



Technical Service Information

FORD E4OD/4R100 NEW FRONT PUMP ASSEMBLY FOR 1997-1998 MODELS

CHANGE: Ford Motor Company for the 1999 Model Year, has renamed the E4OD transmission when they added the PTO window to the case. Many changes were made to the internal parts including the Oil Pump Assembly. These new oil pumps have now been found in some models of the 1997-1998 E4OD transmissions, from the factory assembly line.

REASON: Preparing the Oil Pump Assembly to accomodate two different converter clutch valve line-ups.

PARTS AFFECTED:

- (1) OIL PUMP BODY - Now has different worm tracks to accomodate the new pump cover assembly and is identified by the rough forging number RF-F81P-7A105-AA, and is cast into the pump body in the location shown in Figure 1. The worm track side of the new pump body and the previous pump body are shown in Figure 2.
- (2) OIL PUMP COVER - Now has different worm tracks to accomodate two different styles of converter clutch valve line-ups, and has one added bolt to clamp the pump halves together. The worm track side of the new pump cover and the previous pump cover are illustrated in Figure 3, and casting number on new pump cover is RF-F81P-7B324-AA for identification.
- (3) TCC LINE-UP - There are now two different Converter Clutch Control Valve Line-Ups in the oil pump cover depending on whether it is gasoline or diesel engine. Both of these valve line-ups are illustrated in Figure 4.
- (4) STATOR SHAFT ASSEMBLY - There are now three different Stator Shaft Assemblies with different sealing ring and bushing configurations, to accomodate the PTO and a new coast clutch housing, as illustrated in Figure 5, and are model dependent.
- (5) COAST CLUTCH HOUSING - There is now a "stamped Steel" coast clutch housing that may or may not have a PTO gear pressed onto the housing, that is used in addition to the previous cast iron coast clutch housing, depending on the model and engine size, and is illustrated in Figure 6. This also changes the coast clutch steel plates and the fourth clutch friction plates, as shown in Figures 6 and 7.

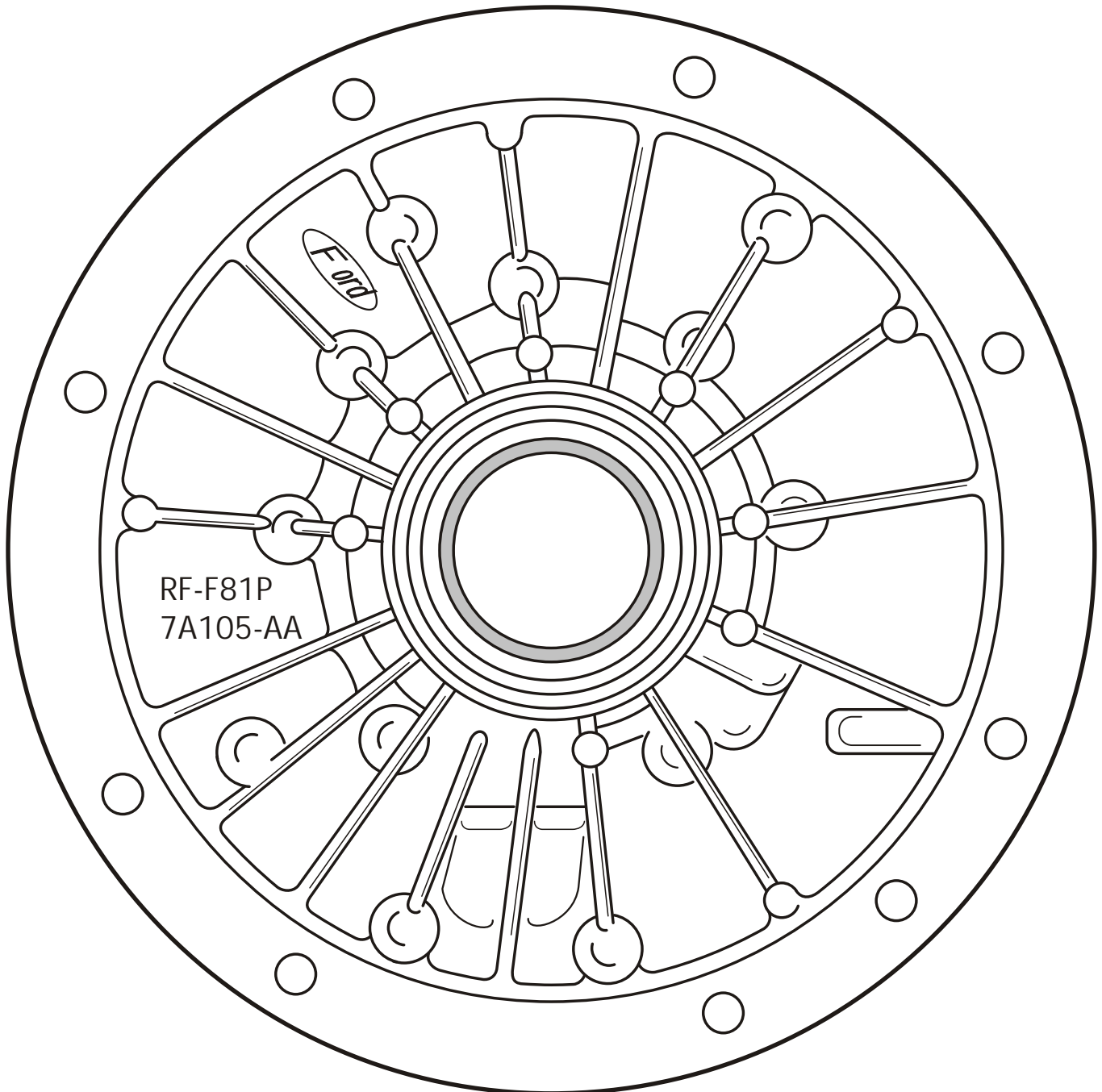
INTERCHANGEABILITY:

