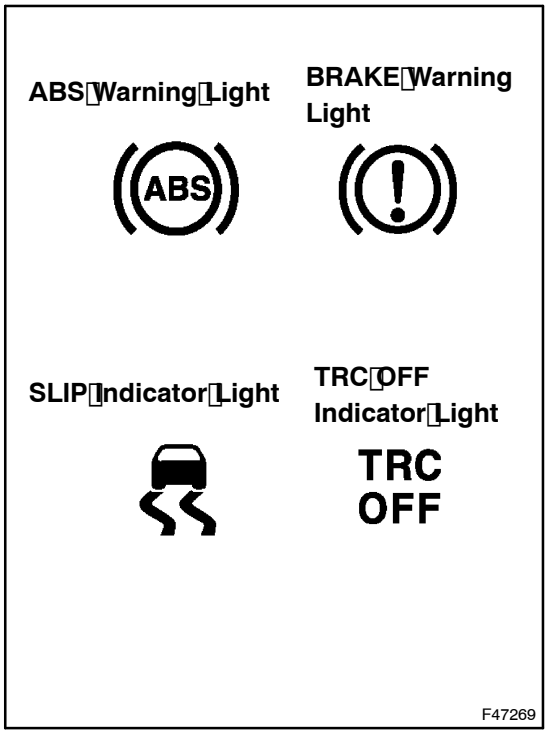
05HJ6–01

TEST MODE PROCEDURE



1. WARNING LIGHT AND INDICATOR LIGHT CHECK

(a) Release the parking brake pedal.

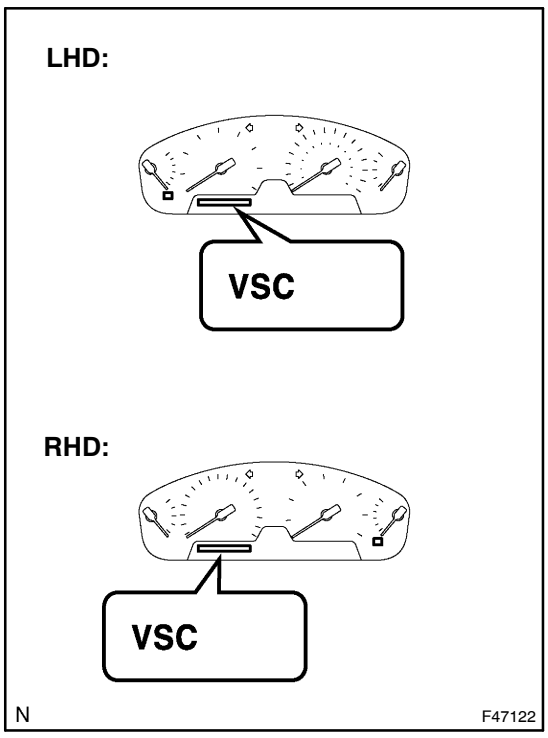
NOTICE:

When releasing the parking brake, move the shift lever into the P position to hold the vehicle for safety.

HINT:

When the parking brake is applied or the level of the brake fluid is low, the BRAKE warning light comes on.

(b) When the ignition switch is turned to the ON position, check that the ABS warning light, TRC OFF indicator light, BRAKE warning light and SLIP indicator light come on for approximately 3 seconds.



HINT:

- If the ECU was any stored DTCs, the ABS warning light, "VSC" is displayed on the multi–information display and TRAC OFF indicator light come on.
- If the indicator does not come on, inspect if the bulb is blown out, and also the wire harness between the skid control ECU and the combination meter.

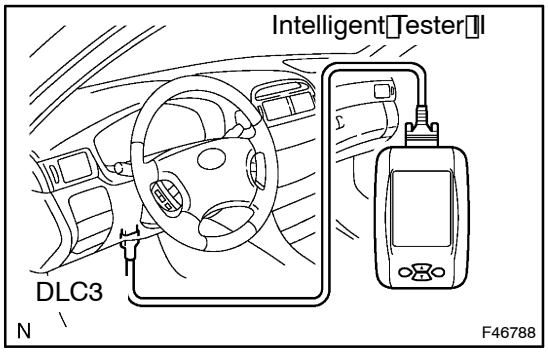
If the indicator remains on, proceed to troubleshooting for the light circuit below.

