

GM 10L80**UNABLE TO SHIFT MESSAGE DISPLAYED**

COMPLAINT: A GM vehicle equipped with a 10L80 and the Electronic Transmission Range Select feature may have an "Unable To Shift" message displayed in the instrument cluster (figure 1), and possibly diagnostic trouble codes P17F3 "Transmission Park Position Switch Stuck On" or P189D "Transmission Park Position Switch Stuck Off". There may also be a complaint of the transmission stuck in park. All of these complaints occurred after the valve body assembly was replaced.

CAUSE: The park valve position switch is part of the Electronic Range Control System (ETRS). This was broken due to the misalignment of the park pawl actuator lever with the park valve position switch (figure 2).

CORRECTION: Since the park valve position switch is not serviced separately, another valve body assembly will have to be purchased.

Since the internal parts of the park valve position switch are made of plastic materials, it is of the utmost importance to ensure that the park pawl actuator lever is placed in the fully forward park position before installing the valve body assembly (figure 3 and 4).

It must be aligned with the slot in the piston servo prior to lowering the valve body assembly into place. Contact between the switch housing or magnet carrier and the end of the Park Pawl Actuator Lever during installation can damage these components and lead to failure. This damage may not be immediately apparent and may occur during subsequent vehicle operation.

The ETRS components are located in the transmission as seen in figure 5.

The Transmission Range Control Valve 1 Position Switch receives a 9 volt supply from the TCM. It detects the position of the ETRS valve located behind the switch in the valve body. The Transmission Park Valve Position Switch also receives a 9 volt supply from the TCM and detects the position of the park servo valve.

The Transmission Park Valve Lock Solenoid Actuator when energized will extend its pin to lock the park servo in the applied position. This will hold the park pawl the "out of the park" position.

A dedicated internal wire harness to accommodate the ETRS components is also required.

The bidirectional Transmission Park Valve Position Switch will respond to gear shift lever selection which the TCM will use to control its movement (figure 6).

