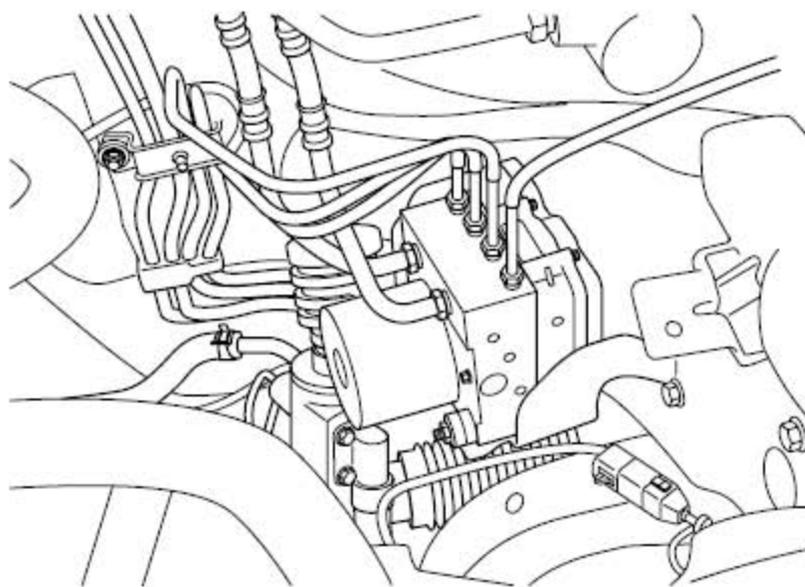


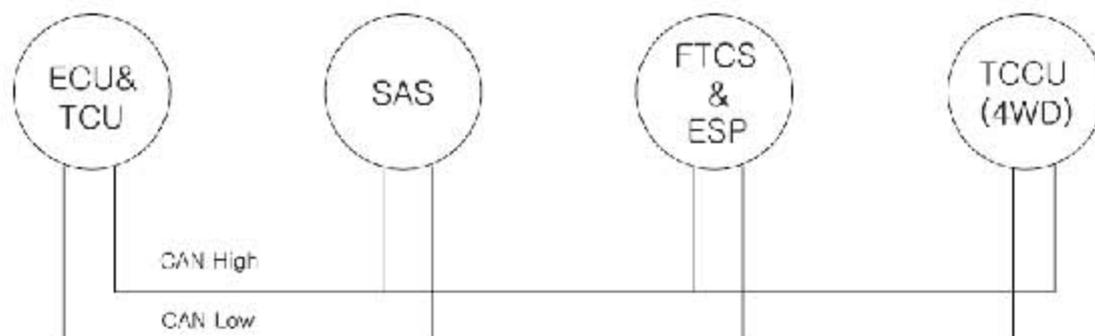
P1750 、 P1751、 P1752 、 P1753 SPEED SENSOR

COMPONENT LOCATION



GENERAL DESCRIPTION

Wheel Speed Sensor senses vehicle speed and difference between front and rear wheel speed. Operation for getting Rotating Speeds of front/rear wheel can be got from deviding wheel speed sensor Rotating Speeds of front/rear by 2. In case of ESP(or FTCS) system applied 4WD ECU receives this signal through CAN line, If it is not the case 4WD ECU receives this signal directly by using PWM communication line. The wheel speed sensor is the essential component the ITM ECU uses to determine how to distribute driving force to front / rear wheel with steering angle sensor signal and TPS, brake signal.



DTC DESCRIPTION

This code related to communication line between ECU and TCCU is set when CAN signal from ECU can't received for more than 1sec or ECU internal error occur. If failure is detected TCCU prohibits the ITM control and cuts the current to control coil.

DTC	FAULT DESCRIPTION
P1750	FRONT LEFT SPEED SENSOR(FL)-With ESP, ABS
P1751	FRONT RIGHT SPEED SENSOR(FR)-With ESP, ABS
P1752	REAR LEFT SPEED SENSOR(RL)-With ESP, ABS
P1753	REAR RIGHT SPEED SENSOR(RR)-With ESP, ABS

DTC DETECTING CONDITION

Item	Detecting Condition	Possible Cause
DTC Strategy	Loss of signal	<ul style="list-style-type: none"> • ABS MODULE, TCCU connector looseness and poor terminal to wire connection • Wheel sensor comm line circuit open/short • Faulty Wheel sensor • Faulty ABS MODULE • Faulty TCCU
Enable Conditions	Message present 1.0 sec self clearing	
Threshold Value	Measure individual wheel, if speed difference is 30kph for 30 seconds fault code will be set. ignition cycle reset	
Diagnostic Time	1 sec	
MIL on condition	0.5 Sec	
Fail Safe	Speed sensor error will turn ITM off. ITM will not have output	

