BE1WU-04

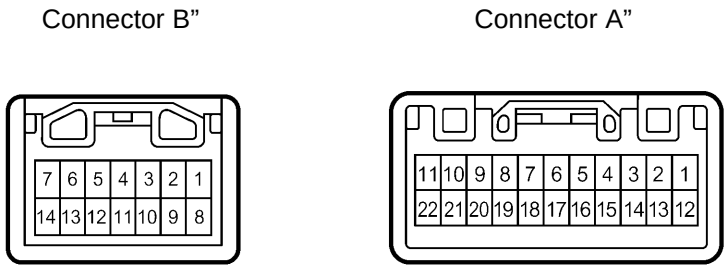
INSPECTION

1. INSPECT COMBINATION METER CIRCUIT

Connector connected:

Connect connector ”A” and ”B” from the combination meter and inspect the connectors on the wire harness side as shown in the table.

Connector connected



I11995

Tester connection	Condition	Specified condition
A2 - Ground (Turn L)	Ignition switch ON and turn signal switch Left	Battery voltage
A3 - Ground (Turn R)	Ignition switch ON and turn signal switch Right	Battery voltage
A4 - Ground (Beam +)	Always	Battery voltage
A5 - Ground (Beam -)	Headlight dimmer switch HI	Battery voltage
A6 - Ground (BRK level)	Ignition switch ON and Brake fluid level warning switch LO	Battery voltage
A7 - Ground (Check engine)	Ignition switch ON and engine running	Battery voltage
A8 - Ground (SRS)	SRS warning light does not light up	Battery voltage
A9 - Ground (ABS)	Ignition switch ON and ABS warning does not lights up	Battery voltage
A10 - Ground (ILL-)	Light control switch TAIL or HEAD	Continuity
A11 - Ground (Headlight beam level)	Headlight beam level control system is operation	Battery voltage
A12 - Ground (Speed signal input)	Ignition switch ON and turn propeller shaft slowly	Battery voltage
A13 - Ground (Speed signal output)	Ignition switch ON and turn propeller shaft slowly	1 V to 4.5 - 5.5 V
A14 - Ground (Tachometer signal)	Engine running	Pulse generation *1
A15 - Ground (MPX +B)	Always	Battery voltage

A16 - Ground (DOME +B)	Always	Battery voltage
A17 - Ground (IGN)	Ignition switch ON	Battery voltage
A18 - Ground (Power ground)	Always	Continuity
A19 - Ground (Signal ground)	Always	Continuity
A20 - Ground (MPX+)	Ignition switch ON	Pulse generation
A21 - Ground (MPX-)	Ignition switch ON	Pulse generation
A22 - Ground (ILL+)	Light control switch TAIL or HEAD	Battery voltage
B1 - Ground (SP ground)	Always	Continuity
B3 - Ground (TRC OFF)	Ignition switch ON and TRC OFF indicator does not light up	Battery voltage
B4 - Ground (SLIP)	Ignition switch ON and SLIP indicator does not light up	Battery voltage
B5 - Ground (VSC)	Ignition switch ON and VSC indicator does not light up	Battery voltage
B6 - Ground (Rear Lights)	Ignition Switch ON and rear lights bulb is blown	Battery voltage
B8 - Ground (Security)	Theft deterrent system is operating	Battery voltage
B9 - Ground (Alternator L terminal)	Engine running	Battery voltage

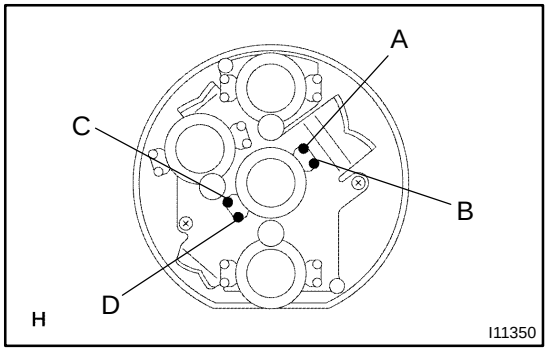
If circuit is not as specified, wiring diagram and inspect the circuits connected to other parts.

2. INSPECT SPEEDOMETER/ON-VEHICLE

Using a speedometer tester, inspect the speedometer for allowable indication error and check the operation of the odometer.
HINT:
Tire wear and tire over or under inflation will increase the indication error.

