

Portable Drill Notes

Requirements:

Proper eye protection must be worn—operate only with instructor's permission and after proper instructions have been received.

1. Select the correct drill bit just like you would for the drill press.
2. Secure a piece of scrap wood and the good wood to the table so that it will not move around while drilling.
3. Make sure that the switch is OFF, the chuck key is removed, and that your work area is clean and dry BEFORE you plug the drill in and turn it ON!
4. Drill with straight, even, and steady pressure.
5. When drilling deep holes, withdraw the drill bit several times to clear the area. This helps to provide a SAFE and even drilling process.
6. As with any machine DO NOT PANIC if something "goes wrong." Turn it OFF, unplug it, and tell a teacher.

Portable Drill Written Test

Use the correct heading and write the answer on your own paper. Use the BEST answer to complete the following:

1. You (**Should** **Should not**) secure a piece of scrap wood to your worktable.
 - 2/3. Make sure that the drill is switched (**on** **off**) and that the work area is clean and (**dry** **wet**).
 4. You (**Should** **Should not**) drill with straight, steady, even pressure.
 5. To provide for a SAFE and even drilling process, you need to clear the area as you drill. To do this you need to _____.
 6. As with any machine, if it is NOT working properly you should:
-

List five SAFETY procedures you should do before you operate this machine:

7. _____
8. _____
9. _____
10. _____
11. _____

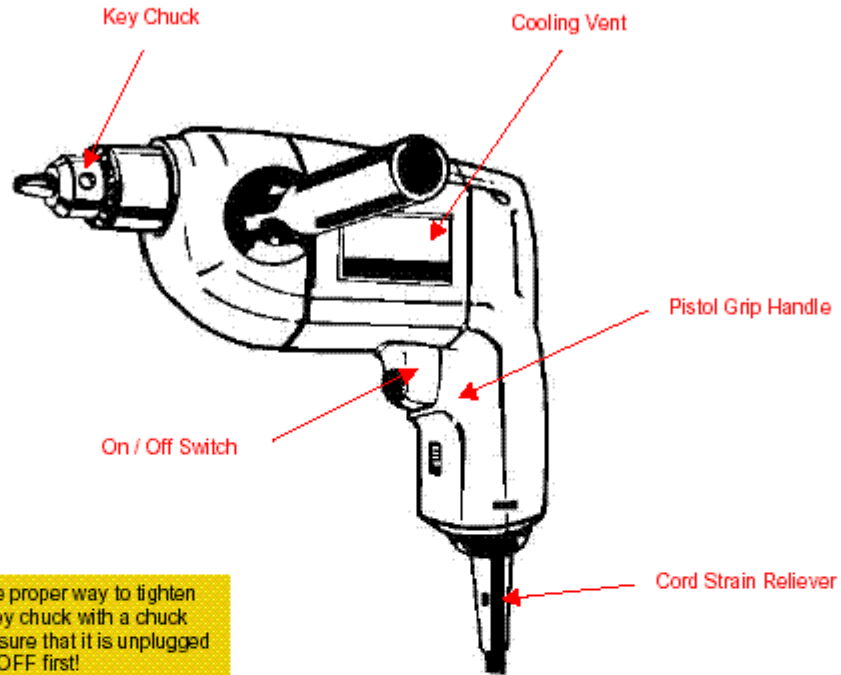
Portable Drill Written Test Key

1. Should
2. Off
3. Dry
4. Should
5. Withdraw the bit to remove the sawdust
6. Turn it off; unplug; and tell your teacher

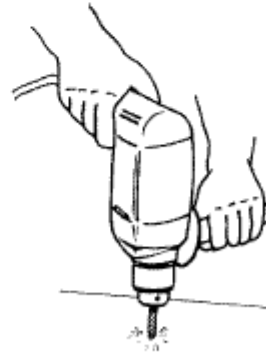
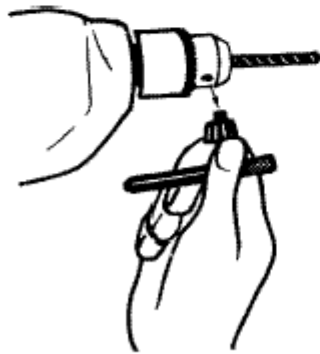
List five safety procedures you should do before you operate this or any machine:

1. Wear proper eye protection.
2. Obtain instructor's permission to use machine.
3. Make sure the table is stable.
4. Make sure the area is clean and dry before you plug the drill in.
5. Withdraw the drill bit several times to clear the area when drilling deep holes.
6. If something goes wrong, turn off the machine and tell the instructor.

