

## PERIPHERAL EQUIPMENT DIVISION

TITLE POSITIONER ASSEMBLY REMOVAL/REPLACEMENT PROCEDURE				PIB NO. DK-3021	
PRODUCT LINE	TAPE DISK FORMATTER	<input checked="" type="checkbox"/>	EQUIPMENT CHANGED 102888-01	MODEL SERIES AFFECTED D3000	EFFECTIVE DATE 2/28/75

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	All 100TPI (Track Per Inch) D3000 Disk Drives

**TITLE:** POSITIONER ASSEMBLY REMOVAL AND REPLACEMENT PROCEDURE  
(Estimated time of removal, replacement, and retest - 3 hrs.)

**PURPOSE:** Product Support has prepared the following preliminary procedure to assist you whenever you find the need to replace the positioner assembly.

The following procedure is not currently outlined in the D3000 Service and Maintenance Manual. However, its incorporation will be reflected in all future D3000 manuals. The addition of this procedure will add flexibility to your D3000 disk drive maintenance programs performed by your trained personnel. Your use of this procedure will probably be infrequent. It is with this understanding that the procedure has been prepared in a fundamental form so that it may be studied carefully before any step-by-step disassembly or reassembly be performed. Feel free to contact your PERTEC Product Support representative for consultation regarding this procedure.

**PARTS:** One Positioner Assembly (102888-01)  
Twenty Tie Wraps 1/8" x 12" (Or Equivalent)

### NOTE

DUE TO THE COMPLEXITY AND TIME FRAME OF THIS PROCEDURE, IT IS RECOMMENDED THAT THE FOLLOWING BE PERFORMED AT THE OEM REPAIR CENTER. THE SETUP PROCEDURES ARE WRITTEN FOR FRONT LOAD (STEP 7.0) AND TOP LOAD (STEP 8.0).

#### 1.0 Tools Required.

- 1.1 Complete set of Xcelite hex drivers.
- 1.2 1 - Small set of diagonal cutters.
- 1.3 1 - 8" Phillips screwdriver.
- 1.4 1 - 4" Phillips screwdriver.
- 1.5 1 - 10" Phillips screwdriver.
- 1.6 1 - 10" Standard flat blade screwdriver.
- 1.7 1 - Complete set of open end Ignition wrenches.

Additional Information Be Required — Contact

**PERTEC**

PERIPHERAL EQUIPMENT DIVISION  
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ATTENTION: PRODUCT SUPPORT MANAGER  
PERTEC 20 K012C(11)

Distribution Code - 6318

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- 1.8 1 - Adapter Bowl setup tool (103619-01) (TOP LOAD ONLY)
- 1.9 1 - Circumferential Adjustment Tool (103609-01) (FRONT LOAD ONLY)
- 1.10 1 - C.E. Alignment Cartridge.
- 2.0 Prepare drive for service.
  - 2.1 Power OFF and unplug unit.
  - 2.2 Remove dust cover.
  - 2.3 Place LOGIC and SERVO PCBA upright in the service position.
- 3.0 Remove READ/WRITE PCBA, READ/WRITE head adjustment plate and READ/WRITE heads. (Reference D3000 Manual, Page 7-8, Fig 7-4 Item 8, Rev. A manual, Items in area 13, Rev. C and above.)
- 4.0 Remove LOGIC and SERVO PCBA's. (Reference D3000 Manual, Page 7-8, Fig. 7-4, Items 17 and 18 Rev. A manual, Items 1 & 16, Rev. C or above.)
- 5.0 Remove swing stud, closest to the positioner magnet, that supports one side of the LOGIC PCBA.
- 6.0 Remove Phillips screws that secure tie wraps for the POWER/TRANSISTOR cable on rear of positioner.
- 7.0 Front Load Setup Procedure.
  - 7.1 Remove 4 (four) hex bolts that secure pivot brackets at rear of receiver. (Reference D3000 Manual, Page 7-4, Fig. 7-2, Item 2).
  - 7.2 Remove 5 screws that secure lower platter cover.
  - 7.3 Remove air baffles (Deflectors) if applicable. (Located on rear of lower platter cover next to the positioner.)
  - 7.4 Remove lower platter cleaning access door. (Located on right side of lower platter cover.)
  - 7.5 Cut enough of the tie wraps that secure the magnetic pickup cable for the lower platter sector ring, so that platter cover may be swung over bezel.

CAUTION

WHEN REMOVING THE LOWER PLATTER COVER UTILIZE UTMOST CAUTION. DO NOT TOUCH LOWER PLATTER WITH LOWER PLATTER COVER OR CABLE BUNDLE. DAMAGE TO LOWER PLATTER COULD RESULT IN HEAD TO DISK CONTACT (HEAD CRASHES) OR READ/WRITE ERRORS.

