DFC

(Dust Free Combo)

Owner's Manual

DFC-C4, DFC-C5, DFC-H4, DFC-H5, DFC-H6

DFC-Series substrate cutter/vertical panel saw with optional accessories.
Proudly made in the USA

www.SafetySpeed.com

⚠WARNING

Read and understand this manual before operating this tool. Failure to follow the safety precautions and instructions can result in serious injury or death. Keep this manual in an accessible and safe location for future reference.

A message from all of us at SAFETY SPEED MANUFACTURING:

Thank you for purchasing a Safety Speed Manufacturing (SSM) Dust Free Combo (DFC). We take pride in building these fine products in the U.S.A.

Each SSM product is designed to give years of dependable service. Your new DFC was built from the finest components available, and every machine is individually assembled by craftsmen - some of whom have been building these products for more than 25 years. We appreciate you choosing SSM products for your facility.

Team Safety Speed
Ham Lake, Minnesota

Limited Warranty

Safety Speed Manufacturing (SSM) warrants the parts and workmanship of this tool, except for the electric motor(s), for one year from the date of purchase. SSM will repair or replace, at our discretion, any component that is determined to be defective. Repair or replacement is limited to providing replacement parts from the factory. SSM assumes no responsibility for making repairs on site. Parts returned to the factory must be returned freight prepaid and include a Return Authorization (R.A.) number. Please call SSM 763-755-1600 for a R.A. number.

All motors are warranted directly by the motor manufacturer. See local repair and maintenance centers for warranty claims for motors.

Safety Speed Manufacturing assumes no responsibility for any damage or accidents resulting from the misuse of this tool, its misapplication, or failure to follow precautionary safety measures. SSM assumes no responsibility for any consequential damage or loss of production. SSM will not be responsible for claims made for machines that are not used or maintained in the normal course of business, used for applications not intended, or modified in any way. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. SSM # 763-755-1600.

This manual applies to the following SSM DFC models:

DFC-C4 DFC-C5 DFC-H4 DFC-H5 DFC-H6

Enter your model number and serial number for quick and easy reference when ordering accessories, supplies or parts.

Note: The Model and Serial No. label can be found on the upper, left side of the frame, when facing the machine.

Model No: _____

Serial No: _____

Safety Speed Mfg.
13943 LINCOLN ST. NE
HAM LAKE, MN 55304
763-755-1600

Figure 1: Serial & Model label

CONTENTS

SAFETY

Read and understand this manual before operating this tool. Failure to follow the safety precautions and instructions can result in serious injury or death. Keep this manual in an accessible and safe location for future reference. Electronic copies of this manual are available at www.safetyspeed.com. Printed copies are available by calling SSM **763-755-1600.**

DANGER

Indicates a hazardous situation which, if not avoided, <u>will</u> result in death or serious injury.

WARNING

Indicates a hazardous situation which, if not avoided, <u>could</u> result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation, which if not avoided, <u>could</u> result in minor or moderate injury.

Safety & Warning Label Placement

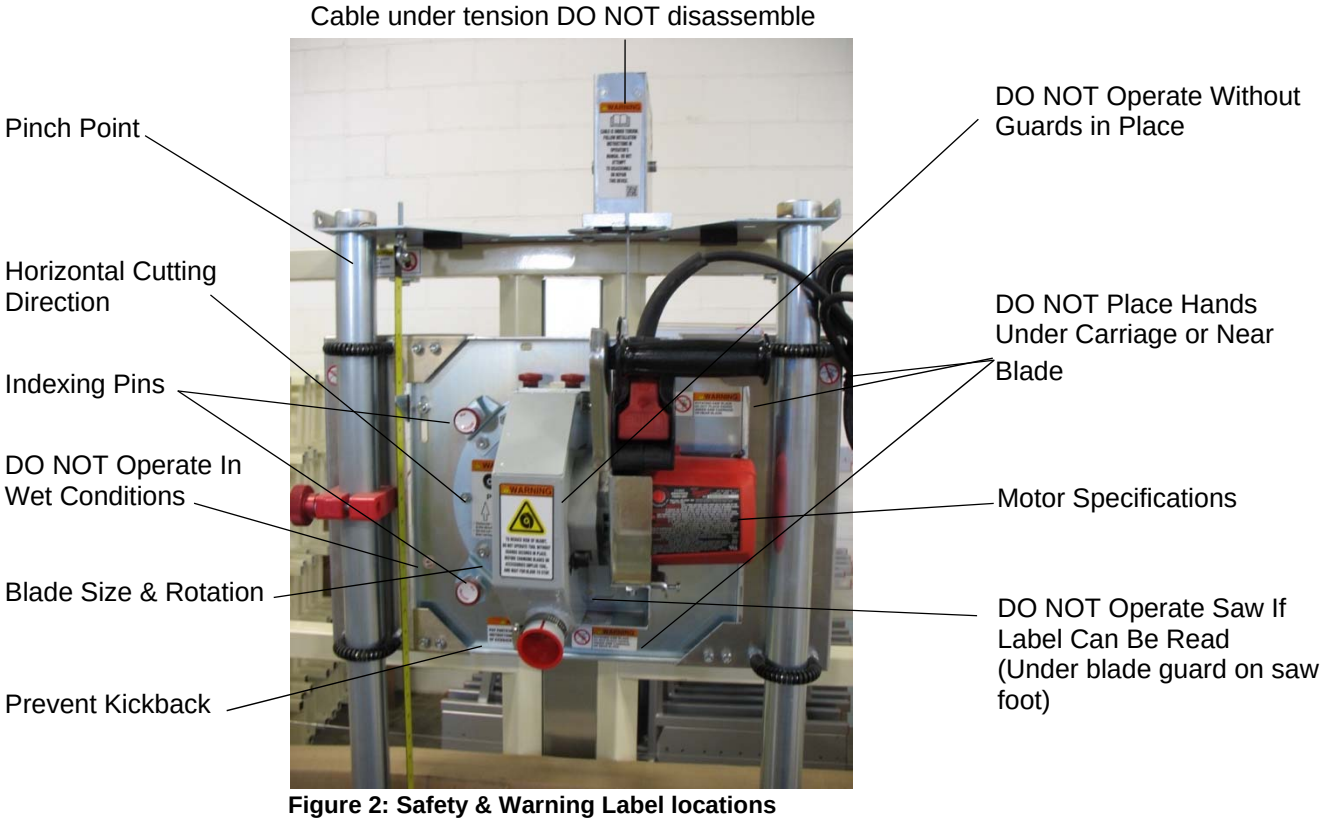

Figure 2: Safety & Warning Label locations

Safety Warning Labels Identified

Feed Stock In The Direction Of The Arrow

Do Not Use Without Blade Guard On Machine

Cable Under Tension. Do Not Disassemble

Do Not Place Hands Under Saw Carriage Or Near Blade

Read Instructions To Reduce Risk Of Kickback

Do Not Place Hands Under Saw

Do Not Operate In Wet Conditions

Indexing Pin

Install Blade In Direction Of Arrow (6400/6800)

Install Blade In Direction Of Arrow (C/H Series)

Keep Hands Clear Of Area To Reduce Risk Of Pinching

If Label Is Visible Do Not Operate Saw

⚠WARNING

When using electric tools, always follow basic safety precautions to reduce the risk of fire, electric shock, and personal injury.

READ AND SAVE ALL INSTRUCTIONS FOR FUTURE USE. Before use, be sure everyone using this tool reads and understands this manual as well as any labels packaged with or attached to the tool.

1. KNOW YOUR POWER TOOL. Read this manual carefully to learn your power tool's applications and limitations as well as potential hazards associated with this type of tool.
2. DO NOT ALLOW UNQUALIFIED PEOPLE TO OPERATE the tool.
3. AVOID DANGEROUS ENVIRONMENTS. Do not use your power tool in rain, damp or wet locations, or in the presence of explosive atmospheres (gaseous fumes, dust, or flammable materials). Remove materials or debris that may be ignited by sparks.

4. KEEP WORK AREA CLEAN AND WELL LIT. Cluttered, dark work areas invite accidents. Provide at least 200 watts of lighting at the front work area of the tool. Eliminate all shadows that could interfere with clear viewing of the work area.
5. DRESS PROPERLY. Do not wear loose-fitting clothing or jewelry. Wear a protective hair covering to contain long hair, as it may be caught in moving parts. When working outdoors, wear rubber gloves and insulated, nonskid footwear. Keep hands and gloves away from moving parts.
6. USE SAFETY EQUIPMENT. Everyone in the work area should **wear safety goggles or glasses with side shields** that comply with current safety standards. Wear hearing protection during extended use and a dust mask for dusty operations. Hard hats, face shields, safety shoes, etc. should be used when specified or necessary. Keep a fire extinguisher nearby.
7. KEEP BYSTANDERS AWAY. Keep children and bystanders at a safe distance from the work area to avoid distracting the operator and contacting the tool or extension cord.
8. MAKE THE WORKSHOP CHILD PROOF with padlocks, master switches, etc.
9. NEVER LEAVE THE TOOL RUNNING UNATTENDED. Turn the power off. Do not leave the tool until it comes to a complete stop.
10. PROTECT OTHERS IN THE WORK AREA from debris such as chips and sparks. Provide barriers or shields as needed.
11. SECURE THE WORK. Use a clamp, vise, or other practical means to hold your work securely, freeing both hands to control the tool.
12. USE THE RIGHT TOOL. Do not use a tool or attachment to do a job for which it is not recommended. For example, do not use a circular saw to cut tree limbs or logs. Do not alter the tool, remove guards, or operate the saw when removed from the carriage and frame.
13. USE PROPER ACCESSORIES. Using non-recommended accessories may be hazardous. Be sure accessories are properly installed and maintained. Do not defeat a guard or other safety device when installing an accessory or attachment.
14. CHECK FOR DAMAGED PARTS. Inspect guards and other parts before use. Check for misalignment, binding of moving parts, improper mounting, broken parts, and any other conditions that may affect operation. If abnormal noise or vibration occurs, turn the tool off immediately and have the problem corrected before further use. Do not use a damaged tool. Tag damaged tools "DO NOT USE" until repaired. Repair or replace a damaged guard or other part. For all repairs, insist on identical replacement parts or factory certified conversions.
15. REMOVE ALL ADJUSTING WRENCHES AND TOOLS from the tool before turning it on. Make this a habit.
16. GROUND YOUR TOOL. See "Electrical Safety," page 10.

17. AVOID ACCIDENTAL STARTING. Be sure your tool is turned off before plugging it in. Do not use the tool if the power switch does not turn it on and off. Observe correct lockout/tag out procedures when performing maintenance on the tool.
18. DO NOT FORCE THE TOOL. Your tool will perform best at the rate for which it was designed. Excessive force only causes operator fatigue, increased wear, increased risk of binding or sudden breakage, and reduced control.
19. KEEP HANDS AWAY FROM ALL CUTTING EDGES, MOVING PARTS AND PINCH POINTS.

20. DO NOT ABUSE THE CORD. Never unplug the cord by yanking it from the outlet. Pull the plug rather than the cord to reduce the risk of damage. Keep the cord away from heat, oil, sharp objects, cutting edges, and moving parts.
21. DO NOT OVERREACH. MAINTAIN CONTROL. Keep proper footing and balance at all times. Maintain a firm grip.
22. STAY ALERT. Watch what you are doing, and use common sense. Do not use a tool when you are tired, distracted, or under the influence of drugs, alcohol, or any medication causing decreased control.
23. UNPLUG THE TOOL when it is not in use, before changing items such as blades, and before performing recommended maintenance. Observe appropriate lockout/tag out procedures.
24. MAINTAIN TOOLS CAREFULLY. Keep handles dry, clean, and free from oil and grease. Keep cutting edges sharp and clean. Follow instructions for lubricating and changing accessories. Periodically inspect tool cords and extension cords for damage. Have damaged parts repaired or replaced.
25. MAINTAIN LABELS AND NAMEPLATES. These carry important information. If unreadable or missing, contact Safety Speed for a free replacement.

26. AVOID KICKBACK. Kickback is a violent reaction to a pinched or binding saw blade. It throws the saw upward when crosscutting and throws the work piece out when ripping. Firm control, proper support of the work piece, and concentration on the job are essential to reduce the risk of injury from kickback:
    a. KEEP SAW BLADE CLEAN AND SHARP. A dull or improperly sharpened blade produces a narrow kerf and is likely to be pinched by the work piece. Any blade with a small set, even though sharp, may be likely to kick back. A dull blade encourages you to force the saw, causing reduced control and blade binding. The excessive friction generated can cause the blade to warp or bind. Use only blades that are recommended for use with your tool. Do not use blades with mounting holes that are not the correct size or shape. Never use defective or incorrect blade flanges or bolts. Be sure the blade bolt is tight. Select the proper blade for the application. Blade speed specifications must be at least as high as the nameplate RPM.
    b. DO NOT FORCE THE TOOL. Let the saw do the work. A saw is more easily controlled and will do a better job when used in the manner for which it was designed.

c. SECURE WORK PROPERLY. If a piece is supported on both sides of the cut in such a way that it allows the material to bow and pinch the blade, it may produce kickback. Do not cut pieces smaller than the saw carriage. Support large panels properly.

d. IF THE BLADE BINDS, **TURN SAW OFF!** The saw or work piece may kick back. Keep hands, body, and bystanders out of the path of the blade and material.

e. STAY ALERT. Watch what you are doing and use common sense. Do not allow yourself to be distracted. Do not operate the tool when you are tired or under the influence of drugs or alcohol. Hold the tool and material firmly and exercise control at all times. Position yourself and co-workers out of the kickback path. Repetitive cuts that lull you into careless movements can also cause kickback. A brief "stretch" may be all that is necessary to avoid a problem.

f. RESTARTING IN MID-CUT. If the saw is stopped in mid-cut, **TURN SAW OFF!** Allow the blade to stop. Then back up the saw (if crosscutting) or the board (if rip cutting) before restarting.

g. IF THE BLADE STALLS, **TURN SAW OFF!** DO NOT TURN THE SWITCH ON AND OFF. A dull blade or excess pressure may cause stalling. **TURN OFF** the switch immediately if the blade binds or the saw stalls, and remove the saw from the cut.

h. AVOID CUTTING NAILS OR OTHER FASTENERS. Inspect for and remove all metal fasteners before cutting.

i. SUPPORT THIN MATERIAL. Large sheets such as paneling, Formica, etc., tend to warp or sag and must be well supported over their entire length to avoid pinching the blade. Optional hold down bar recommended for this application.

27. HANDLE THE COUNTERBALANCE WITH CARE. The counterbalance cable is under tension. See page 16. Always attach the cable to the saw carriage before removing the cable clip. Do not pull on the cable by hand or attempt to disassemble or repair the counterbalance. Replacement counterbalances can be purchased directly from Safety Speed, or an authorized dealer.

