

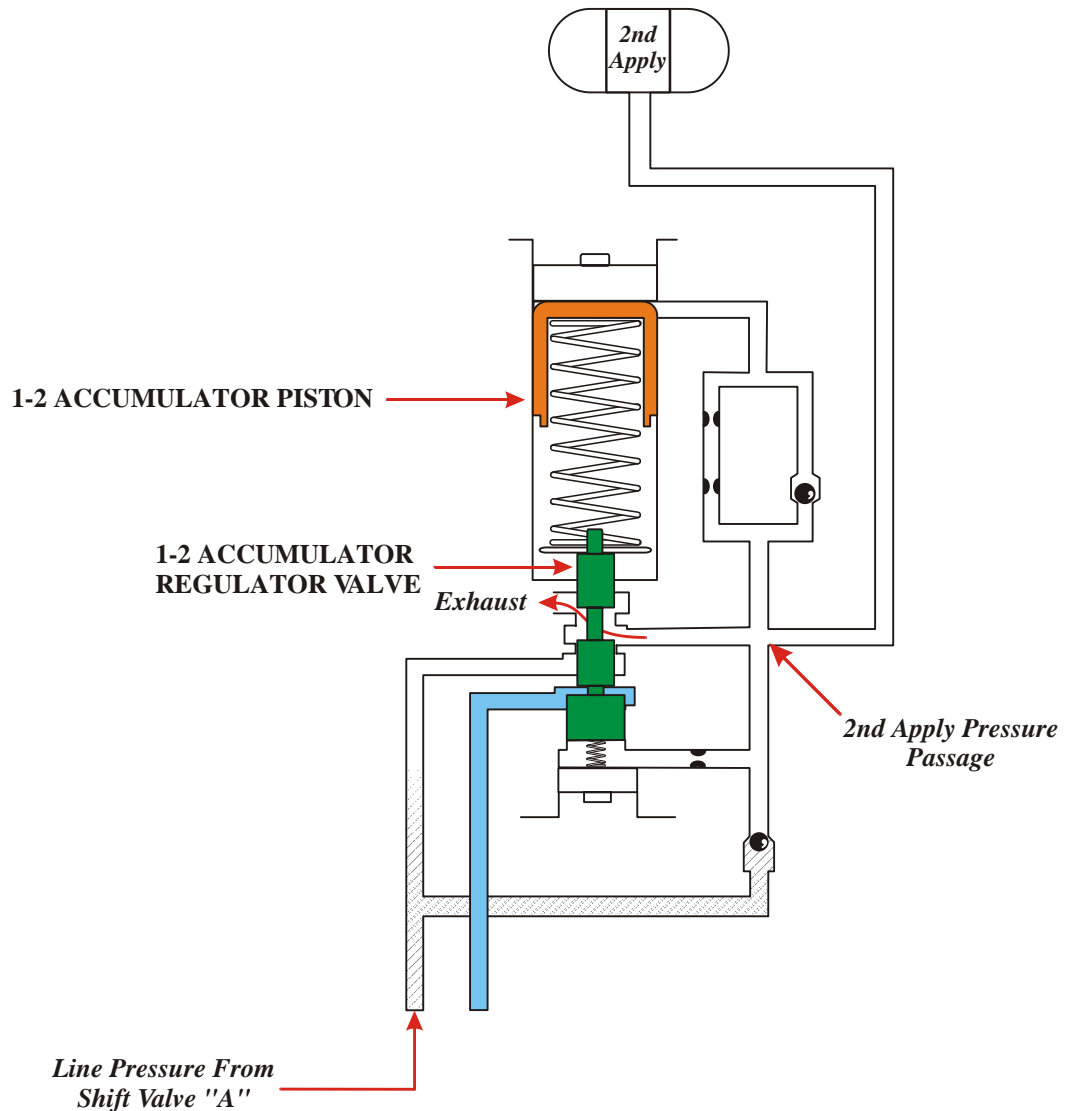


NISSAN RE4FO4A OR VILLAGER 4F20E SLIPPING OR NO 2ND GEAR

- COMPLAINT:** Before and/or after rebuild, the vehicle exhibits a condition of no upshift into second gear, or a slipping condition into 2nd gear.
- CAUSE NO. 1:** One cause may be insufficient spring tension on the 1-2 accumulator piston, or a stuck 1-2 accumulator regulator valve allowing 2nd apply oil to be restricted. Refer to Figure 1, for a description of the 1-2 hydraulic circuit with a stuck valve, or insufficient spring tension on the 1-2 accumulator piston. Refer to Figure 2, for a description of the 1-2 hydraulic circuit with sufficient spring tension on the 1-2 accumulator piston.
- CAUSE NO. 2:** Another cause may be the 2/4 servo return spring switched with the N/D accumulator spring. If the N/D accumulator spring is installed in the location for the 2/4 servo return spring, the N/D accumulator spring will coil bind before the 2/4 servo gets a chance to fully apply the band resulting in a no second gear condition. Refer to Figure 5 for spring specifications and proper placement of the 2-4 servo return spring and the N-D accumulator spring.
- CORRECTION NO. 1:** Add a pressure regulator valve spring from a 700-R4 inside of the original 1-2 accumulator spring as shown in Figure 3. Install a 1.5 - 2.0 pound heavier spring in the Pilot Valve line-up, as shown in Figure 3. Also install two 125C front planetary shims on the Pressure Regulator Valve, to increase line pressure, as shown in Figure 4. This will greatly increase transmission durability and reliability.
- CORRECTION NO. 2:** Refer to Figure 5 for spring specifications and place the 2-4 servo return spring and the N-D accumulator spring in their proper locations.