This new Oil Pump Assembly will retro-fit back to previous models, as long as you have the proper valve line-up in the converter clutch control valve bore. The pump halves **cannot** be inter-mixed because of the major worm track differences. All other parts listed above are model dependent and **great care must be used** when parts replacement is necessary.

Note: For information additional changes in this unit refer to ATSG Bulletin 98-56.

Copyright © 1998 ATSG

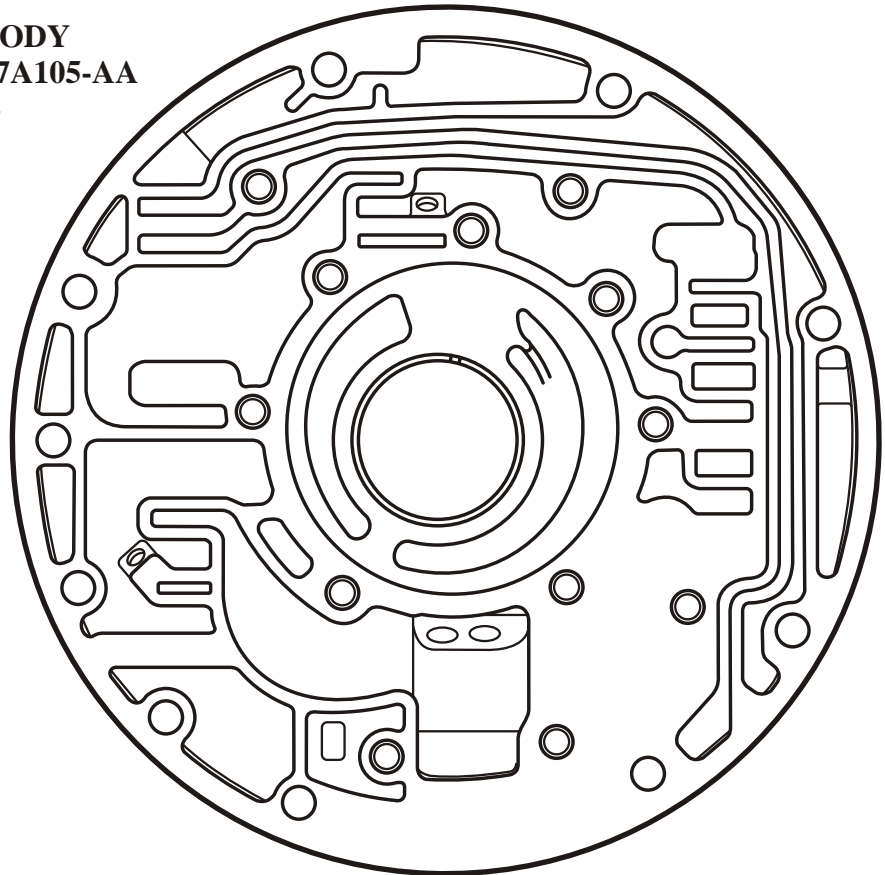
**1998 E4OD PUMP BODY
FRONT SIDE**



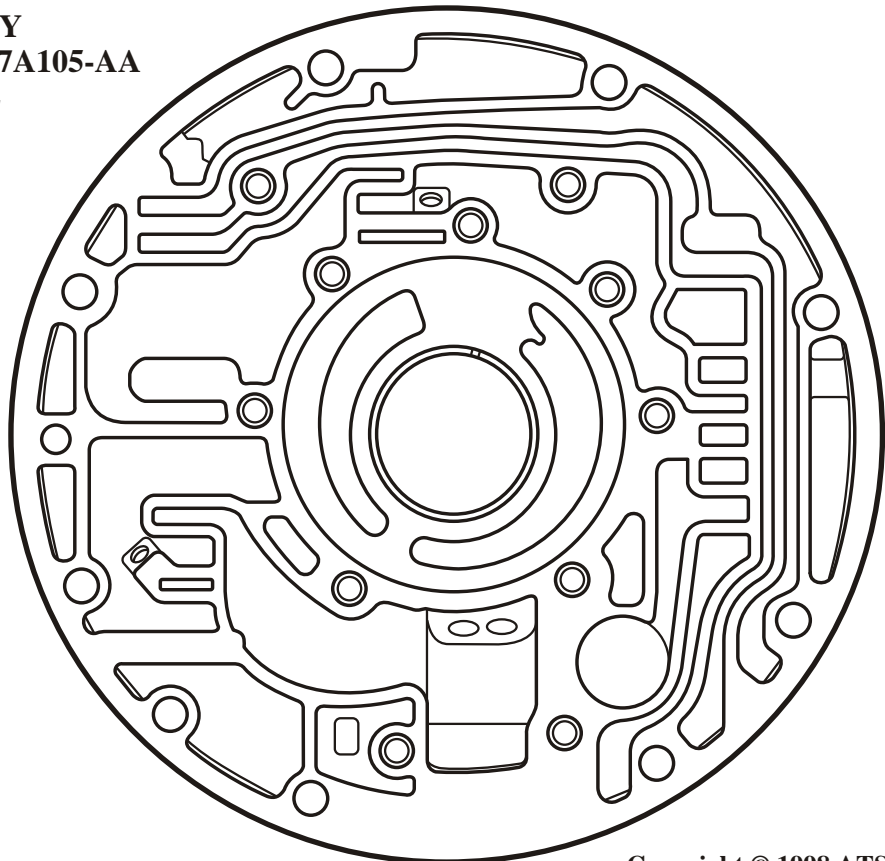
Copyright © 1998 ATSG

Figure 1

1998 E4OD/4R100 PUMP BODY
CASTING NUMBER RF-F81P-7A105-AA
WORM TRACK SIDE



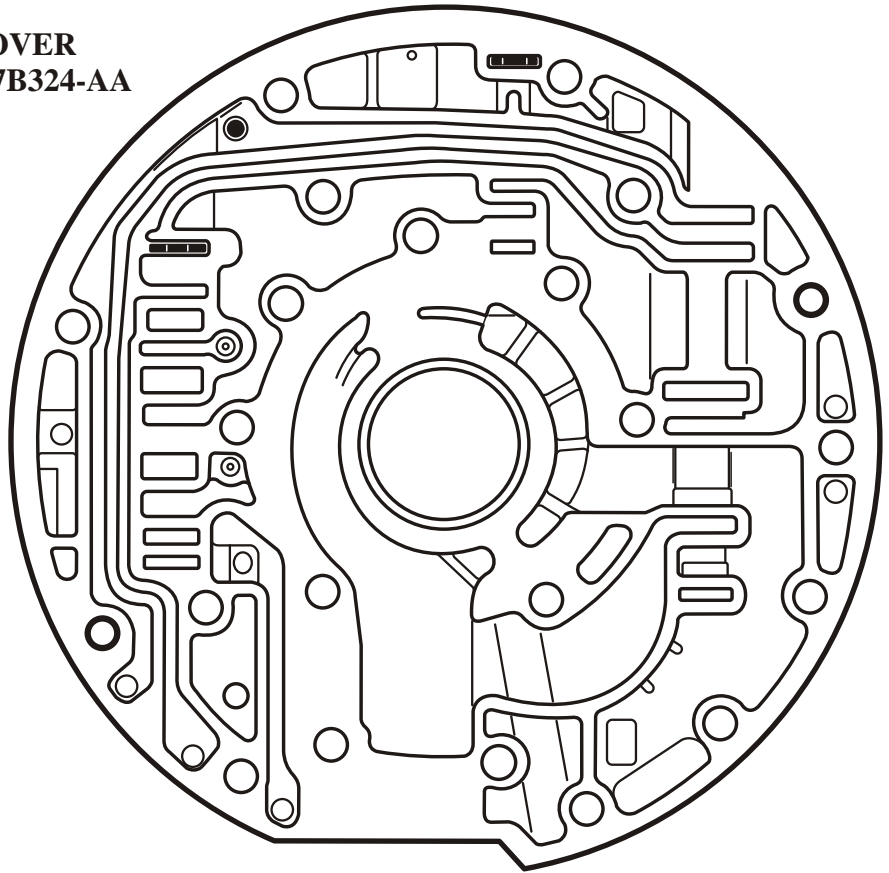
1995 E4OD PUMP BODY
CASTING NUMBER RF-F5TP-7A105-AA
WORM TRACK SIDE



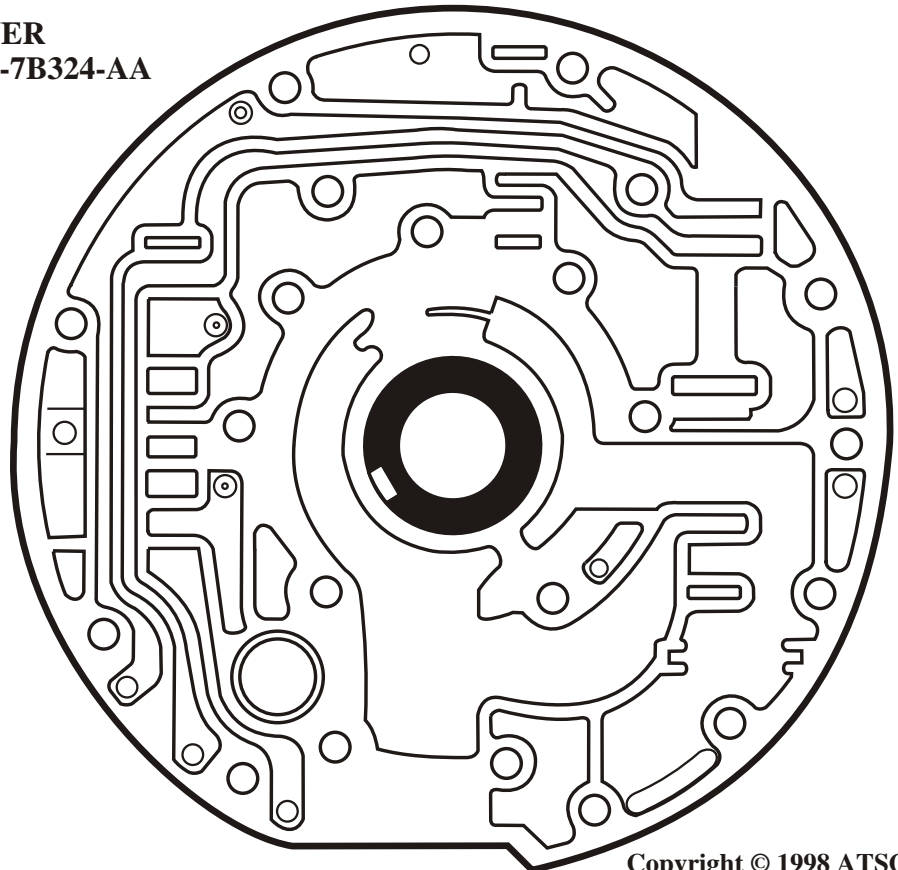
