The SawStop® Safety System

The *SawStop*® safety system does not interfere with your use of the saw. You can still make all the cuts that you can with ordinary saws including 0° to 45° bevels, non-through cuts, and dado cuts (with the optional dado brake cartridge and the optional dado table insert).

Your *SawStop*® saw operates differently than ordinary table saws, and there are a few important points to keep in mind as you use the saw.

1. **Do not** rely on the *SawStop*® safety system to protect against unsafe operation. Although the system is designed to react and stop the blade very quickly in the event of accidental contact, it cannot react until contact is detected. This means that you may receive at least a minor injury even with the *SawStop*® safety system. Therefore, always use safe operating practices, and use the blade guard, push stick and other safety devices whenever possible. The *SawStop*® safety system, like the airbag in a car, should be considered as a last measure to minimize injury when all other safety practices and devices have failed to prevent an accident.

2. In the event of contact, the blade will be stopped in about 3–5 milliseconds (coarse toothed blades stop more quickly than fine-toothed blades such as plywood blades). Therefore, the seriousness of the injury incurred will depend on the speed at which a person's hand or other body part is moving toward the blade. For example, if a person's hand is moving toward the blade at 1 $^{ft}/_{sec.}$, then the depth of the cut will be approximately $^{1}/_{16}$ inch (1 $^{ft}/_{sec.}$* 0.005 sec. = 0.005 ft. or $^{1}/_{16}$ inch). At faster speeds, the cut will be proportionally deeper. Therefore, it is possible to be seriously injured even with the *SawStop*® safety system.

3. **Do not** operate the saw in Bypass Mode unless you are cutting electrically conductive material. When Bypass Mode is engaged, the *SawStop*® safety system will not activate the brake if contact is detected and a serious injury could result if you contact the blade.

4. The motor cannot be started without a blade installed. Since the safety system disables the motor if the blade is spaced too far from the brake, a missing blade will be detected as a blade-to-brake spacing error and the motor will be disabled.

5. Blades
   You can use any standard 10 inch saw blade or 8 inch dado set with your *SawStop*® saw, although the following precautions should be observed:

   i. **Never** attempt to use a blade other than a single 10 inch blade with the standard *SawStop*® brake cartridge. **Never** attempt to use a dado set or blade other than an 8 inch dado set with the *SawStop*® dado cartridge. The use of smaller diameter blades with a brake cartridge designed for larger blades could result in a serious injury because the brake cannot be positioned correctly to stop the smaller blades.

   ii. **Never stack dado blades thicker than $^{13}/_{16}$ inch**. The 8 inch dado brake cartridge is not designed to stop dado stacks thicker than $^{13}/_{16}$ inch.

   iii. **Do not use molding heads**. The use of molding heads could result in a serious injury because neither the standard brake cartridge nor the dado brake cartridge is designed to stop a molding head.

   iv. **Never use a blade with damaged or missing teeth** as this can result in a more serious injury or a false activation of the brake. Blades with variable spacing between teeth are compatible with the *SawStop*® safety system, however you must ensure the brake is positioned correctly by rotating the blade at least one full revolution to be certain that none of the teeth touch the brake (see page 30 for more information on setting the brake position).

   v. **Never install the blade backwards**. The brake might not stop a blade that is installed backwards.

   vi. **Do not use saw blades or dado sets that have a lacquer or other coating on the teeth**. These coatings are non-conductive and therefore can reduce the speed at which the system detects contact. In other words, a coated tooth must cut slightly deeper into the skin for contact to be detected, resulting in a somewhat more serious injury. Used blades that originally had a coating are OK to use since the coating is worn away within a few uses. However, SawStop recommends that you examine each tooth on such blades to confirm that no coating remains.

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   vii. **Blades with depth-limiting shoulders** may take longer to stop in the event of an accident than standard blades, and you could receive a more serious injury. Therefore, SawStop recommends using blades without depth-limiting shoulders.

   viii. The SawStop safety system is designed for use with standard 10 inch blades with kerfs from $^{3}/_{32}$ inch to $^{3}/_{16}$ inch. Blades with kerfs much thinner than $^{3}/_{32}$ inch should not be used because those blades might not be strong enough to withstand the force applied by the brake when it activates. As a result, those blades might deform and stop more slowly in the event of an accident, resulting in a more serious injury. Blades with kerfs much thicker than $^{3}/_{16}$ inch are heavier than standard $^{1}/_{8}$ inch kerf blades, and should not be used because they may stop more slowly than standard blades in the event of an accident, resulting in a more serious injury. Similarly, stacks of two or more 10 inch blades should never be used on your SawStop saw as the combined weight of the blades may be too heavy to stop quickly. If you need to use a blade with a kerf thicker than $^{3}/_{16}$ inch, use an 8 inch dado set with the optional Sawstop 8 inch dado brake cartridge.

   ix. **Do not use non-conductive blades**, including abrasive blades, blades with plastic hubs, or blades that have non-conductive teeth. The safety system cannot induce the electrical signal onto a non-conductive blade, and blades with non-conductive teeth may prevent the system from detecting contact. Only standard steel blades with either steel or carbide teeth should be used.

6. **Do not** use table inserts, guards, fences or other devices which have metal parts that may come into contact with the blade. Any metal part that contacts the blade may cause the brake to activate. All *SawStop*® accessories are specifically designed to prevent metal contact with the blade.

7. Wet, pressure-treated wood may cause the brake to activate. The chemicals used to pressure treat wood often contain large amounts of copper, which is conductive. When pressure-treated wood is wet, the combination of copper and water substantially increases the conductivity of the wood. Therefore, allow wet pressure-treated wood to fully dry before cutting. Typically, the wood will be sufficiently dry if left unstacked in a dry location for 24 hours. If you must cut wet pressure-treated wood, you can make several cuts in the wettest piece(s) using the Bypass Mode to test whether the wood is too wet. See page 56 for instructions on using Bypass Mode and page 45 for information on testing the conductivity of a material. If the test indicates the wood is too wet to cut with the safety system active, you must either allow the wood to dry or make the remaining cuts in Bypass Mode.

8. **Do not** replace the arbor belt with a non-*SawStop*® belt. The *SawStop*® arbor belt is custom designed to dissipate static electricity that may build up on the spinning blade which could cause a false activation of the brake.

9. **Never** touch the arbor, arbor pulley, arbor nut or arbor washer when the blade is spinning because you may receive a serious injury. These parts are all electrically coupled to the blade and the brake will activate if contact with these parts is detected.

10. **Never** reach under the blade while it is spinning. In the event the brake is activated, the retraction of the blade may cause a serious injury if you contact the bottom of the blade.

11. **Do not** remove the dust shroud because a large portion of the blade will be exposed. If you contact the blade under the table, the blade may retract toward you and cause a severe injury.

12. **Do not** unplug or disconnect the saw from electrical power before the blade has stopped spinning. If the power is interrupted while the blade is moving, the safety system will not be active and therefore the brake will not activate in the event of accidental contact. You may receive a serious injury if you contact the spinning blade while the electrical power has been interrupted.

13. **Never** attempt to disable the *SawStop*® safety system or modify the electrical wiring of the saw in any way. Any change or modification or disablement of the safety system or other wiring could result in a serious injury and will void all warranties.

14. **Never** attempt to repair, adjust, modify or otherwise service a brake cartridge. There are no user-servicable parts inside the brake cartridge. The brake cartridge is permanently sealed against dust and other contaminants. Destruction, removal, or alteration of this seal voids all warranties.