

INSPECTION

1. INSPECT SPEEDOMETER

ON-VEHICLE:

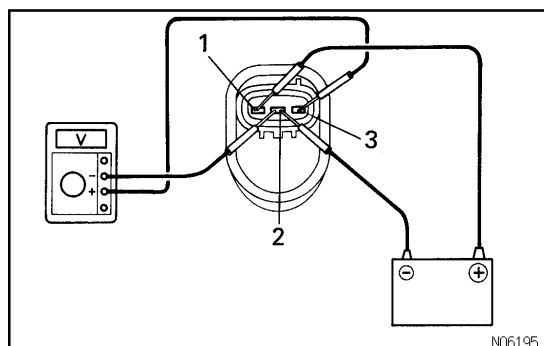
Using a speedometer tester, inspect the speedometer for allowable indication error and check the operation of the odometer.

HINT:

Tire wear and tire over or under inflation will increase the indication error.

If error is excessive, replace the speedometer.

Standard indication	Allowable range
20	18 – 24
40	38 – 44
60	58 – 66
80	78 – 88
100	98 – 110
120	118 – 132



2. INSPECT NO.1 VEHICLE SPEED SENSOR OPERATION

- Connect the positive (+) lead from battery to terminal 1 and negative (–) lead to terminal 2.
- Connect the positive (+) lead from tester to terminal 3 and the negative (–) lead to terminal 2.
- Revolve shaft.
- Check that there is voltage changer from approx. 0 V to 11 V or more between terminals 3 and 2.

HINT:

The voltage change should be 4 times per each revolution of the No.1 vehicle speed sensor shaft.

If operation is not as specified, replace the sensor.

3. INSPECT TACHOMETER

ON-VEHICLE:

- 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.

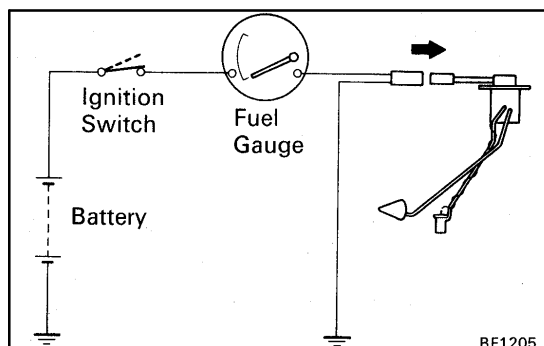
- Compare the tester and tachometer indications.
- If error is excessive, replace the tachometer.

RPM (DC 13.5 V, 25 °C (77 °F))

Standard indication	Allowable range
700	630 – 770
1,000	900 – 1,100
2,000	1,875 – 2,125
3,000	2,850 – 3,150
4,000	3,850 – 4,150
5,000	4,850 – 5,150

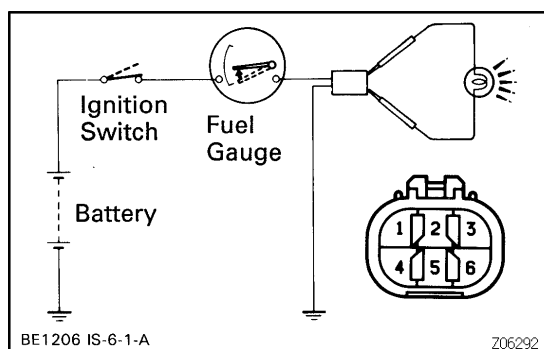
4. INSPECT VOLTMETER ON-VEHICLE:

Compare the tester and voltmeter indications.
If error is excessive, replace the voltmeter.



5. INSPECT FUEL RECEIVER GAUGE OPERATION

- Disconnect the connector from the sender gauge.
- Turn the ignition switch ON, and check that the receiver gauge needle indicates EMPTY.



- Connect terminals 4 and 5 on the wire harness side connector through a 3.4 W test bulb.
- Turn the ignition switch ON, and check that the bulb lights up and the receiver gauge needle moves towards the full side.

HINT:

Because of the silicon oil in the gauge, it will take a short time for needle to stabilize.

