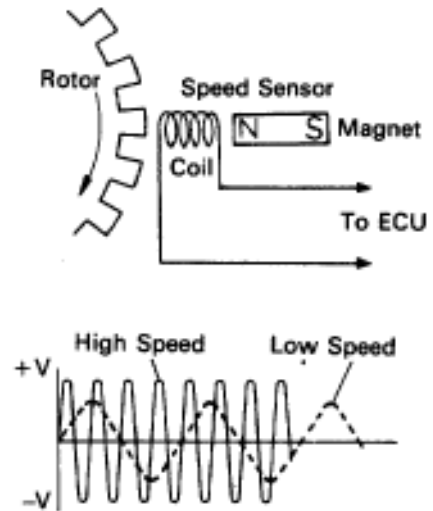


Diag. Code 31, 32, 33 34, 35, 36

Speed Sensor circuit.

CIRCUIT DESCRIPTION

The speed sensor detects the wheel speed and sends the appropriate signals to the ECU. These signals are used for control of both the ABS and TRAC control systems. The front rotor and rear rotor 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 proportion to the speed of the rotors (wheels) the frequency is used by the ECU to detect the speed of each wheel.

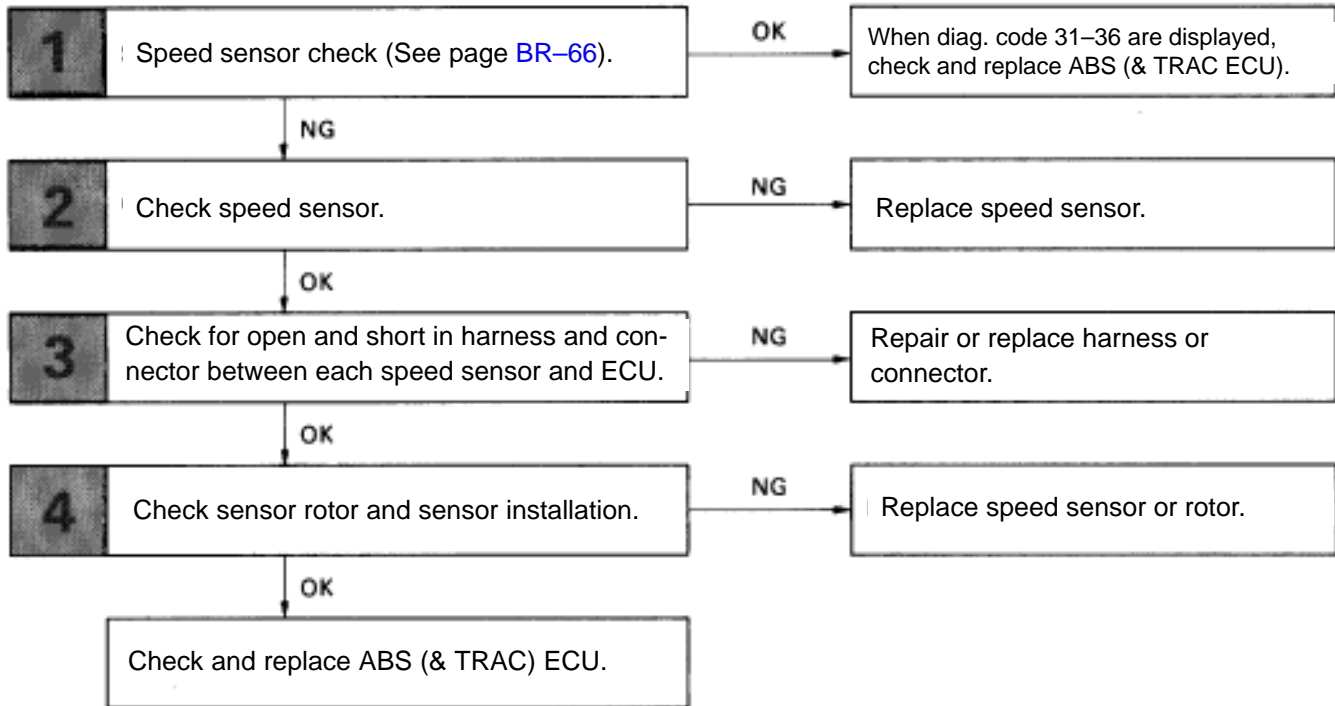


Code No.	Diagnostic Code Detecting Condition	Trouble Area
31, 32, 33, 34	Detection of any of conditions (1) through (3): (1) At vehicle speed of 10 km/h (6 mph) or more, pulses are not input for 5 sec. (2) Momentary interruption of the vehicle speed sensor signal occurs at least 7 times in the time between 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
