



DODGE 48RE VALVEBODY HYDRAULIC DIFFERENCES

CHANGE: Beginning at the start of production for the model year 2003, the 48RE transmission was introduced to the Dodge line of Heavy Duty trucks. The 48RE is a new designation for the previous design 46/47RE. There are numerous differences as far as a re-designed pump Stator and Torque Converter as well as increased capacity in the clutch drums. There was also a change in the hydraulics in the Valvebody in the Torque Converter Clutch Control circuit.

REASON: The reason for the change in the Torque Converter Control Circuit is so that TCC engagement will be possible in the Manual 2 and Manual 1 position, providing better pulling capacity at lower engine rpm. The TCC Solenoid is now fed Forward Clutch pressure instead of the previous design, that was fed from the 1-2 shift valve. This now makes it possible to have TCC in 1st gear. Refer to Figures 1 and 2 for a partial hydraulic circuit diagram of the TCC circuit.

PARTS AFFECTED: The main changes were made in the Channel plate and the two spacer plates, which required the elimination of the Number 2 checkball. Refer to the Figures below:

Refer to Figure 3 for a view of the previous design 46RE/47RE Main Valvebody and Upper Transfer Plate and checkball locations. There is also dotted circles around the areas that changed in the 48RE.

Refer to Figure 4 for a view of the Main Spacer Plate on the 46RE/47RE, and the hole configuration for the Number 2 checkball.

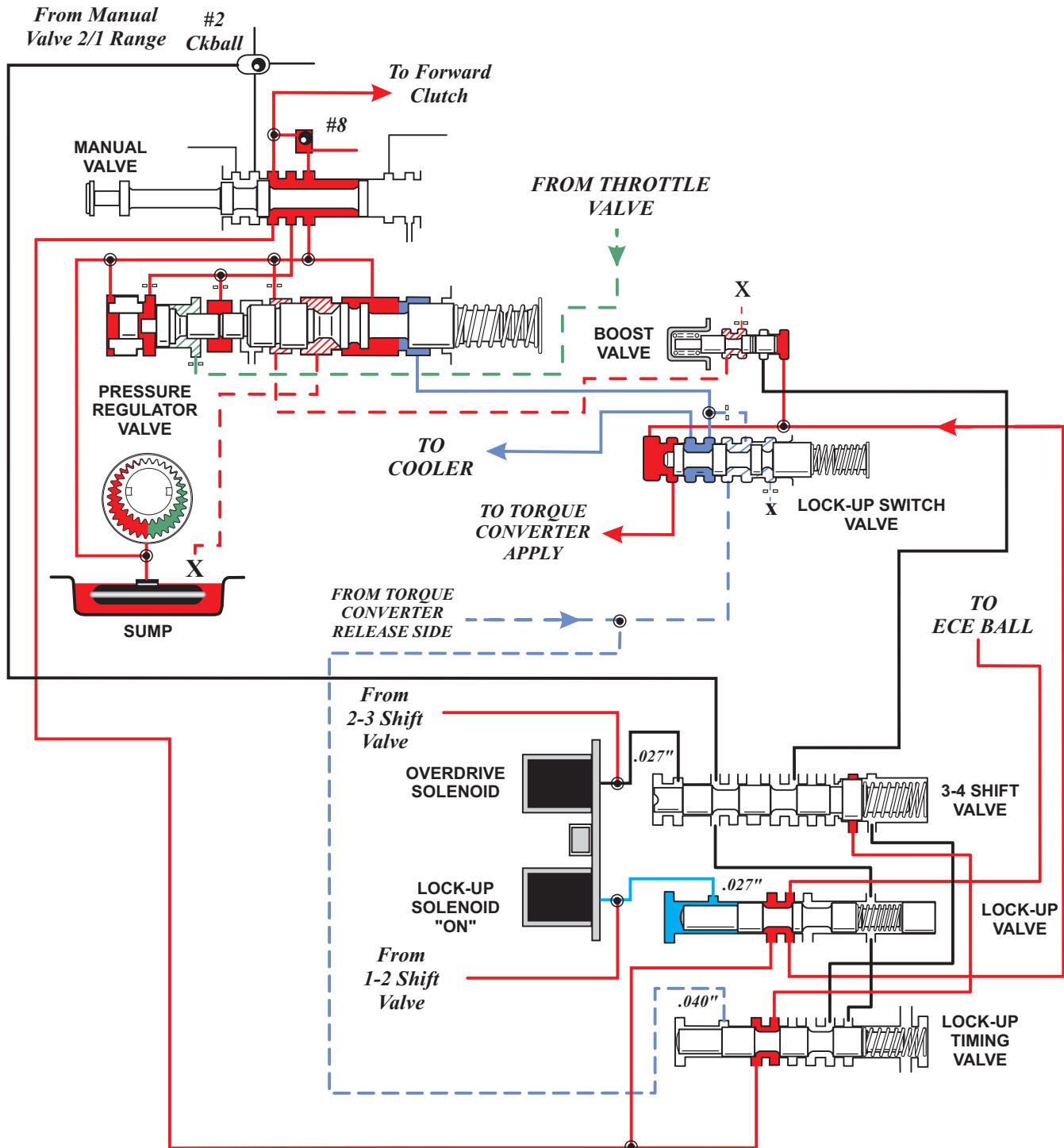
Refer to Figure 5 for a view of the Lower Transfer Plate and Lower Spacer Plate on the 46RE/47RE, and the hole configuration for the Number 2 checkball to the spring side of the Lock-up and 3-4 Shift Valve, and second land of the Lock-up Timing Valve. Also Figure 5 shows the Previous design TCC solenoid feed from the 1-2 shift valve.

