

## Motorized Miter Saw

### I. Competencies

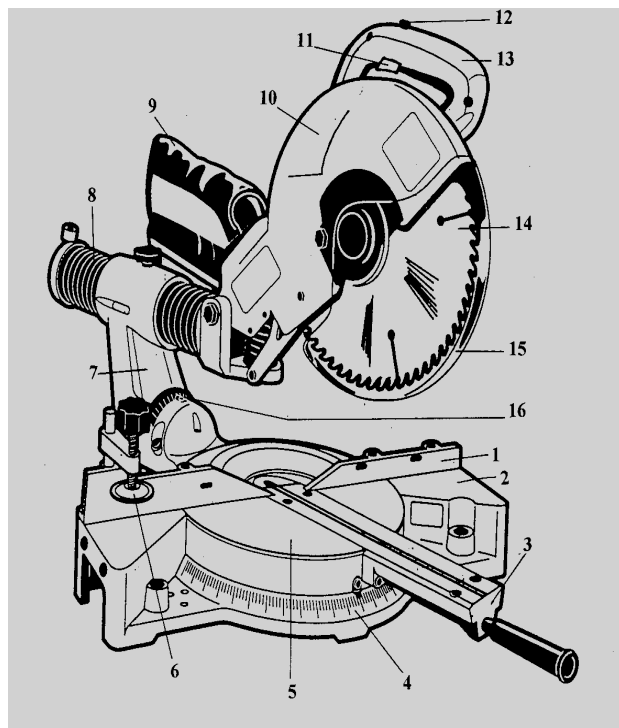
Given a properly adjusted motorized miter saw, accessories, instruction and demonstration of use, each student will be able to:

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

### II. Instructional Materials and Procedures

#### A. Identification of basic motorized miter saw parts.

- |                           |                             |
|---------------------------|-----------------------------|
| 1. Fence                  | 9. Dust Bag                 |
| 2. Table                  | 10. Stationary Blade Guard  |
| 3. Miter Adjusting Lever  | 11. Safety Start Button     |
| 4. Miter Scale            | 12. Off/On Switch           |
| 5. Turn Base              | 13. Handle                  |
| 6. Vertical Holddown Vice | 14. Blade                   |
| 7. Arm                    | 15. Retractable Blade Guard |
| 8. Slide                  | 16. Bevel Scale             |



## B. Motorized Miter Saw Safety

1. Wear industrial quality safety glasses when operating the motorized miter saw.
2. Make sure the saw is securely attached to a table or base support before attempting any cut.
3. Hold or clamp the material securely before making any cut.
4. Keep hands at least 4 inches away from the rotating saw blade when making a cut.
5. Make sure the electrical cord and plug are in good operating order before using the saw.
6. After the saw blade has cut through the material, continue to hold the saw down, release the trigger switch, and let the saw blade stop rotating before allowing the blade to return to its starting position.
7. Never attempt to remove scrap material from the cut zone until the blade has stopped rotating and your hand is removed from the on/off switch.
8. Keep the saw blades sharp and the saw well lubricated where necessary.
9. If cutting long stock, support the long end to prevent the material from binding or jamming the saw blade after the cut is finished.
10. Use a shop vacuum and/or position the saw where dust does not blow back in the operator's face.
11. If using outside, or in a damp location make sure the saw is connected to a Ground Fault Circuit Interrupter(GFCI).
12. Position the electrical cord out of the way of the material and operator.
13. Lock the saw blade in its safest position when work is completed and you are leaving the work area.
14. Caution others in the work area to wear safety glasses and be aware of the saw dust generated by the saw.
15. Wear a respirator or good quality dust mask when using the motorized miter saw for extended periods.
16. Unplug the saw when making adjustments on the saw.
17. Wear hearing protection when using the motorized miter saw for extended periods of time.

## C. Operating Procedures

1. Make a trial cut on a piece of scrap material before attempting final cuts to make sure the saw is cutting properly and that the miter and bevel angles are set accurately.