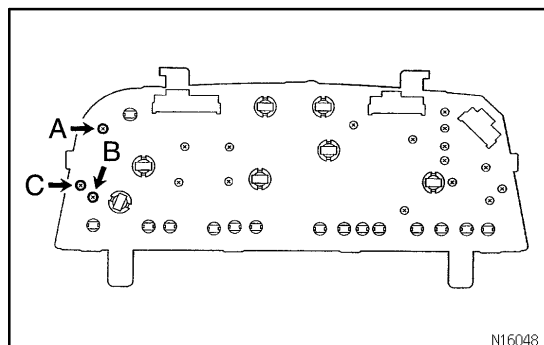
If operation is not as specified, inspect the receiver gauge resistance.

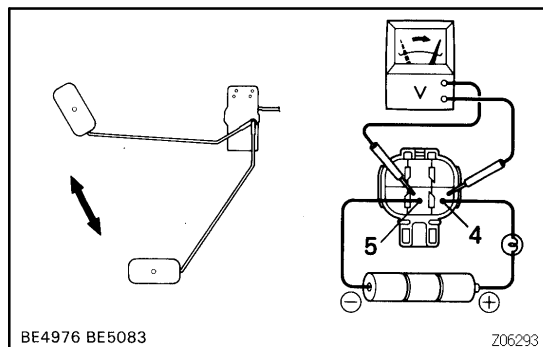
6. INSPECT FUEL RECEIVER GAUGE RESISTANCE

Between terminals	Resistance (Ω)
A – B	85.5 – 105.5
A – C	126 – 150
B – C	*90 – 110

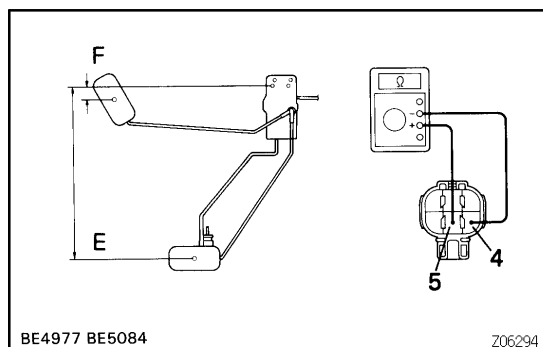
*: Include voltmeter resistance

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



**7. INSPECT FUEL SENDER GAUGE OPERATION**

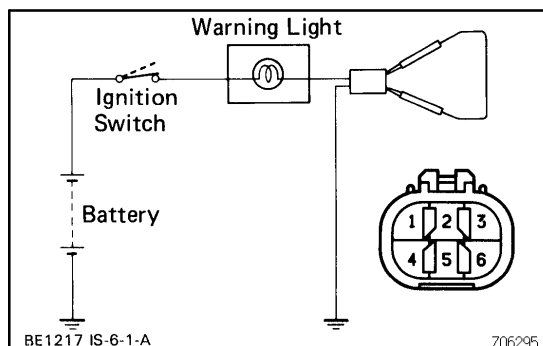
- Connect a series of three 1.5 V dry cell batteries.
- Connect the positive (+) lead from the dry cell batteries to terminal 4 through a 3.4 W test bulb and the negative (-) lead to terminal 5.
- Connect the positive (+) lead from the voltmeter to terminal 4 and the negative (-) lead to terminal 5.
- Check that the voltage rises as the float is moved from the full to empty position.

**8. INSPECT FUEL SENDER GAUGE RESISTANCE**

Measure the resistance between terminals 4 and 5.