28. DO NOT USE PUSH STICKS.

29. CROSSCUTTING (VERTICAL CUTTING) MUST ALWAYS BE DONE FROM THE TOP DOWN. Raise the saw carriage to the uppermost position on the guides and lock it into position with the carriage lock whenever the tool is not in use. See "Operating Procedure: Crosscutting", for more information.

30. RIPPING (HORIZONTAL CUTTING) MUST ALWAYS BE DONE WITH THE DIRECTION OF THE ARROW. Raise the saw carriage to the top of the guides and lock it into position with the carriage lock whenever the tool is not in use. See "Operating Procedure: Rip cutting", for more information.

31. ALWAYS WAIT FOR THE BLADE TO STOP COMPLETELY BEFORE CHANGING POSITIONS. Unplug the tool before transporting or moving it.

32. DO NOT PLACE YOUR HANDS ON OR UNDER THE SAW CARRIAGE OR IN THE PATH OF THE BLADE.

Do not try to retrieve a piece of cut material while the blade is rotating. This symbol is to remind you:

33. DO NOT DEFEAT THE GUARDS OR OPERATE THE TOOL WITHOUT THE GUARDS IN PLACE. Do not remove the saw motor from the carriage.

34. NEVER STAND ON THE TOOL. Serious injury could occur if the tool is tipped or if you unintentionally contact the cutting tool.
35. DIRECTION OF FEED. Always feed work into the blade or cutter against the direction of the rotation of the blade or cutter.
36. HOME CENTERS AND COMMERCIAL LOCATIONS should check with their local electrical contractor to be sure the proper amount of electrical power (volts/amps) will be available for this machine during all operating hours and conditions. Be aware of any special electrical safety requirements for this machine (examples: key lock offs, timers, coded security, touch pads, disconnects, or time lockouts) required by local codes.
37. DISCONNECT AND LOCK THE POWER OFF before changing saw blades or making any adjustments.
38. BEFORE CONNECTING THE SAW MOTOR TO THE POWER SUPPLY BE SURE THE SAW MOTOR SWITCH IS IN THE OFF POSITION.
39. KEEP THE CARRIAGE LOCK SECURELY TIGHTENED when the machine is not in use.
40. DO NOT PLACE HANDS UNDER CARRIAGE OR IN LINE WITH CARRIAGE TRAVEL. Be aware of potential pinch points at top of saw carriage. Only hold or operate saw with designated handles. Do not place hands under carriage or in-line with carriage travel.

41. REFER TO PAGE 5 FOR WARNING LABEL IDENTIFICATION.

Please Read Before Operating the Saw/Router/Knives

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paint
- Crystalline silica from bricks and cement and other masonry products, and
- Arsenic and chromium from chemically treated lumber.

Risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specifically designed to filter out microscopic particles.

Electrical Safety

⚠WARNING

Improperly connecting the grounding wire can result in the risk of electric shock. Check with a qualified electrician if you are not sure that the outlet is properly grounded. Do not modify the plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the cord or plug is damaged. If damaged, have it repaired by a qualified electrician before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

Some of our machines are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way. Double insulation eliminates the need for the three wire grounded power supply system mentioned above.

Do not expose your tool to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

For best performance and to prevent damage use a dedicated electrical circuit for all SSM tools.

The plug must be connected to a properly grounded outlet (Fig. 3). If the tool should electrically malfunction or break down, grounding provides a low-resistance path to carry electricity away from you, reducing the risk of electric shock.

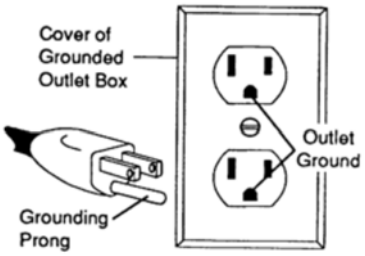

Figure 3: Grounded Plug and Outlet

The grounding prong on the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically "live" terminal.

Your tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in Figure 3.

Figure illustrates a temporary adapter available for connecting grounded plugs. The green rigid ear or lug extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box or receptacle. Simply remove the center screw from the outlet, insert the adapter and reattach the screw through the green grounding ear to the outlet. If in doubt of proper grounding, call a qualified electrician. A temporary adapter should only be used until a qualified electrician can install a properly grounded outlet. The Canadian Electrical Code prohibits the use of temporary adapters.

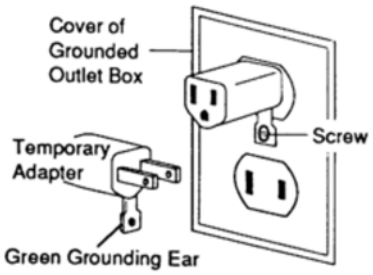

Figure 4: Temporary Grounding Adapter

Extension Cords

Extension cords are not recommended. If an extension cord is used, please adhere to the following suggestions. Grounded tools require a three-wire extension cord. As the distance from the supply outlet increases a heavier-gauge extension cord must be used. Extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible motor damage. Refer to Table I below to determine the required minimum wire size.

Table I: Recommended Minimum Wire Gauge for Extension Cords

	Extension Cord Length*					
Nameplate Amps	**25'(7.6m)**	**50'(15m)**	**75'(23m)**	**100'(31m)**	**150'(46m)**	**200'(61m)**
< 5	16	16	16	14	12	12
5 - 8	16	16	14	12	10	—
8 - 12	14	14	12	10	—	—
12 - 15	12	12	10	10	—	—
15 - 20	10	10	10	—	—	—

* Based on limiting the line voltage drop to 5V at 150% of rated amperes.

— Not recommended

The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14-gauge cord can carry a higher current than a 16-gauge cord.

Guidelines for Using Extension Cords

For longest motor life and optimum performance extensions cords are not recommended.

If you are using an extension cord outdoors, be sure it is marked with the suffix "W-A" ("W" in Canada) to indicate that it is acceptable for outdoor use.

Be sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it.

Protect extension cords from sharp objects, excessive heat, and damp or wet areas.

Short-Circuit Protection

This tool must only be plugged into a dedicated circuit that has a short-circuit protection device which is located ahead of the equipment in the circuit, in accordance with local codes.

General guidelines are as follows:

120 Volt: 20-amp protection

These models can include: DFC-C4, DFC-C5, DFC-H4, DFC-H5, DFC-H6

220 Volt: 10 amp protection

These models can include: DFC-C4, DFC-C5, DFC-H4, DFC-H5, DFC-H6

Reference your motor label and your local codes before installation.

Electrical Connections

Connect the power cord from the panel saw to a dedicated circuit that meets the requirement of the saw and local codes. Connect the power cord from the dust collector to a circuit that meets the requirement of the dust collector.

READ AND SAVE ALL INSTRUCTIONS FOR FUTURE REFERENCE

DFC Components

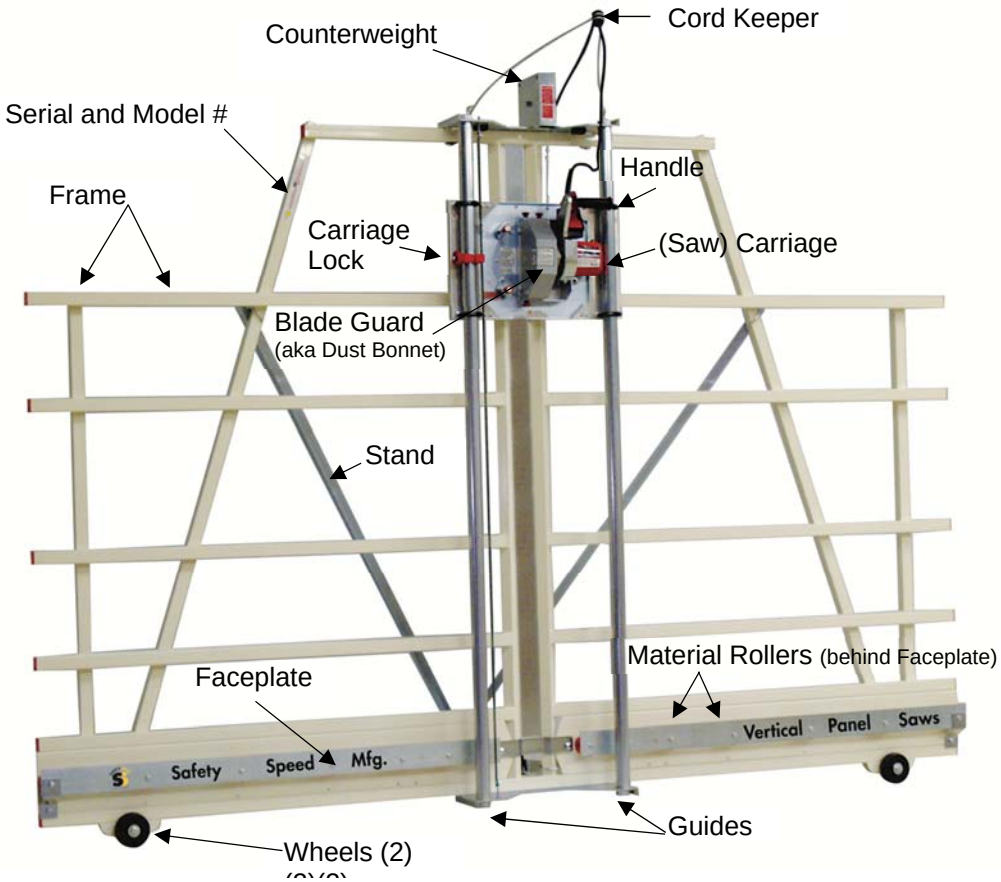

Figure 5: DFC reference guide, shown with accessories

INSTALLATION

Your Safety Speed DFC comes from the factory assembled and aligned. You will only have to mount the following parts before you can run this tool:

- Saw Motor (installed) or cutter (not installed)
- Cord keeper
- Dust cover/blade guard
- Wheels
- Knife Cartridge Holder
- Dust Collection Kit

If you ordered any optional accessories, (e.g. Vacuum, or other accessories), you will find assembly instructions packed with that item (and repeated at the end of this manual, page 49).

Tools Required for Installation

NOTE: Additional tools may be required for installing accessories.

Saw & Frame:

- 1/4" hex wrench, included (blade)
- 7/16" wrench
- 5/8" wrench
- 11/16" wrench (Hand Clamps)
- 3/4" wrench (Wheels)

Substrate Cutters:

- 5/32" hex wrench, #10 Knife Cutter
- 1/8" hex wrench, #20 ACM & Aluminum Cutter
- 3/32" hex wrench, #30 Scoring Tool
- 5mm hex wrench, #40 V-Groove Tool

Operating Environment

For safe operation, install the tool in an area that is well lit. Eliminate all shadows that could interfere with clear viewing of the work area.

Do not locate the tool in a damp or wet location, or a location where it may be exposed to rain.

If the tool will be operated in an enclosed area, SSM recommends installing the optional Vacuum. (see pg. 56).

Avoid explosive atmospheres (gaseous fumes, dust, or flammable materials).

Secure the area so that children and bystanders are kept a safe distance from the work area. Provide barriers and shields as needed.

NOTE: The average noise level of SSM saws is less than 80 dB.

Inventory

Each Dust Free Cutter (DFC) model incudes the machine frame, saw motor, three knife cartridges, wheels, dust kit and counterweight. These items may be installed on the frame or packaged in separate boxes. The DFC includes a separate box for the substrate cutters and other items (Fig.6). Accessories and options may be packaged and included with the frame or shipped separately. Carefully remove and inspect all items before operation.

Figure 6: Packaged DFC without crate

Unpacking

1. Removing plastic sheeting, protective cardboard, and wood crating. NOTE: Uncrating methods vary by model and accessories.

⚠CAUTION

Caution: Have a helper hold machine frame for the next steps.

2. Remove wood crate by cutting (a reciprocating saw is used as an example) the wood frame along the **outside/back** corners (Fig. 7) being careful not to damage frame. Cut around base. NOTE: Do not cut through (across) crate base (Fig.8).

   NOTE: cut between block of wood and base of wood crate, supporting counter weight in back. This will ease removal of wood block supporting counter weight.

Figure 7: Cutting back of wood crate

Figure 8: Cutting along base of wood crate, do not cut through (across) base

3. Cut top of crate near machine frame, to release crate, Fig. 9. Remove back side of crate as it should be loose from frame and crate. Make sure helper is holding frame.

Figure 9: Cutting top (back) of wood crate

4. Make sure helper is holding machine frame.
5. Push sides of crate away from machine frame to release and remove machine frame from crate and place in the desired and secure position. See page 18, **Standing Up the Tool**.
6. One or more boxes of parts are attached to the frame. The cord keeper is attached to the carriage. Remove these items for later installation.

Machine Assembly

The Counterweight is factory installed

⚠WARNING

To reduce the risk of injury or damage to components, do not attempt to disassemble or repair the Counterweight. Do not pull on the Counterweight cable. The cable is under strong tension.

All models use a counterweight system that is factory installed. When unpacking, loosen carriage lock (Fig. 5), move saw carriage to center. Remove wood support block from bottom, center of weight canister.

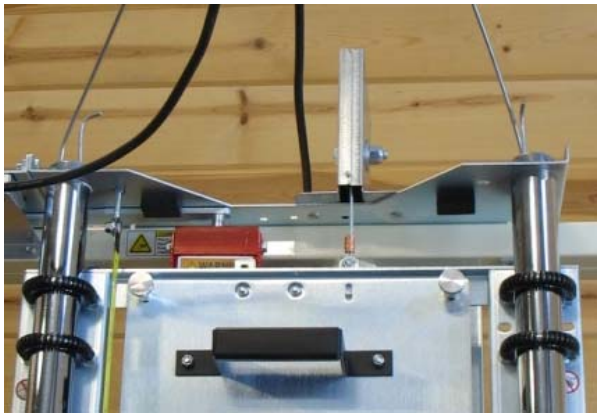

Figure 10: Counterweight Pulley and Cable

CAUTION

Do not remove the bolt and nut from the Counterweight cable.

Installing the Wheels

1. With the machine standing on the floor, raise one end of the frame several inches and block under the frame, but do not cover wheel bracket.
2. Install a caster in front of the caster bracket with a bolt and washer (head of bolt and one washer on face of caster (Fig. 11).

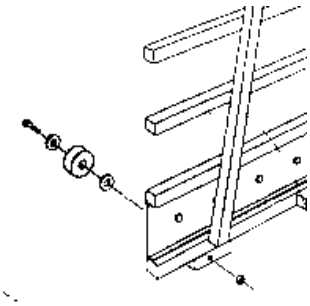

Figure 11: Attaching wheel

Figure 12: Wheel attached

3. Install a washer and tighten nut, from back of machine. DO NOT overtighten (Fig. 12).
4. Unblock this side of machine and repeat process on the other side of machine.

Installing the Sight Glass

1. Install the Sight Glass (two pieces) onto the top of the Knife Cartridge Holder.
2. Align the two red lines of each of the acrylic pieces (Fig. 13).
3. Install the included hex bolt and washer, finger tighten.

