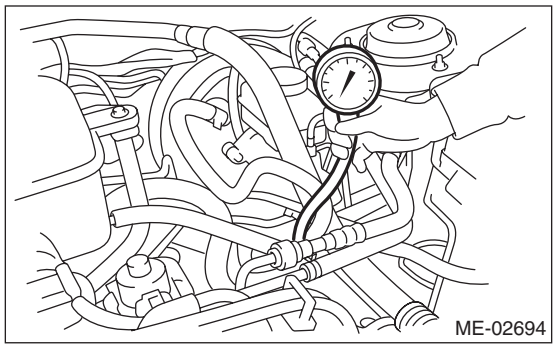
5. Intake Manifold Vacuum

A: INSPECTION

1) Warm up the engine.
2) Disconnect the brake vacuum hose from intake manifold, and then install the vacuum gauge.
3) Keep the engine at idle speed and read the vacuum gauge indication.
By observing the gauge needle movement, internal condition of the engine can be diagnosed as described below.



Vacuum pressure (at idling, A/C "OFF"):
–60.0 kPa (–450 mmHg, –17.72 inHg) or less

Diagnosis of engine condition by measurement of intake manifold vacuum	
Vacuum gauge indication	Possible engine condition
1. Needle is steady but lower than normal position. This tendency becomes more evident as engine temperature rises.	Air leakage around intake manifold gasket, disconnection or damage of vacuum hose
2. Needle intermittently drops to position lower than normal position.	Leakage around cylinder
3. Needle drops suddenly and intermittently from normal position.	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 normal position in narrow range.	Defective ignition system