SIGNAL WAVEFORM & DATA

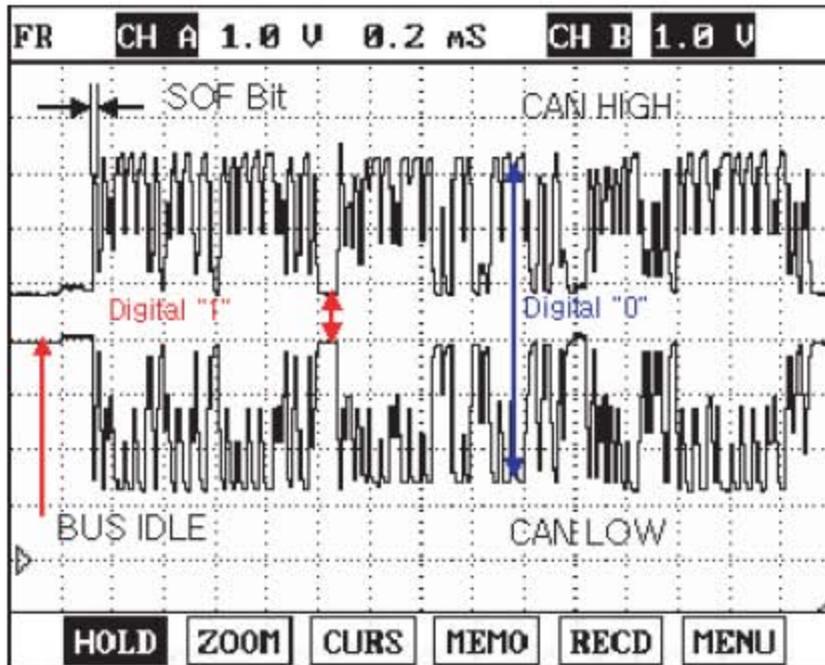


FIG.1)

FIG.1) CAN Signal : high & low

TERMINAL AND 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 of Vehicle Repair" procedure.

NO

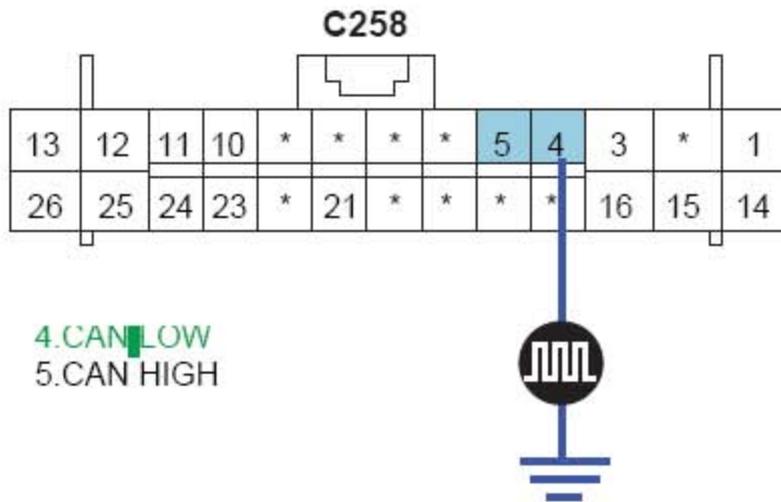
- ▶ Go to "CAN Signal Inspection " procedure.

CAN SIGNAL INSPECTION

- 1). Ignition ON, Engine : ON.
- 2). TCCU connector : Connect.
- 3). Monitor signal waveform between terminal 4, 5 of TCCU harness connector and chassis ground.

- 4). Start and drive vehicle in gear and maintain vehicle speed approx. 10km/h or less(6mph or less).

Specification : Signal Waveform & Data



CAUTION

The above value is only for reference.
The actual value may differ from it according to various engine condition.

- 5). Is CAN(FLSS)comm. Line Signal display near the specified value?

YES

- ▶ Fault is intermittent caused by poor contact in the sensor's and/or TCCU's connector or was repaired and TCCU memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

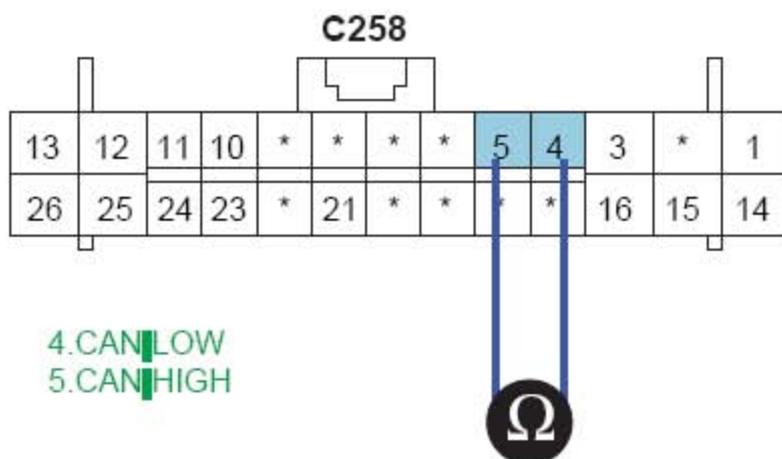
NO

- ▶ Go to "CAN comm. Line Inspection " procedure.

CAN COMM. LINE INSPECTION

- 1). IG "OFF" & ENG "OFF"
- 2). TCCU connector : Disconnect.
- 3). Measure resistance between terminal "4" of the TCCU harness connector and terminal "5" of the TCCU harness connector.

Specification : Approx. 60Ω

**CAUTION**

The above value is only for reference.
The actual value may differ from it according to various engine condition.

4). Is resistance display near the specified value?

YES

- ▶ Fault is intermittent caused by open or short in CAN signal harness or was repaired and TCCU memory was not cleared. Go to the applicable troubleshooting procedure.

NO

- ▶ Check for open/short in CAN communication line of TCCU circuit.
- ▶ Check for the signal or component of ESP(ABS control module).
- ▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.

VERIFICATION OF VEHICLE REPAIR

- 1). Connect scan tool and select "Diagnostic Trouble Codes(DTCs)" mode.
- 2). Using scantool, Clear DTC.
- 3). Operate the vehicle within DTC Enable conditions in General information.
- 4). Are any DTCs present ?

YES

- ▶ Go to the applicable troubleshooting procedure.

NO

- ▶ System is performing to specification at this time.