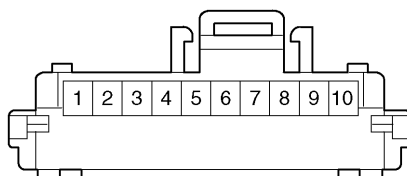


# INSPECTION

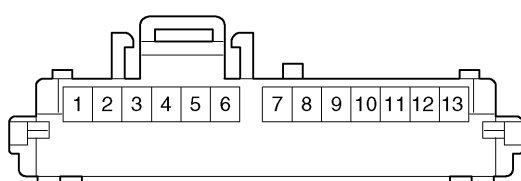
## 1. INSPECT COMBINATION METER CIRCUIT

Disconnect the 5 connectors from the combination meter.

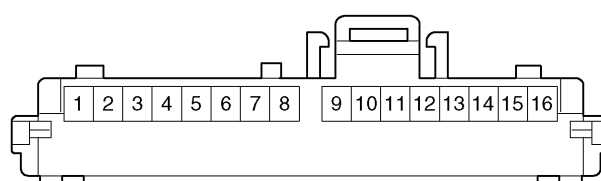
Connector C



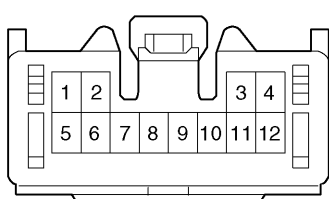
Connector B



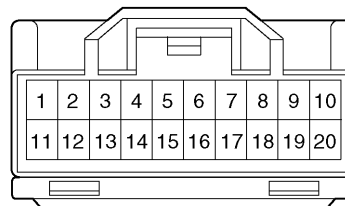
Connector A



Connector D



Connector E



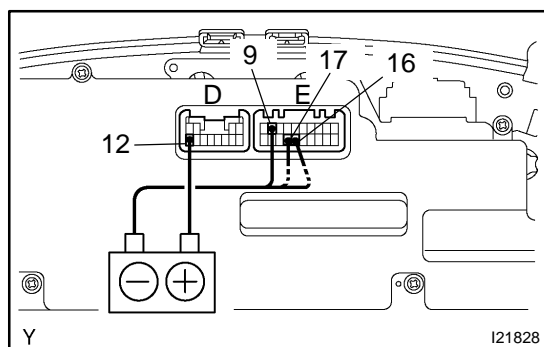
I21827

I22036

Tester connection	Condition	Specified
A4 - Body ground	Brake fluid level warning switch ON	Continuity
	Brake fluid level warning switch OFF	No continuity
A5 - Body ground	Ignition switch OFF or ACC	No voltage
	Ignition switch ON	Battery positive voltage
A7 - Body ground	Constant	Continuity
A8 - Body ground	When ignition switch ON and engine coolant temperature is 50 °C (122 °F)	234 - 314 Ω
A9 - Body ground	Ignition switch ON      Engine is operation	No continuity
	Ignition switch ON      Engine is stopped	Continuity
A10 - Body ground	For 3 sec., after ignition switch has been turned ON	Continuity
A11 - Body ground	Ignition switch ON      Engine in operation	No continuity
	Ignition switch ON      Engine stopped	Continuity
A12 - Body ground	Ignition switch ON      Headlight dimmer switch low beam	No voltage
	Ignition switch ON      Headlight dimmer switch High beam or flash	Battery positive voltage
A14 - Body ground	Transfer shift lever except N position	No continuity
	Transfer shift lever N position	Continuity

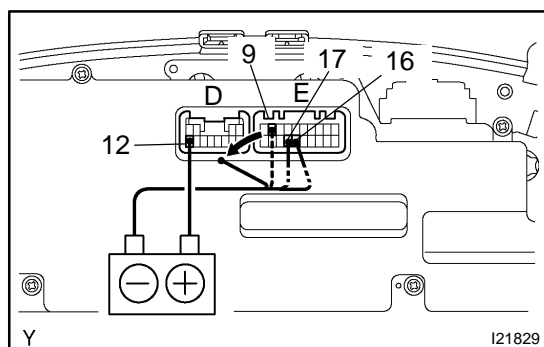
A15 - Body ground	Pattern select switch OFF	No voltage
	Pattern select switch ON	Battery positive voltage
A16 - Body ground	Washer fluid level warning switch OFF	No continuity
	Washer fluid level warning switch ON	Continuity
B1 - Body ground	Ignition switch ON Turn signal switch OFF or right	No voltage ↔ Battery positive voltage
	Ignition switch ON Turn signal switch left	No voltage
B2 - Body ground	Ignition switch ON Turn signal switch OFF or left	No voltage ↔ Battery positive voltage
	Ignition switch ON Turn signal switch right	No voltage
B3 - Body ground	Ignition switch ON Transfer shift position except L4L or H4L	No continuity
	Ignition switch ON Transfer shift position L4L or H4L	Continuity
B12 - Body ground	Ignition switch OFF or ACC	No voltage
	Ignition switch ON	Battery positive voltage
C1 - Body ground	O/D Main switch ON	No continuity
	O/D Main switch OFF	Continuity
C2 - Body ground	A/T shift lever except P position	No voltage
	A/T shift lever P position	Battery positive voltage
C3 - Body ground	A/T shift lever except R position	No voltage
	A/T shift lever R position	Battery positive voltage
C4 - Body ground	A/T shift lever except N position	No voltage
	A/T shift lever N position	Battery positive voltage
C5 - Body ground	A/T shift lever except D position	No voltage
	A/T shift lever D position	Battery positive voltage
C6 - Body ground	A/T shift lever except 2 position	No voltage
	A/T shift lever 2 position	Battery positive voltage
C7 - Body ground	A/T shift lever except L position	No voltage
	A/T shift lever L position	Battery positive voltage
D10 - Body ground	Headlight control switch OFF	No voltage
	Headlight control switch TAIL or HEAD	Battery positive voltage
D11 - Body ground	Constant	Continuity
D12 - Body ground	Constant	Battery positive voltage
E1 - Body ground	Headlight control switch OFF or TAIL	No continuity
	Headlight control switch HEAD	Continuity
E2 - Body ground	Headlight control switch OFF	No continuity
	Headlight control switch TAIL or HEAD	Continuity
E3 - Body ground	Driver's seat belt buckle switch OFF	No continuity
	Driver's seat belt buckle switch ON	Continuity
E4 - Body ground	Passenger's seat belt buckle switch OFF	No continuity
	Passenger's seat belt buckle switch ON Belt warning occupant detection sensor ON	Continuity
E7 - Body ground	Rear door courtesy switch OFF	No continuity
	Rear door courtesy switch ON	Continuity
E8 - Body ground	Passenger's door courtesy switch OFF	No continuity
	Passenger's door courtesy switch ON	Continuity

