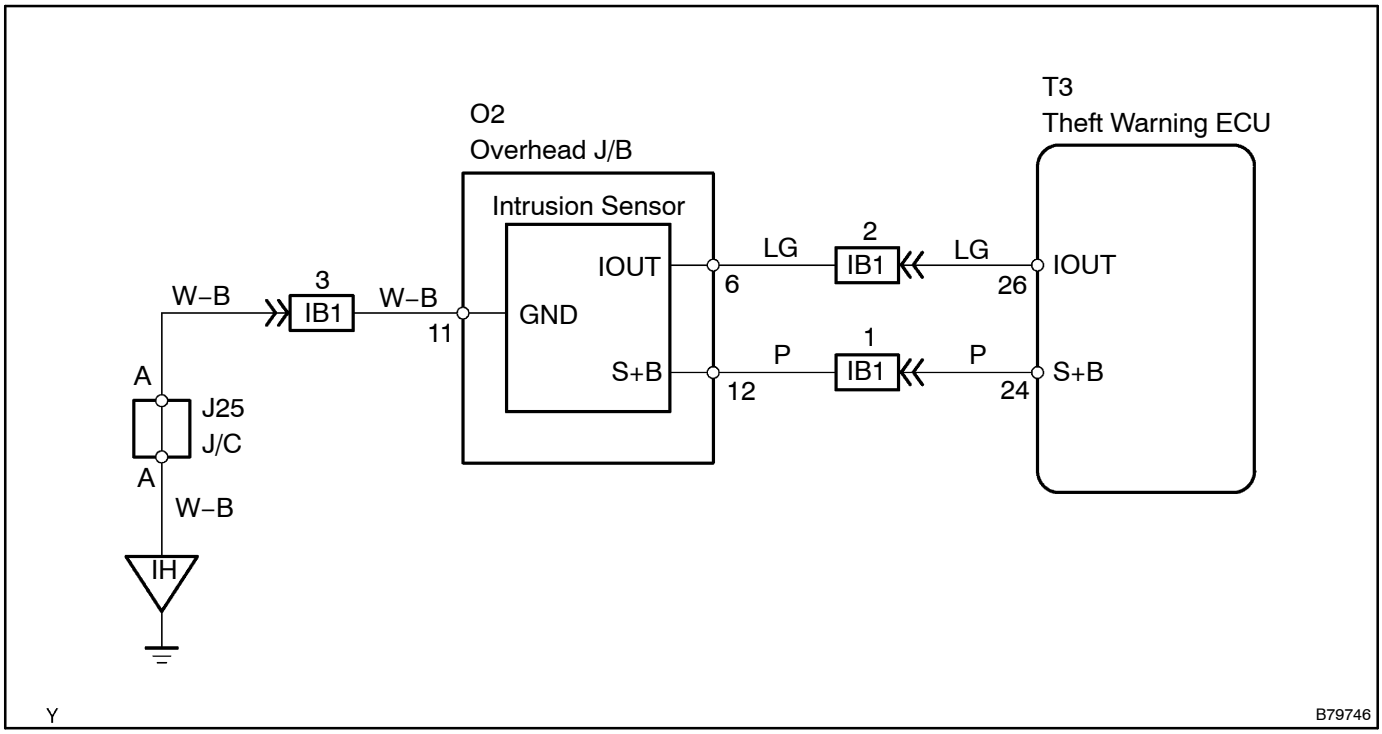
INTRUSION SENSOR CIRCUIT

CIRCUIT DESCRIPTION

The intrusion sensor (theft warning sensor) detects moving objects by using ultrasonic waves. If a moving object is detected, it outputs signals to inform the theft warning ECU of an intrusion and the theft deterrent system sets off the alarm.

When the theft deterrent system is switched to the arming preparation state, the theft warning ECU supplies power to the intrusion sensor through the S+B. In such a situation where a window glass is broken, the intrusion sensor can output a signal and the theft deterrent system can set off an alarm.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	CHECK INTRUSION SENSOR OPERATION

