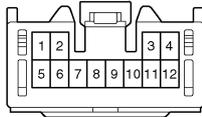
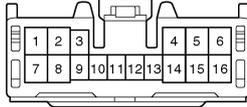


Wire Harness Side

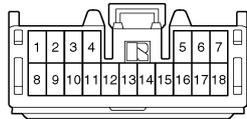
"A"



"B"



"C"



I03435

INSPECTION**1. INSPECT COMBINATION METER CIRCUIT****Connector disconnected:**

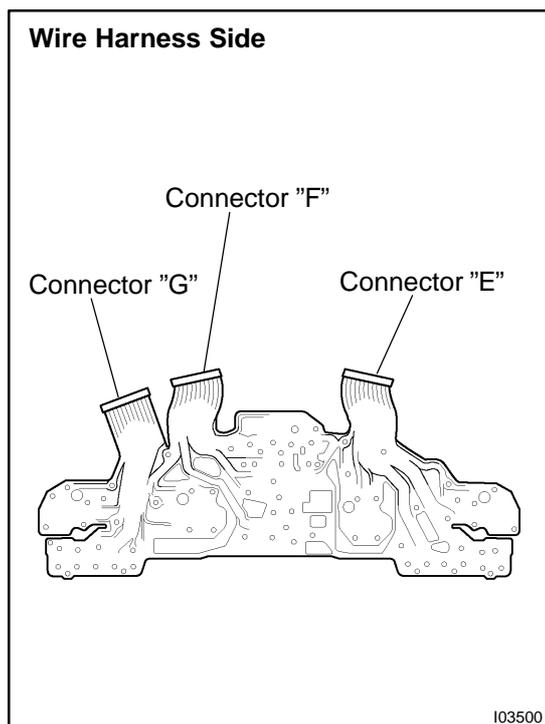
Disconnect connector "A", "B" and "C" from the combination meter and inspect the connectors on the wire harness side as follows.

Tester connection	Condition	Specified condition
A1 - A12	Driving monitor switch MODE Free	No continuity
A1 - A12	Driving monitor switch MODE Pushed in	Continuity
A2 - A12	Driving monitor switch RESET Free	No continuity
A2 - A12	Driving monitor switch RESET Pushed in	Continuity
A5 - A6	Light control switch TAIL or HEAD and turn rheostat volume knob	Voltage changes no voltage or voltage fluctuates
A8 - Ground	Ignition switch OFF or ACC	No voltage
A8 - Ground	Ignition switch ON or START	Battery positive voltage
B1 - Ground	Ignition switch OFF or ACC	No voltage
B1 - Ground	Ignition switch ON or START	Battery positive voltage
B3 - Ground	Engine running	Voltage fluctuates
B4 - Ground	Steering pad switch FUNCTION	Continuity
B4 - Ground	Steering pad switch RESET	Resistance 360 Ω
B4 - Ground	Steering pad switch MODE	Resistance 1,110 Ω
B5 - B12	Fuel Sender Gauge Float position Full	Resistance Approx. 21 Ω
B5 - B12	Fuel Sender Gauge Float position 1/2	Resistance Approx. 145.8 Ω
B5 - B12	Fuel Sender Gauge Float position Empty	Resistance Approx. 276 Ω
B5 - B13	Constant	Resistance Approx. 300 Ω
B6 - Ground	Constant	Continuity
B7 - Ground	Constant	Battery positive voltage
B8 - Ground	Constant	Battery positive voltage
B16 - Ground	Constant	Continuity
C2 - Ground	Turn signal switch LEFT	Continuity
C3 - Ground	Constant	Continuity

BODY ELECTRICAL - COMBINATION METER

C4 - Ground	Light control switch HI or FLASH	Battery positive voltage
C5 - Ground	Turn signal switch RIGHT	Continuity
C11 - Ground	Engine running	Continuity
C14 - Ground	Window washer level warning switch Float down	Continuity
C17 - Ground	Brake fluid level warning switch Float down	Continuity
C18 - Ground	Constant	Continuity

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



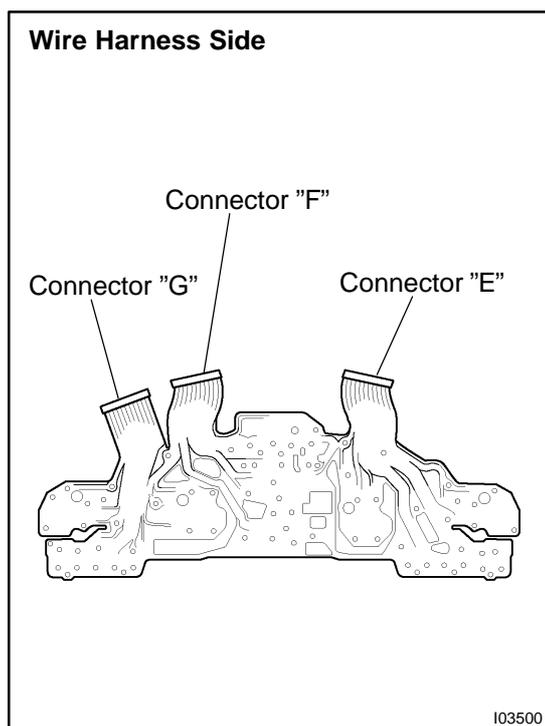
2. INSPECT COMBINATION METER CIRCUIT PLATE Warning light circuit plate:

- (a) Remove the cover.
- (b) Disconnect connector "E", "F" and "G" from the combination meter and inspect the connectors on the wire harness side as follows.

