Light Vehicle Diesel Engines, 1st Edition
Chapter 23

Name_____

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

1) What is the purpose and function of the fourth piston ring groove?

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2) How are Duramax engine generations identified?

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3) Why does the PCM cycle the EGR valve at key on?

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4) How does the fuel get to the high-pressure fuel pump from the fuel tank?

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5) Why are the cylinder walls induction hardened?

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1) There is a ring groove that does not have a ring placed between the top and second compression ring. This groove helps reduce blow-by because the expanding gases during combustion can expand into this void space. It also acts as a heat dam by helping to prevent heat from the combustion chamber from traveling to the lower part of the piston. This groove is often called the "empty piston ring groove."
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2) Duramax engine generations are identified by the regular production option (RPO) code.
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3) The PCM also cycles the EGR five times at key-on to help remove any built up soot and to prevent it from building up.
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4) The high-pressure fuel pump (HPFP) used on a Duramax diesel engine includes a gear pump used to draw fuel from the fuel tank.
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5) The cylinder area is induction hardened and then polished to increase wear resistance.
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