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## VACUUM CHECK

**By Peter, BAT Auto Technical**

For a large number of years a vacuum gauge was the most important tool in a mechanics toolbox.

With all the high Tech equipment we have available today, I still use a vacuum gauge to help in diagnosis and use it for a quick reference when time is limited. This inexpensive tool can be of great help getting one out of some of the basic problems, when trying to diagnose an engine problem.

The chart below maybe of some interest to both the professional mechanic and the home mechanic.



**Normal Reading**  
14-20" at idle



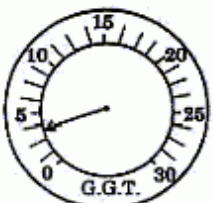
**Normal Reading**  
High lift cam w/large overlay



**Late Ignition Timing**  
10-17" at idle.  
Normal cam.



**Late Valve Timing**  
8-15" at idle



**Intake Leak**  
Low steady reading



**Normal Reading**  
Drops to 2", then rises to 25"  
When accelerator is rapidly  
depressed and released.



**Worn Rings  
Diluted Oil**  
Drops to 0", then rises to 22"  
when accelerator is rapidly  
depressed and released.



**Weak Valve  
Springs**  
Violent oscillation (about 10")  
as RPMs increase. Often  
steady at idle.



**Improper Idle  
Mixture**  
Floats between 8-14"



**Burned or  
Warped Valve**  
Regular, even spaced  
down-scale flick around 4"



**Worn Valve  
Guides**  
Oscillates around 4"



**Sticking Valves**  
Normally steady.  
Intermittently flicks  
downward around 4".



**Leaky Valve**  
Regular drop of about 2".



**Small Spark Gap  
or Defective Points**  
Slight float between 14-15".



**Head Gasket Leak**  
Floats between 5-9".



**Restricted  
Exhaust System**  
Normal when first started  
Drops to as low as 4"  
and stabilizes.

Your feedback is GREATLY appreciated!! Please email your comments to: [Contact Us](#)

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**96 & newer vehicles are OBD2 systems  
and REQUIRE A SCANNER, unless otherwise stated.**

**Warning:** Please check for manufacturer specific codes and  
confirm the trouble code descriptions with an appropriate manual.

**Disclaimer:** We cannot guarantee the accuracy of all information.

Please confirm the information with an appropriate manual

We try and make them as accurate as we can, but sometimes we all make mistakes.

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