USA (mph)		CANADA (km/h)	
Standard indication	Allowable range	Standard indication	Allowable range
20	18.5 - 21.5	20	18 - 23
40	38 - 41.5	40	40 - 44
60	58 - 62	60	60 - 64.5
80	77.5 - 82	80	80 - 85
100	97 - 102	100	100 - 105
120	116.5 - 122	120	120 - 125.5
140	136 - 142	140	140 - 146
		160	160 - 167
		180	180 - 188
		200	200 - 209
		220	220 - 230
		240	240 - 251

If error is excessive, replace the speedometer.



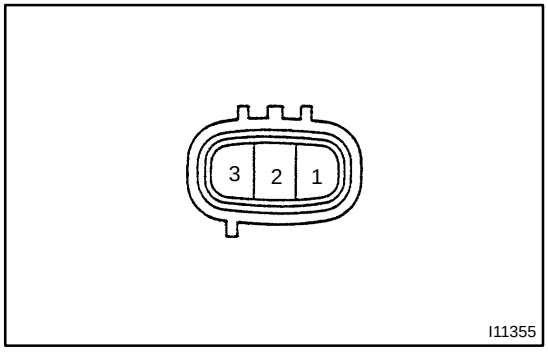
3. INSPECT SPEEDOMETER RESISTANCE

(See page DI-877)

Measure the resistance between terminals with fixing pointer to the stopper.

Tester connection	Resistance (Ω)
A - D	160
B - C	160

If resistance value is not as the specified, replace the meter.



4. INSPECT VEHICLE SPEED SENSOR OPERATION

(See page DI-885)

(a) Connect the positive (+) lead from battery to terminal 1 and negative (-) lead to terminal 2.
(b) Connect the positive (+) lead from tester to terminal 3 and negative (-) lead to terminal 2.
(c) Rotate shaft.
(d) Check that there is a voltage change from approx. 0 V to 11 V or more between terminals 2 and 3.

HINT:
The voltage change should be 4 times for every revolution of the speed sensor shaft.
If operation is not as specified, replace the sensor.

5. INSPECT TACHOMETER/ON-VEHICLE

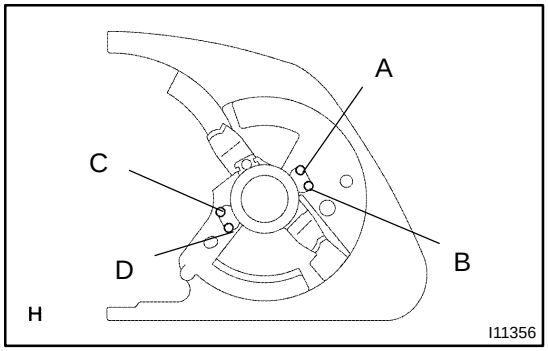
(a) Connect a tune-up test tachometer, and start the engine.

NOTICE:

- **Reversing the connection of the tachometer will damage the transistors and diodes inside.**
- **When removing or installing the tachometer, be careful not to drop or subject it to heavy shocks.**

(b) Compare the tester and tachometer indications.
DC 13.5 V 25 ˚C at (77˚F)

Standard indication	Allowable range
700	630 - 770
1,000	(900 - 1,100)
2,000	(1,850 - 2,150)
3,000	2,850 - 3,150
4,000	(3,800 - 4,200)
5,000	4,800 - 5,200
6,000	(5,750 - 6,250)
7,000	6,700 - 7,300
8,000	7,700 - 8,300

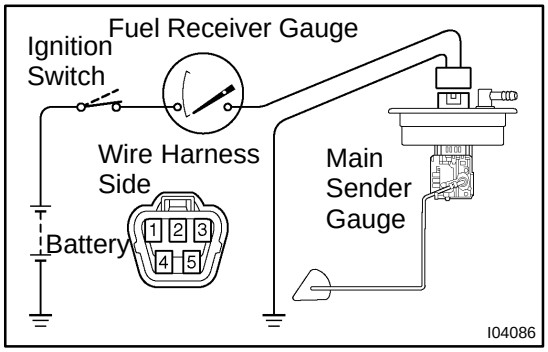


6. INSPECT TACHOMETER RESISTANCE
(See page DI-878)

Measure the resistance between terminals with fixing pointer to the stopper.