Copyright © 1998 ATSG

Figure 2

**1998 E4OD/4R100 PUMP COVER
CASTING NUMBER RF-F81P-7B324-AA**



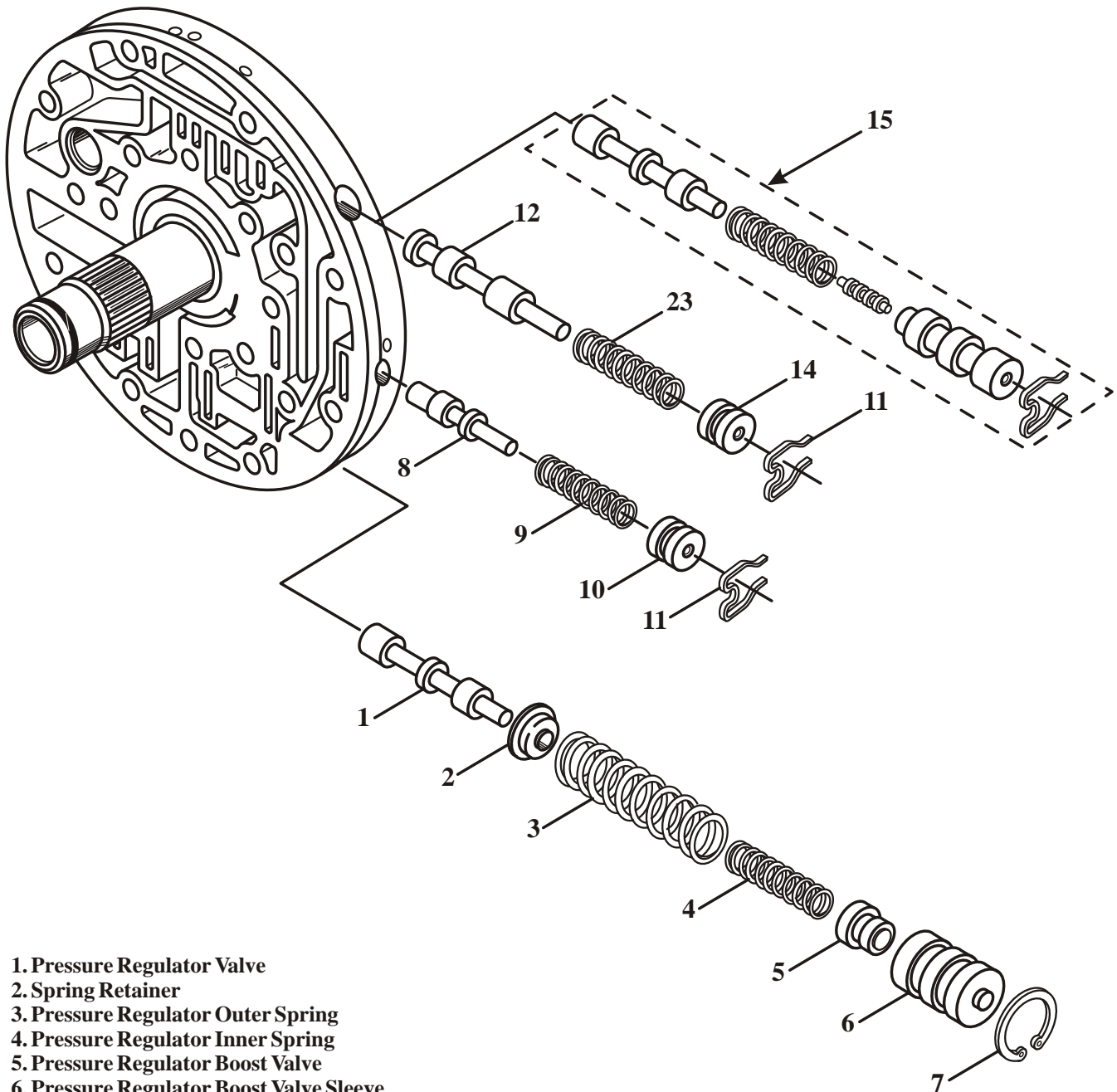
**1995 E4OD PUMP COVER
CASTING NUMBER RF-F5TP-7B324-AA**



Copyright © 1998 ATSG

Figure 3

FORD 4R100 VALVE LINE-UPS IN PUMP ASSEMBLY

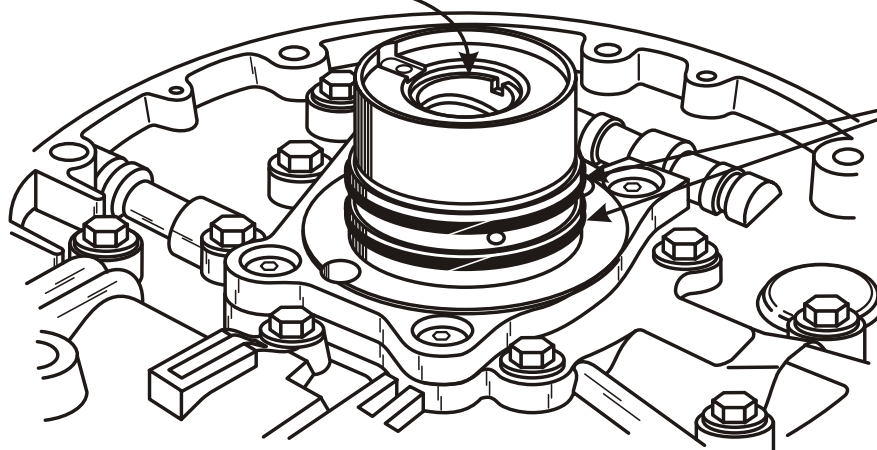


1. Pressure Regulator Valve
2. Spring Retainer
3. Pressure Regulator Outer Spring
4. Pressure Regulator Inner Spring
5. Pressure Regulator Boost Valve
6. Pressure Regulator Boost Valve Sleeve
7. Snap Ring
8. Converter Clutch Regulator Valve
9. Converter Clutch Regulator Spring
10. Converter Clutch Regulator Bore Plug
11. Bore Plug Retainer
12. Converter Clutch Control Valve (Gas "On-Off" Only)
13. Converter Clutch Control Spring (Gas "On-Off" Only)
14. Converter Clutch Control Bore Plug
15. Converter Clutch Control Line-up (Diesel "PWM" Only)