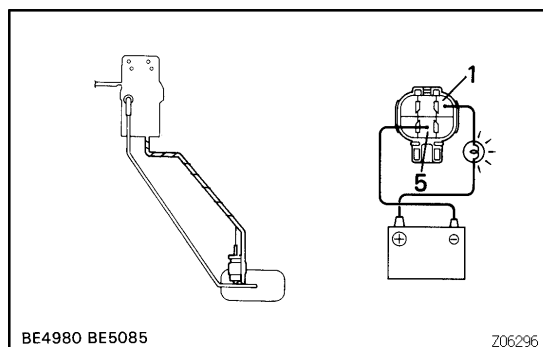
Float position: mm (in.)	Resistance (Ω)
F: Approx. 15.0 (0.591)	Approx. 3.0
E: Approx. 200.0 (7.874)	Approx. 110.0

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

**9. INSPECT FUEL LEVEL WARNING LIGHT**

- Disconnect the connector from the sender gauge.
- Connect terminals 1 and 5 on the wire harness side connector.
- Turn the ignition switch ON, and check that the warning light lights up.

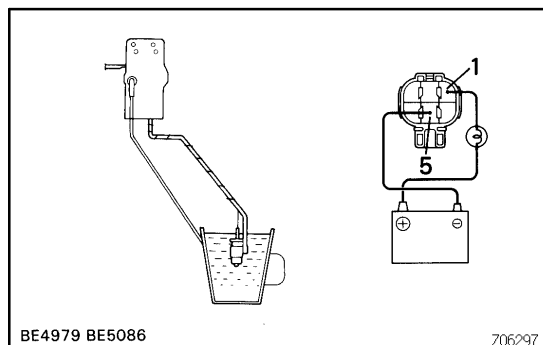
If the warning light does not light up, test the bulb.

**10. INSPECT FUEL LEVEL WARNING SWITCH**

- Apply battery positive voltage between terminals 1 and 5 through a 3.4 W test bulb, and check that the bulb lights up.

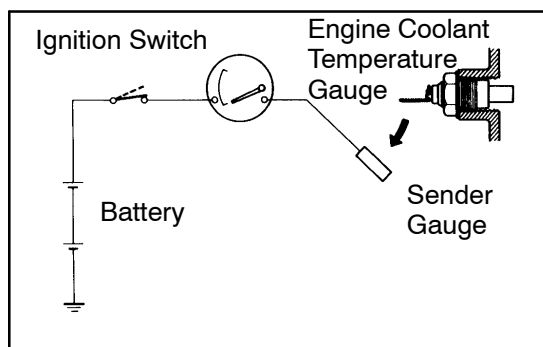
HINT:

It will take a short time for the bulb to light up.



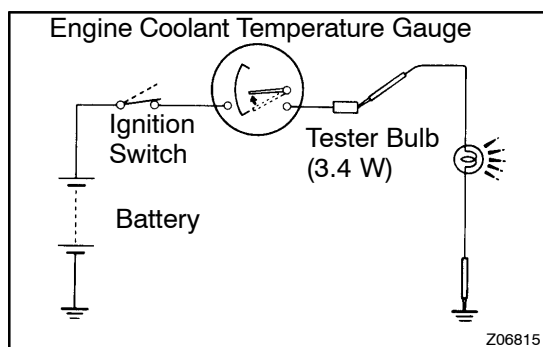
- Submerge the switch in fuel, and check that the bulb goes out.

If operation is not as specified, replace the sender gauge.



11. INSPECT ENGINE COOLANT TEMPERATURE RECEIVER GAUGE OPERATION

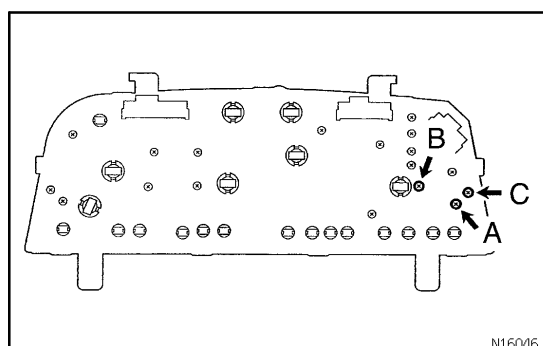
- Disconnect the connector from the sender gauge.
- Turn the ignition switch ON, and check that the receiver gauge needle indicates COOL.



- Ground terminal on the wire harness side connector through a 3.4 W test bulb.
- Turn the ignition switch ON, and check that the bulb lights up and the receiver gauge needle moves to the hot side.