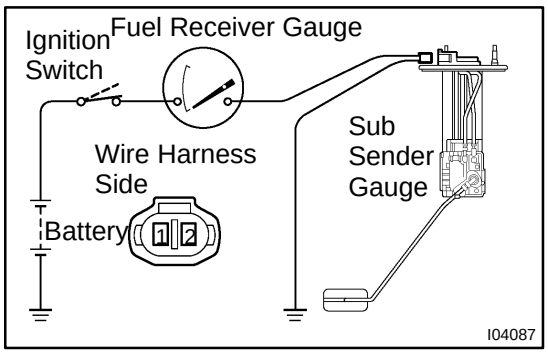
Tester connection	Resistance (Ω)
A - D	160
B - C	160

If resistance value is not as specified, replace the meter.



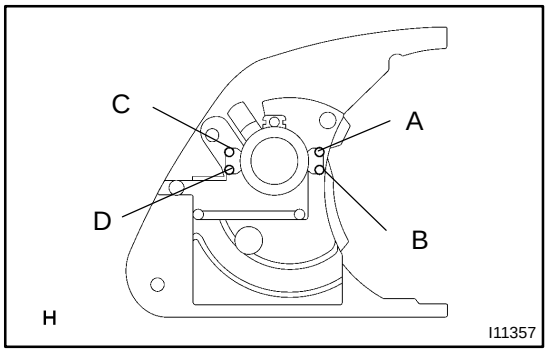
7. INSPECT FUEL RECEIVER GAUGE OPERATION (See page DI-879)

(a) Disconnect the connector from the main sender gauge.
(b) Turn the ignition switch ON, check that the receiver gauge needle indicates EMPTY.



(c) Connect the main sender gauge.
(d) Disconnect the connector from the sub sender gauge.
(e) Turn the ignition switch ON, check that the receiver gauge needle indicates EMPTY.

HINT:
Because of the silicon oil in the gauge, it will take a short time for needle to stabilize.
If operation is not as specified, inspect the receiver gauge resistance.

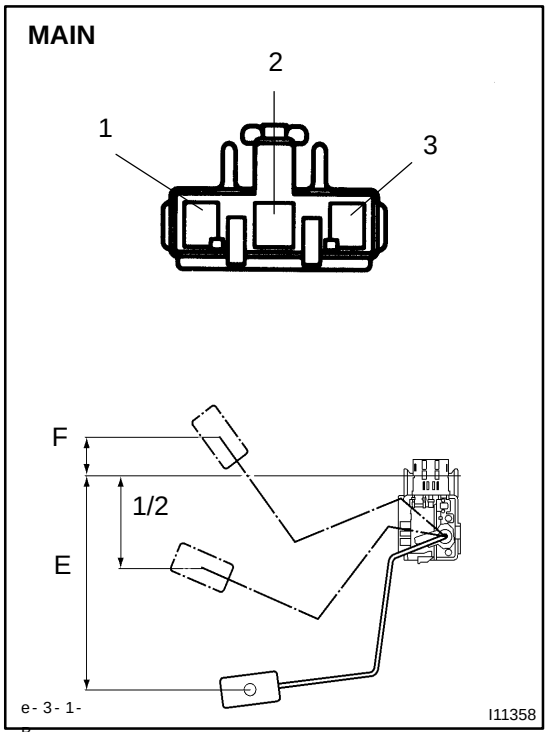


8. INSPECT FUEL RECEIVER GAUGE RESISTANCE (See page DI-919)

Measure the resistance between terminals with fixing pointer to the stopper.

Tester connection	Resistance (Ω)
A - D	160
B - C	160

If resistance value is not as specified, replace the receiver gauge.

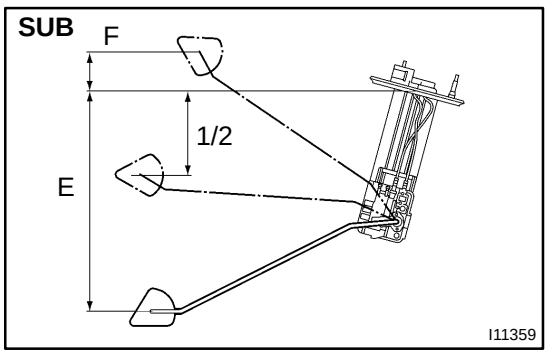


9. INSPECT FUEL MAIN SENDER GAUGE RESISTANCE

Measure the resistance between terminals 1 and 2 for each float position.