Portable Drill Parts



NOTE: The proper way to tighten down the key chuck with a chuck key. Make sure that it is unplugged and turned OFF first!



NOTE: The correct and SAFE way to drill.

III. Written Test

Portable Electric Drill Safety and Operation Test

Name _____ Date _____ Class _____

Multiple Choice - Place the letter of the most correct answer on the answer sheet.

1. The purpose of turning the drill on before attempting to drill a hole is to _____.
 - a. see if the drill operates.
 - b. see if the drill bit is running true.
 - c. make sure the chuck key has been removed.
 - d. none of these.

2. The purpose of moving the drill and bit up and down often when drilling deep hole is to _____.
 - a. ream the hole slightly larger.
 - b. give the drill operator better drilling leverage.
 - c. help keep the hole centered.
 - d. reduce overheating in the drill bit.

3. If a large capacity portable drill bit hangs during the drilling operation what will likely happen?
 - a. The bit will break.
 - b. The drill will twist in the operator's hands causing a sprained wrist or bruised fingers.
 - c. The drill will likely stall out and overheat.
 - d. The hole will become badly distorted.

4. What kind of pressure should be applied to a drill during the drilling operation?
 - a. Light, even.
 - b. Medium, even.
 - c. Moderate, even.
 - d. Heavy, even.

5. What type of drill speed is needed for wood drilling operations?
 - a. Low
 - b. Low-medium
 - c. Medium
 - d. High

6. What type of drill speed is needed for most metal drilling operations?
- Low
 - Medium-low
 - Medium-high
 - High
7. The purpose of a pilot hole when drilling is to _____.
- make the final hole drilling operation easier.
 - guide the final drilling operation and achieve a more accurately placed hole.
 - reduce the feed pressure needed to drill the hole.
 - allow the final hole to be drilled at a faster rpm and achieve a smoother finish.
8. To prevent seizing when drilling the operator should _____.
- reduce the rpm's of the portable electric drill
 - lubricate the drill bit.
 - use a high speed drill bit.
 - reduce the feed pressure when the bit is about to come through the material being drilled.

IV. Performance Test for the Portable Electric Drill

Name _____ Date _____ Class _____

The student performs the following while operating the portable electric drill.

	Yes	No	N/A
1. Safety glasses are worn while the portable electric drill is being used.	___	___	___
2. The portable drill is unplugged while the drill bit is being changed.	___	___	___
3. The drill bit is tight in the chuck, runs true, and the chuck wrench has been removed from the chuck key before the drilling operation begins .	___	___	___
4. The portable electric drill is held firmly in both hands as the switch is turned on and as the hole is being drilled.	___	___	___
5. The portable electric drill has stopped rotating before the drill is laid down.	___	___	___
6. The portable electric drill is positioned so that chips are thrown away from the operator and others working in the area.	___	___	___
7. The electrical cord and extension cord(s) are positioned away from the work being performed.	___	___	___
8. The student can properly select, remove and replace bits on the portable electric drill.	___	___	___
9. The correct drill speed is selected for the type of material being drill.	___	___	___
10. The student can safely control the portable electric drill and perform satisfactory drill work.	___	___	___

Comments _____

I do hereby certify that the student has satisfactorily demonstrated ability to operate the portable electric drill by passing this performance test.

Student Date Teacher Date

Portable Electric Drill Parts Identification Test

Name _____

Match the number of each portable electric drill part to the correct part name.

- ___ A. Chuck
- ___ B. Chuck Wrench
- ___ C. Cord Strain Reliever
- ___ D. Electrical Cord
- ___ E. Pistol Grip
- ___ F. Reversing Switch
- ___ G. Switch Lock
- ___ H. Trigger Switch