Figure 13: Sight Glass installed

4. Align the two red lines and tighten the hex bolt using a 1/8” hex wrench (DO NOT over tighten).
5. The Sight Glass (red lines) may require calibration for each type of knife used.

Installing the Storage Brackets (Material Clamp & Backer Board)

Storage brackets (2 for each side) are included for safe storage of the Backer Board and Material Clamp when not in use. These brackets are located behind the frame on each side of the machine (Fig. 14).

1. Place a steel bracket in alignment with the two holes on the back of the machine frame.
2. Loosely install the two screws using a 3/8” socket and ratchet.

3. Hold the bracket parallel to the horizontal frame and tighten both screws using the 3/8” socket and ratchet.
4. Repeat this process for both brackets (top and bottom) on each side (right and left) of the machine.

Figure 14: Bracket ready for installation

Standing Up the Tool

⚠CAUTION

Do not attempt to lift tool without help of an assistant.

With the help of an assistant, stand up the machine frame and position it in its intended operating location. **NOTE:** If the tool is to be mounted to the floor, a wall or post, it must be securely attached to prevent injury from tipping. Position the saw frame with a 10 – 15 degree angle of back-lean for optimum saw performance, if not using the factory installed stand and wheels.

⚠WARNING

A freestanding saw must be located away from areas where it could be accidentally tipped over.

DANGER

Do not use saw motor or router motor for applications not intended. Do not use saw motor or router motor removed from carriage or frame for any application. The motors are engineered for SSM and built specifically, for the intended use as a vertical panel saw/router.

All Models:

Shipped with the saw motor mounted.

Installing a Saw Blade:

WARNING

1. **Observe appropriate lock-out/tag-out procedures to insure the tool cannot accidentally be powered**.
2. Select the correct blade for your needs. Refer to "**Selecting a Blade**", page **28**.

IMPORTANT: Improper blade selection can result in reduced tool life, inaccurate, poor quality cuts, and safety risks. Consult with your machinery dealer or with our customer service department SSM **(763-755-1600)** to determine the best blade for your cutting needs. One blade is included, but may not be the correct choice for all applications.

NOTE: It is a good idea to have spare blades available to prevent downtime.

3. Tighten the carriage lock. While holding the spindle lock "in" (Fig. 15, #16) (located on the bottom side of the motor) **remove the blade bolt** (#12) from the saw motor spindle by turning it **counterclockwise**. Remove the outer blade flange (#13), but leave the inner blade flange (#14) on the spindle.

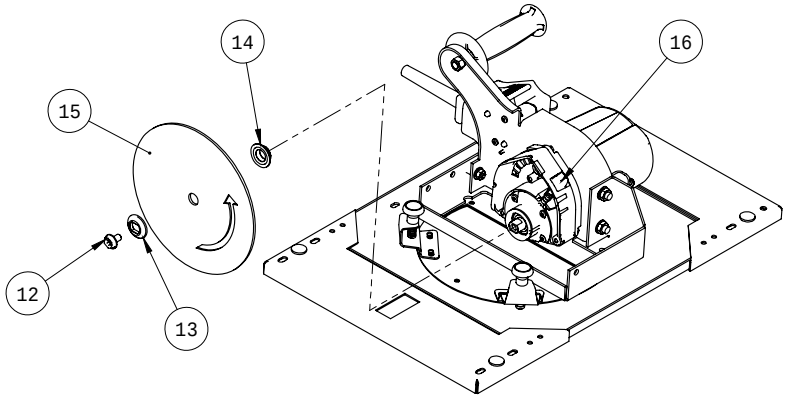

Figure 15: Installing a Saw Blade

4. Install the blade with the arrow pointing counterclockwise as shown Fig. 15, #15.
5. Reinstall the outer blade flange (#13) and hand-tighten the arbor bolt (#12). To keep the spindle from turning while you tighten the bolt hold "in" the spindle lock button (#16) Use the hex wrench provided with the tool (stored in motor housing) to **securely tighten the bolt clockwise**.
6. Install Blade Guard before operating (Page 20).
7. Loosen the carriage lock and allow the saw carriage to return to the top of the guides.

⚠WARNING

To reduce the risk of injury, do not operate the tool without the blade guard in place.

Installing the Blade Guard (aka Dust Bonnet)

The blade guard (Fig. 16) may be factory installed or in a separate box (varies with model).

⚠WARNING

Always install the blade guard before operating the saw.

The guard is shipped with three (Fig. 16) torque knobs (#22) installed. Remove the knobs to install the guard. Be sure to leave the rubber washers on the torque knobs, as they prevent the knobs from slipping.

Attach the guard (Fig. 16 #21) to the carriage by reinstalling the torque knobs as shown (Fig. 16, #22).

Return the carriage to the top of the guide tubes and tighten the carriage lock.

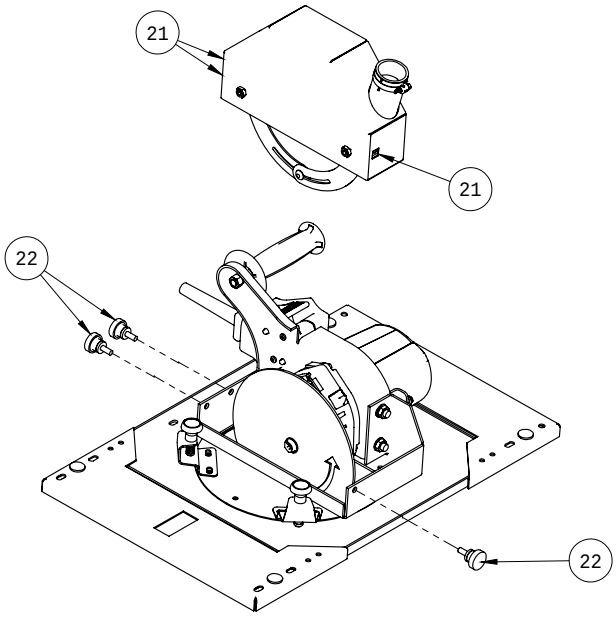

Figure 16: Installing the Blade Guard

Installing Dust Collection Kit

The dust hose must be attached to an SSM Vacuum or to any high-pressure vacuum source that provides at least 90” to 110” of static pressure and 100 CFM.

All machines come standard with the hose connection on the blade guard.

Installation

Refer to Fig. 17 & 18.

⚠WARNING

Before beginning installation, disconnect the power supply to the motor, raise the carriage to the top of the guides, and lock the carriage in place with the lock knob.

⚠CAUTION

Be sure the tool frame is securely supported and cannot be tipped over during this installation procedure. An additional person should support and stabilize the frame at all times during the installation.

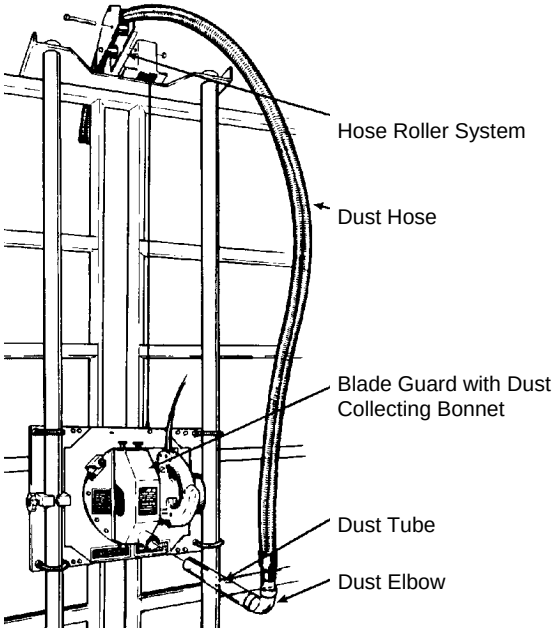

Figure 17: Installing the Dust Collection Kit on a Saw

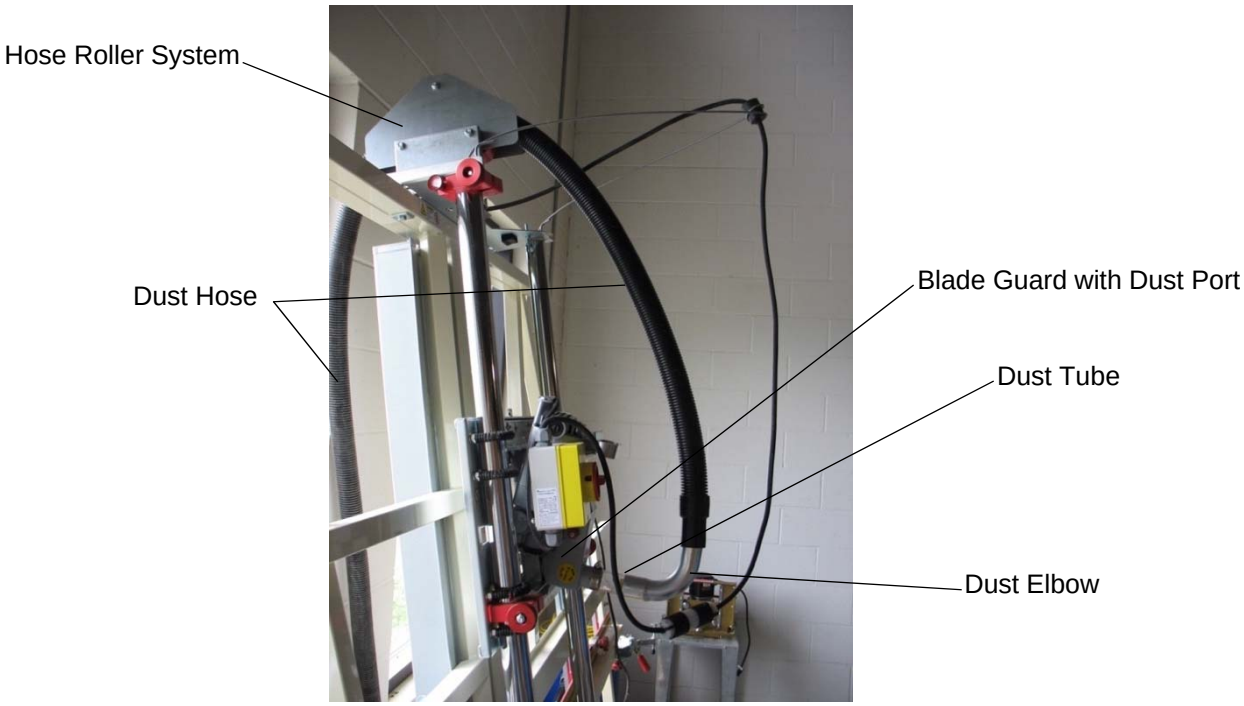

Fig. 18: Installed Dust Collection Kit

1. Remove the plastic blade guard dust plug by loosening the hose clamp and pulling dust plug from dust cover.
2. Insert the clear plastic inner tube into the blade guard, and align the tube's slot with the inner tab. Slide the tube further in (the slot will fit around the blade), until it is as close to the work piece as possible. Tighten the clamp to hold the inner tube in place.
3. Mount the hose rollers to the top of the frame.
4. Lay the $1^1/_2$" (40.6mm) black flexible vacuum hose across the rollers, with one end to the front of the frame and one end to the back of the frame.
5. Connect the hose end that is toward the back of the frame to the vacuum (see above specifications).
6. Connect the hose end that is toward the front of the frame to the narrow end of the steel tube elbow.

7. Connect the tapered end of the steel tube elbow to the outside of the plastic dust tube.

Operation

Always turn the vacuum source on before starting the saw and turn it off when finished cutting.

Adjusting the Rulers and Quick Stop

The machine has one rip ruler mounted vertically, and three crosscut rulers, two attached to the frame on each side of the guide tubes. The rip ruler is set at the factory, for right-to-left cuts with the saw. It may need to be recalibrated for the substrate cutters or router or if using a different blade.

⚠WARNING

Unplug Saw before adjusting

The three crosscut rulers must be adjusted to the specific blade/bit or substrate cutter mounted in the carriage. Install a blade/bit/cutter, then refer to "**Adjusting the Crosscut Rulers**" in the Operation Section, page 37.

The ruler for the Quick Stop is adjusted by sliding the ruler within the aluminum extrusion. With the machine unplugged, measure from the blade or knife to the ruler. Adjust the ruler by sliding it with thumb pressure.

NOTE: After the machine is completely assembled, make test cuts to verify that all rulers are adjusted correctly.

Installing the Cord Keeper

The cord keeper keeps the cord away from the blade/bit and away from the work piece.

1. Pinch the ends of the cord keeper together as shown in Fig. 19 while you slowly slide the ends into the guide tubes. Seat the ends securely, as shown in Fig. 20.

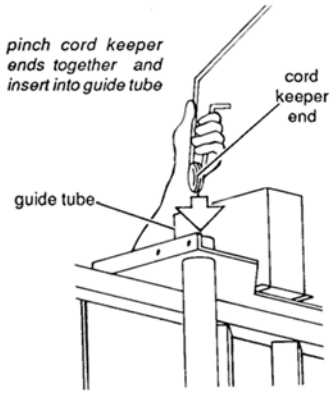

Figure 19: Installing the Cord Keeper

Figure 20: Cord keeper installed

2. Remove the rubber stopper from the ring in the cord keeper. See Fig. 21. Uncoil the cord from the motor, and place the plug end through the ring as shown, Fig. 22.

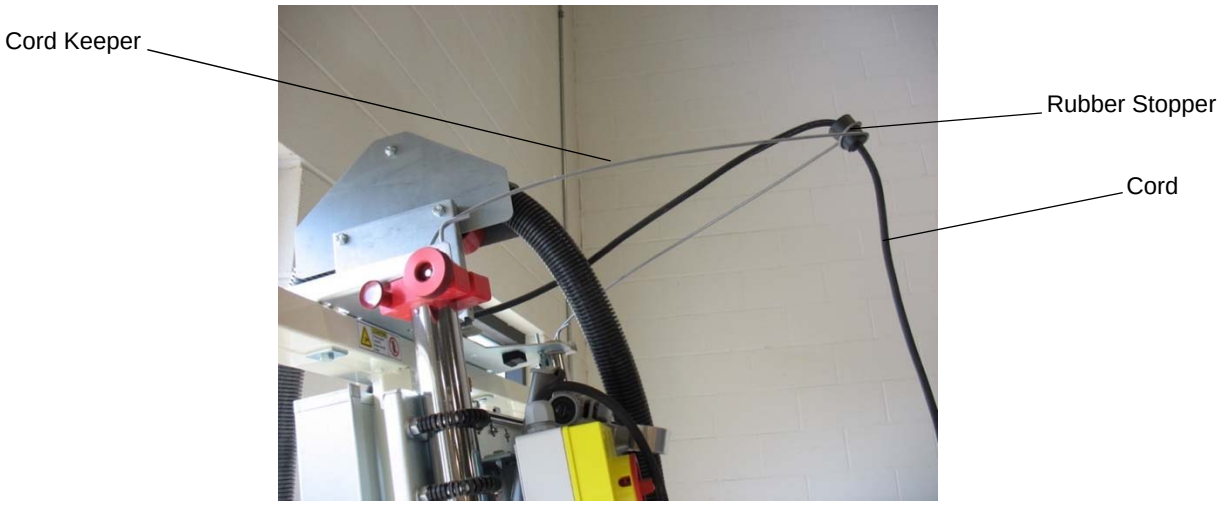

Figure 21: Cord keeper installed with cord

3. Loosen the carriage lock and lower the carriage to the **bottom** of the guide tubes (the farthest that the cord will have to be extended). Tighten the carriage lock in this lowered position.
4. Pull the cord keeper down so it is approximately parallel to the floor as shown. Pull the cord up to remove any slack. Open the rubber stopper and pull it over the cord with the small end of the taper on the bottom. Press the rubber stopper into the ring on the cord holder, Fig.22.