Tester connection	Check indicator light circuit	specified condition
E1 (-) - F14 (+)	Headlight indicator (USA models) Taillight indicator (CANADA models)	Continuity
E6 (-) - G16 (+) E6 (-) - G17 (+)	TRAC indicator light	Continuity
E7 (-) - G16 (+) E7 (-) - G17 (+)	Window washer level warning light	Continuity
E8 (-) - G16 (+) E8 (-) - G17 (+)	Malfunction indicator light	Continuity
E9 (+) - E10 (-)	VSC OFF indicator light	Continuity
E11 (-) - G16 (+) E11 (-) - G17 (+)	ABS warning light	Continuity
E12 (+) - E13 (-)	HEIGHT HI indicator light	Continuity
E14 (-) - G16 (+) E14 (-) - G17 (+)	ECT SNOW indicator light	Continuity
E16 (-) - G16 (+) E16 (-) - G17 (+)	ECT PWR indicator light	Continuity
F5 (-) - G16 (+) F5 (-) - G17 (+)	A/T shift indicator light (2)	Continuity

F6 (-) - G16 (+) F6 (-) - G17 (+)	A/T shift indicator light (L)	Continuity
F7 (-) - G16 (+) F7 (-) - G17 (+)	A/T shift indicator light (3)	Continuity
F8 (-) - G16 (+) F8 (-) - G17 (+)	A/T shift indicator light (4)	Continuity
F9 (-) - G16 (+) F9 (-) - G17 (+)	A/T shift indicator light (D)	Continuity
F10 (-) - G16 (+) F10 (-) - G17 (+)	A/T shift indicator light (N)	Continuity
F11 (-) - G16 (+) F11 (-) - G17 (+)	A/T shift indicator light (R)	Continuity
F12 (-) - G16 (+) F12 (-) - G17 (+)	A/T shift indicator light (P)	Continuity
F15 (+) - F16 (-)	Hi-beam indicator light	Continuity
F17 (+) - F18 (-)	Right turn signal indicator light	Continuity
F19 (+) - F18 (-)	Left turn signal indicator light	Continuity
F20 (+) - F14 (+)	Front fog light indicator light	Continuity
G5 (-) - G16 (+) G5 (-) - G17 (+)	CRUISE MAIN indicator light	Continuity
G6 (-) - G16 (+) G6 (-) - G17 (+)	Discharge warning light	Continuity
G7 (-) - G16 (+) G7 (-) - G17 (+)	Seat belt warning light	Continuity
G8 (-) - G16 (+) G8 (-) - G17 (+)	Fuel level warning light	Continuity
G9 (-) - G11 (+)	Open door warning light	Continuity
G14 (+) - G13 (-)	SRS warning light	Continuity
G15 (-) - G16 (+) G15 (-) - G17 (+)	Brake warning light	Continuity

If circuit is not as specified, replace the bulb or circuit plate.



3. INSPECT COMBINATION METER CIRCUIT PLATE From combination meter ECU to gauges:

- (a) Remove the cover.
- (b) Disconnect connector "E", "F" and "G" from the combination meter and inspect the connectors on the wire harness side as follows.

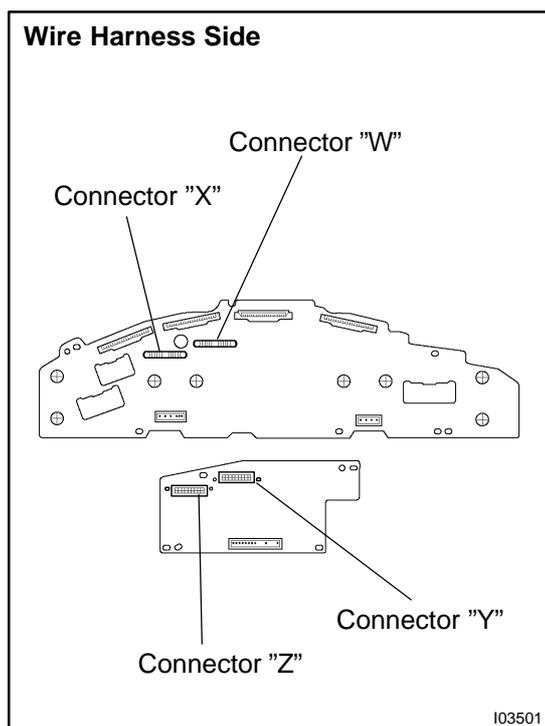
Terminal	Resistance (Ω)
E2 - E3	Approx. 151.8
E4 - E5	Approx. 164.2
E17 - E20	Approx. 151.8
E18 - E19	Approx. 164.2
F1 - F2	Approx. 151.8
F3 - F4	Approx. 164.2
G1 - G2	Approx. 151.8
G3 - G4	Approx. 164.2

If circuit is not as specified, inspect gauge*¹ or meter*². Then recheck.

