



Technical Service Information

FORD 4R100 "NON-PTO" AND "PTO" HYDRAULIC DIFFERENCES

CHANGE: Beginning at the start of production for 1999 models, Ford Motor Company made available a "Power Take Off" option for some F250, F350, F450 and F550 Super Duty Trucks, equipped with 5.4L, 6.8L and 7.3L engines.

REASON: The "PTO" option addition, to the 4R100, required many changes to the transmission to make the "PTO" function. The "PTO" window, added to the case, the "PTO" drive gear and other cosmetic changes were previously covered in ATSG Bulletin No. 98-56. Hydraulic changes also had to be made to make the coast clutch operate in ranges other than the Drive ranges.

PARTS AFFECTED:

- (1) **TRANSMISSION CASE:** The transmission case was changed to accommodate the "PTO" window, as shown in ATSG Bulletin No. 98-56. All 4R100 Cases, "NON-PTO" and "PTO," also had a "Dam" added to separate "Rear Lube" and to incorporate "Central Lube" as shown in Figure 1.
- (2) **VALVE BODY TO CASE SPACER PLATE:** The Valve Body to Case Spacer plate on the "PTO" versions had a hole added to supply the 3-4 Shift Valve with Line Pressure, as shown in Figure 3. A hole was also added to the Spacer Plate on "NON-PTO" and "PTO" versions to connect "Solenoid Regulator Valve" oil to supply "Central Lubrication." Refer to Figures 2 and 3 for identification of "NON-PTO" and "PTO" Valve Body To Case Spacer Plates.
- (3) **MAIN VALVE BODY:** A passage was added on the "Upper Side" of the Main Valve Body on "PTO" versions, as shown in Figure 5, to supply Line Pressure to the 3-4 Shift Valve. A passage was also added, on the "Lower Side" of the Main Valve Body, to connect the 3-4 Shift Valve (Coast Clutch Circuit) to an exhaust as shown in Figure 7. The spring side of the 3-4 Shift Valve was also separated from the Low/Reverse circuit as shown in Figure 7. Refer to Figures 4-7 for identification of "NON-PTO" and "PTO" Main Valvebody's.
- (4) **LOWER VALVE BODY:** The Lower Valve Body had a passage added, as shown in Figure 9, to connect to the "*new*" exhaust passage in the Main Valve Body. Refer to Figures 8 and 9 for identification of "NON-PTO" and "PTO" Lower Valvebody's.
- (5) **LOWER VALVE BODY SPACER PLATE:** The Lower Valve Body Spacer Plate had a hole added to connect the "*new*" exhaust passage in the Main Valve Body to the "*new*" exhaust passage in the Lower Valve body as shown in Figure 10. Refer to Figure 10 for "NON-PTO" and "PTO" Lower Valve Body Spacer Plate identification.

INTERCHANGEABILITY:

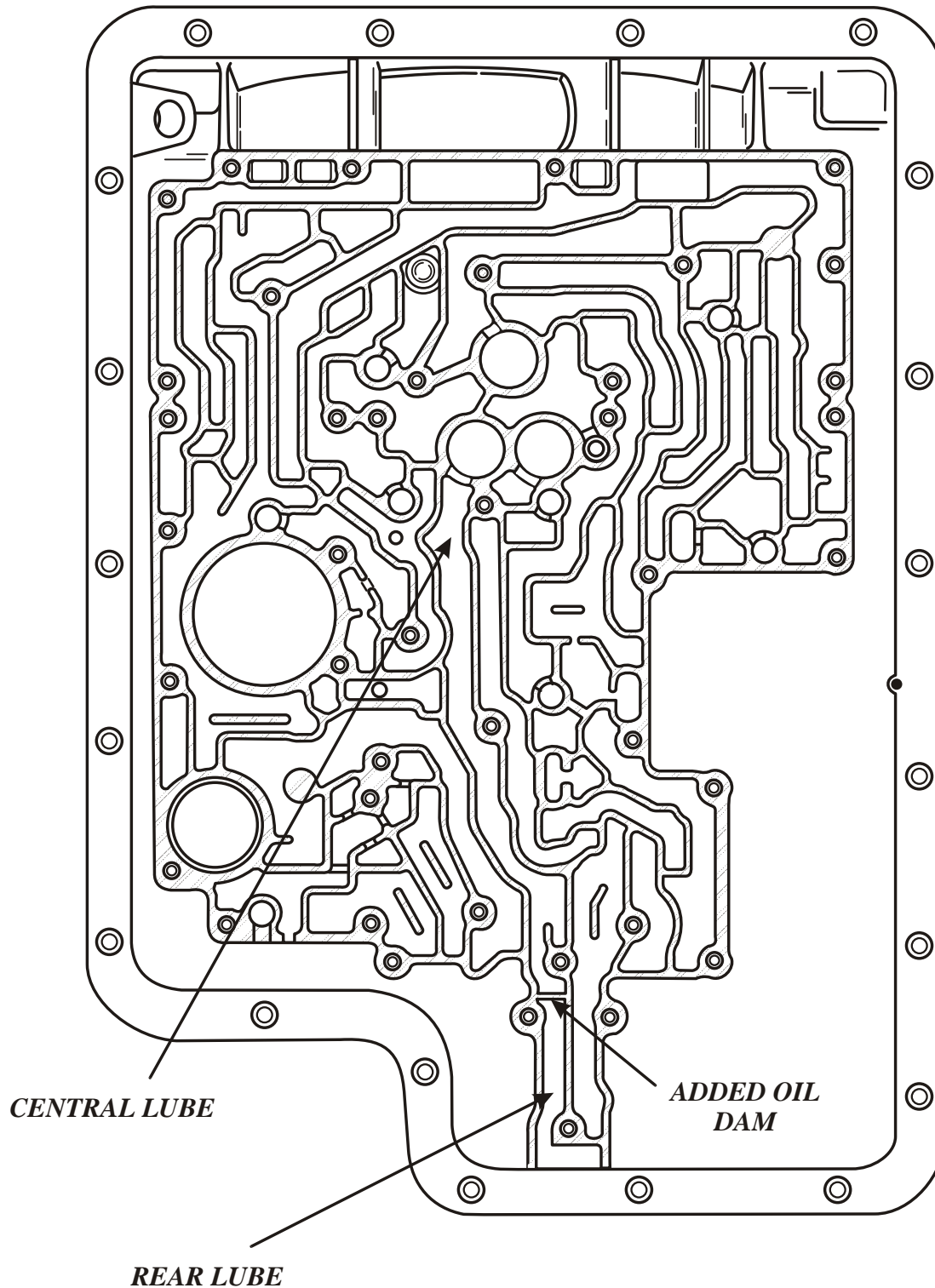
None of the parts listed above will interchange between "NON-PTO" and "PTO" versions.

