

Animation Worksheet: Variable Intake Manifold

Name: _____ Date: _____

1. A variable intake manifold, also known as a _____ intake manifold, is designed to optimize airflow based on engine RPM.
2. This system is used to improve engine _____ at low RPM and increase _____ at high RPM.
3. The manifold uses intake _____ of different lengths to control the flow of air into the cylinders.
4. A internal _____ or valve is used to switch the airflow between the different paths.
5. At low engine speeds, the internal flap is _____, forcing air through the long intake runners.
6. Long intake runners increase airflow _____, which helps create better cylinder filling at low speeds.
7. The scientific phenomenon that helps push more air into the cylinder through long runners is called _____ tuning.
8. When the engine reaches high speeds, the internal flap _____ to allow air to take a shorter path.
9. Using shorter runners reduces airflow _____, allowing the engine to breathe more freely at high RPM.
10. The intake flap is typically controlled by the _____ (ECM) using inputs like engine load and throttle position.