Quantum

Contents

Quantum SuperLoader®3: Lodged Tape Removal Instructions

This document provides instructions for removing a lodged tape cartridge from the Quantum SuperLoader 3.

This procedure provides step-by-step instructions for retrieving your tape for retention at the your site. The information provided is structured to perform the simplest to most complex tape removal steps as needed to remove the stuck tape. This instruction uses the following conventions:

Note: Notes emphasize important information related to the main topic.

Caution: Cautions indicate potential hazards to equipment and are included to prevent damage to equipment.

WARNING: Warnings indicate potential hazards to personal safety and are included to prevent injury.

Dislodging a Stuck Tape

Use the following steps when dislodging a stuck tape in a SuperLoader 3:

1 Power cycle the unit using the power switch located at the rear of the system. Wait at least 10 seconds after power down before powering up the unit.

The Operator Control Panel (OCP) on the front of the unit displays the following status (see Figure 1).

Figure 1 OCP, Initializing

While the system is running this sequence, several clicking sounds are heard while the system attempts to rotate the turntable mechanism. Commands can not be entered through the OCP until this initialization completes. This process can take up to 10 minutes.

The system attempts to adjust and move the stuck tape. If the stuck tape cannot be moved, after a period of time the noise should stop. The OCP displays this or another error (see an example of an error below in Figure 2).

Figure 2 OCP, System Error
Type (AE) - Example of Error
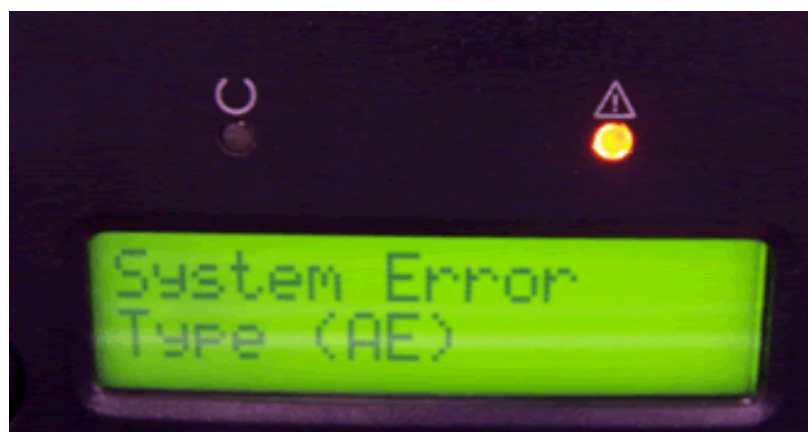
> **Note:** This system error prevents you from entering a Move command through the OCP.

2 Power cycle the unit using the power switch located at the rear of the system for a second time. Wait at least 10 seconds after power down before powering on the unit.

The OCP displays initializes again, as shown in the above figure (see Figure 1).

With the earlier adjustment movement of the tape, the turntable may or may not rotate freely.

Next, the system attempts to rotate the magazine. This process can take up to 10 minutes.

If the tape is returned to a magazine slot successfully, the OCP displays the following (see Figure 3).

Figure 3 OCP, System Ready
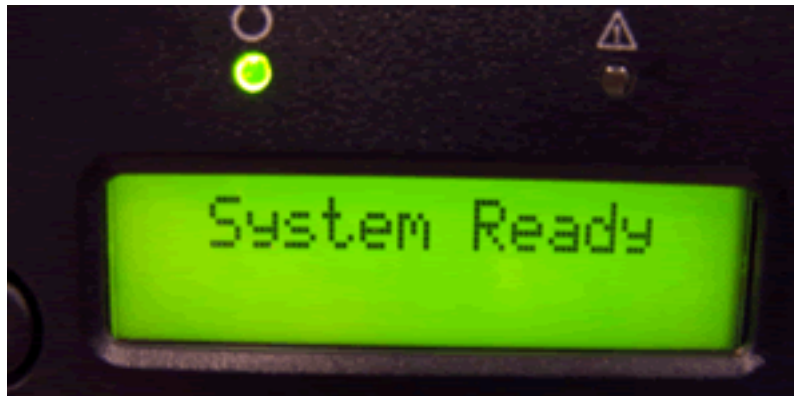
The OCP can now be used to control movement of the tape and other normal product operation.

In the event the stuck tape was not removed, proceed to Tape Removal Without Removing the Top Cover on page 4.

Tape Removal Without Removing the Top Cover

This procedure involves removing the magazine(s) and/or the magazine blank and manually rotating the turntable.

1   Power off the system using the power switch located at the rear of the system.

2   Inspect for tape location. Using a paper clip or the corner of a plastic card, open the mail slot door by gently pulling the bottom of the door towards the front of the unit. Determine where the tape is located. The tape could be in the turntable, the magazine, stuck between the magazine and the turntable, stuck between the turntable and the tape drive or in the tape drive. If the tape is stuck in the drive, proceed to Tape Stuck in Drive on page 7.

