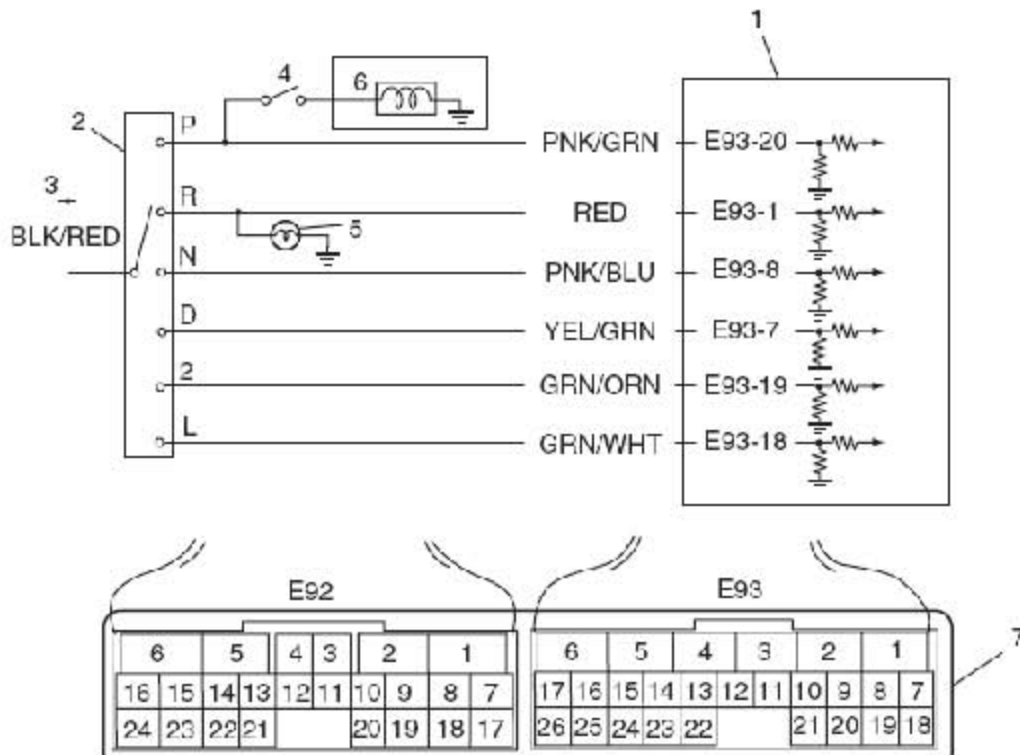


P0705 Transmission Range Sensor Circuit Malfunction

Wiring Diagram



1. TCM	4. Brake light switch	7. Terminal arrangement of TCM connector (viewed from harness side)
2. Transmission range sensor (switch)	5. Back-up light	
3. From ignition switch	6. Shift lock solenoid	

DTC Detecting Condition and Trouble Area

DTC Detecting Condition	Trouble Area
Multiple signals are inputted simultaneously for 2 seconds. (1 driving cycle detection logic)	<ul style="list-style-type: none"> • Select cable maladjusted. • Transmission range sensor (switch) maladjusted. • Transmission range sensor (switch) or its circuit malfunction. •TCM

DTC Confirmation Procedure

- 1) Connect scan tool to DLC with ignition switch OFF.
- 2) Clear DTCs in TCM and ECM memories by using scan tool.
- 3) Start engine and shift select lever to "D" range.
- 4) Keep engine running at idle speed for 25 seconds or more.
- 5) Check DTC, pending DTC and freeze-frame data.

DTC Troubleshooting

Step	Action	Yes	No
1	Was "A/T System Check" performed?	Go to Step 2.	Go to "A/T System Check".
2	Do you have SUZUKI scan tool?	Go to Step 3.	Go to Step 4.
3	<p>Check transmission range sensor (switch) circuit for operation</p> <p>Check by using SUZUKI scan tool:</p> <p>1) Connect SUZUKI scan tool to DLC with ignition switch OFF.</p> <p>2) Turn ignition switch ON and check transmission range sensor signal ("P", "R", "N", "D", "2" or "L") on display when shifting select lever to each range.</p> <p>Is applicable range indicated?</p>	<p>Intermittent trouble.</p> <p>Check for intermittent trouble referring to "Intermittent and Poor Connection Inspection: in Section 00".</p>	Go to Step 5.

Step	Action	Yes	No
4	<p>Check transmission range sensor (switch) circuit for operation</p> <p>Check without using SUZUKI scan tool:</p> <p>1) Turn ignition switch ON. 2) Check voltage at terminals "E93-1", "E93-7", "E93-8", "E93-18", "E93-19" and "E93-20" respectively with select lever shifted to each range. Taking terminal "E93-1" as an example, is battery voltage will be indicated only when shift lever is shifted to "R" range and 0 V for other ranges as shown in table. Check voltage at other terminals likewise, referring to table.</p> <p>Are check results satisfactory?</p>	<p>Intermittent trouble.</p> <p>Check for intermittent trouble referring to "Intermittent and Poor Connection Inspection: in Section 00".</p>	<p>Go to Step 5.</p>
5	<p>Check transmission range sensor (switch) for installation position</p> <p>1) Check transmission range sensor (switch) for installation position referring to "Transmission Range Sensor Inspection and Adjustment: ".</p> <p>Is it adjusted correctly?</p>	<p>Go to Step 6.</p>	<p>Adjust transmission range sensor (switch) and recheck.</p>
6	<p>Check select cable for adjustment</p> <p>1) Check select cable for adjustment referring to "Select Cable Adjustment: ".</p> <p>Is it adjusted correctly?</p>	<p>Go to Step 7.</p>	<p>Adjust select cable and recheck.</p>

Step	Action	Yes	No
7	<p>Check transmission range sensor (switch)</p> <p>1) Check transmission range sensor (switch) referring to "Transmission Range Sensor Inspection and Adjustment: ".</p> <p>Are check results satisfactory?</p>	Transmission range sensor circuit shorted to power circuit or shorted each other. If wires and connections are OK, substitute a known-good TCM and recheck.	Replace transmission range sensor (switch).

		E93-20	E93-1	E93-8	E93-7	E93-19	E93-18
Select lever position	P	8 – 14 V	0 V	0 V	0 V	0 V	0 V
	R	0 V	8 – 14 V	0 V	0 V	0 V	0 V
	N	0 V	0 V	8 – 14 V	0 V	0 V	0 V
	D or 3	0 V	0 V	0 V	8 – 14 V	0 V	0 V
	2	0 V	0 V	0 V	0 V	8 – 14 V	0 V
	L	0 V	0 V	0 V	0 V	0 V	8 – 14 V