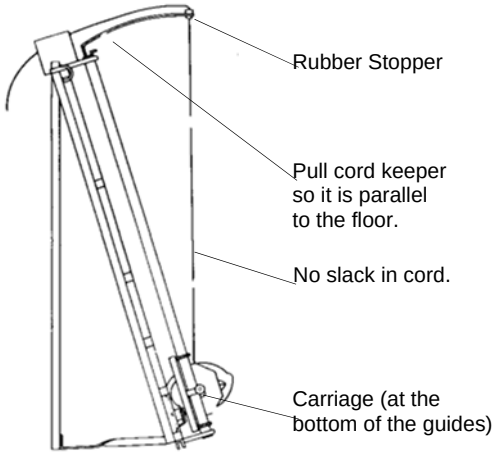

Figure 22: Installing the Cord Keeper

5. Loosen the carriage lock. Allow the carriage to return to the top of the guide tubes and then tighten the carriage lock.

NOTE: If there is too much or not enough slack in the cord, readjust as necessary.

OPERATION

⚠WARNING

The following are suggestions that give you a general idea of how a DFC machine is intended to be operated. No instructions can replace common sense and experience. Be sure you and all operators have enough time and material to become familiar with the general operating characteristics of this tool, and have FULLY READ AND UNDERSTOOD all general operating and safety instructions.

Capacities of the Tool

Small Work pieces

Do not cut pieces that are so small that your hand must be behind the carriage to hold the piece in place. Use a tool better suited to these applications, such as a table saw, radial arm saw, chop saw, band saw, etc.

Work piece Height (Crosscutting)

SSM crosscut capacity as shown in Table II below.

Table II: Maximum work piece height (stock width) for Crosscutting

Model DFC-	Max. Height
C4	50 in. (1270mm)
H4	50 in. (1270mm)
C5	64 in. (1625mm)
H5	64 in. (1625mm)
H6	74 in. (1880mm)

Work piece Thickness

Maximum thickness of a work piece to be cut with SSM saws and routers:

- 1-3/4” (45mm)*, all models.

SSC recommends using the optional Hold-Down Bar for frequent saw/router cutting of materials thinner than 1/2” (13mm).

Maximum thickness of a work piece to be cut with all SSM knife cutters:

- 1/2” (13mm)*, all models.

*Maximum thickness cut capacity can vary depending on the material and type of cutter/blade.

Crosscutting Capacities (vertical)

When crosscutting (vertical cuts with saw, router or substrate cutter), the work piece must be supported on at least two rollers (Page 40, Fig. 29) for safe operation and accurate cutting. When using the optional Midway Fence, the work piece must extend at least 4" (100mm) beyond the carriage on both sides (Page 40, Fig. 30).

NOTE: The Midway Fence cannot be used in conjunction with the hold down bar when cutting substrates or router bits larger than 1" in diameter.

Do not crosscut work pieces that extend more than 5 feet (1520mm) beyond the outermost roller (on Models DFC-C4 or DFC-C5 more than 2 feet (610mm) beyond). To increase available capacity for these larger panels, SSM recommends using the optional Frame Extensions (Page 49, Fig. 39).

Rip cutting Capacities (horizontal)

The minimum length recommended for rip (horizontal) cuts is 2-1/2 feet (760mm), so the work piece will be supported on at least four rollers. Pieces shorter than 4 feet (1220mm) can be rotated 90° and be crosscut. This size limitation also applies when using the optional Midway Fence. See pages 52 & 53, Figs. 45 & 46.

Do not attempt to rip cut stock longer than 6 feet (1830mm) with models DFC-C4 or DFC-C5; 8 feet (2440mm) with the optional Frame Extensions, page 49, Fig. 39. On all other models, there is no limit to the length of stock that can be rip cut. However, you must insure that the stock is properly supported at all times. For regular rip cutting of long pieces, SSM recommends using optional Frame Extensions.

⚠CAUTION

DO NOT rip cut (horizontal) with any Substrate Cutters! Substrate cutters are designed for cross cuts only.

Selecting a Saw Blade

The saw blade must be carefully matched to the materials being cut. Improper blade selection can result in reduced tool life, inaccurate and poor quality cuts, and safety risks.

NOTE: The following table lists some recommended blades for certain applications.

If in doubt, consult with your machinery dealer, or with our customer service department (**763-755-1600**), to determine the best blade for your cutting needs.

NOTE: It is a good idea to have replacement blades on hand to prevent unnecessary downtime.

Table III: Recommended SSM Blades and Applications

Material	8200HG	840ATB	860ATBL	860ATB	864NRATB	860NRTCG	860TCG	860TCGS	880ATBL	880TCGL
Aluminum composite						X	X	X		
Aluminum plate						X				
Chipboard		X	X	X			X		X	
Double-face panels			X		X	X			X	
Duraply							X			X
Gatorfoam								X	X	
Hardwood		X	X	X					X	
Laminated panels		X	X						X	
Masonite		X	X				X		X	
Melamine					X	X				X
Particle board		X	X				X	X	X	
Plexiglas up to 1/2”							X	X		
Plywood		X	X	X				X	X	
Polycarb. (Lexan)	X							X		
Polyester					X	X				X
Printed grain lamin.					X					X
Solid wood		X	X	X				X	X	
Veneer			X		X				X	
Vinyl					X	X			X	

Always keep blades clean and sharp for the best performance. A dull or dirty blade can bind and pinch, resulting in kickback and poor quality cuts. **If in doubt, replace it with a new/sharp blade.**

The blade diameters specified for SSM panel saws are 8” (200mm), with an arbor of 5/8” (16mm). Minimum blade kerf for the saw blade is .10” (2.5mm).

⚠CAUTION

Riving knife thickness is .08” (1.98mm), blades thinner than this kerf should NOT be used!

⚠CAUTION

Only blades made in conformity to BS EN 847-1:2013 should be used on SSM machines.

Selecting a Knife Cutter

Tool cartridges are engraved with a number, e.g. #10, 20, 30 or 40 optional (Fig. 23). The number references the

type of cutter and material each cartridge is best suited to cut or score. The storage location is also engraved with the corresponding number for fast, safe storage and retrieval.

NOTE: It is a good idea to have replacement blades on hand to prevent unnecessary downtime.

Figure 23: Knife Cartridges stored on machine

 # 10 Knife Cartridge (3 heavy duty utility blades)

Designed for cutting softer materials up to 1/2" thick.

 # 20 Cutter Wheels (2 rotating cutting wheels)

Designed for cutting aluminum faced sheet material up to 5/32" (4mm) thick.

 # 30 Scoring Blade (1 scoring blade)

Designed for scoring fracture sensitive rigid plastics. Scoring allows these materials to be broken along the score line.

 # 40 V-Grooving (single V-blade) (Optional)

Designed to cut a strip of material from the surface of aluminum composite sheets up to 5/32" (4mm) thick. Thus enabling bending and folding of substrate.

Knife Cutter Selection Chart

Table IV: Recommended SSM Knives and Applications

Substrate	**#10** Knives (3 cutting) **# SSC1-1**	**#20** Cutter Wheels **# SSC2-1**	**#30** Scoring Blade **# SSC3-1**	**#40** V-Grooving **# SSC4-1**
Foam board e.g. Paper Faced Foam Board, PVC, Sintra®, Fome-Cor®, Foam Core	X			
Aluminum Faced Sheet Material e.g. ACM (Alum. Composite Material), UltraBoard™, PolyMetal™, AlumaCorr™		X		X
Acrylic e.g. Plexiglass, Plexiglas™, Crylux™, Lucite®			X	

Basic Operating Controls and Functions

(Substrate Cutters)

General Principles of Substrate Cutting

1. **ALL** cutting and scoring with substrate cutters is done on the downward stroke of the carriage and knife or knives.

2. Material for cutting or scoring can be placed onto the rollers and slid behind the carriage from either side.

3. The Material Clamp must ALWAYS be engaged when cutting or scoring with knives.

4. The Tool Cartridges have a machined groove on the right side (when facing the carriage). This groove is for locking the Tool Cartridge in place and to adjust the height/depth of the knives for the correct thickness of material.

   NOTE: Insert the Tool Cartridge into the Carriage and tighten the lock knob. The lock knob stud should fit into the slot on the side of the Tool Cartridge. Then loosen the knob one revolution to position the Tool Cartridge for the specific material to be cut/scored. Tighten the lock knob.

(#10) Knife Cutting Cartridge Operation

Overview

The knife cartridge with three heavy duty utility knives (aka. “Triple Threat”) is designed for cutting soft substrates such as foam board, PVC, Sintra® and similar materials, up to .500” (13mm) thick. A pack of 15 heavy duty blades is included with the Cartridge. Quality Heavy Duty (medium) utility blades is recommended.

Installing/Replacing Knives

(Package of 100 blades, part# **SSC1-1**) SSM# **763-755-1600**

To install or change blades, remove the Tool Cartridge from the Carriage by loosening the Lock Knob and lifting the Knife Cartridge from the Carriage. Place the Tool Cartridge on its side and remove the two hex screws using a 5/32” hex wrench. Remove the tool clamp plate and install/replace the three knives and reinstall the tool clamp plate and hex screws.

Position Material

Place material to be cut on rollers and slide behind carriage. Align material to horizontal ruler (already calibrated) or align material with edge of knife and cutting mark on material. Apply Material Clamp, use only enough force to hold material in place. Excessive pressure can bend clamp and cause material to slip.

Setting Knife Depth

With Material Clamp applied, lower (pull down) Carriage (with Knife Cartridge) to cutting mark (or align with horizontal ruler). The tip of the first blade should score the material. If the knife depth requires adjustment, loosen the Lock Knob and adjust for proper contact of knives.

NOTE: If the material is thin the first and possibly the second blade will not contact the material and cutting will be accomplished with the second and third or possibly the third knife only. This is normal.

Making the Cut

With material clamped in correct position and blade(s) set to proper depth, pull down on the Carriage using the handle on the right of the Carriage. Use a slow, steady "pull" to make the cut.

NOTE: Pulling too fast or using dull knives can cause an uneven or "ragged" cut line. Loosen Material Clamp.

Remove material from saw. Raise Carriage to top of Guide Tubes and tighten Carriage Lock.

(#20) Wheel Cutter (Aluminum Composite) Cartridge Operation

Overview

The aluminum composite cutting tool (wheel cutter) is designed to cut aluminum faced sheet material, often referred to as aluminum composite, up to 5/32" (4mm) thick.

Installing/Replacing Wheels (cutters)

(Package of one set (2 wheels) of cutting wheels, part# **SSC2-1**). SSM**# 763-755-1600**

Bearings sold separately.

To install or change cutting wheels, remove the Tool Cartridge from the Carriage by loosening the Lock Knob and lifting the Cutting Wheel Cartridge from the Carriage. Place the Cartridge on its side and remove the two bolts holding the bearings to the cutting wheels using a 1/8" hex wrench. Remove the bearing and place them into the two new wheels (unless replacing the bearings). Re-install the bolts with the beveled edge of the wheel facing "out" and tighten snug (do not overtighten).

Position Material

Place material to be cut on rollers and slide behind carriage. Align material to horizontal ruler (already calibrated) or align material with center of wheels and cutting mark on material. Apply Material Clamp, use only enough force to hold material in place. Excessive pressure can bend clamp and cause material to slip.

Setting Wheel (cutter) Depth

With Material Clamp applied, lower (pull down) Carriage (with Knife Cartridge) to cutting mark (or align with horizontal ruler). The tip of the two wheels should align with the cutting mark on the material. The cutting wheels should be centered on the thickness of the stock being cut. If the wheels are not centered, loosen the Lock Knob and adjust wheel depth to be centered on the thickness of the material to cut. Tighten the Lock Knob.

Making the Cut

With material clamped in correct position and wheels set to proper depth, pull down on the Carriage using the handle on the right of the Carriage. Use a slow, steady "pull" to make the cut.

NOTE: Pulling too fast or using dull wheels can cause an uneven or "ragged" cut line.

Loosen Material Clamp. Remove material from machine. Raise Carriage to top of Guide Tubes and tighten Carriage Lock.

(#30) Scoring Blade Cartridge Operation

Overview

The Scoring Blade is designed to score acrylic, plexiglass and other fracture sensitive rigid plastics. Scoring enables these materials to be broken along the score line.

Installing/Replacing Knives

(Package of 10 Scoring Blades, part# **SSC3-1**). SSM# **763-755-1600**

To install or change blade, remove the Tool Cartridge from the Carriage by loosening the Lock Knob and lifting the Tool Cartridge from the Carriage. Place the Tool Cartridge on its side and loosen the hex bolt using a 3/32" hex wrench. Slide out the old blade. Slide a new blade into the holder and tighten hex bolt with the 3/32" hex wrench.

Position Material

Place material to be cut on rollers and slide behind carriage. Align material to horizontal ruler (already calibrated) or align material with center of Scoring Knife and cutting mark on material. Apply Material Clamp, use only enough force to hold material in place. Excessive pressure can bend clamp and cause material to slip.

Setting Scoring Blade Depth

With Material Clamp applied, lower (pull down) Carriage (with Scoring Blade) to cutting mark (or align with horizontal ruler). The tip of the blade should contact the material. Tighten the Securing Knob. Pull back the spring loaded blade holder and position the tip of the scoring blade 1mm below the top edge of the sheet of plastic.

Note: No need to remove the protective film from plastic sheet.

Making the Score (Cut)

With material clamped in correct position and scoring blade set to proper depth, pull down on the Carriage using the handle on the right of the Carriage. Use a slow, steady "pull" to make the cut.

NOTE: Pulling too fast or using a dull blade can cause an uneven or "ragged" cut line.

NOTE: One pass is usually sufficient for material up to 3mm thick. Three or more passes may be required when scoring thicker material or a denser composition.

To make multiple passes, maintain Material Clamp pressure and position. Pull the Scoring Blade back against the spring while sliding the Carriage "up" to the start position. Repeat steps above as often as required as substrates vary in number of scores required.

