

CDX Text book Chapter 24 (Wheel Rims and Hubs)

Pre-test Questions. Directions: If you are completing the assignment on a computer, simply left click and drag across the answer and use the high lighter to show your correct answer. Circle your correct answer if working on a printed hard copy.

1. When installing a new hub, a new assembly is installed on to the spindle and the bearing retaining nut is typically torqued to _____.

Select one:

- a. 150 to 200 ft-lb (203 to 271Nm)
- b. 250 to 300 ft-lb (339 to 407 Nm)
- c. 350 to 400 ft-lb (475 to 542 Nm)
- d. 450 to 500 ft-lb (610 to 678 Nm)

2. Technician A says wheel-end seal leaks are one of the biggest maintenance concerns among heavy-duty commercial vehicle operators. Technician B says the most common failure mode for most bearings is installing the wrong type of seal. Who is correct?

Select one:

- a. Technician A
- b. Technician B
- c. Both Technician A and Technician B
- d. Neither Technician A nor Technician B

3. Technician A says pilot pads are lugs attached to the bearing hub to locate the wheel assembly correctly during assembly. Technician B says that unlike stud-piloted hubs, hub-piloted wheel nuts and studs only clamp the disc to the hub and do not support vehicle weight. Who is correct?

Select one:

- a. Technician A
- b. Technician B
- c. Both Technician A and Technician B
- d. Neither Technician A nor Technician B

4. Technician A says that when adjusting wheel bearings, technicians are actually setting a bearing load factor called preload. Technician B says bearing preload is a clearance. Who is correct?

Select one:

- a. Technician A
- b. Technician B
- c. Both Technician A and Technician B
- d. Neither Technician A nor Technician B

5. Which of the following is correct concerning wheel studs and wheel nuts?

Select one:

- a. Wheel studs and wheel nuts are highly stressed by loads from the weight of the vehicle and the forces generated by its motion.
- b. Wheel studs and nuts are made from heat-treated, high-grade alloy steel.
- c. The threads between the studs and the nuts are close fitting and accurately sized.
- d. All of these are correct.

6. What is the ideal runout for a rim installed on a spoke wheel?

Select one:

- a. 1/16 inch (1.59 mm)
- b. 1/8 inch (3.175 mm)
- c. 1/4 inch (6.355 mm)
- d. 1/2 inch (12.7 mm).

7. Which of the following is correct concerning standard hubs?

Select one:

- a. Two bearing cups are press-fitted into the housing with two bearing cones.
- b. A seal is installed on the inboard side of the hub, which is used to retain oil in the hub.
- c. Bearings are installed by the technician and manually adjusted using an industry standard procedure defined by TMC RP 618.

d. All of these are correct.

8. Technician A says a large variety of wheel end retaining nuts are used to precisely adjust the wheel bearing end play and lock the adjustment in place. Technician B says end play when using a ProTorq Nut is 0.001"-0.005" (0.025-0.127 mm). Who is correct?

Select one:

- a. Technician A
- b. Technician B
- c. Both Technician A and Technician B
- d. Neither Technician A nor Technician B

9. Technician A says wheel seals are an integral part of hubs used to keep oil or grease from leaking out between the wheel spindle and the rotating hub. Technician B says wheel seals are static type seals. Who is correct?

Select one:

- a. Technician A
- b. Technician B
- c. Both Technician A and Technician B
- d. Neither Technician A nor Technician B

10. Technician A says wheel rims, tires, and hubs are names given to major components making up part of the axle end or, what the trucking industry calls the wheel end. Technician B says the role of the hub is to transfer the vehicle weight from the wheels to the axle ends and enable the wheel to rotate on the axle end. Who is correct?

Select one:

- a. Technician A
- b. Technician B
- c. Both Technician A and Technician B
- d. Neither Technician A nor Technician B

11. Technician A says the wheel offset is the distance from its hub mounting surface to the centerline of the wheel. Technician B says offset does not affect the load on the stub axle. Who is correct?

Select one:

- a. Technician A
- b. Technician B
- c. Both Technician A and Technician B
- d. Neither Technician A nor Technician B

12. Technician A says most wheels are made from pure magnesium. Technician B says the terms "wheel" and "rim" are often used synonymously, but technically, the wheel rim is the outer circular lip of the metal on which the inside edge of the tire is mounted. Who is correct?

Select one:

- a. Technician A
- b. Technician B
- c. Both Technician A and Technician B
- d. Neither Technician A nor Technician B.

13. Technician A says standard hubs were used for decades, but beginning in 1997, a new method was devised to establish correct wheel bearing end play. Technician B says that in preset hubs, the bearing cup and bearing bores are machined seat-to-seat to precise tolerances in a climate-controlled factory. Who is correct?

Select one:

- a. Technician A
- b. Technician B
- c. Both Technician A and Technician B
- d. Neither Technician A nor Technician B

14. Technician A says cast-iron spoke wheels have the highest load carrying capacity. Technician B says the heaviest loads will be supported with wheels using eight spokes. Who is correct?

Select one:

- a. Technician A
- b. Technician B
- c. Both Technician A and Technician B
- d. Neither Technician A nor Technician B

15. Technician A says gear oil and grease are used to lubricate wheel bearings. Technician B says good quality grease resists corrosion and water entry into the hub. Who is correct?

Select one:

- a. Technician A
- b. Technician B
- c. Both Technician A and Technician B
- d. Neither Technician A nor Technician B

16. Technician A says precise adjustment of wheel bearing preload is necessary to maximize bearing life and prevent wheel seal leaks. Technician B says preset hubs use a precision spacer and close-tolerance bearings, eliminating the need to manually adjust bearings. Who is correct?

Select one:

- a. Technician A
- b. Technician B
- c. Both Technician A and Technician B
- d. Neither Technician A nor Technician B

17. Technician A says discs wheels are sometimes called drop-center rims. Technician B says discs wheels are a two-piece design using a special fastening system. Who is correct?

Select one:

- a. Technician A
- b. Technician B
- c. Both Technician A and Technician B
- d. Neither Technician A nor Technician B

18. Which of the following is correct concerning wheel hub lubricants?

Select one:

- a. Lubricants used for wheel bearings generally contain the extreme pressure (EP) additive lithium or lithium soap.
- b. Lithium is a metallic element that provides additional lubrication and corrosion protection.
- c. Both A and B
- d. Neither A nor B

19. Technician A says left-hand threaded nuts are used on the right side of the vehicle. Technician B says right-hand threads are used on the left side. Who is correct?

Select one:

- a. Technician A
- b. Technician B
- c. Both Technician A and Technician B
- d. Neither Technician A nor Technician B

20. Technician A says when rims are installed on spoke wheels, the lateral run out needs to be checked and adjusted. Technician B says rim clamps should be tightened in a circular pattern. Who is correct?

Select one:

- a. Technician A
- b. Technician B
- c. Both Technician A and Technician B
- d. Neither Technician A nor Technician B