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One-inch Hard Drives: Drive Orientation and SCSI Cable Length

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TOPIC -----

Since Apple began using the 1-inch drives (Apple part # 661-1629), some dealers expressed concern with the physical orientation of the hard drive within the carrier. On the 3.5 drive Apple supplies, the key is on the bottom side of the connector. When mounted component side down, as the 1-inch drive is, the key on the data interface connector is on the top. This forces the technician to twist the cable from the logic board to make it mate with the connector on the hard disk. That ribbon cable coming from the logic board doesn't have a lot of slack in it, resulting in a kinked and possibly damaged cable.

Unfortunately, due to the placement of the screw holes on the carriers supplied with this drive, the drive can't be flipped over and mounted component side up. Can we redesign the carrier so that the drive will mount the other way around, or is there a workaround for this?

DISCUSSION -----

Apple Service worked on this issue last month due to numerous Apple USA Service Providers commenting on the same thing. Service found the following:

- If you use third-party cables, there is a chance that the cable length will not meet Apple length requirements. You then need to twist the cable to make it fit. The result is a kinked or damaged cable and/or a cable that pulls away from the main logic board
- Apple tested all systems that can use the 1-inch drive with the drive, carrier, and cable. If the Service Provider follows the cable fold procedures in the Technical Procedures Manual, the cable will fit with no unusual stress on the cable. This is documented in Macintosh Family Technical Procedures, Volume 2, for the Macintosh IIxi, LC, and Classic, in the Hard Disk Drive tab, Replacement procedure.

Technically, the 1-inch drives work with either the PCB up or down. However, there is more risk of damage to the PCB board when it is facing

component side up.
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