If circuit is not as specified, replace the circuit plate.

*1 : Fuel Receiver Gauge and Engine Coolant Temperature Receiver Gauge

*2 : Speedometer and Tachometer



4. INSPECT COMBINATION METER CIRCUIT PLATE
From meter ECU main circuit plate to meter ECU sub circuit plate:

Disconnect connector "W", "X", "Y" and "Z" from the combination meter and inspect the connectors on the wire harness side as follows.

Terminal	Specified value
W1 – Y1	Continuity
W2 – Y2	Continuity
W3 – Y3	Continuity
W4 – Y4	Continuity
W5 – Y5	Continuity
W6 – Y6	Continuity
W7 – Y7	Continuity
W8 – Y8	Continuity
W9 – Y9	Continuity
W10 – Y10	Continuity
W11 – Y11	Continuity
W12 – Y12	Continuity
X1 – Z1	Continuity
X2 – Z2	Continuity
X3 – Z3	Continuity
X4 – Z4	Continuity
X5 – Z5	Continuity
X6 – Z6	Continuity
X7 – Z7	Continuity
X8 – Z8	Continuity
X9 – Z9	Continuity
X10 – Z10	Continuity
X11 – Z11	Continuity
X12 – Z12	Continuity

If circuit is not as specified, replace the wire harness.

5. INSPECT RHEOSTAT LIGHT CONTROL (See page BE-62)

6. INSPECT COMBINATION METER ILLUMINATION NOTICE:

To avoid damage to the computer, be careful of the following.

- Do not make an error with another terminal number.
- Do not cause a short with another terminal.

Connect the connectors "P", "Q" and "H".

7. 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.

mph (USA)		km/h (CANADA)	
Standard indication	Allowable range	Standard indication	Allowable range
20	18.5 – 21.5	20	18 – 23
40	40 – 43	40	38 – 42
60	60.5 – 64	60	57 – 61.5
80	81 – 85	80	76.5 – 81.5
100	102 – 107	100	96.5 – 101.5
120	122.5 – 128.5	120	116 – 121.5
140	136 – 142	160	155.5 – 162.5
180	175 – 183	200	194.5 – 203.5

8. INSPECT TACHOMETER ON-VEHICLE

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

NOTICE:

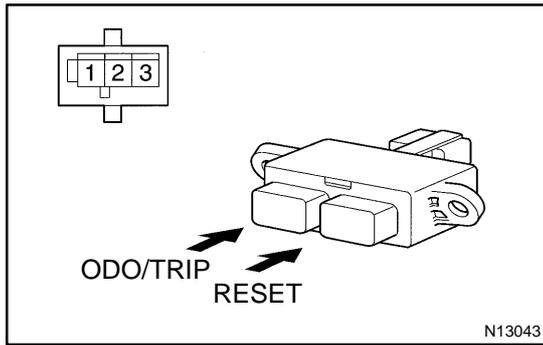
Reversing the connection of the tachometer will damage the transistors and diodes inside.

(b) Compare the tester and tachometer indications.

If error is excessive, replace the tachometer.

RPM(DC 13.5 V, 25 °C (77 °F))

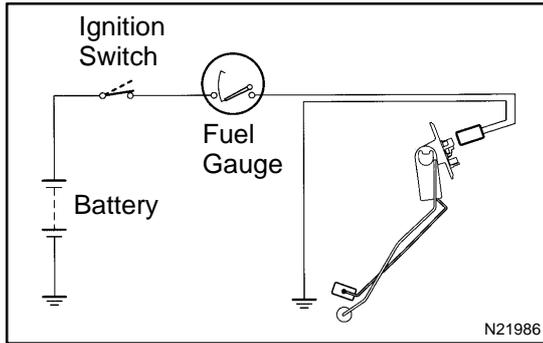
Standard indication	Allowable range
700	630 – 770
1000	925 – 1125
2000	1900 – 2200
3000	2845 – 3305
4000	3870 – 4330
5000	4925 – 5320
7000	6875 – 7475



9. INSPECT TWIN TRIP AND ODO SWITCH CONTINUITY

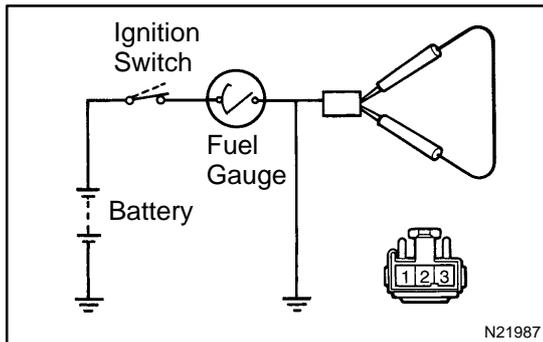
Switch position	Tester connection	Condition
ODO/TRIP Free	1 - 2	No continuity
ODO/TRIP Pushed in	1 - 2	Continuity
RESET Free	2 - 3	No continuity
RESET Pushed in	2 - 3	Continuity

If continuity is not as specified, replace the twin trip and odo switch.



