FORD E4OD

NEW DESIGN FRONT PUMP FOR 1995 MODELS

CHANGE: Beginning at the Start Of Production for all 1995 model E40D transmissions, Ford Motor Co. introduced an increased displacement Front Pump Assembly, 1.70 cu in/rev, versus 1.50 cu in/rev for previous models.

REASON: To provide additional flow for more robust converter clutch functions *and* additional lube flow, both of which will greatly increase transmission durability.

PARTS AFFECTED:

(1) FRONT PUMP BODY - Gerotor bore has an increased diameter to accommodate the new design level outer gerotor. Previous outer gerotor diameter was 3.950" and the new design level outer gerotor diameter is 4.083". Refer to Figures 1 and 2. Also, the two holes in the suction cavity were increased from .3 12" to .400", as shown in Figures 1 and 2. Another way to identify the new pump body is with the "Rough Forging Number" F5TP-7A105-AA, and is found on the front seal side of the pump body. All of the oil passages in the new design Front Pump Body remained the same as previous years and are identified in Figure 4.

(2) OUTER GEROTOR - The lobes on the Outer Gerotor changed from the previous 11 lobes to 10 lobes on the new design, to accommodate the changes on the inner gerotor. The diameter of the Outer Gerotor also changed from 3.950" to 4.083". Refer to Figures 1 and 2. The changes on both the inner and outer gerotor increased the cavity between the gerotors for ' increased pump volume, as shown in Figure 3.

(3) INNER GEROTOR - The lobes on the Inner Gerotor changed from the previous 10 lobes to 9 lobes on the new design, to accommodate the changes on the outer gerotor. Refer to Figures 1 and 2. The changes on both the inner and outer gerotor increased the cavity between the gerotors for increased pump volume, as shown in Figure 3.

(4) FRONT PUMP COVER - Recieved casting changes with added ribs in strategic places to increase torque retention when the two halves are torqued properly. The Pump Body to Pump Cover bolts should be torqued to 18-23 ft.lbs, with the alignment ring in place. The easiest way to identify the new design level Pump Cover is with the "Rough Forging Number" F5TP-7B324-AA, and is located on the back side of the Pump Cover. All of the oil passages in the new design Pump Cover remained the same as previous years and are identified in Figure 5. Internal pump cover passages are identified in Figure 6.

INTERCHANGEABILITY:

(1) The new design level Front Pump Assembly will retro-fit back to all previous models, when used as an assembly, and is recommended for all rebuilds. The new design Front Pump Assembly is available under OEM part number F5TZ-7A 103-A.

(2) The new design level and previous design level gerotors will not interchange in any way.

SERVICE INFORMATION:

Front Pump Assembly (New 1995 Design) F5TZ-7A103-A

1989 1994 PUMP BODY AND GEARS
ROUGH FORGING # E9TP-7A105-AB
(PREVIOUS DESIGN)

