

Automotive Engines 10th

Chapter 22 In-Vehicle Service

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

1. How can a water pump fail requiring replacement?

2. How can a thermostat fail?

3. Why is it important that the READY light be out on the dash before working under the hood of a hybrid electric vehicle?

4. What will happen to the engine if the intake manifold gasket fails?

5. Why must timing belts be replaced?

Answer Key

Testname: ENGINES 10 SHORT22

1. A water pump can fail in the following ways:

- Leaking coolant from the weep hole
- Noisy bearing
- Loose bearing
- Not being able to circulate the proper amount of coolant due to worn or slipping impeller blades

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2. A thermostat can fail in the following ways:

- Stuck open
- Stuck closed
- Stuck partially open
- Skewed

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3. If the READY light is on or the ignition is on and the engine is off, it could be in "idle stop" mode. This means that the engine could start at any time without warning.

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4. If the intake manifold gasket fails, the following may occur:

- Leaking coolant or oil
- Coolant level goes down, but no external leaks are found
- A diagnostic trouble code (DTC) for a lean exhaust condition

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5. A timing belt should be replaced if any of the following conditions are present:

- Meets or exceeds the vehicle manufacturer's recommended timing belt replacement interval.
- The timing belt has been contaminated with engine oil or coolant.
- The timing belt has failed.

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