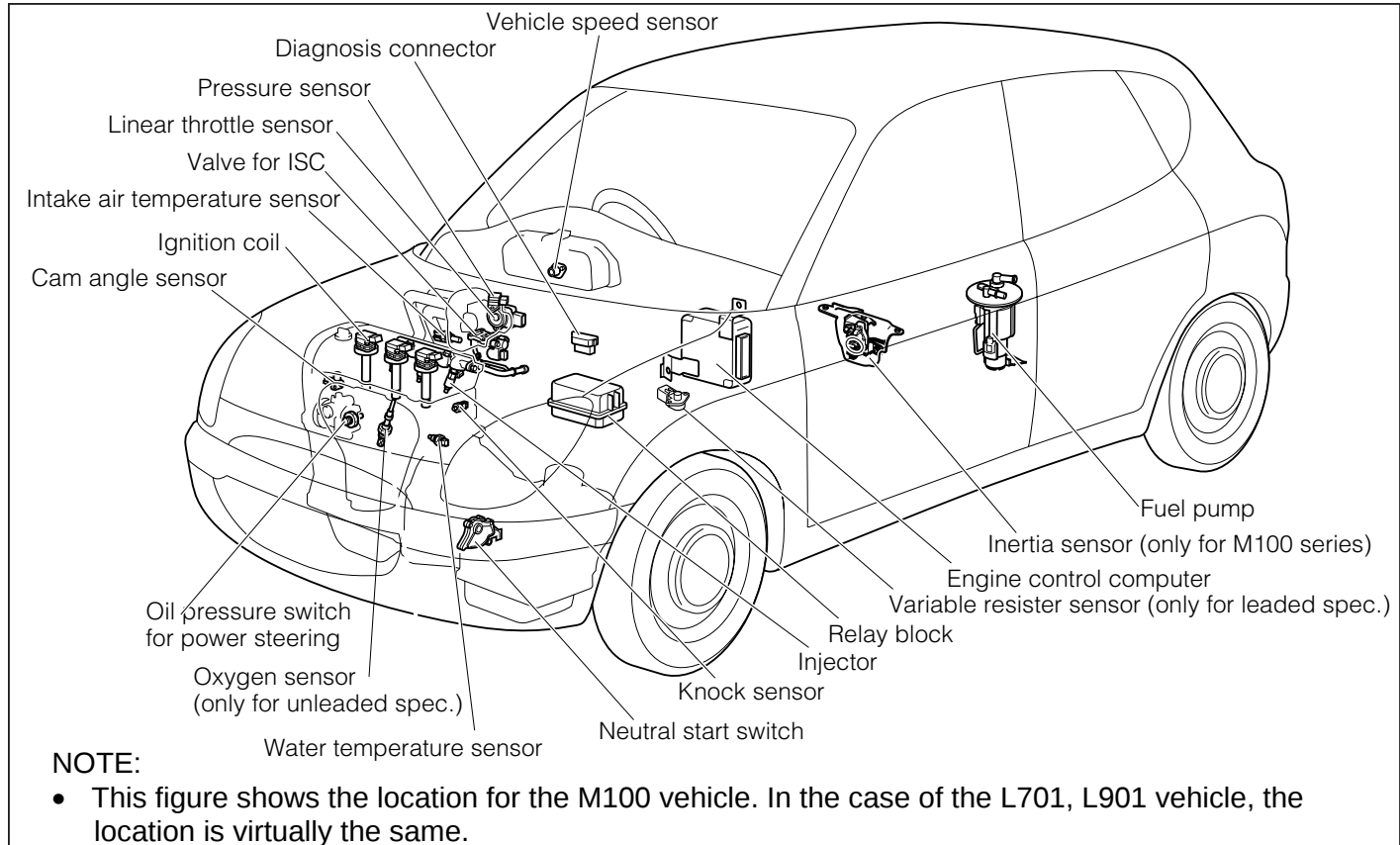


EFI SYSTEM

1. SYSTEM DESCRIPTION

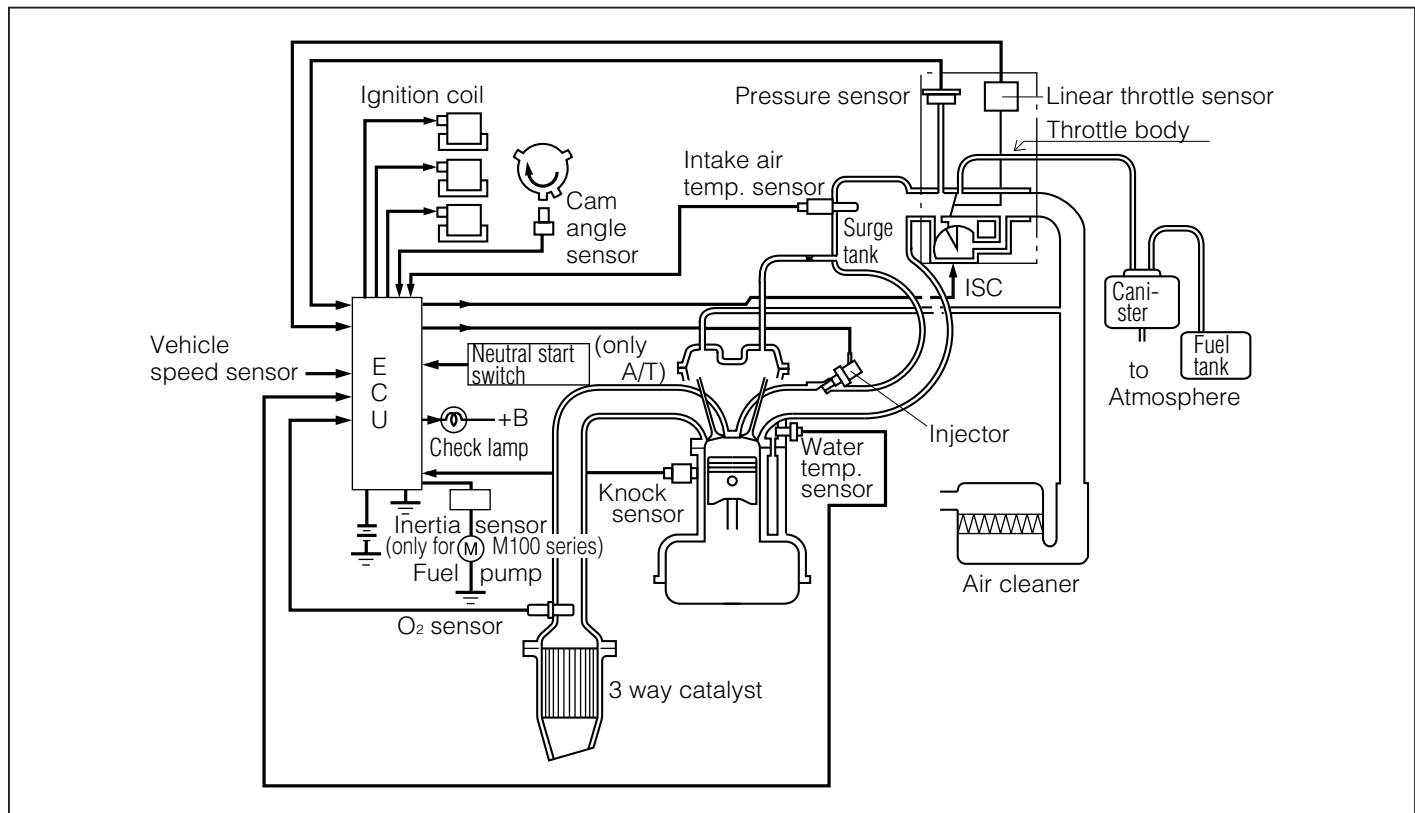
1.1 LOCATION OF ELECTRONIC CONTROL PARTS



mEF00002-00001

1.2 SYSTEMATIC DIAGRAM

1.2.1 SPECIFICATIONS OF SYSTEM FOR UNLEADED GASOLINE



mEF00003-00002

15. Turn OFF the ignition switch.
16. Install the injector grommet and O-ring to the injectors.

NOTE:

- Install a new O-ring to the O-ring seal section.

