

## ON-VEHICLE INSPECTION

### 1. INSPECT SPEEDOMETER

(a) Check the operation.

- (1) Using a speedometer tester, inspect the speedometer for acceptable indication error and check the operation of the odometer.

**Reference: km/h (Canada)**

| Standard indication | Acceptable range    |
|---------------------|---------------------|
| 20 km/h             | 18.0 to 23.0 km/h   |
| 40 km/h             | 40.0 to 44.0 km/h   |
| 60 km/h             | 60.0 to 64.5 km/h   |
| 80 km/h             | 80.0 to 85.0 km/h   |
| 100 km/h            | 100.0 to 105.0 km/h |
| 120 km/h            | 120.0 to 125.5 km/h |
| 140 km/h            | 140.0 to 146.0 km/h |
| 160 km/h            | 160.0 to 167.0 km/h |
| 180 km/h            | 180.0 to 188.0 km/h |
| 200 km/h            | 200.0 to 209.0 km/h |

**Reference: mph (U.S.)**

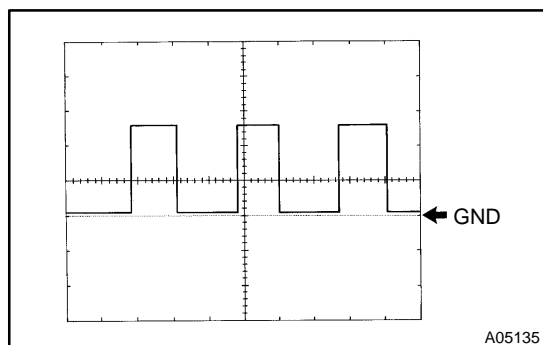
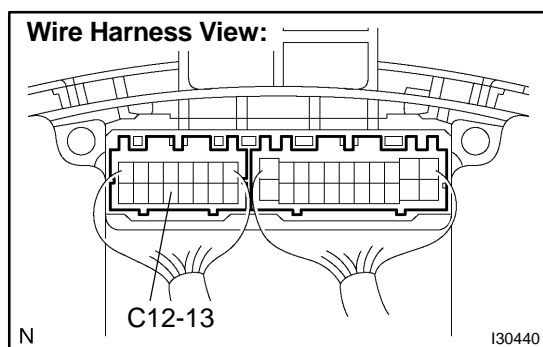
| Standard indication | Acceptable range   |
|---------------------|--------------------|
| 20 MPH              | 20.0 to 23.0 MPH   |
| 40 MPH              | 40.0 to 43.5 MPH   |
| 60 MPH              | 60.0 to 64.0 MPH   |
| 80 MPH              | 80.0 to 84.5 MPH   |
| 100 MPH             | 100.0 to 105.0 MPH |
| 120 MPH             | 120.0 to 125.5 MPH |

#### NOTICE:

**Tire wear and over or under tire pressure will affect the indication error.**

- (2) Check the deflection width of the speedometer indicator.

**Reference: Below 0.5 km/h (0.3 mph)**



### 2. INSPECT OUTPUT SIGNAL OF VEHICLE SPEED

(a) Check the output signal waveform.

- (1) Remove the combination meter assy.  
 (2) Connect the oscilloscope to the terminals C12-13 and body ground.  
 (3) Start the engine.  
 (4) Check the signal waveform according to the condition (s) in the table below.

| Item              | Condition                 |
|-------------------|---------------------------|
| Tool setting      | 5 V/DIV, 20 ms/DIV        |
| Vehicle condition | Driving at approx. 20Km/h |

#### HINT:

As the vehicle speed increases, the cycle of the signal waveform narrows.

### 3. INSPECT TACHOMETER

(a) Check operation

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

**NOTICE:**

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

- (2) Compare the result of the test with the standard indication.

