

Homework - Arbor & Shop Presses

Student Name _____ Date _____

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

1) Two basic principles always taken into consideration by persons familiar with the proper use of shop presses are: 1) _____

- A) Always use the largest press available for every job as the part being pressed might stick half way through with a small press. Personal safety
- B) Personal safety and the care of the workpiece to prevent it from being damaged
- C) Care not to overload the press by trying to press an oversized part and personal safety
- D) Care should be taken not to press too fast, as this creates friction which produces heat

2) You can use the arbor press or shop press to: 2) _____

- A) Install and remove mandrels, bushings, bearings and shafts
- B) Make keyseats on shafts
- C) Drill holes in metal parts
- D) All of the above

3) An arbor press designed with a rack and pinion is what type? 3) _____

- A) Mechanical
- B) Gear driven
- C) Hydraulic
- D) Hydro-mechanical

4) To avoid failures from seizing when pressing a shaft or mandrel, you should: 4) _____

- A) Apply a high pressure lubricant to the bore and shaft
- B) Use a good grade of lubricating oil on both parts and don't stop after you start pressing
- C) Use sulfurized cutting oil on both parts
- D) Press them together dry

5) A loose arbor press ram may cause: 5) _____

- A) keyway broach to twist and cause an excessively wide keyway and a mandrel to "hog" in half way through the bore
- B) A loss of pressure making it difficult to force a broach through the work
- C) A keyway broach to "hog" in or a bushing to twist out of alignment
- D) None of the above

6) The amount of pressure you should apply to a bushing in an arbor press would be: 6) _____

- A) Just the amount needed to push it through the bore and when slight additional pressure is felt, stop pressing
- B) About 5 tons
- C) Between 10 and 30 tons
- D) Just the amount needed to push it through the bore and then considerable more force applied to make sure it is seated

7) A ball bearing that is on a shaft or in a housing should be removed: 7) _____

- A) By applying pressure only to the race that is supported securely
- B) By pressing on and supporting any part of the bearing that is available
- C) Only by pressing on the inner race when the outer race is in a housing or by pushing on the outer race when the inner race is on a shaft
- D) B and C above

8) A mandrel will slip into a bore on one of its ends. Why then does it press tightly in a bore?

- A) The high pressure lubricant applied to its surface causes the bore to tighten
- B) It has been made rough by a knurling process in the center thus enlarging it slightly
- C) It is made in a "barrel" shape so that it is slightly larger in the center than at the ends
- D) It is made very slightly tapered so that it is somewhat larger at one end

8) _____

9) What two important things should be done before pressing in a bushing?

- A) Chamfer and lubricate the bore
- B) Oil the bushing and start it in the bore with a hammer before you start pressing
- C) Clean all the oil off the bushing and wash your hands so you won't get contaminated
- D) None of the above

9) _____

10) When using keyway broaches in an arbor press, you should avoid:

- A) Using an ill fitting guide bushing and having less than two broach teeth contacting the workpiece
- B) Lack of lubrication of the broach and using the broach on hard materials
- C) Loose press rams and a lack of clearance for the broach through the press plate
- D) All of the above

10) _____