17. Install the injectors and the fuel delivery pipe.

NOTE:

- After completion of the assembling, ensure that the injector can be turned smoothly by your hand, although there is a slight resistance due to friction.
- Make sure that the connector of the injector is located at the outside of the engine and is directed in a horizontal direction.

I. Inspection of idling revolution

1. Warm up the engine completely.

NOTE:

- Turn off the all electrical accessory switches.
- The transmission control lever should be in the N or P range.

2. Connect a tachometer to the tachometer terminal and the earth terminal at the diagnosis connector.
3. Check to see if the idling revolution conforms to the specification when the engine water temperature is higher than 80°C.

Specified Value:

L701, L901 series	All destinations	—————
M100 series	EC, General	AUS, ISRAEL, GCC
M/T	850 ± 50 rpm	900 ± 50 rpm
A/T	850 ± 50 rpm	900 ± 50 rpm

NOTE:

- The engine revolution is given here for your reference during the check. It is not necessary to carry out the adjustment.

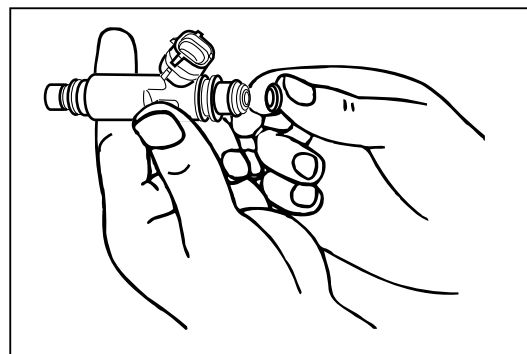
J. Inspection of rotary ISC valve.

1. Connect a tachometer to the terminal of the diagnosis connector.
2. Check to see if the fast idle revolution speed is within the reference value.

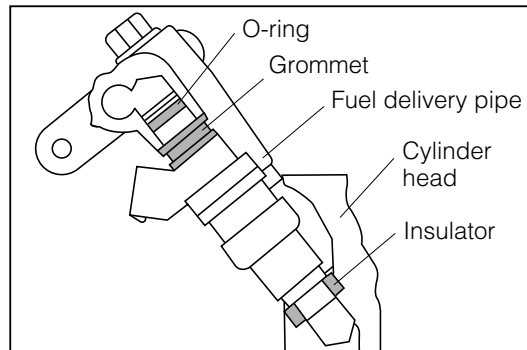
Reference Value: Around 1300 - 1900 rpm/25°C

NOTE:

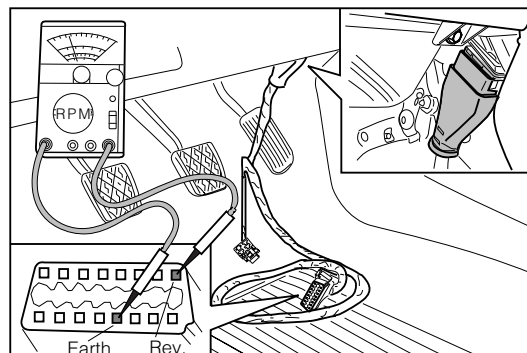
- The fast idle revolution speed can not be adjusted to the specification. If the revolution speed will not conform to the reference value, perform the inspection of the auxiliary air system, following the procedure given below.