E9 - Body ground	Driver's door courtesy switch OFF	No continuity
	Driver's door courtesy switch ON	Continuity
E11 - Body ground	Back door courtesy switch OFF	No continuity
	Back door courtesy switch ON	Continuity
E16 - Body ground	Key unlock warning switch OFF	No continuity
	Key unlock warning switch ON	Continuity
E17 - Body ground	Constant	Continuity
E19 - Body ground	Constant	Continuity

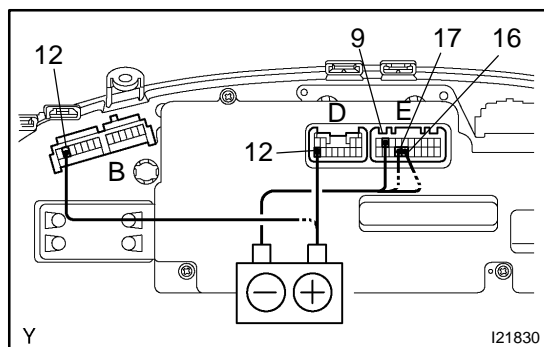


## 2. Key Unlock Warning System: INSPECT COMBINATION METER OPERATION

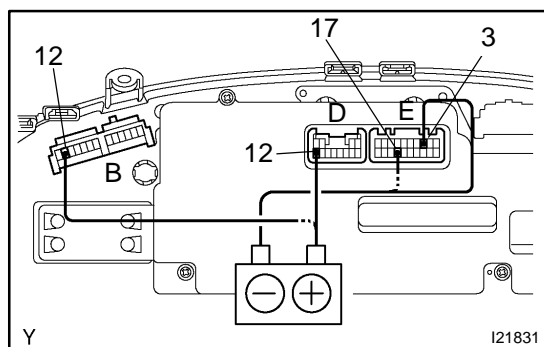
- Connect the positive (+) lead from the battery to terminal 12 of connector D.
- Connect the negative (-) lead from the battery to terminals 9, 16 and 17 of connector E.
- Check the chime sounds.



- Disconnect the negative (-) lead from the battery to terminal 9 of connector E.
- Check that the chime stops sounding.

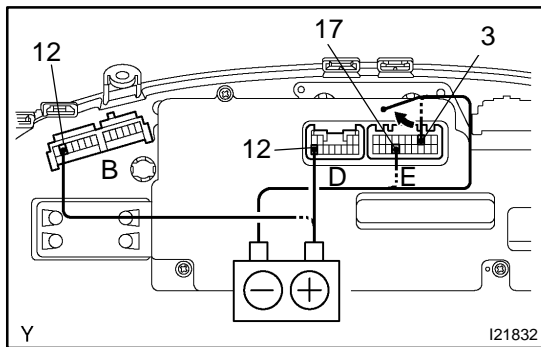


- Connect the negative (-) lead from the battery to terminal 9 of connector E.
  - Connect the positive (+) lead from the battery to terminal 12 of connector B.
  - Check that the chime stops sounding.
- If the operation is not as specified, replace the combination meter.



## 3. Driver's Seat Belt Warning System: INSPECT COMBINATION METER OPERATION

- Connect the positive (+) lead from the battery to terminal 12 of connector D and terminal 12 of connector B, and negative (-) lead from the battery to terminals 17 and 3 of connector E.
- Check that the driver's seat belt warning light flashes and buzzer sounds for approx. 6 seconds.

