

Using Your Saw

Using the Blade Guard

Using the blade guard is one of the most important steps you can take to prevent injury. Many table saw injuries occur when the blade guard is either not being used or not being used properly. The blade guard on your SawStop® saw was designed to have a narrow profile that allows you to use the guard even when making narrow rip cuts (see Fig. 53). As a result, there are only a few situations where the blade guard cannot be used (e.g., dado cuts, rabbet cuts, and extremely narrow cuts).

Install the blade guard as described on page 32. The side guards are mounted to the top guard so that they can pivot freely to automatically adjust to the height of the workpiece (up to 3 $\frac{1}{8}$ inches high).

The front of the top guard is formed into a wood stop that prevents wood that is too high to move through the blade guard from entering the guard (see Fig. 53).

The top guard can be placed in an upright position so that you can change the blade without removing the guard. Pull the top guard forward and then up, as shown in Fig. 54, to release it from the front of the spreader. The top guard may then be placed in an upright position, balanced against the spreader, as shown in Fig. 55. Once upright, the top guard may be removed from the spreader by lifting it up vertically as shown in Fig. 55. To reinstall the top guard in the spreader, reverse the process.

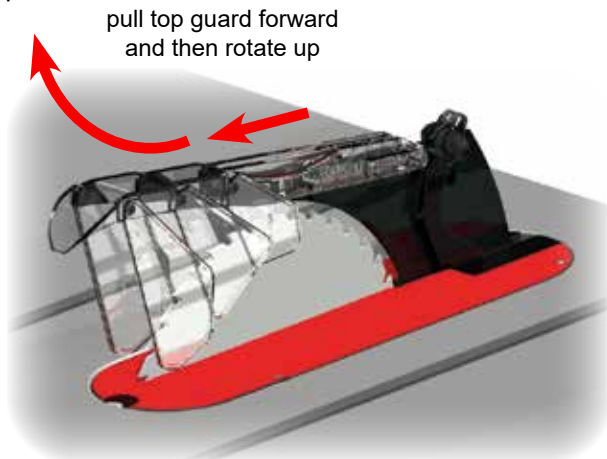


Fig. 54

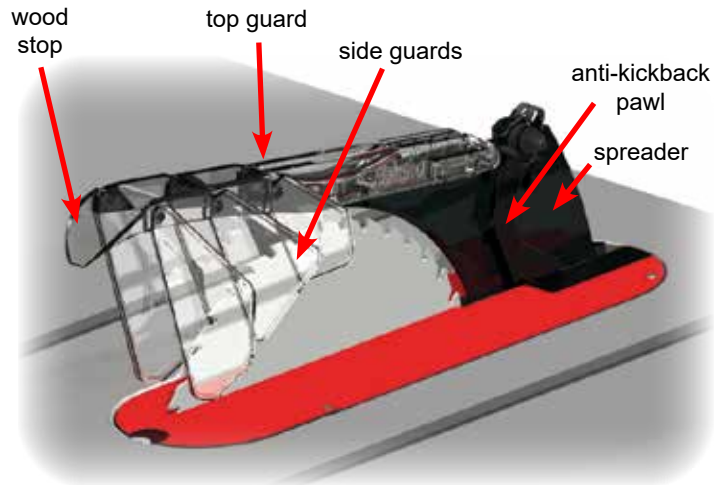


Fig. 53

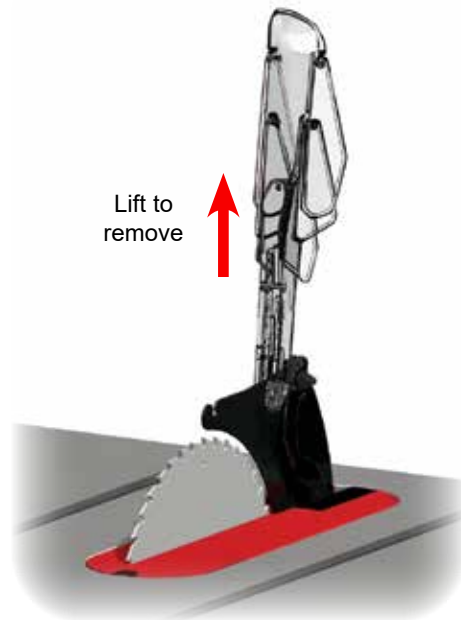


Fig. 55

WARNING! Use the blade guard for every operation for which it can be used, including all through-sawing. Note that since the spreader extends above the top of the blade it cannot be used as a riving knife, even if the top guard and the anti-kickback pawls are removed, as shown in Fig. 55 and 57).

Using Your Saw

The spreader helps minimize kickback by preventing a workpiece from pinching or shifting into the back of the blade. The spreader also supports a set of anti-kickback pawls to further minimize kickback.

In certain situations, such as cutting very soft wood, you may want to disable the anti-kickback pawls. The anti-kickback pawls may be disabled by rotating them up, as shown in Fig. 56. They will stay rotated up until you put them down again. Both anti-kickback pawls may be down together or up together, but they are not designed to be disabled independently.

The anti-kickback pawls may also be removed from the guard. To remove the anti-kickback pawls, hold both ends of the bolt that goes through the anti-kickback pawls and pull the bolt back to stretch the spring (see Fig. 57). Allow the anti-kickback pawls to rotate upwards as you stretch the spring (do not hold the anti-kickback pawls) then pull the bolt upwards to remove the anti-kickback pawl assembly (see Fig. 58).

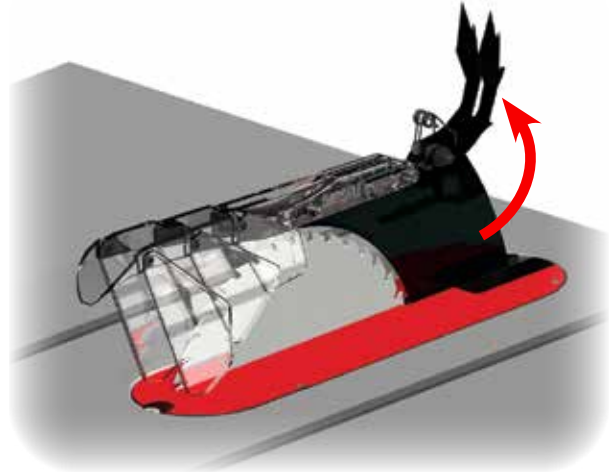


Fig. 56

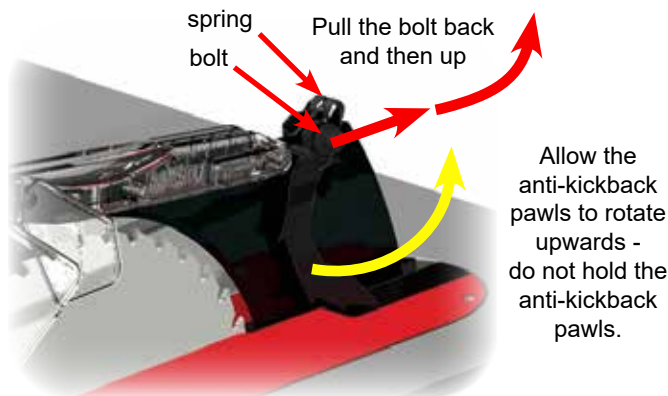


Fig. 57

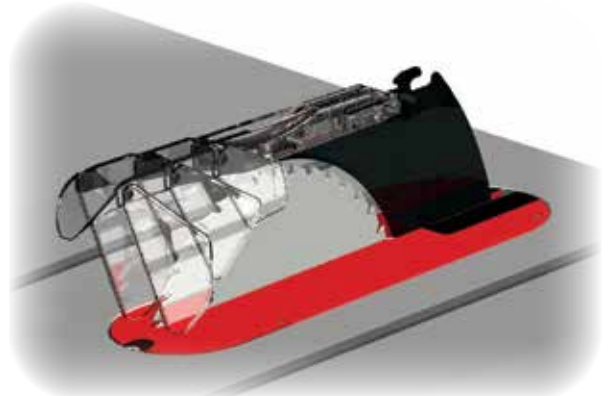


Fig. 58

To use the blade guard, set the blade elevation and tilt angle to the desired settings and, if necessary, install or swing down the top guard so that the side guards rest on the table or insert. Make sure the top guard is securely locked in place in the spreader before use.

Cut the workpiece as described beginning on page 51. The side guards will “float” on the top of the workpiece as the workpiece passes under the guard. The wood stop will prevent material that is taller than the height of the blade from entering the blade guard. The top guard and side guards are constructed of clear polycarbonate to allow you to clearly see the blade and the workpiece as it passes under the guard. After making the cut, the cut-off portion of the workpiece may be held beneath one of the anti-kickback pawls. In this case, turn off the motor and wait until the blade stops before pushing the cut-off portion past the anti-kickback pawl.

