HP LTO Drive Tape Extraction Process

Summary

This document details the steps necessary to successfully manually remove a cartridge from an HP Ultrium LTO drive. Each of the steps detailed must be followed rigorously to avoid damage to the cartridge, tape media and drive, and to return the drive to a working state.

Note: This process should only be used after all other eject operations have failed.

The manual tape extraction process uses the following steps
1. Ensure the mechanism is in the correct position to park the leader pin.
2. Rewind the media into the cartridge until the leader pin is parked.
3. Disconnect the grab mechanism.
4. Eject the cartridge.

The following are detailed instructions on how to manually remove a cartridge from both a full height and half height drive as well as a flowchart that shows the entire recovery process including some help on removing the drive from its enclosure or a library.

Detailed Manual Tape Extraction Process – Full Height Drives

Step 1

Rotate the thumbwheel on the side towards the back of the drive as shown until it starts to spring back. This ensures the mechanism is in the correct position to rewind the tape and park the leader pin.

Step 2

The tape can now be wound back into the cartridge. This requires a T8 Torx driver. Insert the driver into the front reel motor and rotate as shown. Continue to rewind the tape until it stops. A click may be heard as the leader pin is parked in the cartridge.

Note: It can take up to 3000 turns to fully rewind the tape.

Note: It is very important to fully rewind the tape before attempting to eject the cartridge as a failure to do so will damage the tape and make the drive unusable.

Step 3

After the tape has been rewound, and the leader pin is parked maintain gentle tension on the cartridge reel to keep the leader pin parked. Simultaneously rotate the thumbwheel towards the front drive as shown. This will disconnect the grab mechanism from the leader pin and start to eject the cartridge.

Step 4

Continue to rotate the thumbwheel until the cartridge is fully ejected as shown. This ensures that the mechanism is in the correct position for normal operation. Only then can the cartridge be extracted from the drive.

Detailed Manual Tape Extraction Process – Half Height Drives

Step 1

Attach a 6mm nut spinner to the load motor and rotate as shown until it starts to spring back. This ensures the mechanism is in the correct position to rewind the tape and park the leader pin.

Note: It is very important only apply very gentle pressure to the load motor during this step as over-rotation of the load motor will break the Head Cleaner mechanism and make the drive unusable.

Step 2

The tape can now be wound back into the cartridge. This requires either a T6 or T8 Torx driver. Insert the driver into the front reel motor and rotate as shown. Continue to rewind the tape until it stops. A click may be heard as the leader pin is parked in the cartridge.

Note: It can take up to 3000 turns to fully rewind the tape.

Note: It is very important to fully rewind the tape before attempting to eject the cartridge as a failure to do so will damage the tape and make the drive unusable.

Step 3

After the tape has been rewound, and the leader pin is parked maintain gentle tension on the cartridge reel to keep the leader pin parked. Simultaneously attach the nut spinner to the load motor and rotate as shown. This will disconnect the grab mechanism from the leader pin and start to eject the cartridge.

Step 4

Continue to rotate the load motor until the cartridge is fully ejected as shown. This ensures that the mechanism is in the correct position for normal operation. Only then can the cartridge be extracted from the drive.

Manual Tape Extraction Process Flowchart

The steps marked in red are particularly important and should be performed carefully to avoid damaging the media or drive.

HP LTO Drive Manual Tape Extraction Process

```
Tape stuck and all other
extraction methods have
been tried
```

```
11/17/2009
HP Manual Tape Extraction Process
```

```
Power down drive
```

Stand Alone

Process specific
to stand alone
products such
as desk top

Half High product Specifics

```
Disconnect drive
from server
```

```
Remove drive from
enclosure
```

Use 6mm nut
spinner to line up
pin parking
mechanism — **OR** —
```
Wind Thumb
wheel to line up
pin parking
mechanism
```

Rewind tape using
T6 or T8 TORX
driver (as
appropriate)
inserted into front
reel motor — **OR** —
```
Rewind tape using
T8 TORX driver
inserted into front
reel motor
```

```
Complete rewind
and park leader
pin
```

Use 6mm nut
spinner to turn
load motor to eject
cartridge — **OR** —
```
Wind Thumb
Wheel to eject
cartridge
```

```
Remove ejected
cartridge from
drive.
```

Automation

Process specific
to automation
and library
products

```
Disconnect drive
from library
```

```
Remove drive from
library
```

```
Wind Thumb
wheel to line up
pin parking
mechanism
```
— **OR** —
Use 6mm nut
spinner to line up
pin parking
mechanism

Half High Product Specifics

```
Remove drive from
library cage
```

```
Rewind tape using
T8 TORX driver
inserted into front
reel motor
```
— **OR** —
Rewind tape using
T6 TORX driver
(as appropriate)
inserted into front
reel motor

```
Complete rewind
and park leader
pin
```

```
Wind Thumb
Wheel to eject
cartridge
```
— **OR** —
Use 6mm nut
spinner to turn
load motor to eject
cartridge

```
Remove ejected
cartridge from
drive.
```

```
Power up drive
without tape and
see that it comes
ready.
```

```
Test drive load/
unload with a non-
vital cartridge
```

```
End
```

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