

Name _____

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

1) What property of oil does the SAE ratings reflect?

2) Why is the oil filter bypassed when the engine oil is cold and thick?

3) What additives are added to oil to help protect the engine?

4) What are the steps in performing an oil change?

5) What additives are used in the base oil to improve the oil?

Answer Key

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1) The SAE rating reflects the viscosity of the oil.

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2) The bypass valve is used to allow oil to bypass the oil filter if the filter becomes clogged. The oil will also bypass the filter through the bypass valve when the oil is cold and thick.

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3) The additives used to protect the engine include:

- Rust inhibitor. Inhibits the action of water on ferrous metal, such as steel
- Corrosion inhibitor. Protects nonferrous metals, such as copper
- Anti-wear additive. Forms a protective layer on metal surfaces to reduce friction and prevent wear when no lubricant film is present
- Extreme pressure additive. Functions only when heavy loads and temperatures are occurring

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4) To change the engine oil, perform the following steps:

Step 1 Check the oil level (notify the customer if low).

Step 2 Hoist the vehicle and drain the oil; remove the oil filter.

Step 3 Lubricate the oil filter rubber gasket and install the oil filter; reinstall the oil drain plug with a new gasket.

Step 4 Lower the vehicle and add the amount of specified oil.

Step 5 Start the engine and check for leaks.

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5) The additives used to improve the base oil include: viscosity index (VI) improver, pour point depressant, and antifoam agents.

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