Keep the guard clean and free of dust to allow unobstructed viewing of the blade and workpiece. For successful operation, the spreader must remain flat, and the side guards and anti-kickback pawls must pivot freely. If any portion of the blade guard ceases to function properly, replace or repair it before continuing to use the saw. When not in use, the blade guard can be stored by hanging it on one of the storage pins on the left side of the saw (see Fig. 60 on page 49).

Using Your Saw

Using the Riving Knife

To use the riving knife, remove the blade guard and install the riving knife as described on page 32. The riving knife should be used whenever the blade guard cannot be used (see Fig. 59). The only operations where neither the blade guard nor the riving knife can be used are operations such as making dado cuts. When the riving knife is properly aligned, it will be positioned below the top of the blade and inside the kerf of the blade. As a result, the riving knife can be used even for rabbet cuts and other non-through cuts.

For successful operation, the riving knife must remain flat so that the full height of the riving knife is positioned inside the kerf of the blade. In the event the riving knife becomes bent, replace or straighten it before continuing to use it. When not in use, the riving knife can be stored by hanging it on one of the storage pins on the left side of the saw (see Fig. 24 on page 26).



Fig. 59

WARNING! Use the riving knife for every operation where the blade guard cannot be used. Neither the blade guard nor the riving knife can be used when making dado cuts.

Using the Miter Gauge

The miter gauge included with your saw allows you to make miter cuts and cross-cuts (cuts across the grain of the wood). When not in use, the miter gauge can be stored by hanging it on one of the storage pins on the left side of the saw (see Fig. 60).

The main bar of the miter gauge fits in the T-shaped slots in the table (see Fig. 23 on page 26). There is one slot on each side of the blade and the miter gauge can be used in either slot. However, do not use the miter gauge in the slot on the left of the blade when making bevel cuts. Positioning the miter gauge in the left slot when making bevel cuts causes the blade to be tilted toward the miter gauge and the operator's hand which could result in a serious injury.



Fig. 60

Using Your Saw

The face of the miter gauge can be adjusted between -60° and $+60^{\circ}$ relative to the blade. To adjust the miter angle, turn the handle counter-clockwise approximately $\frac{1}{2}$ turn to unlock the miter gauge head (see Fig. 61). Pull the indexing pin out until it stops, and then rotate the head until the indicator is positioned over the desired angle on the miter gauge scale. Use an angle gauge to set the angle between the miter gauge head and the blade if precise alignment is needed. Once the angle is correct, turn the handle clockwise to lock the miter gauge head.

Adjustable index stops at -45° , 0° , and $+45^{\circ}$ are provided to allow quick and precise alignment at those angles. To use the index stops, rotate the miter gauge head until the angle indicator reads approximately 5° higher (more positive) than the desired angle, and then push the indexing pin forward until it stops. Next, rotate the miter gauge head counter-clockwise until the index stop hits the indexing pin, and then tighten the handle to lock the gauge at the desired angle. The index stops are preset at the factory to be within $\pm 0.5^{\circ}$ of the true angle, so further adjustment should not be necessary. If you wish to adjust the index stops, see page 74 for instructions.

For added safety, an optional wood face can be mounted to the miter gauge face to provide additional support when cutting large or small workpieces. To mount the face, use wood screws with shanks sized to fit through the slots in the miter gauge head. The wood face should be at least 1 inch higher than the maximum depth of cut, and should extend beyond the edges of the miter gauge head.

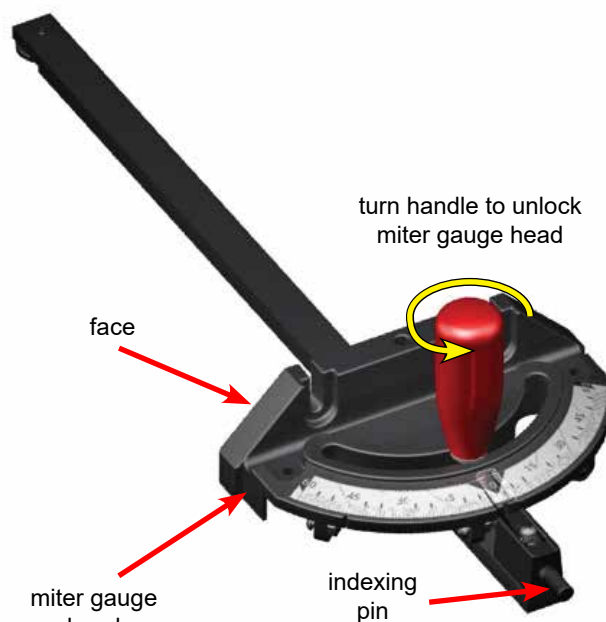


Fig. 61

When using the miter gauge, start with the workpiece and miter gauge well in front of the blade. Grip the miter gauge handle with the hand closest to the blade, and place your other hand on the workpiece opposite the blade (see Fig. 62 and 63 on page 51). Make sure the workpiece is held squarely and firmly against the miter gauge face and the table. Move the miter gauge and workpiece slowly and smoothly past the blade. For through-cuts, shift the workpiece slightly away from the blade before pulling the miter gauge and workpiece back toward the front of the saw. Do not touch the portion of the workpiece that was cut off until the blade stopped.

WARNING! Never make free-hand cuts. Never hold or touch an unsupported piece of wood while the blade is spinning.

Using Your Saw

Cross-Cutting

Cross-cutting (cutting perpendicular to the grain of the workpiece) is performed using the miter gauge. To lessen the risk of kickback, the rip fence should be removed or positioned so that it does not contact the workpiece during cross-cutting.

To begin, make sure the motor is off and the blade is completely stopped. Tilt the blade to the desired tilt angle and adjust the blade elevation to about $\frac{1}{8}$ inch above the workpiece. Place the miter gauge in the right miter slot for bevel cuts, or in either the right or left miter slots for making non-bevel cuts (see Fig. . Adjust the miter gauge to the desired miter angle (see page 50).

Position the workpiece against the miter gauge head and slowly push the miter gauge toward the non-spinning blade until the workpiece is almost touching the blade. Next, slide the workpiece to the left or right until the blade is aligned with the point on the workpiece to be cut. Pull the miter gauge and workpiece back away from the blade before starting the motor.

Once the motor reaches full speed, you can begin your cut. Holding the miter gauge and workpiece firmly, move the miter gauge and workpiece slowly and smoothly past the blade.



Fig. 62



Fig. 63

WARNING! To reduce the potential for kickback and a serious injury, move the rip fence out of contact with the workpiece when cross-cutting to prevent the workpiece from binding between the rip fence and the blade.

Using Your Saw

Using a Fence

You must install a rip fence prior to making rip cuts with the saw.

The **SawStop® Contractor Fence Assembly** is designed specifically for your saw (see Fig. 64). It includes an aluminum extrusion fence with non-conductive face plates, front and rear rails, a workpiece support, and dual cursors that allow the fence to be used on either side of the blade.



Fig. 64

The **SawStop® T-Glide™ Fence System - Professional Series** is another fence system designed specifically for your saw (see Fig. 65). It is the best fence system available in the industry. The fence is constructed from heavy-duty steel tubing for maximum rigidity and includes high-quality, non-conductive face plates that maintain their flatness over time. The system also includes steel front and rear rails, a steel clamp tube, and SawStop's proprietary design that makes the fence slide smoothly. This fence system can be used with optional 36 or 52 inch extension tables.

You can learn more about the **SawStop®** fence systems from an authorized SawStop distributor or at www.sawstop.com.



Fig. 65

Using Your Saw

Rip Cutting

Rip cutting or cutting with the grain of the workpiece must be performed with a rip fence to support and guide the workpiece. The miter gauge should not be used when making rip cuts. The blade guard should be used for all through cuts.

To begin, make sure the motor is off and the blade is completely stopped. Tilt the blade to the desired tilt angle and adjust the blade elevation to about $\frac{1}{8}$ inch above the workpiece. Position the rip fence for the desired rip width and lock the fence in place. Refer to the owner's manual that accompanied your rip fence for instructions on using your fence.



Fig. 66

WARNING! A rip fence must always be used when making rip cuts. Never perform a ripping operation freehand or a serious injury may result.

Position the workpiece flat on the table and flush against the side of the rip fence. Turn on the motor. Use both hands to push the workpiece smoothly toward the blade, as shown in Fig. 66. It is important to always maintain at least 6 inches between your hands and the blade. If your hand that is closest to the blade comes within 6 inches of the blade, remove that hand from the workpiece and continue the cut using the hand that is closest to the fence or with both hands near the fence (see Fig. 67). If your hand closest to the fence also comes within 6 inches of the blade, remove that hand and use a push stick to finish the cut. A push stick is a tool that is used to push the work piece forward to make a cut while allowing the user to keep their hands at a safe distance from the blade. (See page 82 for instructions on making a push stick.)