If operation is as specified, replace the sender gauge. Then re-check the system.

If operation is not as specified, measure the receiver gauge resistance.



12. INSPECT ENGINE COOLANT TEMPERATURE RECEIVER GAUGE RESISTANCE

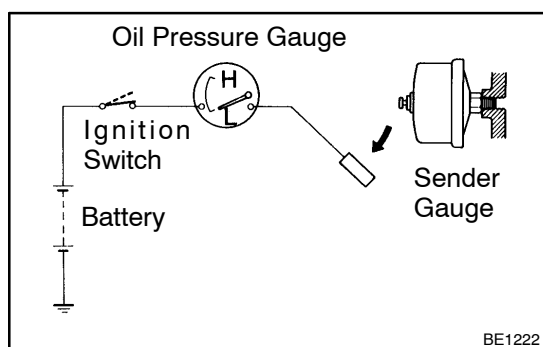
Measure the resistance between terminals.

Between terminals	Resistance (Ω)
A - B	71 - 79
A - C	117 - 141
B - C	185 - 215

HINT:

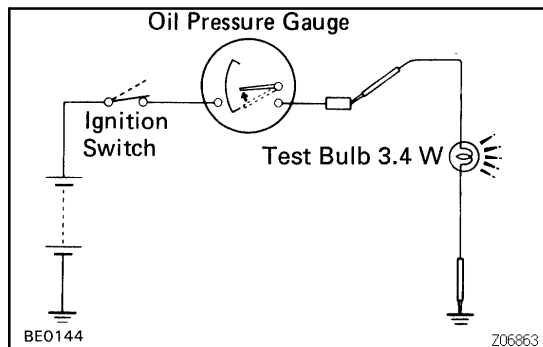
Connect the test leads so that the current from the ohmmeter can flow according to the above order. This circuit include the diode.

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



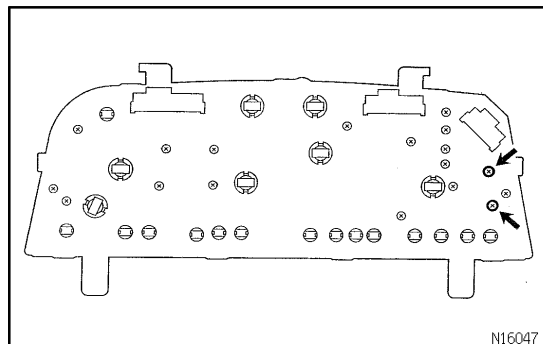
13. INSPECT OIL PRESSURE RECEIVER GAUGE OPERATION

- Disconnect the connector from the sender gauge.
- Turn the ignition switch ON, and check that the receiver gauge needle indicates LOW.



- (c) Ground terminal on the wire harness side through a 3.4 W test bulb.
- (d) Turn the ignition switch ON, and check that the bulb lights up and that the receiver gauge needle moves to the high side.

If operation is not as specified, measure the receiver gauge resistance.



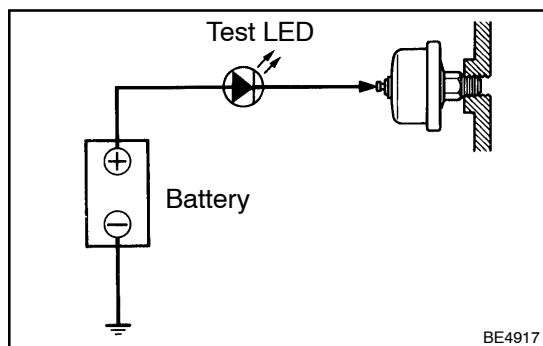
14. INSPECT OIL PRESSURE RECEIVER GAUGE RESISTANCE

Measure the receiver gauge resistance between terminals.

