

Animation Worksheet: Variable Valve Timing

Name: _____ Date: _____

1. Variable Valve Timing (VVT) is a technology used in internal combustion engines to optimize engine performance, fuel efficiency, and _____.
2. The system dynamically adjusts the timing of the _____ and _____ valves based on engine speed and load.
3. By advancing or retarding valve timing, the engine can improve _____ output and increase fuel efficiency.
4. _____ refers to the brief period during an engine's cycle when both the intake and exhaust valves are open simultaneously.
5. This overlap typically happens around the transition from the exhaust stroke to the intake stroke, near _____ (TDC).
6. _____ is the point where the piston is at its highest position in the cylinder, closest to the cylinder head.
7. _____ is the point where the piston is at its lowest position in the cylinder, farthest from the cylinder head.
8. Retarding the exhaust valve timing allows for more complete _____ of exhaust gases from the cylinder.
9. When the system acts as an _____ system, it allows some exhaust gases to flow back into the combustion chamber.
10. This diluted charge helps lower combustion temperatures, which reduces _____ emissions.