Float position mm (in.)	Resistance (Ω)
F: Approx. 22.9 (0.90) ± 3 (0.12)	Approx. 2.0 ± 1.0
1/2: Approx. 58.3 (2.30) ± 3 (0.12)	Approx. 30.3 ± 3.0
E: Approx. 133.6 (5.26) ± 3 (0.12)	Approx. 55.0 ± 1.0

If resistance value is not as specified, replace the main sender gauge.



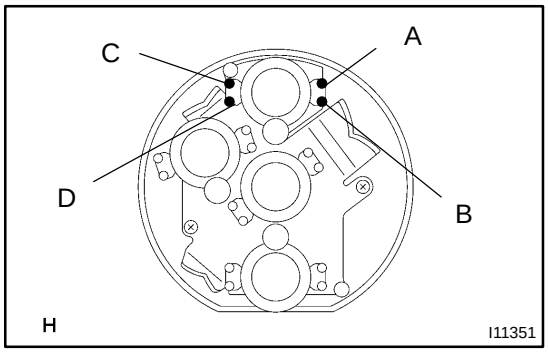
10. INSPECT FUEL SUB SENDER GAUGE RESISTANCE

Measure the resistance between terminals 1 and 2 for each float position.

Float position mm (in.)	Resistance (Ω)
F: Approx. 29.1 (1.15) ± 3 (0.12)	Approx. 2.0 ± 1.0
1/2: Approx. 65.8 (2.59) ± 3 (0.12)	Approx. 29.7 ± 3.0
E: Approx. 169.5 (6.67) ± 3 (0.12)	Approx. 55 ± 1.0

If resistance value is not as specified, replace the sub sender gauge.

11. INSPECT WATER TEMPERATURE RECEIVER GAUGE OPERATION (See page DI-881)



12. INSPECT WATER TEMPERATURE RECEIVER GAUGE RESISTANCE

Measure the resistance between terminals with fixing pointer to the stopper.

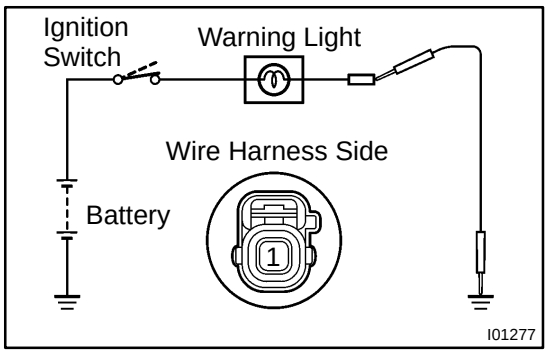
Tester connection	Resistance (Ω)
A - D	160
B - C	160

If resistance value is not as specified, replace the receiver gauge.

HINT:

This circuit includes the diode.

If resistance value is not as specified, replace the receiver gauge.

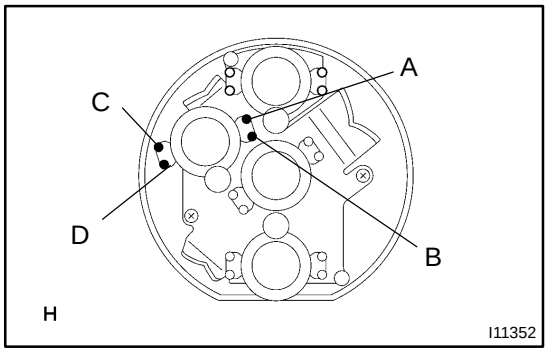


13. INSPECT LOW OIL PRESSURE WARNING LIGHT

(a) Disconnect the connector from the warning switch and ground terminal on the wire harness side connector.

(b) Turn the ignition switch ON and check that the warning light lights up.

If the warning light does not light up, test the bulb.

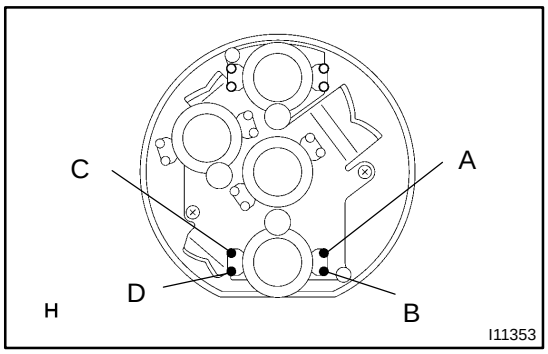


14. INSPECT VOLTAGE GAUGE RESISTANCE (See page DI-883)

Measure the resistance between terminals with fixing pointer to the stopper.