3   If the unit contains a magazine blank (typically on the right side of the unit), gently remove the blank by pulling on the handle.

4   Remove the magazine(s) left and/or right - proceed to Manual Magazine Ejection below.

## Manual Magazine Ejection

To manually eject the magazine:

1   Slide a plastic card on the front inside edge of the magazine between the magazine and the front panel (see Figure 4).

Figure 4 Manually Ejecting the Magazine

2 At the bottom of the slot, push the latch out of the way to manually eject the magazine (see Figure 5).

Figure 5 Inserting the Card to Release the Latch (right magazine removed for clarity)

Card   Latch   Cavity
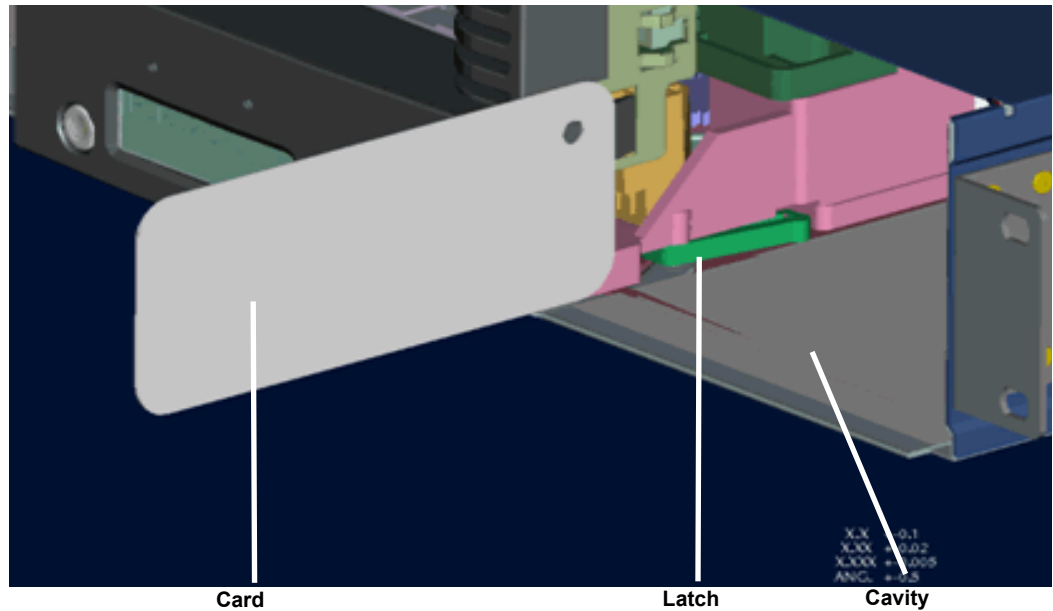
3 Insert the card approximately 3 inches (75 millimeters) to release the magazine latch.

4 After releasing the latch, use the handle to remove the magazine.

5 If a second magazine is present, insert the card into the slot on the opposite side to release it.

> **Note:** Magazine gear can only be engaged in one magazine at a time.

The left and right magazine cavities should now be empty.

If the card will not go in past 1 ½ inches, the magazine gear is probably blocking access to the latch. Move the gear out of the magazine by rotating the turntable (can be viewed through the empty cavity).

> **Caution:**   When rotating the turntable manually, be careful not to tear or disconnect the flex circuit ribbon cable of the barcode reader (see Figure 6).

Figure 6 Barcode Reader Ribbon Cable

Ribbon cable
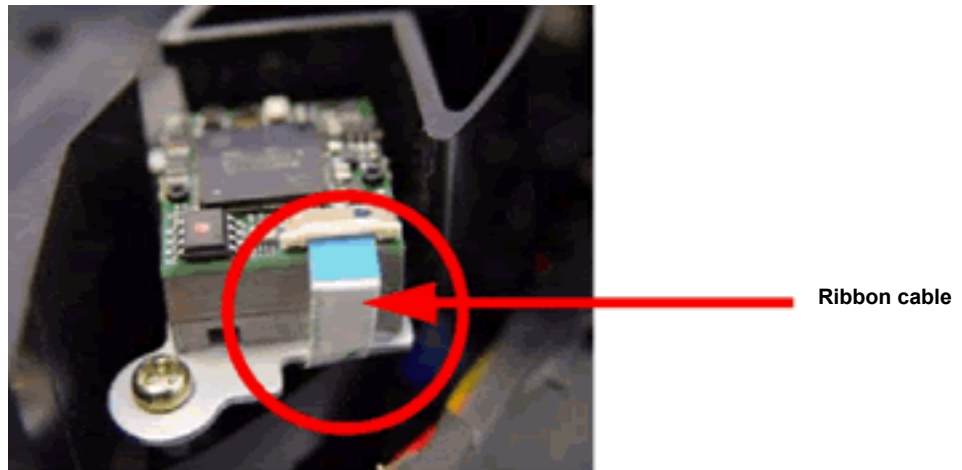
6   Using a flashlight (or similar light source), inspect the turntable viewed through the cavity. Determine if a tape can be seen via inspection. If the tape is in the turntable, rotate the turntable using your hand.

