

PERIPHERAL EQUIPMENT DIVISION

TITLE POSITIONER TRANSDUCER LAMP REMOVAL AND REPLACEMENT PROCEDURE				PIB NO. DK-3015
PRODUCT LINE:	TAPE DISK FORMATTER <input checked="" type="checkbox"/>	EQUIPMENT CHANGED Lamp Assy. 102887-01	MODEL SERIES AFFECTED D3000	EFFECTIVE DATE October 1, 1974
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 D3000 DISK SERIES	

TITLE: POSITIONER TRANSDUCER LAMP REMOVAL AND REPLACEMENT PROCEDURE
(Estimated time to removal, replacement and retest - 2 hrs.)

PURPOSE: Product Support has prepared the following preliminary procedure to assist you whenever you find the need to replace the positioner lamp 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 Lamp Assembly (102887-01)

NOTE

HEADS MUST NOT BE REMOVED IF DATA ON FIXED PLATTER IS TO BE RECOVERED. HEADS MAY BE REMOVED IF DATA ON FIXED PLATTER IS TO BE RECONSTRUCTED.

Should Additional Information Be Required — Contact

PERTEC

PERIPHERAL EQUIPMENT DIVISION
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PERTEC 20-K012C(1)

Distribution Code - 6318

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1.0 Tools Required

- 1.1 1 - 10" Phillips Screwdriver
- 1.2 1 - 10" Standard Flat Blade Screwdriver.
- 1.3 1 Complete set of Xcelite Hex Drivers
- 1.4 1 Soldering Iron
- 1.5 1 Small Pair of Diagonal Cutters
- 1.6 1 Strip of paper or Mylar .005" thick, 0.6" wide and 5" long.
- 1.7 1 CE Cartridge (alignment Cartridge)

2.0 Preheat Soldering Iron.

3.0 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 service position.
- 2.4 Install carriage restraint tube, or equivalent, on top bearing rail to keep heads from moving.

4.0 If Front Load, remove receiver and lower disk cover.

CAUTION

AVOID DAMAGE TO TRANSDUCER TIP

5.0 Removal of the lower platter is optional.

CAUTION

IF LOWER PLATTER IS NOT REMOVED, EXTREME CARE MUST BE UTILIZED AS POSITIONER MOUNTING STRIP IS REMOVED.

6.0 Remove READ/WRITE PCBA, laying head cables against magnet front plate.

7.0 Remove heads if applicable. (See BEGINNING NOTE - PAGE 1)

CAUTION

EXTREME CARE MUST BE TAKEN TO AVOID DAMAGE TO GLASS SCALE

8.0 Remove Scale Shield.

9.0 Scribe position of reticle in its holder.

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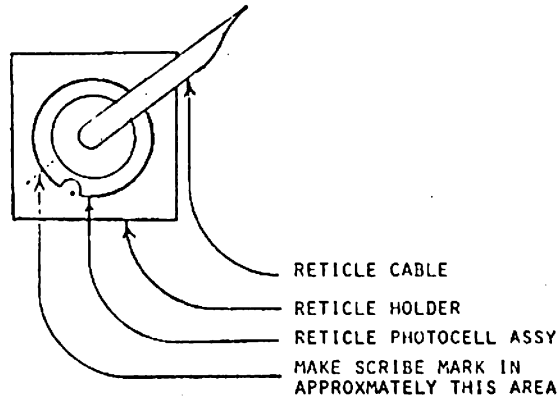


FIGURE 1

- 10.0 Cut the two tie wraps that secure positioner transducer cable (reticle cable) closest to the holder.
- 11.0 Remove two hex head screws/washers securing the reticle in the holder.
 - 11.1 Remove reticle.
- 12.0 Remove 3 hex head screws that mount scale assembly to positioner carriage.
 - 12.1 Remove scale. Do not touch the surface of the scale with bare fingers.
- 13.0 Scribe position of the positioner transducer mounting strip. Scribe end closest to the magnet.
- 14.0 Remove the hex head screw (from beneath the drive) that holds the positioner transducer mounting strip closest to the spindle (See Figure 1).

