

## Random Orbit Disk Sander

### I. Competencies

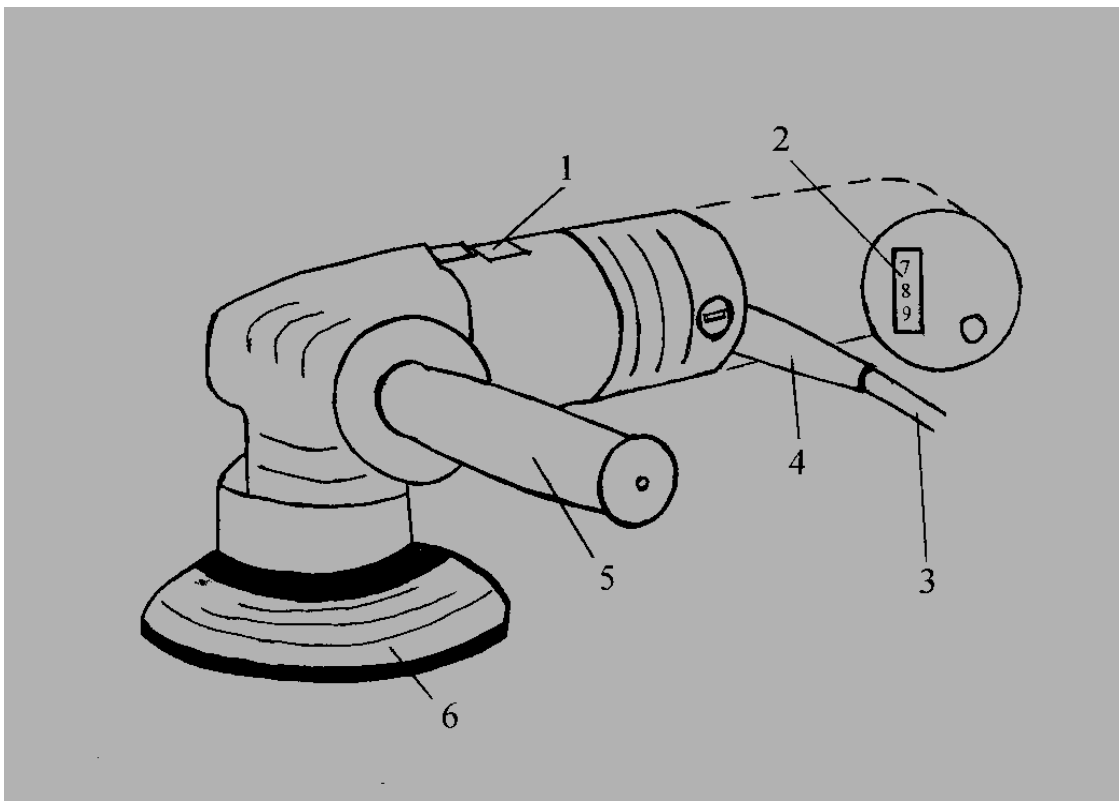
Given a properly adjusted random orbit disk sander, accessories, instruction and demonstration of use, each student will be able to:

- A. Identify the major parts of the random orbit disk sander.
- B. Pass a written test on safety and operating procedures of the random orbit disk sander with 100 percent accuracy.
- C. Demonstrate ability to use the random orbit disk sander, following suggested safety rules and correct operation procedures.

### II. Instructional Materials and Procedures

#### A. Identification of basic random orbit disk sander parts.

- |                           |                         |
|---------------------------|-------------------------|
| 1. Base Pad               | 5. Cord Strain Reliever |
| 2. Handle                 | 6. Electrical Cord      |
| 3. Off/On Switch          |                         |
| 4. Variable Speed Control |                         |



## B. Random Orbit Disk Sander Safety

1. Check the condition of the cord strain reliever and power cord. If any damage is present make sure it is repaired before using the random orbit disk sander.
2. Wear safety glasses at all times while using the random orbit disk sander.
3. Wear a respirator or good quality dust mask when using the random orbit disk sander.
4. Never allow the rotating sanding disk to touch the electrical cord or any part of the body. Electrical shock or a serious cut may result.
5. Do not lay the random orbit disk sander down while the disk is still rotating.
6. When sanding do not hold the random orbit disk sander in a position where the sanding dust is thrown toward the user or other workers in the area.
7. Do not wear loose clothing, rings, or bracelets while operating the Random orbit disk sander.
8. Have a firm grip on the barrel and handle before turning the random orbit disk sanders switch to on.
9. Unplug the random orbit disk sander before changing sandpaper or making any adjustments.
10. Do not operate the random orbit disk sander while standing in a wet or damp area.

## C. Operating Procedures

1. Install the sandpaper on the base pad so the outside edges of the paper is even with edge of the base pad. Otherwise the sandpaper will be off-center when rotating and may cause it to be thrown off the base pad.
2. If the random orbit disk sander is a dustless model then the holes in the sandpaper must be aligned with the holes in the base pad.
3. To realize maximum life from the sandpaper, hold the base pad flat on the material being sanded. Avoid doing all of the sanding with the edges of the sanding disk.

