Cyclone Upcut Cut off saw

Operation manual

⚠ WARNING

The operator must thoroughly read and understand this manual before operating the cut off saw or starting any servicing. All safety and warning instructions should be followed. This manual must be available to all operators.

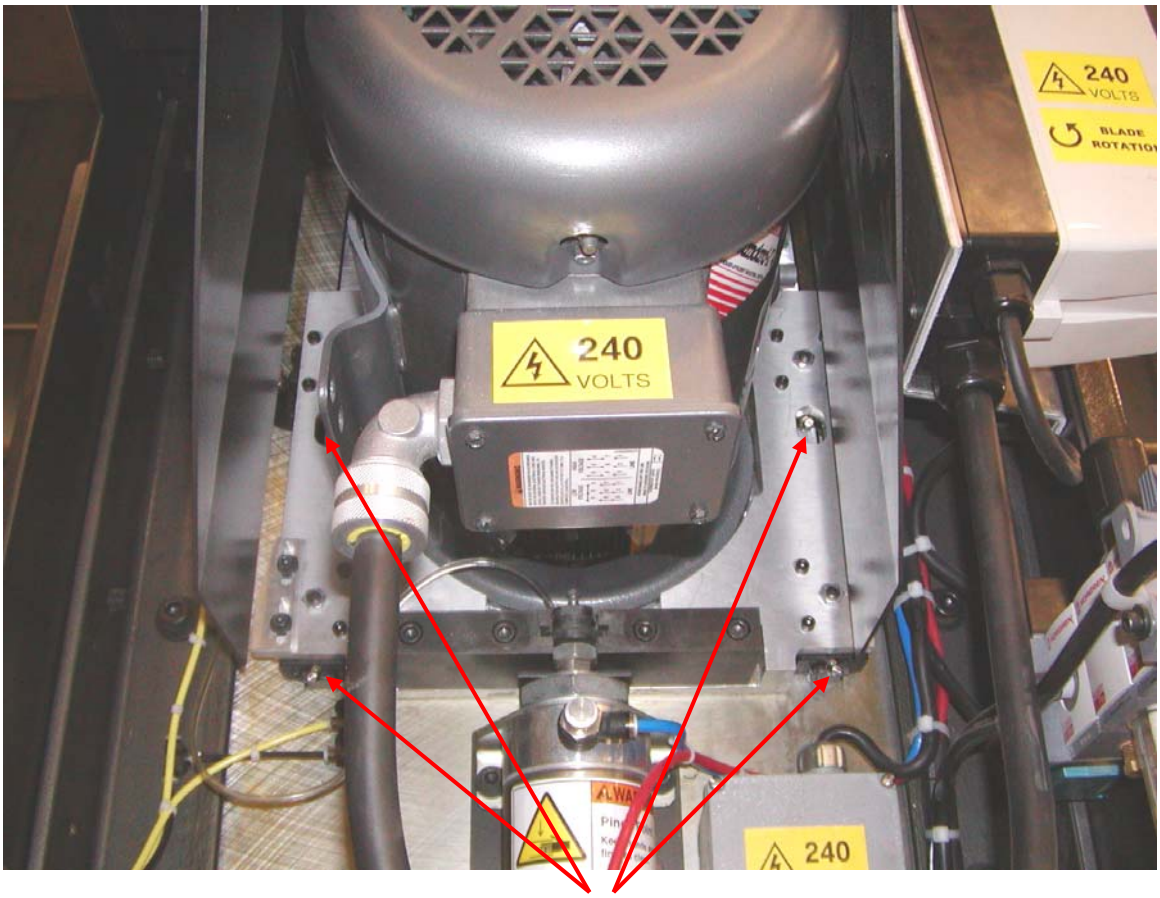
Addendum to razorgage upcut saw manual

Grease requirements for up cut saw.

Your Razorgage upcut saw should be greased after 5000 cut cycles, if dust generated by the material cut is greater, then adjust cycle count lower. Grease all bearings with 2 pumps of grease use good quality medium weight grease. Wipe dust off of zerks before attaching grease gun.