10. INSPECT FUEL RECEIVER GAUGE OPERATION

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



- (c) Connect the terminals 3 and 2 on the wire harness side connector.
- (d) Turn the ignition switch ON and check that the receiver gauge needle moves toward the full side.

HINT:

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

NOTICE:

Do not connect the terminals 1 and 3.

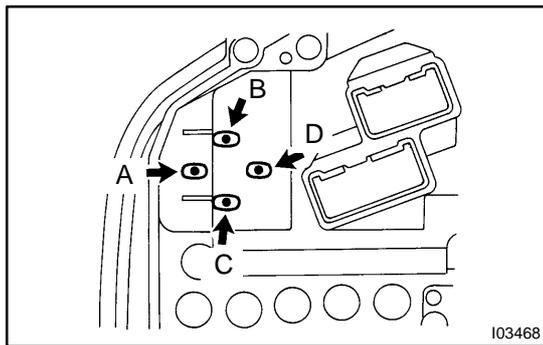
If operation is not as specified, inspect the power source unit.

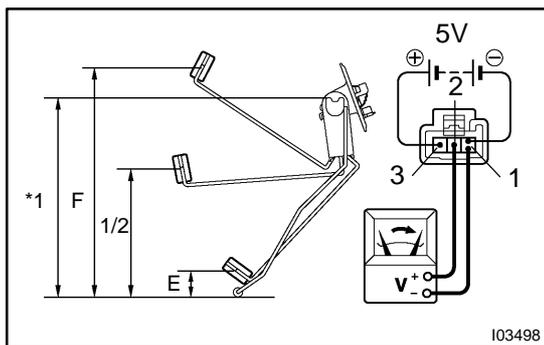
11. INSPECT FUEL RECEIVER GAUGE RESISTANCE

Measure the resistance between terminals.

Between terminals	Resistance (Ω)
A - B	Approx. 151.8
C - D	Approx. 164.2

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





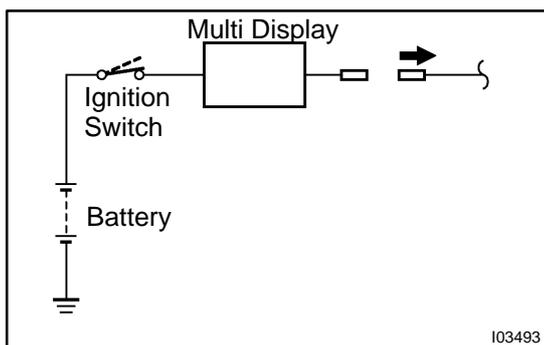
12. INSPECT FUEL SENDER GAUGE VOLTAGE

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

*1: Set value 270.7 mm (10.66 in.)

Float position	mm (in.)	Voltage (V)
F	Approx. 310.5 (12.22)	Approx. 4.6
1/2	Approx. 172.0 (6.77)	Approx. 2.43
E	Approx. 34.3 (1.35)	Approx. 0.35

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



13. INSPECT BRAKE PAD SENSOR

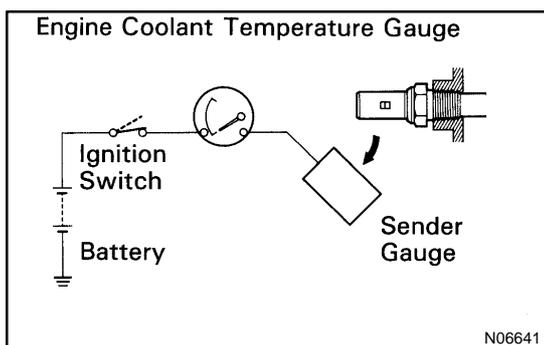
(Front side: See page BR-23)

(Rear side: See page BR-33)

14. INSPECT BRAKE PAD INDICATOR LIGHT

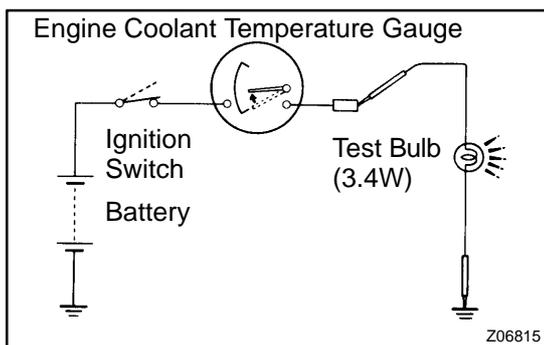
- (a) Disconnect the connector from the brake pad sensor.
- (b) Turn the ignition switch ON, check that the indicator light lights up.