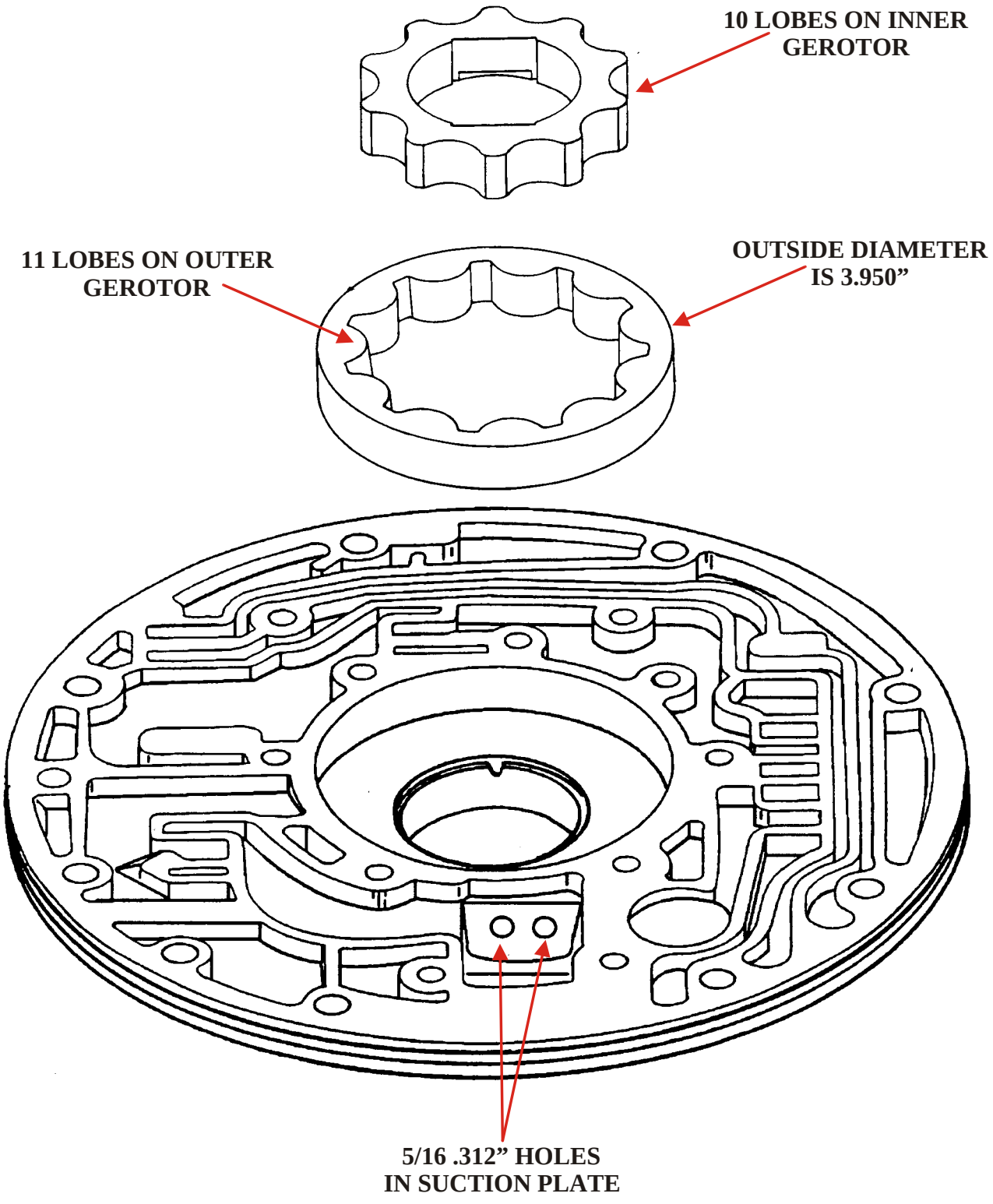


Figure 1

1989 1994 PUMP BODY AND GEARS
ROUGH FORGING # F5TP-7A105-AB
(NEW DESIGN)

