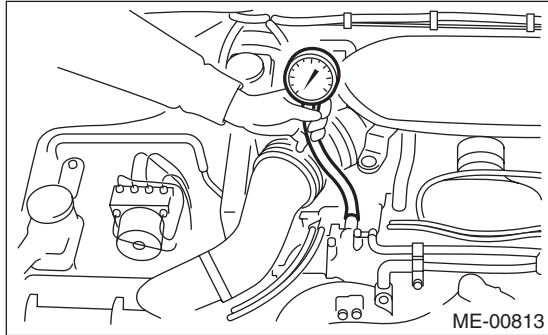


## 5. Intake Manifold Vacuum

### A: INSPECTION

- 1) Warm up the engine.
- 2) Disconnect the brake booster vacuum hose from the intake manifold, and install the vacuum gauge.



- 3) Keep the engine at idle speed and read the vacuum gauge indication.

#### NOTE:

Condition of engine inside can be diagnosed by observing the behavior of the vacuum gauge needle as described in table below.

#### **Intake manifold vacuum (at idling, A/C OFF):**

**–60.0 kPa (–450 mmHg, –17.72 inHg) or more**

- 4) After inspection, install the related parts in the reverse order of removal.

| Diagnosis of engine condition by inspection of intake manifold vacuum                                                                                   |                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Vacuum gauge needle behavior                                                                                                                            | Possible engine condition                                                     |
| 1. Needle is steady but lower than standard value. This tendency becomes more evident as engine temperature rises.                                      | Leakage around intake manifold gasket, disconnection or damage of vacuum hose |
| 2. Needle intermittently drops to position lower than standard value.                                                                                   | Leakage around cylinder                                                       |
| 3. Needle drops suddenly and intermittently from standard value.                                                                                        | Sticky valve                                                                  |
| 4. When engine speed is gradually increased, needle begins to vibrate rapidly at certain speed, and then vibration increases as engine speed increases. | Weak or broken valve springs                                                  |
| 5. Needle vibrates above and below standard value in narrow range.                                                                                      | Defective ignition system                                                     |