Refer to Figure 6 for a view of the new design 48RE Main Valvebody and Upper Transfer Plate and checkball locations, notice the elimination of the Number 2 checkball. There is also dotted circles around the areas that changed in the 48RE.

Refer to Figure 7 for a view of the Main Spacer Plate on the 48RE, and the hole configuration for where the Number 2 checkball used to be. Notice there are only 3 holes, which are square, when compared to the previous plate in Figure 4.

Refer to Figure 8 for a view of the Lower Transfer Plate and Lower Spacer Plate on the 48RE, and the hole configuration for the Number 2 checkball is eliminated. Also Figure 8 shows the Previous design TCC solenoid feed from the 1-2 shift valve has been eliminated and the new hole connects the slot in the channel plate to the Forward Clutch circuit.

46RE/47RE PARTIAL HYDRAULIC SCHEMATIC "DRIVE" POSITION 3rd GEAR WITH TCC "ON"

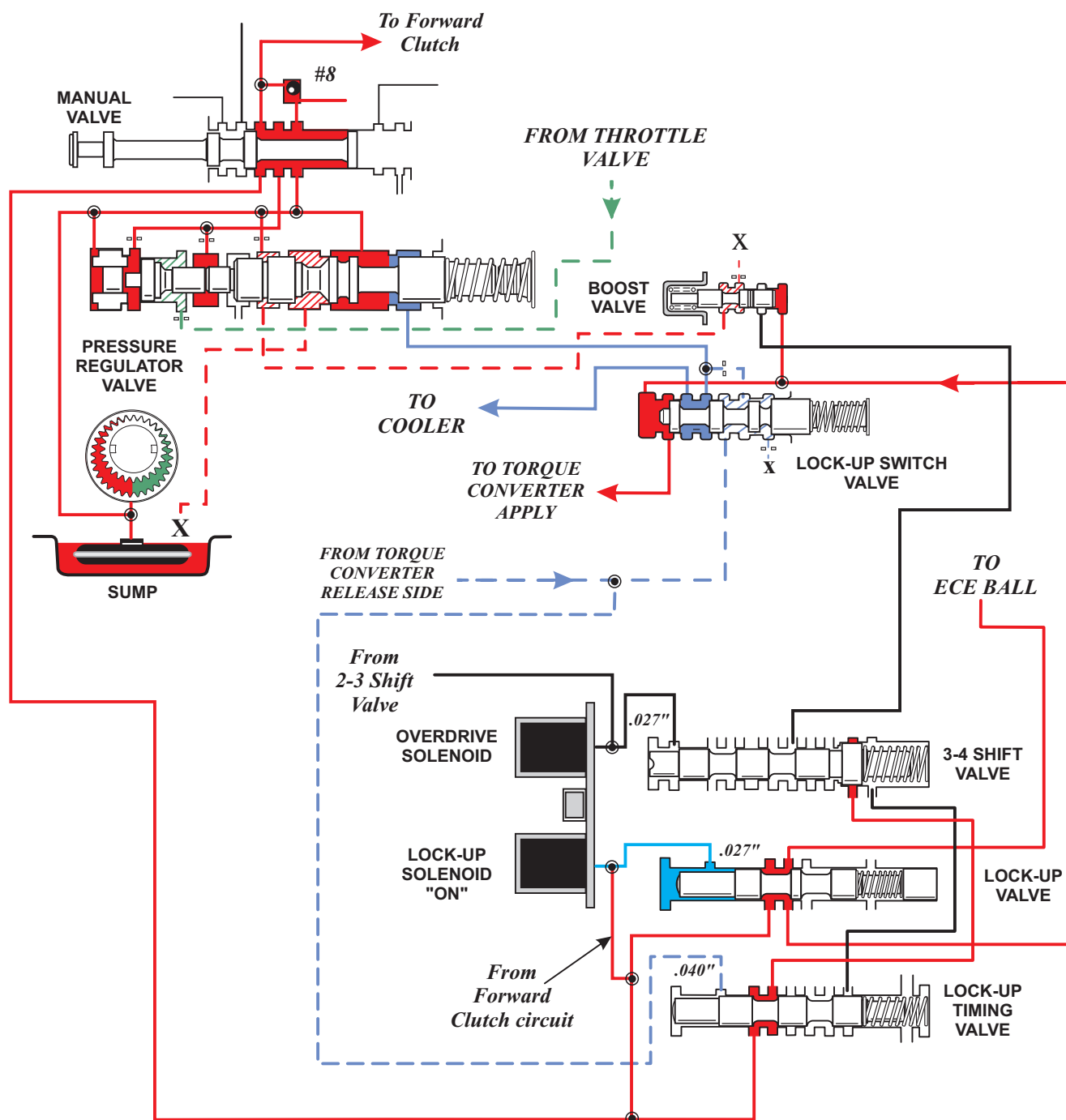


Note: The number 2 Checkball, on 46 and 47RE, is used for a 3-2 manual downshift and for TCC cancel in Manual 2 and Manual 1 ranges, by applying line pressure from the Manual valve to the spring side of the Lock-up and 3-4 Shift Valve, and second land of the Lock-up Timing Valve to Prevent application.

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Figure 1

48RE PARTIAL HYDRAULIC SCHEMATIC "DRIVE" POSITION 1st GEAR WITH TCC "ON"

