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MAGNETIC MEDIA, OPTICAL DISKS AND OTHER DATA STORAGE PRODUCTS

LTO Ultrium Cleaning Cartridge Q & A

***FAQ* – Which type of LTO Ultrium Cleaning Cartridge is compatible with my drive?**
What is the life of an LTO Ultrium Cleaning Cartridge; how many drive-cleans?

Answer – IBM, Seagate and HP manufactured LTO-Ultrium drives that use different Cleaning Cartridges, Fujifilm Type I, S and H respectively. Additionally, Fujifilm introduced a Universal Cleaning Cartridge, which is compatible all manufacturers' LTO Ultrium drives, in May of 2002. How many times the drive will allow a cleaning cartridge to be used depends upon the drive; the drive sets the Maximum Uses Limit, not the Cleaning Cartridge.

Each Cleaning Cartridge has an RF (Radio Frequency) LTO-CM (Cartridge Memory); the drive will communicate with this memory and enters the cleaning mode if the Cleaning Cartridge is compatible. If the CM shows the Cleaning Cartridge is identified as an incompatible type, it will not be used and the drive reports "Invalid Cleaning Media" (e.g., if a Type-I or Type-H were inserted into a Seagate Drive which uses Type-S).

The drives use the CM to keep track of the number of times the Cleaning Cartridge has been used. When a drive sees that a Cleaning Cartridge has already been used the maximum number of times (as determined by the drive's firmware) it will no longer use that Cleaning Cartridge and the drive will report "Expired Cleaning Media."

The table shows the maximum number of times the drive allows the cleaning cartridge to be used before reporting that the cartridge is expired (for current drives/firmware).

LTO Ultrium Drive Manufacturer/Model	Fujifilm Ultrium Cleaning Cartridge	Part Number	Maximum Cleanings
IBM 3580 and IBM StorageSmart T200/ TX200 Ultrium Drives (P/N 00N8016)	Type-I	26120017	50
	Universal**	26120014	
IBM StorageSmart Half-High LTO Ultrium Drives (P/N 24P2396)	Type-I	26120017	15
	Universal**	26120014	
Seagate LTO Ultrium Drives*	Type-S	26120015	50
	Universal**	26120014	
HP LTO Ultrium Drives	Type-H	26120016	15
	Universal**	26120014	

* Firmware version 1300 or later required for reliable Type-S operation.

** Fujifilm introduced a Universal Cleaning Cartridge (UCC) in May 2002. LTO UCC is compatible with all Ultrium drives. Existing older drives will require a firmware upgrade for UCC use and the maximum cleanings still varies by drive model. Order P/N 26120014.

LTO Ultrium Drive Cleaning Cartridge Troubleshooting FAQ

Question   The new LTO Universal Cleaning Cartridge (UCC) goes into the drive and immediately ejects without performing a cleaning cycle. Why isn't the UCC working in my Ultrium drive?

Answer   Specific revisions of the drive's firmware are needed for proper operation. The LTO Universal Cleaning Cartridge (UCC) began shipping in May 2002. The UCC is compatible with all Ultrium drives; however, existing older drive units will require a firmware upgrade to use the UCC. Please contact your drive manufacturer or system vendor for firmware upgrade information.

Another possibility is that you have already used the cleaning cartridge its maximum number of times and it is expired.

For other explanations for a UCC and/or Drive-Specific Cleaning Cartridge that immediately ejects without performing a cleaning cycle – **see last Q/A at bottom of page.**

Question   How many drive cleanings can I get from my LTO Cleaning Cartridge?

Answer   The number of drive-cleaning uses for an LTO Cleaning Tape is dependent on the drive manufacturer/model. Please see the specifications in your drive manual or contact your drive manufacturer or system vendor for the number of cleanings allowed before the cleaning cartridge is expired. Some current information is listed in the above chart, on page one.

The Universal Cleaning Cartridge (UCC), which became available in May 2002, is compatible with all Ultrium drives. However, the number of clean uses still varies by drive model.

Keep track of the number of times used and discard a cleaning cartridge when it has reached the maximum number of uses for your drive model.

Question   I am certain that I'm using the correct cleaning cartridge for my Drive Model and Firmware Level – and still the cleaning cartridge goes into the drive and immediately ejects without performing a cleaning cycle. Why?

Answer   Some drive models DO NOT allow cleaning unless the drive is requesting a cleaning cartridge. If you insert a cleaning cartridge when the drive does not need to be cleaned, the drive will automatically eject the cleaning cartridge.

Other drive models do allow periodic cleaning, but NOT when the drive has been cleaned too recently (the drive is preventing excessive cleaning, which can cause wear on drive heads). If the drive is not requesting to be cleaned and you insert a cleaning cartridge too soon after the last cleaning, the drive will automatically eject the cleaning cartridge.

Of course, all drive models automatically eject an expired cleaning cartridge without performing a cleaning cycle. Discard the cleaning cartridge when it has reached the maximum number of uses for your drive model.

For more information, please submit your question to "Ask the Expert" in the Technical Center at: www.fujifilmmediasource.com or call Mike McCorkle at 800-755-FUJI (3854), ext. 1281.

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