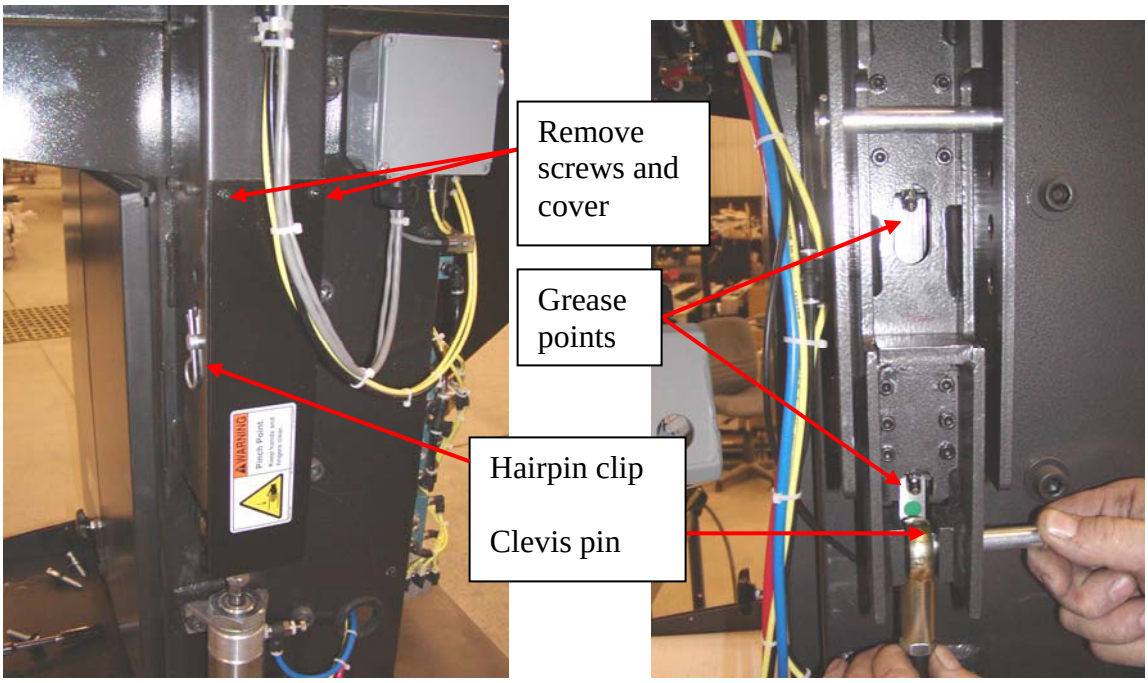
WARNING

DISCONNECT SAW FROM POWER BEFORE SERVICING !



2 pumps all locations.

The top clamp contains 2 bearings follow directions for access to bearings.



It maybe necessary to remove cylinder clevis pin to allow grease gun access to bottom grease zerk. Remove hairpin and slide clevis pin out of rod end, push rod down to allow more clearance to bearing zerk.

Replace clevis pin and hairpin clip. Replace top clamp cover.

Bearings on material roller clamps can be greased when ever necessary to maintain smooth motion of handles.

Be sure all components and covers are replaced before restoring power to saw.

Contents

General Safety Rules for Woodworking Machinery

⚠ WARNING

Do not attempt to operate until you thoroughly read, and understand completely, all instructions and rules in this manual. Failure to comply could result in serious injury or accident involving fire, or electric shock. This manual must be accessible to any operator of saw and its frequent review should be part of a continuous safety program.

1. For your own safety, read the operation manual carefully. Know your machine. Learn its applications and limitations, and any hazards specific to this machine. All personnel should be trained in the operational procedures and received safety instruction before operating this equipment. If you have not received proper training in the use of this machine, ***DO NOT OPERATE THIS MACHINE***, damage to the equipment or injury to the operator is possible.

2. This machine should not be operated without all of the guards in place and safety devices in operation. Removal of any guards or disabling any of the safety devices may result in damage to the equipment or injury to the operator. If any of the guards or safety devices are missing, damaged or not working properly, ***DO NOT OPERATE THIS MACHINE***, notify your supervisor immediately.

3. If the operator has any safety concerns or questions regarding the operation of this equipment, ***DO NOT OPERATE THIS MACHINE***, the machine should be locked out and your supervisor notified immediately.

4. All Lock Out/Tag Out procedures must be followed before servicing or adjusting this equipment. If you have not received proper training in the Lock Out/Tag Out procedures for this machine, ***DO NOT OPERATE THIS MACHINE,*** damage to the equipment or injury to the operator is possible.

5. In case of any equipment malfunction or jam the machine should be powered off and locked out before clearing any materials from the operational areas of this machine. Once cleared the reset procedures need to be followed when powering up the equipment. At no time should any of the machine control systems including electrical, hydraulic or pneumatic circuits be manually overridden.

6. Check machine for damaged parts. Before continued machine use any damaged guard or part must be carefully checked for proper operation of its intended function. Check all moving parts for proper alignment, check for binding of moving parts, breakage of parts, proper secure mounting, and any other condition that may affect machine operation. Guards or other parts that are damaged must be properly repaired or replaced.

7. Machine must be properly grounded.

8. Maintain and clean machine at recommend intervals. Intervals may need to be adjusted due to work load or material type to keep machine in top condition. Follow instructions for lubrication, setup, and changing accessories.

9. Disconnect machine from power source before, changing accessories, or any servicing activity.

10. Avoid accidental starting. Make sure switch is in the off position before connecting to power.

11. Remove any tools or loose objects from work surface of machine. Make sure any tools used for adjustment or maintenance are removed from machine before machine is restarted. Make a habit of scanning for tools and scraps every time the machine is started.

