

Name \_\_\_\_\_

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

1) Why is an intake air flow control valve used on the 6.7-liter Power Stroke diesel engine?

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2) After flowing through the filter, where does the engine oil go?

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3) What are the components of the 6.7-liter Power Stroke diesel engine cooling system?

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4) What is the purpose and function of the diesel fuel conditioner module (DFCM)?

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5) What Power Stroke diesel engines were made by International?

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## Answer Key

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1) The intake air flow control valve is attached to the intake manifold in the same way a throttle plate would be attached to a gasoline engine. The PCM controls the air control valve during EGR operation. The position of the valve determines the mix of fresh air and exhaust gasses in the intake manifold. The PCM uses the feedback from the O2 sensor to help determine the valve position. The default position of the valve is the open position.

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2) After flowing through the filter, the oil in the main gallery feeds both the right side and left side galleries.

The left gallery feeds the following:

- Vacuum pump lubrication
- HPFP gears
- Left bank piston cooling jets
- Camshaft journals
- Left head lifters and rocker arms

The right gallery feeds the following:

- Turbocharger lubrication
- Right-head lifters and rocker arms
- Right-bank piston and cooling jets
- Main and rod bearings

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3) The primary cooling system holds 29.4 quarts (28 L) and includes:

- The rear mounted radiator
- The engine-driven water pump on the left front of the engine
- Engine cooling
- Engine oil cooling
- Turbocharger cooling
- Charge air cooler (CAC) cooling
- The heater core to provide cab heat
- Two engine-mounted thermostats
- The fuel cooler
- The EGR cooler
- The Degas bottle

The secondary cooling system holds 11.7 quarts (11L) and includes the:

- Forward mounted radiator. This allows the secondary cooling system to operate at a lower temperature than the primary cooling system.
- Radiator mounted thermostats (two).
- Engine-driven water pump on the right front of the engine.
- Transmission fluid cooler.
- Degas bottle.

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4) The DFCM is located on the frame rail and includes the following components:

- The lift (transfer) fuel pump
- The assembly where the fuel lines are attached, and the electrical connector for the fuel pump
- The primary fuel filter
- The water-in-fuel (WIF) sensor

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5) The 7.3-, 6.0-, and 6.4-liter Power Stroke diesel engines were manufactured by International.

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