

NISSAN RE4R01A**AFTER REBUILD STALLS FORWARD & REVERSE**

COMPLAINT: A 2001 Nissan Frontier with an RE4R01A comes into the shop for overhaul. After installation of the transmission, the engine would stall anytime it was placed in drive or reverse.

CAUSE: Knowing the TCC solenoid was changed during rebuild, it was inspected. When the solenoid was removed from the valve body, it was discovered that the snap ring retaining the bracket to the solenoid had not been fully seated into its groove. This caused the snap ring to move out of position as seen in figure 1.

With the snap ring out of place, pilot oil pushed the solenoid up out of the bracket causing it to drain. This allowed line pressure at the Lock Up Cap Valve to stroke the Lock UP Control Valve causing the converter clutch to apply. Refer to figure 2 for a view of the Lock Up Cap Valve and Lock UP Control Valve. This valve line up is referred to in a hydraulic diagram as the Torque Converter Clutch Control Plug (figure 3).

TCC SYSTEM OPERATION:

Once the vehicle is started and is placed into gear (Drive or Reverse), line pressure is sent to the control valve where it is then directed to the cap valve as seen in figure 3 (left side hydraulic). To prevent the lock up valve from applying, pilot pressure is sent to the normally closed solenoid and the spring side of the valve. With oil on both sides of this valve line up, the assembly is held in the converter clutch release position.

When the solenoid is energized, it will exhaust the pilot pressure used to hold the valve assembly in the release position. The Lock Up Cap then pushed the lock up control valve to the right, into the converter clutch apply position (figure 3 right side hydraulic).

CORRECTION: Reposition and secure the snap ring into its correct location (figure 4).

NOTE: ATSG has encountered solenoids that were made with too shallow of a snap ring groove allowing for it to pop out of place.