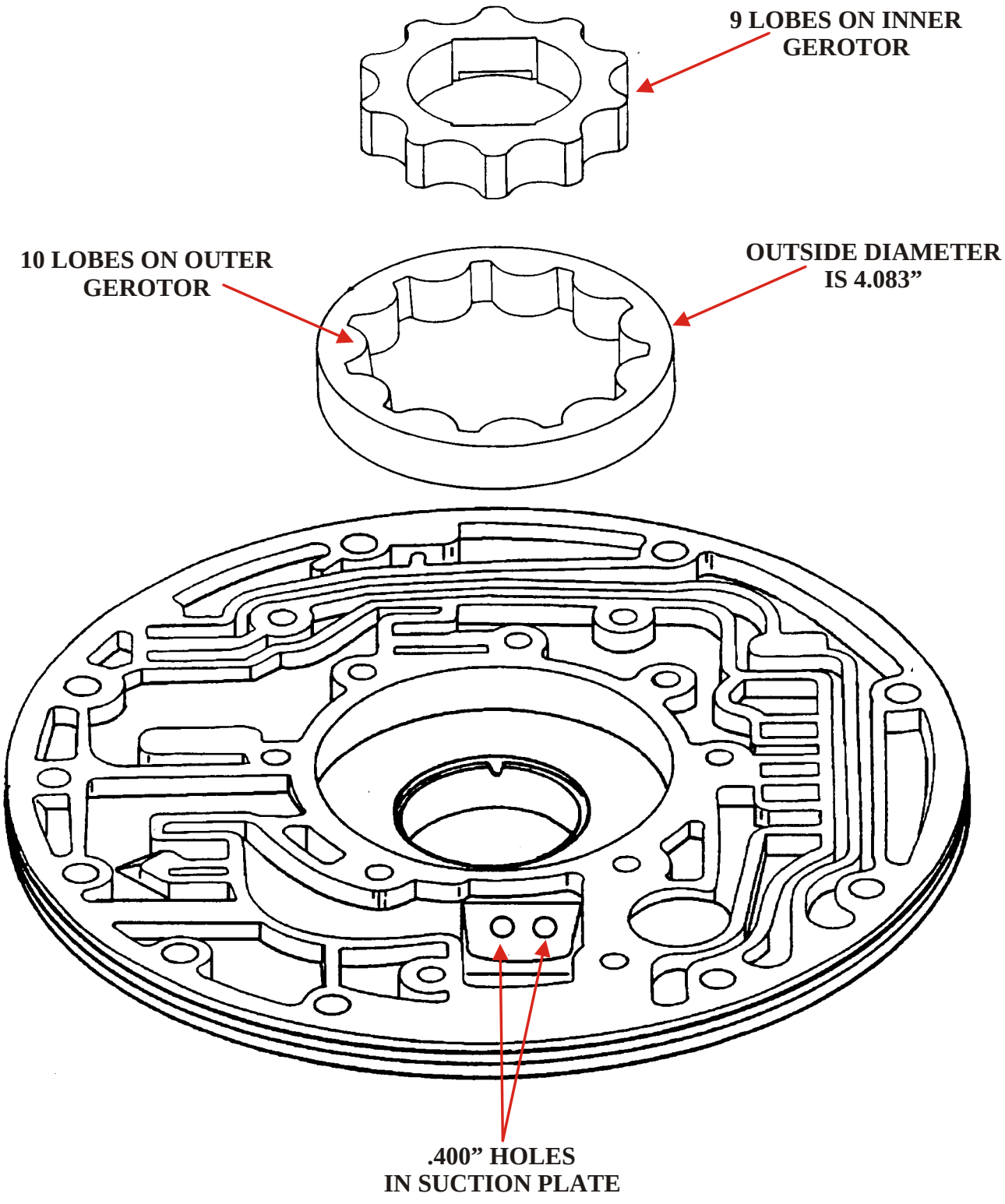
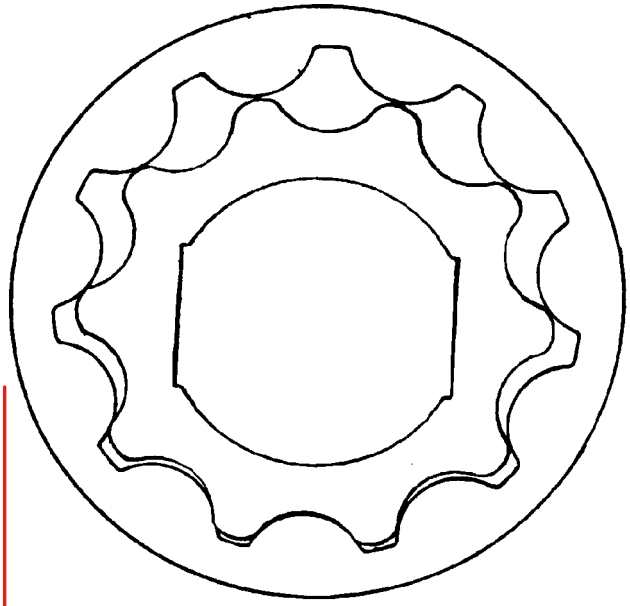