Loosen the Material Clamp. Remove material from machine. Raise Carriage to top of Guide Tubes and tighten Carriage Lock.

Running the Score Line (fracturing)

Place the scored material on a table or flat, solid surface. Align the score line with the edge of the table and apply pressure to the overhanging piece to start the run and separate the two pieces.

(#40) V-Grooving Tool Cartridge Operation

Overview

The optional aluminum composite V-Grooving Tool is designed to cut a strip of material from the surface of aluminum composite sheets up to 5/32" (4mm) thick. Thus enabling bending and folding of substrate.

Installing/Replacing Blade

(Package with one spare blade, part# **SSC4-1**). SSM**# 763-755-1600**

To install or change blade, remove the Tool Cartridge from the Carriage by loosening the Lock Knob and lifting the Tool Cartridge from the Carriage. Place the Tool Cartridge on its side and remove the two bolts (one on each side of the blade holder) using a 5mm hex wrench. Remove the old blade. Install a new blade with the cutting edge pointing "down". Insert the two bolts and tighten with the 5mm hex wrench.

Position Material

Place material to be cut on rollers and slide behind carriage. Align material to horizontal ruler (already calibrated) or align material with center of Grooving Blade and cutting mark on material. Apply Material Clamp, use only enough force to hold material in place. Excessive pressure can bend clamp and cause material to slip.

Setting Scoring Blade Depth

Note: It is good practice to test the Blade Depth using a scrap of material the same thickness as the "good" material. Fold the test piece as desired. Adjust the blade depth if necessary.

With material clamped in place, insert Tool Carriage into Carriage. Lower cartridge to desired depth. Knife and material can be observed through view port in center of carriage. Lock in place with lock knob.

Making the Score (Cut)

With material clamped in correct position and V-Grooving blade set to proper depth, pull down on the Carriage using the handle on the right of the Carriage. Use a slow, steady "pull" to make the cut.

NOTE: Pulling too fast or using a dull blade can cause an uneven or "ragged" cut line.

Loosen the Material Clamp. Remove material from machine. Raise Carriage to top of Guide Tubes and tighten Carriage Lock. Fold substrate as desired.

General Maintenance (Substrate Cutters)

1. Regularly clean the Material Clamp using a dry cloth. Stubborn stains can be removed with a damp cloth or light mix of detergent.
2. Spare parts and replacement blades are available from your SSM dealer or direct from SSM, **763-755-1600**.

Basic Operating Controls and Functions

(Saw)

Refer to Figure 24 for the location of saw operator controls.

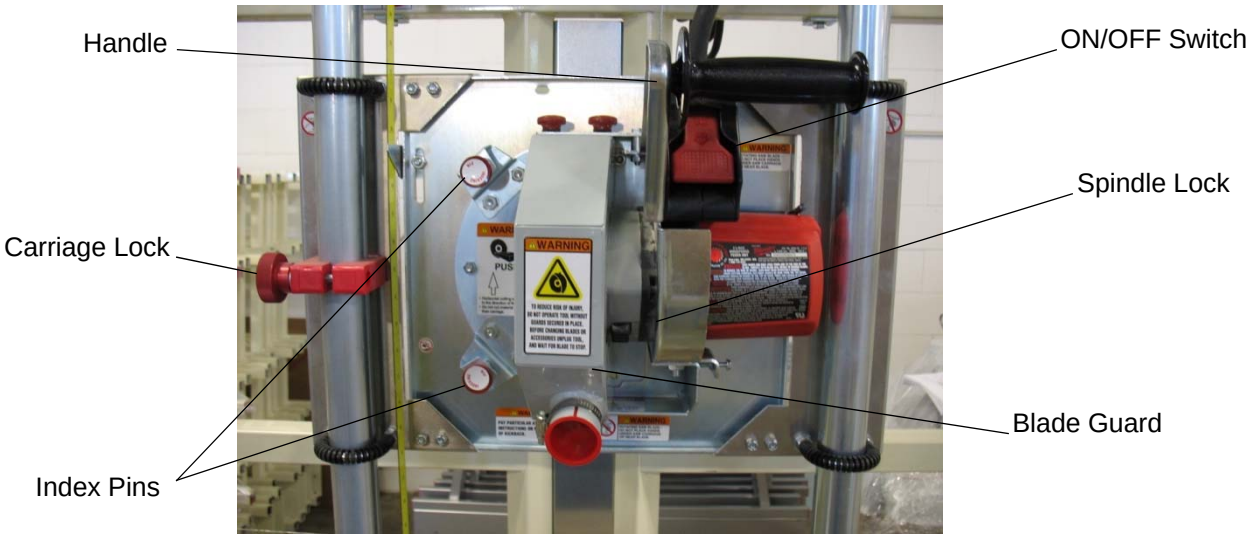

Figure 24: Basic Operating Controls and Components

Removing and Reinstalling the Blade Guard (Dust Bonnet)

⚠WARNING

Unplug Saw before adjusting

The blade guard (Fig. 25, #21) is attached to the carriage with torque knobs (Fig. 25, #22). Remove the torque knobs to remove the guard. Be sure to leave the rubber washers on the torque knobs to prevent the knobs from slipping.

⚠CAUTION

Always install the blade guard before operating the saw (Fig. 25 #21).

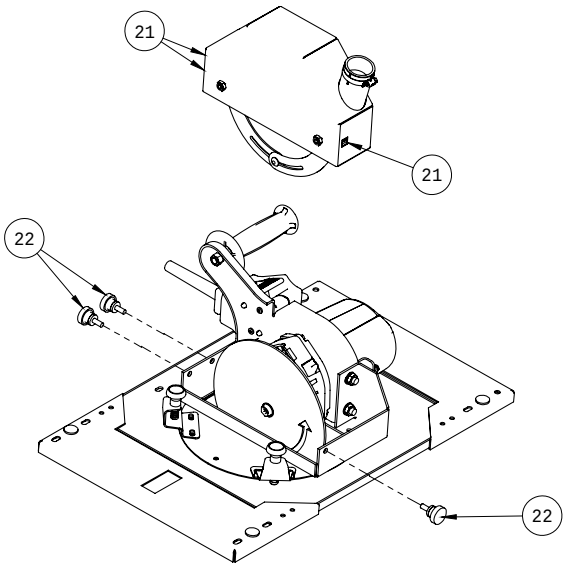

Figure 25: Removing/Installing the Blade Guard

Changing the Blade

⚠WARNING

Unplug Saw before adjusting

1. Observe appropriate lock-out/tag-out procedures to insure the tool cannot accidentally be powered.
2. Remove the blade guard see "**Removing and Installing the Blade Guard**" and (Fig. 25, #21).
3. To keep the spindle from turning while you loosen the arbor bolt (Fig. 26, #12) push the spindle lock on top of the motor housing Fig. 30. Then tighten the carriage lock.
4. Use the hex wrench provided with the saw to loosen and remove the bolt (Fig. 26, #12) counterclockwise while holding the spindle lock.
5. Remove the outer blade flange (Fig. 26, #13), blade (#15), and inner blade flange (#14).
6. Clean the spindle, flanges, bolt, and blade to remove built-up dust and debris.
7. Reinstall the inner flange, slide on the **new blade with the arrow pointing counterclockwise**, **hand-tighten the bolt clockwise**. Use the hex wrench to tighten the bolt while pushing the spindle lock.
8. Reinstall the blade guard.
9. Loosen the carriage lock and allow the saw carriage to return to the top of the guides.
10. Reconnect the power.

NOTE: You may have to readjust the rip and crosscut rulers after changing blades or installing a re-sharpened blade. See "**Adjusting the Crosscut Rulers**".

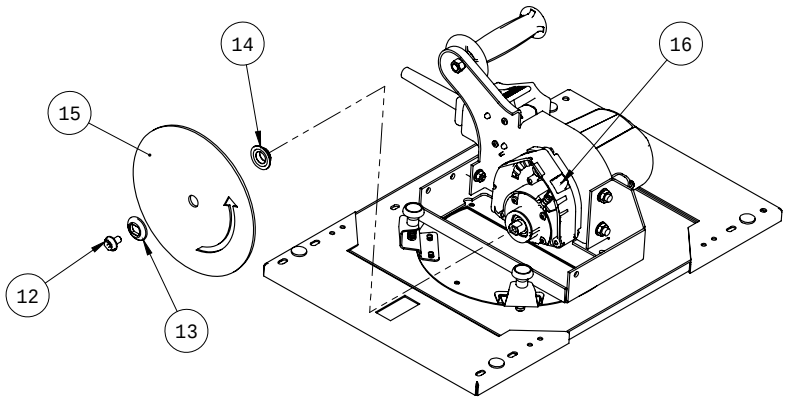

Figure 26: Installing a Saw Blade

Starting and Stopping the Motor

Start the motor by lifting on the paddle switch (page 34, Fig. 24) located under the saw handle. Stop the motor by pressing the same switch down.

Rotating the Turntable on the Carriage

Pull out both of the indexing pins (page 34, Fig. 24), and pivot the turntable until they snap into the appropriate holes.

Moving the Carriage Up or Down

Use the handle attached to the motor body (page 34, Fig. 24).

Locking the Carriage

Lock the carriage by tightening the (carriage lock), (page 34, Fig. 24) lock knob:

- located on the left guide tube.

Installing and Removing the Clamp Bar (substrate cutting only)

NOTE: The clamp bar must NOT be installed when cutting with the saw, router or any rip cutting (saw or knife).

Install the red clamp bar by placing the top of the clamp bar into the (pin) receiver at the top, left of the guide tubes. While holding up on the clamp bar, place the bottom of the clamp bar into the (pin) receiver at the bottom, left of the guide tubes. Make sure the clamp bar is seated properly in the pin receiver at the bottom.

To engage the clamp bar, rotate the clamp bar handle counter clockwise (as viewed from the top) to maintain firm and moderate pressure on the substrate to be cut.

NOTE: Excessive clamp pressure may distort (bend) the clamp bar and not allow full contact with the work piece. If necessary, reduce clamp pressure for firm holding of material without clamp distortion.

To disengage the clamp bar, rotate the clamp bar handle clockwise (as viewed from the top).

Remove the clamp bar by sliding it up and then pulling out (away from the frame) the bottom of the clamp bar. When the bottom of the clamp bar is free of the receiving pin, lower the clamp bar to remove it from the top receiving pin. Store the clamp bar in the clamp bar holder in the back of the frame.

Adjusting the Crosscut Rulers

The saw has one rip ruler mounted vertically, and three crosscut rulers, two attached to the frame on each side of the saw. The rip ruler is set at the factory, but the three crosscut rulers must be adjusted to the specific blade or knives mounted in the saw.

⚠WARNING

Unplug Saw before adjusting

Be sure the blade/knife is installed before following these steps:

1. Remove the blade guard, when adjusting for sawing, (page 35; Fig. 25) so the blade is exposed.
2. Loosen the carriage lock and lower the carriage as shown in Fig. 27.

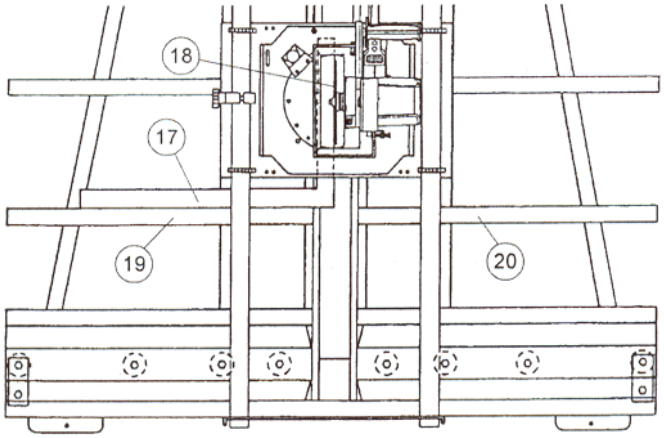

Figure 27: Adjusting the Crosscut Rulers

3. Use a square (#17) that measures at least 14” (356mm) on one side. Line up one edge of the square with the tips of the saw blade or knife, and the other edge of the square with the crosscut (horizontal) ruler. Slide the ruler (#19) so that its measure matches the measure on the square. A magnet holds the ruler in place and allows the ruler to be adjusted to various blade types. To prevent unauthorized adjustment, clear tape can be wrapped around the ruler and frame.
4. Repeat the above steps to adjust the crosscut ruler on the other side (#20) of the tool.
5. Make a test cut to verify that the ruler is lined up correctly.

Adjusting the Quick Stop

⚠WARNING

Unplug Saw before adjusting

1. Loosen Carriage Lock and Lower Saw/Knives to height of Quick Stop

2. Measure from blade or knives to tape measure of Quick Stop. Adjust the Quick Stop tape measure to the same dimension (as measured with a hand tape measure), if necessary by sliding it with your thumbs.

3. Position the Stop Block (Fig. 27) to the desired cut length and secure the stop block with the lock knob.

Figure 27: Stop Block in position

4. Raise the carriage to the top of the guides.

⚠WARNING

5. **Install any guards that may have been removed**.

6. Slide the work piece behind carriage and hold firmly to stop block. Clamp work piece in place, if appropriate.

7. Connect power, if appropriate.

8. Cut the work piece with a smooth, slow, continuous down stroke of the carriage.

General Operating Tips

- For smooth, clean, chip-free cuts, you **must** use industrial carbide saw blades that are **sharp**. Dull or improperly sharpened blades will cause chipping, unclean cuts, chatter, and motor overloading. **If you are not sure that a blade is sharp, replace it with a new/sharp one.**
- For smooth, clean cutting of substrates, use sharp, heavy duty knives or cutters.
- When you feed the material through the tool horizontally, or move the carriage over the material vertically, **do it slowly, smoothly, and (whenever possible) without stopping and in the direction of the arrows on the carriage labels.** Overfeeding results in poor-quality cuts, shortened blade/knife life and motor overloading (sawing).
- Be careful when setting material onto the rollers. **Do not drop heavy material onto the rollers** or damage to the rollers or material may result.
- For best results when sawing, place the work piece onto the tool with its backside facing you. This provides the smoothest possible cut on the face side of the panel.
- Panels being cut horizontally or vertically must always be fed against the rotation of the saw blade or into the sharp profile of the knife.
- DFC Panel Saws and Knife Cutters are intended for cutting **large** panels down to size. As the overall panel size becomes smaller and smaller consider the "**Midway fence**" page 52 or other types of sawing/cutting tools as they become more convenient and safer to use.
- Refer to the Maintenance section for regular maintenance procedures.

Operating Procedure: Crosscutting

A crosscut is a vertical cut that must always be done from the top to the bottom of a work piece as shown on page 40, Fig. 28 & 29. This includes the Saw, Router and Knives (See also "**General Operating Tips**" above and "**Capacities of the Tool**".)

⚠WARNING

To reduce the risk of injury, do not place your hands on or under the carriage or in the path of the saw blade or knives.

