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Hard Drives: Sticking at Startup (9/95)

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TOPIC -----

I have an older Macintosh LC with an external 40 megabyte (MB) hard drive. Sometimes when I switch the external drive on, it won't start spinning. Tapping the side of the hard drive seems to break something loose inside, and the drive then starts spinning. The drive may work fine for a while, but the problem generally occurs again. Is there something wrong with my hard drive?

DISCUSSION -----

This is one of the most common hard drive failures. When a hard drive spins down, the read/write heads land on the platters. Hard drive manufacturers place some lubricant on the platters so that the heads don't scratch the platter surfaces when the drive is switched on again. Sometimes the lubricant actually functions as an adhesive and sticks the read/write heads to the platter. If the spindle motor can't overcome this adhesion, the hard drive will not spin up. The hard drive industry refers to this condition "stiction." A twist or a bump may free the heads temporarily, but the condition usually recurs. If you have a hard drive exhibiting these symptoms, back up any data that may not have been backed up, because the hard drive is not reliable. The repair is usually a drive replacement.

This is an industry-wide problem. Hard drive manufacturers are exploring alternate forms of lubrication and read/write head placement methods.

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