

Name _____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

1) What prevents a backfire in the intake manifold from causing the fumes in the crankcase from exploding?

2) What keeps the exhaust gases from flowing up from the exhaust manifold and into the secondary air injection (SAI) pump?

3) What exhaust emissions do the PCV valve and SAI system control?

4) How does a PCV valve work?

5) Why do some PCV valves have an electric heater?

Answer Key

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- 1) If the engine backfires, the PCV valve closes instantly to prevent a crankcase explosion.
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- 2) All air-injection systems use one or more one-way check valves to protect the air pump and other components from reverse exhaust flow.
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- 3) Both PCV and SAI systems are used to reduce HC and CO emissions.
Page Ref: 1003; 1006
- 4) The PCV valve works by regulating airflow through the crankcase under all operating conditions.
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- 5) Ford uses an electric heater to prevent ice from forming inside the PCV valve and causing blockage. Water is a by-product of combustion, and resulting moisture can freeze when the outside air temperature is low.
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