SERVICE INFORMATION:

Valve Body To Case Spacer Plate (Non-PTO)F81Z-7A008-DA
Valve Body To Case Spacer Plate (PTO)F81Z-7A008-BA

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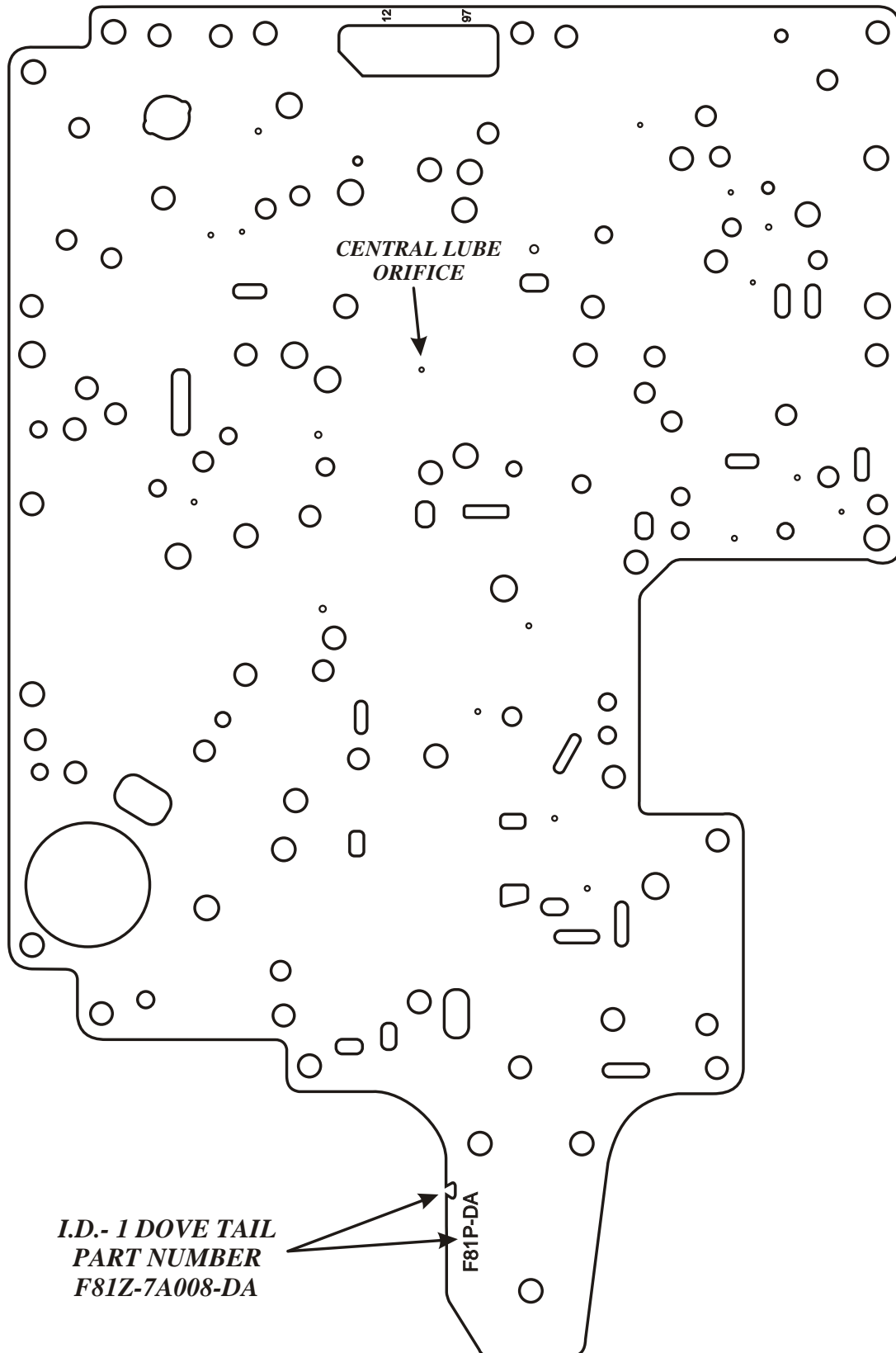
4R100 CASE "NON-PTO" AND "PTO"