Tester connection	Resistance (Ω)
A - D	160
B - C	160

If resistance value is not as specified, replace the receiver gauge.

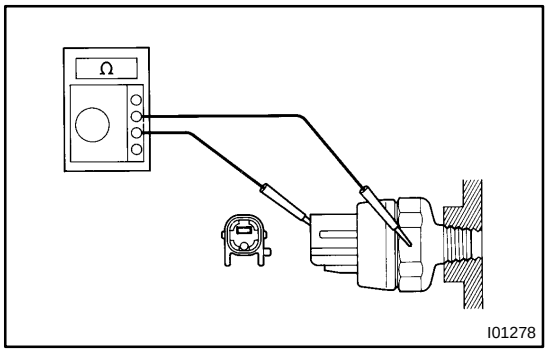


15. INSPECT SPECIFIC FUEL CONSUMPTION GAUGE RESISTANCE (See page DI-884)

Measure the resistance between terminals with fixing pointer to the stopper.

Tester connection	Resistance (Ω)
A - D	160
B - C	160

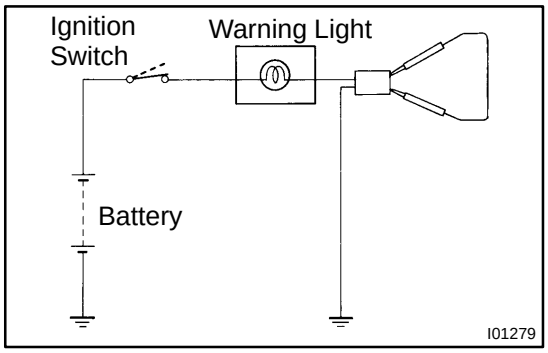
If resistance value is not as specified, replace the meter.



16. INSPECT OIL PRESSURE SENDER CONTINUITY

(a) Disconnect the connector from the oil presser sender.
(b) Check that no continuity exists between terminal and ground with the engine stopped.
(c) Check that continuity exists between terminal and ground with the engine running.

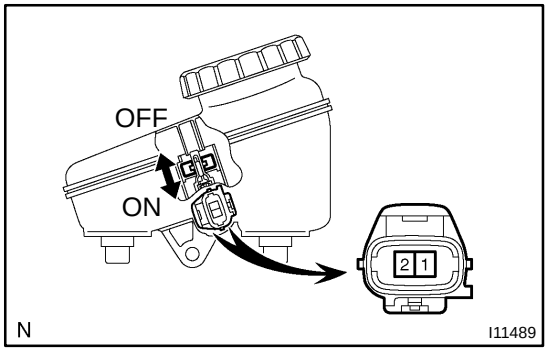
HINT:
Oil pressure should be over 24.5 kPa (0.25 kgf/cm^2, 3.55 psi).
If operation is not as specified, replace the oil pressure sender.



17. INSPECT BRAKE WARNING LIGHT

(a) Disconnect the connector from the brake fluid warning switch.
(b) Release the parking brake pedal.
(c) Connect the terminals on the wire harness side of the level warning switch connector.
(d) Start the engine, check that the warning light lights up.

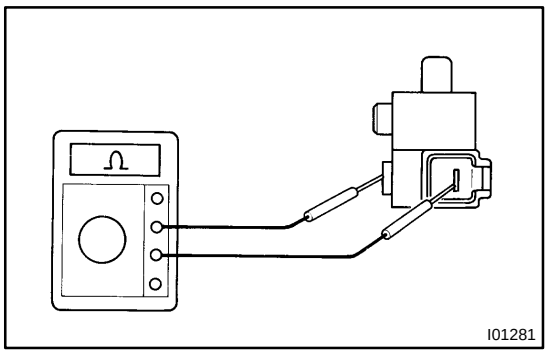
If the warning light does not light up, test the bulb or wire harness.



18. INSPECT BRAKE FLUID LEVEL WARNING SWITCH CONTINUITY

(a) Remove the reservoir tank cap and strainer.
(b) Disconnect the connector.
(c) Check that no continuity exists between the terminals with the switch OFF (float up).
(d) Use siphon, etc. to take fluid out of the reservoir tank.
(e) Check that continuity exists between the terminals with the switch ON (float down).
(f) Pour the fluid back in the reservoir tank.