Fig. 67

WARNING! To reduce the chance of a serious injury, always use a push stick or push block when your hand comes within 6 inches of the blade.

Using Your Saw

When using a push stick to feed your workpiece toward the blade, it can be difficult to maintain the position of the workpiece flush against the side of the rip fence. In these situations, use a featherboard to hold the workpiece against the fence (see page 85 for making a featherboard). Clamp the featherboard to the top of the table against the side of the workpiece opposite the rip fence to hold the workpiece flush against the fence (see Fig. 68).

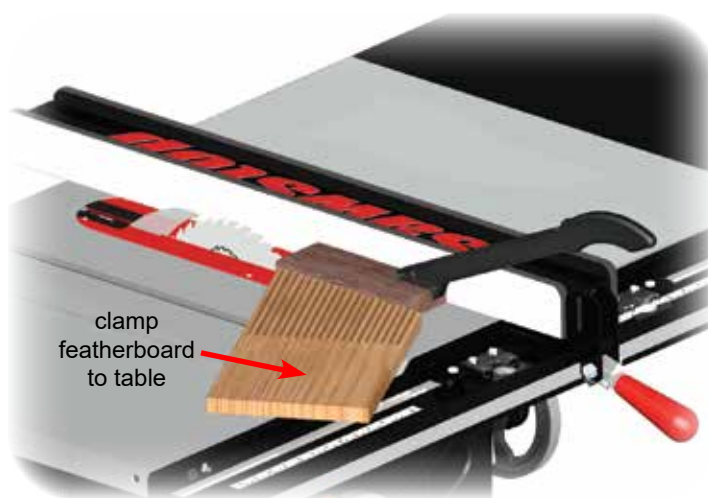


Fig. 68

If your cut requires the fence to be positioned too close to the blade to use a push stick, use an auxiliary fence and a push block to make the cut. (See pages 83 and 84 for instructions on making an auxiliary fence and a push block.) In this case, clamp the auxiliary fence to the rip fence and slide the workpiece along the auxiliary fence. When your hand comes within 6 inches of the blade, remove your hand from the workpiece and finish the cut using the push block.

Continue pushing the workpiece toward the back of the saw until it clears the anti-kickback pawls on the spreader. Turn off the motor. Do not attempt to remove the cut-off portion until the blade has come to a complete stop.

When ripping pieces longer than approximately 4 feet, use rollers, an out-feed table or a similar support to prevent the workpiece from dropping off the back of the table. See page 57 for more information on out-feed tables.

When making non-through cuts, the blade guard and spreader must be removed. For these cuts, install the riving knife (except when making dado cuts) and use one or more featherboards to hold down the workpiece and help prevent kickback. (See page 85 for instructions on making a featherboard.) The featherboard should be clamped to the rip fence.

Alternatively, the featherboard can be clamped to an extender board that is clamped to the rip fence as shown in Fig. 69. Although not shown in the illustration, a second featherboard can be clamped to the top of the table and against the left side of the workpiece to hold the workpiece against the rip fence.



Fig. 69

Using Your Saw

Using the Saw in Bypass Mode

If you need to cut electrically conductive materials such as aluminum with this saw, you must operate the saw in Bypass Mode to prevent the brake from activating. In order to operate the saw in Bypass Mode, the safety system requires you to follow the procedure below to ensure that the saw is never placed in Bypass Mode accidentally. If you are unsure whether a particular material is conductive, you can use the Material Conductivity Test described on page 46.

Note: the saw will not start in Bypass Mode unless the brake cartridge is properly installed and all error codes are cleared. It is not possible to “override” an error by starting the saw in Bypass Mode.

To Operate the Saw in Bypass Mode

- Make sure the Start/Stop paddle is in the OFF position and then switch the Main Power switch to ON. Wait until the safety system completes the initialization routine and the system status code indicates the saw is ready for operation.
- Turn the Bypass Key clockwise and hold it for at least 1 second (see Fig. 70). The green LED will begin blinking slowly and the red LED will flash once to let you know when the 1 second has elapsed.

Note: to prevent unauthorized use of the saw in Bypass Mode, remove the Bypass Key from the saw when not in use.

- While still holding the Bypass Key turned, pull the Start/Stop paddle out to the ON position. The blade will start to spin.
- Continue to hold the Bypass Key turned for at least 1 second after the motor starts—the red LED will flash once again to let you know when the 1 second elapses. If you release the Bypass key before 1 second has elapsed, the motor will stop and the “Push Start/Stop Paddle to OFF” error code will be displayed. If this happens, switch the Start/Stop paddle to OFF and repeat this procedure from the beginning.
- When you have completed your cut, push the Start/Stop paddle in to turn off the motor. The safety system will remain in Bypass Mode until the blade comes to a complete stop. Once the blade has stopped, the safety system returns to normal Standby Mode. The next time you start the motor, the safety system will be active unless you repeat the procedure described above to start the motor in Bypass Mode.

WARNING! Never run the saw in Bypass Mode unless necessary to cut conductive materials. The brake system will not activate when the saw is in Bypass Mode and a serious injury could result.

CAUTION! Always check the saw blade after cutting conductive materials. Sometimes a shard of aluminum or other conductive material will become embedded on the end of a saw blade tooth. If that occurs and the saw is started, then the shard could contact the aluminum brake pawl and cause the brake to activate.

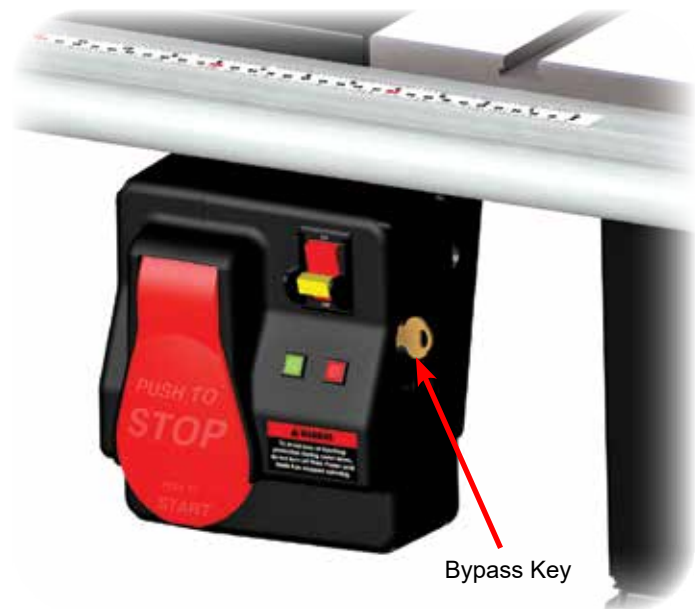


Fig. 70

Using Your Saw

Using a Mobile Base

The Contractor Saw is a stationary saw. In many situations it is important to be able to move the stationary saw from one location to another. For example, you may want to store the stationary saw against a wall in your workshop and then move it away from the wall to use it. SawStop offers an optional mobile base that allows you to reposition your stationary saw with ease.

The SawStop® Contractor Saw Mobile Base is designed specifically for your saw (see Fig. 71). It attaches to the stand and automatically lifts the saw onto the wheels when you step on a lever. When the wheels are down, you can roll the saw from one location to another. Stepping on a release will then raise the wheels and lower the saw back onto its feet.



Fig. 71

Using Your Saw

Using an Out-Feed Table

You should use an out-feed table to support your work when cutting pieces longer than approximately 4 feet. The out-feed table attaches flush against the back edge of your saw and prevents your workpiece from dropping off the back of your saw during cutting.

The *SawStop*® Out-Feed Table is designed specifically for use with the T-Glide™ Fence System - Professional Series (see Fig. 73). It does not attach to the *SawStop*® Contractor Fence Assembly.



Fig. 73

You can learn more about the *SawStop*® Out-Feed Table from an authorized *SawStop* distributor or at www.sawstop.com.

The SawStop® Brake Cartridge

The SawStop® brake cartridge (shown in Fig. 74) includes a sealed housing containing the SawStop® system electronics, and an aluminum block called a brake pawl. The sealed housing also includes a high-speed actuator that pushes the brake pawl into the teeth of the saw blade in the event accidental contact is detected.

Like any electronic component, brake cartridges should be handled with care. Store brake cartridges in a safe, dry place when not in use. Do not drop, hit or otherwise subject brake cartridges to abuse as this may damage the cartridge. In addition, the high speed actuator could be unexpectedly triggered due to damage, thereby causing the brake pawl to be pushed away from the housing at very high speed and with a large amount of force.