Copyright © 1998 ATSG

Figure 4

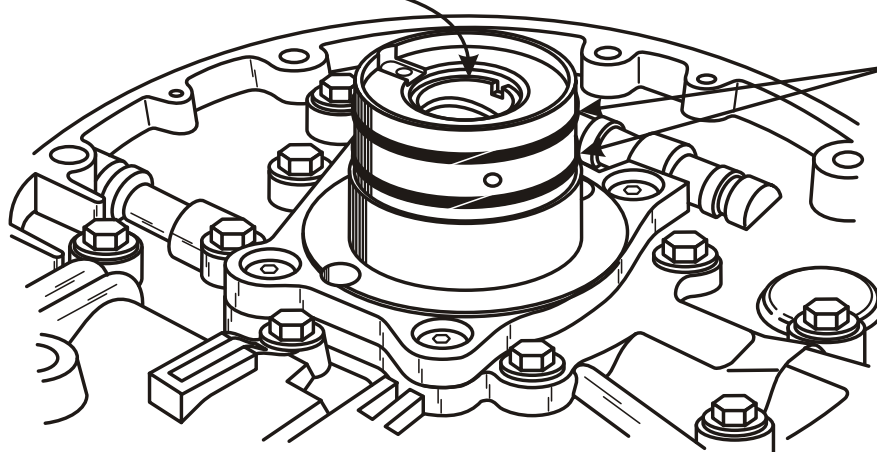
BUSHING



COAST CLUTCH
SEAL RINGS ARE
LOW ON PUMP TOWER
(LIKE E40D)

USED WITH THE "CAST IRON" COAST CLUTCH DRUM
WITH 5.4L AND 6.8L "WITHOUT" PTO OPTION

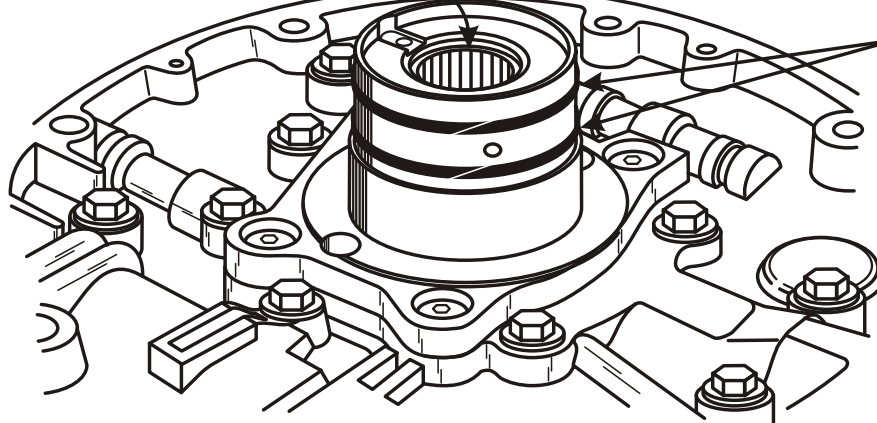
BUSHING



COAST CLUTCH
SEAL RINGS ARE HIGHER
ON THE PUMP TOWER

USED WITH THE "STAMPED STEEL" COAST CLUTCH DRUM
WITH 5.4L AND 6.8L "WITHOUT" PTO OPTION

CAGED NEEDLE
BEARING

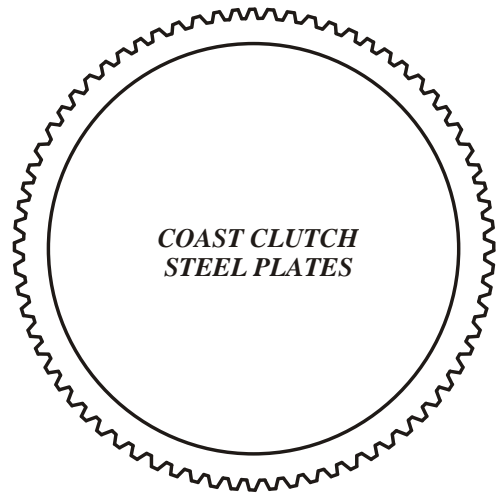
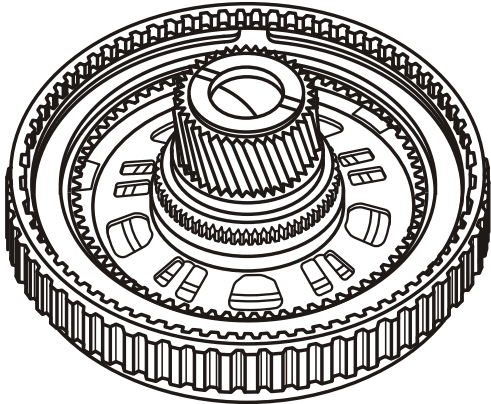


