inspection

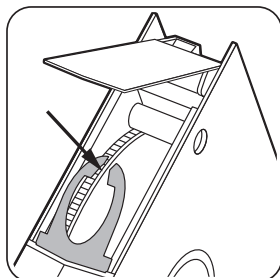
##### DLTtape Leader Inspection



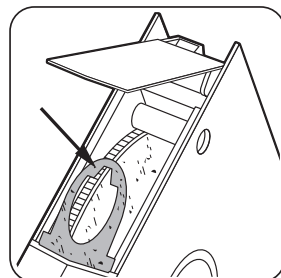
**Normal**  
Normal leader.



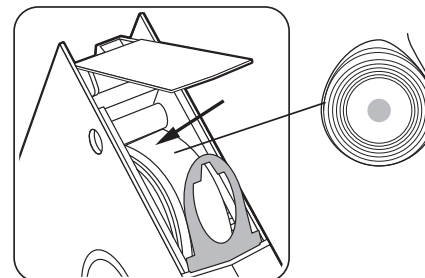
**Tape Leader Missing**  
Swallowed cartridge leader or broken tape.



**Broken Tape Leader**  
Not always this obvious.



**Excessive Debris**  
Stuck to tape leader and to tape.



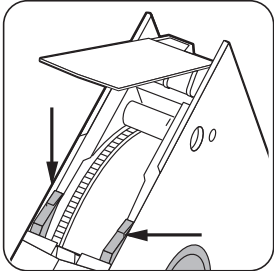
**Media Wrapped too Loosely**  
Excessive slack apparent.  
(Note: OK to use cartridge if small amount  
of slack at the tape leader is present,  
but inspect cartridge again after use.)

## 3.6

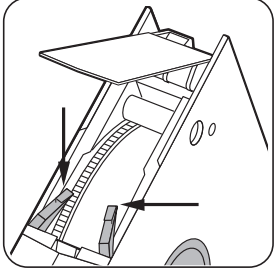
### Visual Inspection: Spotting a Damaged Cartridge

#### Visual Inspection

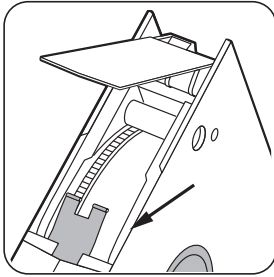
#### Super DLTtape Leader Inspection



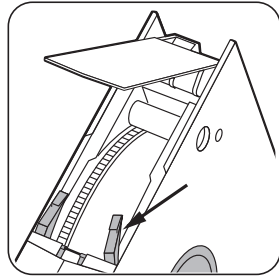
**Normal**  
Normal leader.



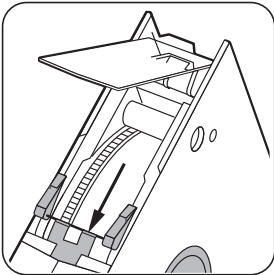
**Toed-In Buckle**  
Buckle ends clearly extend past edge of reel.



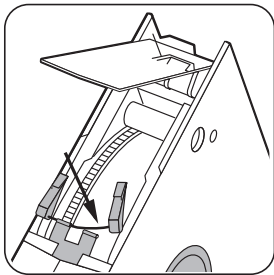
**Buckle Missing**  
No buckle present.



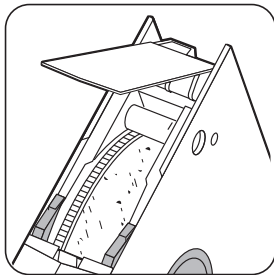
**Buckle Bent**  
One buckle end is bent and buckle is not symmetrical.



**Gap from Tape Leader Slack**  
Tape Leader is clearly visible.



**Buckle Separated from Tape Leader**  
Buckle has broken through tape leader on one side.



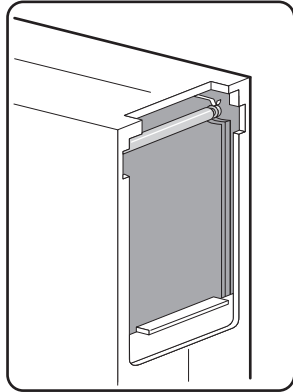
**Excessive Debris**  
Stuck to tape.