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Figure 1

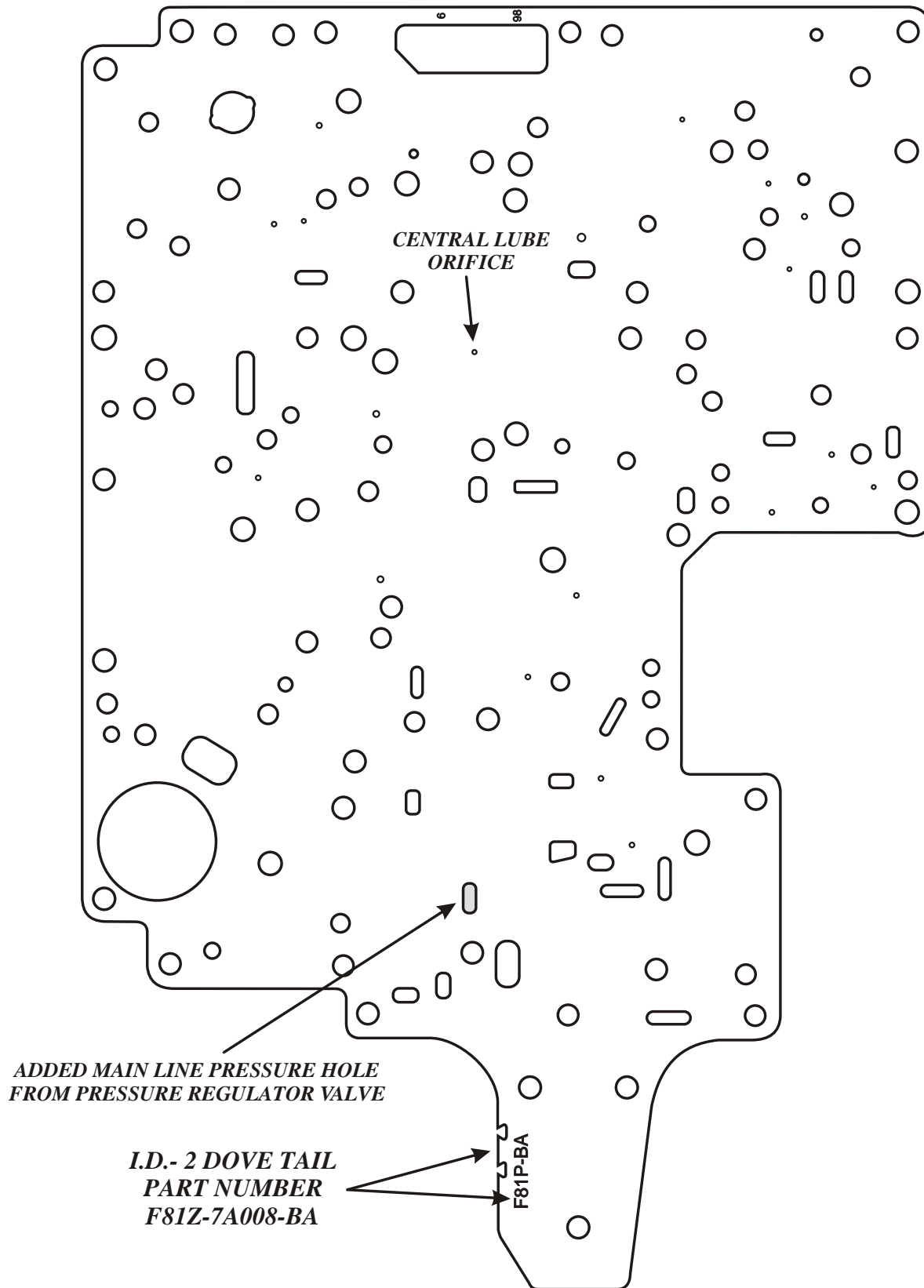
4R100 MAIN SPACER PLATE "NON-PTO"



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Figure 2

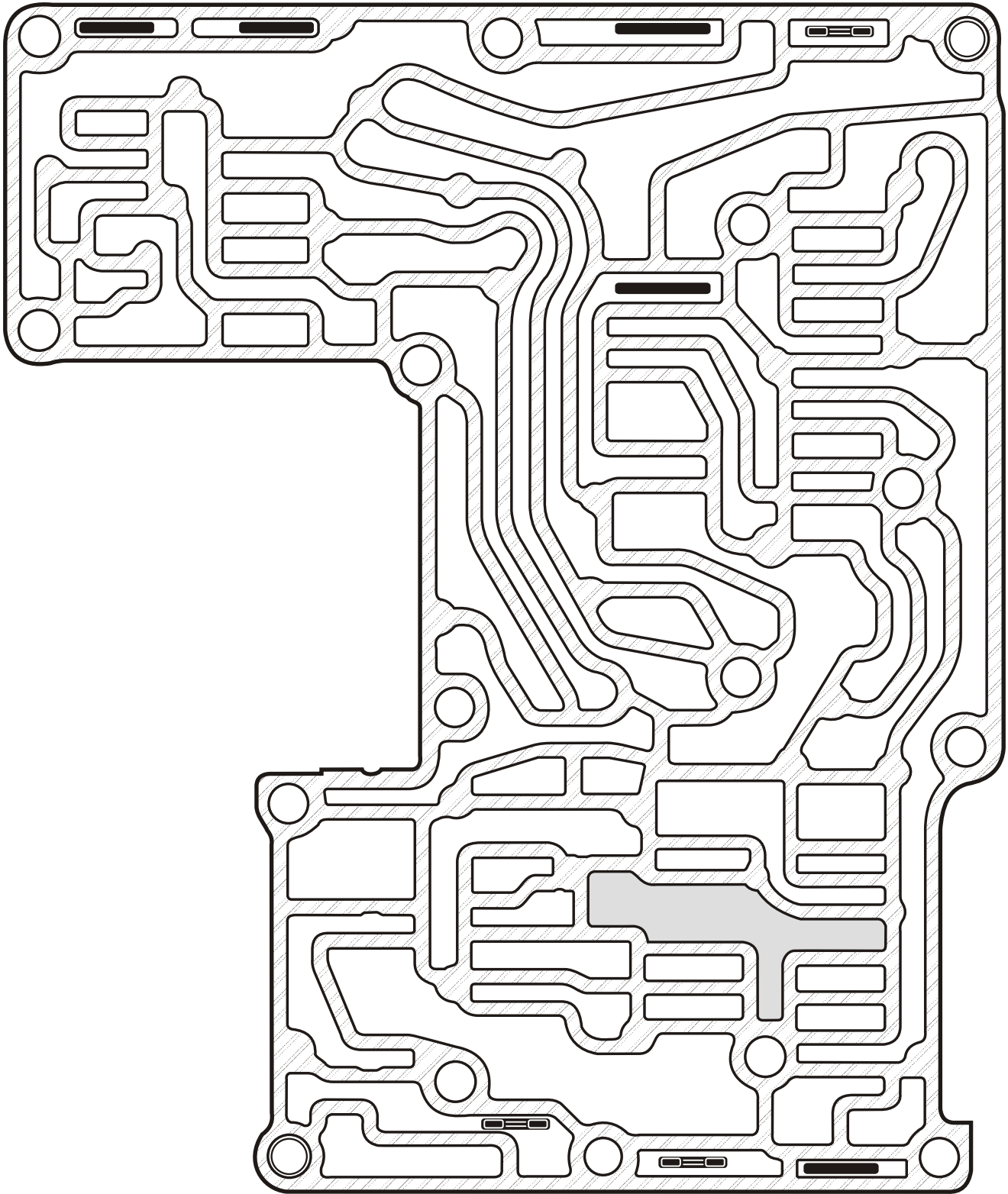
4R100 MAIN SPACER PLATE "PTO"