**DC 13.5 V, 25° C (77° F)**

| Standard indication (r/min) | Acceptable range (r/min)<br>Data in ( ) are for reference |
|-----------------------------|---|
| 700                         | 630 to 770  |
| 1,000                       | (900 to 1100)   |
| 2,000                       | (1850 to 2150)  |
| 3,000                       | 2800 to 3200  |
| 4,000                       | (3800 to 4200)  |
| 5,000                       | 4800 to 5200  |
| 6,000                       | (5750 to 6250)  |
| 7,000                       | 6700 to 7300  |

Fuel Sender Gauge Connector  
Front View:



1e-5-1-A

130899

### 4. INSPECT FUEL RECEIVER GAUGE

- (a) Disconnect the connector from the sender gauge.
- (b) Connect terminals 1 and 2 on the wire harness side connector of the fuel sender gauge.
- (c) Turn the ignition switch to the ON position, then check the position of the receiver gauge needle.

**OK:**

**Needle position is on (EMPTY).**

- (d) Connect terminals 2 and 3 on the wire harness side connector of the fuel sender gauge.
- (e) Turn the ignition switch to the ON position, then check the position of the receiver gauge needle.

**OK:**

**Needle position is on (FULL).**

### 5. INSPECT FUEL LEVEL WARNING

- (a) Disconnect the connector from the sender gauge.
- (b) Turn the ignition switch to the ON position, then check that the fuel level needle indicates EMPTY and the fuel level warning light comes on.

**OK:**

**Fuel level warning light comes on.**

### 6. INSPECT LOW OIL PRESSURE WARNING LIGHT

- (a) Disconnect the connector from the low oil pressure switch.
- (b) Turn the ignition switch to the ON position.
- (c) Ground the terminal of the wire harness side connector, then check the low oil pressure warning light.

**OK:**

**Low oil pressure warning light comes on.**

**7. INSPECT BRAKE WARNING LIGHT**

- (a) Inspect the parking brake warning light.
  - (1) Disconnect the connector from the parking brake switch.
  - (2) Turn the ignition switch to the ON position.
  - (3) Ground the terminal of the wire harness side connector, then check the parking brake warning light.

**OK:****Brake warning light comes on.**

- (b) Inspect the brake fluid level warning light.
  - (1) Disconnect the connector from the brake fluid level warning switch.
  - (2) Turn the ignition switch to the ON position.
  - (3) Connect a terminal to the other terminal of the wire harness side connector, then check the brake fluid level warning switch.

**OK:****Brake warning light comes on.****8. INSPECT BRAKE FLUID LEVEL WARNING SWITCH**

- (a) Remove the reservoir tank cap and strainer.
- (b) Disconnect the connector.
- (c) Measure the resistance between the terminals.

**Standard:****Float up (switch off): 10 k $\Omega$  or higher**

- (d) Use a syphon, etc. to take fluid out of the reservoir tank.
- (e) Measure the resistance between the terminals.

**Standard:****Float down (switch on): Below 1  $\Omega$** 

- (f) Pour the fluid back in the reservoir tank.

**9. INSPECT WASHER LEVEL WARNING SWITCH**

- (a) Disconnect the connector from the washer level warning switch.
- (b) Turn the ignition switch to the ON position.
- (c) Ground the terminal of the wire harness side connector, then check the washer level warning light.

**OK:****Washer level warning light comes on.****10. MAINTENANCE LIQUID RESETTING PROCEDURE****Indicator Condition:**

| State                    | Condition   | Specified State   |
|--------------------------|---|---|
| Blinking                 | The vehicle runs 4,500 miles after the previous setting | The indicator blinks for 15 seconds after the ignition switch on (including 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 on.                                   |

- (a) Set the display window to ODO.
- (b) Turn the ignition switch off.
- (c) Pressing the reset switch, turn the ignition switch to the ON position (keep pressing for at least 5 seconds).
- (d) Reset procedure is completed.

**HINT:**

- If the ignition switch is turned off during reset procedure, reset mode is canceled.
- If the reset switch is turned off during the reset procedure, reset mode is canceled and the display shows the condition prior to the reset procedure.