Figure 2

1989 1994 PUMP BODY AND GEARS
ROUGH FORGING # E9TP-7A105-AB
(PREVIOUS DESIGN)

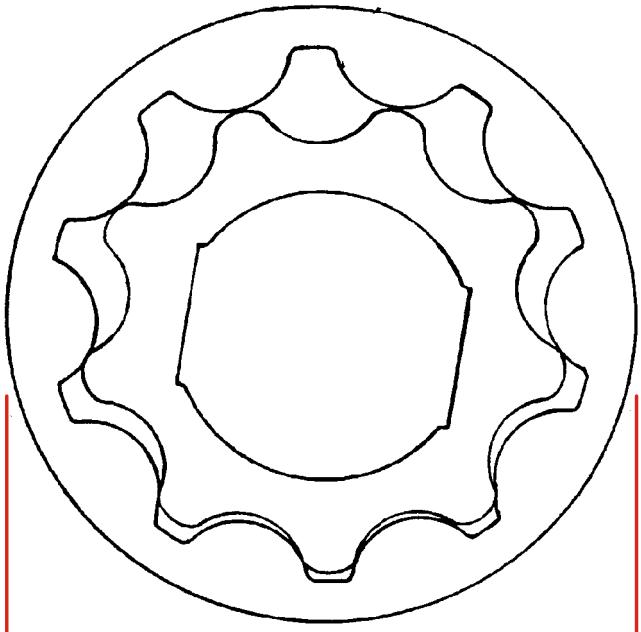
10 LOBES ON INNER
11 LOBES ON OUTER



OUTSIDE DIAMETER
IS 3.950”

1989 1994 PUMP BODY AND GEARS
ROUGH FORGING # F5TP-7A105-AB
(NEW DESIGN)