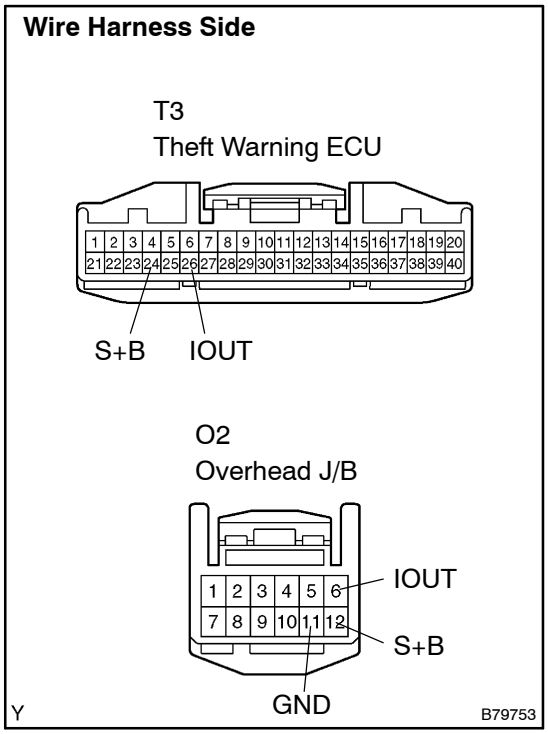
(a) Open a window. Then activate the theft deterrent system. After 30 seconds, insert your hand through the window and shake it near the sensor to check if the alarm is triggered.
OK: Alarm is triggered.

NG → **Go to step 2**

OK

END

2	CHECK WIRE HARNESS (OVERHEAD J/B (INTRUSION SENSOR) – THEFT WARNING ECU AND BODY GROUND)



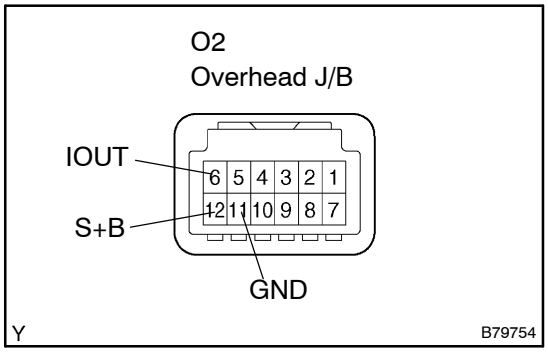
(a) Disconnect the T3 ECU connector.
(b) Disconnect the O2 J/B connector.
(c) Measure the resistance between the wire harness side connectors and body ground.
Standard:

Tester Connection	Specified Condition
O2 – 6 (IOUT) – T3 – 26 (IOUT)	Below 1 Ω
O2 – 12 (S+B) – T3 – 24 (S+B)	Below 1 Ω
O2 – 11 (GND) – Body ground	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

3 CHECK INTRUSION SENSOR (OVERHEAD J/B)

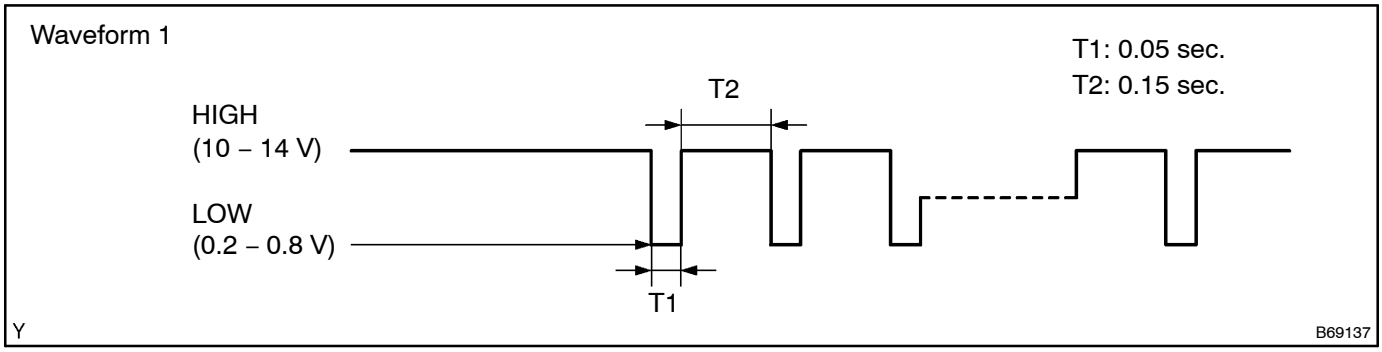


(a) Measure the voltage or resistance.

Standard:

Tester Connection	Condition	Specified Condition
O2–12 (S+B) – Body ground	Arming preparation state or armed state	10 to 14 V
O2–12 (S+B) – Body ground	Disarmed state	Below 1 V
O2–6 (IOUT) – Body ground	No moving object detected by sensor	10 to 14 V
O2–6 (IOUT) – Body ground	Moving object detected by sensor during arming preparation state or armed state	Pulse generation (see waveform 1)
O2–11 (GND) – Body ground	Constant	Below 1 V

Wave Pattern:



NG → **REPLACE OVERHEAD J/B**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN ON PROBLEM SYMPTOMS TABLE (See page 05–2209)