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Figure 1

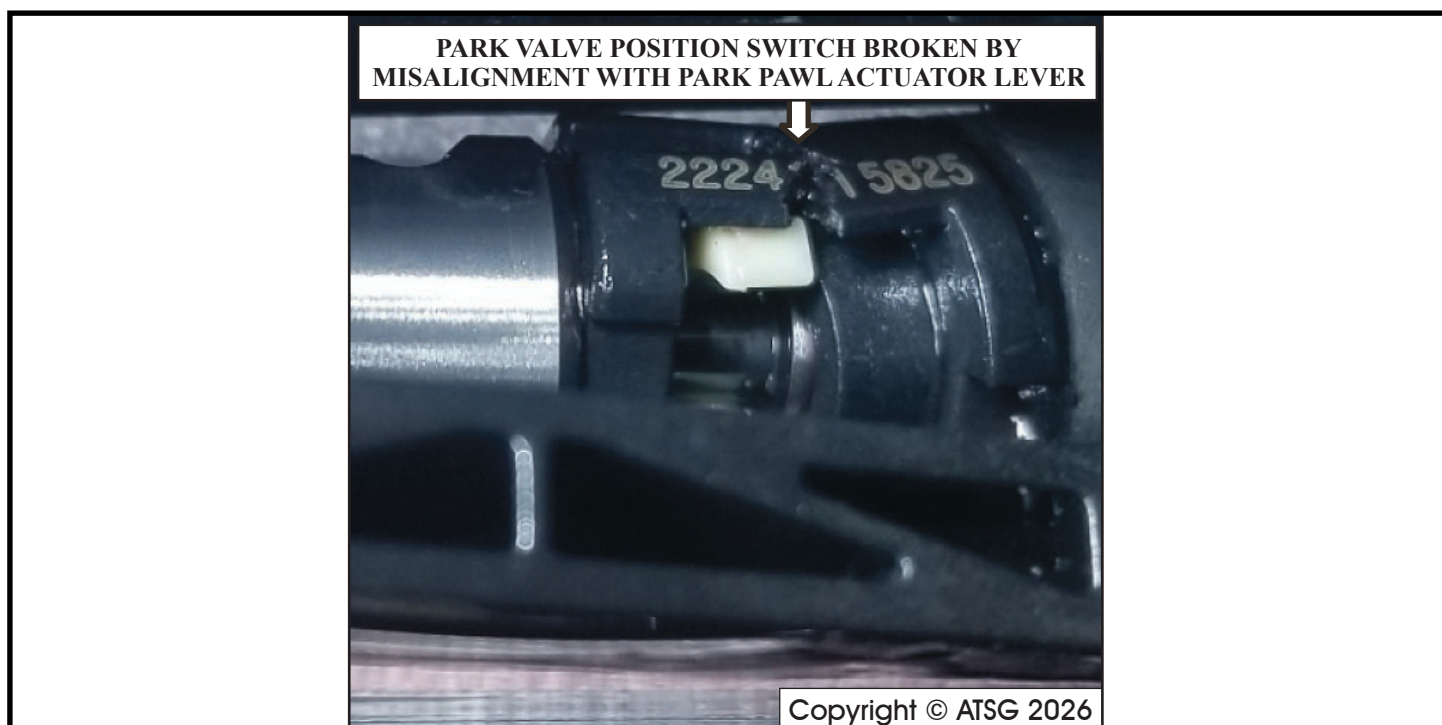


Figure 2

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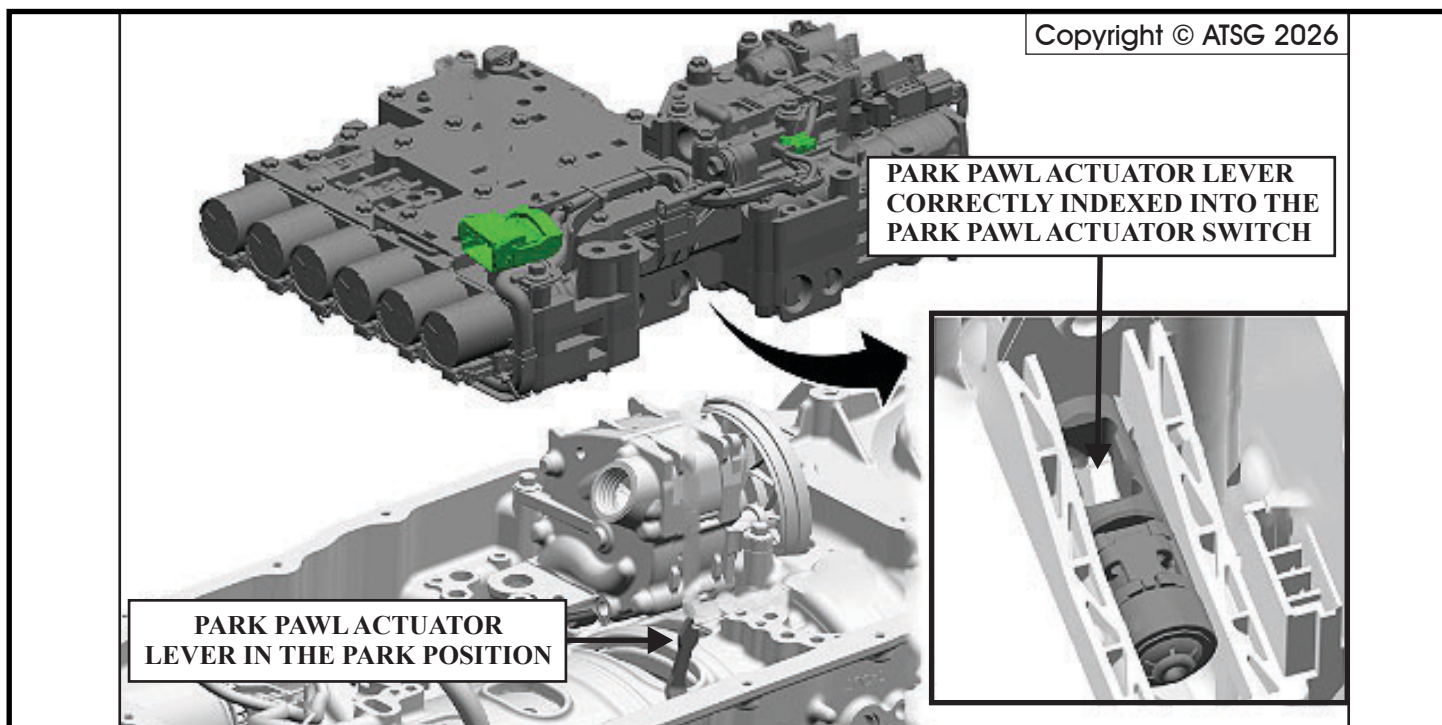