Trouble area	See Page
ABS warning light circuit	05–476
BRAKE warning light circuit	05–489
TRC OFF indicator light circuit	05–496
SLIP indicator light circuit	05–501

2. SENSOR SIGNAL CHECK BY TEST MODE

HINT:

- If the ignition switch is turned from ON to the ACC or LOCK position during test mode, DTC of sensor check function will be erased.
- During test mode, ECU records all DTCs of sensor check function. By performing sensor signal check, the codes are erased if normality is confirmed. The codes left over are the codes where abnormality was found.



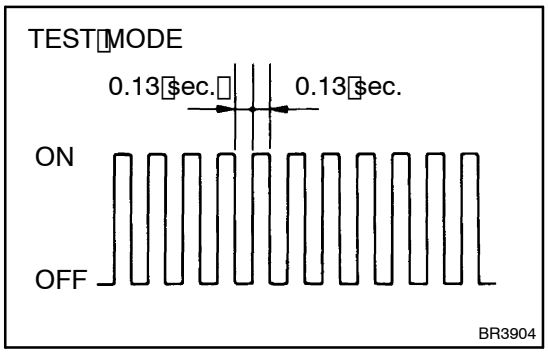
(a) PROCEDURES FOR TEST MODE

(1) Turn the ignition switch off.

(2) Connect the Intelligent Tester II to the DLC3.

(3) Check that the steering wheel is in the straight–ahead position and move the shift lever to the P position.

(4) Turn the ignition switch to the ON position.



(5) Check that the ABS warning light blinking TEST MODE and "VSC Test" is displayed on the multi–information display.

HINT:

If the ABS warning light and VSC information do not blink, inspect the ABS warning light circuit and VSC warning information circuit.

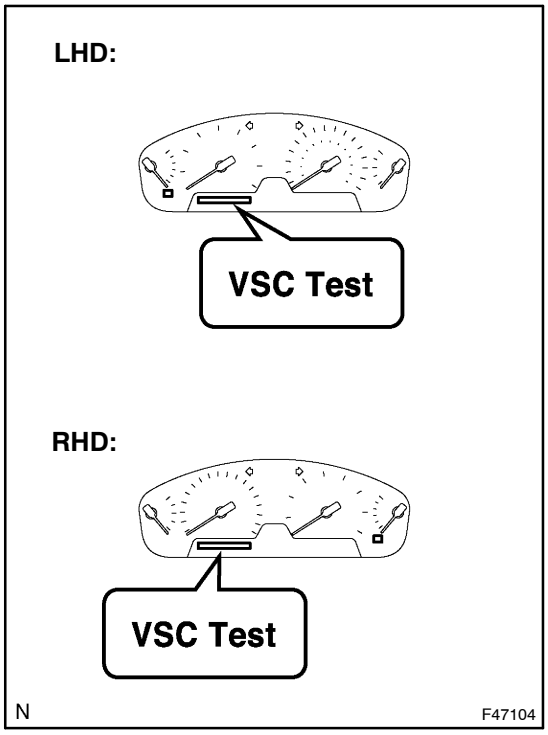
Trouble area	See Page
ABS warning light circuit	05–480
VSC warning information circuit	05–486

(6) Start the engine.

(b) DECELERATION SENSOR CHECK

(1) Check that the ABS warning lamp is blinking in TEST MODE.

(2) Keep the vehicle in the stationary condition on a level surface for 1 second or more.



HINT:

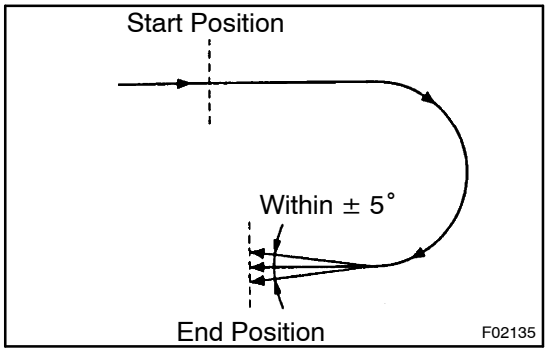
The blinking pattern of the ABS warning lamp and the "VSC Test" display on the multi–information do not change. When the sensor is normal and in the test mode, if the above conditions are met, the check is completed.

(c) MASTER CYLINDER PRESSURE SENSOR CHECK

(1) Leaving the vehicle in a stationary condition and the brake pedal in a free condition for 1 second or more, continue to quickly depress the brake pedal with a force of 98 N (10 kgf, 22 lbf) or more for 1 second or more.

HINT:

At the time, the ABS warning light stays on for 3 seconds.



