

DTC	P0705	TRANSMISSION RANGE SENSOR CIRCUIT MALFUNCTION (PRNDL INPUT)
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CIRCUIT DESCRIPTION

When the shift lever is in the N or P position: 1) the Park/Neutral Position (PNP) switch turns on, and 2) ECM terminal NSW is grounded to the body ground via the starter relay and voltage becomes 0 V. When the shift lever is in the D, 2, L or R position: 1) the PNP switch turns off, and 2) ECM terminal NSW receives current and becomes the voltage of the ECM internal power source.

If the shift lever is moved from the N position to the D position, this signal is used for air-fuel ratio correction and for idle speed control (estimated control).

DTC No.	DTC Detection Condition	Trouble Area
P0705	2 or more switches are ON simultaneously at R, N, D, 2 and L positions (2 trip detection logic)	<ul style="list-style-type: none"> • Short in PNP switch circuit • PNP switch • ECM

HINT:

After confirming DTC P0705, use the hand-held tester to confirm the PNP switch signal in the ALL menu (to reach the ALL menu: DIAGNOSIS / ENHANCED OBD II / DATA LIST / ALL).

WIRING DIAGRAM

Refer to DTC P0705 on page [05-922](#) .

INSPECTION PROCEDURE

Refer to DTC P0705 on page [05-922](#) .

HINT:

Read freeze frame data using the hand-held tester or the OBD II scan tool. Freeze frame data records the engine conditions when a malfunction is detected. When troubleshooting, freeze frame data can help determine if the vehicle was running or stopped, if the engine was warmed up or not, if the air-fuel ratio was lean or rich, and other data from the time the malfunction occurred.