

### PERIPHERAL EQUIPMENT DIVISION

TITLE			C.E. ALIGNMENT SPECIFICATION FOR D3000 DISK DRIVE		PIB NO. DK3058	
PRODUCT LINE:	TAPE DISK FORMATTER XX	EQUIPMENT CHANGED	MODEL SERIES AFFECTED		EFFECTIVE DATE	
		None	D3000		5/30/76	

CLASS OF BULLETIN:	ORDER PART KIT NO.	EFFECTIVITY
<input type="checkbox"/> IMPROVEMENT <input type="checkbox"/> RETROFIT ON FAILURE <input type="checkbox"/> RETROFIT RECOMMENDED <input checked="" type="checkbox"/> SERVICE INFORMATION ONLY	N/A	D33XX, D34XX, and D36XX

PURPOSE:

This bulletin specifies the CE circumferential alignment cylinder and times and radial alignment cylinders for the D33XX, D34XX, and D36XX and for a disk drive with a Pertec or a Diablo compatible interface. The interfacing is determined by the Logic PCBA on the disk drive, except for the special cases where the drive must be aligned to be Diablo media compatible but has a PERTEC interface and where the drive must be aligned to be PERTEC media compatible but has a Diablo interface.

CIRCUMFERENTIAL ALIGNMENT:

A circumferential alignment is done on the disk drive to align the sector transducer sensor to a fixed point on the disk to ensure that there will be data compatibility as cartridges are interchanged among disk drives. This is done by adjusting the position of the transducer for a specific time relationship between the falling edge of the index pulse and the fixed point on the disk which is represented by a pulse and a data burst on a specific track of a CE cartridge. The adjustment is checked on the upper and lower heads of the removable cartridge.

Table I below lists the tracks and times for the circumferential alignment for the disk drives. Refer to Operating & Service Manual, Section 6.13, for CE Alignment Procedure.

Should Additional Information Be Required — Contact

**PERTEC**

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DISTRIBUTION CODE: 6318

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TABLE I

MODEL(S)	TRACK	PERTEC	DIABLO COMPATIBLE	TRACK	TIME
		TIME			
D3311, D3321	05 <sub>10</sub>	30 $\pm$ 5 us		05 <sub>10</sub>	30 $\pm$ 5 us
D3331, D3341	95 <sub>10</sub>	30 $\pm$ 5 us		100 <sub>10</sub>	75 $\pm$ 5 us
D3312, D3322	05 <sub>10</sub>	30 $\pm$ 5 us		05 <sub>10</sub>	18.75 $\pm$ 3.12 us
D3332, D3342	95 <sub>10</sub>	30 $\pm$ 5 us		100 <sub>10</sub>	46.88 $\pm$ 3.12 us
D3421, D3621	10 <sub>10</sub>	30 $\pm$ 5 us		10 <sub>10</sub>	30 $\pm$ 5 us
D3441, D3641	190 <sub>10</sub>	30 $\pm$ 5 us		190 <sub>10</sub>	30 $\pm$ 5 us
D3422, D3622	10 <sub>10</sub>	30 $\pm$ 5 us		10 <sub>10</sub>	18.75 $\pm$ 3.12 us
D3422, D3642	190 <sub>10</sub>	30 $\pm$ 5 us		190 <sub>10</sub>	30 $\pm$ 5 us
D3341-XXX-CWU	N/A	N/A		100 <sub>10</sub>	75 $\pm$ 5 us

(For all cases, the total deviation between heads 0 and 1 should be be more than twice the tolerance for each head.) (Refer to Table III.)

#### RADIAL ALIGNMENT:

A radial alignment is performed on the disk drive to ensure that the upper and lower heads on the removable cartridge will always be positioned on the same cylinders as different cartridges are interchanged from drive to drive and provide for cartridge compatibility. This is done by aligning the heads to a specific cylinder on the CE cartridge. A special data pattern is written on the cylinder so as to recognize it when the heads are properly positioned over that cylinder.

Table II below lists the tracks for the radial alignment of the disk drives (refer to Table III).

TABLE II

MODELS	PERTEC TRACK	DIABLO COMPATIBLE TRACK
D3311, D3321	73 <sub>10</sub>	73 <sub>10</sub>
D3331, D3341	100 <sub>10</sub>	105 <sub>10</sub>
D3312, D3322	73 <sub>10</sub>	73 <sub>10</sub>
D3332, D3342	100 <sub>10</sub>	105 <sub>10</sub>

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TABLE II-cont'd.

MODELS	PERTEC TRACK	DIABLO COMPATIBLE TRACK
D3421, D3621	146 <sub>10</sub>	146 <sub>10</sub>
D3441, D3641	200 <sub>10</sub>	200 <sub>10</sub>
D3422, D3622	146 <sub>10</sub>	146 <sub>10</sub>
D3442, D3642	200 <sub>10</sub>	200 <sub>10</sub>
D3341-XXXX-CWU	N/A	105 <sub>10</sub>

REFERENCE DOCUMENTS:

Refer to Operating & Service Manuals:

- 102780 'Model D3000 Disk Memory Drive'
- 103715 'Model D3000 Disk Memory Drive with Diablo Compatible Interface'
- 104615 'Model D3000 Disk Memory Drive with Diablo Compatible Interface'
- 104630 'Model D3000 Disk Memory Drive'

for C.E. alignment procedures.

IDENTIFICATION:

D3XXX - XXXX - Y XX

- Y = N Normal Pertec C.E. Alignment
- Y = C Diablo Compatible C.E. Alignment
- Y = S Special Configuration (SC) listed on the following page, in Table III.

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TABLE III

PERTEC	DIABLO
SC907	SC904
SC914	SC905
SC915	SC908
SC920	SC909
SC927	SC910
SC931	SC911
SC935	SC912
SC927	SC917
	SC918
	SC919
	SC921
	SC922
	SC923
	SC925
	SC928
	SC930
	SC933
	SC936

NOTE: In the case of 200tpi, front load units, these units are to be Pertec compatible.