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Figure 3

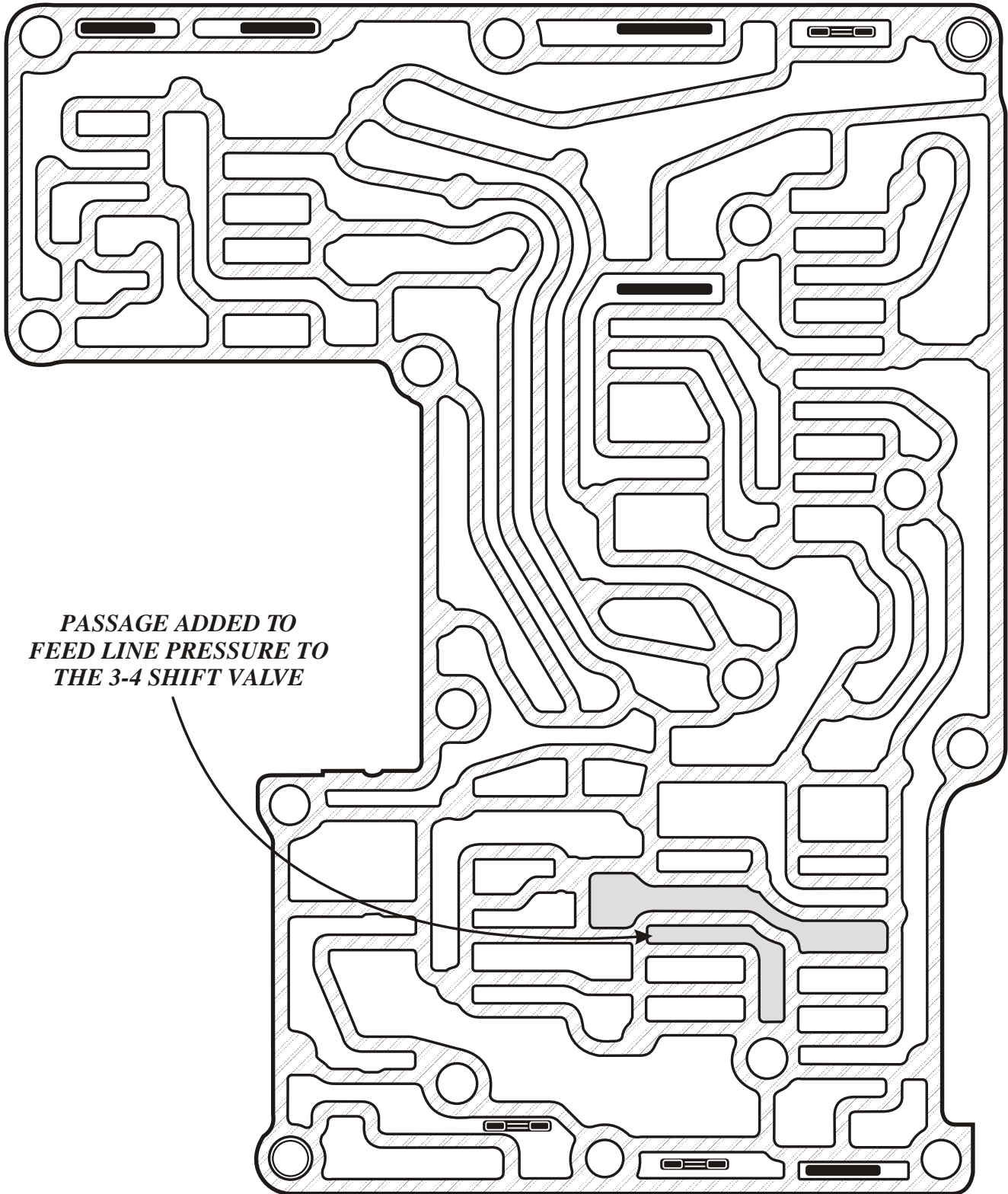
"UPPER SIDE" 4R100 MAIN VALVE BODY "NON-PTO"



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Figure 4

"UPPER SIDE" 4R100 MAIN VALVE BODY "PTO"