Thanks to Ernie at Victor's Transmission for this information

NISSAN RE4R01A
AFTER REBUILD STALLS FORWARD & REVERSE

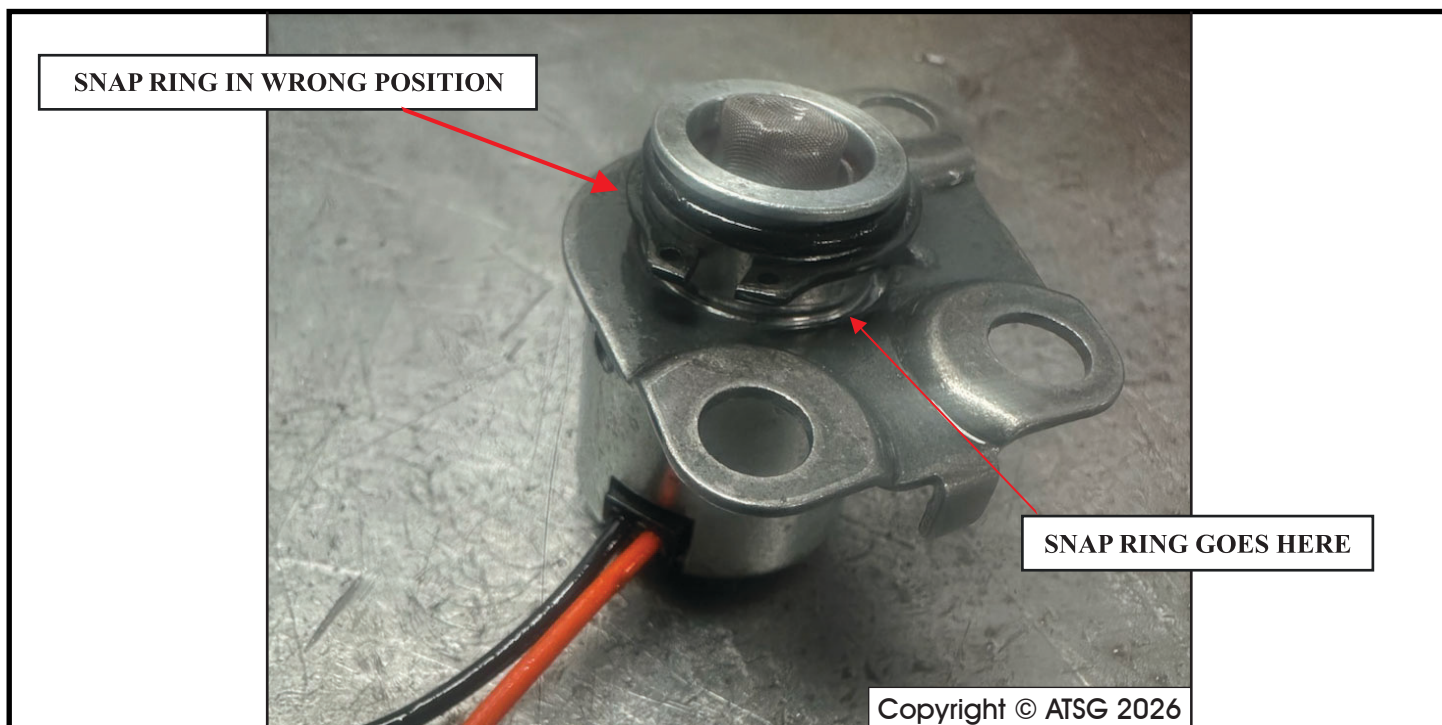


Figure 1