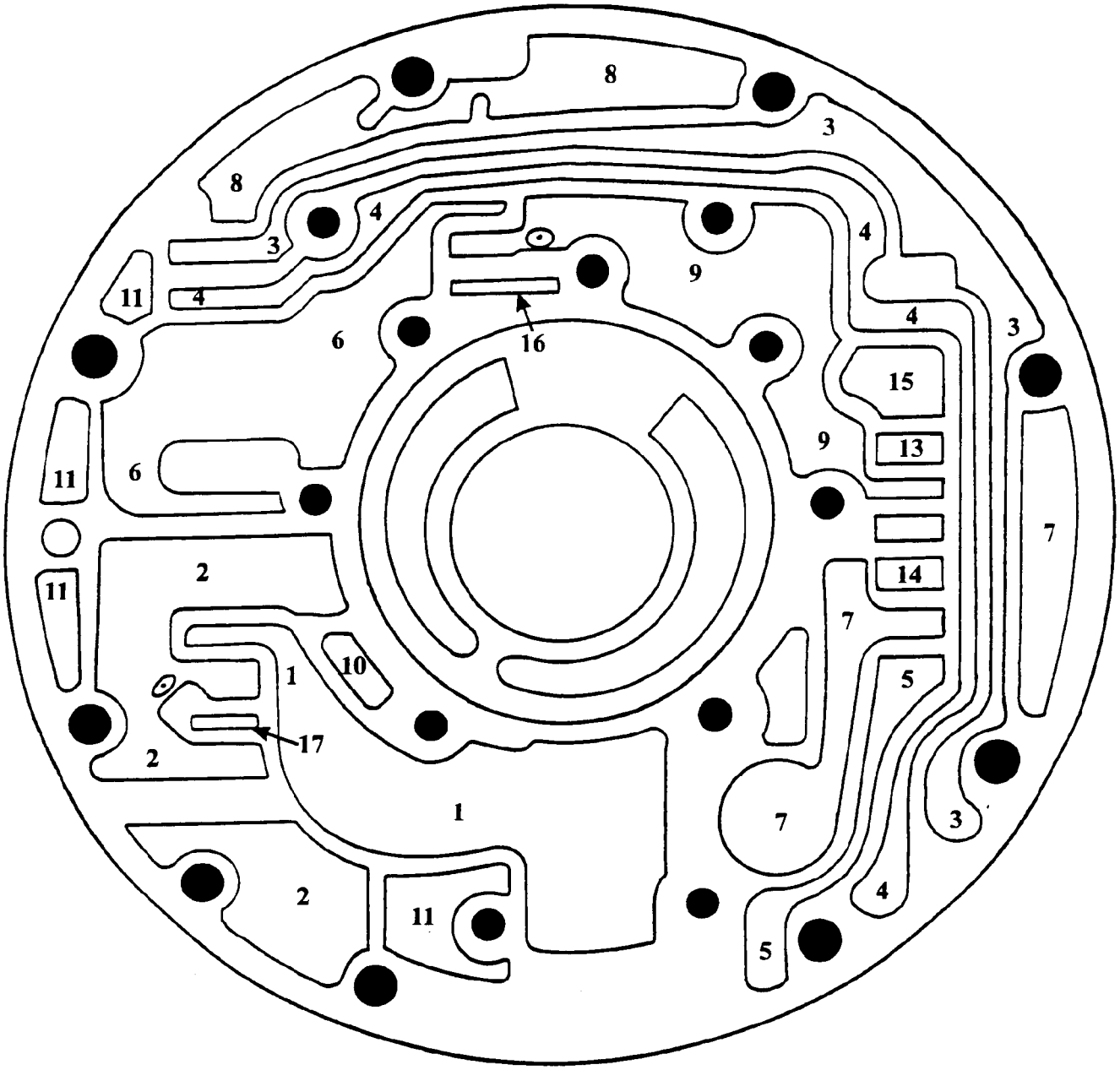
9 LOBES ON INNER
10 LOBES ON OUTER



OUTSIDE DIAMETER
IS 4.083”