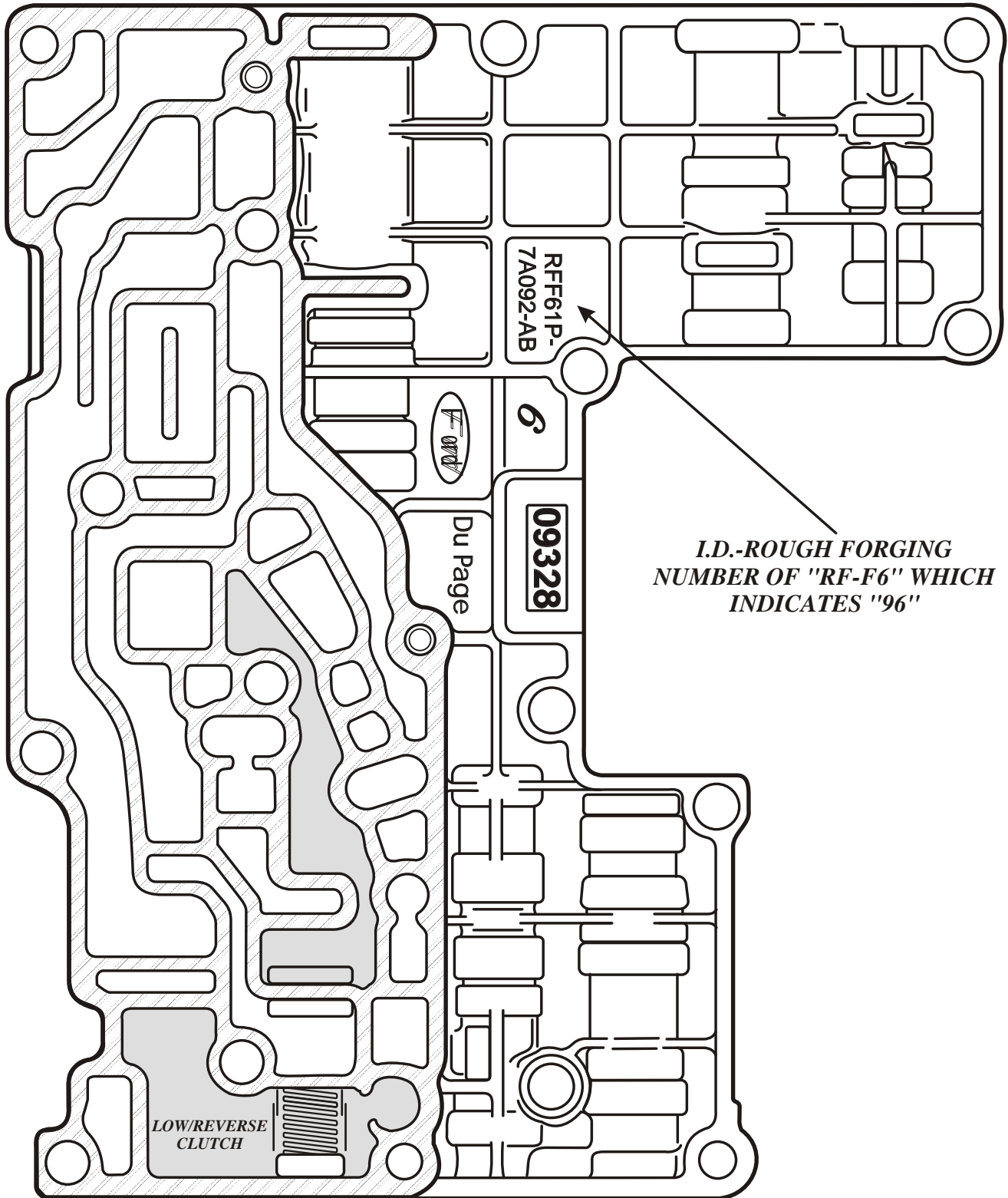


*PASSAGE ADDED TO
FEED LINE PRESSURE TO
THE 3-4 SHIFT VALVE*

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Figure 5

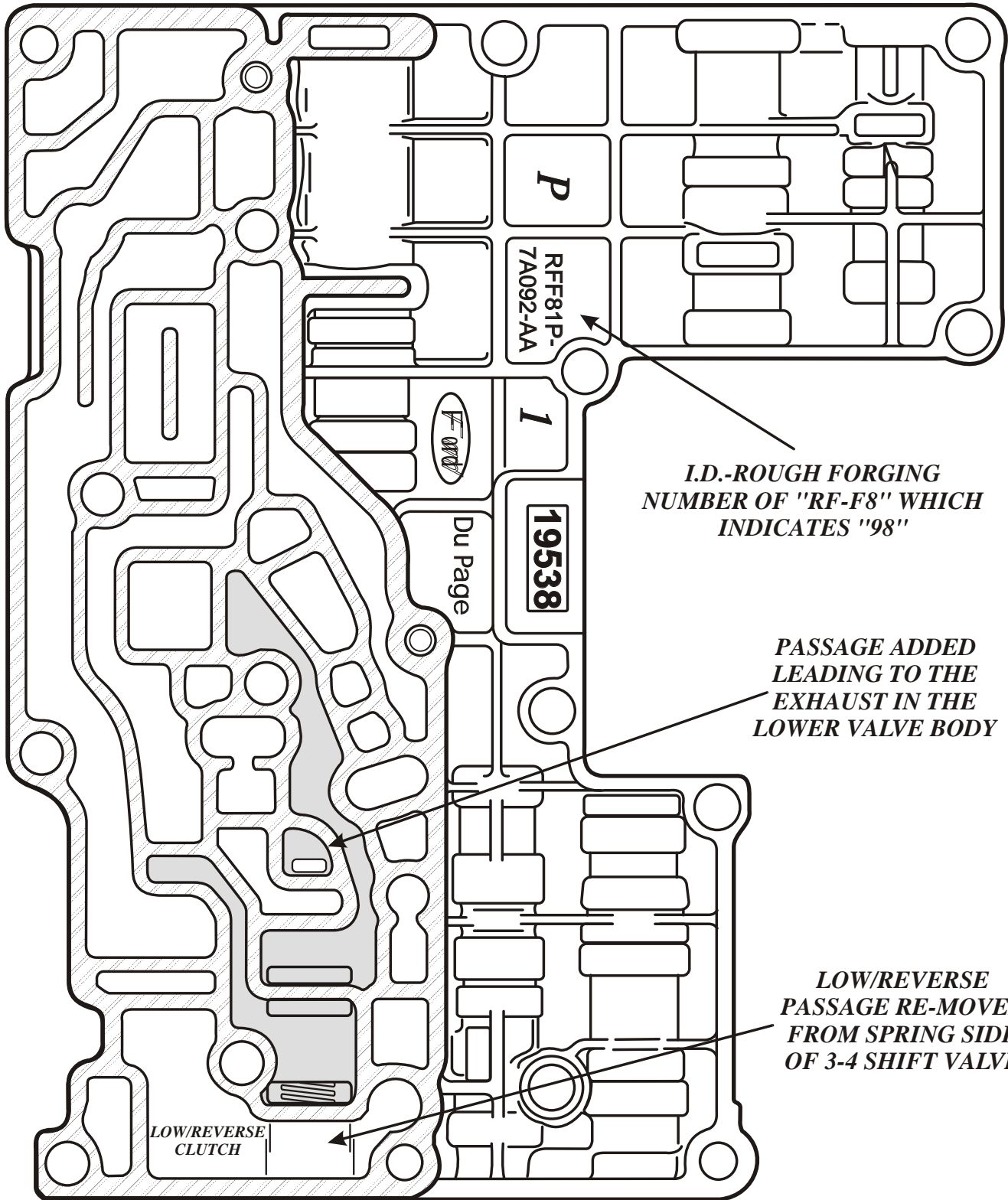
"LOWER SIDE" 4R100 MAIN VALVE BODY "NON-PTO"