The brake cartridge must be changed in the event the brake is activated. The brake cartridge must also be changed whenever swapping between 10 inch standard blades and dado sets. For dado cuts, the optional dado brake cartridge must be installed (see Fig. 75). The SawStop® dado cartridge is identical to the standard brake cartridge with the exception of the brake pawl. The dado brake pawl is larger than the standard brake pawl to accommodate the width and diameter of 8 inch dado sets. Other size dado sets or standard 10 inch blades are not compatible with the 8 inch dado cartridge.

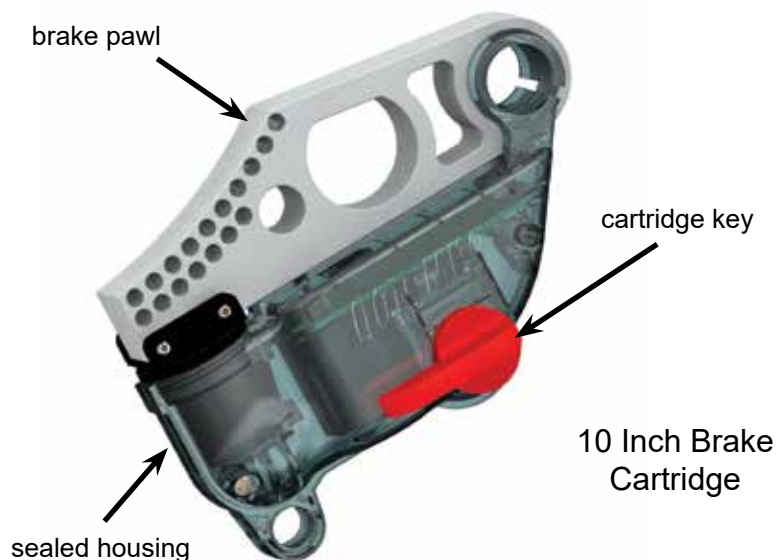


Fig. 74

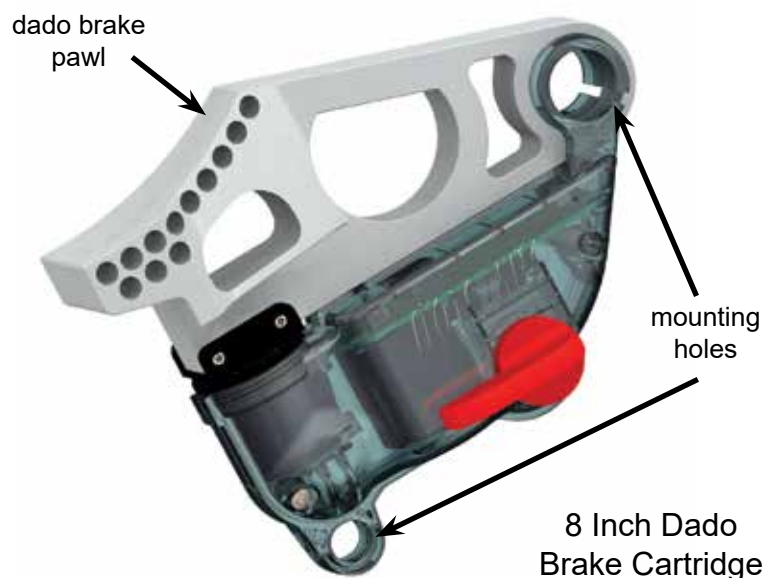


Fig. 75

WARNING! Never drop or otherwise subject a brake cartridge to misuse as this may damage the brake cartridge and potentially cause the brake pawl to be released unexpectedly and result in a serious injury.

The SawStop® Brake Cartridge

Changing the Brake Cartridge

Changing the brake cartridge is both simple and foolproof. The safety system will not allow the motor to start unless the brake cartridge is correctly installed. Before changing the brake cartridge, make sure the Start/Stop paddle is pushed in to the *OFF* position, the main power switch is toggled down to the *OFF* position, and the power cord is unplugged.

The brake cartridge is mounted beneath the table and behind the blade (see Fig. 76). To change the cartridge, begin by setting the tilt angle to about 0° and raising the blade elevation to the maximum height. This allows the easiest access to the brake cartridge.

Next, remove the table insert from the table (see page 28). Rotate the blade guard clamping handle fully upward to provide clearance for removing the brake cartridge.

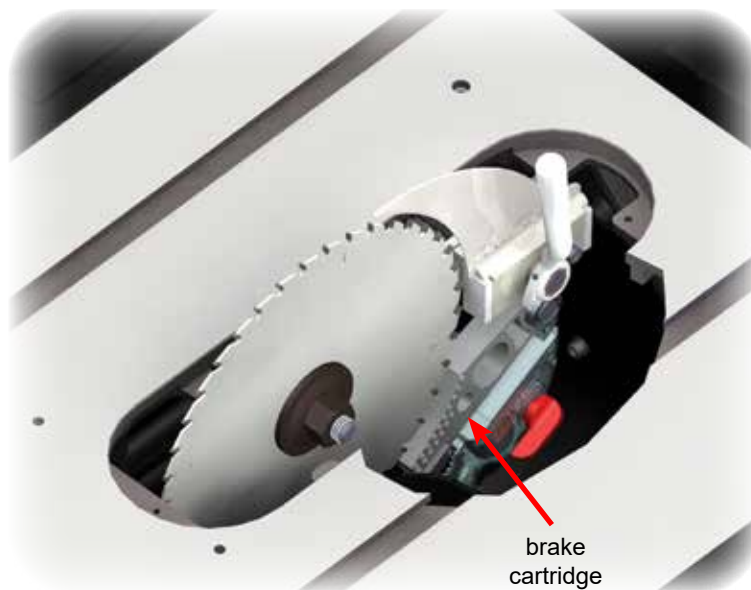
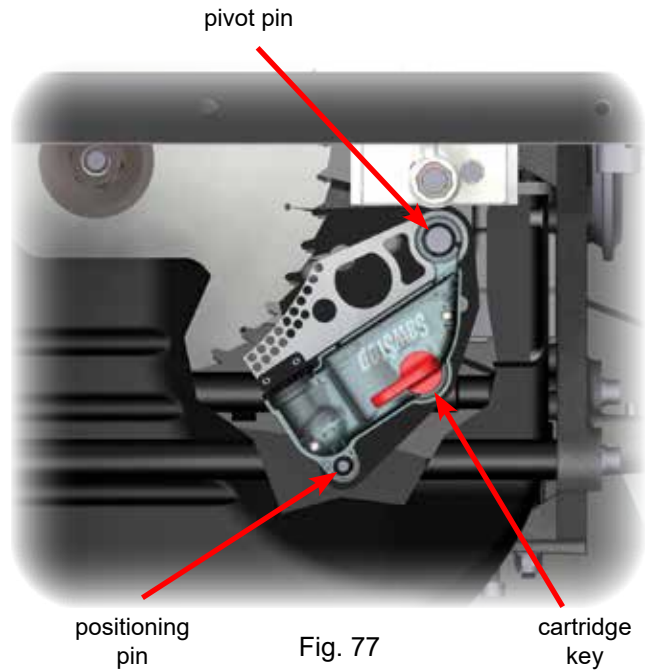


Fig. 76

WARNING! Always turn off the main power switch and unplug the power cord before removing or installing the brake cartridge on your saw.

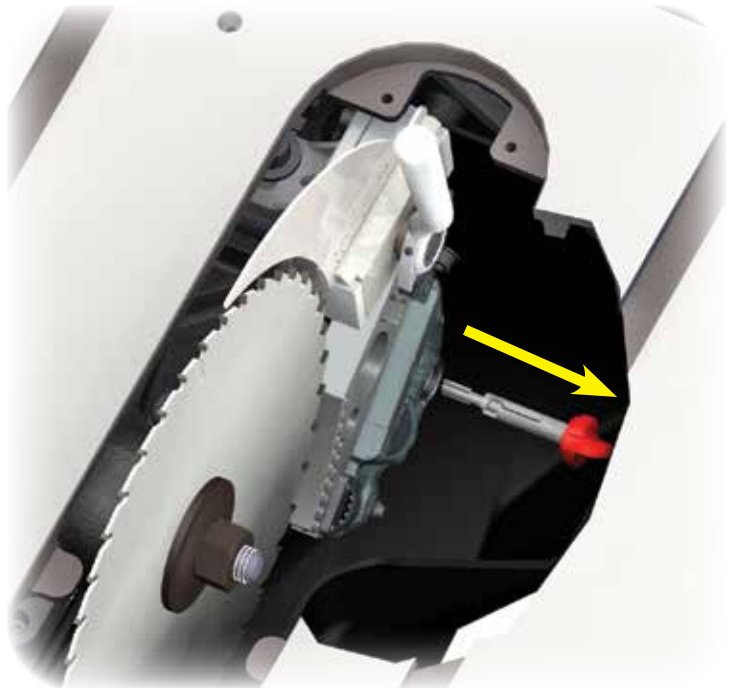
The SawStop® Brake Cartridge

The brake cartridge is mounted on a large pivot pin and a smaller positioning pin as shown in Fig. 77. Both the pivot pin and positioning pin extend outward from a cartridge mounting bracket that sets the position of the cartridge. The cartridge mounting bracket also holds a computer cable that self-aligns to the computer connector in the side of the cartridge. A cartridge key is used to lock the brake cartridge in place against the cartridge mounting bracket.



