



SERVICE BULLETIN

Document ID:

SB276

Title:

Saw Blade Replacement

Affected machinery: *Hornet II™* saws

Distribution: Customers upon order

Applies to: All *Hornet II™* saws (*Hornet II™* saws only - does not apply to first generation *Hornet™* saws)

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Graphics may be unclear and could create an unsafe condition if this recommendation is not followed.

Purpose and Scope

This service bulletin instructs how to install a new saw blade in the Hornet II saw. Resharpener specs are also provided for future use.

Overview

Parts Included

The parts included in this kit are shown in Table 1. Please make sure all parts and supplies are present before starting the procedure.

Table 1: Parts in SB276KIT

Quantity	Description	Part #
1	Saw blade, 20"	811069
1 box of 25	Saw blade bolts	452068
1	Service bulletin document	SB276

If you have any questions, call MiTek Automation Support at 1-800-523-3380.





Supplies Needed

- Torque wrench with capacity up to 40 ft-lbs
- 3/8" 12-point socket
- Front saw chamber door key (PN 520195)

Lockout/Tagout Procedure

Electrical Lockout/Tagout

 WARNING	
	<p>ELECTROCUTION HAZARD.</p> <p>All electrical work must be performed by a qualified electrician.</p> <p>Verify that all power to the machine has been turned off and follow approved lockout/tagout safety procedures before performing any maintenance.</p> <p>If it is absolutely necessary to troubleshoot an energized machine, follow NFPA 70E for proper procedures and person protective equipment.</p> <p>When the disconnect switch is off, there is still live power within the disconnect switch's enclosure. Always turn off the power at the building's power source to the equipment before opening this electrical enclosure.</p>





Before performing maintenance on any machine with electrical power, lockout/tagout the machine properly. When working on a machine outside of the machine's main electrical enclosure, not including work on the electrical transmission line to the machine, follow your company's approved lockout/tagout procedures which should include, but are not limited to the steps include in this service bulletin.

Figure 1: Hornet II Disconnect Switch Lockout/Tagout Procedure



Pneumatic or Hydraulic System Lockout/Tagout

	 WARNING
	<p>HIGH PRESSURE HAZARD.</p> <p>Bleed pneumatic lines before performing any maintenance on the system.</p> <p>Working on pressurized lines may cause injury.</p>

After lockout/tagout of the electrical power, turn off or close the system's air shut-off valve and attach a lock and tag.



Figure 2: Sample of a Lockout/Tagout on a Pneumatic System



Procedure

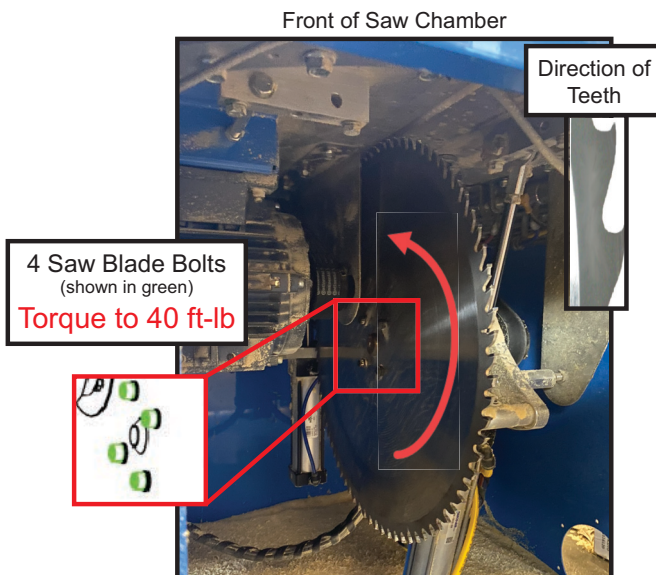


Removing and Installing Saw Blade



 WARNING	
	<p>MOVING PARTS CAN CRUSH AND CUT.</p> <p>Always verify that power to the machine has been turned off and follow approved lockout/tagout procedures.</p>

1. After ensuring power is locked out, open the front saw chamber door using the key.
2. Loosen and remove the 4 bolts holding the saw blade. See Figure 3.
 - a) Each new saw blade kit comes with a box of 50 bolts. Keep the extra bolts to reinstall a used blade after sharpening.

Figure 3: Saw Blade Specifications





3. Remove the saw blade and follow the below instructions to determine whether it should be discarded or kept for sharpening:

 CAUTION	
 	<p>CUT HAZARD.</p> <p>Saw blades are sharp. Wear gloves and eye protection when handling blade.</p>



- a) Measure the diameter of the blade from outside edge of tooth to outside edge of tooth. If the diameter is less than 19-1/2", discard it.

- b) If the diameter is greater than 19-1/2", place the saw blade in a safe location for sharpening.

4. Prepare the surfaces:

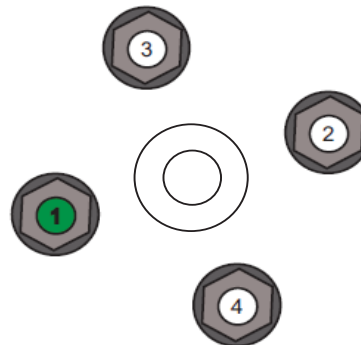
 WARNING	
	<p>Mounting surfaces and hardware must be clean and dry when installing saw blade.</p> <p>Dust, dirt, and lubrication may cause the blade to come loose, causing injury or death.</p>

- a) Blow off dust from the hub and the bolt threads. Remove all pitch and debris from threads.
 - b) Wipe down the mounting surface on the new saw blade and the hub. Use a 320-grit emery cloth, if necessary, to remove pitch.
 - c) Ensure all parts are clean, dry, and free of lubricants.
 - d) If using a used saw blade, measure its diameter from outside edge of tooth to outside edge of tooth. If the diameter is less than 19-1/2", or over 20", discard it.
5. Place the new or sharpened saw blade so the holes align with the holes in the hub and the teeth hook points upward. See Figure 3 for the correct orientation.