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Figure 6

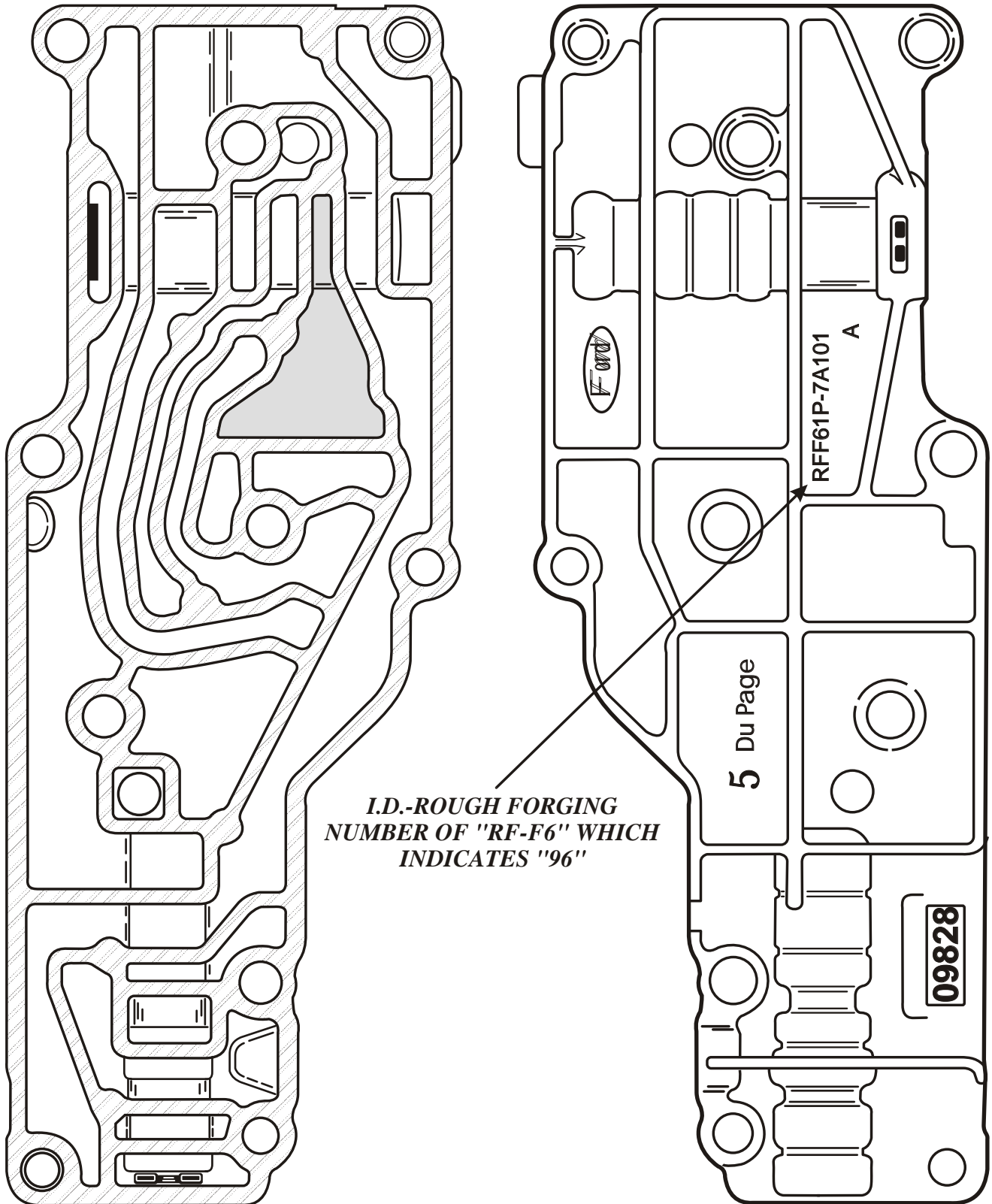
"LOWER SIDE" 4R100 MAIN VALVE BODY "PTO"