12. Keep work area clean. Cluttered work areas and workbenches increase the likelihood of an accident.

13. Do not use in dangerous environments. Do not use machine in damp or wet locations, or expose them to rain. Keep work area well illuminated.

14. Keep children away. All visitors should be kept at a safe distance from work area.

15. Make workshop childproof, with padlocks, master switches, or by removing starter keys.

16. Do not force the machine. It will function better and safer at its designed rate.

17. Use the right tools. Do not force the machine or attachments to do a job for which they were not designed. Contact the manufacturer or distributor if there is any question about the machines suitability for a particular job.

18. Use only recommended accessories. Consult the operation manual for recommended accessories.

19. Wear proper apparel. Avoid loose clothing, gloves, neckties, rings bracelets, or jewelry which could be tangled in moving parts. Keep long hair contained to prevent entanglement. Non-slip footwear is recommended.

20. Always wear safety glasses.

21. Secure the work piece.

22. Keep proper footing and balance at all times.

23. Do not use machine while under the influence of drugs, alcohol, or any medication.

24. Always wear a face mask or dust mask if operation creates excessive dust or chips. Always operate machine in a well ventilated area and provide proper dust removal.

25. Never leave machine running unattended. Turn power off. Do not leave machine until it comes to a complete stop.

Safety Rules for Cut-Off Saw

1. Read and understand the operation manual before operation.

2. Keep hands away from the cutting area.

3. Before making any adjustments disconnect all power sources including electrical and pneumatic.

4. Minimum air pressure is 50 psi, DO NOT operate saw if minimum air pressure is not available. Normal working pressure is 80psi.

5. At the start of each work session turn on saw and trigger the two hand trip with no work piece present, cycle the saw and check for normal operation of top clamp and blade advance cylinders. Turn off saw and as the motor slows and comes to a stop check for correct rotation direction compared to arrow indicator.

6. Do not cut warped wood; work piece should lay flat on table without rocking.

7. Use infeed and outfeed supports when cutting long work pieces.

8. Set top clamp stop pin to limit opening height to only what is required to process the work piece.

9. Never place hands under top clamp; remove cut piece by pulling it out from under open top clamp. Short trim scraps should only be removed by pushing them out with a scrap piece.

10. Always use push roller handles to position and guide work piece against fence. Do not use hands to support work piece.

When your saw arrives,

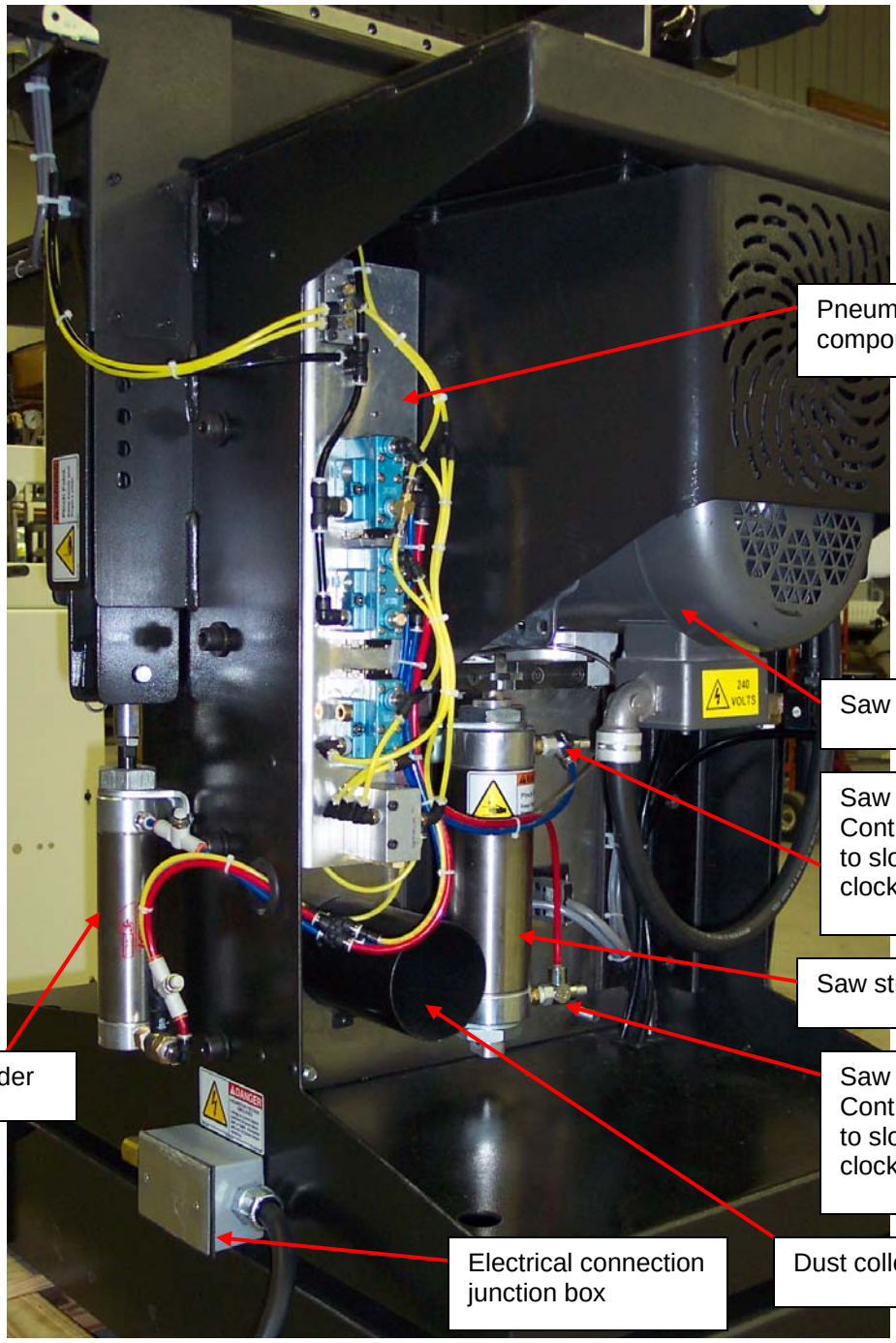
The saw ships complete on one pallet, if ordered with stop the stop will be in separate crate.