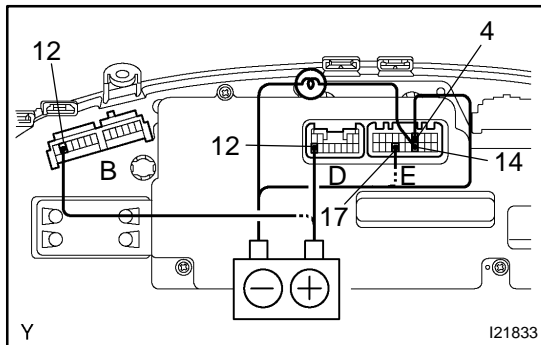


- (c) Disconnect the negative (-) lead from the battery to terminal 3 of connector E and reconnect it again.
- (d) Check that the buzzer sounds again.
- (e) Check that the buzzer stops sounding when disconnecting the negative (-) lead from terminal 3 of connector E.

HINT:

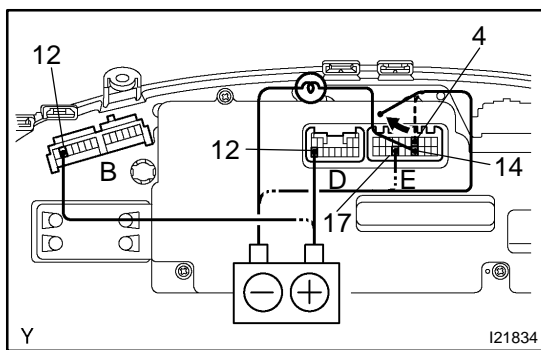
Check the buzzer 6 seconds.

If the operation is not as specified, replace the combination meter.



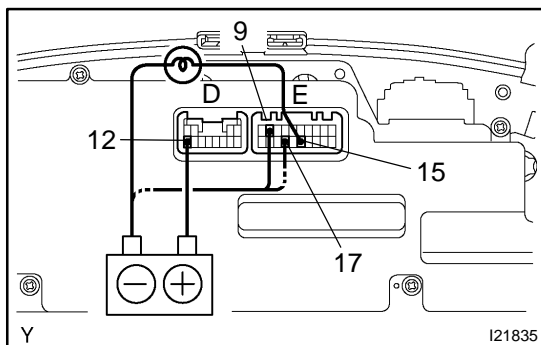
#### 4. Passenger's Seat Belt Warning System: INSPECT COMBINATION METER OPERATION

- (a) Connect the positive (+) lead from the battery to terminal 12 of connector D and terminal 12 of connector B, and negative (-) lead from the battery to terminal 17 of connector E.
- (b) Connect terminal 14 of connector E to battery negative (-) terminal through a 3.4 W test bulb.
- (c) Connect the negative (-) lead from battery to terminal 4 of connector E.
- (d) Check that the bulb flashes.
- (e) Disconnect the negative (-) lead from the battery to terminal 4 of connector E, and reconnect it again.
- (f) Check that the bulb flashes again.



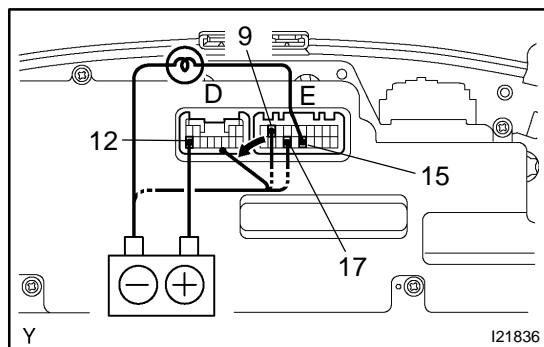
- (g) Check that the bulb flashing when disconnecting terminal 4 of connector E from the negative (-) lead.

If operation is not as specified, replace the combination meter.

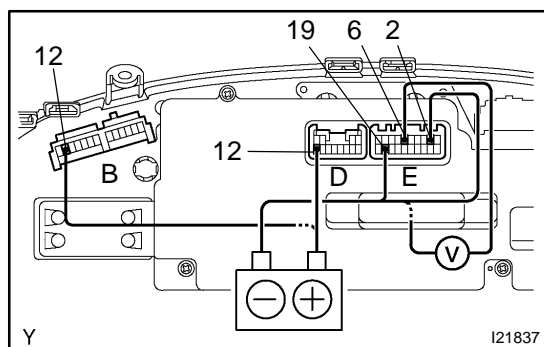


#### 5. Key Illuminated Entry System: INSPECT COMBINATION METER OPERATION

- (a) Connect the positive (+) lead from the battery to terminal 12 of connector D, and negative (-) lead from the battery to terminals 9 and 17 of connector E.
- (b) Connect terminal 15 of connector E to battery negative (-) terminal through a 3.4 W test bulb.
- (c) Check that the bulb lights up.

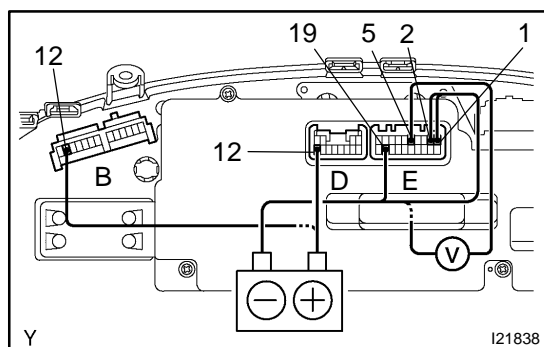


- (d) Disconnect the negative (-) lead from the battery to terminal 9 of connector E.
- (e) After approx. 5 seconds, check that the bulb turns off.