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Figure 7

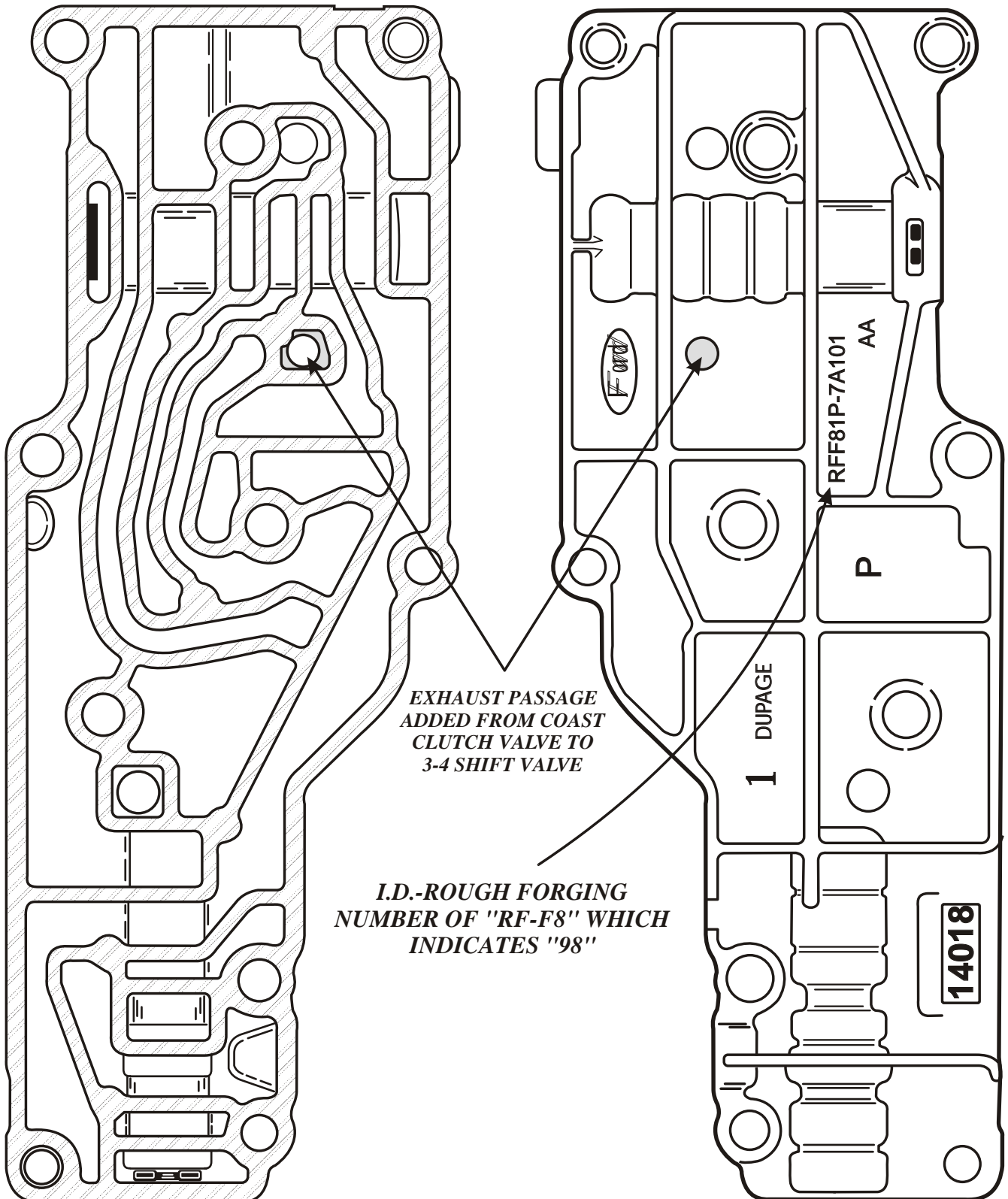
4R100 LOWER VALVE BODY "NON-PTO"



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Figure 8

4R100 LOWER VALVE BODY "PTO"



