

MiTek Machinery

Service Bulletin

Product(s) Affected **Cyber[®], Cyber[®] A/T, SmartSet[®], SmartSet[®] Pro, EasySet[®], and CombiSet[®] Saws**

Description **Replacing a Saw Blade & Checking/Inspecting the Hub**



**TORQUE SPECS IN THIS DOCUMENT
SUPERCEDE AND REPLACE ALL PREVIOUS
SPECS AS OF SEPTEMBER 2024.**



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SB 120	
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Revised by	R. Tucker
Approved by	Samir Mehta
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Created by	R. Tucker

Purpose and Scope

When replacing a saw blade, follow this procedure to ensure that the bushing, hub, and blade are secure and safe to operate.

Parts and Supplies

The parts included in this kit are shown in Table 1. Please ensure all parts are present before starting this procedure.

Table 1: Parts in SB120 Kits

Qty.	Kit #	Part Name	Description	Part #
1	SB120KIT-A	Saw blade	16" (3-bolt)	811040
1	SB120KIT-B	Saw blade	20" (3-bolt)	811041
1	SB120KIT-C	Saw blade	Quad 5, 32" (6-bolt)	811042
1	SB120KIT-D	Saw blade	Quad 6, 32" (6-bolt)	811043
1	SB120KIT-E	5-blade set	811040 (2), 811041 (2), 811042 (1)	
1	SB120KIT-F	6-blade set	Kit E plus 811043 (1)	
1 box	All Kits	Set screws, 5/16-18x3/4"	50 screws per box	325210
1	All Kits	Service Bulletin 120	Document	SB120

Before beginning the procedure, gather these supplies:





- Saw blade and screws (A new saw blade and screws are included in this kit. If using a used blade, locate the extra screws that were sent with a previous kit.)
- Torque wrench and 1/4" socket head driver (Allen key)
- Large screwdriver or small pry bar
- 2 previously used set screws 5/16-18x3/4".
(These are the same as the screws used to hold the saw blade to the hub, but these must be discarded when procedure is complete as they may be damaged, so we suggest using old screws.)

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

Procedure



Lockout/Tagout Procedures



	 WARNING
	<p>ELECTROCUTION HAZARD!</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>All electrical work must be performed by a qualified electrician. If it is absolutely necessary to troubleshoot an energized machine, follow NFPA 70E for proper procedures and PPE.</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 here.

1. Engage an E-stop on the machine.
2. Turn the disconnect switch handle on the machine’s main electrical enclosure to the “off” position.

	 WARNING
	<p>ELECTROCUTION HAZARD.</p> <p>When the disconnect switch is off, there is still live power within the disconnect switch’s enclosure. Always turn off power at the building’s power source to the equipment before opening electrical enclosure!</p>

3. Attach a lock and tag that meets OSHA requirements for lockout/tagout.



Do NOT lockout the pneumatic air. It is required to hold the brake on which will assist in the procedure.

Procedure Overview

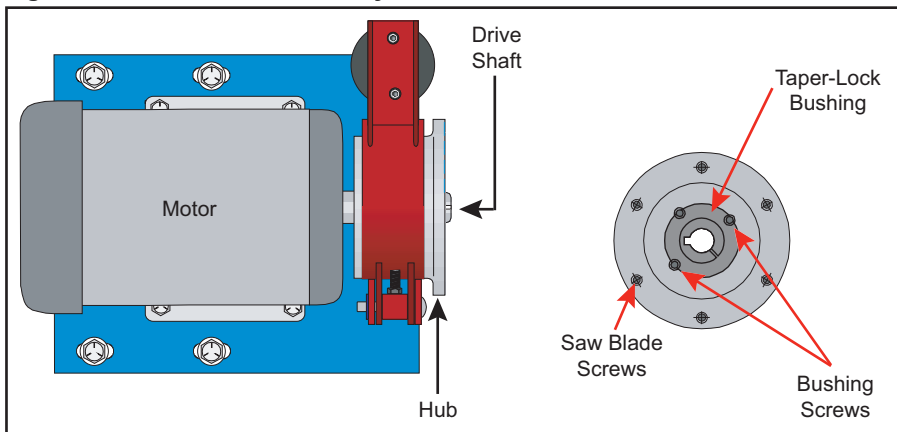
The drive shaft on the motor holds a saw hub. They are attached to each other with a taper-lock bushing and key stock in the center of the saw hub. The saw blades are then attached to the saw hub face. See Figure 1 for clarification.



