

C1101, C1102, C1103, C1104 WHEEL SENSOR

Description

When the sensor rotor rotates, the magnetic field changes. It converts the magnetic field changes to current signals (rectangular wave) and transmits them to the ABS actuator and electric unit (control unit).

DTC DETECTION LOGIC

DTC	Display item	Malfunction detected condition	Possible cause
C1101	RR RH SENSOR-1	Circuit of rear RH wheel sensor is open or short circuit. Current signal from sensor is outside limits.	<ul style="list-style-type: none"> • Harness or connector • Wheel sensor • ABS actuator and electric unit (control unit)
C1102	RR LH SENSOR-1	Circuit of rear LH wheel sensor is open or short circuit. Current signal from sensor is outside limits.	
C1103	FR RH SENSOR-1	Circuit of front RH wheel sensor is open or short circuit. Current signal from sensor is outside limits.	
C1104	FR LH SENSOR-1	Circuit of front LH wheel sensor is open or short circuit. Current signal from sensor is outside limits.	

DTC CONFIRMATION PROCEDURE

- 1). Start the engine and drive the vehicle at 30 km/h (19 MPH) or more for approximately 1 minute.
- 2). Perform ABS actuator and electric unit (control unit) self-diagnosis.
 - Is DTC "C1101", "C1102", "C1103" or "C1104" detected?
 - YES >> Proceed to diagnosis procedure.
 - NO >> INSPECTION END

Diagnosis Procedure

CAUTION:

- Do not measure the resistance value and also voltage between sensor terminals with tester etc., because the sensors are active sensors.
- Do not expand terminal of connector with a tester terminal stick, when it does the inspection with the tester.

1).CHECK TIRE

Check air pressure, wear, and size. Refer to WT-111, "Tire Air Pressure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace damaged parts.

2).CHECK SENSOR AND SENSOR ROTOR

- Check that there is no damage or adherence of foreign matter on the sensor rotor surface.

- Check sensor rotor for damage.

- Check wheel sensor for damage, disconnection or looseness.

- Check that there is no deformation on the wheel sensor mounting surface.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair wheel sensor mount or replace sensor rotor. Then perform the self-diagnosis.

3).CHECK CONNECTOR

A).Turn the ignition switch OFF.

B).Disconnect ABS actuator and electric unit (control unit) connector.

C).Disconnect malfunctioning wheel sensor connector.

D).Check terminal to see if it is deformed, disconnected, loose, etc.

E).Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace damaged parts.

4).CHECK WHEEL SENSOR HARNESS

Check the continuity between ABS actuator and electric unit (control unit) harness connector and wheel sensor harness connector. (Also check continuity when steering wheel is turned right and left and when sensor harness inside the wheel house is moved.)

- 5).CHECK WHEEL SENSOR POWER SUPPLY CIRCUIT
- A).Connect ABS actuator and electric unit (control unit) connector.
 - B).Turn the ignition switch ON.
 - C).Check the voltage between wheel sensor harness connector and ground.
 - D).Is the inspection result normal?
 - YES >> GO TO 6.
 - NO >> Repair or replace damaged parts.
- 6).CHECK DATA MONITOR
- A).Turn the ignition switch OFF.
 - B).Connect each wheel sensor connector.
 - C).Check wheel sensor signal.
 - D).Is the inspection result normal?
 - YES >> Replace ABS actuator and electric unit (control unit).
 - NO >> Repair or replace damaged parts.

Component Inspection

- 1).CHECK DATA MONITOR
- On "DATA MONITOR", select "FR LH SENSOR", "FR RH SENSOR", "RR LH SENSOR", and "RR RH SENSOR",and check the vehicle speed.
- Is the inspection result normal?
- YES >> INSPECTION END
- NO >> Proceed to diagnosis procedure. Refer to BRC-34, "Diagnosis Procedure".

Special Repair Requirement

- 1).ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION, CALIBRATION OF YAW RATE/SIDE/DECEL G SENSOR AND CALIBRATION OF PRESSURE SENSOR