1. Position the saw/router motor or knives in the crosscutting position with the blade/nit oriented vertically. See "**Rotating the Turntable".**

2. Loosen the carriage lock and move the carriage to the top of the guides.

3. Place the work piece on top of the rollers. Be careful not to drop the material on the rollers.

4. Slide the work piece to the desired position, using the crosscut rulers or optional gauging systems (Stop Bar or Quick Stop) as measures.

5. Make certain that the work piece is adequately supported and stable in the machine. Refer also to "**Capacities of the Tool**". The work piece can be held with one hand or if using the substrate cutter, held in place with the clamp bar.

⚠WARNING

6. **Do not hold the work piece so that your hand is anywhere behind the carriage or guides or in the path of the saw blade/bit or knives!**

7. Start the motor (see "**Starting and Stopping the Motor**"), and allow it to reach full speed before beginning the cut. Or if using knives, engage the clamp bar (See Material Clamp, Pg.43).

8. When the motor has reached full speed or if using knives, slowly and smoothly pull the carriage down so the blade/knife runs through the work piece. **Keep one hand on the handle at all times and the other hand clear of saw carriage**. Be careful not to force the saw or knives through the work piece, to avoid binding or distortion.

⚠CAUTION

9. **If the blade binds in the work piece, or the work piece shifts during the cut, stop the motor, carefully move the carriage to the top of the guides, restart the motor, and begin the cut again.**

10. Support and remove the cut-off piece as the saw completes its cut.

11. Once the cut is complete, turn off the motor and wait for the blade to come to a full stop. Move the work pieces away from the blade. Return the carriage to the top of the guides, and lock the carriage rip lock.

12. When making cuts that are less than 1" (25mm), the chatter preventer (guard) (located inside the blade guard) must be resting on the work piece, not on the cut-off piece. See page 43, Fig. 35. If it is not positioned this way, it will jam the work piece and prevent the carriage from continuing through the cut**. If the saw jams, turn the saw OFF** and wait for the blade to stop. Then back the saw out of the cut.

NOTE: A coasting saw blade could mar the edge of a freshly cut work piece.

Figure 28: Crosscut carriage position

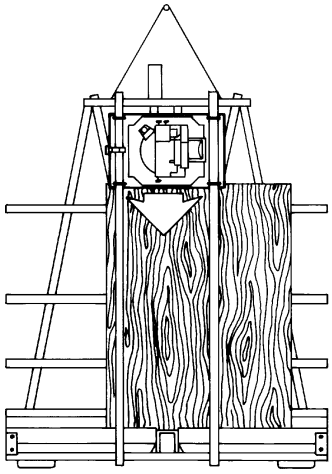

Figure 29: Crosscutting (work supported on at least two rollers)

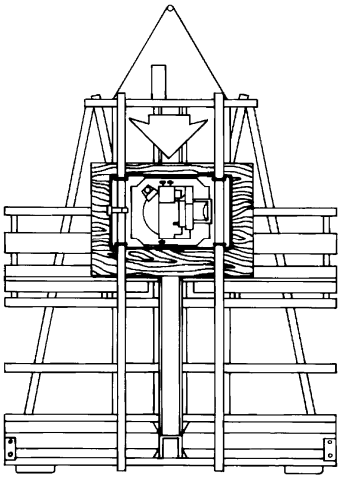

Figure 30: Crosscutting using optional Midway Fence Kit (work extends at least 4" (100mm) beyond saw carriage)

Operating Procedure: Rip cutting (saw only)

A rip cut is a horizontal saw cut that can be done either from the left to the right or from the right to the left, as shown on page 42, Fig. 31. Rip cuts **must always** be done by moving the work piece in the direction of the arrow on the saw carriage. (See also "**General Operating Tips**" above and "**Capacities of the Tool**.")

⚠WARNING

To reduce the risk of injury, ripping must always be done with the direction of the arrow on the saw.

1. Before you begin, be sure there is enough space on both sides of the saw to completely load the work piece on the saw frame, move it past the saw, and completely off-load it.
2. Select the ripping direction, from right or from left, based on preference. Then rotate the turntable to the ripping position as shown. See "**Rotating the Turntable**". The rip measurement is set at the factory for cutting right to left. The measurement indicator will need to be adjusted for left to right.
3. Select the height of the saw blade above the rollers. Raise or lower the carriage until the height index tab is aligned with the corresponding dimension on the vertically mounted ruler. Lock the carriage securely to the guides in this position.
4. Start the motor (see "**Starting and Stopping the Motor**") and allow it to reach full speed before beginning the cut.
5. Position the material on the side of the machine indicated by the arrows on the carriage that show direction of cut. Place the work piece on top of the rollers. Be careful not to drop the material onto the rollers.
6. When the motor has reached full speed, slowly and smoothly push the work piece through the saw, in the direction of the feed arrow on the saw. **Warning**: **Avoid placing your hands, clothing, or body parts under the carriage or in the cutting path of the saw blade. Do not look directly down the line of cut because dust and debris are generated during this operation.**

   Be careful not to force the work piece through the saw, to avoid binding.

⚠CAUTION

If the saw blade binds in the work piece, or the work piece shifts during the cut, stop the saw motor, carefully back the work piece out of the saw, reposition the work piece, restart the motor, and begin the cut again.

7. As the work piece passes across the machine, move to the other side and complete the cut by pulling the work piece past the saw blade. Support the upper piece to keep it from pinching the blade or the kerf protector, or falling away from the machine.

8. Once the cut is complete, turn off the motor and wait for the blade to come to a full stop. Remove the work pieces from the machine.
9. Rotate the turntable back to the vertical position and return the carriage to the top of the guides. Lock the carriage in this position.

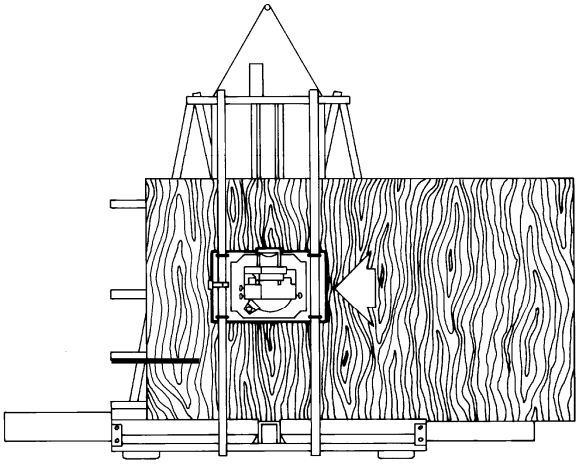

Figure 31: Saw Motor in Rip cutting Position

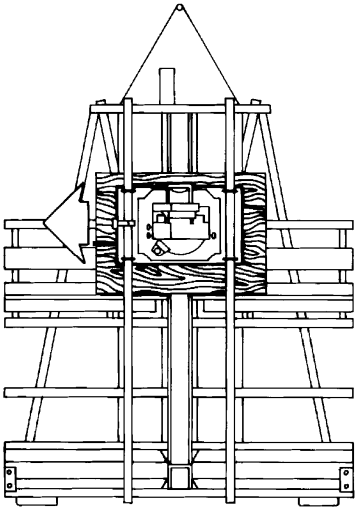

Figure 32: Rip cutting From the Right Using Optional Midway Fence (work must extend beyond saw carriage at least 4" (100mm))

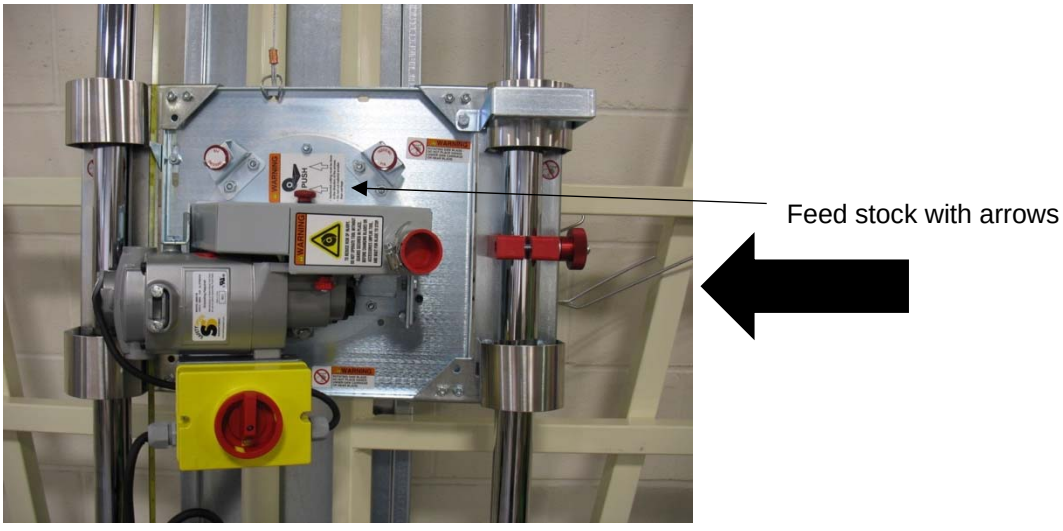

Figure 33: Rip cutting motor position

10. When making cuts that are less than 1 inch, the chatter preventer (guard) (located inside the blade guard) must be resting on the work piece, not on the cut-off piece. See Fig. 34 & 35. If it is not positioned this way, it will jam the work piece and prevent the carriage from continuing through the cut. **If the saw jams, turn the saw OFF** and wait for the blade to stop. Then back the saw out of the cut.

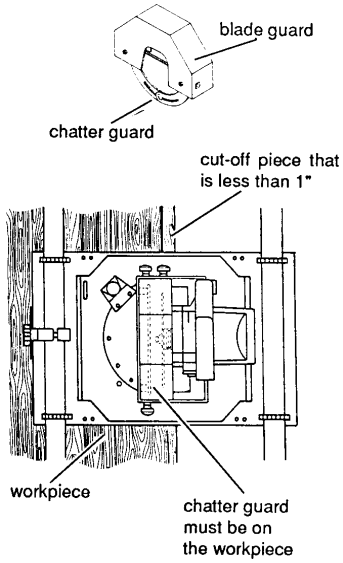

Figure 34: Chatter Preventer (guard) in position for crosscutting

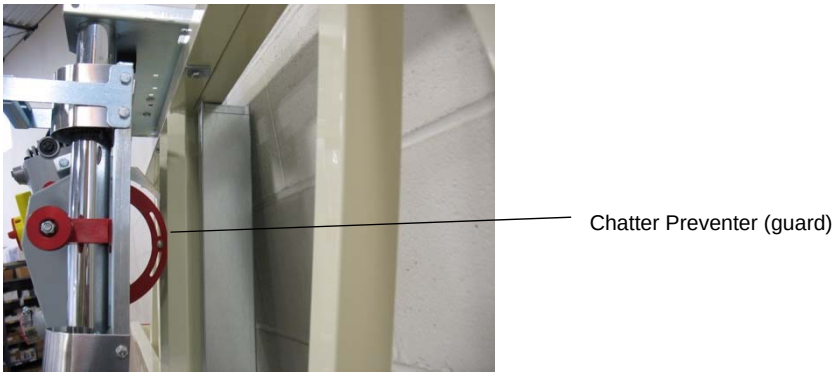

Figure 35: Chatter Preventer (guard) in position for crosscutting

KNIFE CUTTER OPERATION

General principles of cutting substrates

1. **ALL** cutting and scoring with knives is done with a downward stroke of the carriage and knives.
2. The Clamp Bar MUST be engaged with all knife cutting and scoring. The Clamp Bar helps prevent panel movement and provides for a cleaner and more accurate cutting and scoring.
3. Material can be placed onto the rollers and positioned behind the carriage from either direction.
4. Align cutting tool with a mark on the material or with one of the crosscut rulers (after confirming calibration of ruler).

5. Choose the correct knife for the material to be cut or scored.
6. The knife height must be adjusted to the correct thickness of material being cut. The knife is adjusted by loosening the knife adjustment knob and sliding the knife in or out to match the material thickness.
7. **The Clamp Bar MUST BE REMOVED for all sawing and routing operations!**

General Maintenance

1. Regularly clean the Guide Tubes and the back of the Clamp Bar using a dry cloth.
2. Silicon spray can be used to lubricate the conning points and pivots of the Clamp Bar.
3. Replacement knives, blades, bits or parts can be purchased by contacting your Safety Speed Dealer or by contacting Safety Speed Mfg. at **763-755-1600**.

MAINTENANCE

⚠WARNING

To reduce the risk of injury, always unplug the tool before doing any maintenance. Never disassemble the tool or try to do any rewiring to its electrical system. Contact a qualified electrician for electrical repairs. Always follow lockout/tag out procedures when servicing electrical equipment.

General Maintenance

Keep the tool in good repair by adopting a regular maintenance program. Before each day's use, examine the general condition of the tool, and inspect the guards, switches and power cord, for damage. Check for loose screws, misalignment, binding of moving parts, improper mounting, broken parts, and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, turn the tool off immediately and have the problem corrected before further use. Do not use a damaged tool. Tag damaged tools "**DO NOT USE**" until repaired (see "**Repairs**").

Cleaning

⚠WARNING

Unplug Saw before cleaning

Daily, clean all dust and debris from the vents in the motor housing.

Keep the handles clean, dry and free from oil and grease.

Use only mild soap and a damp cloth to clean the tool, because certain cleaning agents and solvents are harmful to plastics and other insulated parts. Some of these include: gasoline, turpentine, lacquer thinner, paint thinner, chlorinated cleaning solvents, ammonia, and household detergents containing ammonia. Never use flammable or combustible solvents around tools.

⚠WARNING

To reduce the risk of injury, electric shock, and damage to the tool, never immerse the saw or router in liquid or allow a liquid to flow inside it.

Maintaining the Motor

⚠WARNING

Unplug Saw before inspecting

Under normal conditions, motor maintenance is not necessary until the brushes need to be replaced.

Every six months:

- Inspect the brushes, and replace as necessary.
- Mechanically inspect and clean the gears, spindles, bearings, housing, etc.
- Inspect the switch, cord, armature, etc. for cracks or other issues.
- Test to assure proper mechanical and electrical operation.

Lubricating the Guides

The carriage should move smoothly up and down the guide tubes or rails. However, if the guides become caked with dust or debris, the carriage may get stuck or it may not slide smoothly. Periodically clean the guides with a damp cloth, following the directions under "**Cleaning**" above. Then use a dry lubricant such as a spray silicone. Other lubricants cause dust and debris to collect on the guides and contaminate the bearings.

SERVICE

Repairs

If your tool is damaged, call your purchasing dealer or Safety Speed at **(763) 755-1600** for technical advice or for the name of a dealer near you who can service your machine.

Replacement Parts

Refer to the separate replacement parts information provided with the tool. Parts diagrams and manuals can be found at www.safetyspeed.com or by calling SSM # (**763) 755-1600**.

NOTE: To save time have your **Model Number** and **Serial Number** available when calling for parts and accessories. See inside cover of this manual or model/serial label on top/left of saw frame (page 2, Fig. 1).