35	Vehicle speed sensor signal is not input for about 1 sec. while the left front and right rear vehicle speed sensor signals are being checked IG switch is turned ON.	<ul style="list-style-type: none"> •Open in left front, right rear speed sensor circuit. •ECU
36	Vehicle speed sensor signal is not input for about 1 sec. while the right front and left rear vehicle speed sensor signals are being checked with the IG switch ON.	<ul style="list-style-type: none"> •Open in right front, left rear speed sensor circuit. •ECU

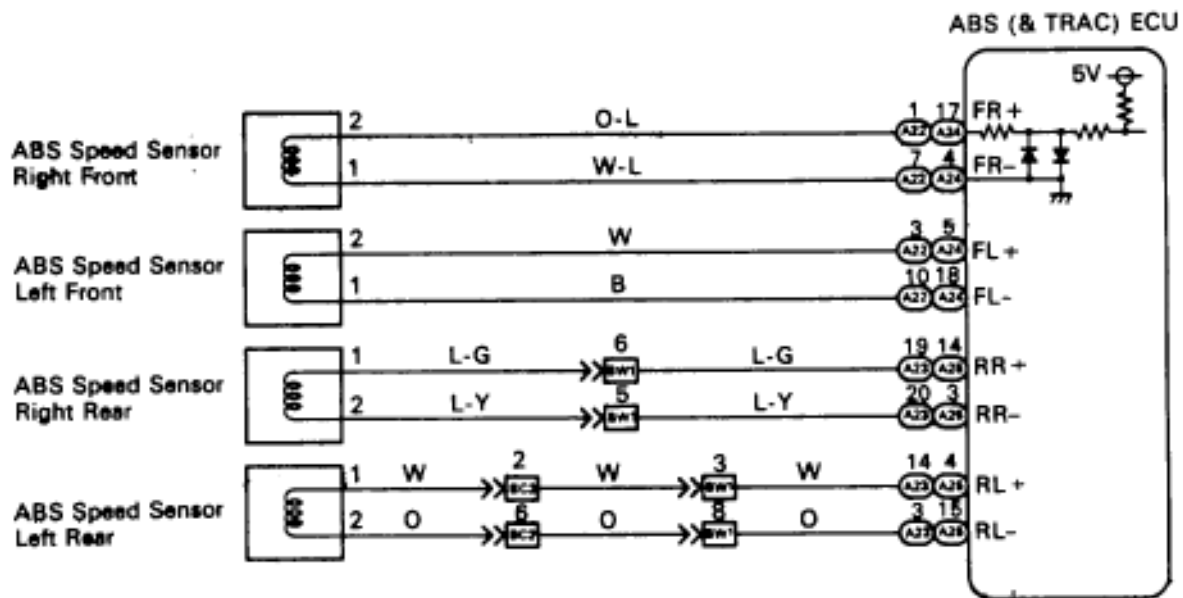
HINT: Diag. code 31 is for the right front wheel speed sensor.
 Diag. code 32 is for the left front wheel speed sensor.
 Diag. code 33 is for the right rear wheel speed sensor.
 Diag. code 34 is for the left rear wheel speed sensor.

Fail safe function: If trouble occurs in the speed sensor circuit, the ECU cuts off current to the ABS solenoid relay and prohibits ABS control.