Figure 3

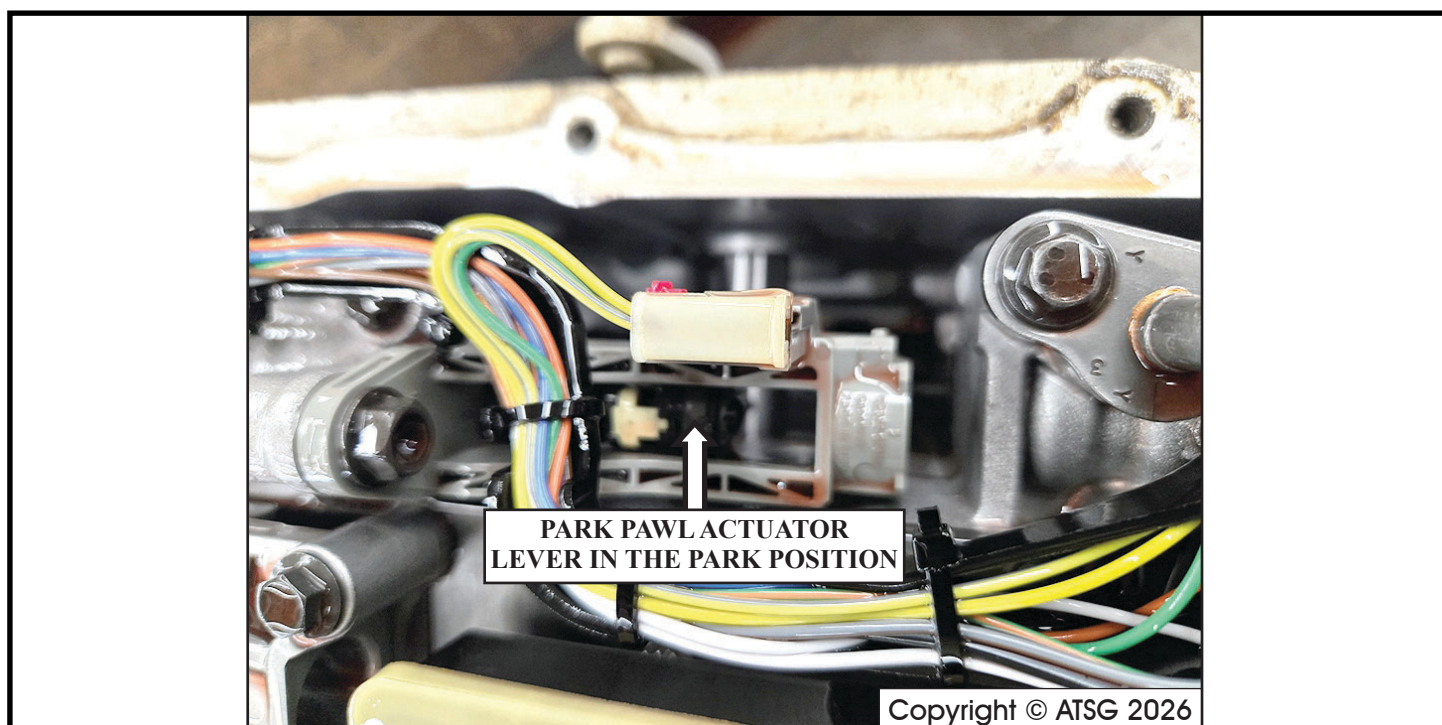


Figure 4

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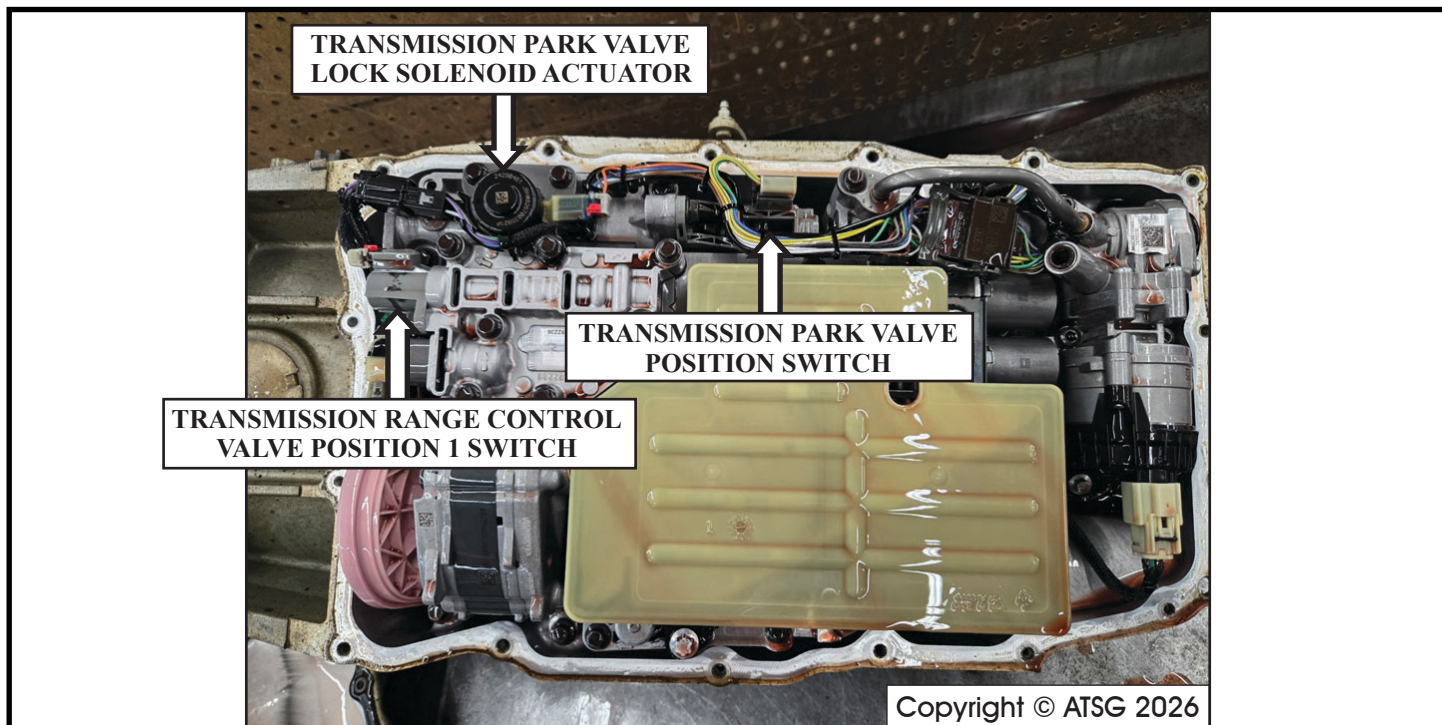