Unpack the saw ensuring that all parts are present and free from damage. If any parts are missing or damaged contact your local distributor immediately. Do not assembly or attempt to operate saw without all components present and in undamaged condition.

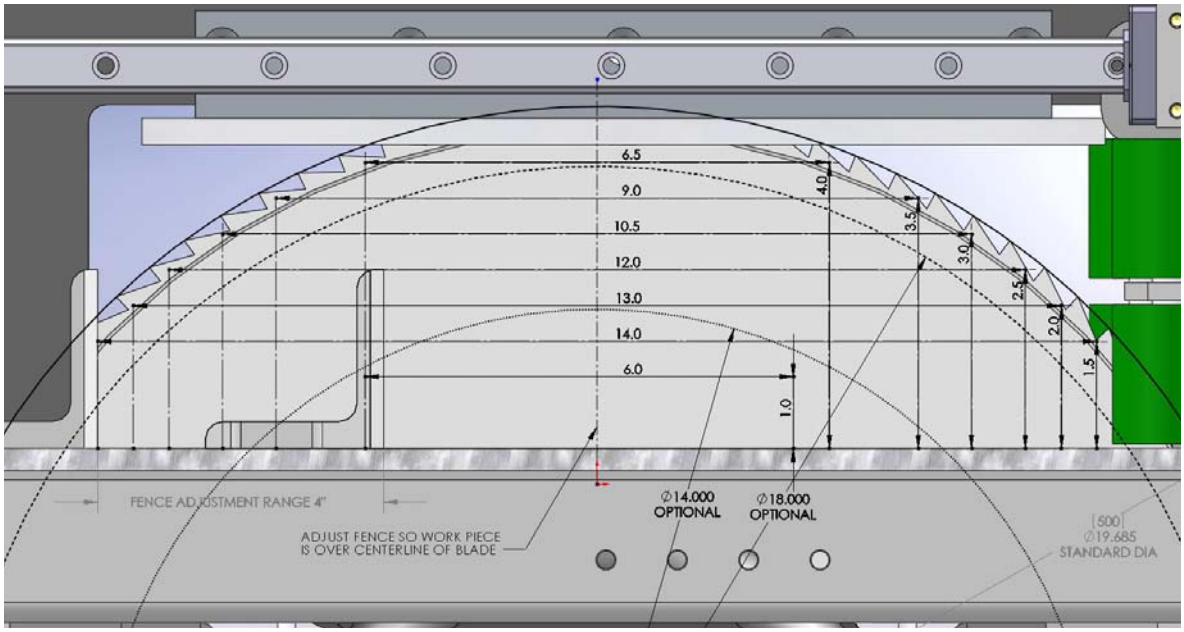
Saw specifications Cyclone upcut

Saw blade speed	3450 rpm
Saw motor	7-1/2 hp, 230vac or 480 vac
Saw blade dia. (optional)	500mm, or smaller see capacity chart
Saw arbor size	1”
Exhaust duct dia.	4”
Cycle operation	Pneumatic factory set at 80PSI
Table size	371/8 (943)w x 21-1/2 (546)d
Weight	600lbs