To remove the cartridge, first remove the cartridge key by turning it 90° clockwise and then pulling it away from the cartridge (see Fig. 78). Set the cartridge key aside for use with the new cartridge.

It may take a small amount of force to turn the key and pull it out. Make sure you turn the key a full 90°, as the key cannot be pulled out unless it has been fully rotated.



The SawStop® Brake Cartridge

If the brake cartridge has not been activated, slide the brake cartridge to the right until it clears both pins as shown in Fig. 79.

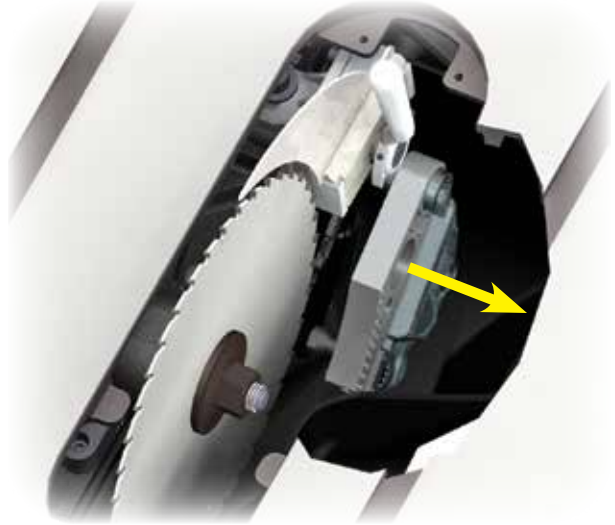


Fig. 79

If the cartridge has been activated, the brake pawl typically will be locked onto the blade or dado set. As a result, it is usually easiest to remove the blade and the brake cartridge together. To remove the cartridge and blade together, first remove the blade nut and washer, and then remove the cartridge key by turning it 90° clockwise and pulling it away from the cartridge (see Fig. 78). You can remove the blade and brake cartridge simultaneously by alternately moving the blade and then the cartridge to the right to “walk” them off the arbor and pins. Often you can “walk” them to the right by hand, but if not, you can use a blade wrench as a lever. To do this, place one end of the wrench between the blade and the side of the arbor block, and then push the blade a short distance away from the arbor flange (see Fig. 80). Then place the end of the wrench between the brake pawl and the cartridge mounting bracket to pry the cartridge away from the arbor block a short distance (see Fig. 81). Only move the blade and cartridge a short distance each step, for example, a distance equal to one or two threads on the arbor. Otherwise the brake cartridge may bind on the arbor and pivot pin. Repeat these steps to walk the cartridge and blade off. A significant force may be needed to pry the cartridge off the mounting pin if the brake pawl deformed and pinched the pivot pin when it stopped the blade.



Fig. 80



Fig. 81

The SawStop® Brake Cartridge

Installing a Brake Cartridge

WARNING! Always turn off the main power switch and unplug the power cord before removing or installing the brake cartridge on your saw.

To install a brake cartridge, the above process is reversed. Align the mounting holes in the cartridge with the pivot pin and positioning pin in the saw. Slide the cartridge onto the pins until the cartridge rests against the mounting bracket. The cartridge will automatically align with a computer cable mounted in the saw.

Next, insert the cartridge key into the hole in the cartridge housing (see Fig. 78 on page 60). The key shaft has a ridge that must be aligned with a channel in the hole. As a result, the key can only be inserted into the hole when the red handle is pointing toward the brake pawl. Insert the key fully into the hole and rotate the key 90° counter-clockwise to lock the cartridge in place. The key will not rotate unless it is fully seated against the side of the cartridge housing and the cartridge housing is pressed against the cartridge mounting bracket.

Once the key is rotated to its locked position, it cannot be removed and the cartridge will be locked in place. Rotating the key to the locked position also actuates a switch inside the cartridge that signals to the safety system that the cartridge is correctly installed and locked in place. The system will not allow the saw to start if the switch is not actuated. If you attempt to turn on the saw when the key is not in the locked position, the LED lights on the switch box will flash a status code indicating the key should be turned to *ON*. Turning the key to *ON* means turning the key to the locked position.

To complete the installation, the brake cartridge must be correctly positioned relative to the blade or dado set. Once the brake cartridge is installed, fully rotate the blade guard clamping handle counter-clockwise to lock the spreader or riving knife in place. Next, install the blade or dado set as described on page 29, and adjust the brake position as described on page 30. Rotate the blade by hand at least one complete revolution to ensure that the blade does not contact the brake.

WARNING! Always check, and if necessary, adjust the position of the brake after changing the brake cartridge or the blade. An improperly positioned brake could increase the time required to stop the blade in the event of accidental contact, or cause the brake to actuate unexpectedly if the blade comes into contact with the brake.

What to do if the SawStop® Safety System Activates

When the SawStop® safety system is activated, the brake pawl will be pushed into the blade to stop its rotation. If the blade is spinning at a significant speed, the arbor block will retract to lower the blade below the table. Both of these actions will occur within just a few milliseconds. In addition, the safety system will turn off the motor and display the “Replace Cartridge” system status code on the LED lights on the switch box (see page 44).

Once the safety brake is activated, you will need to carry out the 3 steps described below to reset the safety system and the saw before continuing to use the saw.

1. **Reset the Retraction of the Arbor Block:** During normal use, the arbor block is held in place by a spring-loaded support mechanism called the retraction bracket. When the brake is activated, the angular momentum of the spinning blade is transferred to the arbor block, causing it to drop out of the retraction bracket.

To reset the arbor block into the retraction bracket, fully lower the blade by turning the elevation hand wheel counter-clockwise until the lower elevation limit stop is reached. The arbor block will automatically engage the support mechanism. Now turn the elevation hand wheel clockwise to raise the arbor block and blade.

2. **Replace the Brake Cartridge:** The SawStop® brake cartridge must be replaced in the event the brake is activated. The brake pawl and components inside the sealed housing are expended when the brake is activated. Therefore, the brake cartridge cannot be reused after the brake is activated and it may be discarded or returned to SawStop. Once the activated cartridge has been removed, obtain another brake cartridge that has not been activated and follow the instructions on page 62 to install it.

If the brake activated due to accidental contact between the blade and an operator, please return the cartridge to SawStop. During use the cartridge is constantly measuring data about the operation of the saw and the signal received from the blade. When the brake is activated, the most recent data is stored into memory and SawStop can download the data from the activated cartridge. This data is very important to our continuing research and development program. Therefore, contact SawStop to arrange shipment of the cartridge back to SawStop. Once SawStop’s engineers verify the brake activated due to accidental skin contact, you will receive a replacement cartridge free of charge.

If you are unsure why the cartridge activated, you can return the cartridge to SawStop for analysis by SawStop’s service engineers. When the cartridge data is downloaded, it is usually possible to determine what caused the brake to activate so that further unintended activations can be prevented.

WARNING! Always turn off the main power switch and unplug the power cord before replacing the brake cartridge on your saw.

3. **Change the Blade:** When the brake is activated the aluminum brake pawl will pivot into the teeth of the saw blade with a large amount of force and speed. This usually causes the brake pawl to lock-up on the blade. If you remove the brake pawl from the blade, one or more of the carbide teeth on the blade will usually be pulled off. Therefore, it is almost always necessary to replace or repair the blade after the safety system has been activated.

Once the retraction of the arbor block has been reset and the brake cartridge and blade have been replaced, the saw is ready for operation.

Making Adjustments to Your Saw

Adjusting the Elevation Limit Stops

The upper elevation limit stop prevents the arbor block and the motor belt from hitting the underside of the table. The lower elevation limit stop prevents the arbor block or blade from hitting the lower trunnion assembly and dust shroud. The elevation limit stops must be adjusted correctly to ensure proper operation of the saw.

WARNING! Always turn off the main power switch and unplug the power cord before making any adjustments to your saw.