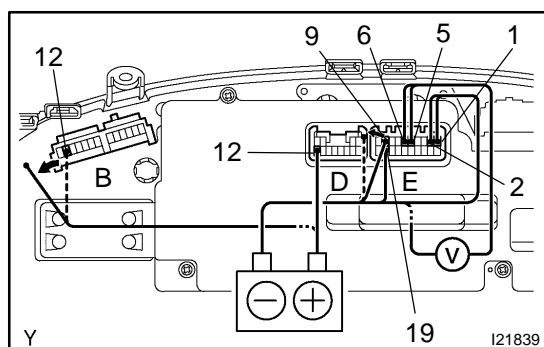


#### 6. Light Auto Turn OFF System: INSPECT COMBINATION METER OPERATION

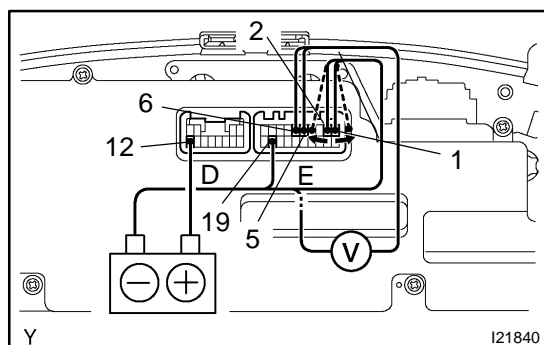
- (a) Connect the positive (+) lead from the battery to terminal 12 of connector B and terminal 12 of connector D, and negative (-) lead from the battery to terminal 19 of connector E.
- (b) Check that the voltage of terminal 6 of connector E is the battery positive voltage after the positive (+) lead from the battery has been connected to terminal 2 of connector E.



- (c) Check that the voltage of terminal 5 of connector E is the battery positive voltage after the positive (+) lead from the battery has been connected to terminal 1 of connector E.



- (d) Check that the voltage of terminals 5 and 6 of the connector E is 0 V after terminal 12 of connector B has been disconnected, and the positive (+) lead from the battery has been connected to terminal 9 of connector E.



- (e) Check that the voltage of terminals 5 and 6 of the connector E is battery positive voltage after terminals 1 and 2 of connector E have been disconnected and reconnected.

## 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.

USA (mph)		CANADA (km/h)	
Standard indication	Allowable range	Standard indication	Allowable range
20	18 - 24	20	17 - 24
40	38 - 44	40	38 - 46
60	56 - 66	60	57.5 - 67
80	78 - 88	80	77 - 88
100	98 - 110	100	96 - 109
120	118 - 132	120	115 - 130
		140	134 - 151.5
		160	153 - 173

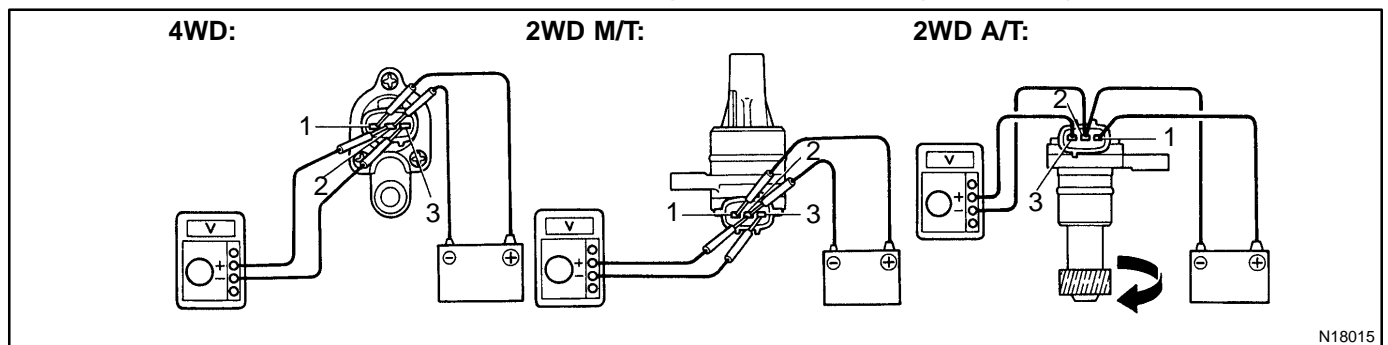
## 8. INSPECT VEHICLE SPEED SENSOR OPERATION

- Connect the positive (+) lead from the 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.
- Rotate the shaft.
- Check that there is some voltage change from approx. 0 V to 11 V or more between terminals 2 and 3.

HINT:

The voltage change should be 4 times in every revolution of the speed sensor shaft.

If the operation is not as specified, replace the sensor.