7   Rotate the turntable in clockwise (viewed from the top of the unit) direction to disengage the left magazine drive gears or rotate the turntable in the counter clockwise direction to disengage the right magazine drive gears (see Figure 7). A rotation of 90 degrees could be required to disengage the gear.

Figure 7 Right Magazine, Drive Gear

Drive gear
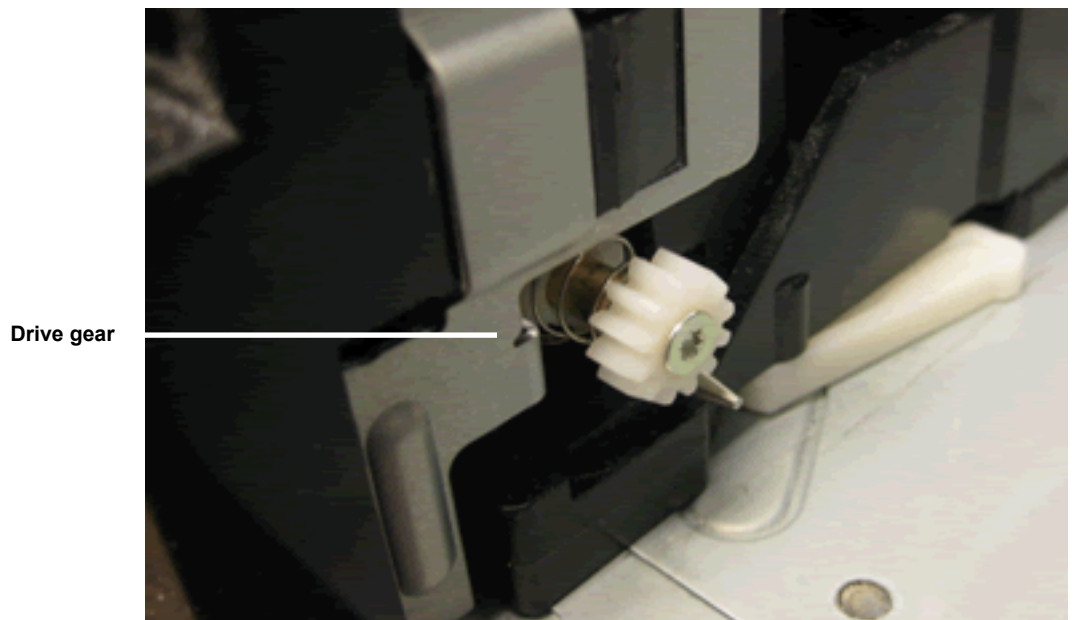
8   Attempt to push/pull the tape out if possible. Several push/pull attempts and turntable rotations may be required to remove the tape.

9 If the tape is successfully removed, reinstall the magazine or magazines into the unit and power up the unit.

Normal operation of the unit should occur.

If the tape is not removed successfully, proceed to Tape Stuck in Drive below.

Tape Stuck in Drive

1 Inspect for tape location. Using a paper clip or the corner of a plastic card, open the mail slot door by gently pulling the bottom of the door towards the front of the unit. Through the mail slot door, look for any labels that may be stuck above, below, or in front of the cartridge such as that shown in Figure 8 below.

2 Remove any cartridge labels stuck in the drive. If you cannot reach the label with your hand, refer to Tape Removal - Removing Top Cover on page 10.

Note: Figure 8 and Figure 9 are examples of labels causing a stuck tape condition.

Figure 8 Stuck Label Viewed Through Mail Slot

Figure 9 Label Causing a Stuck Tape

3 Disconnect all data cables from Superloader.

4 Power cycle the unit and wait 10 minutes (power cycle 2 times, if necessary).

5 Use the following OCP commands:

- Commands

- Eject

- Tape – Mail Slot

- From Drive

6 If the tape still remains stuck, proceed to Tape Removal - Removing Top Cover on page 10.

Tape Stuck in Drive during Backups or Restores in Backup Exec

When performing backups and/or restores in Backup Exec, a degaussed cartridge loaded to the drive may result in a stuck tape. The drive will send a 03x53x00 (Media load or eject failed) back to Backup Exec. Instead of marking the tape as bad, Backup Exec takes the drive offline.

Stop and restart all services by following these steps:

1 From the **Devices** tab on Backup Exec, right click on the drive that has been placed offline and select **Online**.

2 From the option (radio) buttons at the top of the application, select T**ools > Backup Exec Services**.

3 From the Backup Exec Services Manager, select **Stop All Services**.

   a Select **Yes** to verify that you want to stop all services.

   b Once all services have been stopped, select **Restart All Services**.