4. Move the random orbit disk sander back and forth in smooth steady strokes to avoid too much material from being taken off in one area. The random orbit disk sander is a fast cutting sanding tool, so keep it moving for smooth even results.
5. Hold the random orbit disk sander in your hands until the sanding disk stops rotating before laying the tool down.
6. Keep the power cord away from the work area when sanding.
7. Do not apply pressure to the random orbit disk sander when sanding. The weight of the sander provides sufficient force to achieve a good sanding action. Too much pressure will cause premature tool failure.
8. On variable speed random orbit disk sander set the speed to match the desired sanding results.
9. Put on new sandpaper when the old sandpaper exposes the edge of the base pad and/or when the old sandpaper becomes worn and stops giving a good sanding action.
10. Clamp or secure the material being sanded before the sanding operation begins.

III. Written Test

**Random Orbit Disk Sander Safety and Operation Test**

Name \_\_\_\_\_ Date \_\_\_\_\_ Class \_\_\_\_\_

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

1. If damage is observed on the random orbit disk sander electrical cord what should be done?
  - a. Make sure it gets repaired before being used.
  - b. Purchase a new tool.
  - c. Tape it up with electrical tape.
  - d. Test the tool to see if it still operates, if so continue to use it.
  
2. Which personal protective equipment should be worn by the operator when using the random orbit disk sander?
  - a. Safety glasses.
  - b. Gloves.
  - c. Respirator or dust mask.
  - d. Both a and c.
  
3. A random orbit disk sander operator should \_\_\_\_\_ before laying the sander down.
  - a. turn off the switch
  - b. turn off the variable speed control
  - c. unplug the electrical cord
  - d. make sure the disk has stopped rotating
  
4. Just before turning the random orbit disk sander on the operator should \_\_\_\_\_.
  - a. plug in the electrical cord.
  - b. check the sandpaper to make sure it is properly attached.
  - c. have a firm grip on the handle and barrel.
  - d. turn on the variable speed control.

5. Which of the following conditions should be avoided when operating a random orbit disk sander?
  - a. Concrete Floors
  - b. Damp or wet areas
  - c. Outside operation
  - d. Inside Operation
  
6. Sandpaper must be installed evenly on the random orbit disk sander base pad to prevent \_\_\_\_\_.
  - a. sandpaper from being thrown off.
  - b. premature tool wear.
  - c. electrical shock.
  - d. excessive sanding dust from being thrown off.
  
7. To get maximum life from sandpaper on a random orbit disk sander the operator should \_\_\_\_\_.
  - a. hold the base pad flat on the material being sanded.
  - b. apply light sanding pressure.
  - c. reduce the variable speed control rpm's.
  - d. use only aluminum oxide sanding disks.
  
8. How much pressure should be applied to the random orbit disk sander when sanding?
  - a. Heavy
  - b. None
  - c. Medium
  - d. Light
  
9. The power cord should be placed \_\_\_\_\_ when sanding with the random orbit disk sander.
  - a. around the operators neck
  - b. over the operators shoulder
  - c. away from the work
  - d. in front of the work so you can always see it.

10. When making adjustments to the random orbit disk sander which of the following should be done?

- a. Turn off the circuit breaker.
- b. Have someone hold the tool while you make the adjustments.
- c. Hold the On/Off switch in the off position.
- d. Unplug the random orbit disk sander.

**IV. Performance Test for the Random Orbit Disk Sander**

Name \_\_\_\_\_

The student performs the following while changing sandpaper and operating the random orbit disk sander.

	<b>Yes</b>	<b>No</b>	<b>N/A</b>
1. Safety glasses are being worn while the sander is being used.	___	___	___
1. The random orbit disk sander is held firmly in both hands before the switch is turned on.	___	___	___
2. The random orbit disk sander is moved back and forth in smooth, even movements without downward pressure.	___	___	___
3. The power cord is positioned away from the work being performed.	___	___	___
5. The sandpaper is properly aligned on the pad.	___	___	___
6. The material being sanded is properly secured before the sanding operation begins.	___	___	___
7. The variable speed control is properly adjusted for the sanding operation being performed.	___	___	___
8. The random orbit disk sander is unplugged when adjustments are made and the paper is changed.	___	___	___
9. The random orbit disk sander has stopped rotating before the sander is laid down.	___	___	___
10. A respirator or good quality dust mask is worn during the sanding operation.	___	___	___

Comments \_\_\_\_\_

\_\_\_\_\_

I do hereby certify that the student has satisfactorily demonstrated ability to operate the random orbit disk sander by passing this performance test.