COAST CLUTCH
SEAL RINGS ARE HIGHER
ON THE PUMP TOWER

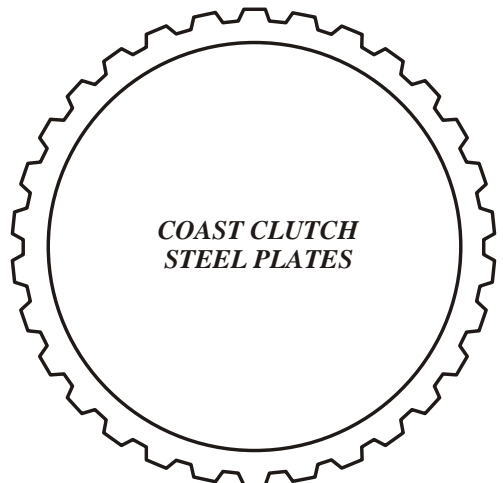
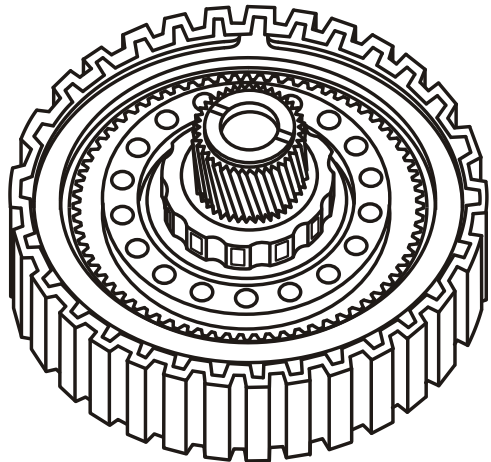
USED WITH THE "STAMPED STEEL" COAST CLUTCH DRUM
WITH 6.8L AND 7.3L "WITH" PTO OPTION

Copyright © 1998 ATSG

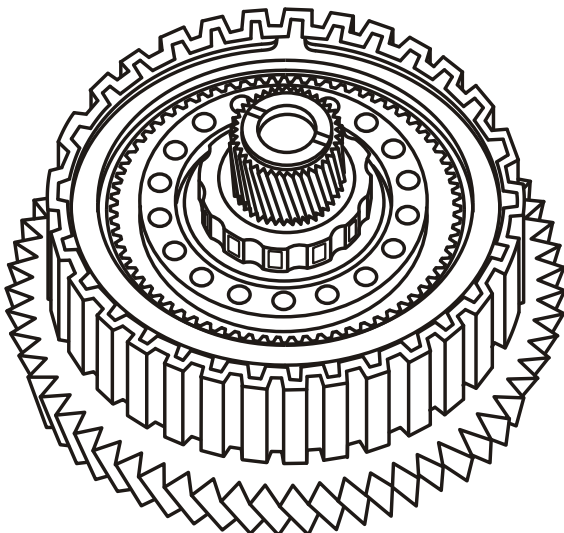
Figure 5



**"CAST IRON" COAST CLUTCH DRUM USED
WITH 5.4L AND 6.8L "WITHOUT" PTO OPTION**



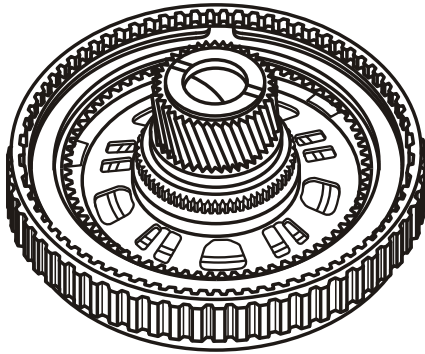
**"STAMPED STEEL" COAST CLUTCH DRUM USED
WITH 5.4L AND 6.8L "WITHOUT" PTO OPTION**