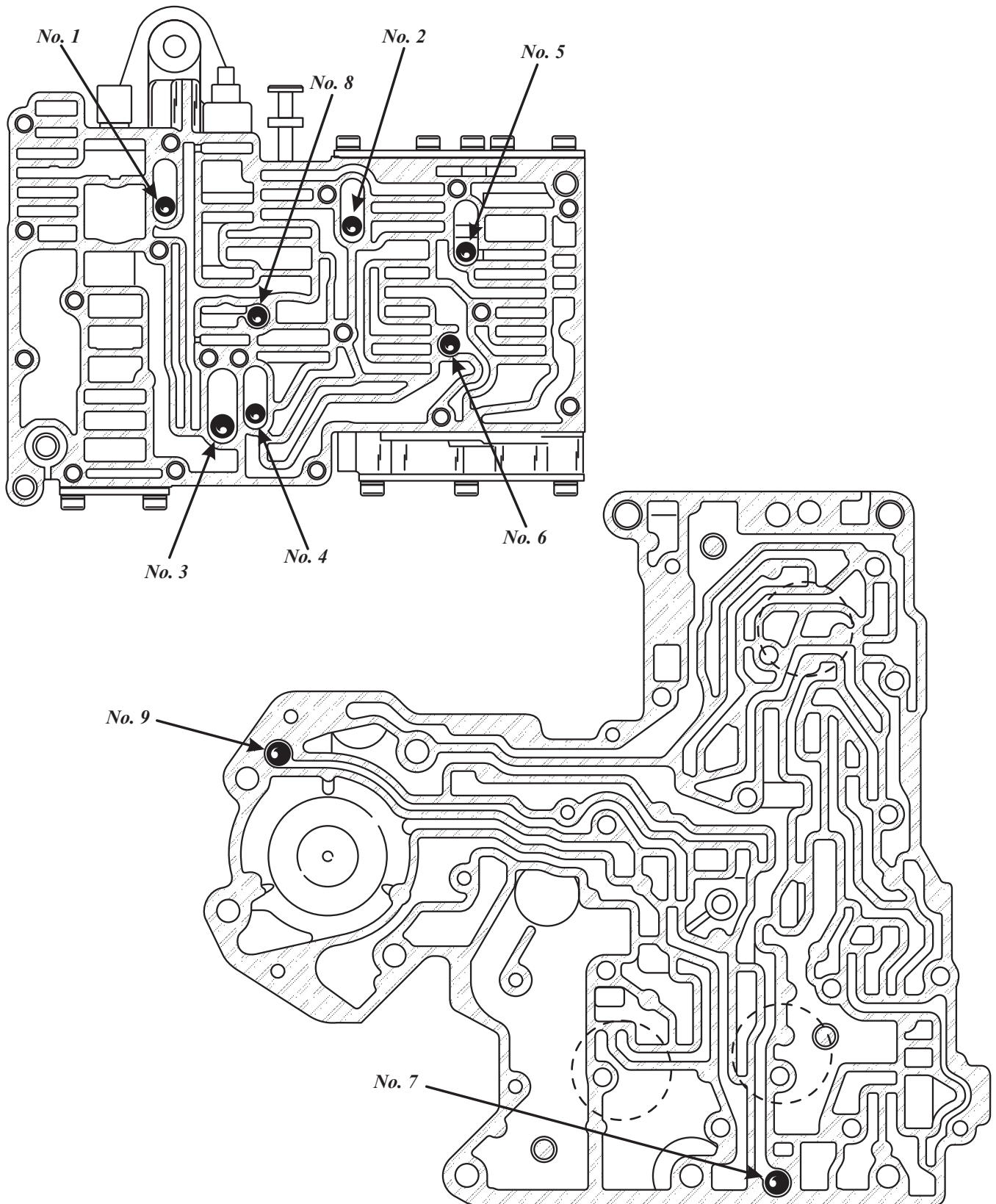


Note: The Number 2 checkball is eliminated on 48RE, this will make it possible to have TCC apply in Manual 2nd and Manual 1st.