Major saw components


Pneumatics components
Saw motor
Saw Upstroke Speed Control – Turn clockwise to slow feed, counter clockwise to speed feed.
Saw stroke cylinder
Top clamp cylinder
Saw Downstroke Speed Control – Turn clockwise to slow feed, counter clockwise to speed feed.
Electrical connection junction box
Dust collection port

Cutting Capacity Chart



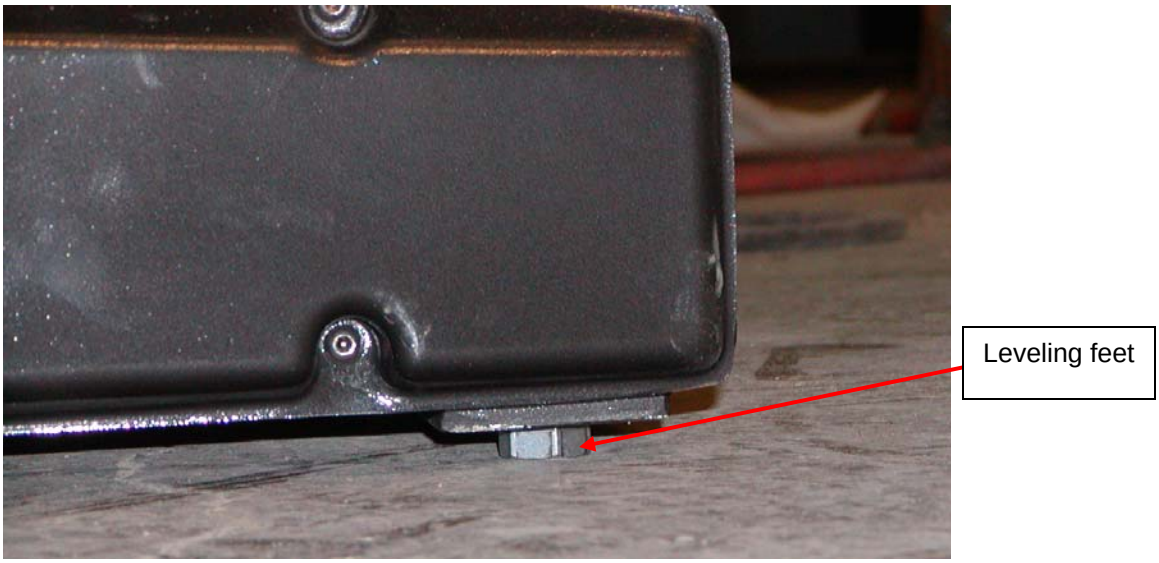
The vertical stroke of the upcut saw blade requires that the workpiece be centered over the center line of the blade to maximize thickness capacity. The fence is adjustable to accommodate the potential material sizes as shown in the chart above. For best cut quality on thin stock the work piece should be toward the rear of the saw. Adjust the position of the fence toward the rear of saw to optimize cut quality. See adjustment section for directions on adjustment of fence and squaring fence to blade after adjustment.

Installation of machine

DANGER

The operator must remove from and lock out all power to saw before servicing or connecting power.

Install saw with enough free space to conveniently allow workpiece to be brought into saw. If infeed and or outfeed is required allow room for such. The floor should be a flat non-slip surface. The saw will be more stable if bolted to floor. After locating the saw use leveling feet to adjust level of saw table. Place level on saw table and adjust feet to bring table into level position.