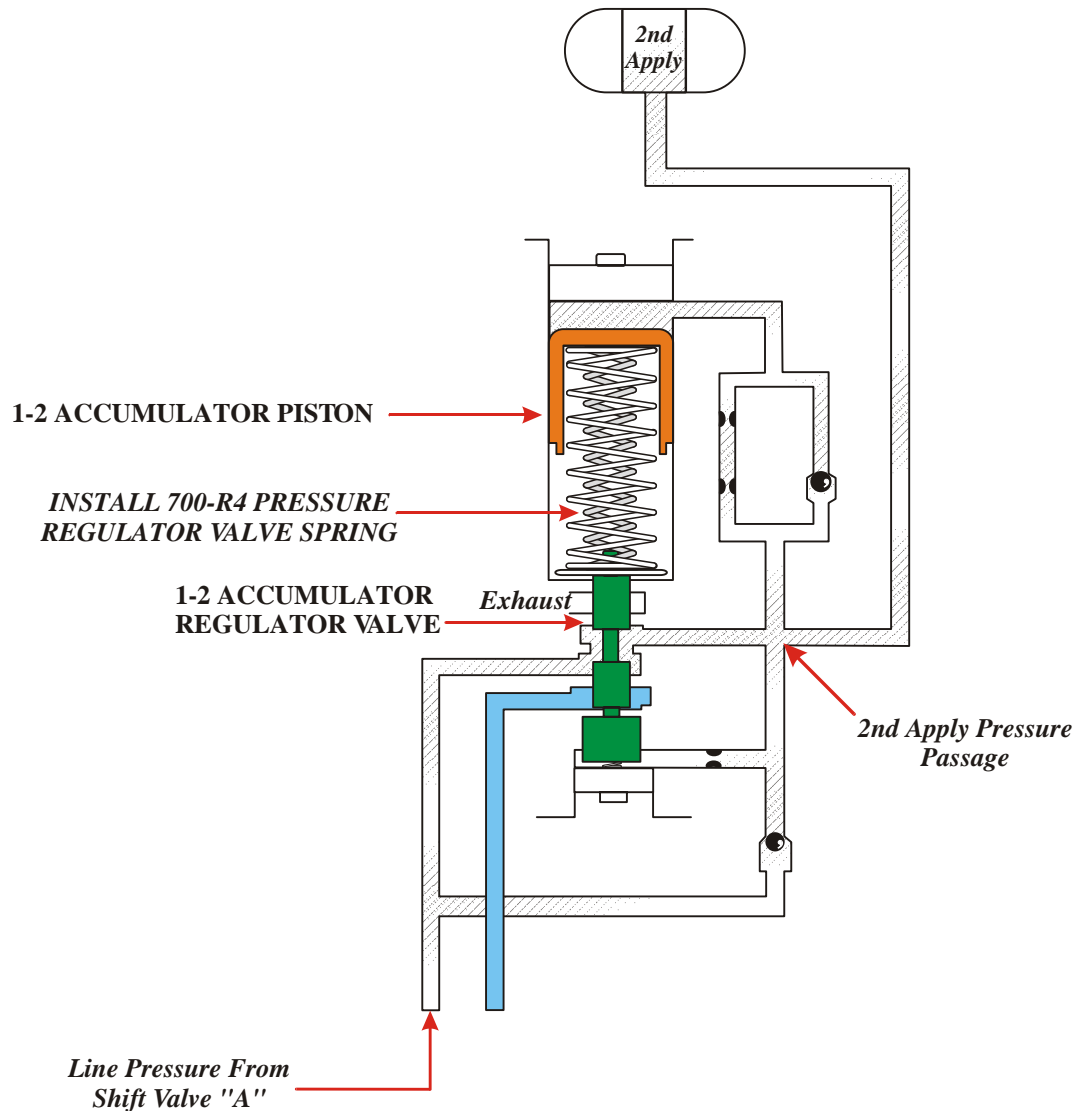
"NO" SECOND GEAR APPLY

If the 1-2 accumulator regulator valve is stuck as shown here, line pressure cannot pass through the valve and apply the servo. In addition, If the spring for the accumulator piston is too weak, 2nd apply pressure may allow the accumulator regulator valve to stroke toward the piston, and block oil coming from shift valve "A" allowing