4 Once all services have been restarted, right click on the selected Robotic Library and select **Unlock**.

5 Using the OCP, issue a Move command to remove the "bad" cartridge from the slot that it resides in to the mail slot.

6 Lock the loader once the bad cartridge has been removed. Resume normal operations.

7 If the tape still remains stuck, proceed to Tape Removal - Removing Top Cover on page 10.

Tape Removal - Removing Top Cover

In an effort to retain your tape(s), remove the top cover.

1 Ensure that the power is off and/or disconnected. Take proper ESD precautions.

2 If the autoloader is in a rack, follow the instructions in the Rail Installation and Rack Mounting Instructions.

3 Remove both rack mount brackets from the sides of unit—including four (4) T8 Torx screws on each bracket (see Figure 10).

Figure 10 Removing the Rack Mounting Brackets

Rack mounting   **T8 Torx screws (4)**

4 Remove the magazines/blanks.

5 Remove a total of 18 screws from the cover:

- Top cover (Figure 11)
- Side cover, left and right (Figure 12)
- Back cover (Figure 13)

WARNING: The top cover edges are sharp. Use caution when handling.
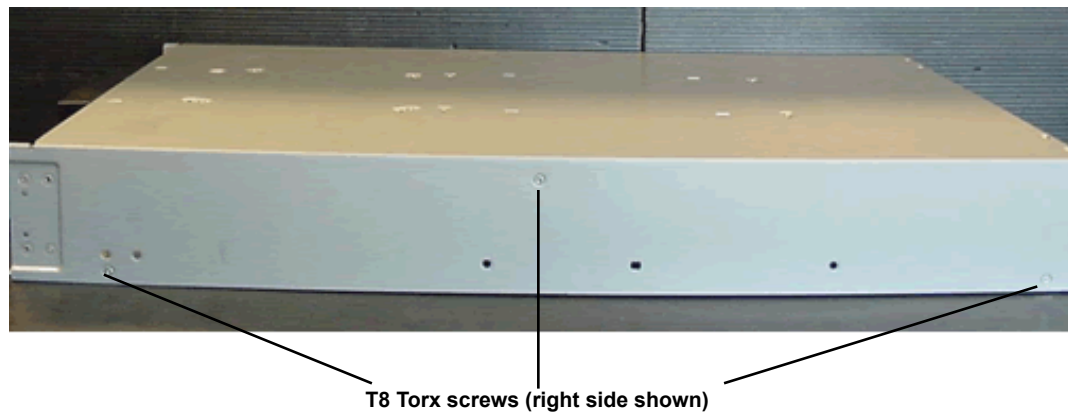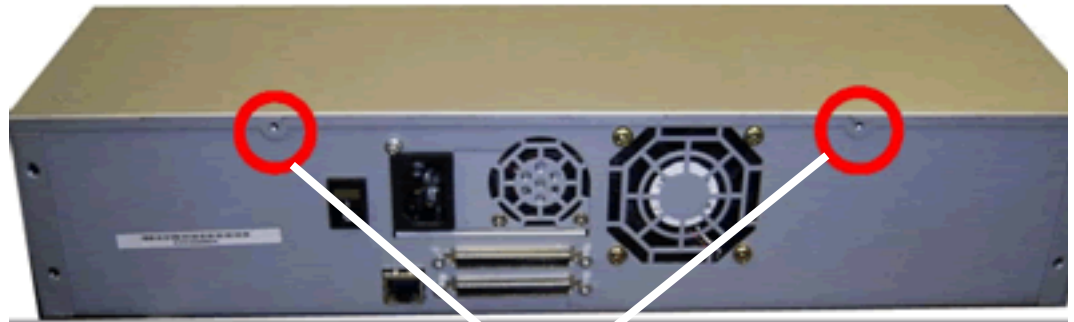
Figure 11 Removing Top Cover Screws

T8 Torx screws (4)