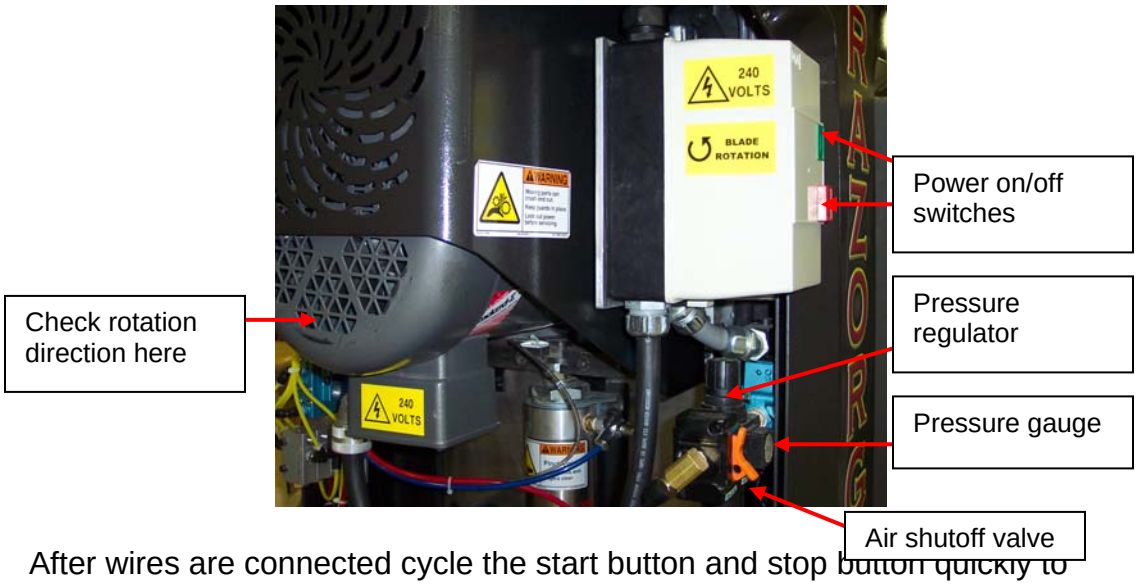


Connect power

DANGER

The operator must remove from and lock out all power to saw before servicing or connecting power.

The saw has been factory wired to the requested voltage before shipment. Check that your supply lines match the labeled voltage on the saw before connection. Connect wires inside junction box located at bottom of rear of saw.

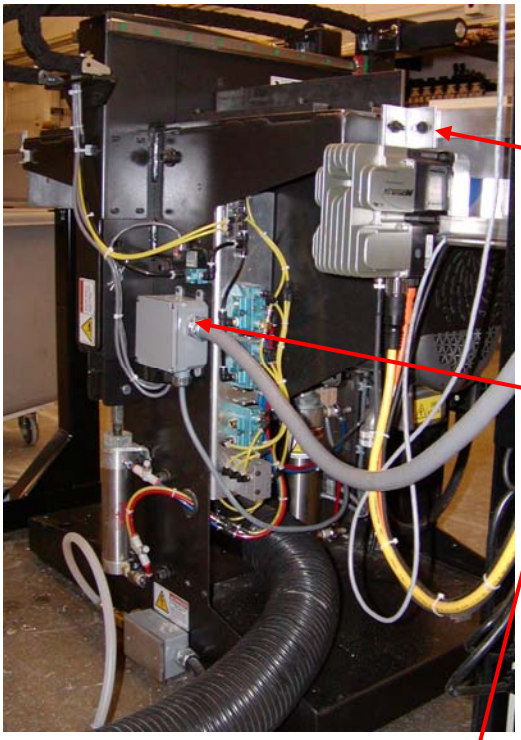


After wires are connected cycle the start button and stop button quickly to pulse the motor on and then off, look through the fan guard of the motor to check direction of rotation. Rotation must match direction indicated on side of start button enclosure. If rotation needs to be reversed swap the connection of two of the three power wires and recheck rotation.

The air supply fitting is located adjacent to the wiring junction box. Connection can be a quick connect of your choice or can be a direct threaded connection into the 3/8NPT fitting. After connecting air, check the pressure setting at the regulator, pressure should be set at 80psi to match factory settings for cylinder operation.

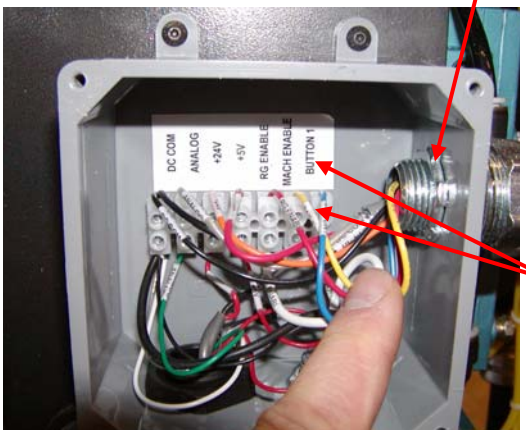
Connect Razorgage

If your saw will be used with a Razorgage the connection to razorgage controls has been removed for shipment. Reconnect the flexible conduit to the junction box on the rear of the saw as shown.



Bracket connection Razorgage to saw. If material size was specified holes for Razorgage will be predrilled, if not, drill required hole into side of saw directly below top plate.

Razorgage connection, remove junction box cover and attach flexible conduit to junction box here. Tighten box nut to make solid connection.



Match labels on wires to positions on terminal block, tighten screw on wire to make solid connection at block. Check wire positions are correct and replace box cover