**9. INSPECT TACHOMETER ON-VEHICLE**

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

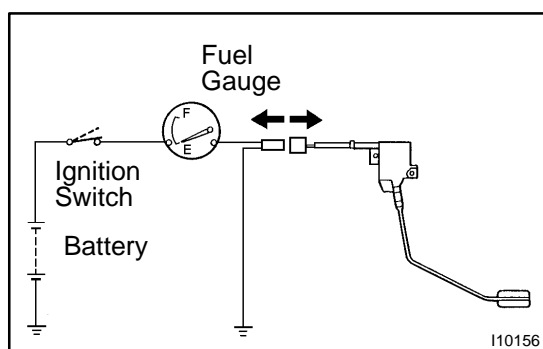
**NOTICE:**

- 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.

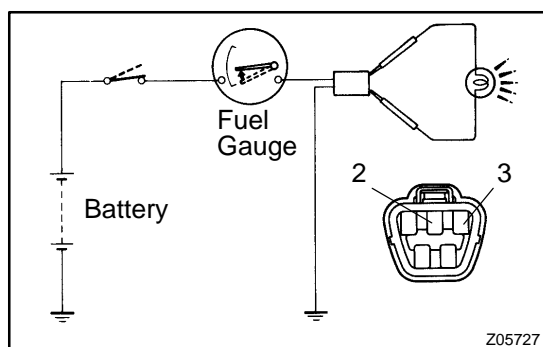
- (b) Compare the tester with tachometer indications.

**DC 13.5 V 20°C at (68°F)**

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

**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 terminals 2 and 3 on the wire harness side connector through a 3.4 W test bulb.  
 (d) Turn the ignition switch ON, check that the bulb lights up and the receiver gauge needle moves towards the full side.

**HINT:**

Because of silicon oil in the gauge, it takes a little time for the needle to stabilize.

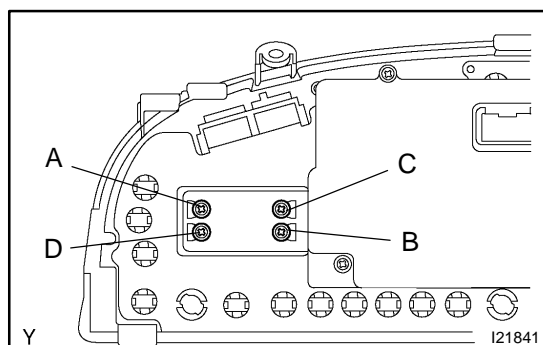
If the operation is not as specified, inspect the receiver gauge resistance.

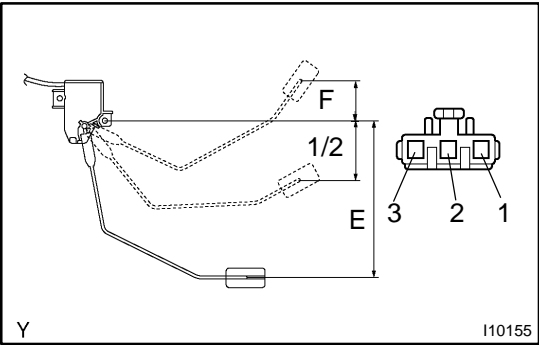
**11. INSPECT FUEL RECEIVER GAUGE RESISTANCE**

Measure the resistance between the terminals.

Tester connection	Resistance ( $\Omega$ )
A - B	Approx. 160
C - D	Approx. 160

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



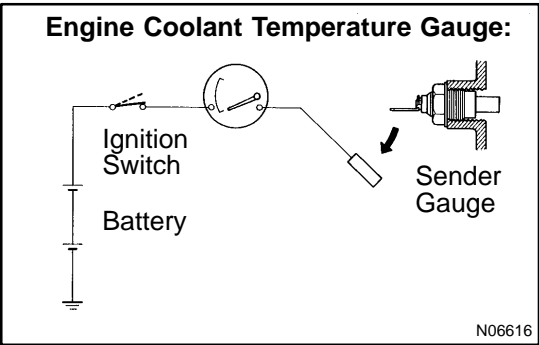


12. INSPECT FUEL SENDER GAUGE

Measure the resistance between terminals 1 and 3 in each float position.

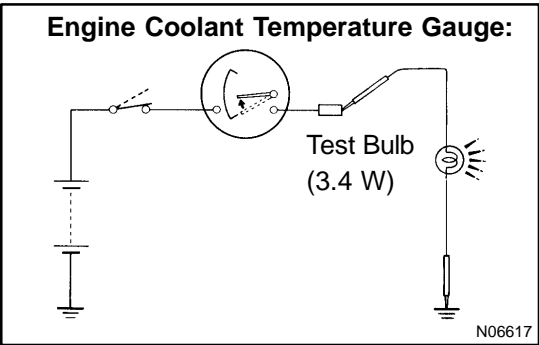
Float position: mm (in.)	Resistance (Ω)
F: Approx. 39.4 (1.551)	Approx. 184
1/2: Approx. 56.0 (2.205)	Approx. 97
E: Approx. 148.9 (5.862)	Approx. 12

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

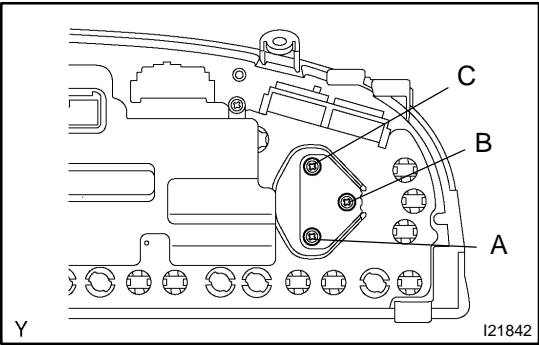


13. INSPECT ENGINE COOLANT TEMPERATURE RECEIVER GAUGE OPERATION

- (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 to the hot side.
- If the operation is as specified, replace the sender gauge. Then recheck the system.
- If the operation is not as specified, measure the receiver gauge resistance.