T10 Torx screws (4)
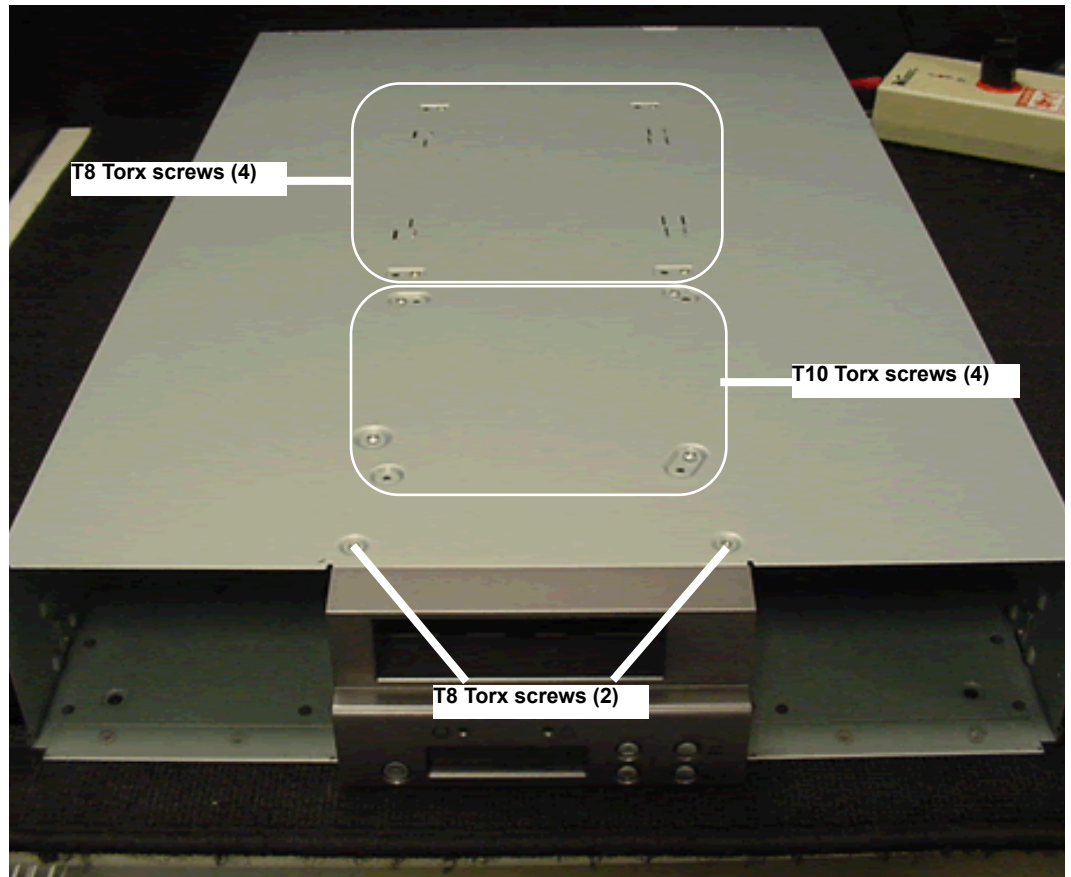
T8 Torx screws (2)

Figure 12 Removing the Side Cover Screws (Left and Right)

T8 Torx screws (right side shown)

Figure 13 Removing the Back Cover Screws

T8 Torx screws (2)

6 Grasp the lower front corner of the top cover. (see Figure 14). Pull slightly outward to disengage the top cover from the chassis base. Simultaneously, lift the rear corner out and up until the cover is loose and can be removed as shown in Figure 15.

Figure 14 Disengaging the Top Cover

Note: The top cover removal can also be accomplished by lifting the opposite side of top cover after all screws are removed from the top cover.