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Figure 2

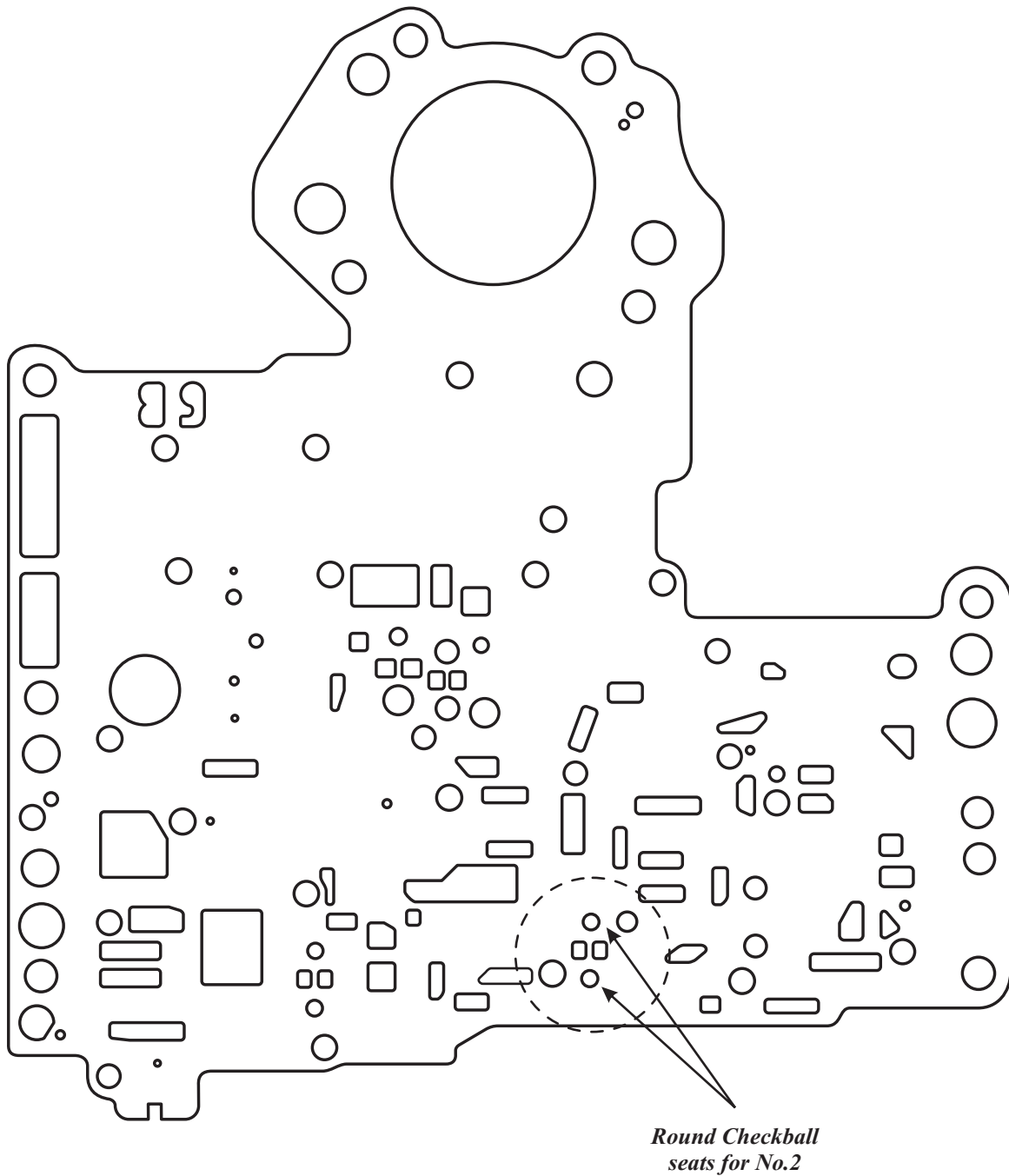
46RE/ 47RE MAIN VALVE BODY AND TRANSFER PLATE "UPPERSIDE"