Resistance:

40 – 48 Ω

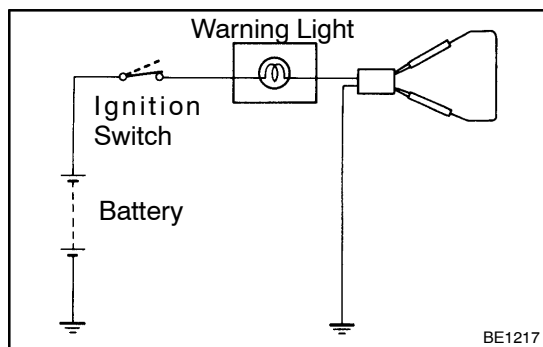
If resistance value is not as specified, replace the receiver gauge.



15. INSPECT OIL PRESSURE SENDER GAUGE OPERATION

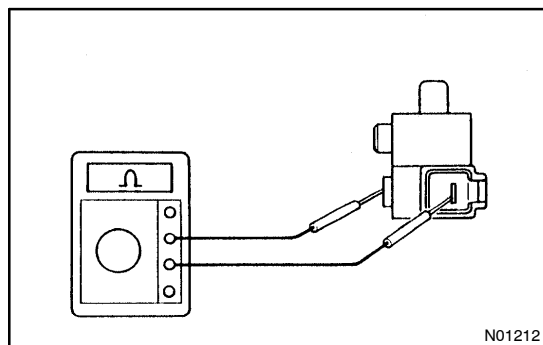
- (a) Disconnect the connector from the sender gauge.
- (b) Apply battery positive voltage to the sender gauge terminal through a test LED.
- (c) Check that the bulb does not light when the engine is stopped.
- (d) Check that the LED flashes when the engine is running. The number of flashed should vary with engine speed.

If operation is not as specified, replace the sender gauge.



16. INSPECT BRAKE WARNING LIGHT

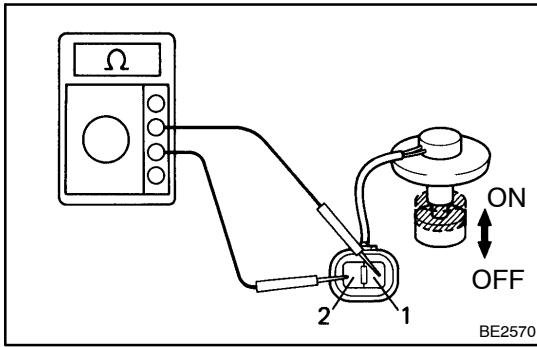
- (a) Disconnect the connectors from the level warning switch and parking brake switch.
- (b) Connect terminals on the wire harness side connector of the level warning switch connector.
- (c) Turn the ignition switch ON, and check that the warning light lights up.



17. INSPECT PARKING BRAKE SWITCH

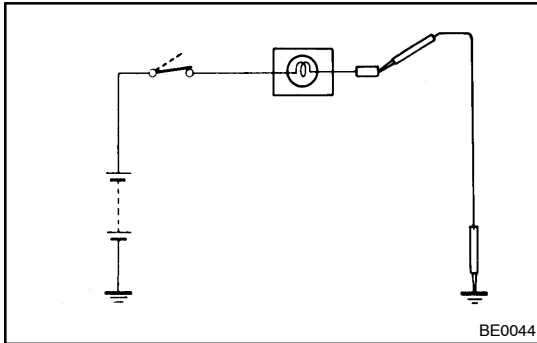
- (a) Check that there is continuity between terminal and the switch set nut with switch pin released (parking brake lever pulled up).
- (b) Check that there is no continuity between terminal and the switch set nut with switch pin pushed in. (parking brake lever released)

If operation is not as specified, replace the switch.

**18. INSPECT BRAKE FLUID LEVEL WARNING SWITCH**

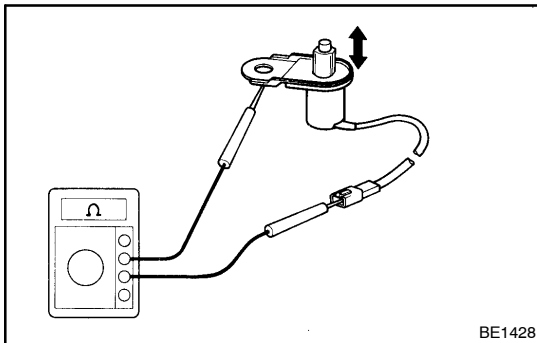
- (a) Check that there is no continuity between terminals with the switch OFF (float up).
- (b) Check that there is continuity between terminals with the switch ON (float down).