WARNING: The top cover edges are sharp. Use caution when handling.
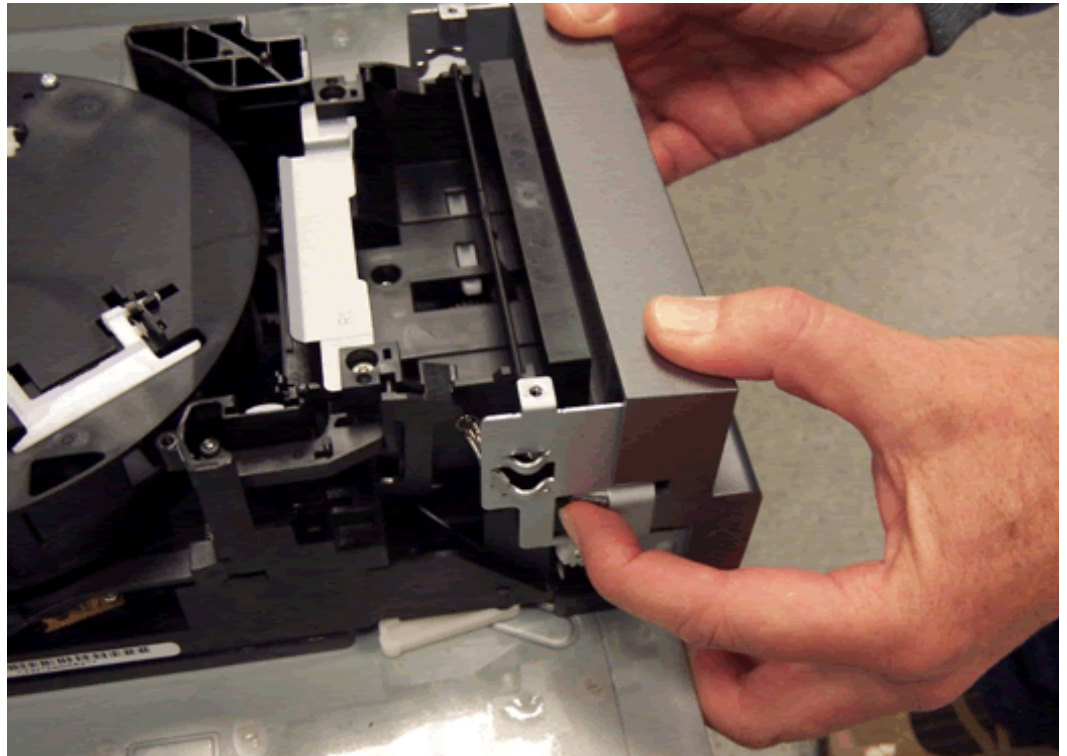
Figure 15 Disengaging the Top Cover
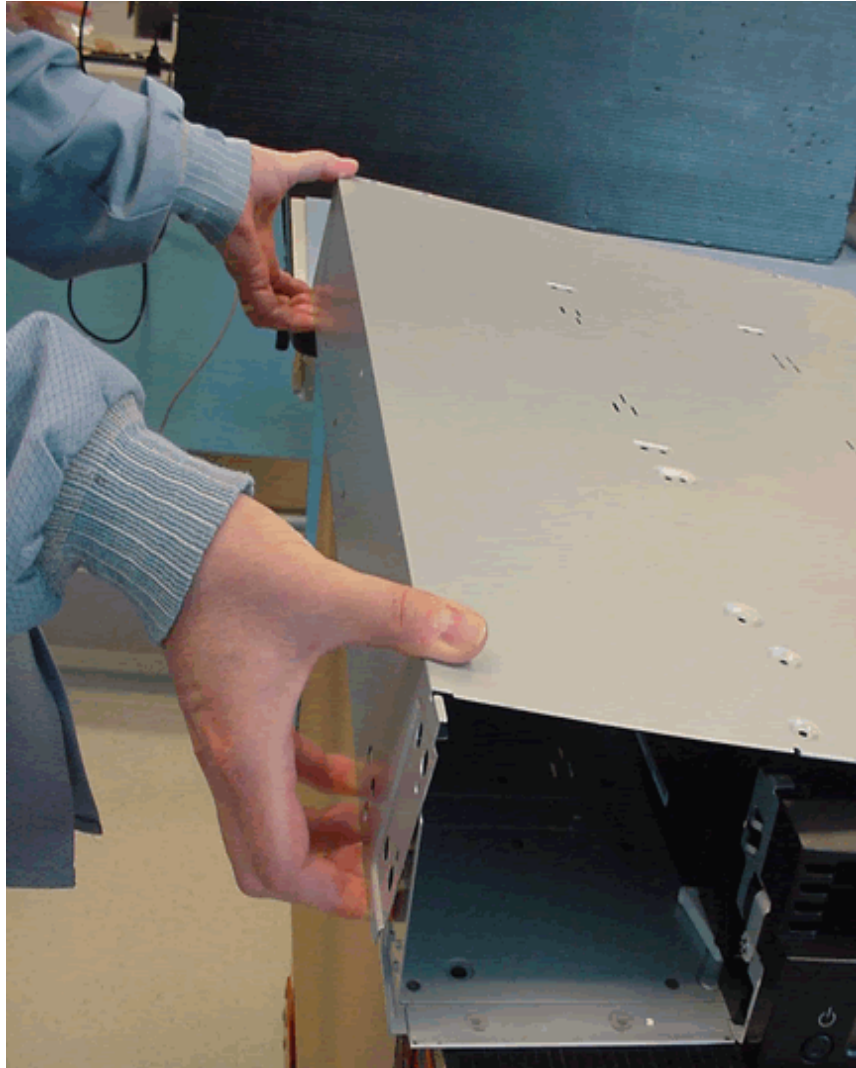