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



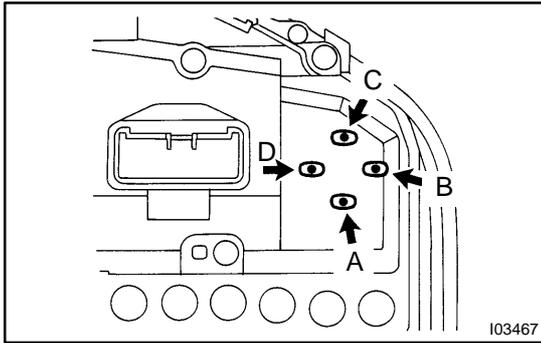
15. INSPECT ENGINE COOLANT TEMPERATURE RECEIVER GAUGE OPERATION

- (a) Disconnect the connector from the sender gauge.
- (b) Turn the ignition switch ON and check that the receiver gauge needle indicates COOL.



- (c) Ground terminal on the wire harness side connector through a 3.4 W test bulb.
- (d) Turn the ignition switch ON and check that the bulb lights up and the receiver gauge needle moves toward the hot side.
- (e) Then recheck the system.

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



16. INSPECT ENGINE COOLANT TEMPERATURE RECEIVER GAUGE RESISTANCE

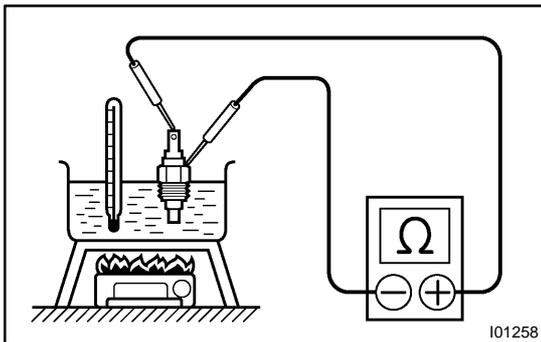
Measure the resistance between terminals.

HINT:

Connect the test leads so the current from the ohmmeter can flow according to the chart order.

Between terminals	Resistance (Ω)
A - B	Approx. 151.8
C - D	Approx. 164.2

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

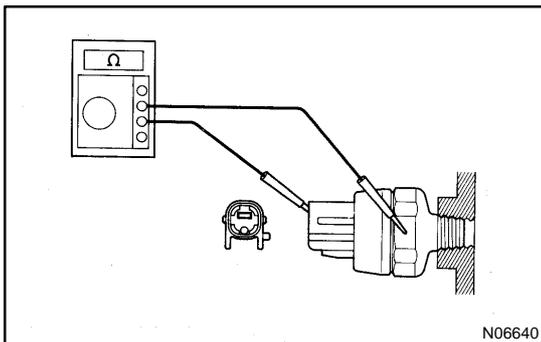


17. INSPECT ENGINE COOLANT TEMPERATURE SENDER GAUGE RESISTANCE

Measure the resistance between the terminal and gauge body.

Temperature $^{\circ}\text{C} (^{\circ}\text{F})$	Resistance (Ω)
50 (122.0)	160 - 240
120 (248.0)	17.1 - 21.2

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



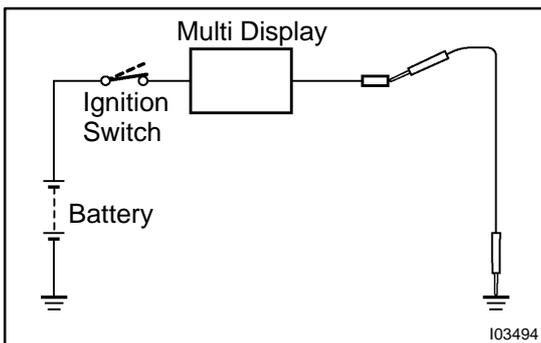
18. INSPECT LOW OIL PRESSURE WARNING SWITCH

- (a) Check that there is continuity between terminal and ground with the engine stopped.
- (b) Check that there is no continuity between terminal and ground with the engine running.

HINT:

Oil pressure should be over 24.5 kPa (0.25 kgf/cm, 3.6 psi).

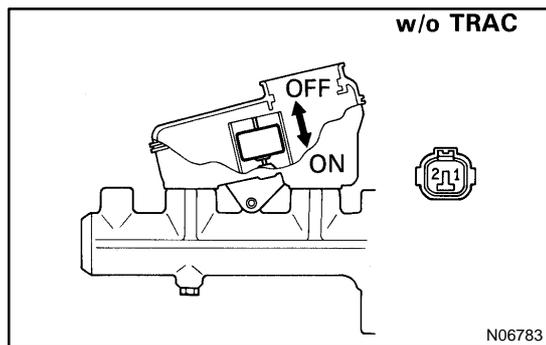
If operation is not as specified, replace the switch.