all apply oil to exhaust through the valve as shown by the arrow.



"GOOD" SECOND GEAR APPLY

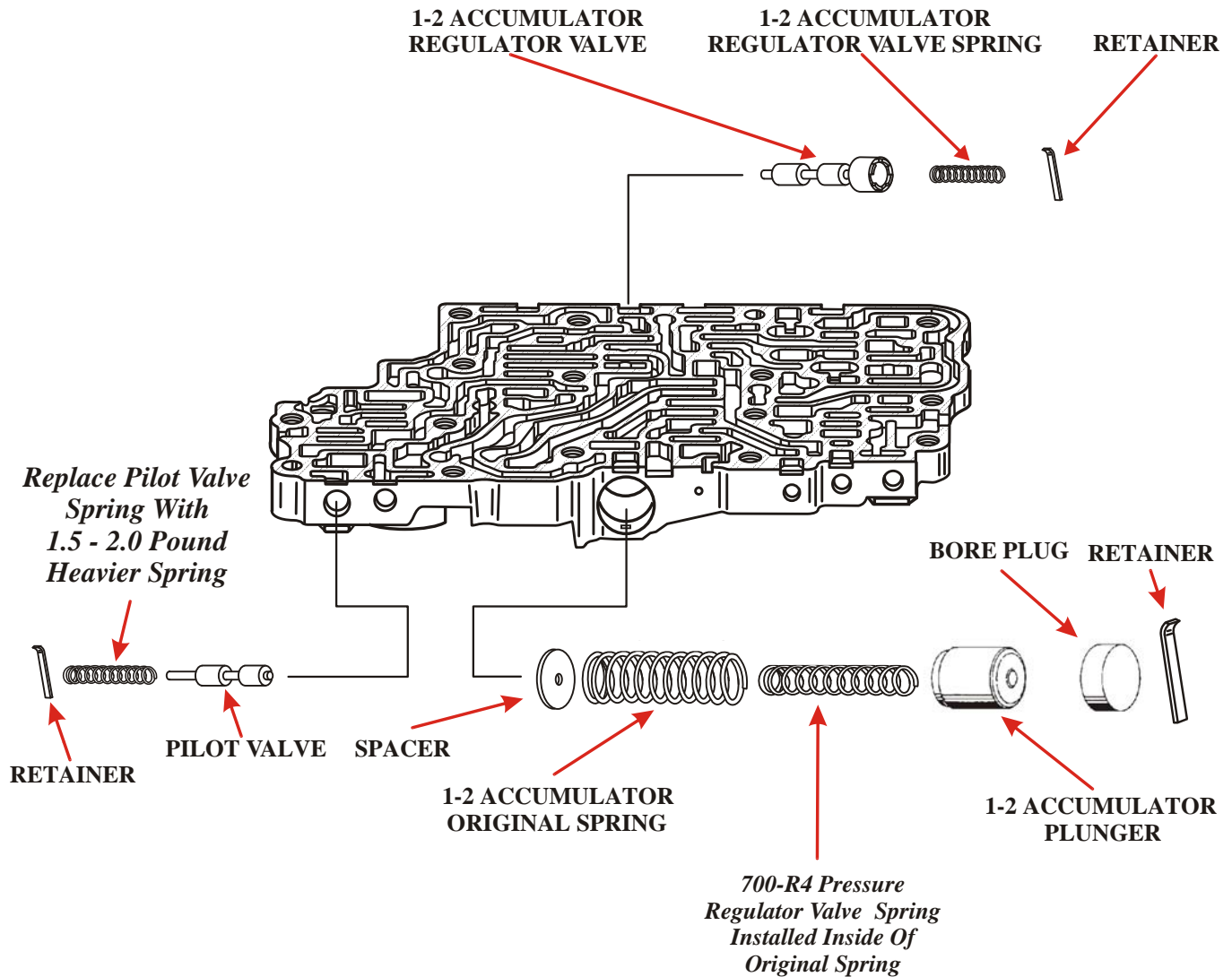
With a 700-R4 pressure regulator valve spring installed inside the original 1-2 accumulator spring, the 1-2 accumulator regulator valve remains in the proper position (exhaust closed) and allows line pressure to flow to the 2nd apply side of the servo.