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Figure 3

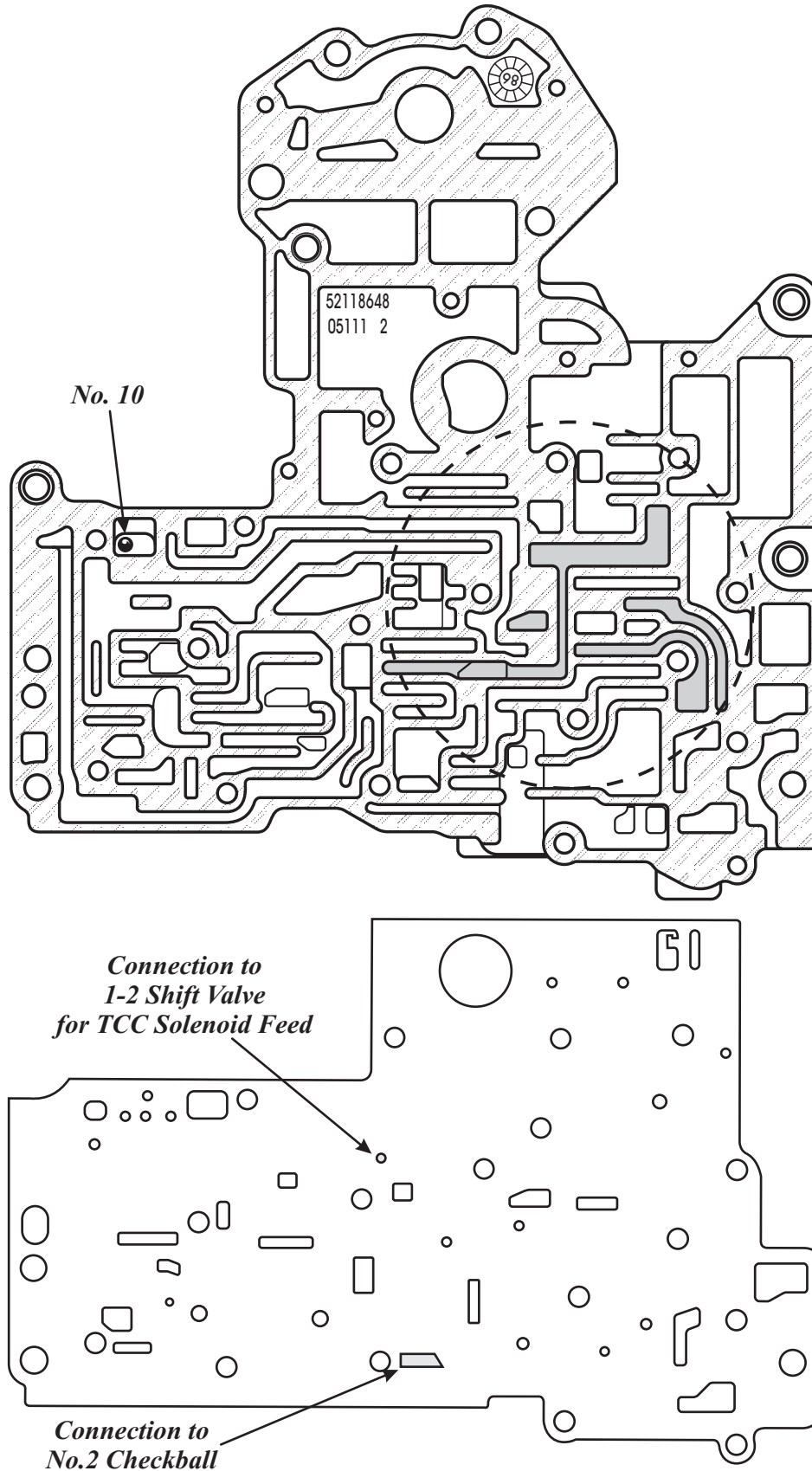
46RE /47RE MAIN SPACER PLATE