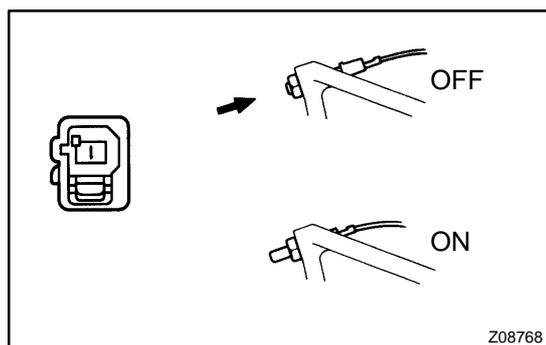
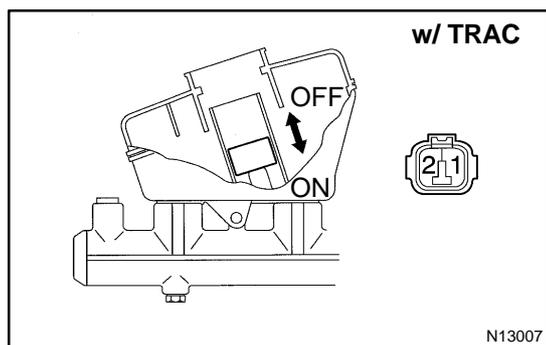
19. INSPECT LOW OIL PRESSURE WARNING LIGHT

- (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.

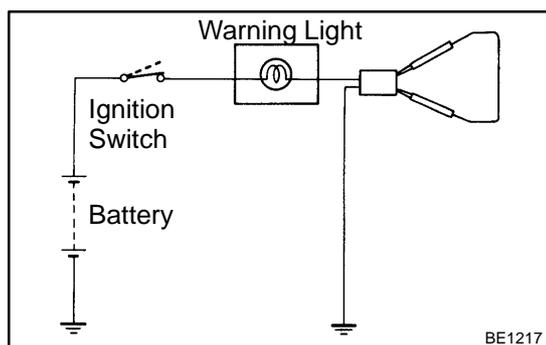
If the warning light does not light up, test the bulb or inspect the wire harness.

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

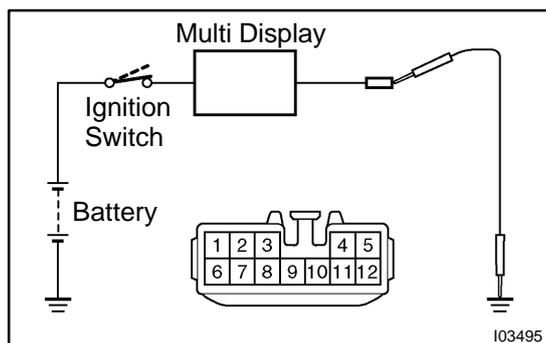
- Disconnect the connector.
 - Check that there is no continuity between terminals with the switch OFF (float up).
 - Use syphon, etc. to take fluid out of the reservoir tank.
 - Check that there is continuity between terminals with the switch ON (float down).
 - Pour the fluid back in reservoir tank.
- If operation is not as specified, replace the reservoir tank.

**21. INSPECT PARKING BRAKE SWITCH**

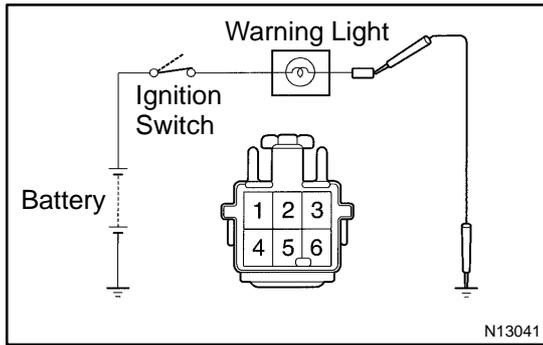
- Check that there is continuity between terminal and switch body with the switch ON (switch pin released).
 - Check that there is no continuity between terminal and switch body with the switch OFF (switch pin pushed in).
- If continuity is not as specified, replace the switch or inspect ground point.

**22. INSPECT BRAKE WARNING LIGHT**

- Disconnect the connector from the brake fluid warning switch.
 - Release the parking brake pedal.
 - Connect terminals on the wire harness side of the level warning switch connector.
 - Start the engine and check that the warning light lights up.
- If the warning light does not light up, test the bulb.

**23. INSPECT LIGHT FAILURE SENSOR**(See page [BE-76](#))**24. INSPECT REAR LIGHT WARNING LIGHT**

- Disconnect the connector from the light failure sensor and ground terminal 4 on the wire harness side connector.
 - Start the engine and check that the warning light lights up.
- If the warning light does not light up, test the bulb or inspect wire harness.