Alignment

The DFC is aligned at the factory to a tolerance of:

- ±1/32" (.8mm), on Models DFC-C4, -C5, -H4, -H5, and -H6

Realignment is only required if the saw is mishandled or abused, or if the motor or a roller is replaced.

Alignment consists of four steps that must be done in the following order (these steps are explained in detail below):

1. Adjust the blade so it is parallel with the guides.
2. Adjust the blade so it will be perpendicular to the work piece.
3. Adjust the guides so they are perpendicular to the rollers.
4. Align the rollers.

Constructing an Alignment Tool

For maximum accuracy, construct a test square to check the full movement of the saw.

See Fig. 36. Construct the square using a 6-ft (1830mm) metal ruler and two 4-ft (1220mm) metal rulers. (Using the 3' (915mm), 4' (1220mm), and 5' (1520mm) measurements assures squareness.) Drill holes and attach the rulers with pop rivets or small nuts and bolts.

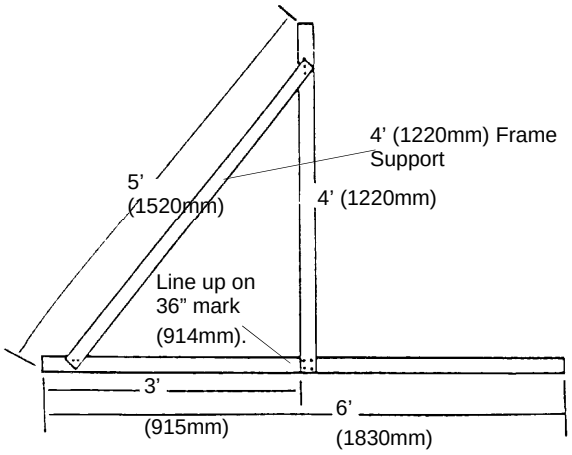

Figure 36: Field Alignment Tool

Use the 6-ft (1830mm) ruler to check rollers for square. Use the 4-ft (1220mm) ruler to check guide tubes (or rails) for square. The tool also can be used as a giant square for layouts.

Step 1: Adjust the Blade Parallel to the Guides

The blade must move parallel to the guides, or tail burning may occur and the kerf will be wider than the set of the blade. Make the following adjustment only if the blade appears to be out of alignment.

To check the blade parallelism:

1. If the blade "heels", or leaves burn marks on the cut, position the carriage for a crosscut and make a sample cut. Check both sides of the cut to determine which side of the blade is causing the problem (you will need this information for adjusting the blade).

To adjust the blade parallelism:

⚠WARNING

Unplug tool before making adjustments

1. Position the Adjustment Tool on the rollers. Lower the carriage so the Adjustment Tool overhangs the blade.
2. Place the Adjustment Tool against the blade. The entire face of the blade should contact the Adjustment Tool. If it does not, then the blade is not parallel to the work piece and you should:
   a. Loosen (but do not remove) the four hex-head nuts holding the indexing pin assembly (Fig. 37, #24).
   b. If burn marks appear on the **left side** of the work piece, rotate the saw slightly clockwise until the entire face of the blade contacts the Adjustment Tool.
   c. If burn marks appear on the **right side** of the work piece, rotate the saw slightly counterclockwise until the entire face of the blade contacts the Adjustment Tool.

   Make only a slight adjustment at a time.
3. Securely tighten the four hex nuts holding the index pin assembly or assemblies.
4. Make a sample cut and adjust if necessary.

Step 2: Adjust the Blade (Perpendicularity)

To adjust for perpendicularity:

1. If the tool does not cut at 90° to the surface (face) of the work piece, loosen the two motor mount nuts (Fig. 37, #25).
2. Loosen the adjusting screw lock nut (#27). Tighten or loosen the adjustment screw (#26) depending on the angle adjustment required. Make only a slight adjustment.
3. Retighten the lock nut (#27); making sure the screw is touching the plate.
4. Retighten the motor mount nuts (#25). Make a test cut and readjust if necessary.

NOTE: For perpendicular cuts, confirm saw motor is touching the factory-set adjustment screw (#26).

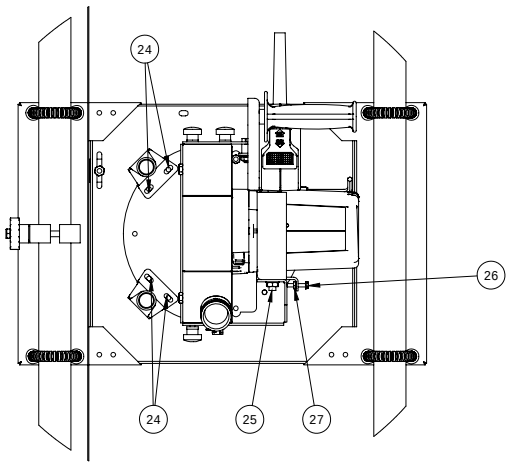

Figure 37: Adjusting Blade Perpendicularity

Step 3: Align the Guides

WARNING

Unplug tool before making adjustments

If the tool does not cut at 90°, the guides may not be perpendicular to the rollers.

To check the guide alignment:

1. Remove the blade guard to expose the blade. Mark a tooth to use as a reference. If you are using a high-speed steel blade, mark a tooth that points toward the edge of the **Alignment Tool** (described above).
2. Clamp the Alignment Tool to the roller assembly.
3. Pull the carriage down slowly until the marked reference tooth just touches the vertical edge of the Alignment Tool. Continue to pull the carriage down: if the blade does not contact the square, or if the blade binds on the square, the guides are not aligned.

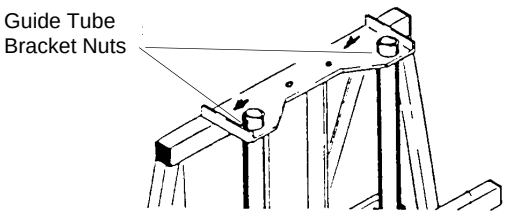

Figure 38: Aligning the Guide Tubes

To align the Guide Tubes:

1. Remove set screw, which indicates original position of guide tubes. Loosen the guide bracket nuts (Fig. 38), but **do not remove** the bracket. Using a dead blow mallet, strike the bracket on the side and in the direction you wish the guides to go**.**

NOTE: Do not strike the guides.

NOTE: **Only adjust the top of the Guide Tubes**

2. Recheck that guides are square to rollers, using the procedure outlined above. Readjust if necessary.
3. Securely retighten the guide bracket nuts.

Step 4: Align the Rollers

To check the roller alignment:

1. Remove any Frame Extensions (reattach them after completing all alignment steps).
2. Remove or retract the Frame Stand, if used. Lay the tool flat so the roller nuts are easily accessible. With proper care, you can place the tool on a table with the guides up.
3. The two outermost rollers are fixed, so adjust all other rollers to them. Lay the 6-ft (1830mm) edge of the Alignment Tool (see above) across the rollers to verify alignment: all rollers should contact the edge. If a roller is "high" or "low" to the edge of the Alignment Tool, align the rollers according the instructions below.

To align the rollers:

1. Clamp a straightedge (at least 5-ft (1520mm) long) to the top of the rollers so that it lies flat on the frame and against the outermost rollers. Position the clamps above the outermost roller.
2. With the straightedge securely clamped, rotate each roller to be sure that it neither jams nor has excessive clearance from the straightedge. If a roller runs "tight" or "loose" to the straightedge, loosen the roller nut. The roller nuts are torqued and require at least an 18-in (458mm) breaker bar to loosen them.
3. All the rollers except the outermost are mounted on an eccentric center hub. Turning a roller when the roller nut is loose will change the position of the roller. You may have to lift the roller **Face Plate** (Page 12) to rotate the eccentric hub. Turn the roller until it contacts the straightedge, being careful not to bend or bow the straightedge when repositioning the roller.
4. Tighten the roller nut securely; making sure the roller does not change position.
5. Repeat this process as needed for any remaining rollers. **NOTE:** After replacing an **outside** roller, repeat **Step 2** as needed. Reposition the Frame Stand.

ACCESSORIES

Safety Speed offers several accessories for the vertical panel saws.

Tools Required for Accessory Installation

- **9/16" wrench**; Quick Stop, Stop Bar, Hold Down Bar
- **Center Punch**; Stop Bar
- **7/32" drill bit**; Stop Bar, Quick Stop
- **Drill**; Stop Bar, Quick Stop

Frame Extensions

The Frame Extensions Accessory adds 20" (500mm) to each end of the tool frame. It includes two extensions and the necessary fasteners.

Extensions are recommended for cutting 4 x 8-ft (1220mm x 2440mm) sheets on the Model C4 and C5, and for cutting panels longer than 10 ft. (3040mm) on larger tools.

Installation

⚠WARNING

Unplug tool before making adjustments or installing accessories

Attach the extensions to the back of the frame as shown in Fig. 39. It is not necessary to remove any parts from your existing machine to install the extensions.

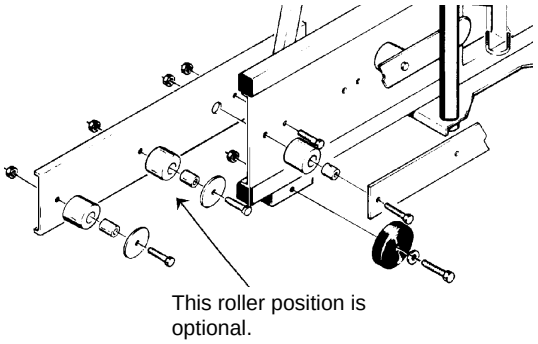

Figure 39: Installing the Frame Extensions (viewed from rear of frame)

.

Stop Bar

The Stop Bar Accessory fits between the lower pair of horizontal frame members. It provides preset flip stops for repetitive cuts. Six or eight flip stops are included (depending on the model), and additional stops can be added.

Installation:

⚠WARNING

Before beginning installation, disconnect the power supply to the motor, raise the carriage to the top of the guides, and lock the carriage in place with the lock knob.

⚠CAUTION

Be sure the tool frame is securely supported and cannot be tipped over during this installation procedure. An additional person should support and stabilize the frame at all times during the installation.

1. Position the stop bar in the bottom left side of the frame as shown in Fig. 40, resting against the bottom horizontal arm and the vertical back supports.

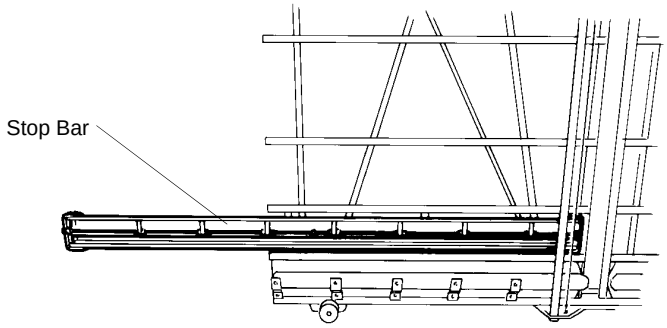

Figure 40: Installing the Stop Bar

2. Working from the front of the tool, attach the three angle supports (Fig. 41) to the back of the Stop Bar, using six 5/16 x 3/4" (7.9mm x 19.05mm) hex-head cap screws and nuts. Tighten the nuts securely.

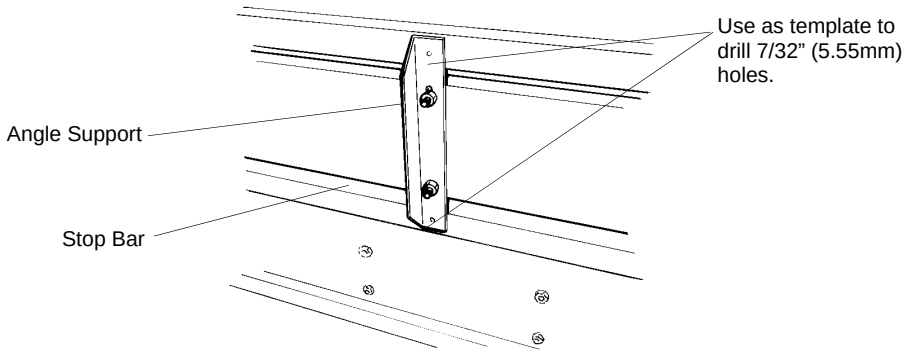

Figure 41: Installing the Stop Bar (viewed from the rear)

3. Push the stop bar housing as far toward the center of the tool as possible.
4. Working from the back of the machine, use the angle supports as templates to drill six 7/32" (5.55mm) holes (two per bracket) in the horizontal tubes of the frame.

5. Insert and tighten six self-tapping ¼- 20 (6.35mm) hex-head screws to secure the angle support brackets to the frame tubes.
6. Measure out from the blade and adjust the stop bar ruler by sliding it left or right inside its aluminum extension.

Operation

Set the individual flip stops to the positions desired for repetitive cuts: loosen the collars with the provided Allen wrench, slide the collars to the desired position, and retighten them.

Multiple cuts can be made by flipping the stops up or down to position the work piece at the proper distance from the blade or bit. When setting multiple stops, remember to account for the material lost to the blade kerf.

Quick Stop

The Quick Stop Accessory provides an easy method of setting an exact repeatable cut length for crosscuts. It consists of an aluminum angle extrusion with movable tape measure, a large aluminum stop block with threaded lock knob, and mounting brackets and screws. The Quick Stop can be attached to any horizontal frame member, on any model saw. Standard Quick Stops are factory-drilled to mount on the left side of the frame; right-hand Quick Stops are available by special order.

Installation

⚠WARNING

Before beginning installation, disconnect the power supply to the motor, raise the carriage to the top of the guides, and lock the carriage in place with the lock knob.

⚠CAUTION

Be sure the tool frame is securely supported and cannot be tipped over during this installation procedure. An additional person should support and stabilize the frame at all times during the installation.

1. Attach the two mounting brackets to the long aluminum angle bar of the Quick Stop as shown in Fig. 42, using the screws provided.

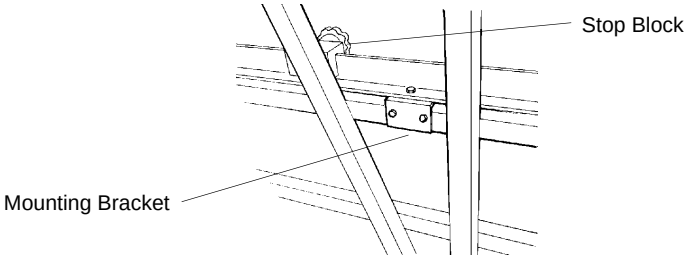

Figure 42: Installing the Quick Stop (viewed from rear of frame)

2. Set the assembled angle bar on the next-to-lowest horizontal bar on the left side (as you are looking at the frame in Fig. 43 & 44). The standard ruler will be covered after installing this accessory.