Upper Elevation Limit Stop

To check the position of the upper elevation limit stop, set the blade tilt to 0°, install a 10 inch saw blade on the arbor (see page 29), and turn the elevation handwheel clockwise until the limit stop is reached. Using a combination square or similar tool, measure the distance from the top of the table to the tip of the highest tooth on the blade (see Fig. 82). The maximum height of the blade above the table should be $3\frac{1}{8}$ inches. If the blade is $3\frac{3}{16}$ inches or higher above the table, the upper elevation limit stop should be adjusted downward. If the blade is less than $3\frac{1}{8}$ inches above the table, you can adjust the limit stop upward to $3\frac{1}{8}$ inches. Alternatively, you can adjust the limit stop so that the maximum blade height is lower than $3\frac{1}{8}$ inches.



Fig. 82

The upper elevation limit stop is fixed by the set screw in the cast iron table top located to the left of the rear of the table opening (see Fig. 83). The upper elevation limit bolt can be adjusted with the included 3 mm hex key.

To lower the maximum blade elevation, adjust the elevation handwheel until the blade elevation is set to the correct maximum height. Thread the set screw in clockwise until it is tight. To raise the maximum blade elevation, begin by turning the set screw counter-clockwise about one complete revolution. Then, adjust the elevation handwheel until the blade elevation is set to the correct maximum height. If the upper elevation limit stop prevents you from raising the blade to the desired maximum elevation, continue to turn the set screw counter-clockwise until the blade can be raised to the correct elevation. Once the blade is set to the correct maximum elevation, turn the set screw clockwise until it is tight. The upper elevation limit has now been set.

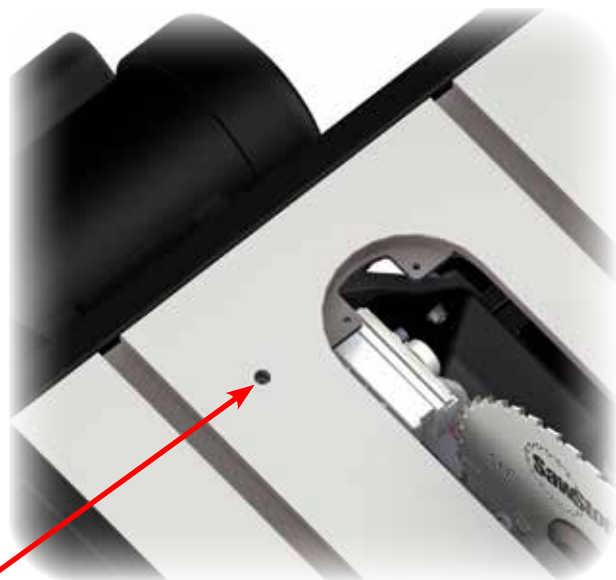


Fig. 83

Making Adjustments to Your Saw

Lower Elevation Limit Stop

To check the position of the lower elevation limit stop, turn the elevation handwheel counter-clockwise until the blade is lowered all the way. The top of the blade should be approximately $\frac{1}{8}$ inch below the table top surface. If the distance is approximately $\frac{1}{8}$ inch, no further adjustment is necessary.

If adjustment is necessary, the lower elevation limit stop is fixed by the M6 socket head screw on the bottom of the rear trunnion (see Fig. 84). The head of the lower elevation limit screw is painted yellow to make it easier to locate. Loosen the M6 hex nut that locks the position of the limit screw by rotating it counter-clockwise with a 10 mm wrench. Next, thread the lower elevation screw out counter-clockwise with the included 5 mm hex key at least two complete revolutions. Then turn the elevation handwheel counter-clockwise until the arbor slightly compresses the rubber bumper (see Fig. 85).

The purpose of the rubber bumper is to absorb the energy of the arbor block when the blade retracts below the table upon activation of the safety system. As shown in Fig. 85, the lower elevation limit stop should be adjusted so that the arbor block slightly compresses the bumper at the lowest elevation. This should also ensure that a 10 inch blade is at least $\frac{1}{8}$ inch below the top of the table.

Verify that the top of the blade is approximately $\frac{1}{8}$ inch below the table top surface. Thread the lower elevation screw in clockwise until it is tight and then lock its position by tightening the M6 hex nut against the rear trunnion. The lower elevation limit has now been set.



lower elevation
limit stop

Fig. 84

M6 hex nut

arbor block



rubber
bumper

Fig. 85

Making Adjustments to Your Saw

Adjusting the Tilt Limit Stops and Tilt Angle Indicator

The tilt limit stops allow you to easily and quickly set the bevel angle to 0° and 45°. However, when making precision cuts, it is always best to check the angle of the blade with a combination square or similar tool.

WARNING! Always turn off the main power switch and unplug the power cord before making any adjustments to your saw.

0° Tilt Limit Stop

To check the position of the 0° limit stop, install a 10 inch saw blade on the arbor (see page 29). Raise the blade to its full elevation, and turn the tilt handwheel counter-clockwise until the limit stop is reached. Using a square, check to see that the blade is at a 90° angle to the table (see Fig. 86). If you need to adjust the position of the 0° limit stop follow the instructions below.



Fig. 86

The 0° tilt limit stop is determined by the set screw in the cast iron table top located to the left of the front of the table opening. (see Fig. 87). Use the included 3 mm hex key to turn the screw counter-clockwise several turns.

Next, adjust the tilt handwheel until the blade is at 90° to the table. Turn the 0° limit set screw clockwise until it is tight. The 0° limit stop has now been set.

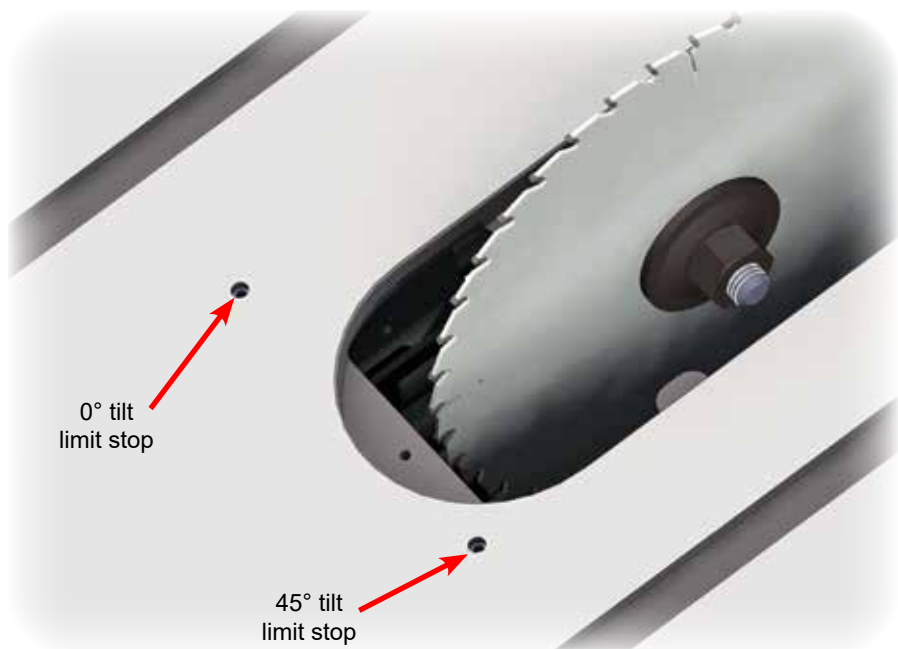


Fig. 87

Making Adjustments to Your Saw

45° Tilt Limit Stop

To check the position of the 45° limit stop, install a 10 inch saw blade on the arbor (see page 29). Raise the blade to its full elevation, and turn the tilt hand wheel clockwise until the limit stop is reached. Using a combination square, check to see that the blade is at a 45° angle to the table (see Fig. 88). If you need to adjust the position of the 45° limit stop follow the instructions below.

The 45° tilt limit stop is determined by the set screw in the cast iron table top located to the right of the front of the table opening (see Fig. 87). Use the included 3 mm hex key to turn the screw counter-clockwise several turns.

Next, adjust the tilt hand wheel until the blade is at 45° to the table. Turn the 45° limit set screw clockwise until it is tight. The 45° limit stop has now been set.



Fig. 88

Tilt Angle Indicator

The tilt angle indicator is located at the front of the contractor saw, just behind the elevation handwheel (see Fig. 89). The indicator shows the current angle of the blade relative to vertical (i.e., perpendicular to the table top).

Once the 0° limit stop is correctly set, turn the tilt handwheel counter-clockwise until the limit stop is reached. Check the reading of the tilt angle indicator. If necessary adjust the indicator by loosening the locking screw with the included 5 mm hex key and rotating the indicator until it reads 0°. Lock the indicator in place by tightening the locking screw.



Fig. 89

Making Adjustments to Your Saw

Adjusting the Table Insert

The SawStop® zero-clearance insert has been designed to fit securely within the table opening and just below the table top. The blade slot in the insert is pre-cut at the factory after all alignments to the saw have been completed.