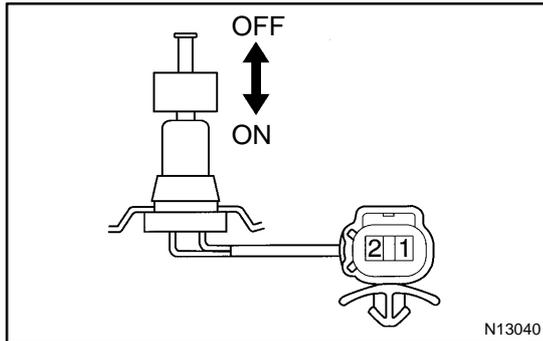
25. INSPECT COURTESY SWITCH

(See page BE-70)

26. INSPECT OPEN DOOR WARNING LIGHT

- (a) Disconnect the connector from the door lock assembly and ground terminal 3 on the wire harness side connector, and check that the warning light lights up.

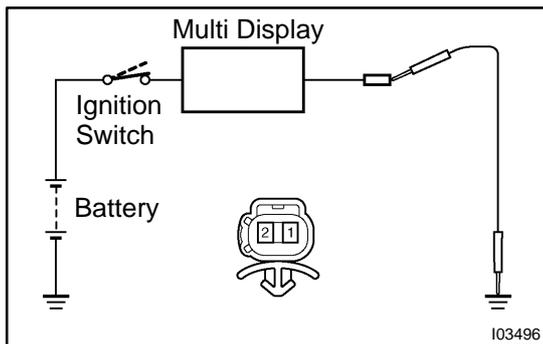
If the warning light does not light up, inspect the bulb or wire harness or body ECU.



27. INSPECT WASHER LEVEL WARNING SWITCH CONTINUITY

- (a) Remove the washer tank.
- (b) Check that there is continuity between terminals (float down).
- (c) Check that there is no continuity between terminals (float up).

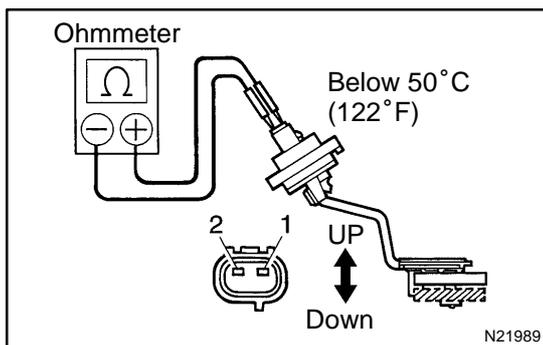
If continuity is not as specified, replace the switch.



28. INSPECT WASHER LEVEL WARNING LIGHT

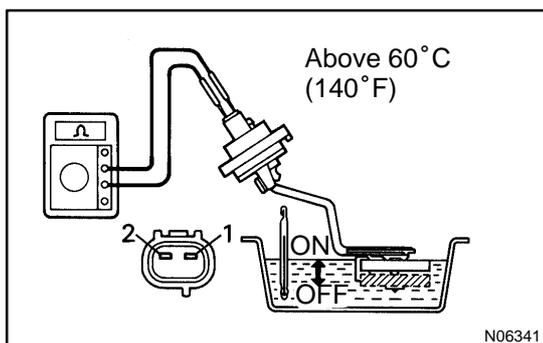
- (a) Disconnect the connector from the washer level warning switch and ground terminal 2 on the wire harness side connector.

(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.



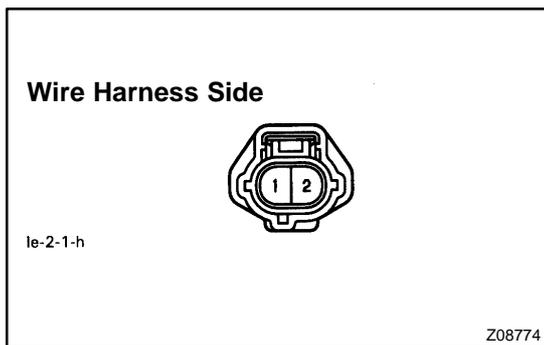
29. INSPECT ENGINE OIL LEVEL WARNING SWITCH CONTINUITY

- (a) Check that there is 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 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.

