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## Attachment: HP Hard Disk Drives (1/28/99)

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### HP MANUFACTURED HARD DISK DRIVES—YEAR 2000 READINESS

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For a period of approximately ten years beginning March 1987, Hewlett-Packard's Disk Memory Division manufactured several families of hard disk drives intended for integration into PC's, servers, workstations and other devices that required internal disk drive data storage. Although HP no longer produces hard disk drives, many of those models produced in the last ten years are still within their support life and are still used in the HP and non-HP systems they were integrated into. The purpose of this attachment is to specify the Year 2000 status of those disk drives.

It is beneficial to note that the scope of this attachment is limited to only those hard disk drives *manufactured* by HP that are still in support. In no way is this attachment intended to address Year 2000 issues for disk drives manufactured by other disk drive vendors that may have been marketed by HP or installed in HP systems. See the attached list of applicable HP hard disk drive model numbers.

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#### HARDWARE

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There are no registers, latches, RAM, or ROM on any models that record or utilize real time or date events. Further, there are no physical bus connections within the ESDI, SCSI-1, or SCSI-2 interface architectures to facilitate real time or date transmission to the hard disk drives. Finally, although all hard disk drives have "clocks", they are oscillators designed to generate timing signals and have no functional capability to generate real time or date events.

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#### SOFTWARE

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None of the HP manufactured disk drives were ever shipped from HP's Disk Memory Division with software loaded on them, whether that is HP developed software or ISV software. Also, of all the ESDI, SCSI-1, and SCSI-2 interface commands processed by these disk drives there are no real time or date related parameters in any command descriptor block, header, data field, supported page, sense key, sense code, status byte, or status code.

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#### SUMMATION

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For the reasons noted above, all Hewlett-Packard manufactured hard disk drives are classified as "**No Date Related Processing**". All HP manufactured hard disk drive model numbers that are still within their support life have been entered into HP's Year 2000 database.

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**HP HARD DISK DRIVE MODELS CLASSIFIED AS NO DATE RELATED PROCESSING**

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All 97560, 97558, and 97556 models and options

All C3010, C3009, and C3007 models and options

All C2235, C2234, and C2233 models and options

All C2247 models and options

All C2490 models and options

All C3323 models and options

All C3325, C3324, C3725, and C3724 models and options

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**EMC SYMMETRIX IS YEAR 2000 COMPLIANT**

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EMC Corporation certifies that all Symmetrix hardware and software products re-sold by Hewlett-Packard, when operated with the compliant microcode revisions (specified below), are Year 2000 compliant. EMC Corporation has provided documentation verifying that all Symmetrix hardware and software products successfully pass the required date boundary test cases.

Because EMC Symmetrix products are data storage products, they perform no date-related processing on customer data. In addition, normal operation of Symmetrix products is not date dependent. Dates are used to time stamp events and to identify software and microcode. In both cases, four-digit years are used.

Minimum microcode revisions are as follows:

5061.83.51

5062.58.39

5063.27.21

5064

5263.22.19

**5264**

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