

## HOW TO PERFORM FOR SYSTEM INSPECTION

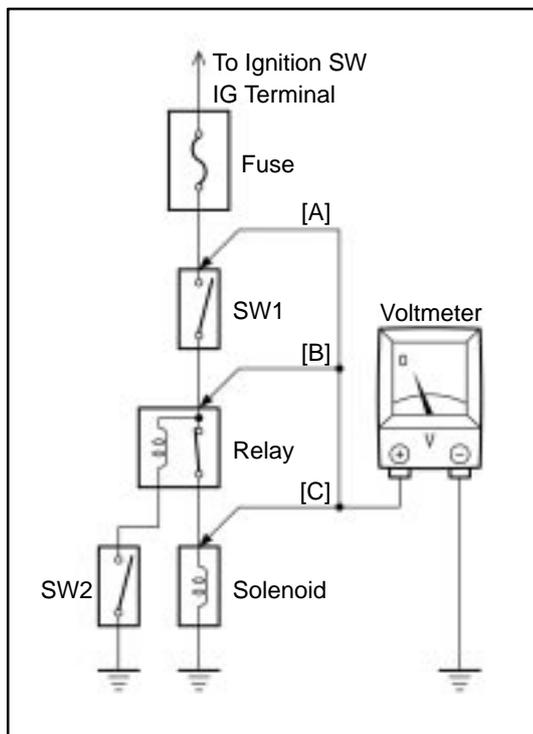
This inspection procedure is a simple troubleshooting which should be carried out on the vehicle during system operation and is based on the assumption of system component trouble

Always inspect the trouble taking the following items into consideration:

- Ground point fault
- Open or short circuit of the wire harness
- Connector or terminal connection fault
- Fuse or fusible link fault

### NOTICE:

- This is an on-vehicle inspection during system operation. Therefore, inspect the trouble with due regard for safety.
- If connecting the battery directly, be careful not to cause a short circuit, and select the applicable voltage.



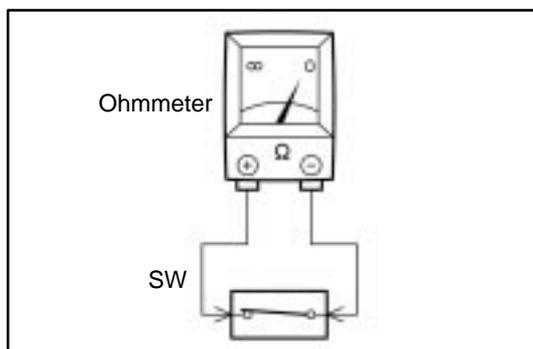
### 1. Voltage Check

- Establish conditions in which voltage is present at the check point.

Example:

- [A] – Ignition SW on
- [B] – Ignition SW and SW 1 on
- [C] – Ignition SW, SW 1 and Relay on (SW 2 off)

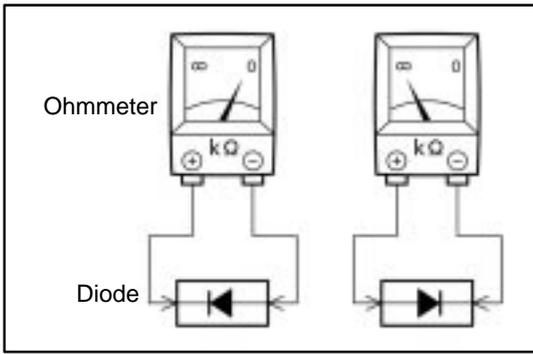
- Using a voltmeter, connect the negative (–) lead to a good ground point or negative (–) battery terminal and the positive (+) lead to the connector or component terminal. This check can be done with a test bulb instead of a voltmeter.



### 2. Continuity and Resistance Check

- Disconnect the battery terminal or wire so there is no voltage between the check points.
- Contact the two leads of an ohmmeter to each of the check points.

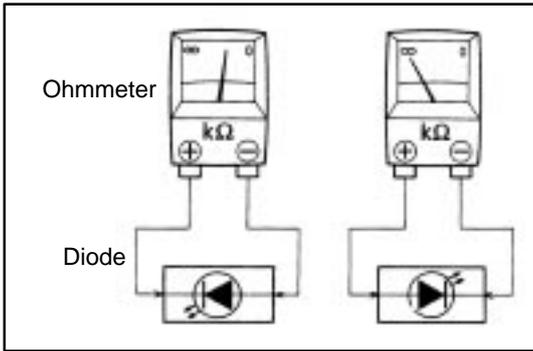
**INTRODUCTION—HOW TO PERFORM FOR SYSTEM INSPECTION**



If the circuit has diodes, reverse the two leads and check again.

When touching the negative (-) lead to the diode positive (+) side and the positive (+) lead to the negative (-) side, there should be continuity. When touching the two leads in reverse, there should be no continuity.

**HINT:** Specifications may vary depending on the type of tester, so refer to the tester's instruction manual before performing the inspection.

