

Name _____

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

- 1) All of these are advantages of supercharging an engine, EXCEPT _____. 1) _____
 - 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

- 2) Boost pressure is generally measured in _____. 2) _____
 - A) inch Hg
 - B) PSI
 - C) inch H₂O
 - D) inch pounds

- 3) Which valve is used on a factory supercharger to limit boost? 3) _____
 - A) A bypass valve
 - B) A wastegate
 - C) A blow-off valve
 - D) An air valve

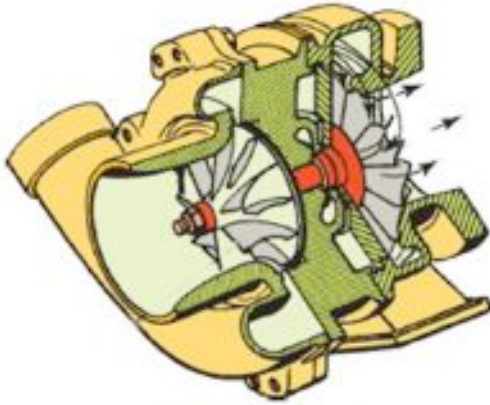
- 4) The term "volumetric efficiency" refers to the ability of an engine to _____. 4) _____
 - A) create emissions
 - B) create heat
 - C) pull in air
 - D) distribute air evenly

- 5) 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. 5) _____
 - A) density
 - B) boost
 - C) horsepower
 - D) waste

- 6) Technician A says that a turbocharger uses the normally wasted heat energy of the exhaust to turn an impeller at high speed. Technician B says that there is only one type of supercharger, the roots-type. Who is right? 6) _____
 - A) Technician A only
 - B) Technician B only
 - C) Both technicians
 - D) Neither technician

- 7) What is the purpose of an intercooler? 7) _____
- A) To reduce the temperature of the air entering engine
 - B) To cool the turbocharger
 - C) To cool the engine oil on a turbocharged engine
 - D) To cool the exhaust before it enters the turbocharger

- 8) Identify this component. 8) _____



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

- 9) Nitrous oxide injection adds _____ allowing the engine to burn more fuel. 9) _____
- A) NO_x
 - B) oxygen
 - C) HC
 - D) CO₂

- 10) How are most turbochargers lubricated? 10) _____
- A) By engine oil under pressure through lines from the engine
 - B) By an internal oil reservoir
 - C) By greased bearings
 - D) No lubrication is needed because the incoming air cools the turbocharger.