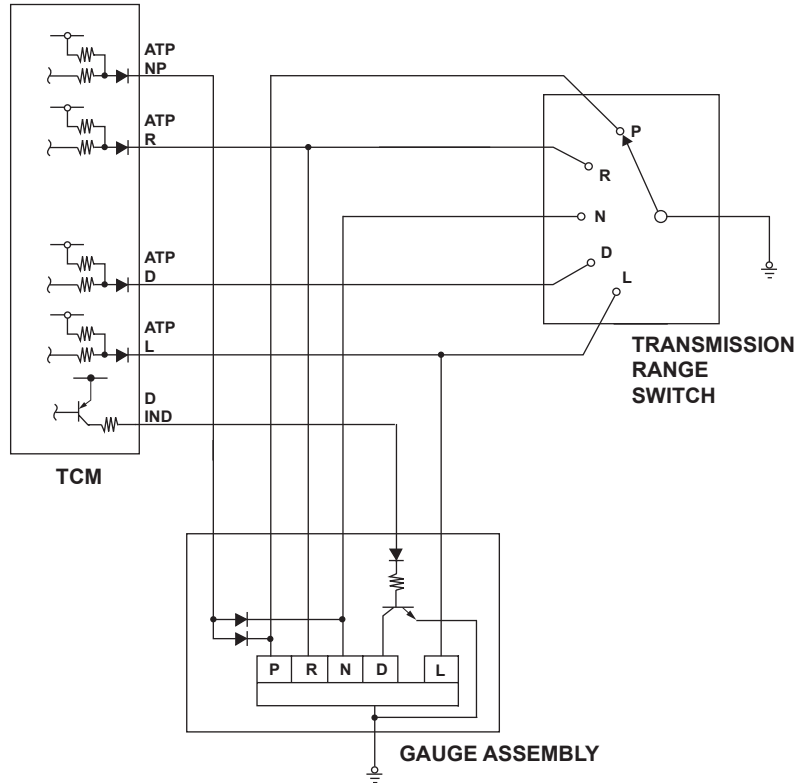


Advanced Diagnostics

DTC P1705: Short in Transmission Range Switch Circuit



P1705-0104

Transmission range switch contact point input matrix

Shift lever position	Input per switch			
	P.N	R	D	L
P	O	X	X	X
R	X	O	X	X
N	O	X	X	X
D	X	X	O	X
L	X	X	X	O

O: Closed X: Open

General Description

The transmission range switch is attached to the control shaft. Operation of the shift lever makes the control shaft rotate via the shift cable. The A/T gear position indicator indicates which position is selected according to the four signal Low/High combinations which vary based on the control shaft rotational angle. The control shaft changes the position of the transmission range switch, activates the manual valve, and switches hydraulic pressure to shift the transmission through forward/neutral/reverse. The transmission range switch signal is used to determine the shift schedule. The voltage is 12 V (High) at the transmission control module (TCM) input terminal when each transmission range switch position is open, and it is 0 V (Low) when each switch is closed. If the TCM detects a different range switch input instead of the correct switch input (see the contact point input matrix) in the selected range at that time, it detects a malfunction and stores a DTC.

Monitor Execution, Sequence, Duration, DTC Type

Execution	Continuous
Sequence	None
Duration	1 second
DTC Type	One drive cycle, MIL ON, D indicator blinks

Enable Conditions

Condition	
Ignition switch	ON

Malfunction Threshold

Two or more contact points of the transmission range switch are ON at the same time for at least 1 second. (0 V at two or more switch input terminals.)

Diagnosis Details

Conditions for illuminating the MIL

When a malfunction is detected, the MIL comes on and the DTC and the freeze frame data are stored.

Conditions for clearing the MIL

The MIL, the DTC, and the freeze frame data can be cleared by using the scan tool Clear command or by disconnecting the battery.