(d) YAW RATE SENSOR CHECK

(1) Shift the shift lever to the D range and drive the vehicle at the vehicle speed of approx. 5 km/h (3 mph) or more, turn the steering wheel either to left or right 90° or more, and maintain 180° 1 second more circular drive for the vehicle.

NOTICE:

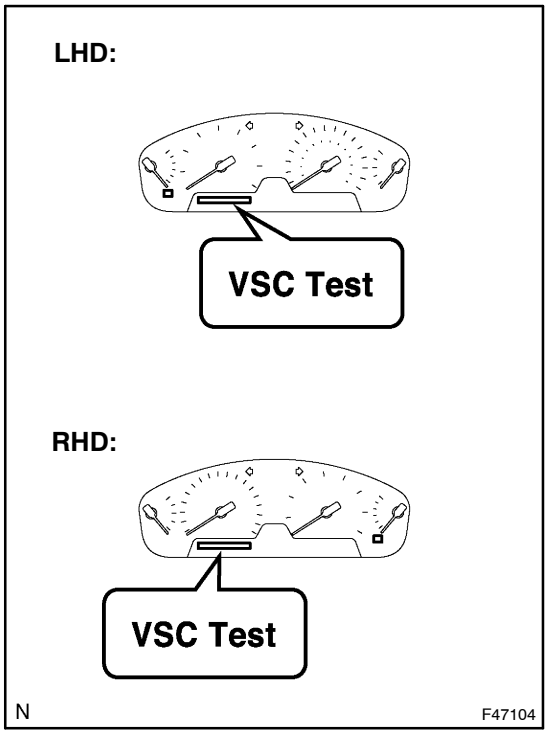
- **The vehicle direction at the beginning and the end should be 180° ± 5° or less.**
- **While turning, do not move the shift lever to the P position. Do not turn the ignition switch off.**

HINT:

- The turning direction is not important.

• Turning should be completed within 20 seconds. However, it is possible to change the vehicle speed, stop or move backward.

(2) Stop the vehicle and shift the shift lever to the P position, check that the skid control buzzer sounds for 3 sec.



HINT:

• If the skid control buzzer sounds, the sensor check is completed normally.

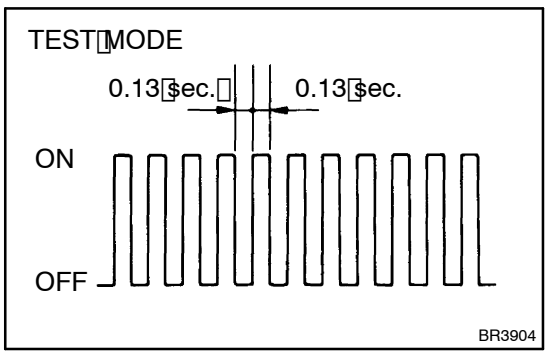
• If the skid control buzzer does not sound, check the skid control buzzer circuit (see page 05–505), then perform the sensor check again.

• If the skid control buzzer still does not sound, there is a malfunction in the VSC sensor, so check the DTC.

• Drive the vehicle in a 180° circle. At the end of the turn, the direction of the vehicle should be within 180° ± 5° of its start position.

• Do not spin the wheels.

• Even if the VSC sensor check is completed normally, the multi–information displays "VSC Test" (test mode).



(e) SPEED SENSOR CHECK

(1) Check the ABS warning lamp is blinking in TEST MODE.

(2) Drive the vehicle straight forward.
Drive the vehicle at a speed of 45 to 80 km/h (28 to 50 mph) or higher for several seconds and check that the ABS warning light goes off.

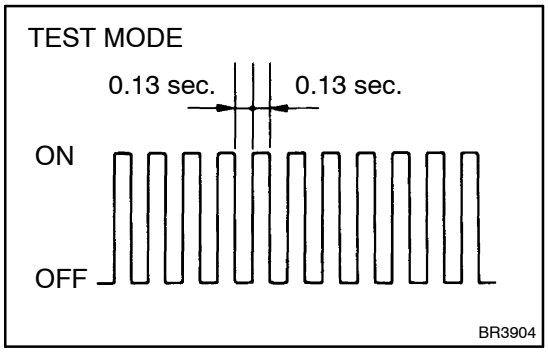
Vehicle Speed	Test	Check
0 to 45 km/h (0 to 28 mph)	Low speed test	Response of sensors
45 to 80 km/h (28 to 50 mph)	Middle speed test	Deviations of sensor signal

NOTICE:

- **Before the speed sensor check, the yaw rate sensor, deceleration sensor and master pressure sensor checks should be completed.**
- **If the sensor check begins with the steering wheel turned or the wheel spin, the speed sensor check may not be completed.**

- **If the sensor check is not completed, the ABS warning lamp blinks even while driving and the ABS does not operate.**

HINT:
If the speed sensor check is completed, the ABS warning lamp does not come on while driving and blinks at test mode when the vehicle stops.