Figure 3

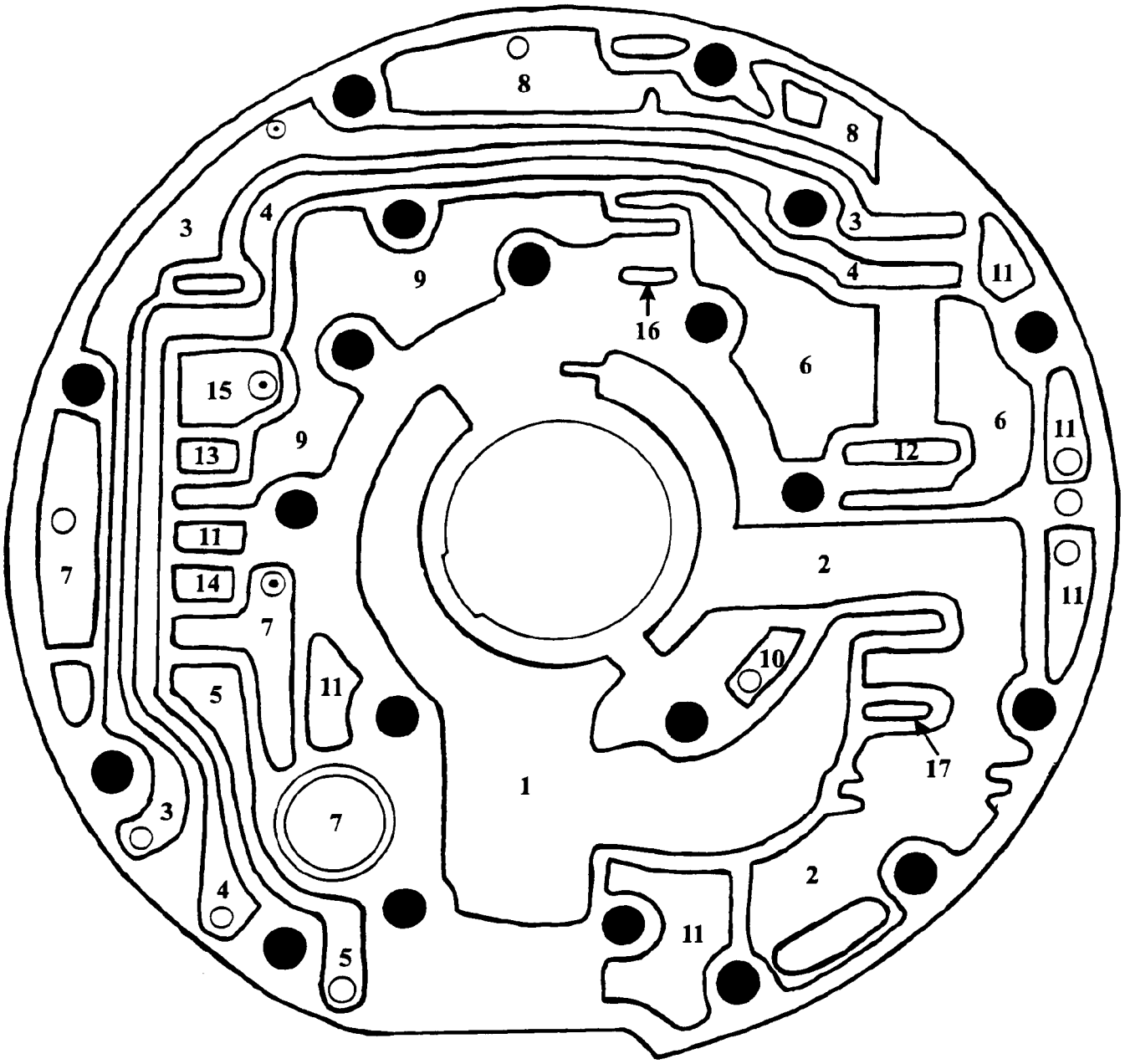
E4OD OIL PUMP PASSAGE IDENTIFICATION



1. PUMP SUCTION
2. LINE PRESSURE
3. EPC SOLENOID
4. MANUAL 1ST AND REVERSE BOOST
5. CONVERTER CLUTCH SIGNAL
6. CONVERTER FEED
7. TO COOLER
8. VENT
9. REGULATED CONVERTER FEED
10. PUMP SEAL DRAIN
11. VOID
12. EXHAUST
13. CONVERTER RELEASE
14. CONVERTER APPLY
15. RELEASE OIL EXHAUST
16. TCC REGULATOR VALVE BALANCE
17. P.R. VALVE BALANCE