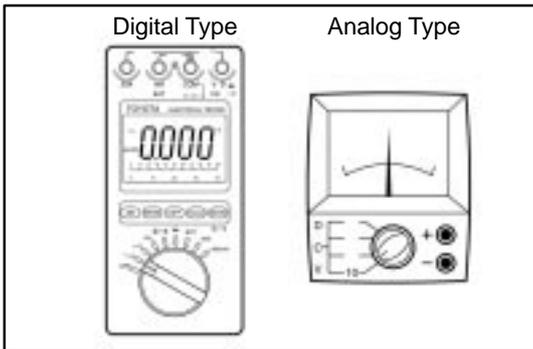


Check LED (Light Emitting Diode) in the same manner as that for diodes.

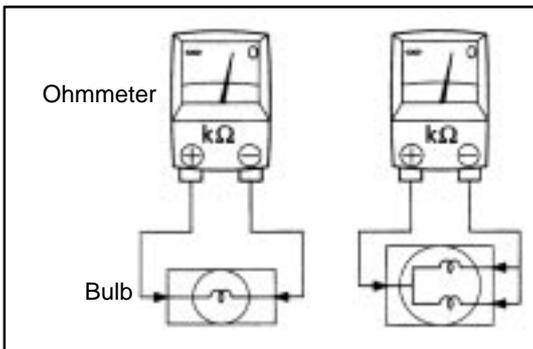
**HINT:**

- Use a tester with a power source of 3V or greater to overcome the circuit resistance.
- If a suitable tester is not available, apply battery voltage and check that the LED lights up.

**A**

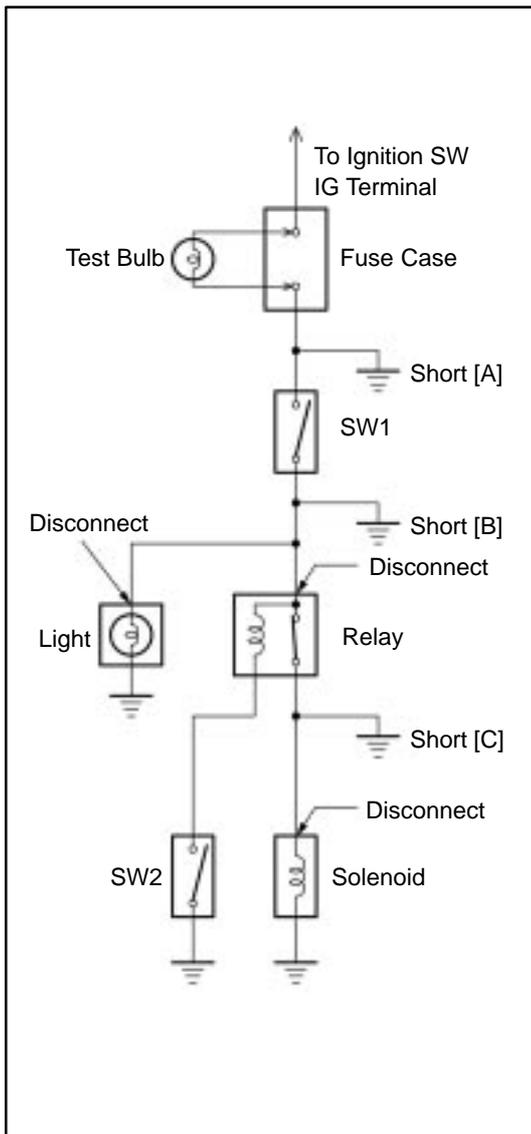


- (c) Use a volt/ohmmeter with high impedance (10kΩ/V minimum) for troubleshooting of the electrical circuit.



**3. Bulb Check**

- (a) Remove the bulb.
- (b) There should be continuity between the respective terminals of the bulb together with a certain amount of resistance.
- (c) Apply the two leads of the ohmmeter to each of the terminals.
- (d) Apply battery voltage and check that the bulb light up.



#### 4. Finding a Short Circuit

- (a) Remove the blown fuse and eliminate all loads from the fuse.
- (b) Connect a test bulb in place of the fuse.
- (c) Establish conditions in which the test bulb comes on.

Example:

[A] – Ignition SW on

[B] – Ignition SW and SW 1 on

[C] – Ignition SW, SW 1 and Relay on (Connect the Relay) and SW 2 off (or disconnect SW 2)

- (d) Disconnect and reconnect the connectors while watching the test bulb. The short lies between the connector where the test bulb stays lit and the connector where the bulb goes out.
- (e) Find the exact location of the short by lightly shaking the problem wire along the body.

#### CAUTION:

- (a) **Do not open the cover or the case of the ECU unless absolutely necessary. (If the IC terminals are touched, the IC may be destroyed by static electricity.)**
- (b) **When replacing the internal mechanism (ECU part) of the digital meter, be careful that no part of your body or clothing comes in contact with the terminals of leads from the IC, etc. of the replacement part (spare part).**