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Figure 4

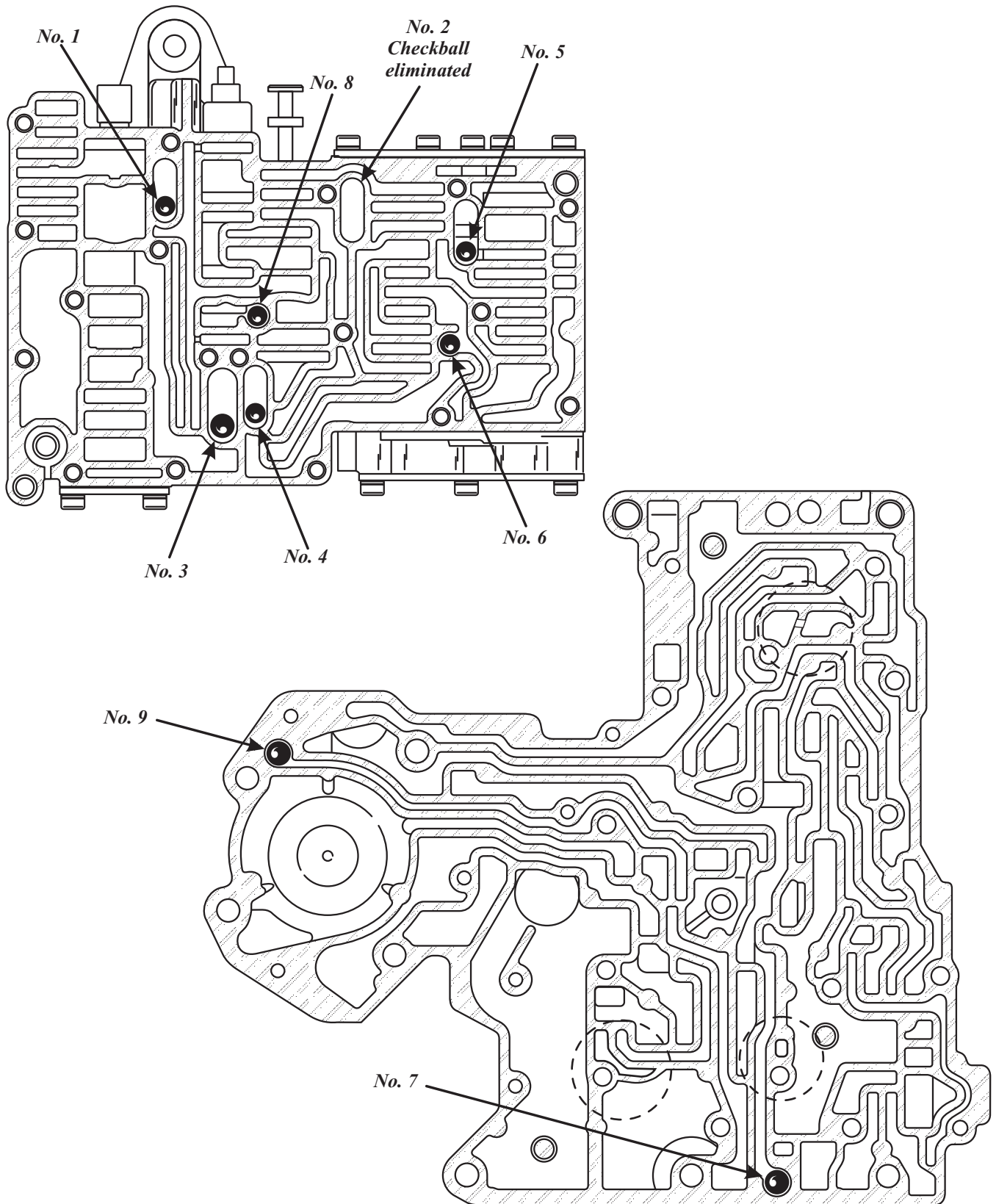
46RE /47RE TRANSFER AND SPACER PLATE "LOWER-SIDE"