If operation is not as specified, replace the switch.

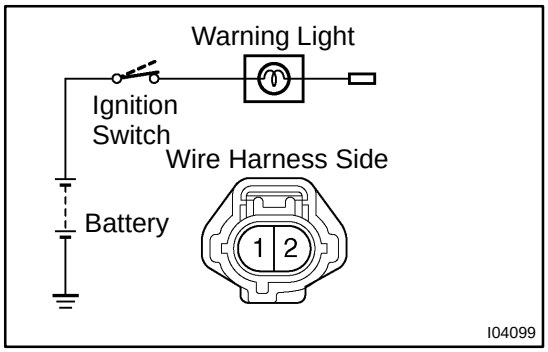


19. INSPECT PARKING BRAKE SWITCH CONTINUITY

(a) Check that continuity exists between the terminal and switch body with the switch ON (switch pin released).

(b) Check that no continuity exists between the terminal and switch body with the switch OFF (switch pin pushed in).

If operation is not as specified, replace the switch or inspect ground point.



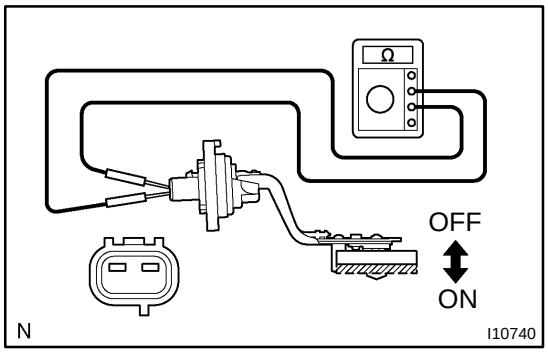
20. INSPECT ENGINE OIL LEVEL WARNING LIGHT

(a) Disconnect the connector from the switch.

(b) Run the engine.

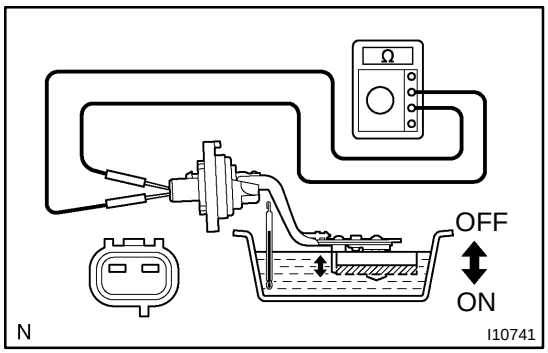
(c) Turn the ignition switch ON, check that the warning light lights up approximately 40 seconds later.

If the warning light does not light up, inspect bulb or wire harness.



21. INSPECT ENGINE OIL LEVEL WARNING SENSOR

(a) Check that continuity exists between terminals when the sensor-sensed temperature drops to 40 °C or less with the float down.

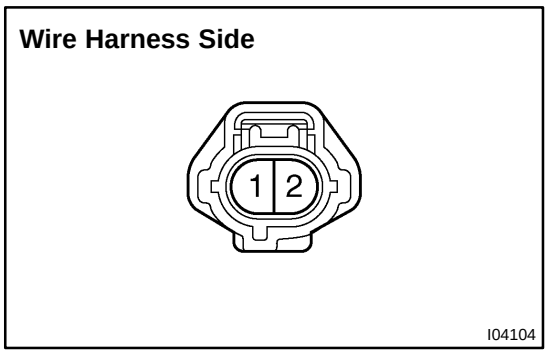


(b) Heat the switch to above 60 °C (140 °F) in an oil bath.

(c) Check that there is continuity between terminals with the switch ON (float down).

(d) Check that there is no continuity between terminals with the switch OFF (float up).

If operation is not as specified, replace the sensor.

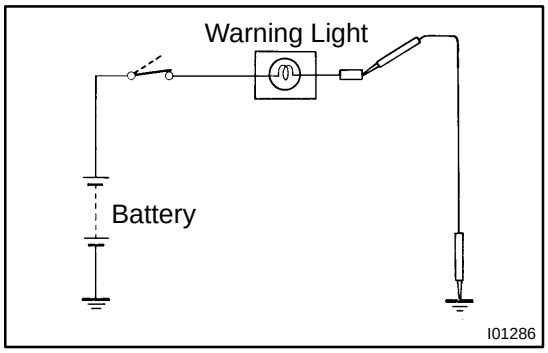


22. INSPECT ENGINE OIL LEVEL WARNING SENSOR CIRCUIT

Disconnect the switch connector and inspect the connector on wire harness side, as shown.

