

Training Guide

Obear & Son Carborundum cut off saw.

Training Guide Objectives: After completing the training the student will be able to;

- Safety check the equipment.
- Change the cutting wheel.
- Prepare to cut the material.
- Operate the chain lock down device.
- Cut the material.

Approximate Time: 4 Hours

Lab: 2 Hours

Written Test: 1 Hour

Review Test: 1 Hour

Student Reference: Maint Procedure MNT-WELD-011, and actual Carborundum cut off saw.

Training Guide Outline.

1. Inspection of the equipment.
 - Check the cutting wheel for damage.
 - Safety guard.
 - Changing the cutting wheel.
2. Preparing the material.
 - Removal of sharp edges.
 - Placement of material for the cut.
3. Operation of the chain lock down device.
 - Position of the chain lock down device.
 - Operation of the chain lock down device foot pedal.
4. Cutting the material.
 - Making different degree cuts.
 - Equipment power buttons.



Operation of the saw handle.

Obear & Son Carborundum cut off saw LAB.

The most important thing to do before operating the Obear & Son Carborundum cut off saw is the inspection of the equipment. Always make sure that the equipment is in safe operating condition before operation. Failure to do so could result in serious personal injury.

1. Inspection of the equipment.

Before operating the Obear & Son Carborundum cut off saw you must inspect the cutting wheel for cracks and/or chips.

To check the cutting wheel for cracks and/or chips you must rotate the wheel by hand and give it a visual inspection. If cracks and/or chips are detected **DO NOT** use the saw. Change the cutting wheel before operation.

Warning: Using a cutting a wheel that has cracks and/or chips may cause the wheel to come apart, resulting in serious personal injury.

To change the cutting wheel you must first raise the safety guard up and out of the way.

To remove the damaged cutting wheel you must remove the spindle nut that holds the cutting wheel in place. Remove the spindle nut by turning it counter clockwise. After removal of the spindle nut slip the cutting wheel off of the shaft.

NOTE: Replacement cutting wheels can be obtained from the Tool room in the Maint shops building.

Warning: Always make sure that the cutting wheel to be used is the right RPM for the saw. Using the wrong RPM cutting wheel may cause the wheel to come apart, resulting in serious personal injury.

To install the new cutting wheel you must slip the new wheel on to the shaft and replace and tighten the spindle nut by turning it clockwise.

After the damaged cutting wheel has been replaced, pull the safety guard back down into place.

Warning: Always make sure that the safety guard is in position over the cutting wheel before operation. Failure to do so may result in serious personal injury.

2. Prepare the material.

NOTE: The maximum material thickness that can be cut on this saw is 3” inch pipe, angle iron, and flat bar.

To prepare the material you must remove any sharp edges, to avoid injury to the hands.

To remove any sharp edges from the material a small grinder or a file may be used.

Warning: Failure to remove any sharp edges from the material may result in lacerations to the hands.

After all sharp edges have been removed you may place the material into position for the cut.

To place the material into position for the cut, you must lay the material up on top of the rollers adjacent to the saw. The rollers will help move the material more easily if several cuts are to be made.

3. Operating the chain lock down device.

After the material has been placed into position for the cut, it must be secured into position. This is done by use of the chain lock down device.

To operate the chain lock down device you must pull the chains up over the top of the material removing as much slack as possible, and slip them into the slotted brackets that are located on the front of the saw table.

After the chains are in place, you must step down on the chain lock down device foot pedal to tighten the chain, and secure the material into place.

NOTE: The chain lock down device foot pedal must held down while the cut is being made. This will keep the chain tight securing the material in place.

Warning: Failure to use the chain lock down device may cause the material to come off of the saw table, resulting in severe personal injury.

4. Cutting the material.

Warning: Eye protection, ear protection, and gloves are required when operating this equipment. Failure to wear required safety equipment may result in serious personal injury.

The Obear & Son Carborundum cut off saw may be set up to cut (4) four different degree cuts. They are 90 degrees, 45 degrees, 30 degrees and 22 ½ degrees.

To set the saw to cut a desired degree cut, you must pull out on the saw locking pin that is located on the front of the saw table.

Pull the saw locking pin out and hold it out. At the same time you must rotate the saw by hand aligning the arrow that is located on the back of the saw to the desired degree setting. The degrees are stamped on the back side of the saw table.

After setting the saw for the desired degree cut, you must release the saw locking pin. Make sure that the saw is locked into position before operation. This is done by trying to move the saw with the pin back in place.

After making sure that the saw is locked into position you may make the desired cut.

To make the cut you must first turn "ON" the power to the saw. This is done by pushing the "GREEN" start button that is located on the top of the saw just above the pull down handle.

With the material locked into position, and the safety guard in position, you must pull down on the saw pull down handle to make the cut. Apply only enough pressure to the saw pull down handle to make the cut.

Warning: DO NOT apply extreme pressure to the saw pull down handle when cutting material. Apply only enough pressure to cut the material. Applying extreme pressure may cause the cutting wheel to come apart, resulting in serious personal injury.

After the desired cut has been made you must turn "OFF" the power to the saw. This is done by pushing the "RED" off button that is located on top of the saw just above the saw pull down handle.

Release the chain lock down device, and remove the material. If a certain degree cut was made, you must reset the saw back to the 90 degree setting before leaving the job site.

Obear & Son carborundum cut off saw Qualification Signoff Sheet

Name: _____
Date: _____
Instructor: _____

Needed Equipment: Maint Procedure MNT-WELD-011, Cutting wheel, and actual Carborundum cut off saw.

Lab Exercise:

- Step 1: Inspect the equipment.
- Step 2: Change the cutting wheel.
- Step 3: Prepare to cut the material.
- Step 4: Operate the chain lock down device.
- Step 5: Cut the material.
- Step 6: Contact instructor for verification of lab completion.

Criteria:

This lab exercise will be graded on how well instructions are carried out, the safe workmanship of the student, and the knowledge obtained from the Training Guide. This equipment must be set-up and operated as per BP Maint Procedure MNT-WELD-011.

LAB

Pass	Fail	Signature: _____
		Signature: _____

Written Test (80% passing)	Score: _____
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