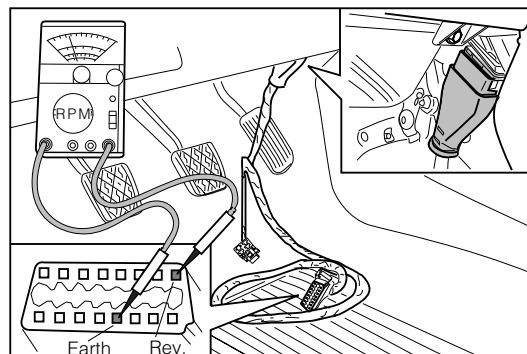
mEF00044-00039



mEF00045-00040



mEF00046-00041



mEF00047-00042

2. PRECAUTIONS

1. When resistance or voltage measurement is conducted at the connector section, insert a measuring probe from the back of the connector, being very careful not to damage the harness of terminal connections.

In the case of water-proof type connector, a measurement is conducted at the connector section with the measuring probe put into contact with the terminal at the connection side of the connector. Be very careful not to apply excessive force to the terminal at the connector side.

As an alternative method, insert a male or female terminal into the connector terminal or connect an adequate attachment.

2. The fuel line at the high-pressure side is pressurized to a fuel pressure of about 294 kPa. Therefore, a large amount of gasoline flows out when parts of the fuel line are disconnected. Hence, take the following countermeasures.

WARNING

- Be sure to release the inner pressure of the fuel tank by removing the fuel filler cap in advance.

3. Tachometer connection.

Connect the tachometer probe to the measuring terminal of the diagnosis connector.

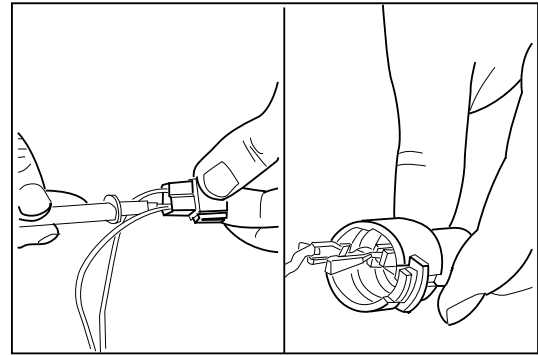
CAUTION:

- This does not apply if your tachometer is a pick-up type.
- Never allow the tachometer probe to touch the ground, for it could result in damage to the ignitor and/or ignition coil.
- Some kinds of tachometers may not be suited for the ignition system of the vehicle. Therefore, ensure that your tachometer is compatible with the ignition system of the vehicle.

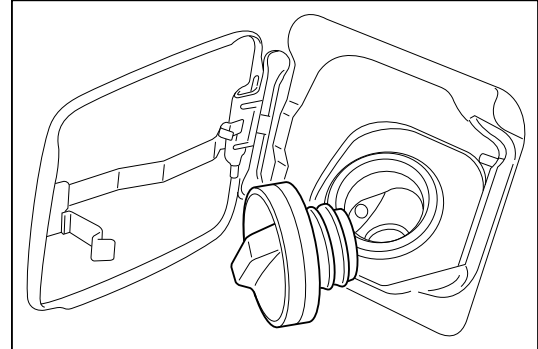
4. Precautions during oxygen sensor handling.

- (1) Do not drop the oxygen sensor or hit it to other objects.
- (2) Do not immerse the sensor in water or do not cool it by water.

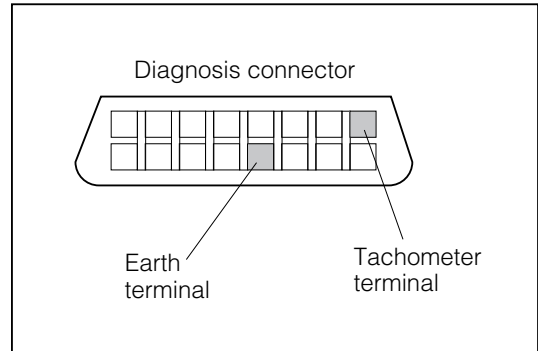
5. Do not open the cover of the ECU proper.
(Failure to observe this caution could cause ECU malfunction.)