\_\_\_\_\_  
Student

\_\_\_\_\_  
Date

\_\_\_\_\_  
Teacher

\_\_\_\_\_  
Date

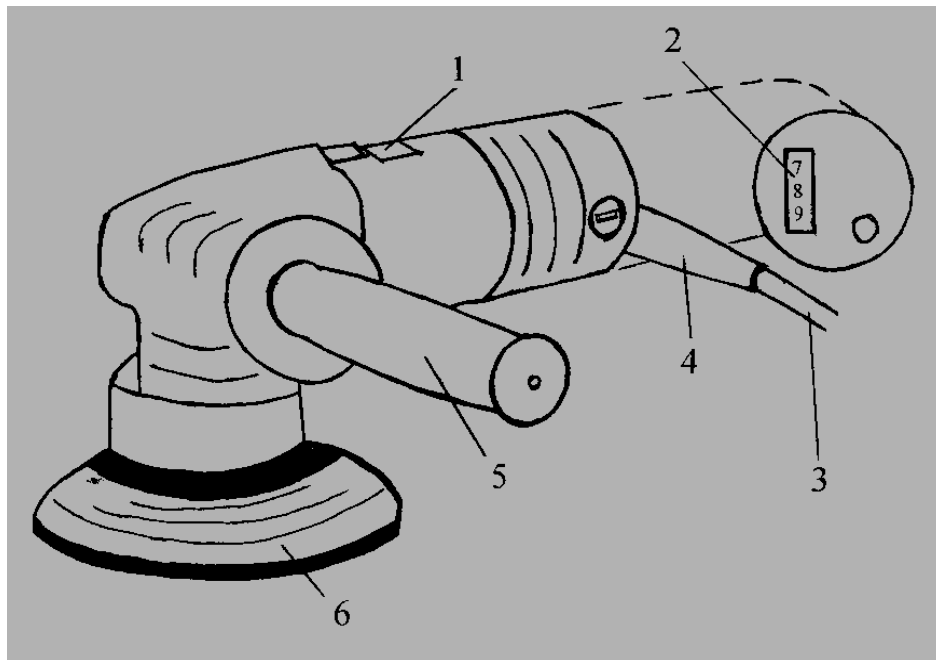
## Random Orbit Disk Sander Parts Identification Test

Name \_\_\_\_\_ Date \_\_\_\_\_ Class \_\_\_\_\_

Match the number of each random orbit disk sander part with the correct part name.

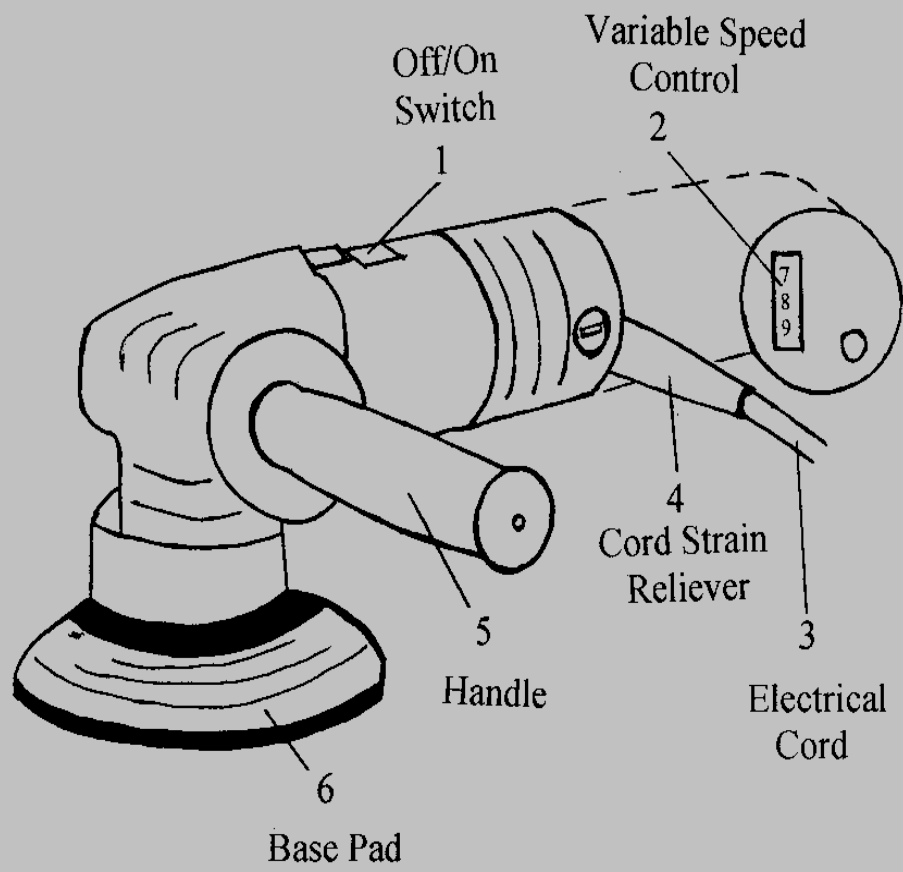
- \_\_\_ 1. Base Pad
- \_\_\_ 2. Handle
- \_\_\_ 3. Off/On Switch
- \_\_\_ 4. Variable Speed

- Control
- \_\_\_ 5. Cord Strain Reliever
- \_\_\_ 6. Electrical Cord





## Random Orbit Disk Sander



## Random Orbit Disk Sander