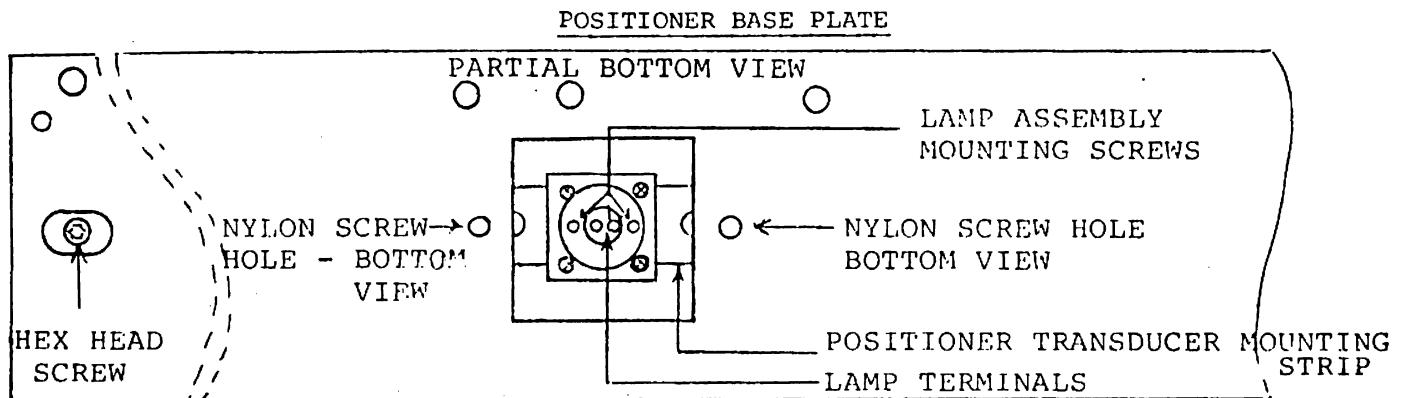
CAUTION

EXTREME CARE MUST BE TAKEN TO AVOID SCRATCHING THE LOWER PLATTER OR BENDING THE POSITIONER TRANSDUCER MOUNTING STRIP.

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- 15.0 Remove the two nylon screws that secure the positioner transducer mounting strip. Remove positioner transducer assembly.
- 16.0 Unsolder gray and white wire off of both old and new assemblies. Remove old lamp assembly and clean lamp lense.
- 17.0 Install new lamp assembly (P/N 102887-01), orient lamp terminals of new assembly in the exact location of the old terminals.
- 18.0 New bulb assembly terminals shall run parallel with positioner (See Figure 2).
 - 18.1 Resolder old wires to new assembly (102887-01).
 - 18.2 Reapply power only long enough to ensure new lamp assembly is operational.
 - 18.3 Remove power.



- 19.0 TAKING CARE NOT TO SCRATCH the lower surface of the LOWER PLATTER, replace positioner lamp assembly.
- 20.0 Replace socket head cap screw that holds down the positioner transducer mounting strip, but only moderately tighten as strip still may require final adjustment.
- 21.0 Replace nylon screws and tighten moderately after moving strip to original position marked with scribe. (If heads were removed, the 2 nylon screws/hex head screws may be secured.)
- 22.0 Replace scale but do not tighten screws completely.
- 23.0 Replace reticle, aligning scribe marks and place .005 paper or mylar between scale and reticle.

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24.0 Slowly tighten the reticle mounting screws using the .005 paper as a feeler guage.

CAUTION

DAMAGE TO SCALE AND RETICLE COULD RESULT IF CARE IN ADJUSTING IS NOT EXERCISED.

25.0 Adjust the scale to reticle distance to .005 as an initial adjustment. Adjust only the part of scale under reticle assembly.

26.0 Remove paper strip.

27.0 Replace items removed in Step 4.0.

28.0 Regap sector transducers per D3000 Manual.

29.0 Scale Adjustment - Electronic.

29.1 Replace READ WRITE PCBA and head cables.

29.2 Remove J205 and J206 from SERVO PCBA.

29.3 Apply power and wait for "SAFE" condition.

29.4 Install scratch pack and depress RUN/STOP Switch.

29.5 After approximately 33 seconds, manually load heads.

29.6 Slowly move positioner to CYL 202 with .005 paper installed between scale and reticle. No excessive tightness should be felt when moving the positioner its full stroke. If no tightness is observed further testing can be done.

CAUTION

CARE MUST BE TAKEN AS POSITIONER IS MOVED. SHOULD POSITIONER BECOME HARD TO MOVE, STOP! SCALE BREAK-AGE COULD RESULT IF POSITIONER IS FORCED.

30.0 Adjust R69, on SERVO BOARD to approximately its center range.

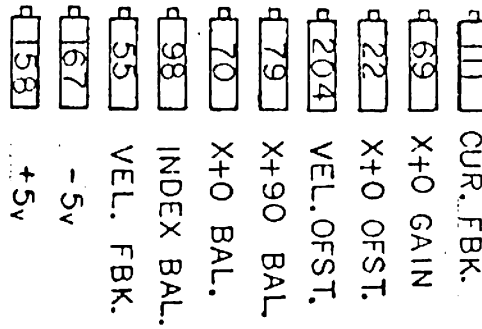
31.0 Adjust reticle for maximum amplitude of X+0 along with proper phase relationship using X+0 and X+90 signal polarity and quadrature check. (Ref. D-3000 Manual - Test and Adjustment Section) (Insure Channel B on Scope is not inverted.)

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S E R V O B O A R D

TOP OF BOARD



32.0 Observe the amplitude of the X+0 waveform. IT SHALL HAVE NO MORE THAN .5V VARIATION IN AMPLITUDE DURING THE FULL STROKE. (Cylinder 000 to 202)

NOTE

SHOULD MORE THAN .5V VARIATION IN X+0 BE OBSERVED AT FULL STROKE, IMPROPER SCALE TO RETICLE ADJUSTMENT IS EVIDENT. READJUSTMENT OF THE SCALE IS NECESSARY.