14. INSPECT ENGINE COOLANT TEMPERATURE RECEIVER GAUGE RESISTANCE

Measure the resistance between the terminals.

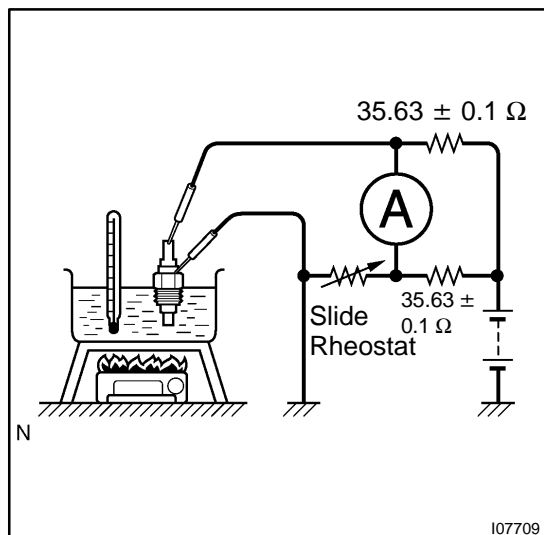
Tester connection	Resistance (Ω)
A - B	Approx. 90
A - C	Approx. 170
B - C	Approx. 230

HINT:

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

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



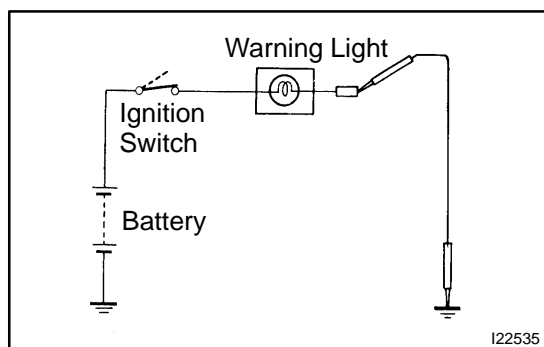


### 15. INSPECT ENGINE COOLANT TEMPERATURE SENDER GAUGE RESISTANCE

Connect the wire harness as shown in the illustration, and adjust the ammeter pointer so as to indicate "0" using the slide rheostat, then read the rheostat indication.

Temperature °C (°F)	Resistance (Ω)
50 (122.0)	234 - 314
120 (248.0)	24.0 - 30.5

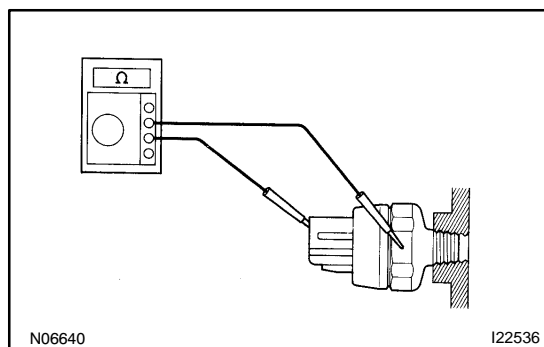
If the resistance value is not as specified, replace the engine coolant temperature sender gauge.



### 16. INSPECT LOW OIL PRESSURE WARNING LIGHT

- Disconnect the connector from the warning switch and ground terminal 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.

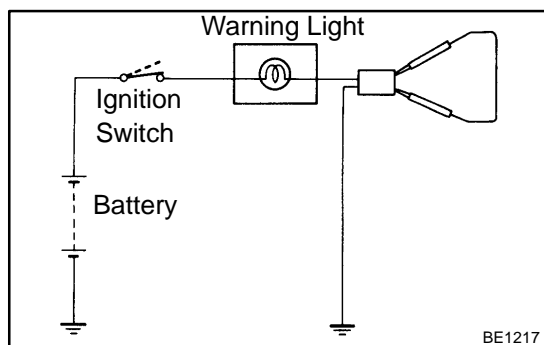


### 17. INSPECT LOW OIL PRESSURE SWITCH

- Disconnect the connector from the switch.
- Check that there is continuity between the terminal and ground with the engine stopped.
- Check that there is no continuity between the terminal and ground with the engine running.

HINT:

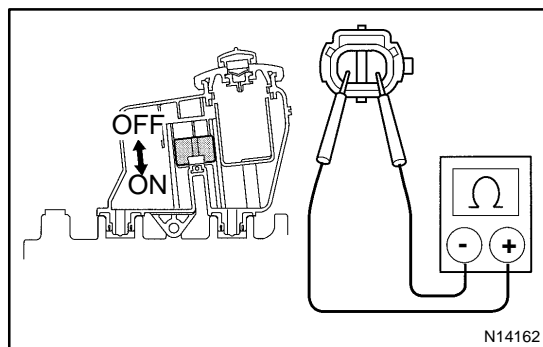
Oil pressure should be over 24.5 kPa (0.25 kgf/cm<sup>2</sup>, 3.55 psi).  
If the operation is not as specified, replace the switch.