2. If the material is bowed or warped, clamp the stock to the saw base before making the cut to avoid binding or saw kickback.
3. Align the saw blade on the waste side of the cut line.
4. Hold the saw firmly and lower the blade slowly into the material being cut. After the cut is completed continue to hold the blade in the down position, release the off/on switch, wait till the blade stops rotating and then raise the blade to the up position.
5. If the motorized miter saw is mounted on a slide, pull the saw out to the extended position, turn the switch on. Lower the blade into the material, and push the saw forward to make the cut.
6. Hold the material securely when making cuts.
7. When making multiple cuts of the same dimensions, clamp a stop on the saw table to assure accuracy of the cut and to reduce the time needed to make the cuts.
8. If the saw should kickback, continue to hold it firmly in the down position, release the off/on switch and wait for the blade to stop rotating.
9. Deep scraps removed from the cutting zone to avoid them being thrown out by the saw blade.
10. When cutting long stock use a helper or a solid support stand to help hold the material steady while the cut is being made.
11. Keep the work area clean and free of clutter when using the motorized miter saw.
12. Do not over-extend or get off-balance when using the motorized miter saw.

III. Written Test

**Motorized Miter Saw Safety and Operation Test**

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

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

1. How must the saw blade be held after the cut is finished and before the blade stops rotating?
  - a. Release it to the up position.
  - b. Hold it in the down position.
  - c. Raise 1" above the stock being cut.
  - d. Pull to the out position.
  
2. What special protection must be observed when using the motorized miter saw outside?
  - a. Keep the saw covered.
  - b. Lubricate the saw more often than normal.
  - c. Unplug the saw after each cut.
  - d. Connect the saw to a ground fault circuit interrupter(GFCI).
  
3. How can the saw operator prevent the blade from binding when cutting warped, bowed, or long stock?
  - a. Clamp the stock to the table.
  - b. Hold the saw firmly.
  - c. Push the saw through the material slowly.
  - d. Hold the saw down securely after the cut is made.
  
4. When is it safe to remove wood scraps from the cutting zone on the motorized miter saw?
  - a. While the saw is positioned over material and ready for a cut to be made.
  - b. While the saw blade is clamped in the down position.
  - c. While the saw is off and the hand is not on the Off/On switch.
  - d. While the blade is up.

5. Where should the saw blade be positioned when cutting is completed and the operator is leaving the work zone?
  - a. Up
  - b. Down
  - c. In its safest position
  - d. Either a or b
  
6. Hands or fingers never come closer than \_\_\_\_\_ to the rotating blade when operating the motorized miter saw.
  - a. 2 inches
  - b. 4 inches
  - c. 6 inches
  - d. 8 inches
  
7. What personal protection equipment should be worn by a motorized miter saw operator?
  - a. Hearing protection, eye protection and a dust mask
  - b. Eye protection
  - c. Eye protection and hearing protection
  - d. Hearing and eye protection, dust mask and gloves
  
8. The purpose of a trial cut before making the actual cut with the motorized miter saw is to \_\_\_\_\_.
  - a. see if the material is positioned correctly.
  - b. see if the saw is cutting properly and is set accurately.
  - c. see how the material will cut.
  - d. test the sharpness of the saw blade.
  
9. Where should the saw blade be aligned when making a cut with the motorized miter saw?
  - a. Left side of the marking line
  - b. Right side of the marking line
  - c. Waste side of the marking line
  - d. On the marking line