If operation is not as specified, replace the switch.

**19. INSPECT OPEN DOOR WARNING LIGHT**

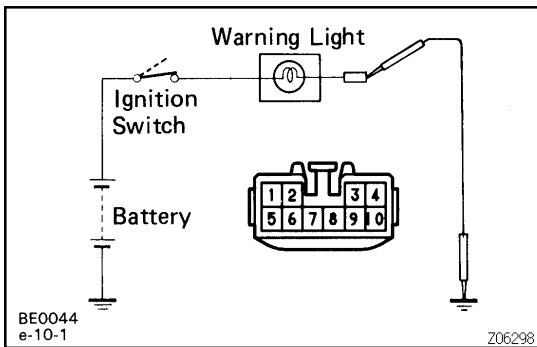
- (a) Disconnect the connector from the door courtesy switch and ground terminal on the wire harness side connector.
- (b) Turn the ignition switch ON, and check that the warning light lights up.

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

**20. INSPECT DOOR COURTESY SWITCH**

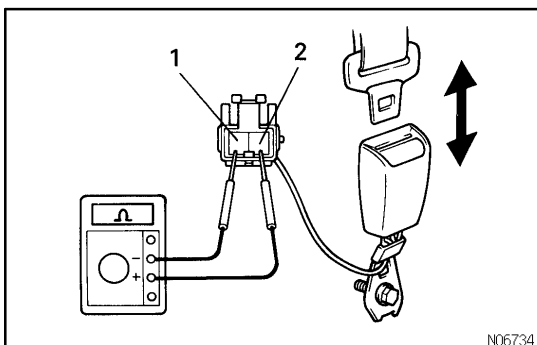
- (a) Check that there is continuity between terminal and the switch body with the switch ON (switch pin released:opened door).
- (b) Check that there is no continuity between terminal and the switch body with the switch OFF (switch pin pushed in:closed door).

If operation is not as specified, replace the switch.

**21. INSPECT SEAT BELT WARNING LIGHT**

- (a) Disconnect the connector from the seat belt warning relay.
- (b) Ground terminal 9 on the wire harness side connector.
- (c) Turn the ignition switch ON, and check that the warning light lights up.

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

**22. INSPECT SEAT BELT BUCKLE SWITCH CONTINUITY**

- (a) Check that there is continuity between terminals with the switch ON (belt unfastened).
- (b) Check that there is no continuity between terminals with the switch OFF (belt fastened).

If operation is not as specified, replace the seat belt inner.

Wire Harness Side



e-10-1

Z06844

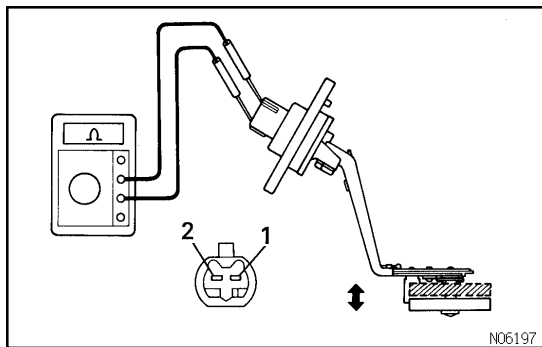
23. INSPECT SEAT BELT WARNING RELAY CIRCUIT

Disconnect the connector from the relay and inspect the connector on the wire harness side, as shown in the chart.