As shown in Fig. 90, the insert includes front and rear leveling screws to set the height of the insert. In addition, positioning screws at the rear and right side of the insert prevent it from rattling in the table opening. Finally, a lock-down lever at the front prevents the insert from rising unexpectedly.

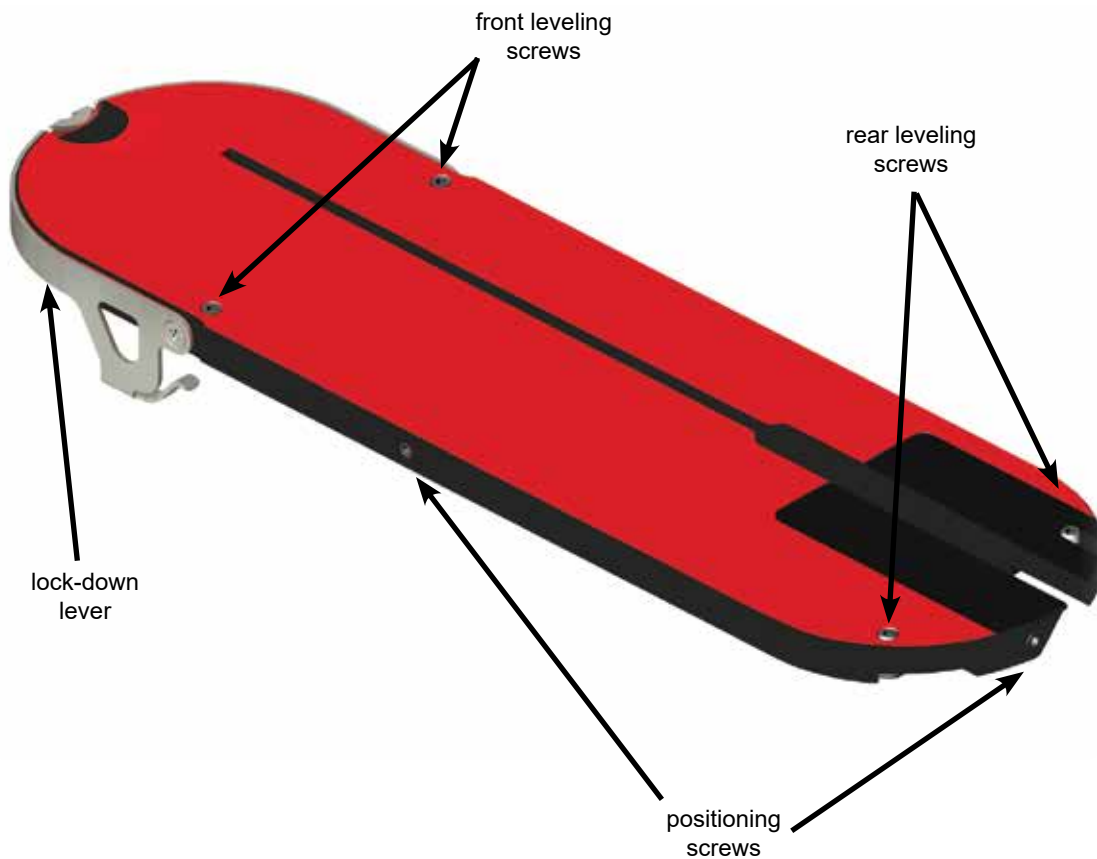


Fig. 90

WARNING! Always turn off the main power switch and unplug the power cord before making any adjustments to your saw.

The insert should slide easily into and out of the table opening, but should not be loose in the opening. If the insert is too loose, use the included 3 mm hex key to turn the side and/or rear positioning screw(s) counter-clockwise as needed to reduce the clearance between the insert and the table opening (see Fig. 90). If the insert is too tight, turn the side and/or rear positioning screw(s) clockwise as needed to increase the clearance between the insert and the table opening.

Making Adjustments to Your Saw

To set the height of the insert, use the included 3 mm hex key to adjust the front and rear leveling screws until the insert is just below the surface of the table. The lower end of each front leveling screw should rest on the corresponding support ledge on the table (see Fig. 91). When the lock-down lever is in the down and locked position, latching arms extend under each of the support ledges to prevent the insert from rising up.

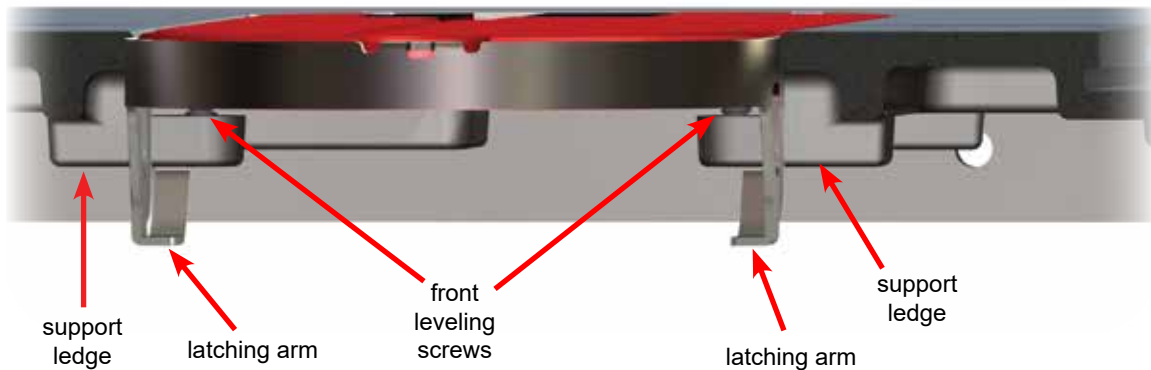


Fig. 91

Adjusting the Rear Lock Down Screws

The rear of the table insert is held down by a pair of lock down screws mounted in the table at the rear of the table opening. As shown in Fig. 92, the lock down screw heads overlap the heads of the rear leveling screws extending down from the insert. The overlapping screw heads hold down the table insert.

The height of the lock down screws should be adjusted to fit close above the leveling screws, while allowing enough clearance to install and remove the table insert without difficulty. The height of the lock down screws can be adjusted using the included 3 mm hex key.

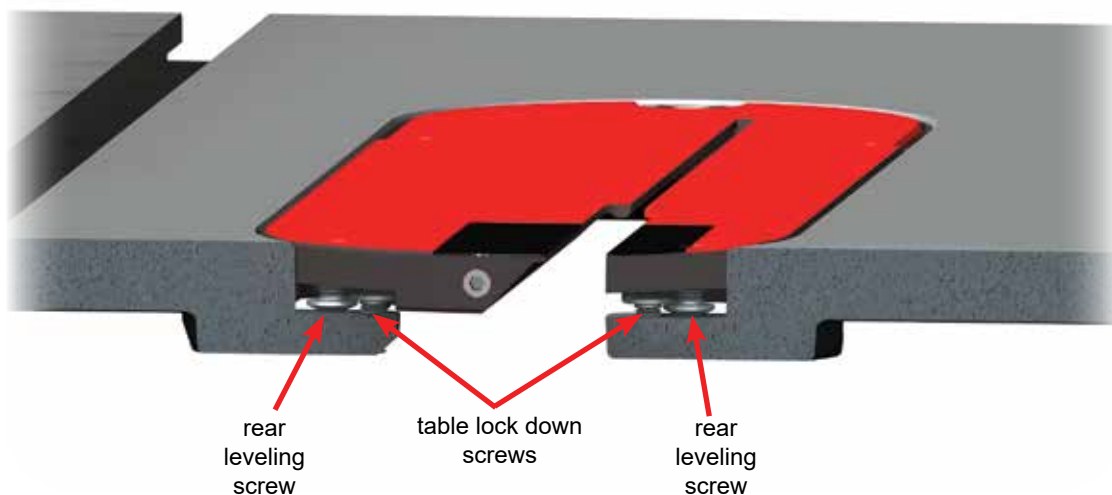


Fig. 92

Making Adjustments to Your Saw

Aligning the Riving Knife and Spreader to the Blade

For safe operation, the spreader and riving knife should be aligned parallel to the blade and positioned inside the kerf of the blade (see Fig. 93).

WARNING! Always turn off the main power switch and unplug the power cord before making any adjustments to your saw.