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Figure 5

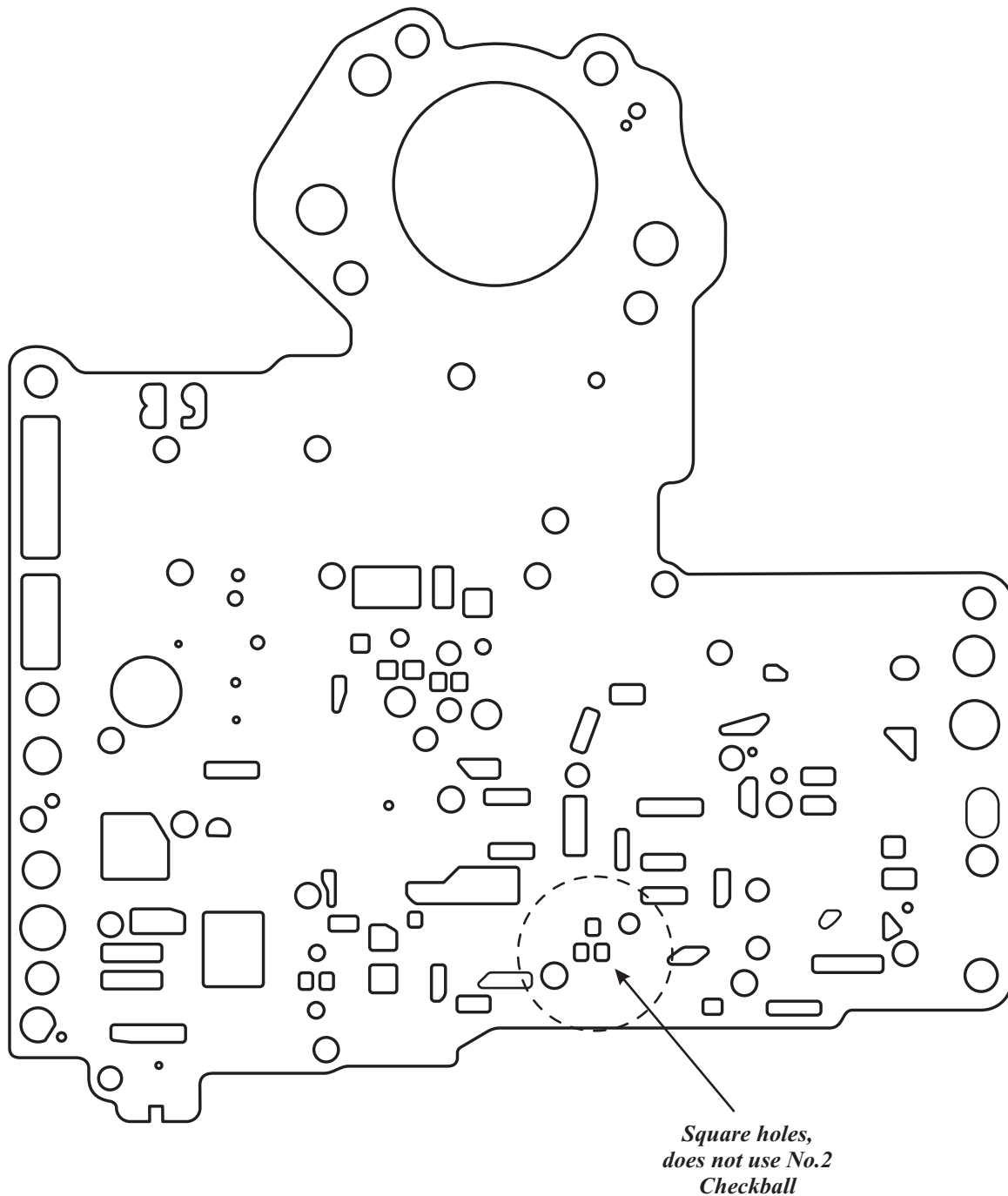
48RE MAIN VALVE BODY AND TRANSFER PLATE "UPPERSIDE"