Figure 4

E4OD OIL PUMP PASSAGE IDENTIFICATION



1. PUMP SUCTION
2. LINE PRESSURE
3. EPC SOLENOID
4. MANUAL 1ST AND REVERSE BOOST
5. CONVERTER CLUTCH SIGNAL
6. CONVERTER FEED
7. TO COOLER
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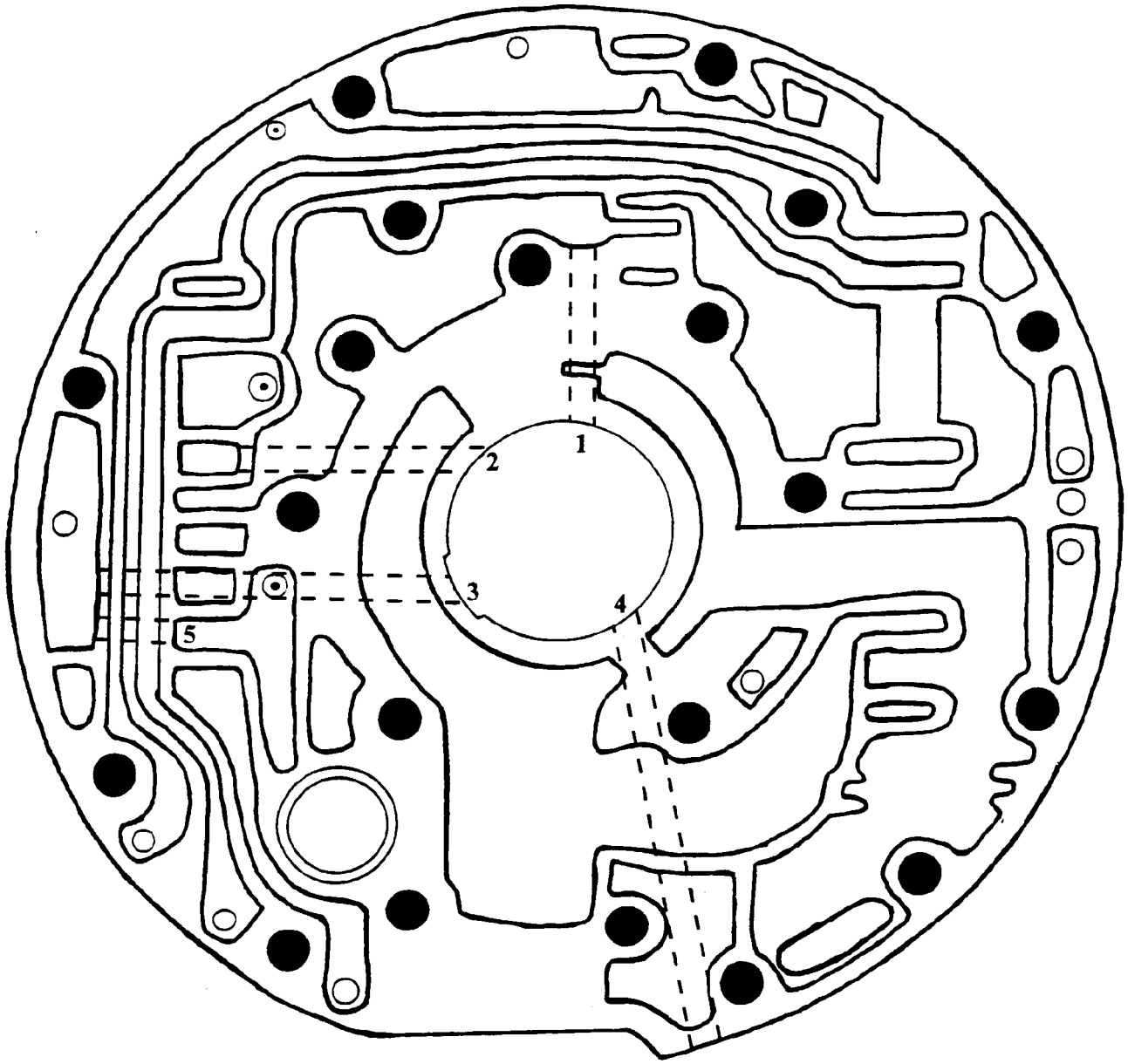
14. CONVERTER APPLY
15. RELEASE OIL EXHAUST
16. TCC REGULATOR VALVE BALANCE
17. P.R. VALVE BALANCE

Figure 5

E4OD PUMP COVER INTERNAL PASSAGE IDENTIFICATION



1. FRONT LUBE SUPPLY
2. CONVERTER RELEASE
3. CONVERTER APPLY
4. COAST CLUTCH FEED
5. TO COOLER

Figure 6