 WARNING	
	<p>Use ONLY the bolts described in Table 1.</p> <p>Use NEW bolts every time the blade is replaced.</p> <p>Do NOT use thread adhesive.</p> <p>TORQUE to specifications given in Figure 3!</p> <p>Ensure the bolts are fully embedded and flush against the saw blade surface.</p>

6. Using new bolts supplied in this kit, install all 4 bolts.
- Use the torque wrench and 3/8" 12-point socket and bolts listed in *Supplies Needed*.
 - Do NOT use thread adhesive.
 - Hand tighten all 4 bolts before using the torque wrench.
 - Using a torque wrench, tighten the bolts in the order shown in Figure 4 until they all reach the recommended torque of 40 ft-lb.

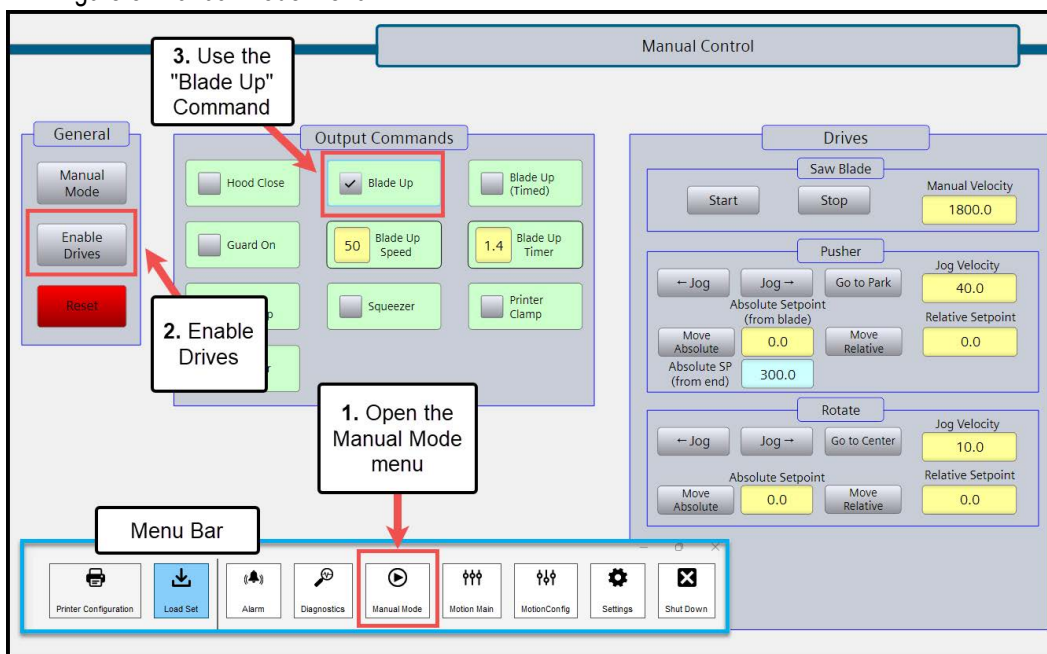
Figure 4: Tighten Saw Blade Bolts in This Pattern



A torque wrench should be calibrated on a yearly basis to ensure accuracy.

- Once properly torqued, all bolts should sit flush with the surface of the blade. If the bolts are protruding or skewed, repeat step 6 with new bolts.
7. By hand, carefully rotate the blade to observe its motion. It should not have any wobble or vibration when rotating.
 8. Close the saw chamber door.
 9. Power on machine:
 - a) Remove lockout/tagout and switch the disconnect switch to the ON position. See Figure 1.
 - b) Release the E-stop and clear any alarms.
 - c) Use the “Reset” button to resume operation.
 10. Open the manual mode menu using the button on the menu bar.
 - a) Select “Enable Drives” to start all drives.
 - b) Use the “Blade Up” command to bring the saw blade up through the table. Observe the saw blade motion. The saw blade should not have any wobble or vibration when rotating.

Figure 5: Manual Mode Menu



Check the saw blade every shift for the following and replace or repair when needed:

- Cracks, warping, missing or dull teeth, etc.
- Observe any wobble or vibration during rotation.
- Check that the bolts holding the blade to the hub are secure.

Specs for Sharpening the Saw Blade

Saw blades can be sharpened to significantly extend their life. They must be sharpened by a reputable blade sharpener that is familiar with carbide tips. It is important to meet the specifications etched into each saw blade. If any specification is not met, it can cause the saw blade to cut inefficiently, inaccurately, and/or rotate out of balance. The specifications are further defined in Table 2.

Table 2: Saw Blade Specifications

Spec Description	Dimension
Tip-to-tip diameter	495.3 mm min. (19-1/2" min.) 508 mm max. (20" max.)
Kerf (blade thickness)	4.57 mm (.180")
Z= qty of teeth	80
Ø = diameter of center hole	31.75 mm
SK = keyways	0
Hook	10°
Face angle	0°
Top angle	15°
Angle left-to-right (or right-to-left) of ATB*	10°
RPM max	3500 rpm
Model # of saw blade	as shown on saw blade
ATB	indicates an alternating top bevel
Serial # of saw blade	as shown on saw blade

* ATB = Alternating Top Bevel

END OF SERVICE BULLETIN