

3. Engine Idle Speed

A: MEASUREMENT

1) Before checking idle speed, check the following:

(1) Ensure that air cleaner element is free from clogging, ignition timing is correct, spark plugs are in good condition, and that hoses are connected properly.

(2) Ensure that malfunction indicator light (CHECK ENGINE light) does not illuminate.

2) Warm-up the engine.

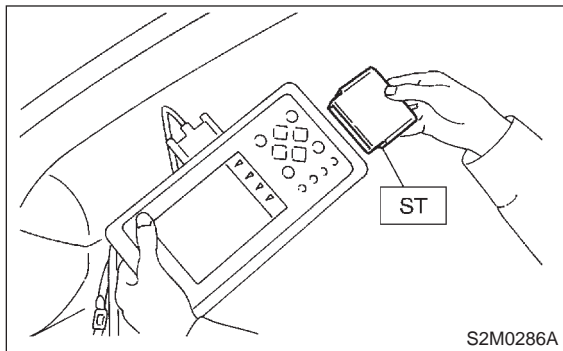
3) Stop the engine, and turn ignition switch to OFF.

4) When using SUBARU SELECT MONITOR;

NOTE:

For detailed operation procedures, refer to the SUBARU SELECT MONITOR OPERATION MANUAL.

(1) Insert the cartridge to SUBARU SELECT MONITOR. <Ref. to 1-6 [G1100].>



(2) Connect SUBARU SELECT MONITOR to the data link connector.

(3) Turn ignition switch to ON, and SUBARU SELECT MONITOR switch to ON.

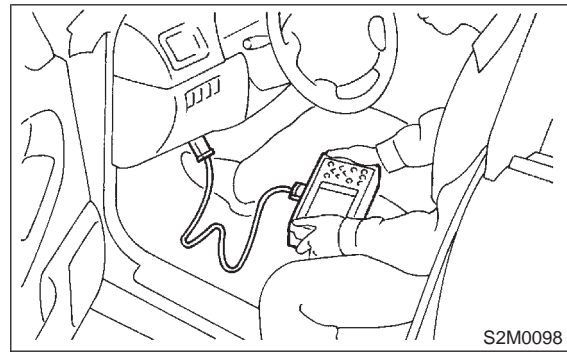
(4) Select {2. Each System Check} in Main Menu.

(5) Select {Engine Control System} in Selection Menu.

(6) Select {1. Current Data Display & Save} in EGI/EMPI Diagnosis.

(7) Select {1.12 Data Display} in Data Display Menu.

(8) Start the engine, and read engine idle speed.



5) When using tachometer (Secondary pick-up type);

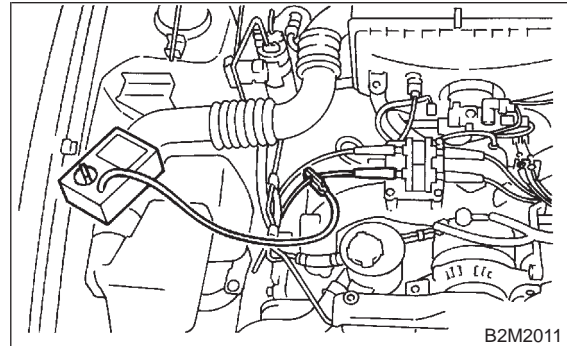
(1) Attach the pick-up clip to No. 1 cylinder spark plug cord.

(2) Start the engine, and read engine idle speed.

NOTE:

- When using the OBD-II general scan tool, carefully read its operation manual.

- This ignition system provides simultaneous ignition for #1 and #2 plugs. It must be noted that some tachometers may register twice that of actual engine speed.



6) Check idle speed when unloaded. (With headlights, heater fan, rear defroster, radiator fan, air conditioning, etc. OFF)

Idle speed (No load and gears in neutral (MT), or N or P (AT) position):

650±100 rpm (MT model)

700±100 rpm (AT model)

7) Check idle speed when loaded. (Turn air conditioning switch to "ON" and operate compressor for at least one minute before measurement.)

Idle speed [A/C "ON", no load and gears in neutral (MT) or N or P (AT) position]:

850±50 rpm

CAUTION:

Never rotate idle adjusting screw. If idle speed is out of specifications, refer to General On-board Diagnosis Table under "2-7 On-Board Diagnostics II System". <Ref. to 2-7 [T100].>

4. Engine Compression

A: MEASUREMENT

CAUTION:

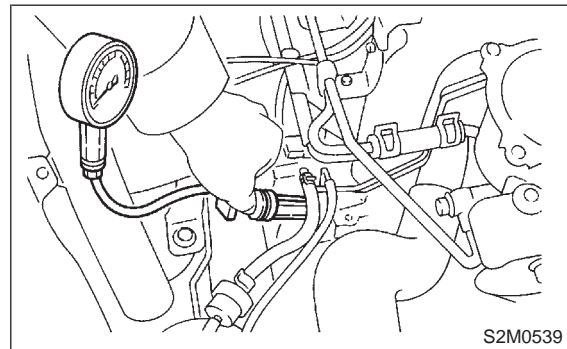
After warming-up, engine becomes very hot. Be careful not to burn yourself during measurement.

- 1) After warming-up the engine, turn ignition switch to OFF.
- 2) Make sure that the battery is fully charged.
- 3) Disconnect battery ground cable.
- 4) Remove all the spark plugs. <Ref. to 6-1 [W3A0].>
- 5) Disconnect connectors from fuel injectors.
- 6) Connect battery ground cable.
- 7) Fully open throttle valve.
- 8) Check the starter motor for satisfactory performance and operation.
- 9) Hold the compression gauge tight against the spark plug hole.

CAUTION:

When using a screw-in type compression gauge, the screw (put into cylinder head spark plug hole) should be less than 18 mm (0.71 in) long.

- 10) Crank the engine by means of the starter motor, and read the maximum value on the gauge when the pointer is steady.



- 11) Perform at least two measurements per cylinder, and make sure that the values are correct.

Compression (350 rpm and fully open throttle):

Standard;

**1,079 — 1,275 kPa (11.0 — 13.0 kg/cm²,
156 — 185 psi)**

Limit;

1,020 kPa (10.4 kg/cm², 148 psi)

Difference between cylinders;

49 kPa (0.5 kg/cm², 7 psi), or less