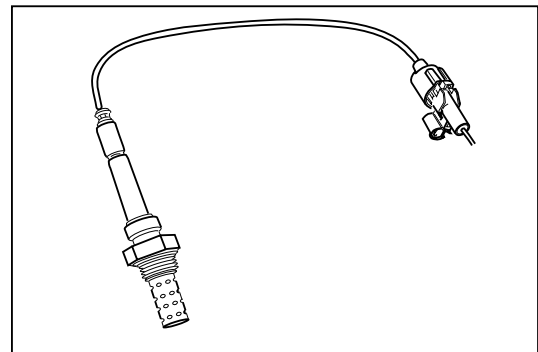
mEF00053-00047



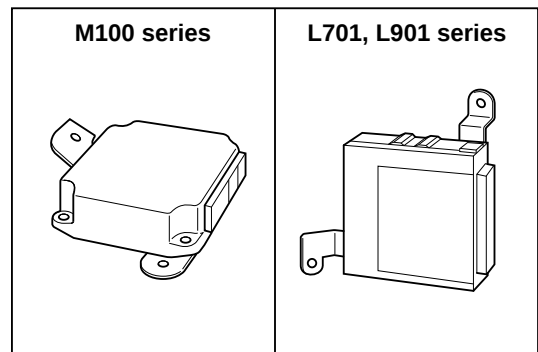
mEF00054-00048



mEF00055-00049



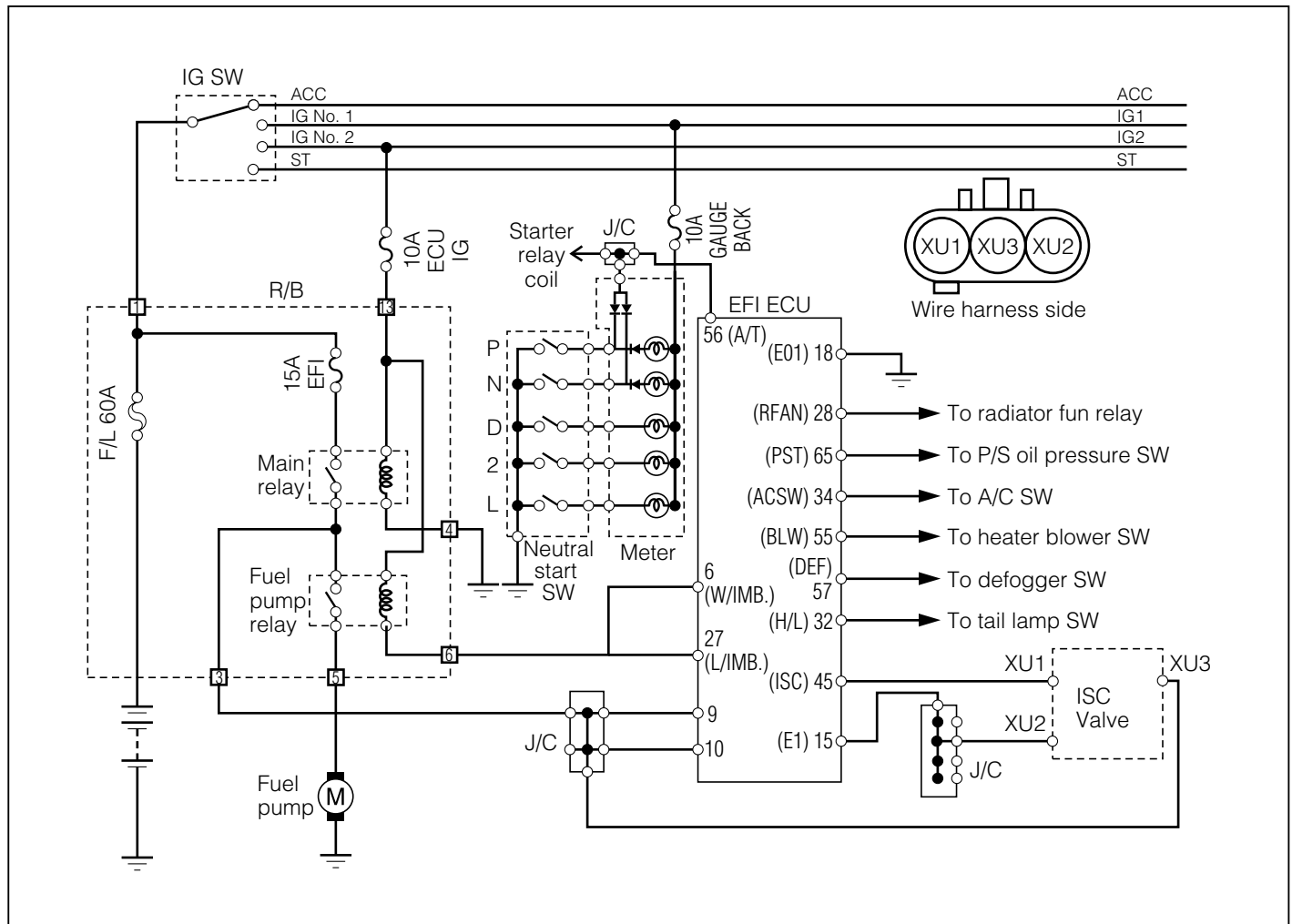
mEF00056-00050



mEF00057-00051

7. INSPECTION OF ROTARY ISC SYSTEM

7.1 WIRING DIAGRAM



mEF00141-00123

7.2 ISC SYSTEM BASIC INSPECTION

1. Ensure that the engine revolution speed is high during the cold period. Also, ensure that the engine revolution speed drops as the engine warms up and that the idle speed is maintained.

Specified Value:

850 rpm (A/T & M/T)... EC, General spec. for M100 series & All destination for L701, L901 series.

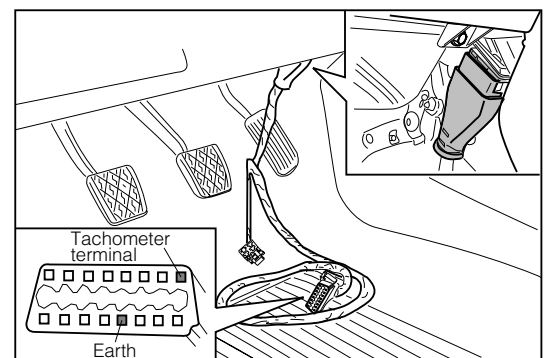
