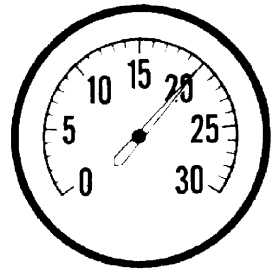


# USING A VACUUM GAUGE

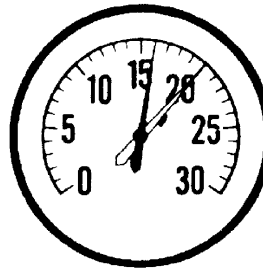
**White needle = steady needle     Dark needle = drifting needle**

The vacuum gauge is one of the most useful and easy-to-use diagnostic tools. It is inexpensive, easy to hook up, and provides valuable information about the condition of your engine.



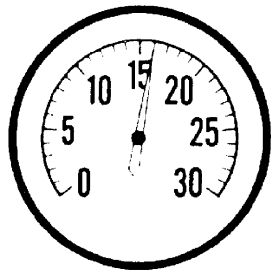
**Indication:** Normal engine in good condition

**Gauge reading:** Steady, from 17–22 in./Hg.



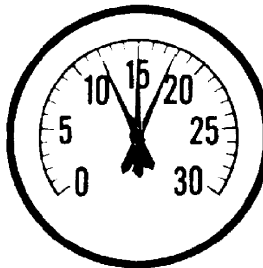
**Indication:** Sticking valve or ignition miss

**Gauge reading:** Needle fluctuates from 15–20 in./Hg. at idle



**Indication:** Late ignition or valve timing, low compression, stuck throttle valve, leaking carburetor or manifold gasket.

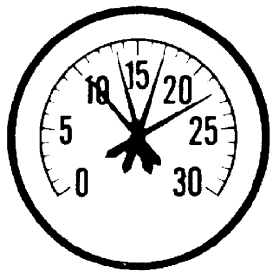
**Gauge reading:** Low (15–20 in./Hg.) but steady



**Indication:** Improper carburetor adjustment, or minor intake leak at carburetor or manifold

**NOTE:** Bad fuel injector O-rings may also cause this reading.

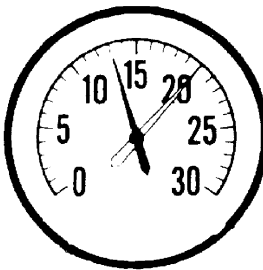
**Gauge reading:** Drifting needle



**Indication:** Weak valve springs, worn valve stem guides, or leaky cylinder head gasket (vibrating excessively at all speeds).

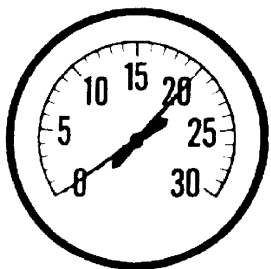
**NOTE:** A plugged catalytic converter may also cause this reading.

**Gauge reading:** Needle fluctuates as engine speed increases



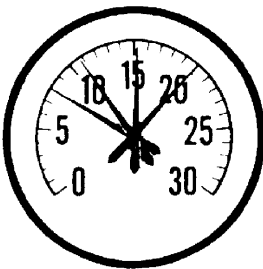
**Indication:** Burnt valve or improper valve clearance. The needle will drop when the defective valve operates.

**Gauge reading:** Steady needle, but drops regularly



**Indication:** Choked muffler or obstruction in system. Speed up the engine. Choked muffler will exhibit a slow drop of vacuum to zero.

**Gauge reading:** Gradual drop in reading at idle



**Indication:** Worn valve guides

**Gauge reading:** Needle vibrates excessively at idle, but steadies as engine speed increases