This document covers the following topics in order to ensure a safe operating environment:

- Checking the tightness of all saw blade hub taper-lock bushings each time a saw blade is changed, or at least once a month as part of your monthly preventive maintenance.
- Inspecting the hub and bushing.
- Replacing the saw blade.

This procedure is valid only for the component saws listed on the title page.

Figure 1: Motor-Hub Assembly Shown Without a Saw Blade



	 WARNING
	<p>Failure to keep the saw blade hub securely attached to the motor may allow the blade or other parts to come off during operation, causing severe personal injury or death.</p>

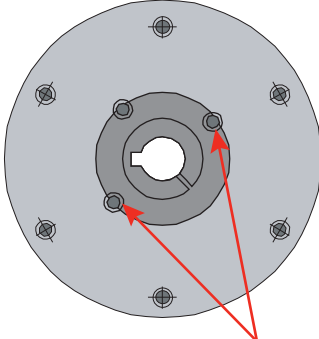
Checking the Tightness of the Bushing Screws

Re-torque the bushing screws connecting the hub to the motor shaft every time the saw blade is replaced, or at least once a month.



1. Set a torque wrench to the appropriate minimum and maximum settings as shown in Figure 2.

Figure 2: Torque for Bushing Screws

 <p style="text-align: center;">Bushing Screws</p>	TORQUE REQUIREMENTS	
	<p>5 - 7 hp motors: 175 - 193 in-lb 14.6 - 16.1 ft-lb 20-21 Nm</p> <p>10 -13 hp motors: 430 - 473 in-lb 35.8 - 39.4 ft-lb 49 - 53 Nm</p>	



2. Fasten two capscrews to the saw hub as shown in Figure 3. This will allow you to hold the hub still while tightening the bushing screws. Use extra screws that are intended for securing the blade, but discard the screws when done. They should never be used for securing a blade because they could become damaged during this process.

Figure 3: Hold the Hub Still While Adjusting the Bushing Screws



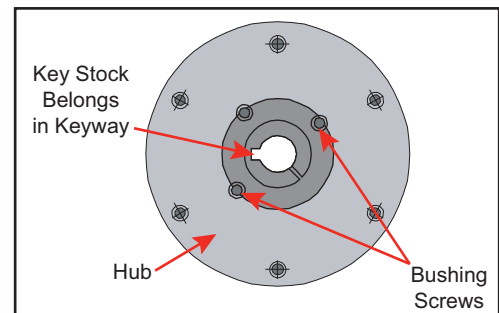
3. Hold the hub in place with the screwdriver while tightening the taper lock bushing with the torque wrench set to the appropriate settings, as shown in Figure 2.


Inspecting the Hub and Bushing

	 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>

1. Blow off dust from the hub and bolt threads.
2. Wipe down the mounting surface on the new saw blade and the hub.
3. Inspect the quality of the bushing screws.
4. Inspect the motor shaft end for damage.
5. Clean the hub surface and inspect for burrs and damage.
6. Ensure all parts are clean, dry, and free of lubricants.
7. Ensure the key stock is in the bushing keyway.