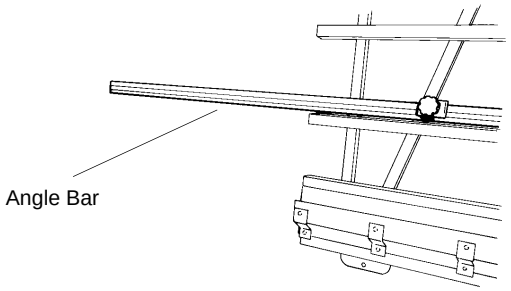

Figure 43: Installing the Quick Stop

3. Push the Quick Stop as far toward the center of the tool as possible.
4. Using the mounting bracket holes as a template, drill four 7/32" (5.55mm) holes in the tool frame.
5. Attach the brackets to the frame, using four ¼-20 (6.35mm) self-tapping hex-head screws.
6. Measure from the blade and adjust the Quick Stop measuring tape by sliding it in the angle extrusion.

Operation

1. Position the stop block at the desired cut length, as shown by the Quick Stop measuring tape, and secure the block with the lock knob.
2. Raise the carriage to the top of the guides.
3. Slide the work piece behind the carriage, and hold it firmly against the stop block.

⚠WARNING

Never reach behind the carriage!

4. Cut the work piece with a smooth, continuous down stroke of the carriage.

Figure 44: Quick Stop installed

Midway Fence

The Midway Fence Accessory is a removable horizontal work piece support that mounts halfway up the tool frame. It allows narrow work pieces to be worked at waist height. The fence consists of left and right fixed brackets that mount to the frame, and removable supports for each side. The accessory contains the components shown in Fig. 45.

Installation

⚠WARNING

Unplug tool before making adjustments or installing accessories

NOTE: All hex nuts furnished with this accessory are **lock** nuts. During pre-assembly, **do not** completely tighten these nuts.

1. Lay out the parts shown in Fig. 45 on a horizontal surface (table or bench) for pre-assembly. Note that one end of each fence extrusion is cut at a 45° angle. The units should be pre-assembled so that these beveled ends will fit against the center of the tool frame at final assembly.

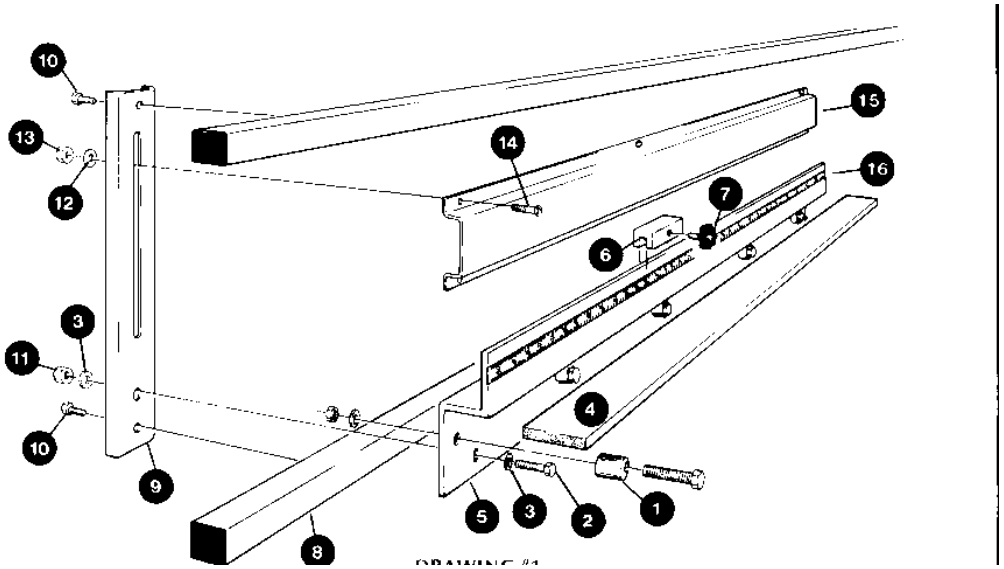

Figure 45: Pre-assembly of Midway Fence

2. Set the complete right-hand fence assembly onto the tool frame as shown in Fig. 46.

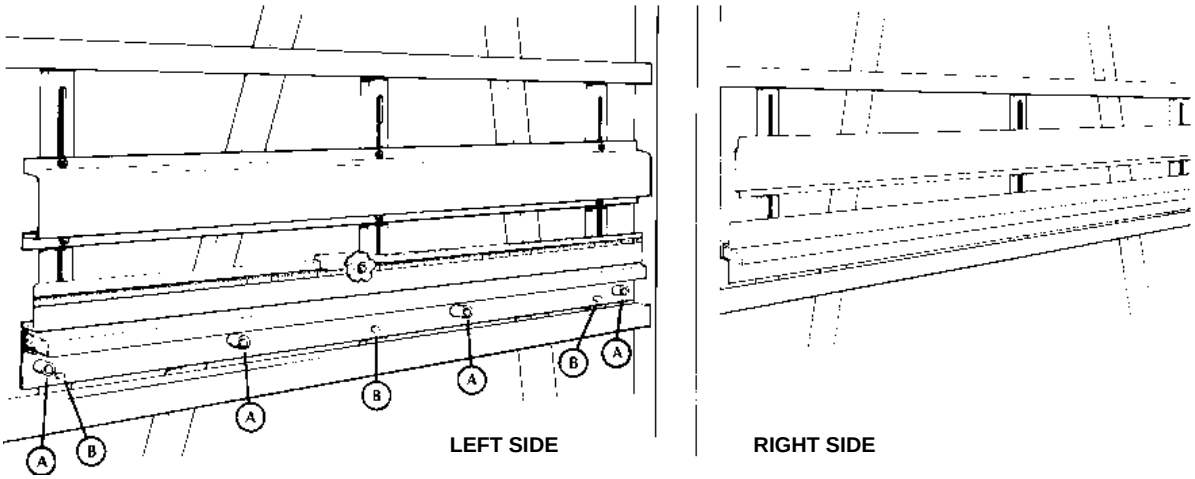

Figure 46: Mounting the Midway Fence

Fig. 47: Midway fence installed

3. Tip the top of the rear support brackets (#9 in Fig. 46) under the **upper** horizontal frame member (#8), raise the fence, and push the lower ends of the rear support brackets down behind the **lower** horizontal frame member. The nuts may have to be loosened slightly to perform this step.

   Tap the entire fence system toward the center of the tool frame, and align (as closely as possible) the 45° angle of the aluminum extrusion (#5) with the 45° angle of the vertical tube at the center of the frame. To assure a

4. neat appearance, be sure the rear support brackets (#9) are flush top and bottom with the machine frame tubes, and that they are at a 90° angle to the horizontal machine frame tubes.
5. Double-check the position of the complete fence assembly. Using the holes in the rear support brackets as a template, drill six 7/32" (11.11mm) mounting holes in the machine horizontal frame tubes, and secure with six self-tapping screws.
6. Repeat Steps 2 through 5 on the left-hand side of the frame.
7. Mount the wooden fence sections (#4), with the 45° angle ends toward the center of the machine, between the aluminum extrusion sections and the cam-type spacers (#1). When not in use, the two wooden fence sections can be stored in the material support channels (#15) on each side.
8. The friction fit of the wooden fence sections between the aluminum support bracket and the cam-type spacers can be adjusted by turning the bolt heads with a wrench. This fit can be readjusted at any time without realigning the fence system.
9. Align the fence system (see below).

Fence Alignment

1. Disconnect the power supply to the tool.
2. Remove the blade guard.
3. Slightly loosen the bolts that secure the aluminum extrusion (#5, Fig. 51) to the rear support brackets (#9), to allow the extrusion to be moved up or down by tapping it with a mallet.
4. Tap the extrusion to align it evenly, 1/4" (6.35mm) above the **lower** horizontal frame member (#8).
5. Place a carpenter's square on the wood fence, with the longer side on the fence and the shorter side against the saw blade. Raise and lower the carriage to check if the saw blade maintains alignment with the edge of the square. Gently tap the **outside** edge of the fence system to bring the wooden fence and the carpenter's square into alignment with the saw blade travel.
6. Reinstall the blade guard and reconnect the power supply.
7. Using a sample panel approximately 18" (458mm) wide and 40" (1016mm) long, and a freshly sharpened saw blade, trim 1" (25mm) off the end of the panel.
8. Remove the panel from the fence. Turn it around, **keeping the same edge down**. Trim 1" (25mm) off the other end.
9. Measure the top and bottom of the piece. When the measurements are the same, or within the tolerance of the machine, tighten all securing bolts.
10. To align the left half of the fence, place a 6-ft (1830mm) or 8-ft (2440mm) straightedge on the right-hand fence.

Move it to the left until it extends the full length of the left wooden fence, 48" (1220mm). Clamp the straightedge to the frame of the machine. Carefully adjust the left aluminum extrusion until the top of the wooden fence gently touches the bottom of the straightedge along its entire surface. Retighten all securing bolts.

To adjust the rulers, measure out from the saw blade and place a vertical pencil mark at 24" (610mm). Place both thumbs on the face of the ruler, and slide the ruler to the right or left to the proper location. Test-cut a piece of scrap material to check the ruler position.

Hold-Down Bar

The Hold-Down Bar Accessory consists of a vertical tube and several spring hold-down arms that help hold any thin, flexible material for chip-free, accurate cutting. It accepts material up to ¾" (19mm) thick, and can be quickly removed without wrenches for cutting thicker material.

Installation

⚠WARNING

Unplug tool before making adjustments or installing accessories

1. Attach the top and bottom support brackets (Fig. 48) with four 5/16" x 3/4" (7.9mm x 19.05mm) cap screws and nuts. The top bracket is marked "T" and the bottom bracket is marked "B".
2. Insert the round vertical tube up through the top bracket and then lower it down through the bottom bracket. A small hex-head screw at the bottom of the tube prevents you from inserting it the wrong way.
3. Attach the top and bottom tension locks as shown in Fig. 48.
4. Attach the spring hold-down arms with 1/4" (6.35mm) hex-head Self-Tapping bolts and washers.
5. Turn the vertical tube until the spring arms touch the tool frame and then tighten the top and bottom tension locks (Fig. 61).

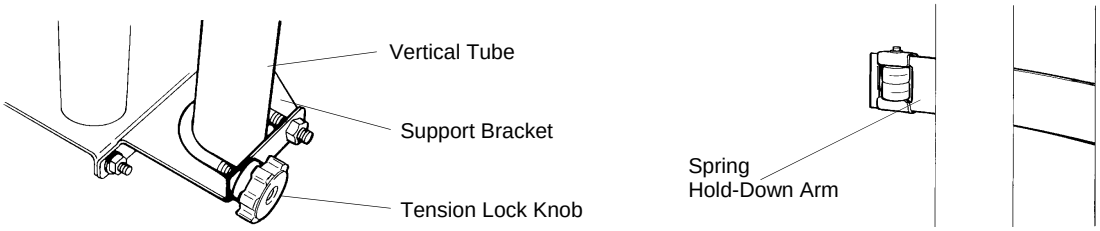

Figure 48: Installing the Hold-Down Bar

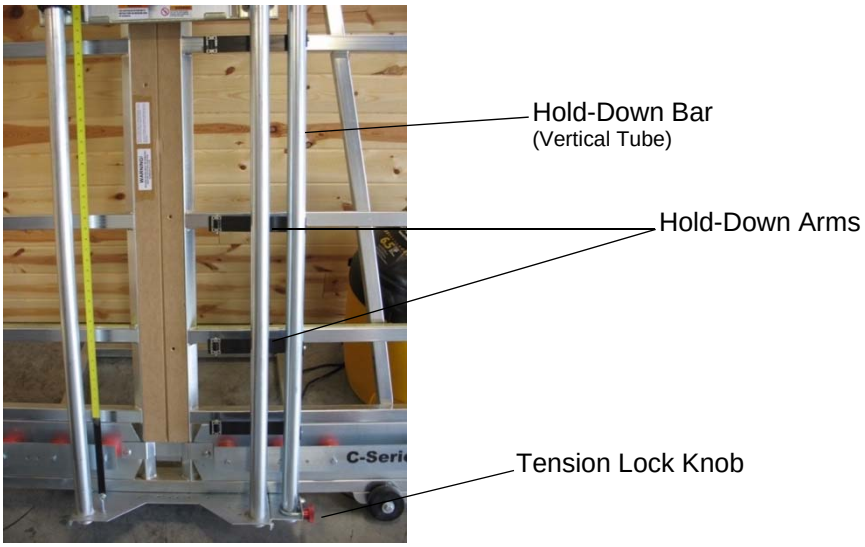

Figure 49: Hold-Down bar installed

SPECIFICATIONS

Table V: DFC Specifications

DFC Model	Dimensions				Maximum Crosscut	Cut Thickness*	Volts AC**	Horse Power
	Length	Height	Depth	Weight				
C4	60”/1525mm	75”/1900mm	14”/356mm	189lbs/86kg	50”/1270mm	1.75”/45mm	120	3.25
C5	60”/1525mm	90”/2286mm	14”/356mm	219lbs/99kg	64”/1625mm	1.75”/45mm	120	3.25
H4	120”/3050mm	75”/1900mm	14”/356mm	244lbs/111kg	50”/1270mm	1.75”/45mm	120	3.25
H5	120”/3050mm	90”/2286mm	14”/356mm	298lbs/135kg	64”/1625mm	1.75”/45mm	120	3.25
H6	120”/3050mm	98”/2500mm	14”/356mm	359lbs/163kg	74”/1850mm	1.75”/45mm	120	3.25

*1/2” Material thickness max knife capacity, varies with material and knives.

**All models available in optional 220/240V, 50/60 hertz.

DFC ACCESSORIES

MEASURE WITH ACCURACY

Description:	*Part #*
QUICK STOP	
C4, C5 (5 ft.)	C6460
H4, H5, H6, (8 ft.)	H6460
DIGITAL QUICK STOP	
C4, C5	C6460-DRO
H4, H5, H6,	H6460-DRO
STOP BAR (all models)	H6450
MIDWAY FENCE FLIP STOP (all mdls.)	PD1

MAXIMIZE DUST COLLECTION

Description:	*Part #*
INDUSTRIAL VACUUMS	
1 HP, 100 CFM, 90” S.P.	740C
2.25 HP, 115 CFM, 110” S.P.	740CC
Automater (120 V only)	AUTO1

EXPAND CAPABILITY

MIDWAY FENCE	
C4, C5	C6470
H4, H5, H6,	H6470
EXTENSIONS	
C4, C5, H4, H5, H6	H30

CLAMP IT

HOLD DOWN BAR	
C4, H4	H440
C5, H5	H550
H6	H660

PANEL MOVER

PANEL DOLLY	PD1

NOTE: SAW BLADES and **KNIVES** listed on **page 28 & 29**

13943 LINCOLN ST. NE
HAM LAKE, MN 55304
763-755-1600 Fax: 763-755-6080
sales@safetyspeed.com

www.SafetySpeed.com

051918