- 7.6 Lift lower platter cover off of fixed platter, flip it over, resting it against the bezel.
- 7.7 Observe that the cartridge in place switch is not being damaged or its actuating arm is not being bent.
- 8.0 Top Load Setup Procedures.
  - 8.1 Remove 4 Phillips head screws that secure lower platter cover. (Located inside cartridge bowl)

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8.2 Remove Lower Platter Cover.

CAUTION

WHEN REMOVING LOWER PLATTER COVER UTILIZE UTMOST CAUTION. DAMAGE TO LOWER PLATTER COULD RESULT IN HEAD TO DISK CONTACT (HEAD CRASHES) OR READ/WRITE ERRORS.

8.3 Remove Bezel.

8.4 Remove index to data adjustment screw and locking nuts.

8.5 Remove upper and lower magnetic transducers by loosening the 2 small hex head screws at the end of the transducer boom. After removing the transducers from the boom, the boom must be loosened and the transducers removed through the side of the bowl.

CAUTION

TRANSDUCER WIRES ARE SMALL AND FRAGILE. ANY EXCESS PRESSURE COULD RESULT IN A TRANSDUCER FAILURE.

8.6 Remove upper and lower magnetic transducer booms. Again utilize CAUTION TO AVOID DAMAGE TO LOWER PLATTER.

8.7 Remove 2 cartridge lock solenoid assemblies. (2 Phillips screws) (Reference D3000 Manual, Page 7-6, Fig 7-3, Item 1)

8.8 Remove write protect switch assembly. (3, 5/16 screws on underside)

8.9 Remove 6 screws that secure lower platter ring and lower platter.

8.10 Remove lower platter and ring.

8.11 Remove 2 screws that secure cable bundle to side of cartridge bowl.

8.12 Remove three cartridge bowl screws from underside of drive.

8.13 Remove cartridge bowl.

NOTE

THE FOLLOWING IS APPLICABLE FOR BOTH FRONT AND TOP LOADING D3000's.

- 9.0 Cut all tie wraps that secure cable bundle for SERVO PCBA plugs, J212, J213, and J203.
- 10.0 Cut tie wrap closest to the motor that secures power switch and lamp cable assembly for J501.
- 11.0 Unplug J501.
- 12.0 Remove white cover for motor control board. (Reference D3000 Manual, Page 7-8, Fig 7-4, Item 13, Rev A manual, Item 12, Rev C and above.)
- 13.0 Remove J405 on motor control board along with any remaining

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tie wraps that may inhibit removing the power supply.

14.0 Remove 3 screws that secure belt guard plate. (Ref D3000 Manual, Page 7-10, Fig.7-5, Item 10)

15.0 Remove belt guard plate.

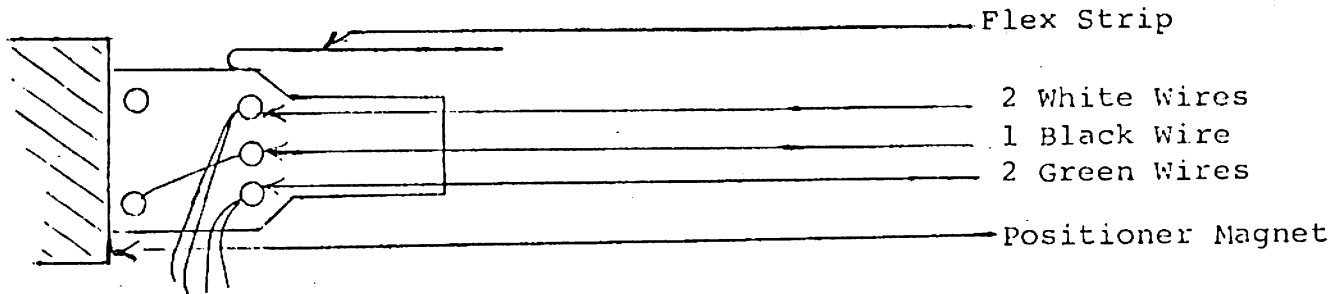
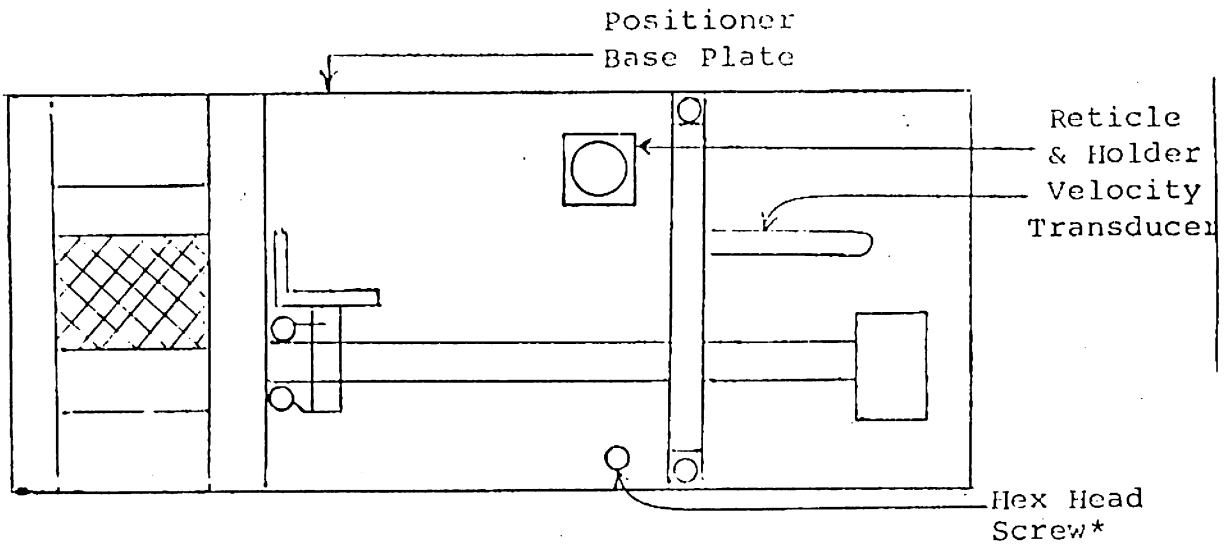


