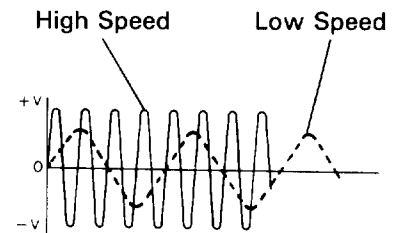
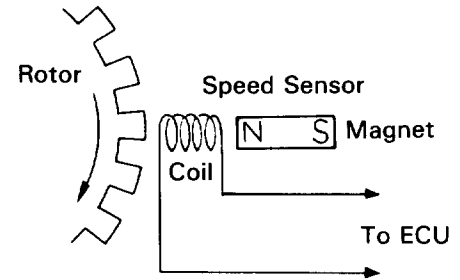


DTC 31 32 33 34 Speed Sensor Circuit

CIRCUIT DESCRIPTION

The speed sensor detects the wheel speed and sends the appropriate signals to the ECU. These signals are used to control both the ABS and TRAC control systems. The front and rear rotors each have 48 serrations. When the rotors rotate, the magnetic field emitted by the permanent magnet in the speed sensor generates an AC voltage. Since the frequency of this AC voltage changes in direct proportion to the speed of the rotor, the frequency is used by the ECU to detect the speed of each wheel.

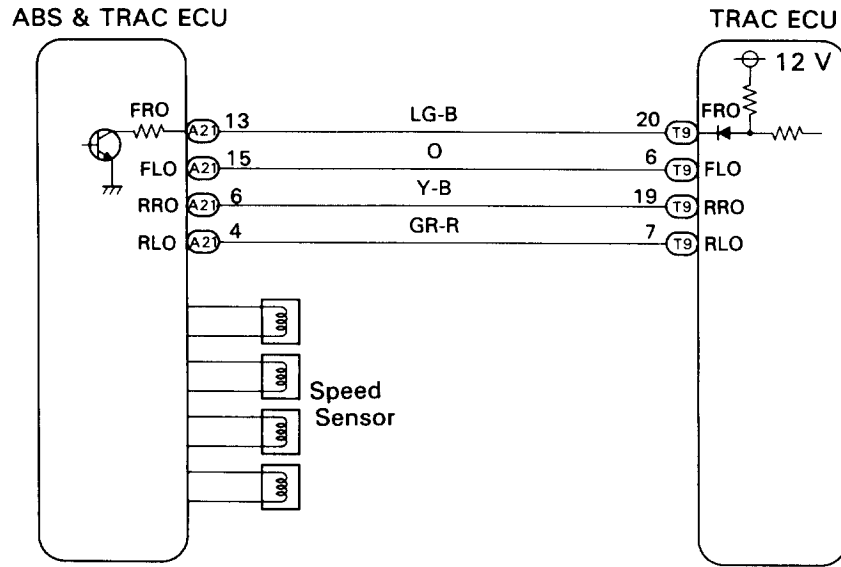


BR3583
BR3582

DTC No.	Diagnostic Trouble Code Detecting Condition	Trouble area
31, 32 33, 34	Detection of any of conditions (1) through (3): (1) At vehicle speed of 10 km/h (6 mph) or more, pulses are not input for 5 sec. (2) Momentary interruption of the vehicle speed sensor signal occurs at least 7 times in the time between switching the ignition switch ON and switching it OFF. (3) Abnormal fluctuation of speed sensor signals with the vehicle speed 20 km/h (12 mph) or more.	<ul style="list-style-type: none"> • Right front, left front, right rear and left rear speed sensor. • Open or short in each speed sensor circuit. • ECU

HINT: DTC No.31 is for the right front speed sensor.
 DTC No.32 is for the left front speed sensor.
 DTC No.33 is for the right rear speed sensor.
 DTC No.34 is for the left rear speed sensor.

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT: If the same code is output from the ABS warning light, troubleshoot the ABS first.

1

Check for open and short in harness and connector between terminals FRO, FLO, RRO, RLO of ABS & TRAC ECU and TRAC ECU (See page IN-30).

