

Name \_\_\_\_\_

**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**

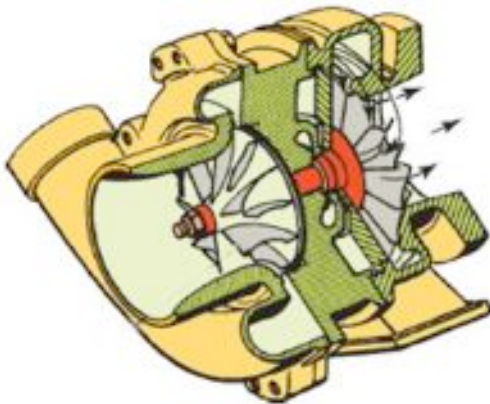
- 1) Many factory installed superchargers are equipped with a \_\_\_\_\_ that allows intake air to flow directly into the intake manifold bypassing the supercharger. 1) \_\_\_\_\_  
A) wastegate  
B) throttle control valve  
C) bypass valve  
D) control valve
- 2) When air is pumped into the cylinder, the combustion chamber receives an increase of air pressure known as \_\_\_\_\_ and is measured in pounds per square inch (psi), atmospheres (ATM), or bar. 2) \_\_\_\_\_  
A) density  
B) boost  
C) horsepower  
D) waste
- 3) Technician A says that a stuck open wastegate can cause the engine to burn oil. Technician B says that a clogged PCV system can cause the engine to burn oil. Who is right? 3) \_\_\_\_\_  
A) Technician A only  
B) Technician B only  
C) Both technicians  
D) Neither technician
- 4) Which type of relief valve used on a turbocharged engine is noisy? 4) \_\_\_\_\_  
A) Bypass valve  
B) Blow Off Valve (BOV)  
C) Dump valve  
D) Both B and C
- 5) Two types of superchargers include \_\_\_\_\_. 5) \_\_\_\_\_  
A) rotary and reciprocating  
B) roots-type and centrifugal  
C) double and single acting  
D) turbine and piston
- 6) An engine designed to use nitrous oxide injection should have which of these features? 6) \_\_\_\_\_  
A) Forged pistons  
B) Forged connecting rods  
C) High strength or forged crankshaft  
D) All of these

7) All of these are advantages of supercharging an engine, EXCEPT \_\_\_\_\_. 7) \_\_\_\_\_  
A) increases the air-fuel charge density  
B) allows the engine to run on lower pressures  
C) pumped air pushes the remaining exhaust from the combustion  
D) lowers the temperature of the cylinder head, pistons, and valves

8) Boost pressure is generally measured in \_\_\_\_\_. 8) \_\_\_\_\_  
A) inch Hg  
B) PSI  
C) inch H<sub>2</sub>O  
D) inch pounds

9) Technician A says that a bypass valve is used to control the boost pressure on most factory installed superchargers. Technician B says that an intercooler is used on many turbocharged and some supercharged engines to reduce the temperature of air entering the engine for increased power. Who is right?  
A) Technician A only  
B) Technician B only  
C) Both technicians  
D) Neither technician

10) Identify this component. 10) \_\_\_\_\_



- A) Centrifugal supercharger
- B) Water pump
- C) Turbocharger
- D) Wastegate