Component Location

General Description

Shift lever positions P-range(Parking), R-range(Reverse), N-range(Neutral) and D-range(Driving) are changed by driver need and lever position is sent to PCM/TCM to control a gear ration.

DTC Description

This code is set when undefined code is input to PCM/TCM without specific of transmission pattern table. (See below)

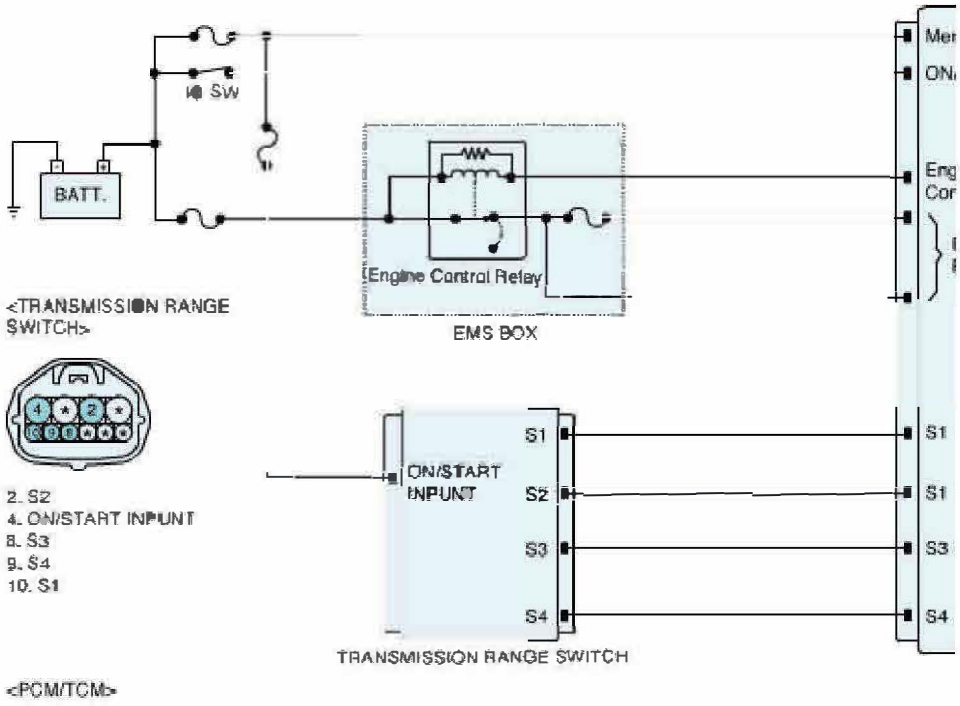
DTC Detecting Condition

Item	Detecting Condition	Possible Cause
DTC Strategy	• Circuit Malfunction	• Circuit short or open • Shift range signal error • PCM/TCM
Enable Conditions	• Ignition "ON" • Battery voltage > 10V	
Threshold value	• TR switch unused code	
Detecting Time	• More than 4sec	
Fail safe	• Normal status : All position possible • Abnormal status : Above 3rd position possible (3rd ~ 6th possible, 1st/2nd impossible)	

Specification

	P	P-R	R	R-N	N	N-D	D	D-X	X	X-Y	Y	Y-Z	Z
S1	1	0	0	0	1	1	1	1	1	1	0	0	0
S2	0	0	0	1	1	0	0	1	1	0	0	1	1
S3	1	1	0	0	0	0	0	0	1	1	1	1	1
S4	1	1	1	1	1	1	0	0	0	0	0	0	1

Diagnostic Circuit Diagram



Signal Waveform & Data

Terminal & Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▸ Repair as necessary and go to "Verification Vehicle Repair" procedure.
NO	▸ Go to "Power Circuit Inspection".

Power Circuit Inspection

1. Disconnect an Inhibitor swtich.
2. IG KEY "ON"" & Engine "OFF".
3. Measure voltge between supplied power and ground at inhibitor circuit.

Specification : Approx. 12V

4. Is the measured voltage within specifications?

YES	▸ Go to "Signal Circuit Inspection" procedure.
NO	▸ Check that ECU fuse-10A is installed or opened. ▸ Check circuit open and replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Signal Circuit Inspection

1. Connect an Inhibitor switch.
2. Ignition "ON" & Engine "OFF".
3. Measure voltages between each terminal and chassis ground during shift lever changed "P, R, N, D".

Specification : See below "Inhibitor switch specification"

Inhibitor Switch Specification

NO	IGN SW	SELECT	SIGNAL			
			Inhibitor Switch 1 (S1)	Inhibitor Switch 2 (S2)	Inhibitor Switch 3 (S3)	Inhibitor Switch 4 (S4)
1	ON	P Range SW	12V	0V	12V	12V
2	ON	R Range SW	0V	0V	0V	12V
3	ON	N Range SW	12V	12V	0V	12V
4	ON	D Range SW	12V	0V	0V	0V

4. Is the measured voltage within specifications?

YES	▶ Substitute with a known-good Inhibitor switch and check for proper operation.If the problem is corrected, replace Inhibitor switch and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Check a battery short circuit, a ground short circuit at the wiring of Inhibitor switch and then go to "Verification of Vehicle Repair" procedure. ▶ If wiring of Inhibitor switch is normal then, Substitute with a known-good Inhibitor switch and check for proper operation.If the problem is corrected, replace Inhibitor switch and then go to "Verification of Vehicle Repair" procedure.