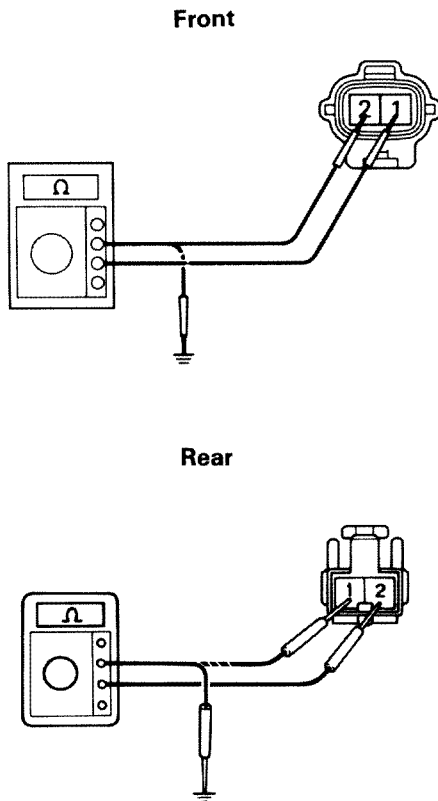
OK

NG

Repair or replace harness or connector.

2

Check speed sensor.



Front

P

1. Remove front fender splash shield.
2. Disconnect speed sensor connector.

C

Measure resistance between terminals 1 and 2 of speed sensor connector.

OK

Resistance: 0.7 – 1.7 kΩ

C

Measure resistance between terminals 1 and 2 of speed sensor connector and body ground.

OK

Resistance: 1 MΩ or higher

Rear

P

1. Remove rear seat cushion, seat back and quarter trim panel.
2. Disconnect speed sensor connector.

C

Measure resistance between terminals 1 and 2 of speed sensor connector.

OK

Resistance: 0.7 – 1.7 kΩ

C

Measure resistance between terminals 1 and 2 of speed sensor connector and body ground.

OK

Resistance: 1 MΩ or higher

BR5425
R07086

OK

NG

Replace speed sensor.

NOTICE: Check the speed sensor signal last (See page BR-62).

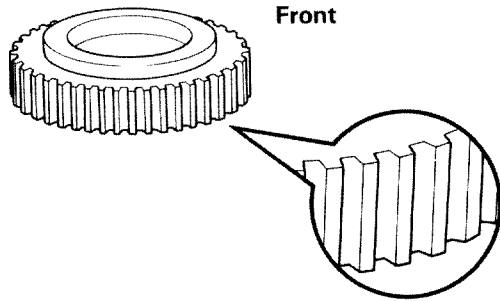
3

Check for open and short in harness and connector between each speed sensor and ECU (See page IN-30).

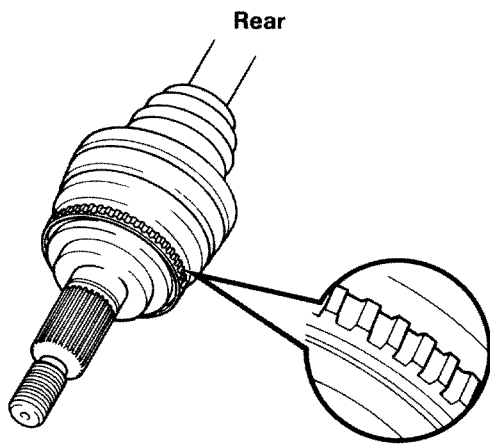
OK

NG

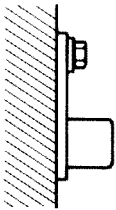
Repair and replace harness or connector.

4**Check sensor rotor and sensor installation.**

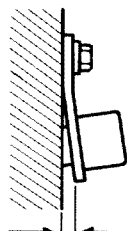
Front



Rear



OK



NG

Front

- P** Remove front speed sensor rotor (See page [SA-15](#)).
- C** Check sensor rotor serrations.
- OK** No scratches or missing teeth.
- C** Check the front speed sensor installation.
- OK** The installation bolt is tightened properly.

Rear

- P** Remove the drive shaft (See page [SA-45](#)).
- C** Check the sensor rotor serrations.
- OK** No scratches or missing teeth.
- C** Check the rear speed sensor installation.
- OK** The installation bolt is tightened properly and there is no clearance between the sensor and rear axle carrier.

BR3719
BR3720
BR3795

OK

NG

Replace speed sensor or rotor.

NOTICE: Check the speed sensor signal last (See page [BR-62](#)).

Check and replace ABS (& TRAC) ECU.