Tester connection	Condition	Specified condition
2 - Ground	Always	Continuity

If continuity is not as specified, inspect the wire harness or ground point.

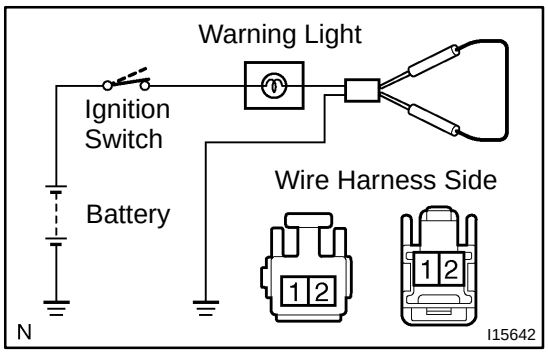


23. INSPECT OPEN DOOR WARNING LIGHT

Disconnect the connector from the door courtesy switch and ground terminal 1 on the wire harness side, and check that the warning light lights up.

If the warning light does not light up, inspect the bulb or wire harness.

24. INSPECT DOOR COURTESY SWITCH CONTINUITY AND CIRCUIT (See page DI-921)



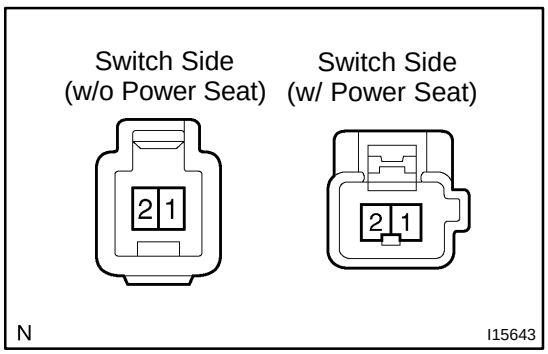
25. INSPECT SEAT BELT WARNING LIGHT

(a) Disconnect the connector from the buckle switch.

(b) Connect terminal on the wire harness side of the buckle switch connector.

(c) Turn the ignition switch ON and check that the warning light lights up.

If the warning light does not light up, inspect the bulb or wire harness.



26. INSPECT SEAT BELT BUCKLE SWITCH CONTINUITY

(a) Check that continuity exists between the terminals 1 and 2 on the switch side connector with the switch ON (belt fastened).

(b) Check that continuity exists between the terminals 1 and 2 on the switch side connector with the switch OFF (belt unfastened).

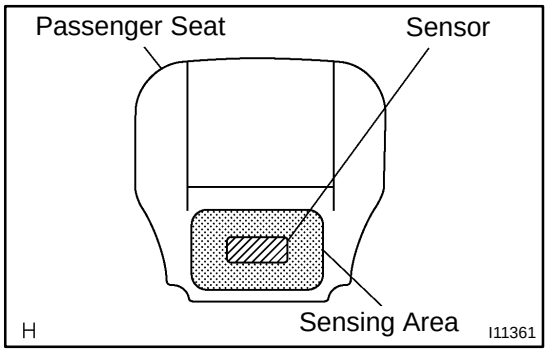
If operation is not as specified, replace the switch.

27. INSPECT SEAT BELT BUCKLE SWITCH CIRCUIT (See page DI-917)

Disconnect the switch connector and inspect the connector on wire harness side, as shown.

Tester connection	Condition	Specified condition
2 - Ground	Always	Continuity

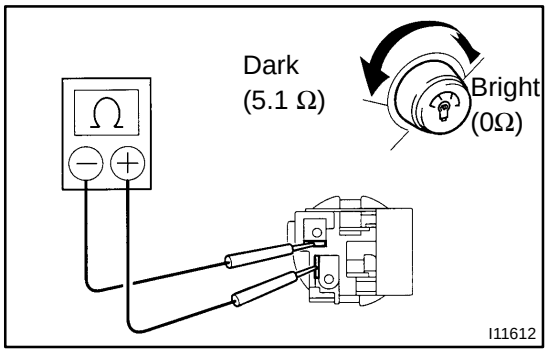
If continuity is not as specified, inspect the circuits connected to other parts.