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Figure 2

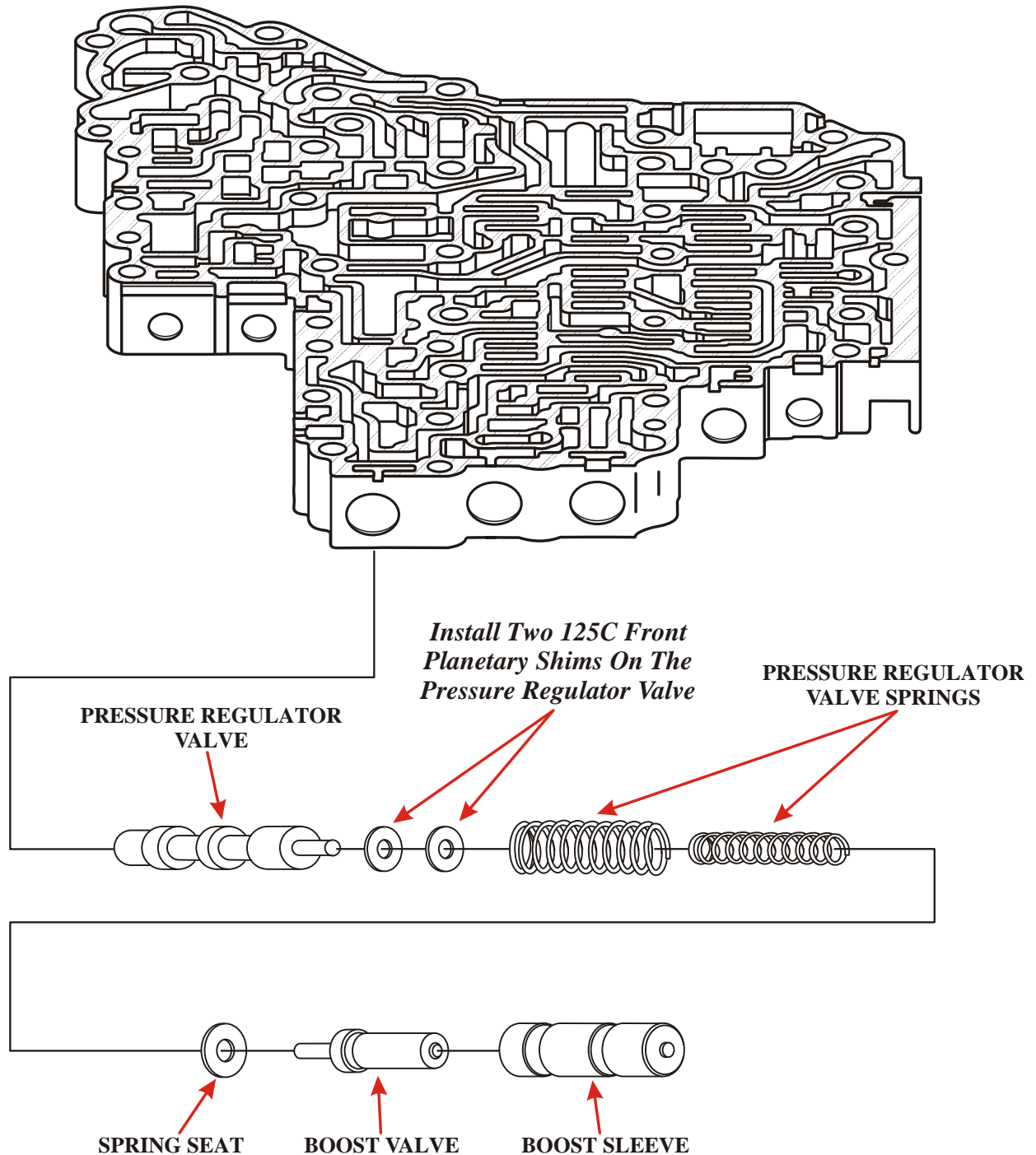
RECOMMENDED MODIFICATIONS



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Figure 3

RECOMMENDED MODIFICATIONS



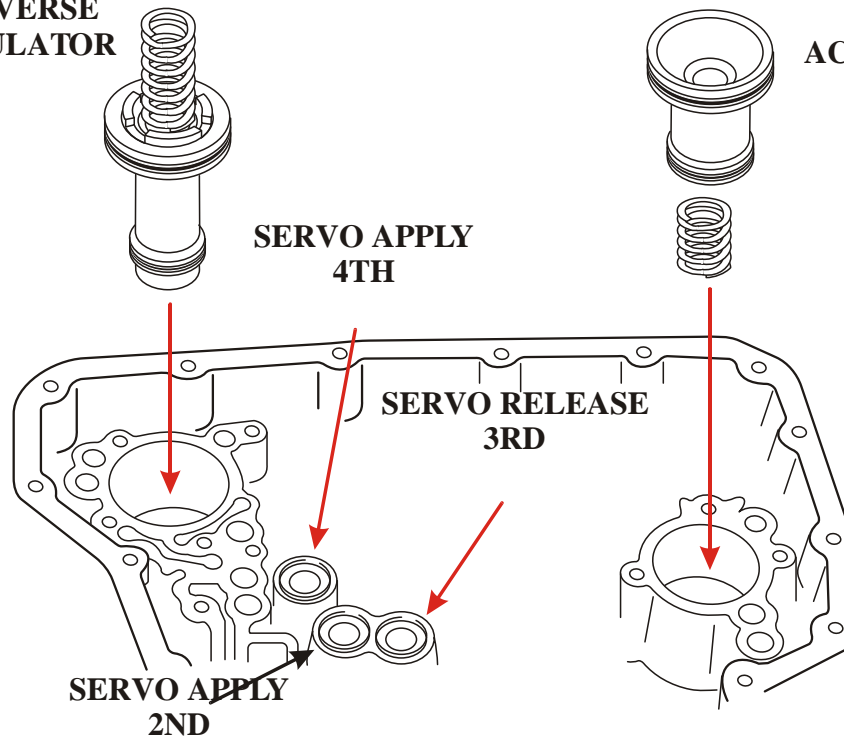
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Figure 4

ACCUMULATOR SPRING IDENTIFICATION AND PROPER LOCATIONS

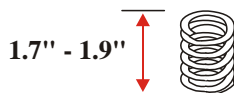
**3RD/REVERSE
ACCUMULATOR**

**N/D
ACCUMULATOR**

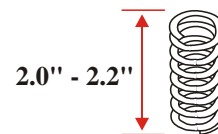


**2ND/4TH SERVO
PISTON ASSEMBLY**

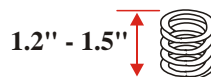
**THE N/D ACCUMULATOR
SPRING IS APPROX. 1.7" TO 1.9"**



**THE 3RD/REVERSE ACCUMULATOR
SPRING IS APPROX. 2.0" TO 2.2"**



**THE 2ND/4TH SERVO
SPRING IS APPROX. 1.2" TO 1.5"**



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Figure 5