

Name: _____

Date: _____

1. What is the correct procedure to check the backlash in a differential?
 - A. Use a torque wrench to measure the resistance on the pinion.
 - B. Apply a load to the ring gear and use a dial indicator to measure backlash.
 - C. Rotate the pinion gear and listen for any noise.
 - D. Inspect visually for any wear or damage on the gear teeth.

2. When observing a tooth contact pattern to check for proper drive pinion depth, what should be applied to the gear teeth?
 - A. Lubricant
 - B. Iron oxide compound
 - C. Cleaning solvent
 - D. Paint

3. If a differential case is leaking, what might be a necessary step before refilling with lubricant?
 - A. Tightening the differential cover bolts
 - B. Checking for proper backlash
 - C. Disassembling for further analysis and service
 - D. Replacing the axle shaft

4. What is indicated by excessive backlash between the drive pinion and the ring gear?
 - A. Proper lubrication
 - B. Correct pinion depth
 - C. Excessive wear
 - D. Adequate bearing preload

5. What is the purpose of a collapsible spacer or shims in the context of a pinion gear?
 - A. To adjust the gear ratio
 - B. To provide the necessary preload to the pinion shaft bearings
 - C. To secure the pinion gear to the differential case
 - D. To align the axle shafts

6. A growling sound is heard from the rear of a rear-wheel-drive vehicle during cornering only. What might be the cause?
 - A. Defective rear axle bearings
 - B. Defective drive pinion bearings
 - C. Both A and B
 - D. Neither A nor B

7. If the backlash is within specifications, what can be inferred about the side bearing preload?
 - A. It is also within specifications.
 - B. It needs to be adjusted.
 - C. It cannot be determined without further testing.
 - D. It is unrelated to backlash.

8. How should the ring gear be positioned if the backlash exceeds specifications?

- A. Closer to the drive pinion gear
- B. Farther from the drive pinion gear
- C. Toward the heel
- D. Toward the toe

9. What lubricants are typically used in a limited-slip differential?

- A. SAE 80W-140
- B. SAE 80W-90
- C. Both A and B, with or without special additives
- D. Neither A nor B

10. What does a ring gear runout measurement of less than 0.002 inch indicate?

- A. The ring gear is damaged.
- B. The backlash is too high.
- C. The pinion gear depth is incorrect.
- D. The ring gear is within specifications.

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Multiple Choice Quiz A

Answer Key

1. B

2. B

3. C

4. C

5. B

6. C

7. D

8. A

9. C

10. D