Tester connection	Condition	Specified condition
1 – Ground	Constant	Continuity
4 – Ground	Driver's seat belt position UNFASTEN	Continuity
4 – Ground	Driver's seat belt position FASTEN	No continuity
7 – Ground	Ignition key SET	Continuity
7 – Ground	Ignition key Remove	No continuity
8 – Ground	Driver's door position OPEN	Continuity
8 – Ground	Driver's door position CLOSE	No continuity
5 – Ground	Ignition switch position ON	Battery positive voltage
5 – Ground	Ignition switch position LOCK or ACC	No voltage
9 – Ground	Constant	Battery positive voltage

If circuit is as specified, try another relay.

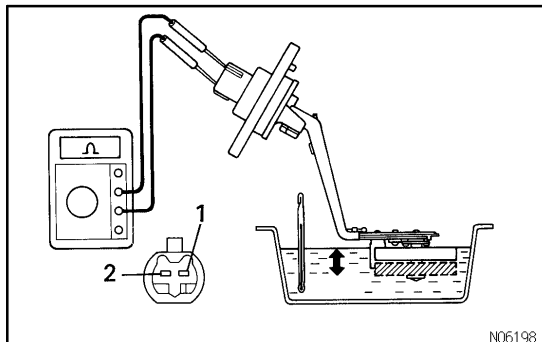
If the circuit is not as specified, refer to BE-xx wiring diagram and inspect the circuits connected to other parts.



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24. INSPECT ENGINE OIL LEVEL WARNING SWITCH

- (a) Check that there is continuity between terminal with the switch each position.
- (b) Heat the switch to above 60°C (140°F) in an oil bath.



N06198

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

If operation is not as specified, replace the switch.

Wire Harness Side

le-2-1-h

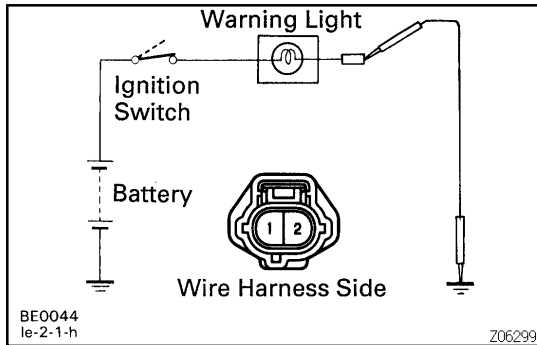
Z06845

25. INSPECT ENGINE OIL LEVEL WARNING CIRCUIT

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

Tester connection	Condition	Specified condition
2 - Ground	Constant	Continuity

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

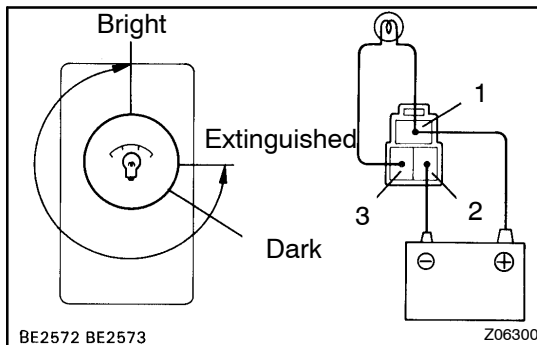
BE0044
le-2-1-h

Z06299

26. INSPECT ENGINE OIL LEVEL WARNING LIGHT

- Disconnect the connector from the switch.
- Ground terminal 1 on the wire harness connector.
- Turn the ignition switch ON, and check that the warning light lights up approximately 40 seconds later.

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



BE2572 BE2573

Z06300

27. INSPECT LIGHT CONTROL RHEOSTAT

- Connect terminals 1 and 3 through a 3.4 W test bulb.
- Connect the positive (+) lead from the battery to terminal 1 and the negative (-) lead to terminal 2.
- Turn the rheostat knob to fully counterclockwise, and check that the test bulb goes out.
- Gradually turn the rheostat knob to clockwise, and check that the test bulb brightness changes from dark to bright.

If operation is not as specified, replace the rheostat.

HINT:

Adjust the brightness of illumination lights by rheostat.

- A/C Control Assembly
- Antenna Switch
- Ash Receptacle
- Audio
- Center Diff. Lock Switch
- Cigarette Lighter
- Defogger Switch
- Hazard Warning Switch
- Shift Lever