Figure 5

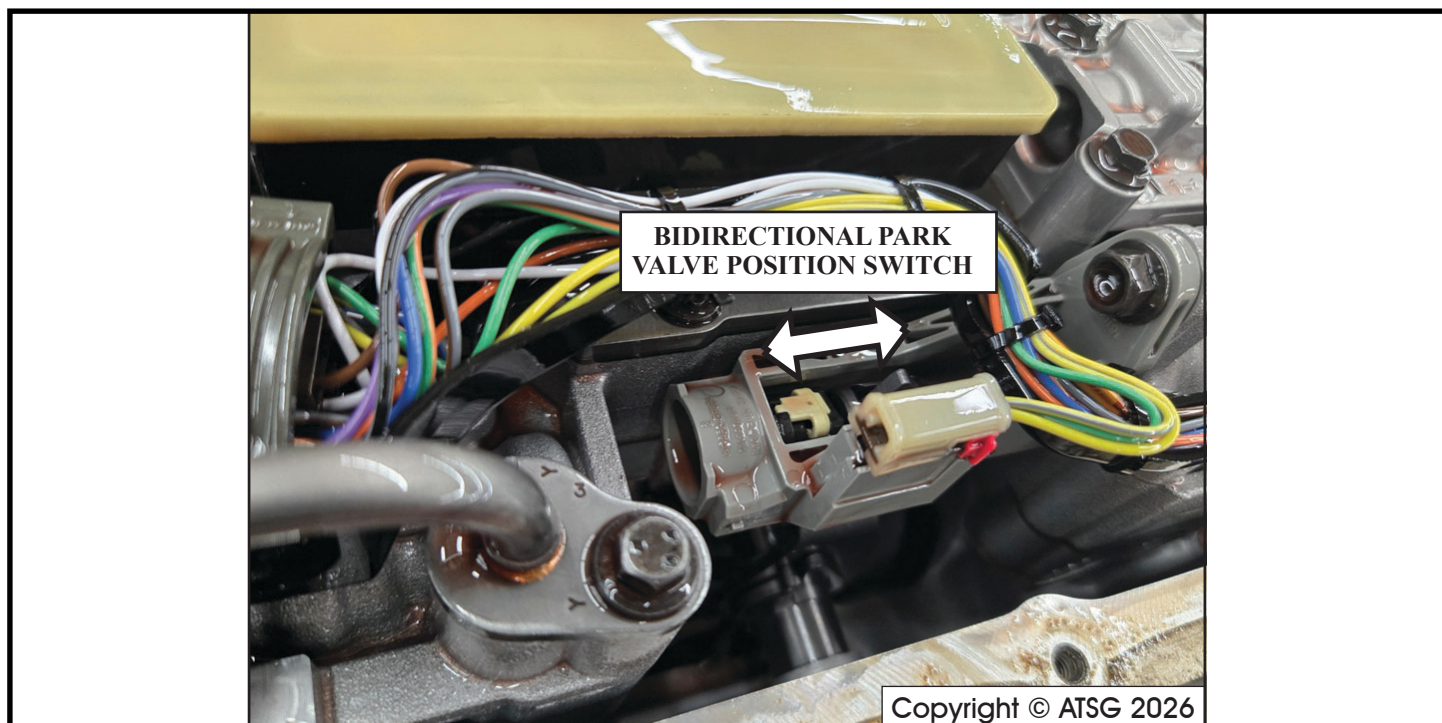


Figure 6