7 Using your index finger on each side of the bezel, depress the bezel tab on each side to release the bezel from the unit (see Figure 16).
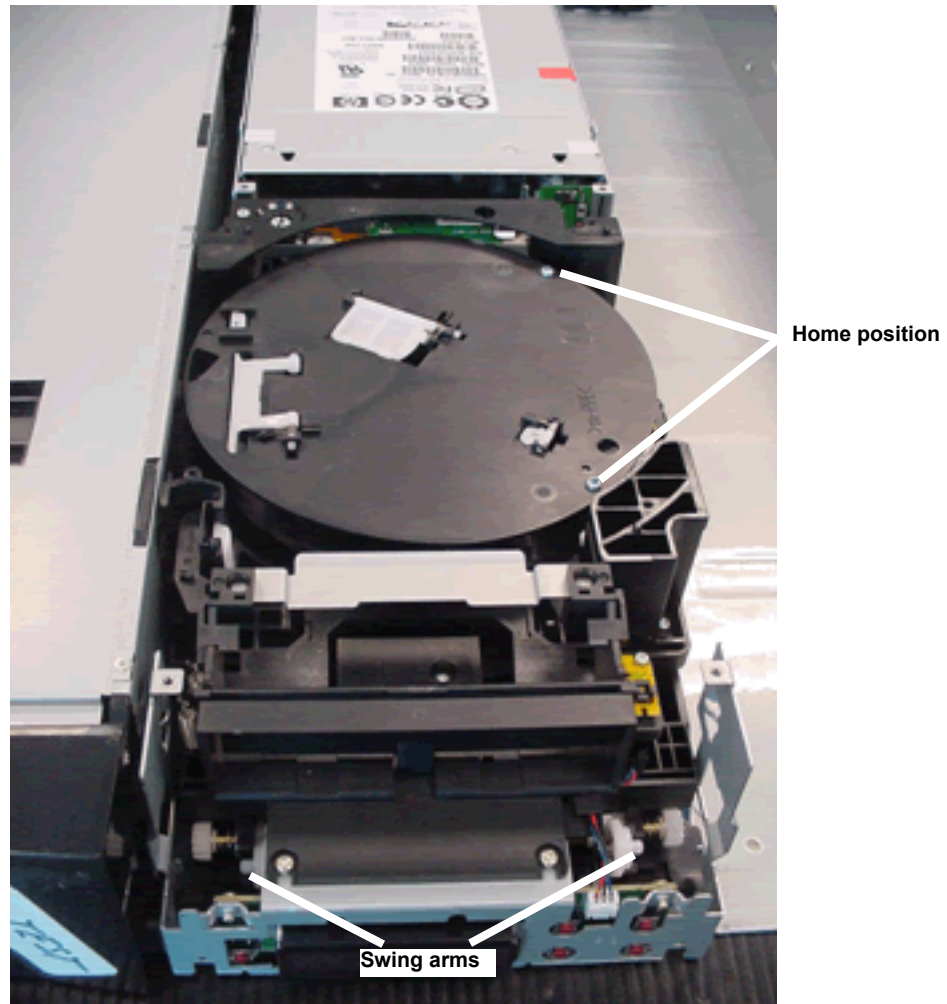

