

# Brake Machining CHPT 61

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

1) Technician A says that rotor thickness variation is a major cause of a pulsating brake pedal. Technician B says that at least 0.015 in. (0.4 mm) should be left on a rotor after machining to allow for wear. Which technician is correct? 1) \_\_\_\_\_

- A) Technician A only
- B) Technician B only
- C) Both Technicians A and B
- D) Neither Technician A nor B

2) Technician A says that hard spots in a brake drum should be removed using a carbide-tip machining tool. Technician B says that the drum should be replaced if hard spots are discovered. Which technician is correct? 2) \_\_\_\_\_

- A) Technician A only
- B) Technician B only
- C) Both Technicians A and B
- D) Neither Technician A nor B

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

3) Cracks, unless they extend over the entire surface of the drum or rotor, can be ignored. 3) \_\_\_\_\_

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

4) Two technicians are discussing disc brake rotor service. Technician A says that the inner races (bearing cups) should be removed from the rotor before it is mounted on the lathe. Technician B says that a non-directional finish on the rotor surfaces can be obtained by using sandpaper. Which technician is correct? 4) \_\_\_\_\_

- A) Technician A only
- B) Technician B only
- C) Both Technicians A and B
- D) Neither Technician A nor B

5) A vehicle with carbon-ceramic rotors is being inspected. Servicing these rotors includes \_\_\_\_\_ the rotors. 5) \_\_\_\_\_

- A) Indenting
- B) Machining
- C) Flushing
- D) Weighing

6) The minimum cut when machining a drum should be \_\_\_\_\_. 6) \_\_\_\_\_

- A) 0.600 inch
- B) 0.002 inch
- C) 0.0005 inch
- D) 0.020 inch

7) Technician A says that aluminum brake drums use cast iron friction surfaces. Technician B says that up to 0.030 in. (0.8 mm) should be left after machining a drum to allow for wear. Which technician is correct? 7) \_\_\_\_\_

- A) Technician A only
- B) Technician B only
- C) Both Technicians A and B
- D) Neither Technician A nor B

8) Typical maximum rotor runout specifications are \_\_\_\_\_. 8) \_\_\_\_\_

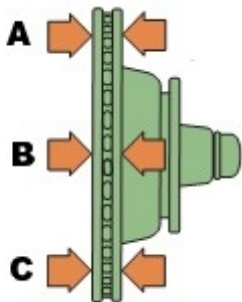
- A) 0.030 to 0.050 in. (0.8 to 1.3 mm)
- B) 0.0003 to 0.0005 in. (0.008 to 0.013 mm)
- C) 0.300 to 0.500 in. (8.0 to 13 mm)
- D) 0.003 to 0.005 in. (0.08 to 0.13 mm)

9) The chamfer on the inside edge of a brake drum usually indicates \_\_\_\_\_. 9) \_\_\_\_\_

- A) Bi-metallic drums (1/2 cast iron and 1/2 steel)
- B) Aluminum drum with cast iron inset
- C) Maximum allowable inside diameter
- D) Machine to diameter

10) The rotor in this illustration was measured in three places.

10) \_\_\_\_\_



The measurements are:

Point A = .987 "

Point B = .986 "

Point C = .987 "

The minimum thickness specification is .968 ". The rotor surface is smooth and not scored. What action should the technician take?

- A) Drive the vehicle to see if the variation evens out.
- B) Machine the rotor to correct the thickness variation.
- C) Replace the rotor.
- D) None, the rotor is OK.

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

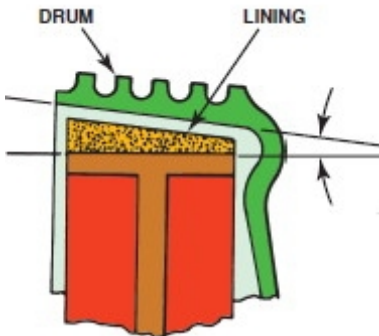
11) Rotors are more likely to become scored than drums.

11) \_\_\_\_\_

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

12) A brake drum shows uneven wear, as shown. This type of is called \_\_\_\_\_.

12) \_\_\_\_\_



- A) Eccentric
- B) Heat checked
- C) Bellmouth
- D) Out of round

13) Two technicians are discussing hard spots in brake drums. Technician A says the drum should be replaced. Technician B says the hard spots are caused by using riveted rather than bonded brake shoes. Which technician is correct?

13) \_\_\_\_\_

- A) Technician A only
- B) Technician B only
- C) Both Technicians A and B
- D) Neither Technician A nor B

14) A pedal pulsation condition can be isolated to the front or rear brakes by \_\_\_\_\_.

14) \_\_\_\_\_

- A) Four hard stops
- B) Lifting the vehicle slightly
- C) Using the parking brake to stop
- D) Rotating the tires

- 15) Technician A says that brake drums on the same axle should be close to the same inside diameter for best brake balance. Technician B says that a brake drum may be cracked if it rings like a bell when tapped with a light steel hammer. Which technician is correct? 15) \_\_\_\_\_  
 A) Technician A only B) Technician B only  
 C) Both Technicians A and B D) Neither Technician A nor B
- 16) Machining of a rotor is performed to \_\_\_\_\_. 16) \_\_\_\_\_  
 A) Remove hard spots B) Remove deep scoring  
 C) Either A or B D) Neither A nor B
- 17) What is the correct tool to use when measuring brake rotor parallelism? 17) \_\_\_\_\_  
 A) Straight edge and feeler gauge B) A rotor gauge  
 C) Micrometer D) Dial indicator
- 18) When measuring a rotor for thickness variation what is the maximum variation allowed? 18) \_\_\_\_\_  
 A) 0.002 inch B) 0.0005 inch C) 0.050 inch D) 0.005 inch
- 19) Using a \_\_\_\_\_ when turning a drum prevents tool chatter. 19) \_\_\_\_\_  
 A) Silencer band B) High speed C) Reverse cut D) Soft tool bit
- 20) Typical maximum rotor thickness variation (parallelism) specifications are \_\_\_\_\_. 20) \_\_\_\_\_  
 A) 0.003 to 0.005 in. (0.08 to 0.13 mm) B) 0.300 to 0.500 in. (8.0 to 13 mm)  
 C) 0.030 to 0.050 in. (0.8 to 1.3 mm) D) 0.0003 to 0.0005 in. (0.008 to 0.013 mm)
- 21) Technician A says that rotors cannot be machined while still installed on the vehicle. Technician B says that the drums should be removed from the vehicle to be machined. Which technician is correct? 21) \_\_\_\_\_  
 A) Technician A only B) Technician B only  
 C) Both Technicians A and B D) Neither Technician A nor B
- 22) Technician A says heat checking can be caused by numerous panic stops in rapid succession. Technician B says it can be caused by "riding" the brake pedal. Which technician is correct? 22) \_\_\_\_\_  
 A) Technician A only B) Technician B only  
 C) Both Technicians A and B D) Neither Technician A nor B
- 23) Hard spots in a brake drum are caused by \_\_\_\_\_. 23) \_\_\_\_\_  
 A) Excessive heat and pressure  
 B) Machining a drum at too high a speed  
 C) Machining a drum without using a rubber belt to damper out the vibrations  
 D) Improper mounting of the drum on the lathe
- 24) The lower the Ra of a rotor, the \_\_\_\_\_ the surface. 24) \_\_\_\_\_  
 A) Lower B) Rougher C) Higher D) Smoother
- 25) Which of these is NOT a form of drum distortion? 25) \_\_\_\_\_  
 A) Eccentric B) Bellmouth  
 C) Out-of-round D) Lack of parallelism