## 3.7

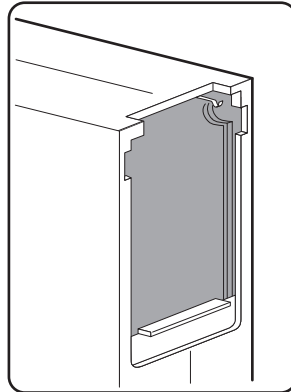
### Visual Inspection: Spotting a Damaged Cartridge

#### Visual Inspection

##### Ultrium LTO Leader Inspection



**Normal**  
Normal leader pin position.



**Tape Leader Missing**  
Swallowed leader pin or broken tape.

## 4

### Shipping Cartridges

#### How to Pack and Ship Cartridges

Note: This procedure assumes you DO NOT have the original packaging the cartridges were shipped in. If the original packaging is going to be used, ensure any empty space created by removed cartridges is filled with bubble wrap to prevent the shipped cartridges from shifting around inside the box.

#### ! Do Not Use the Following Shipping Materials:

Air pillows, peanut packaging, oversized boxes, standard flat boxes, (e.g. FedEx boxes)

#### Wrap Each Cartridge Properly

2' x 2' sheets of bubble wrap, 1" thick

#### Use the Correct Shipping Box

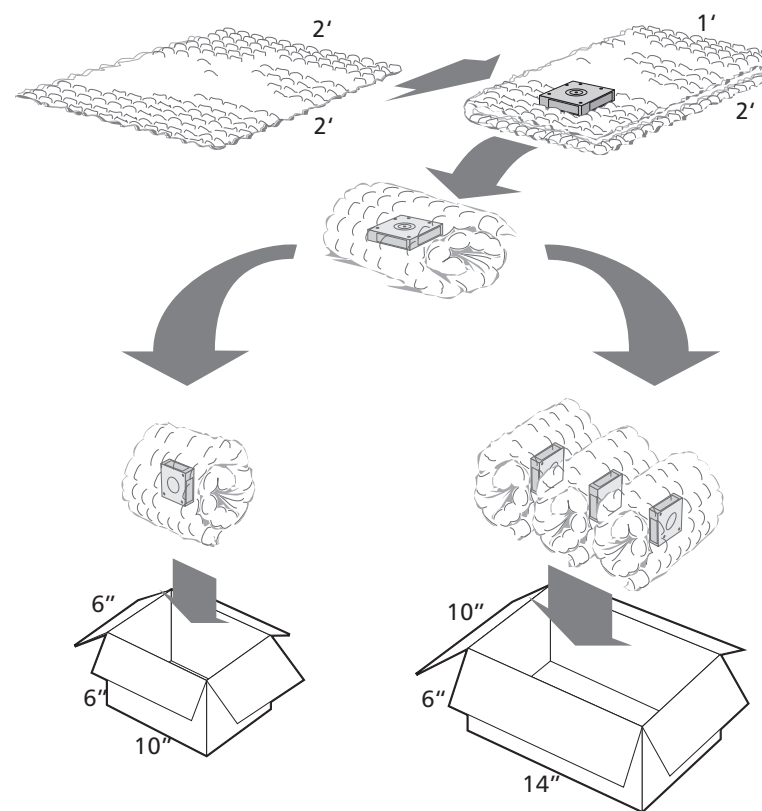
Small box: 10" x 6" x 6" (Holds one cartridge ONLY)

Large box: 14" x 10" x 6" / Multiple Cartridge Box (Holds three cartridges ONLY)

Do not ship with fewer than three cartridges.

#### Packing Single or Multiple Cartridges

# of Cartridges	Bubble Wrap	# of Boxes
1	1 sheet	1 small box
2	2 sheets	2 small boxes
3	3 sheets	1 large box
4	4 sheets	1 large box, 1 small box
5	5 sheets	1 large box, 2 small boxes
6+	Ship in multiple boxes in combination following the above guidelines.	



! Orient tapes vertically in the shipping box  
Fill in air space in large sized boxes

## 5

### Quick Guide: Media Care Do's and Don'ts

#### Media Care Do's

##### Storage

- Store cartridges in their protective cases.
- Align cartridges so grooves interlock.
- Store media vertically.

##### Handling

- Handle cartridges with great care.
- Use the right label for your cartridge.

##### Usage

- Inspect cartridges prior to each use.
- Unload cartridges prior to powering down the drive.
- Before using a new or stored cartridge, allow the cartridge 24 hours to adjust to the present operating temperature and humidity.

#### Media Care Don'ts

##### Storage and Shipping

- Don't store near magnetic fields.
- Don't ship cartridges in drive.
- Don't stack cartridges horizontally.

##### Handling

- Don't touch the media or leader with bare fingers.
- Don't use pens or pencils during cartridge inspection.
- Don't disassemble cartridges.

##### Usage

- Don't drop cartridge.
- Don't use a dropped cartridge.