Automotive Technology 6th Edition
Chapter 29 - Engine Cleaning and Crack Detection
Chapter 29

Name_____

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

1) What is the purpose of stop drilling?

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2) What precautions need to be followed when cleaning aluminum parts using mechanical methods?

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3) How can the engine block and cylinder heads be repaired if cracked?

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4) What are the five methods that could be used to clean engines or engine parts?

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5) Explain magnetic crack inspection, dye-penetrant testing, and fluorescent-penetrant testing methods and where each can be used.

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1) A hole can be drilled at each end of the crack to keep it from extending further, a step sometimes called stop drilling. Cracks that do not cross oil passages, bolt holes, or seal surfaces can sometimes be left alone if stopped.
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2) When cleaning aluminum cylinder heads, blocks, or other engine components, make sure that the chemicals used are "aluminum—safe." Many chemicals that are not aluminum—safe may turn the aluminum metal black.
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3) Engine blocks and cylinder heads can be repaired if cracked by welding or plugging.
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4) Five methods that could be used to clean an engine or engine component part include chemical, mechanical, pyrolitic ovens, hot soak tank, and sprayers.
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5) Magnetic crack inspection uses a strong electromagnet to force iron powder around cracks. Dye penetrant is used on aluminum parts to check for cracks by using chemicals that penetrate into the surface flow. Fluorescent penetrant can be used on all material that requires a black light to observe cracks.
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