900 rpm (A/T & M/T)... AUS, ISRAEL and GCC spec. for M100 series.

2. After the engine has warmed up completely, disconnect the connector of the ISC valve. At this time, ensure that the idle speed rises. (This confirmation should be conducted with no load, such as air conditioner and electric load, applied.)

Specified Value: idle → 1600 rpm

NOTE:

- The above inspection should be conducted only when the engine coolant temperature is above 80°C.



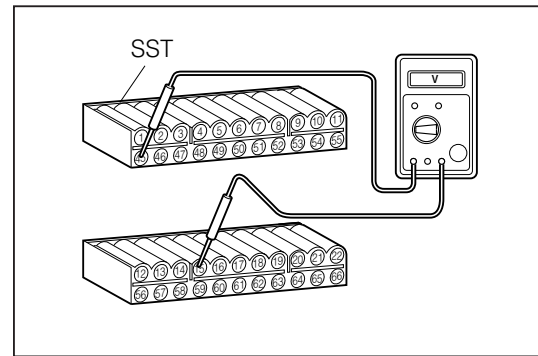
mEF00142-00124

mEF00143-00000

3. Turn OFF the ignition switch.
4. Connect the SST between the EFI ECU terminals and the wire harness terminals.
5. Start the engine.
6. Measure the voltage between the SST terminals 45 and 15.