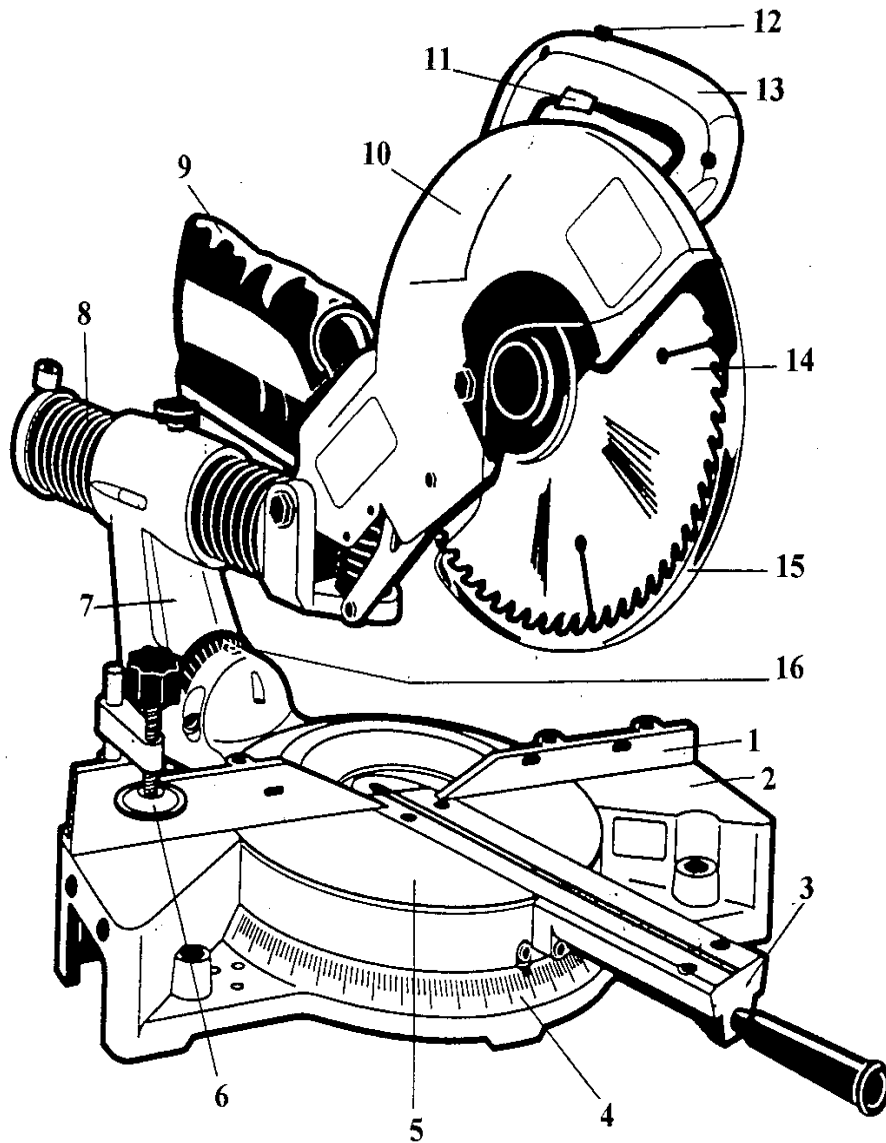
10. How should the saw blade be moved throughout the stock when making a cut with a motorized miter saw that has a sliding arm?
- Push down, then pull out
  - Push down
  - Pull out then push down
  - Pull out, push down, then push forward
11. The purpose of a "stop" when making multiple cuts with the motorized miter saw is to \_\_\_\_\_ .
- hold the stock securely.
  - improve cut accuracy and reduce time required to make cuts.
  - reduce time required to make cuts.
  - get hands and fingers further away from the cutting zone.
12. If a kickback should occur when a cut is being made the saw operator should \_\_\_\_\_ .
- jump out of the way.
  - turn loose of the saw immediately.
  - raise the saw to the up position immediately.
  - hold the saw firmly in the down position and release the On/Off switch.