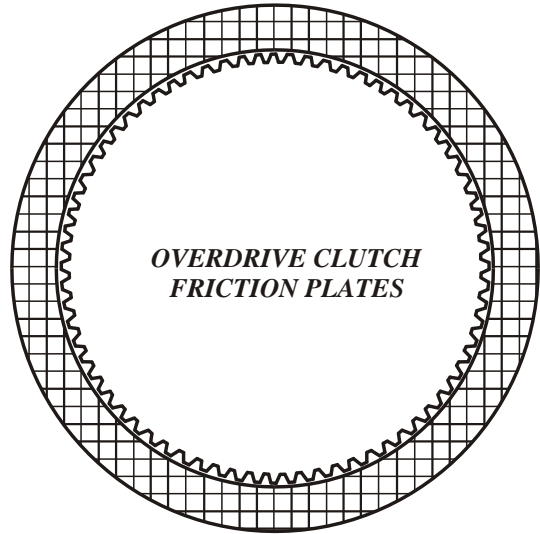
**"STAMPED STEEL" COAST CLUTCH DRUM USED
WITH 6.8L AND 7.3L "WITH" PTO OPTION**

Copyright © 1998 ATSG

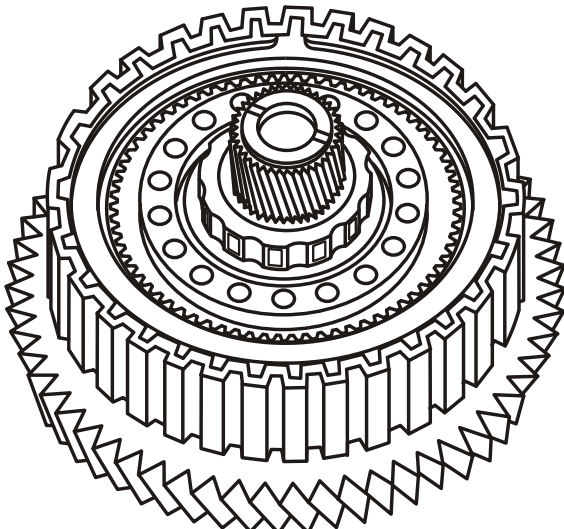
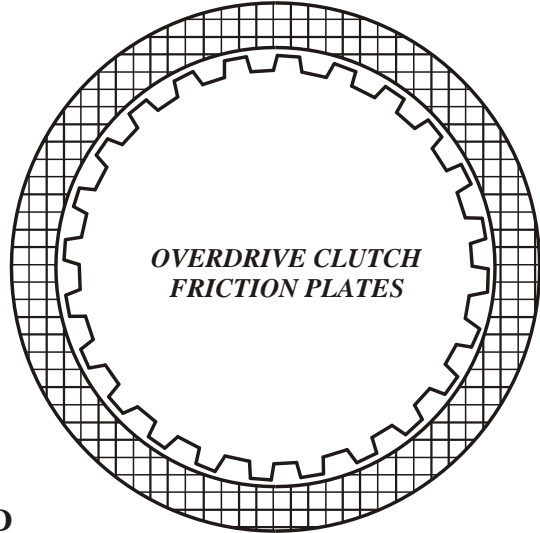
Figure 6



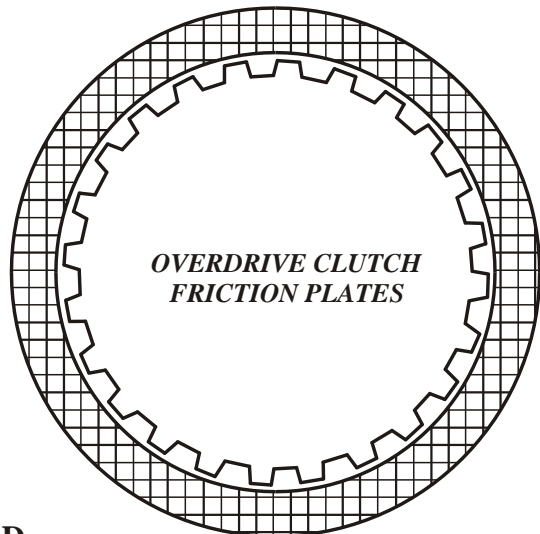
**"CAST IRON" COAST CLUTCH DRUM USED
WITH 5.4L AND 6.8L "WITHOUT" PTO OPTION**



**"STAMPED STEEL" COAST CLUTCH DRUM USED
WITH 5.4L AND 6.8L "WITHOUT" PTO OPTION**



**"STAMPED STEEL" COAST CLUTCH DRUM USED
WITH 6.8L AND 7.3L "WITH" PTO OPTION**



Copyright © 1998 ATSG

Figure 7