Figure 4: See the Inspection Steps



	 WARNING
	<p>Do not install saw blade if key stock is missing from keyway!</p>

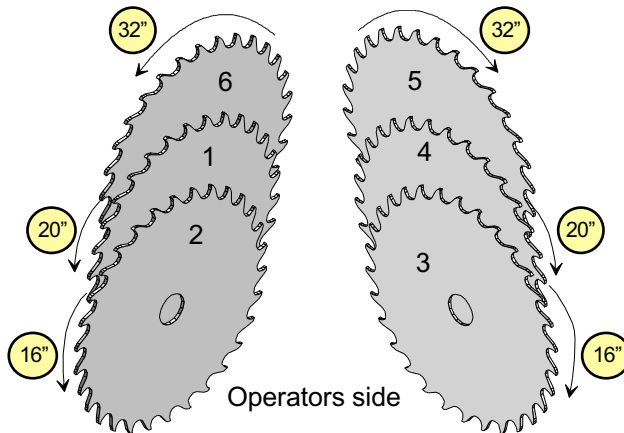
Replacing the Saw Blade

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



1. Turn off all power to the saw following approved lockout/tagout procedures, but leave the air on so the brakes will hold the hub in place.
2. Using an Allen wrench, remove the screws that attach the blade to the hub. Remove the saw blade and place in a safe place for sharpening or re-tipping.
3. Determine on which quadrant the new blade belongs as shown in Figure 5.
4. Place a new/resharpened saw blade so the holes are aligned with the holes in the hub. Ensure the teeth are facing the correct direction, as illustrated in Figure 5.

Figure 5: Quadrant Numbers, Blade Diameters, & Direction of Teeth
(View from infeed side of saw, with blade at 90 degrees.)



WARNING	
	<p>Use new screws every time the blade is replaced on the saw.</p> <p>Do NOT use thread adhesive.</p> <p>Torque to correct specifications!</p>

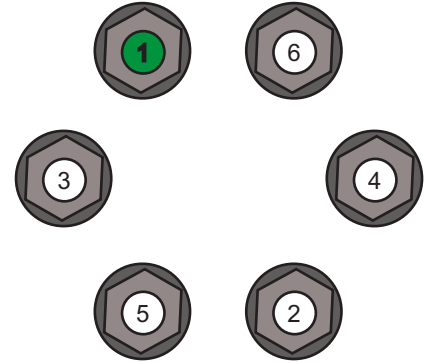


Use only 5/16-18x3/4" socket head cap screws of the same strength and specs as MiTek SB120 kits supply.

5. Using new screws obtained from MiTek with your last new component saw blade purchase, install all screws.

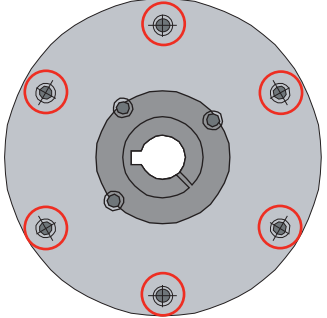
- a) Hand tighten all screws first.
- b) Using a torque wrench, tighten the screws until they all reach the recommended torque shown in Figure 7.
 - For 3-bolt blades, the order of torquing doesn't matter.
 - For 6-bolt blades, tighten the screws in the order shown in Figure 6.

Figure 6: Tighten 6-Bolt Blades in This Pattern



To prevent the screws from shearing off and causing serious injury, do **not** use thread adhesive.

Figure 7: Torque Specs for Saw Blade Screws



TORQUE REQUIREMENTS

216 - 240 in-lb
 18 - 20 ft-lb
 24.4 - 27.1 Nm

= Saw Blade Screws

- 6. Some blades are covered with a wax coating over the teeth to make them easier to handle and to protect the teeth from breakage during shipping. Peel off this coating before starting the blade.
- 7. Remove the lockout/tagout device and start the saw blade rotation to observe its motion. It should not have any wobble or vibration when rotating.

If there is unexpected movement in the saw blade, lockout/tagout and call MiTek Automation Support.



Check the saw blade weekly 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.

END OF SERVICE BULLETIN