Saw operation

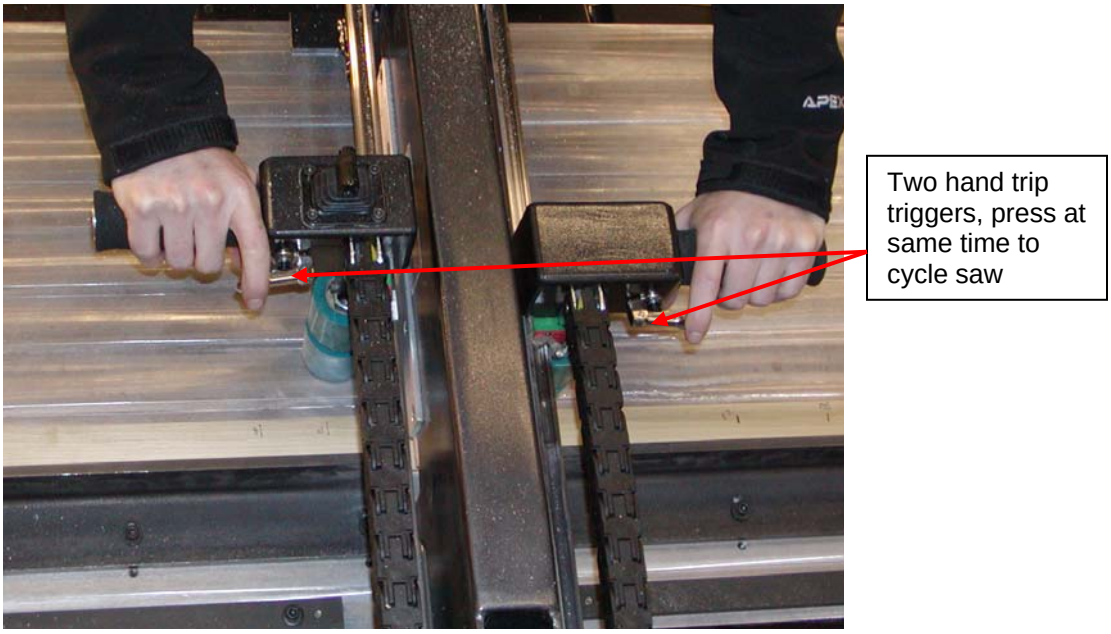
WARNING

The operator must thoroughly read and understand this manual before operating the cut off saw or starting any servicing. All safety and warning instructions should be followed. This manual must be available to all operators.

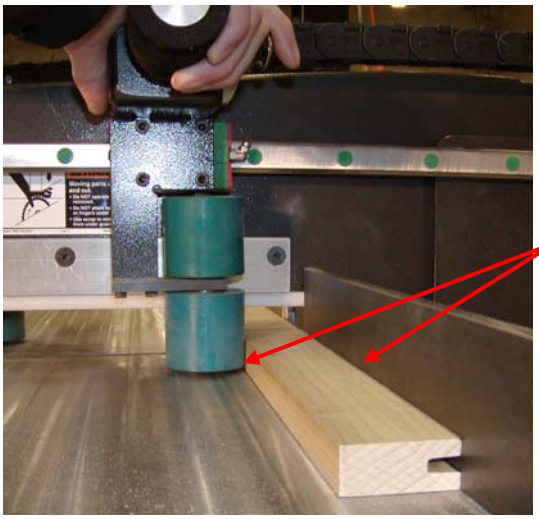
Before operating saw read all general and safety rules.

If operator is uncomfortable with any operation or condition of saw get help from supervisor.

The Cyclone upcut saw is operated by the triggering of two hand anti tie down triggers located on the work piece clamping handles at either side of the top clamp blade cover. The operator's hands must never be placed under the top clamp. Maintain pressure on triggers until the top clamp opens completeing the saw cycle.



Before cutting set opening height of top clamp to minimum opening require by stock. Place pin in lowest hole that allows stock to fit under the open top clamp.
Turn off power to adjust pin position.



When ready to cut push stock against fence, cut quality may vary depending on which side of the blade is held against fence. Experiment holding stock on one side or both against fence to find best results. Always hold one side against fence when triggering saw.