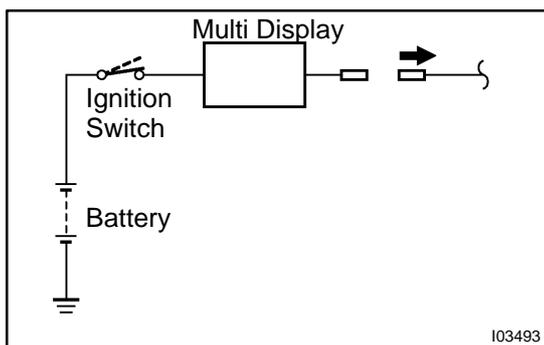


30. INSPECT ENGINE OIL LEVEL WARNING SWITCH CIRCUIT

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

Tester connection	Condition	Specified condition
2 - Ground	Constant	Continuity

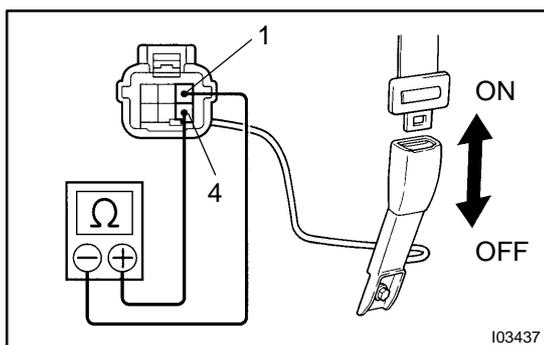
If continuity is not as specified, inspect the wire harness or ground point.



31. INSPECT ENGINE OIL LEVEL WARNING LIGHT

- (a) Disconnect the connector from the switch.
- (b) Turn the ignition switch ON. Check that the warning light lights up approximately 40 seconds later.

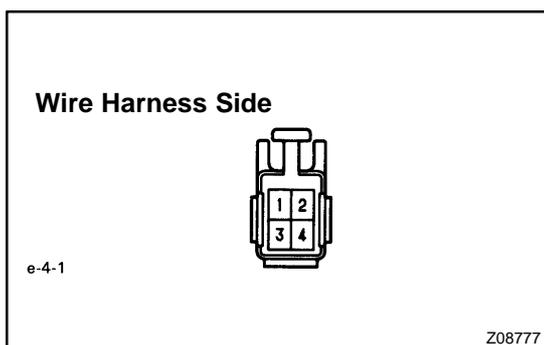
If the warning light does not light up, inspect the bulb or wire harness.



32. INSPECT BUCKLE SWITCH CONTINUITY

- (a) Check that there is continuity between terminal 1 and 4 on the switch side connector with the switch ON (belt fastened).
- (b) Check that there is no continuity between terminal 1 and 4 on the switch side connector with the switch OFF (belt unfastened).

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

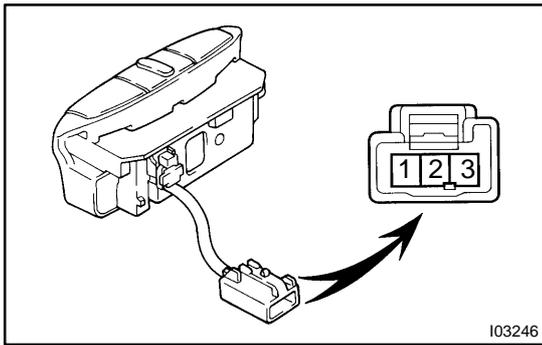


33. INSPECT SEAT BELT WARNING SWITCH CIRCUIT

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

Tester connection	Condition	Specified condition
-	Turn the ignition switch ON	Chime sounds for 4 - 8 sec.
-	Ground terminal 2 and turn the ignition switch ON	No chime sound
1 - Ground	Constant	Continuity

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



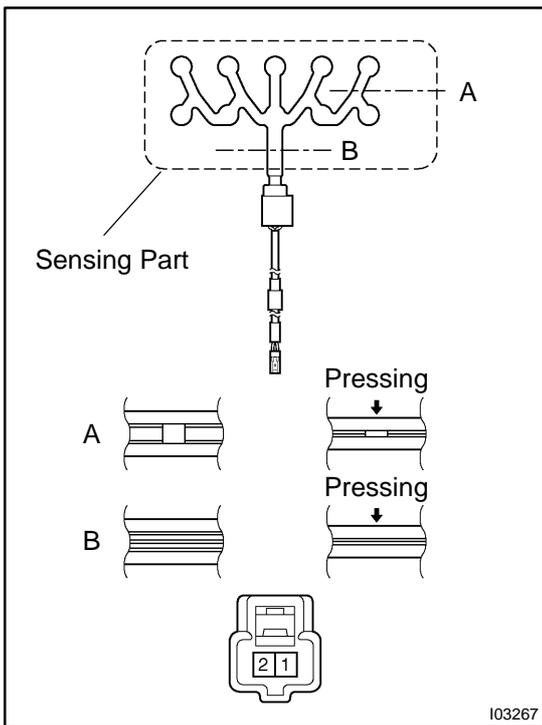
34. INSPECT MULTI-INFORMATION DISPLAY SWITCH

Measure the resistance between terminals 2 and 3.

Switch position	Resistance (Ω)
FUNCTION	0
RESET	Approx. 360
MODE	Approx. 1,110

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

35. INSPECT MULTI-INFORMATION DISPLAY SWITCH CIRCUIT (See page BE-86)



36. INSPECT SEAT BELT WARNING OCCUPANT DETECTION SENSOR

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