Note: Your bezel may be of a different design or color. The removal method is the same for all bezel types.

Figure 16 Releasing the Front Bezel

8 Move the two swing arms located on the gear shaft to the "up" position (see Figure 17).

Figure 17 Moving Swing Arms to the "Up" Position

9 Rotate the turntable manually to **Home** position as shown above in Figure 17.

Note: If any magazine(s) still need to be removed, carefully rotate the turntable to disengage the magazine drive gear. Rotate the turntable to orientation shown in Figure 17 above. The screws on turntable top should be aligned as shown. Use a plastic card to release the magazine latch and carefully slide magazine out.

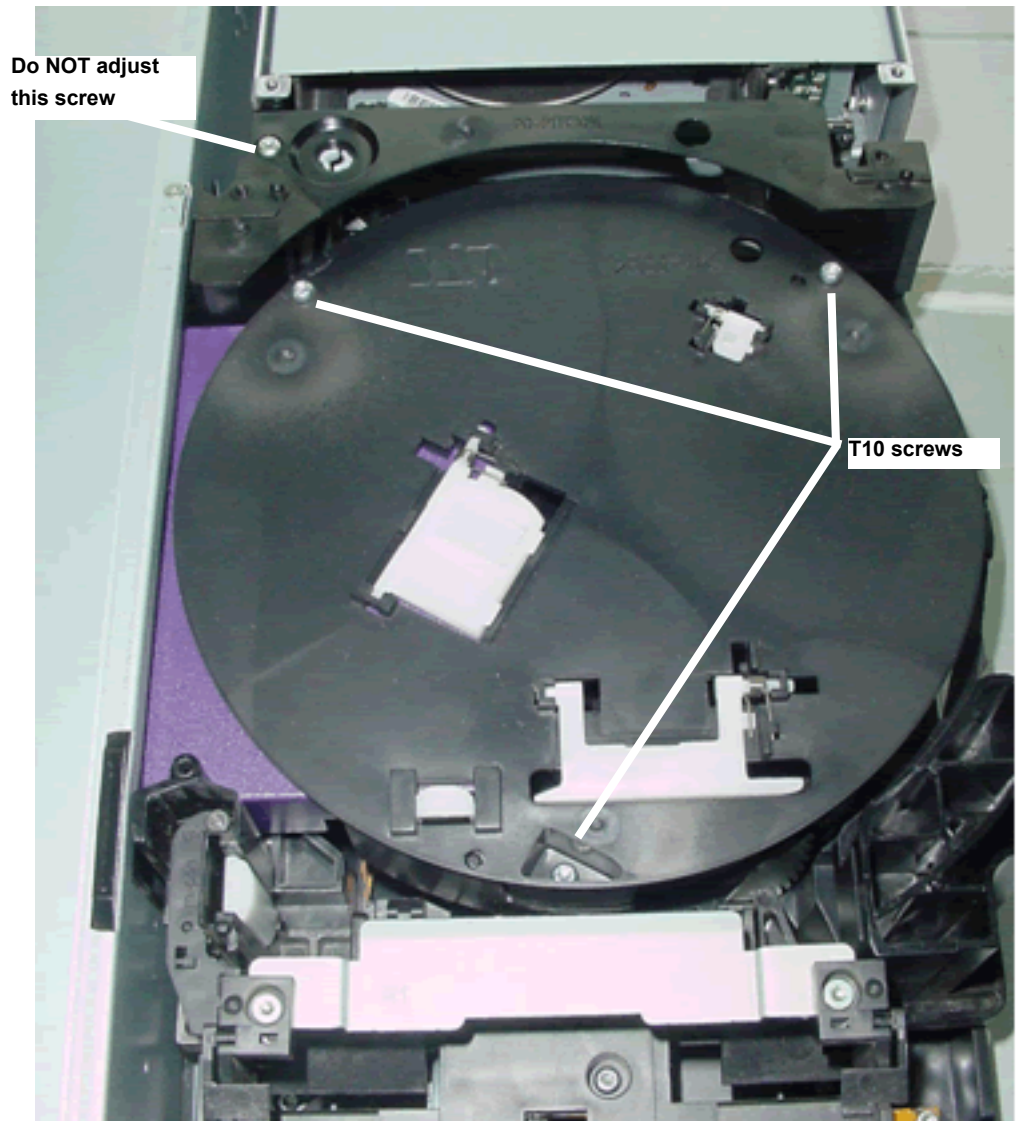**Removing Lodged Tape from Turntable**

To remove the lodged tape from the turntable:

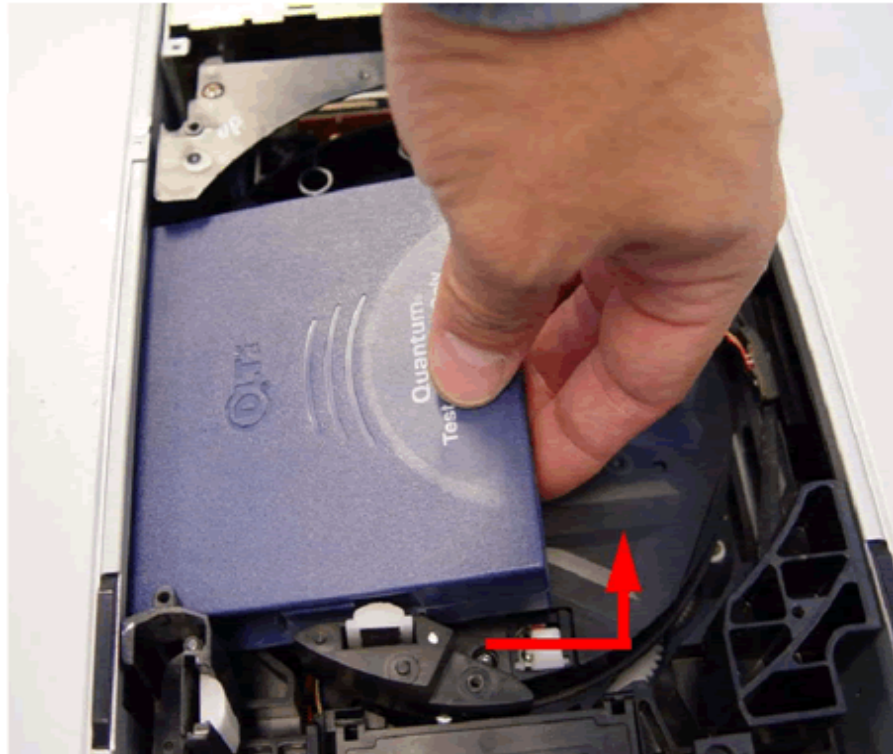**1** Remove the turntable cover by removing three (3) Torx T10 screws holding the turntable cover (see Figure 18).

Figure 18 Removing the Turntable Cover

Do NOT adjust this screw

T10 screws

2 Once the turntable top is removed, the lodged tape inside the turntable is exposed and can be easily lifted and removed (see Figure 19).

Figure 19 Removing the
Lodged Tape

3 Once all tapes have been removed from the unit (magazine, turntable, or drive), reassemble the unit as best as possible and send for service/repair.

> **Caution:**   Do not try to operate the unit after reassembly for shipment.

If successful removal of the tape has not occurred and the unit is returned for service, the tape will be quarantined and destroyed.

6-66736-02 Rev B, March 2012

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About Quantum

Quantum Corp. (NYSE:QTM) is the leading global storage company specializing in backup, recovery and archive. Combining focused expertise, customer-driven innovation, and platform independence, Quantum provides a comprehensive range of disk, tape, media and software solutions supported by a world-class sales and service organization. This includes the DXi™-Series, the first disk backup solutions to extend the power of data deduplication and replication across the distributed enterprise. As a long-standing and trusted partner, the company works closely with a broad network of resellers, OEMs and other suppliers to meet customers' evolving data protection needs.