NOTE:

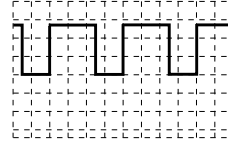
- Ensure that the measured voltage is stabilized at a certain level according to the warming-up state.



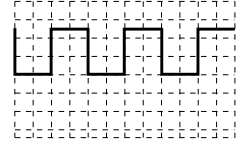
mEF00144-00125

Idling condition

(Electrical load "OFF")



(Electrical load "ON")



When an oscilloscope is used, the ISC control signal becomes the waveform as indicated in the figure above. (The duty ratio cannot be specified.)

mEF00000-00126

7.3 ISC IDLE-UP SYSTEM INSPECTION

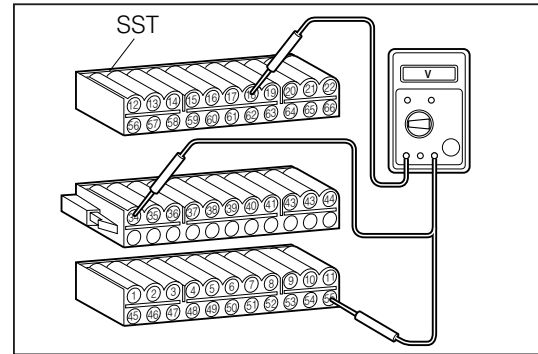
1. Warm up the engine completely.
2. Turn OFF the Ignition switch.
3. Connect the SST between the EFI ECU terminals and the wire harness terminals.
4. Start the engine.
5. Measure the voltage between the SST terminals 34, 55 and 18 and measure the idling speed when the A/C switch is in the following condition while the heater blower is being turned on.

■EC, General spec. for M100 series & All destinations for L701, L901 series.

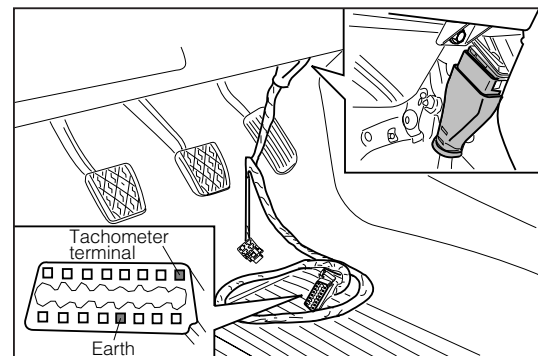
A/C switch	Voltage V		Revolution speed rpm	
	OFF	ON	OFF	ON
M/T	0.5 or less	Battery voltage	850	950
A/T	↑	↑	850	900

■AUS, ISRAEL, GCC spec. for M100 series.

A/C switch	Voltage V		Revolution speed rpm	
	OFF	ON	OFF	ON
M/T	0.5 or less	Battery voltage	900	950
A/T	↑	↑	900	900



mEF00145-00127



mEF00000-00128

6. Measure the voltage between the SST terminals 56 and 18 when the neutral start switch is in the following condition.

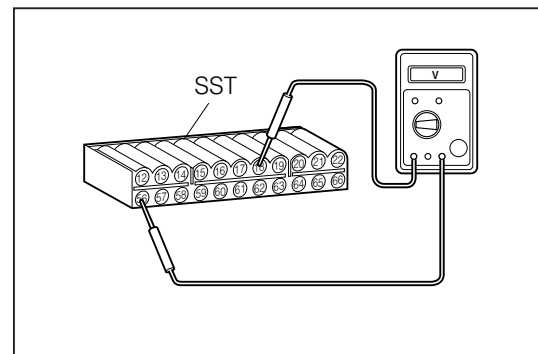
Specified Value: P or N range 0.5 V or less

Other than P and N ranges

Battery voltage

NOTE:

- Make sure that the idle speed will not change when the shift lever is shifted to a position other than the P and N ranges.



mEF00146-00129