DIAGNOSTIC CHART



WIRING DIAGRAM



INSPECTION PROCEDURE

1 Speed sensor check.

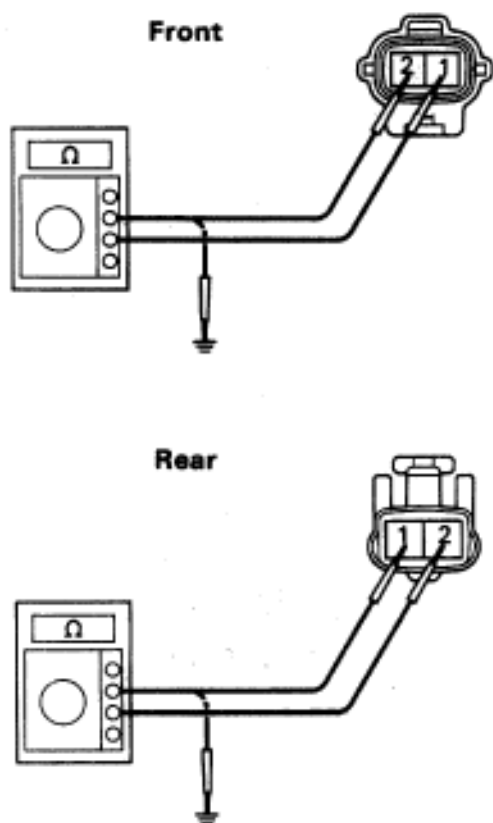
P See speed sensor check on page [BR-66](#).

NG

OK

When diag. Code 31 – 36 are displayed, check and replace ABS (& TRAC) ECU

2 Check speed sensor.



Front

- P** 1. Remove front fender liner.
- 2. Disconnect speed sensor connector.
- C** Measure resistance between terminals 1 and 2 of speed sensor connector.
- OK** **Resistance: 0.9 – 1.3Ω**
- 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 fender liner.
- 2. Disconnect speed sensor connector.
- C** Measure resistance between terminals 1 and 2 of speed sensor connector.
- OK** **Resistance: 0.9 – 1.3Ω**
- C** Measure resistance between terminals 1 and 2 of speed sensor connector and body ground.
- OK** **Resistance: 1 MΩ or higher**

OK

NG

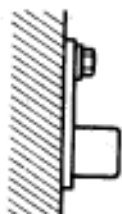
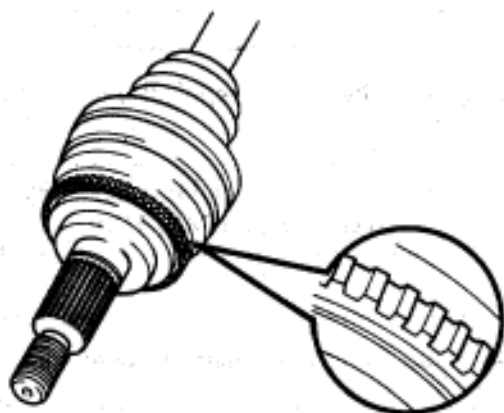
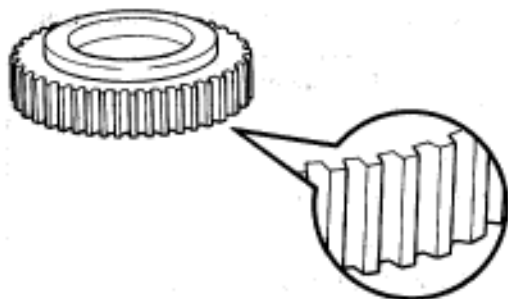
Replace speed sensor.

3 Check for open and short in harness and connector between each speed sensor and ECU (See page IN-27).

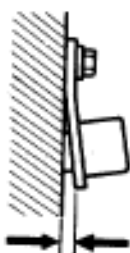
OK

NG

Repair or replace harness or connector.

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

OK



NG

Front

- P** Remove front speed sensor (See page BR-56).
- C** Check sensor rotor serrations.
- OK** **No scratches or missing teeth.**

- C** Check the front speed sensor installation.
- OK** **The installation bolts are tightened properly.**

Rear

- P** Remove the drive shaft (See page SA-64).
- 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
BR3786**OK****NG**

Replace speed sensor or rotor.

Check and replace ABS (& TRAC) ECU.