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Figure 6

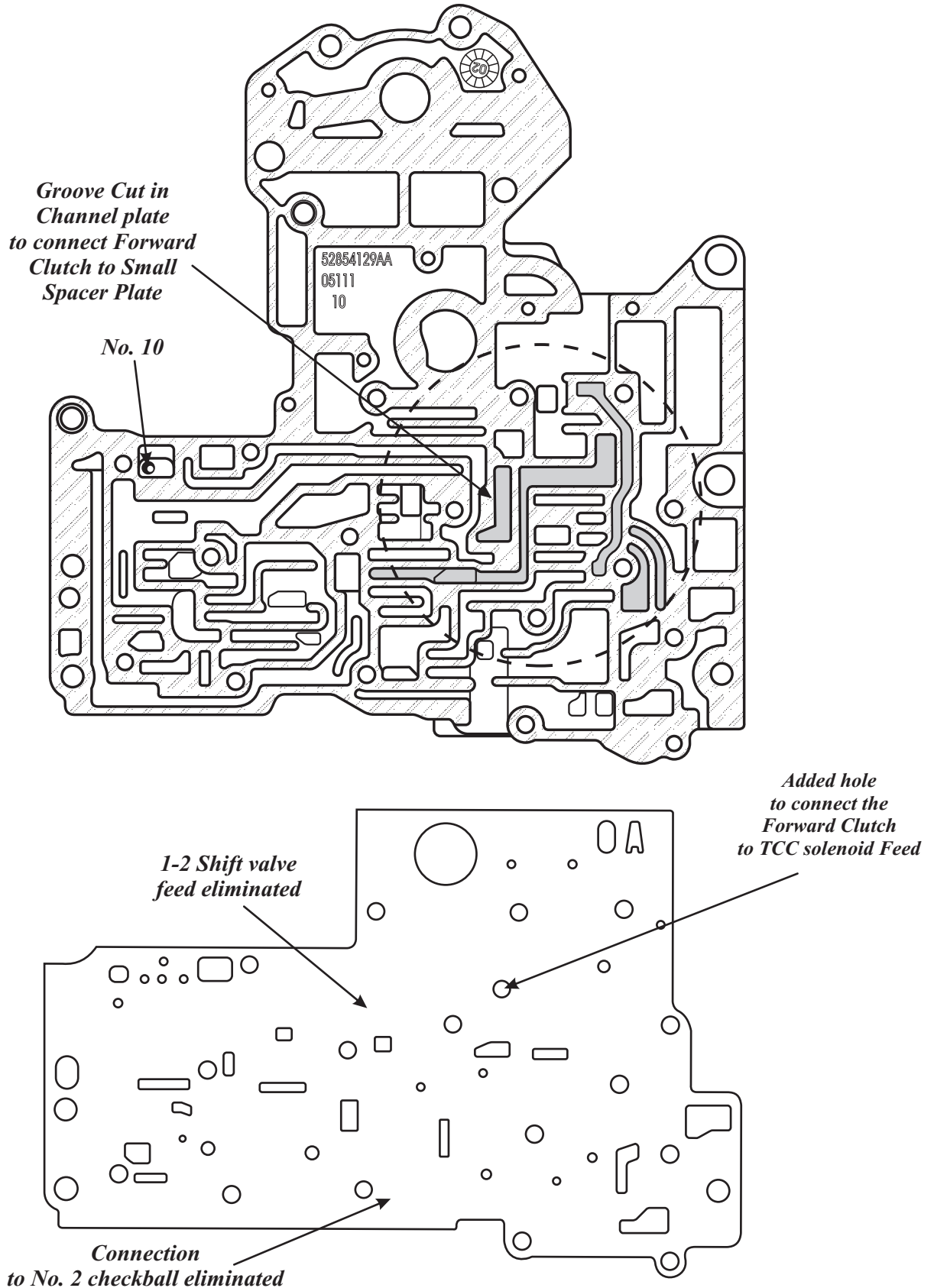
48RE MAIN SPACER PLATE



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Figure 7

48RE TRANSFER AND SPACER PLATE "LOWER-SIDE"



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Figure 8