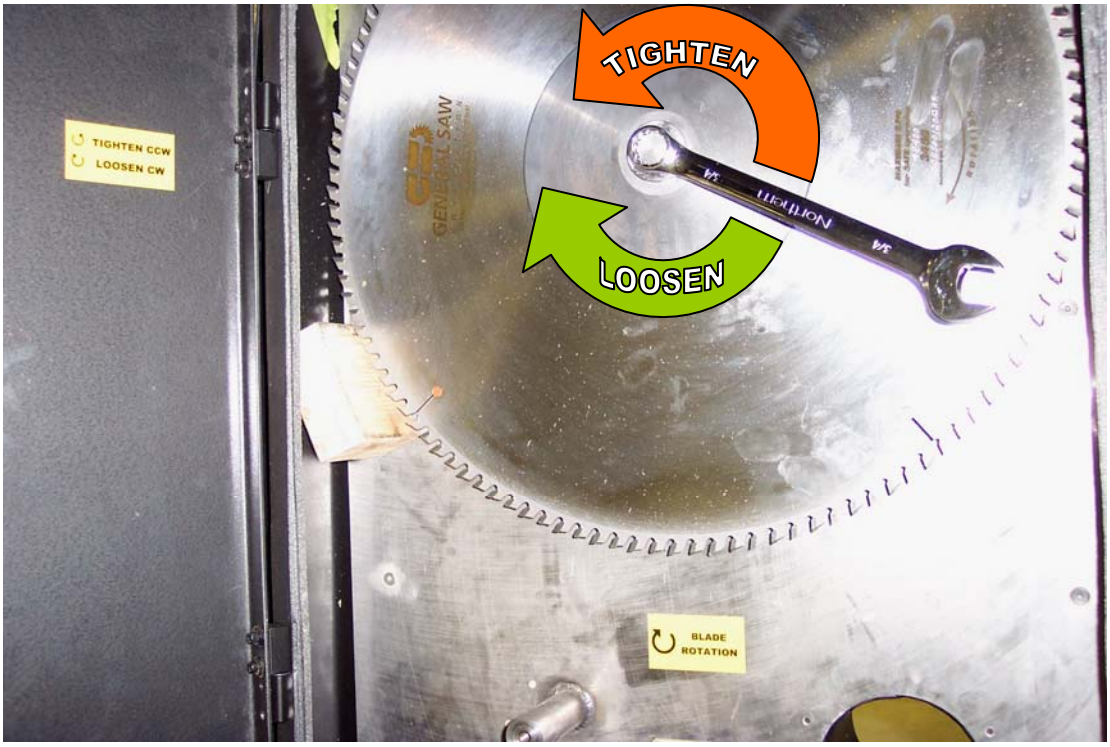
After saw cycles relieve pressure on push roller and remove cut piece.

Installing and Changing Saw Blade

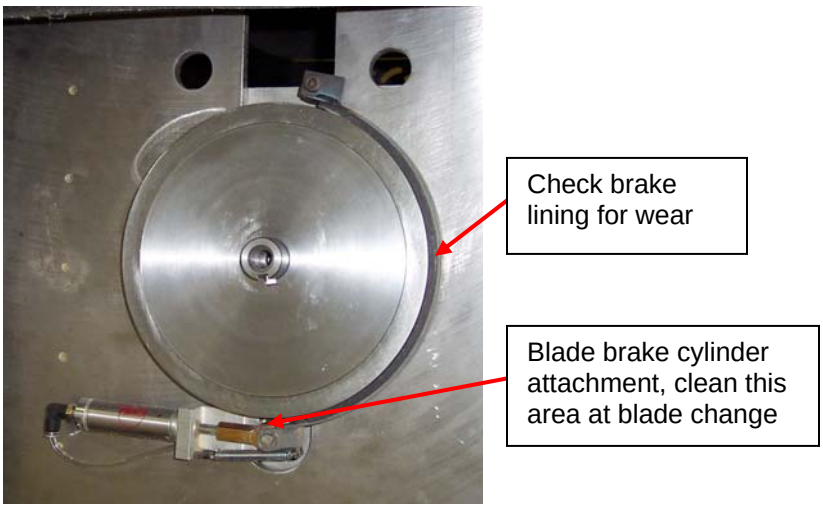
DANGER

The operator must remove from and lock out all power to saw before servicing.

To access blade area remove the door hold down screw, the screw is purposely long to allow the blade and motor to stop before the door will open. Do not use a powered means to remove hold down screw. Do not shorten screw the length is required to make the door interlocks work properly.



When installing or changing blade observe the proper rotation and be sure blade matches the rotation arrow. Use scrap wood to block blade while tightening or loosening blade retaining screw. Blade retaining screw has left hand threads the direction for tightening and loosening is opposite from normal screws and bolts. To loosen blade screw turn wrench in same direction as rotation of blade, clockwise when looking at the blade. Remove retaining screw and blade arbor plate to free saw blade from motor shaft. Do not remove rear arbor plate, check blade brake for dust buildup, clean if necessary.



Adjustments to square cut

DANGER

The operator must remove from and lock out all power to saw before servicing or adjusting.

Adjusting fence square to blade to give a square cut on workpiece requires a measuring device, (tape measure, calipers, or spacer block), 3/16 allen wrench, and a square to check work piece. The reference block along the back edge of the saw table has been squared to the saw blade at the factory. This reference block will be the starting point for squaring the fence in any of the optional mounting positions. Determine mounting position for fence, move fence and mounting screws to desired position do not tighten screws at this time. Using the tape measure determine distance from reference block to back edge of fence, set the fence so that the back edge is parallel to the reference block, same distance from reference block at both ends of reference block. While maintaining the desired measurement tighten the fence mounting screws, check the distance after tightening, adjust if necessary.

Cut a part and use square to check. If finer adjustment of square is required leave mounting screw closest to blade tight and just break loose outer two mounting screws. Use a soft face mallet to tap fence in direction as indicated by work piece and square, retighten screws and check for square. A spacer block made to fit between fence and reference block will speed squaring process if needed in future.

Squaring the fence