28. Passenger seat only: INSPECT SEAT BELT WARNING OCCUPANT DETECTION SENSOR CONTINUITY

Check that continuity exists between the terminals 1 and 2 when pressing the sensing part.

If operation is not as specified, replace the sensor.

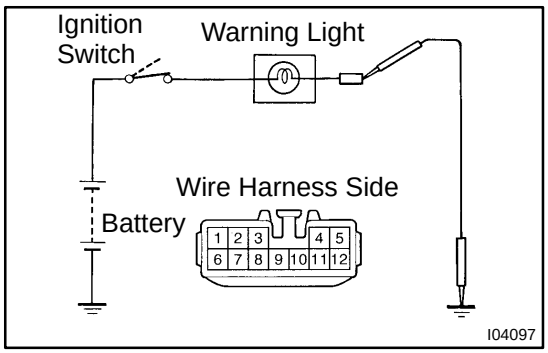


29. INSPECT LIGHT CONTROL RHEOSTAT OPERATION

(a) Turn the rheostat knob max. dark side and check that the resistance 5.1 Ω. (Rheostat knob turned to fully counterclockwise)

(b) Gradually, turn the rheostat knob from the dark side to bright side and check that the resistance decreases from 5.1 to 0 Ω. (Rheostat knob turned to clockwise)

If operation is not as specified, replace the rheostat light control.

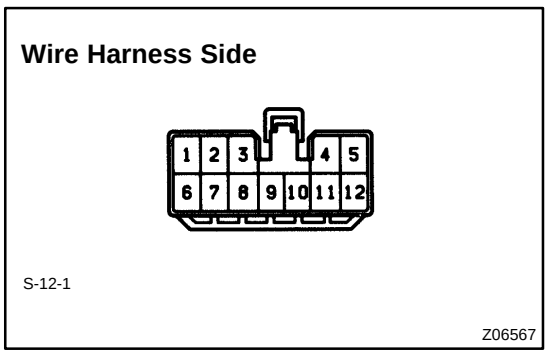


30. INSPECT REAR LIGHTS WARNING LIGHT

(a) Disconnect the connector from the light failure sensor and ground terminal 4, 5 or 9 on the wire harness side connector.

(b) Start the engine, check that the warning light lights up.

If the warning light does not light up, inspect the bulb or wire harness.



31. INSPECT LIGHT FAILURE SENSOR CIRCUIT

Disconnect the connector from the sensor and inspect the connector on the wire harness side, as shown.

Tester connection	Condition	Specified condition
1 - Ground	Always	* Continuity
2 - Ground	Always	* Continuity
3 - Ground	Taillight ON	Battery Positive Voltage
9 - Ground	Always	* Continuity
11 - Ground	Always	Continuity
3 - Ground	Taillight or Headlight OFF	No voltage
3 - Ground	Taillight or Headlight ON	Battery Positive Voltage
4 - Ground	Ignition switch LOCK or ACC	No voltage
4 - Ground	Ignition switch ON	Battery Positive Voltage
7 - Ground	Stop light switch OFF	No voltage
7 - Ground	Stop light switch ON	Battery Positive Voltage
8 - Ground	Ignition switch LOCK or ACC	No voltage
8 - Ground	Ignition switch ON	Battery Positive Voltage

*: There is resistance because this circuit is grounded through the bulb.

If the circuit is not as specified, inspect the circuits connected to other parts.

32. MAINTENANCE LIQUID RESETTING PROCEDURE

Indicator Condition:

State	Condition	Specified condition
Blinking	The vehicle runs 4,500 miles after the previous setting.	The indicator blinks for 15 seconds after the ignition switch is turned on (Incluing 3 seconds for a valve check)
Continuously illuminated	The vehicle runs 5,000 miles after the previous setting.	The indicator is continuously illuminated after the ignition switch is turned on.

(a) Set the display window to ODO.

(b) Turn the ignition switch off.

(c) Pressing the reset switch, turn the ignition switch (Keep pressing for at least 5 seconds).

(d) The reset procedure is completed.

HINT:

- If the ignition switch is turned off during the reset procedure, reset mode is canceled.
- If the reset switch is turned off during the reset procedure, reset mode is canceled.