### 18. INSPECT BRAKE WARNING LIGHT

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

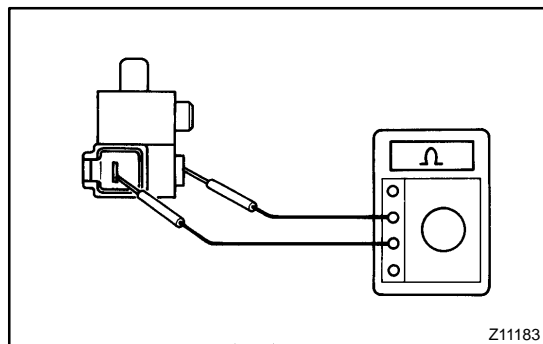
If the warning light does not light up, test the bulb.



### 19. INSPECT BRAKE FLUID LEVEL WARNING SWITCH CONTINUITY

- Check that no continuity exists between the terminals with the switch OFF (float up).
- Check that continuity exists between the terminals with the switch ON (float down).

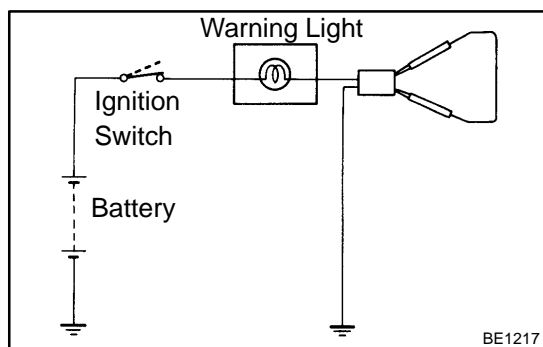
If the operation is not as specified, replace the switch.



### 20. INSPECT PARKING BRAKE SWITCH CONTINUITY

- Check that continuity exists between the terminals with the switch ON (switch pin released).
- Check that no continuity exists between the terminals with the switch OFF (switch pin pushed in).

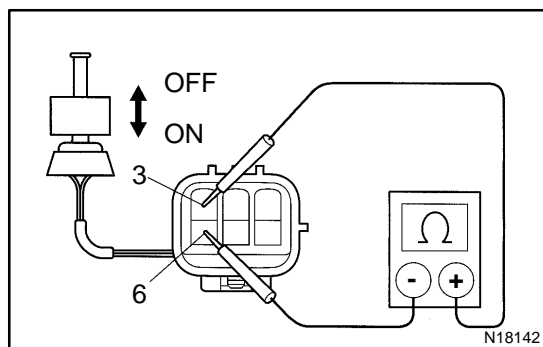
If the operation is not as specified, replace the switch.



### 21. INSPECT WASHER LEVEL WARNING LIGHT

- Disconnect the connectors from the level warning switch and parking brake switch.
- Connect the terminals on the wire harness side connector of the level warning switch connector.
- Remove the CHARGE fuse and turn the ignition switch ON, and check that the warning light comes on.

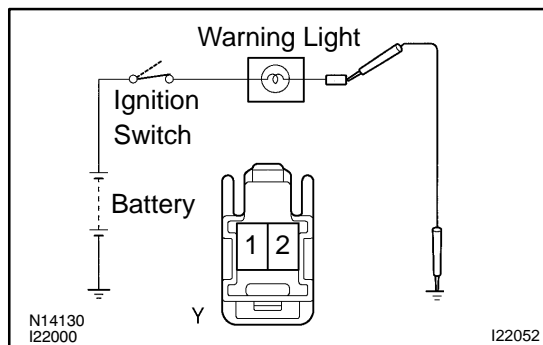
If the warning light does not light up, test the bulb.



### 22. INSPECT WASHER LEVEL WARNING SWITCH

- Check that no continuity exists between the terminals with the switch OFF (float up).
- Check that continuity exists between the terminals with the switch ON (float down).

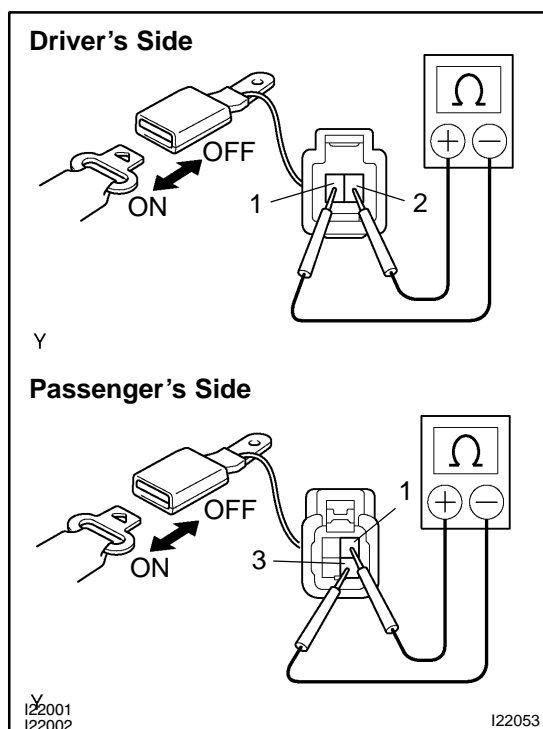
If the operation is not as specified, replace the switch.



