

Name \_\_\_\_\_

**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.**

- 1) Piston ring gap should only be measured after \_\_\_\_\_. 1) \_\_\_\_\_  
A) All cylinder work has been performed  
B) Installing the piston in the cylinder  
C) Installing the rings on the piston  
D) Both A and C
- 2) Side clearance is a measure taken between the \_\_\_\_\_ and the \_\_\_\_\_. 2) \_\_\_\_\_  
A) Piston (side skirt); cylinder wall  
B) Piston pin; piston pin retainer (clip)  
C) Piston ring; piston ring groove  
D) Compression ring; oil control ring
- 3) Technician A says that replacement pistons can be of different weights from the original pistons. Technician B says that some engines use an offset piston pin to help reduce piston slap when the engine is cold. Which technician is correct? 3) \_\_\_\_\_  
A) Technician A  
B) Technician B  
C) Both technicians  
D) Neither technician
- 4) Which type of connecting rod needs to be heated to install the piston pin? 4) \_\_\_\_\_  
A) Forged  
B) Interference fit  
C) Floating  
D) PM rods
- 5) The piston pin may also be called a \_\_\_\_\_ pin. 5) \_\_\_\_\_  
A) Swivel  
B) Wrist  
C) Barrel  
D) Flat
- 6) Technician A says that some piston rings may be coated with ceramic. Technician B says that ring end gap is non-adjustable; therefore there is no need to check it when reassembling the engine. Which technician is correct? 6) \_\_\_\_\_  
A) Technician A  
B) Technician B  
C) Both technicians  
D) Neither technician

- 7) On newer engines the designers try to place the top piston ring as close to the top of the piston as possible. The reason for this is \_\_\_\_\_. 7) \_\_\_\_\_
- A) To reduce HC emissions
  - B) To raise the compression ratio
  - C) To protect the second piston ring
  - D) To reduce the cost of the piston
- 8) All of the following are methods of piston to rod attachment EXCEPT \_\_\_\_\_. 8) \_\_\_\_\_
- A) Free floating
  - B) Full-floating
  - C) Woodruff key
  - D) Press fit to rod
- 9) When installing piston rings the \_\_\_\_\_ rings are installed first. 9) \_\_\_\_\_
- A) Spiral
  - B) Compression
  - C) Oil control
  - D) Scraper
- 10) Technician A says that if the ring end gap is excessive, blowby gases can travel past the rings and into the crankcase. Technician B says that piston rings usually include three compression rings at the top of the piston and an oil control ring below the compression rings. Which technician is correct? 10) \_\_\_\_\_
- A) Technician A
  - B) Technician B
  - C) Both technicians
  - D) Neither technician

## Answer Key

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1) A

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2) C

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3) B

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4) B

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5) B

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6) A

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7) A

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8) C

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9) A

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10) A

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