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Figure 9

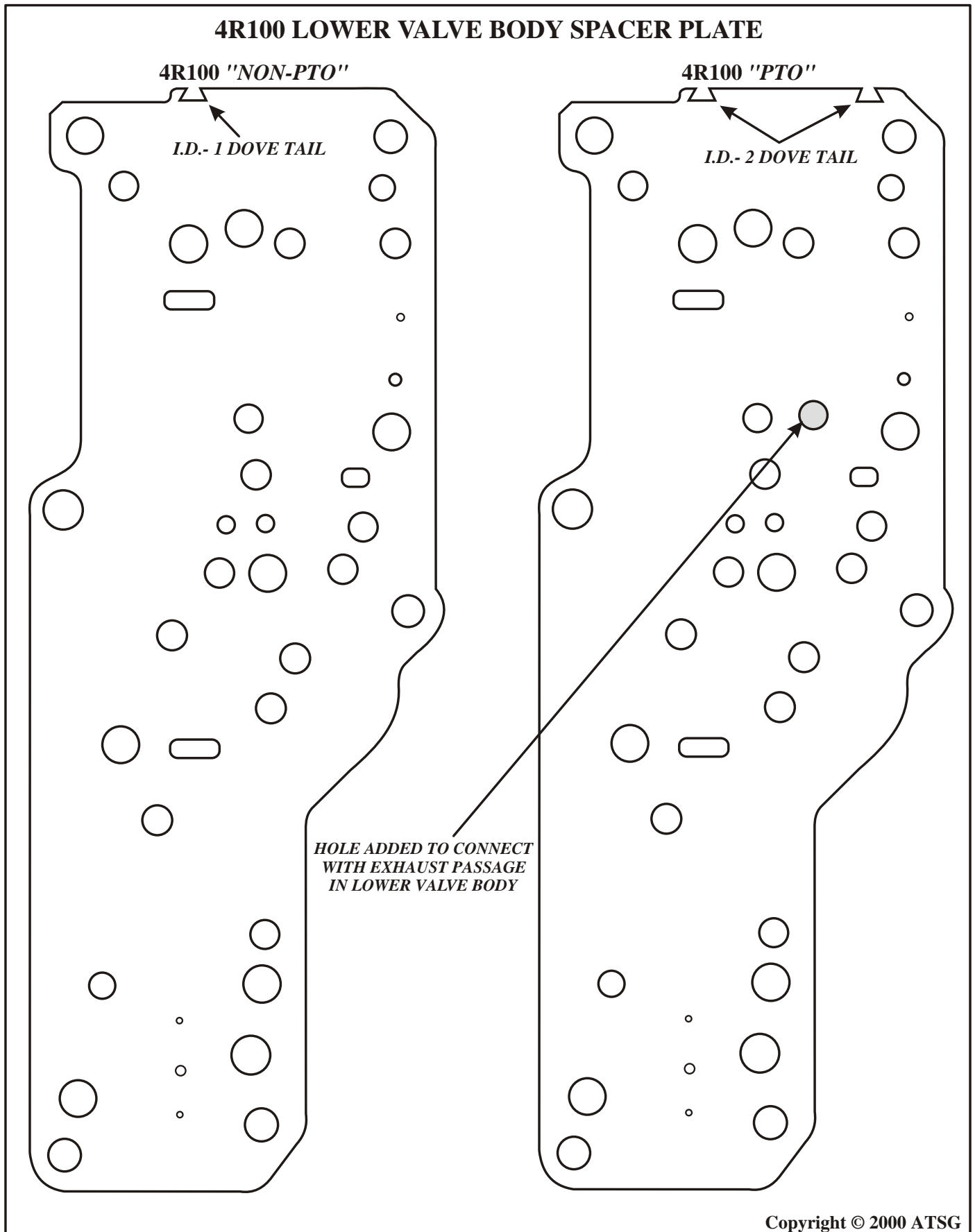
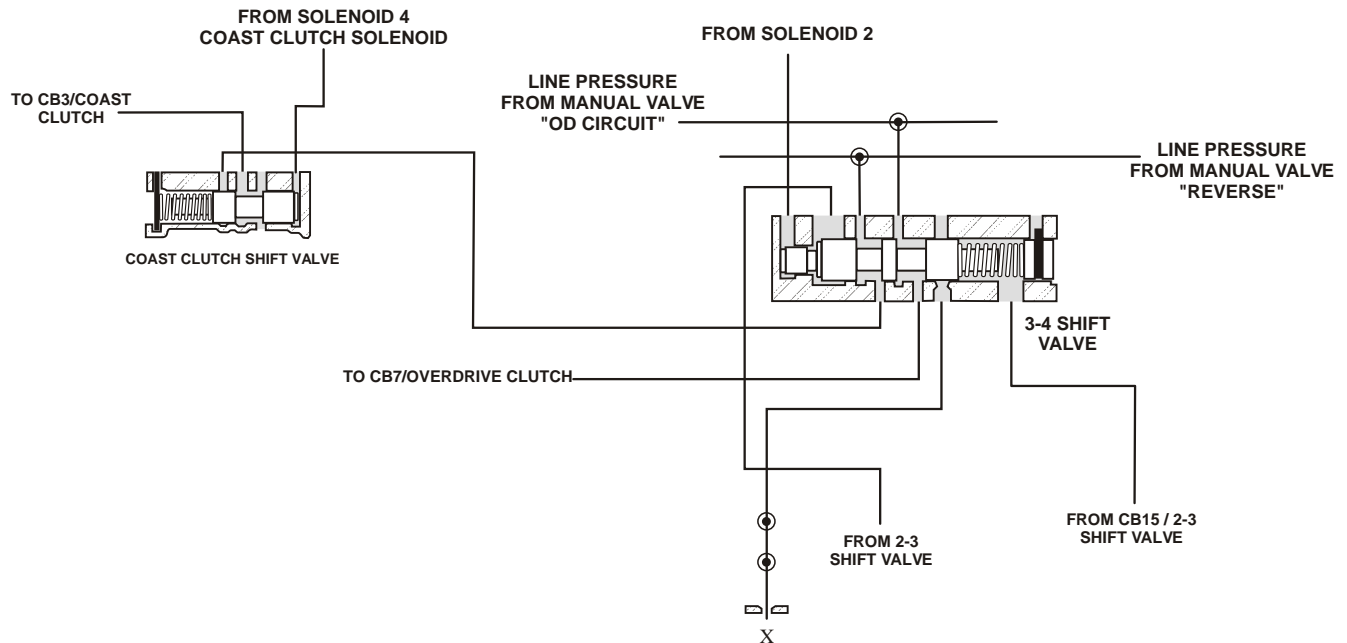
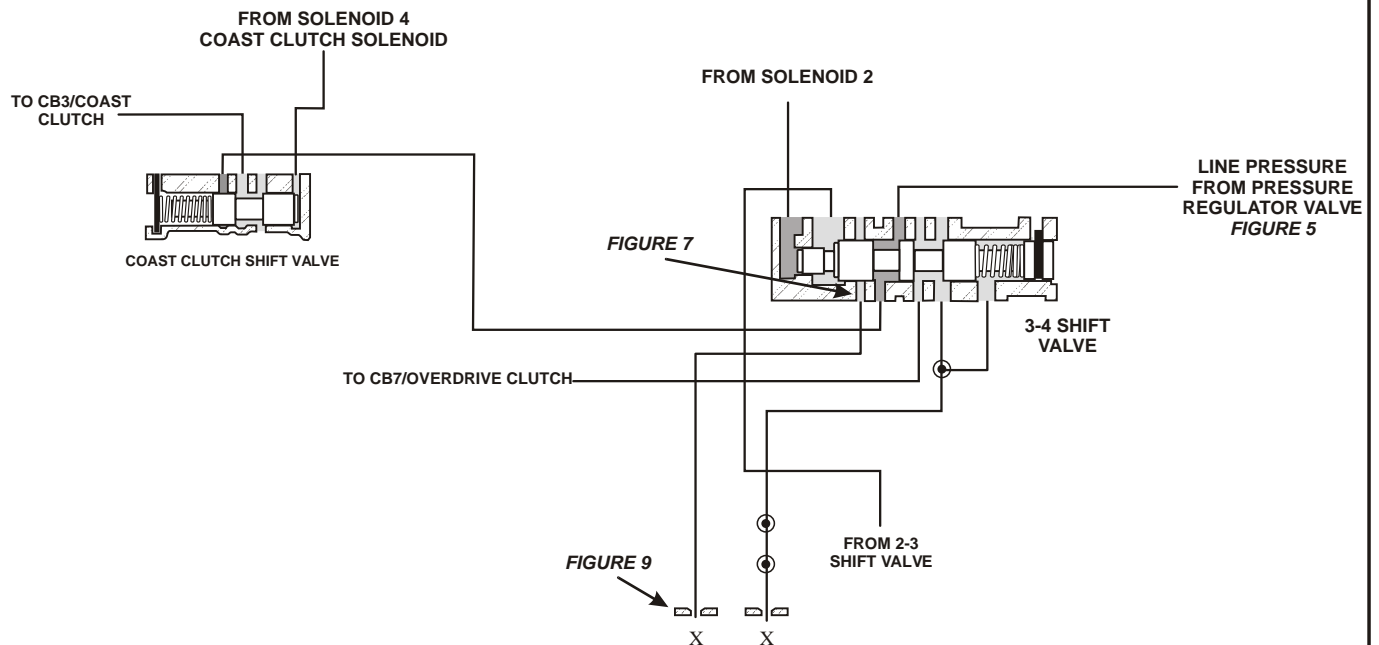


Figure 10

"NON-PTO" 3-4 SHIFT VALVE HYDRAULIC CIRCUIT



"PTO" 3-4 SHIFT VALVE HYDRAULIC CIRCUIT



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Figure 11