### 23. INSPECT DRIVER'S SEAT BELT WARNING LIGHT

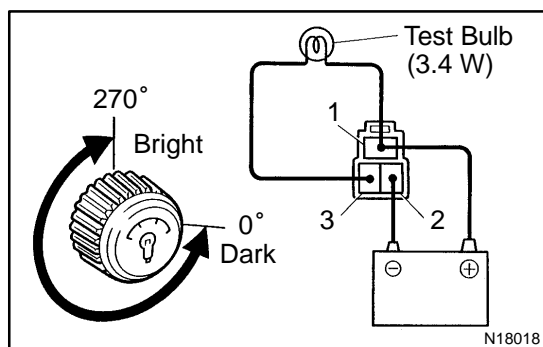
- Disconnect the connector from the driver's buckle switch, and connect terminal 1 and the body ground.
- Turn the ignition switch ON and check that the warning light lights up.

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

**24. INSPECT BUCKLE SWITCH CONTINUITY**

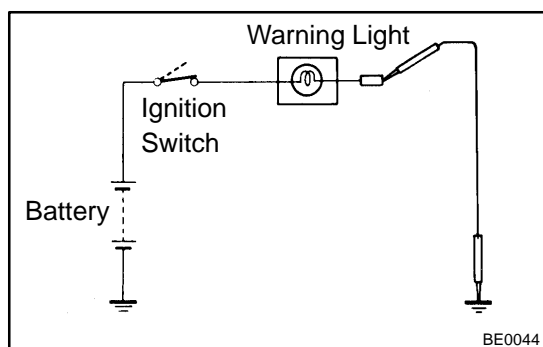
- Passenger's Seat only:  
Press the sensing part of the belt warning occupant detection sensor (See step 29).
- Check that continuity exists between the terminals on the switch side connector with the switch ON (belt unfastened).
- Check that no continuity exists between the terminals on the switch side connector with the switch OFF (belt fastened).

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

**25. INSPECT LIGHT CONTROL RHEOSTAT**

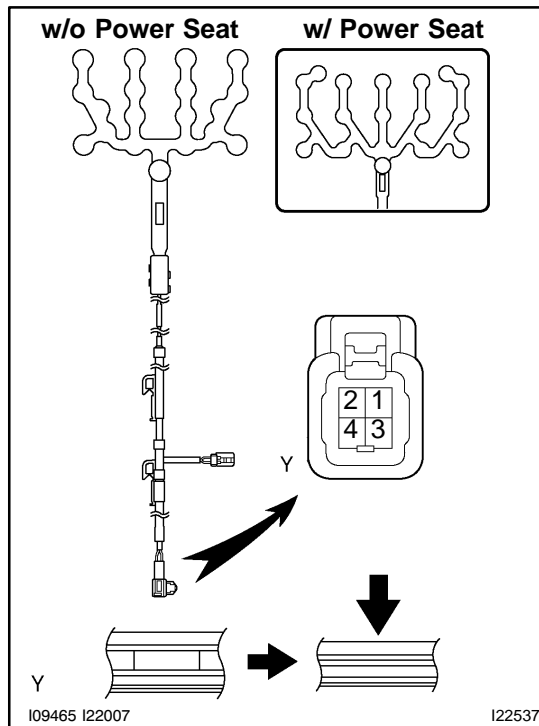
- Connect terminals 1 and 3 through a 3.4 W test bulb.
- Connect the positive (+) lead from the battery to terminal 1, and the negative (-) lead to terminal 2.
- Turn the rheostat knob fully counterclockwise, check that the test bulb goes off.
- Gradually turn the rheostat knob clockwise, check that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

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

**26. INSPECT OPEN DOOR WARNING LIGHT**

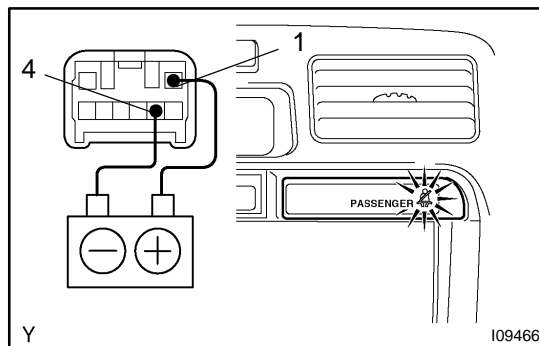
- Disconnect the connector from the door courtesy switch and ground terminal on the wire harness side connector.
- Turn the ignition switch ON, check that the warning light lights up.

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

**27. Passenger's Seat only:****INSPECT SEAT BELT WARNING OCCUPANT DETECTION SENSOR CONTINUITY**

Check that continuity exists between terminals 1 and 3 when pressing the sensing part.

If the operation is not as specified, replace the sensor.

**28. INSPECT PASSENGER SEAT BELT WARNING LIGHT**

Connect the positive (+) lead from the battery to terminal 1, and negative (-) lead to terminal 4, then check that the warning light lights up.