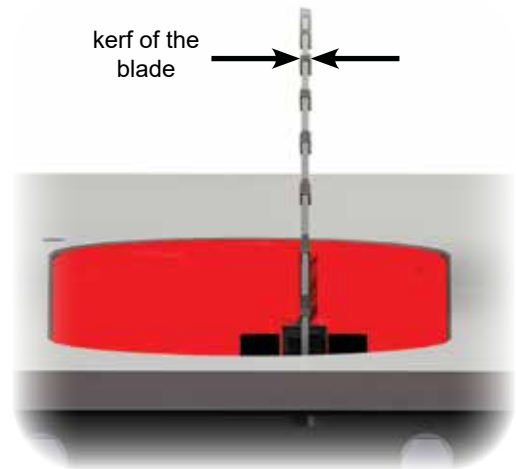


Fig. 93

There should also be a gap of approximately 4-8 mm between the front edge of the spreader or riving knife and the teeth of the blade (see Fig. 94). If the spreader or riving knife is not aligned with the blade or is too close to the blade, then its position must be adjusted. The spreader or riving knife is held in position by a quick-release clamp mounted under the table and behind the blade (see Fig. 95). Once the clamp is properly adjusted, the spreader and riving knife will automatically align to the blade when installed in the clamp.

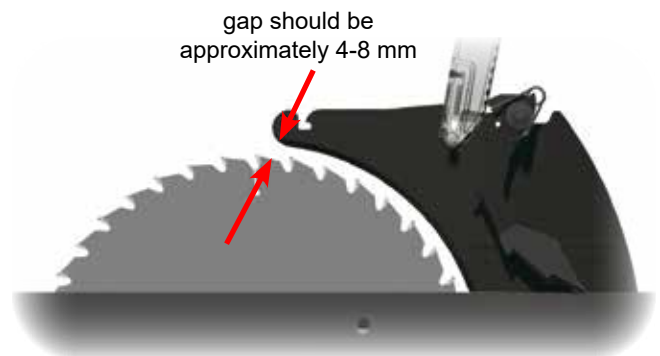


Fig. 94

To adjust the clamp, set the tilt angle to 0° and remove the table insert. Remove the blade and set it aside. Make sure the spreader or riving knife is installed and lower the blade elevation to zero to provide access to the clamp.

Two mounting bolts hold the quick-release clamp in the saw (see Fig. 95). Loosen both mounting bolts (using an 8 mm hex key) just enough so that you can slide the clamp along its mounting surface with some friction. Reinstall the blade and raise the blade to the fully elevated position.

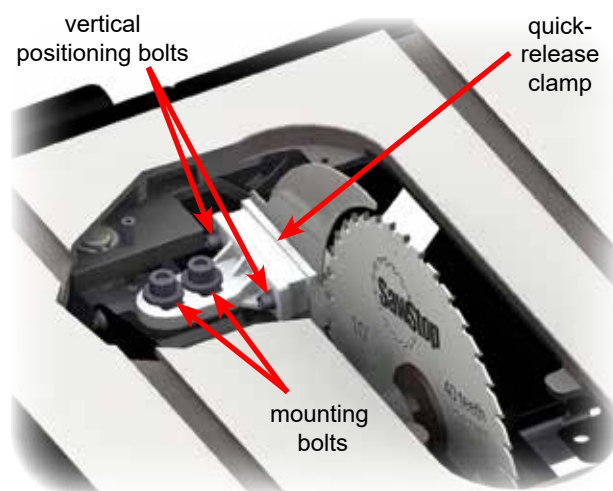


Fig. 95

Making Adjustments to Your Saw

To align the spreader or riving knife so it is within the kerf of the blade, place a straight edge along the left side of the blade, making sure the straight edge runs between the teeth (see Fig. 96). Slide the clamp left or right until the left side of the spreader is flush and flat against the straight edge. If necessary, pivot the left anti-kickback pawl up out of the way while performing this step. If you are using a thin-kerf blade (i.e., kerf is $\frac{3}{32}$ inch), you may need to place one or more shims between the straight edge and the side of the blade to ensure the spreader is centered with the blade.

To adjust the gap between the front edge of the spreader or riving knife and the teeth of the blade, slide the clamp forward or backward until the spacing is approximately correct.

When the spreader or riving knife is both aligned and spaced properly, tighten the two mounting bolts to hold the quick-release clamp in position. You may need to remove the blade to fully tighten the mounting bolts.



Fig. 96

WARNING! Make sure there is at least 4 mm spacing between the riving knife and blade at all points. Contact between the blade and either the riving knife or spreader during operation may cause the brake system to be activated.

Adjusting the Height of the Riving Knife

When using the riving knife, the top of the riving knife should be between 1-5 mm below the top of the blade (see Fig. 97). This allows the riving knife to be used on rabbet cuts and other non-through cuts.

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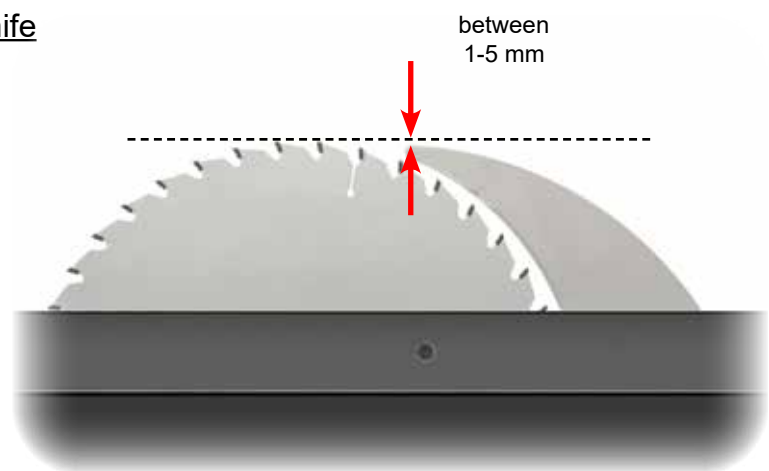


Fig. 97

Making Adjustments to Your Saw

To check the height of the riving knife relative to the blade, lower the blade elevation until the lower limit stop is engaged. Place a ruler or another straight edge on the table insert directly above the tip of the riving knife. Raise the blade elevation until the tip of the riving knife just comes in contact with the straight edge or ruler (see Fig. 98).

Now measure the distance from the top of the table insert to the top of the blade. If the height of the riving knife is set correctly, the saw blade should be between 1-5 mm above the table insert. If the distance is between 1-5 mm, no further clamp adjustments are necessary.

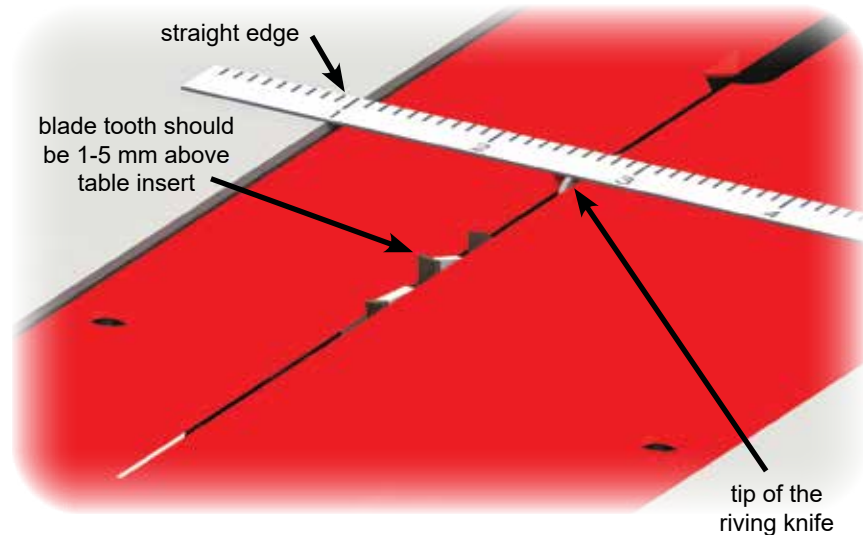


Fig. 98

If the height of the riving knife is not correct, use the elevation handwheel to set the top of the blade to 1-5 mm above the top of the table insert. Next, remove the table insert and loosen the two vertical positioning bolts shown in Fig. 95 using the included 5 mm hex key. Loosen the bolts just enough so that you can slide the clamp up and down on the clamp mounting bracket.

Next, adjust the position of the clamp up or down to set the height of the riving knife. You can also rotate the clamp forward or backward so that the arc on the front edge of the riving knife is concentric with the blade. When the riving knife is correctly positioned, tighten the two vertical positioning bolts just enough to hold the clamp in position and reinstall the table insert. Check to make sure the tip of the riving knife is level with the insert. Repeat the adjustment if necessary. Once the vertical alignment of the riving knife is correct, fully tighten the two vertical positioning bolts.

In some cases, adjusting the vertical alignment may cause the spacing between the front edge of the riving knife and the teeth of the blade to be incorrect. If this happens, repeat the steps explained above to adjust the gap between the front edge of the spreader and the teeth of the blade so that it is 4-8 mm.

Once the clamp has been properly positioned, further adjustment should not be necessary. Both the spreader and riving knife will now automatically align when installed in the clamp.