(f) END OF SENSOR CHECK
  (1) If the sensor check is completed, the ABS warning lamp blinks (test mode) when the vehicle stops and the ABS warning lamp is off when the vehicle is driving.

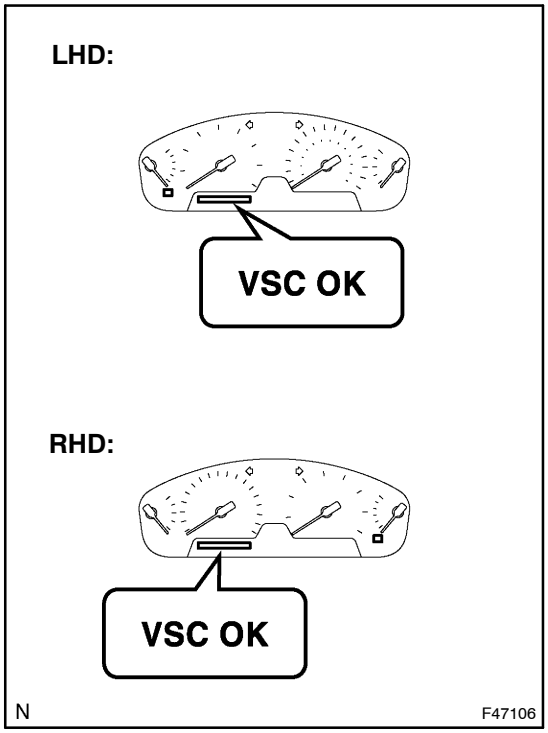
NOTICE:

- **When the yaw rate sensor, deceleration sensor, speed sensor and master cylinder pressure sensor checks are completed, the sensor check is completed.**
- **If the sensor check is not completed, the ABS warning lamp blinks even while the vehicle is driving and the ABS does not operate.**
- **If the DTC is detected during the test mode, the ABS warning lamp comes on and the multi–information displays the VSC abnormality.**

(g) READ TEST MODE CODE
  (1) Using intelligent tester II, check the DTCs in the test mode. (Refer to the step i)

NOTICE:

- **If only the DTCs are displayed, repair the malfunction area and clear the DTC. Check if the ABS warning lamp is normal and multi–information displays "VSC OK".**
- **If only the test mode codes are displayed, perform the test mode again.**
- **If the DTCs or test mode codes are displayed, repair the malfunction area, clear the DTCs and perform the test mode inspection.**



HINT:

- The test mode codes and DTCs are displayed.
- If the ABS is normal, the ABS warning lamp comes on for 0.25 seconds and goes off for 0.25 seconds repeatedly.
- If the VSC system is normal, the multi–information displays ”VSC OK”.

(h) DTC of TEST MODE:

Code No.	Diagnosis	Trouble Area
C1271/71	Low output voltage of right front speed sensor	• Right front speed sensor • Sensor installation • Sensor rotor
C1272/72	Low output voltage of left front speed sensor	• Left front speed sensor • Sensor installation • Sensor rotor
C1273/73	Low output voltage of right rear speed sensor	• Right rear speed sensor • Sensor installation • Sensor rotor
C1274/74	Low output voltage of left rear speed sensor	• Left rear speed sensor • Sensor installation • Sensor rotor
C1275/75	Abnormal change in output voltage of right front speed sensor	Right front sensor rotor
C1276/76	Abnormal change in output voltage of left front speed sensor	Left front speed sensor rotor
C1277/77	Abnormal change in output voltage of right rear speed sensor	Right rear sensor rotor
C1278/78	Abnormal change in output voltage of left rear speed sensor	Left rear speed sensor rotor
C1279/79	Deceleration sensor is faulty	• Yaw rate (deceleration) sensor • Sensor installation
C1281/81	Master cylinder pressure sensor output signal is faulty	Master cylinder pressure sensor
C0371/71	Yaw rate sensor output signal is faulty	Yaw rate sensor

HINT:

The code in this table are output only in TEST MODE.