

Name \_\_\_\_\_

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

1) Describe how to perform a compression test and how to determine what is wrong with an engine based on compression test result.

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2) Describe the cylinder leakage test.

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3) Describe how a vacuum gauge would indicate if the valves were sticking in their guides.

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4) Describe the test procedure for determining if the exhaust system is restricted (clogged) using a vacuum gauge.

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5) Describe the visual checks that should be performed on an engine if a mechanical malfunction is suspected.

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6) List three items that could cause engine noises.

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7) List three items that could cause excessive oil consumption.

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## Answer Key

Testname: ENGINES9\_SHORT 22

- 1) A compression test is performed by connecting a pressure gauge into the spark plug hole and cranking the engine. A low first puff measurement indicates worn or broken piston rings. All cylinders should be within 20% of each other.  
Page Ref: 306-308
- 2) A cylinder leakage test uses compressed air in the cylinders and faults are detected by listening for where the air is escaping from the engine.  
Page Ref: 309
- 3) A vacuum gauge can be used to detect engine faults and a sticking valve would be indicated by a vacuum gauge needle movement that drops 1 or 2 in. Hg from the normal reading.  
Page Ref: 311
- 4) A clogged (restricted) exhaust would be indicated on a vacuum gauge as a drop in engine vacuum if the engine speed is held at 2,000 to 2,500 RPM.  
Page Ref: 313
- 5) The visual inspection items that should be performed as a part of a diagnosis include oil level and condition, coolant level and condition, checking for oil leaks, and listening carefully for abnormal engine noise.  
Page Ref: 302-304
- 6) Excessive engine noise can be caused by a defective accessory drive belt, cracked flexplate, or loose torque converter.  
Page Ref: 304-305
- 7) Excessive oil consumption can be caused by oil leaks, worn valve stem seals, and a clogged PCV system.  
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