## Motorized Miter Saw Parts Identification Test

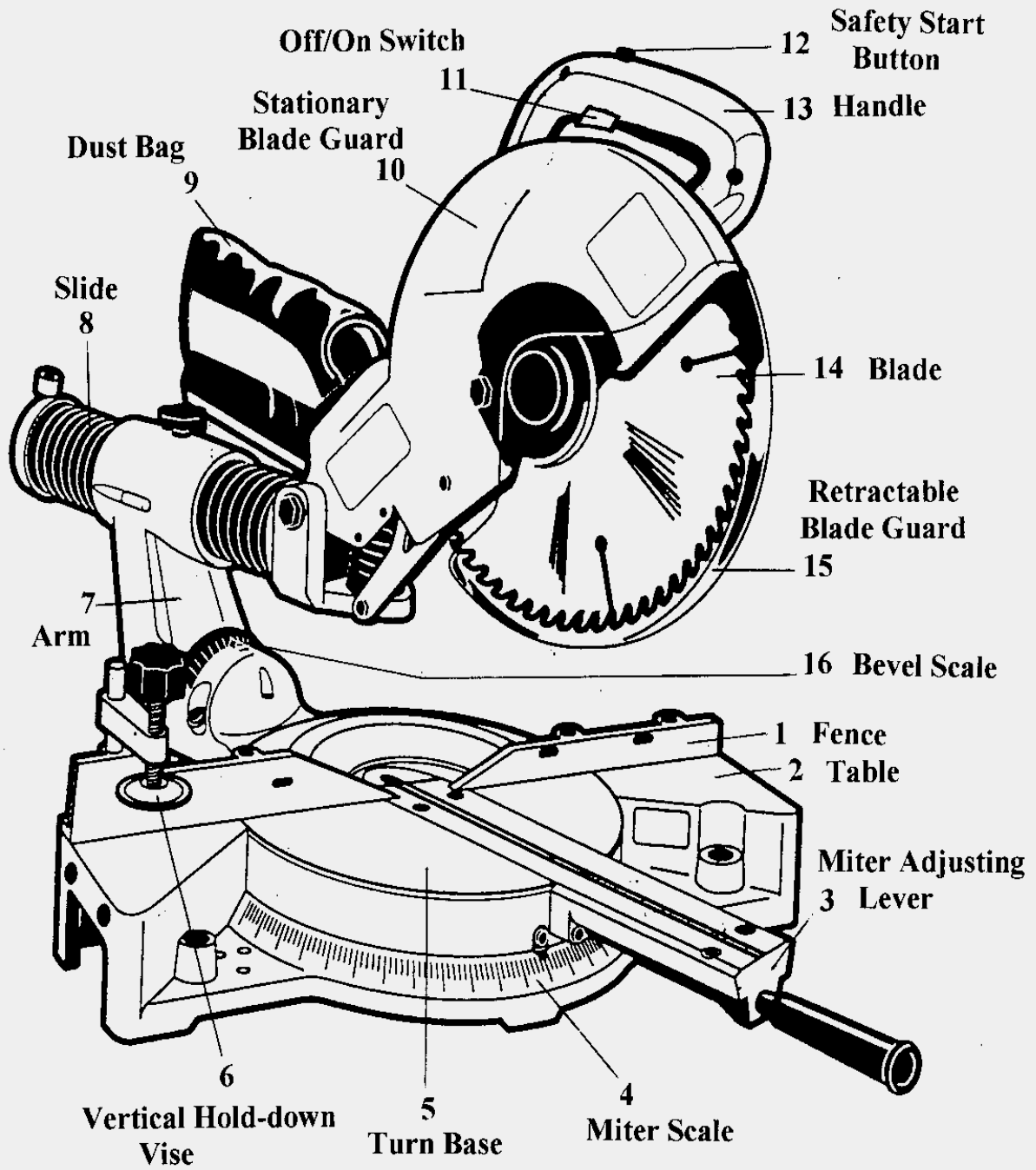
Match the number of each motorized miter saw part with the correct part name.

- |                               |                                |
|-------------------------------|--------------------------------|
| ___ A. Arm                    | ___ I. Retractable Blade Guard |
| ___ B. Fence                  | ___ J. Dust Bag                |
| ___ C. Miter Adjusting Lever  | ___ K. Safety Start Button     |
| ___ D. Miter Scale            | ___ L. Off/On Switch           |
| ___ E. Slide                  | ___ M. Bevel Scale             |
| ___ F. Table                  | ___ N. Stationary Blade Guard  |
| ___ G. Turn Base              | ___ O. Handle                  |
| ___ H. Vertical Holddown Vice | ___ P. Blade                   |





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