FIGURE 1



\*That secures positioner from top side

FIGURE 2

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NOTE

"DO NOT WIPE OFF" STATIC DISCHARGE LUBRICATION FOR SPINDLE.

- 16.0 Remove 8 or 9 screws from underside of unit that holds power supply in.
- 17.0 Remove power supply.
- 18.0 Remove 2 white and 2 green positioner current wires from flex strip plate (See Fig 1 pg 4) black wire need not be removed.
- 19.0 Remove 1 hex head screw\* from top of positioner base plate. (See Fig 2 pg 4)
- 20.0 Remove 5 screws that secure positioner from underside of baseplate.
- 21.0 Remove positioner by lifting off of guide pins.

CAUTION

THE POSITIONER LAMP'S TERMINALS ARE UNPROTECTED WHEN A POSITIONER IS REMOVED. CARE MUST BE UTILIZED WHEN HANDLING OR INSTALLING NEW POSITIONER AS THE LAMP ASSEMBLY COULD BE DAMAGED.

- 22.0 New positioner can now be installed with little or no difficulty.
- 23.0 Reverse appropriate steps for reinstallation of the following:
  - 23.1 Positioner (18.0 thru 21.0)
  - 23.2 Power Supply (9.0 thru 17.0)

NOTE

POWER SUPPLY RECTIFIER MAY HAVE BECOME LOOSE WHILE POWER SUPPLY IS OUT OF UNIT. ENSURE THAT RECTIFIER SCREWS ARE TIGHT AND RECTIFIER ITSELF IS POSITIONED SO THAT THE TERMINAL CLOSEST TO THE BASE CASTING IS NOT SHORTING TO THE CASTING.

- 23.3 Logic and Servo PCBA's
- 23.4 Cartridge Bowl (If Top Load) and related assemblies (Ref D3000 Manual, Sec. 6-16).
- 23.5 Lower Platters.

CAUTION

LOWER PLATTER MUST BE KEPT FREE OF DIRT, FINGER PRINTS, AND OTHER FOREIGN SUBSTANCES. LOWER PLATTER MUST BE CLEANED THOROUGHLY.

- 23.6 Clean disk drive as per D3000 Manual, Sec. 6-4 thru 6-4-2.
- 23.7 Reinstall and adjust magnetic transducers per D3000 Manual, Sec. 6-18.
- 23.8 Reinstall lower platter cover only after platter is clean and transducers have been adjusted (Top Load).

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- 23.9 Reinstall receiver if front loader.
- 24.0 Perform all Servo checks with heads removed from unit.
- 25.0 Ensure Seeks can be done and all servo alignments are correct.
- 26.0 Install heads and perform C.E. and circumferential alignment procedures outlines in D3000 Manual, Sec. 6-13.
- 27.0 Ensure that all the wraps are secure and that no wires are caught under bowl or receiver.
- 28.0 Check unit for proper operation after dust cover is put on.

## NOTE

STEPS 25 THROUGH 28 ARE IN NO PARTICULAR ORDER  
AS THEY MAY VARY DEPENDING ON WHETHER A TOP  
LOAD OR FRONT LOAD POSITIONER IS BEING REPLACED.