Figure 2

NISSAN RE4R01A

AFTER REBUILD STALLS FORWARD & REVERSE

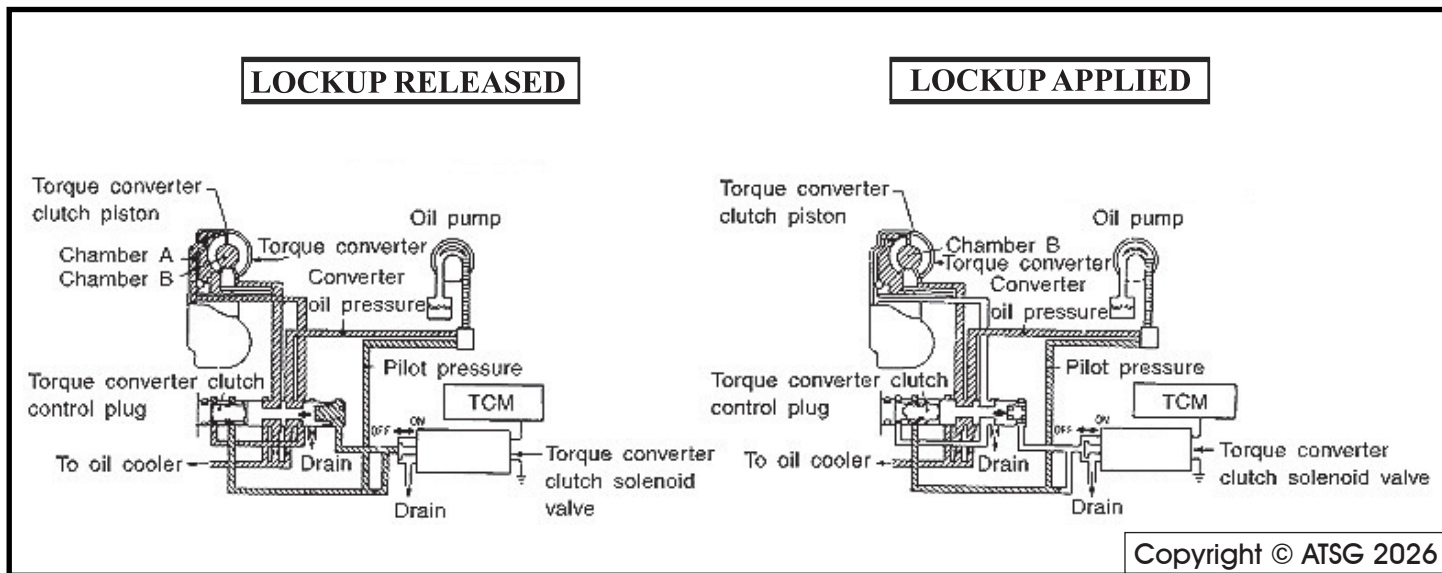


Figure 3

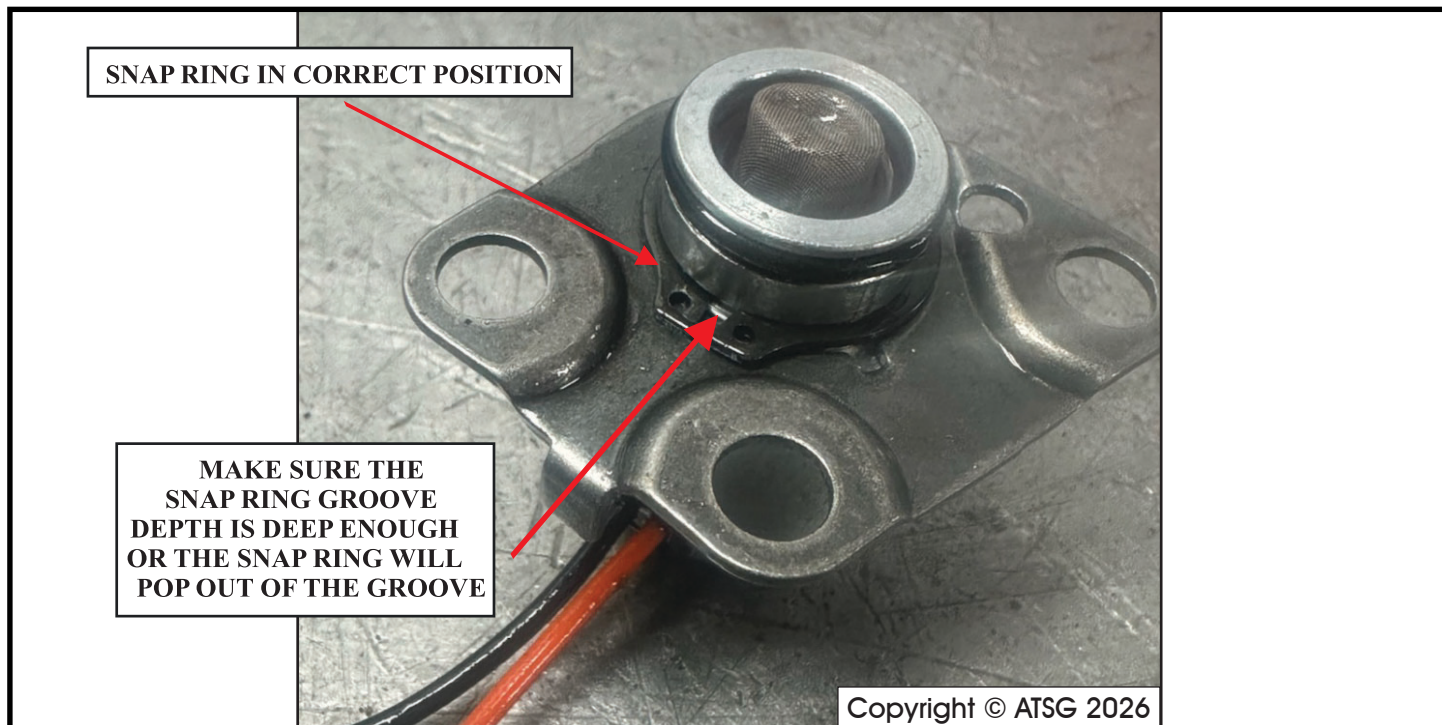


Figure 4