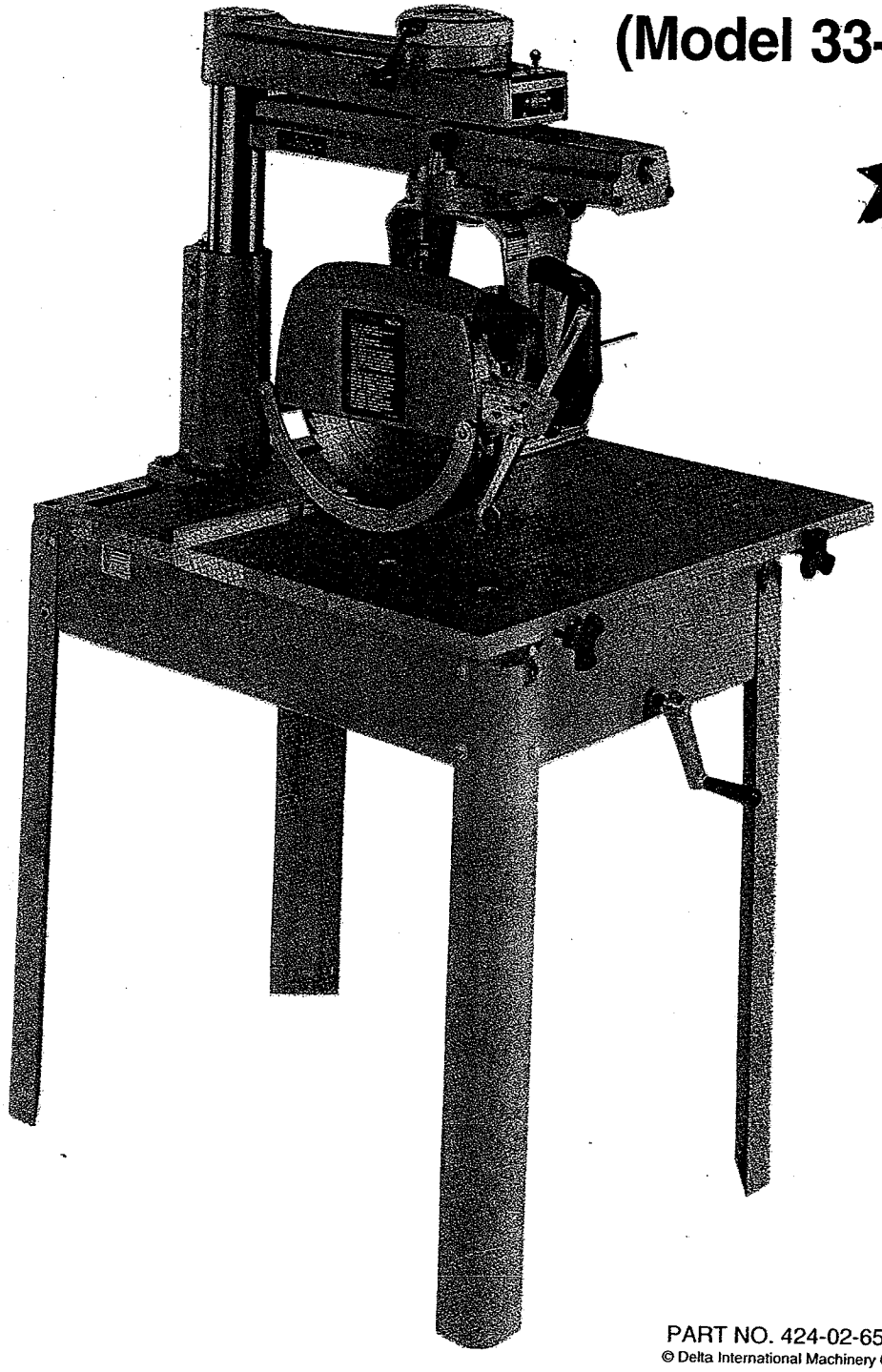
12″ Radial Arm Saw
(Model 33-890)



INSTRUCTION MANUAL

DATED 11-24-94

PART NO. 424-02-651-0021

DELTA

ADDITIONAL SAFETY RULES FOR RADIAL SAWS

1. **KEEP** saw blade sharp and free of all rust and pitch.
2. **KEEP** blade and arbor flanges free from dirt and grease.
3. **MAKE SURE** end plates are securely fastened to track arm before using saw.
4. **BE SURE** that all clamp handles are properly tightened before operating machine.
5. **DO NOT** perform any cutting operation freehand, that is without using the fence to support or guide the work.
6. **WHEN FINISHED** cross-cutting, always return the cuttinghead to the rear of the track arm.
7. **ALWAYS** follow warning on saw guard for instructions on ripping to be absolutely certain of not ripping from the wrong end.
8. **KNOW HOW** to reduce the risk of kickback. Always use anti-kickback fingers when ripping. The guard should be lowered on the infeed end and the anti-kickback attachment adjusted accordingly.
9. **NEVER** feed work into the anti-kickback end of the machine.
10. **ALWAYS** turn off power and wait until saw blade stops turning before moving workpiece or changing operational settings.
11. **SHUT OFF** the power and do not leave until the blade has come to a complete stop.
12. **THE USE** of accessories or attachments not recommended by Delta may result in risk of injury.
13. **DISCONNECT** the machine from power source before servicing or changing blades.
14. **DIRECTION OF FEED.** On ripping operations, feed work into the blade or cutter against the direction of rotation of the blade or cutter only.
15. **ALWAYS** use pushstick when ripping narrow work.
16. **KEEP** hands out of path of saw blade.
17. **NEVER** reach around or in back of saw blade.

SAVE THESE INSTRUCTIONS

OPERATING CONTROLS

The following is an explanation of the operating controls of the Delta 10" Radial Saw. We suggest you study these explanations carefully to familiarize yourself with the controls before turning on the power, to avoid damage to the saw or personal injury.

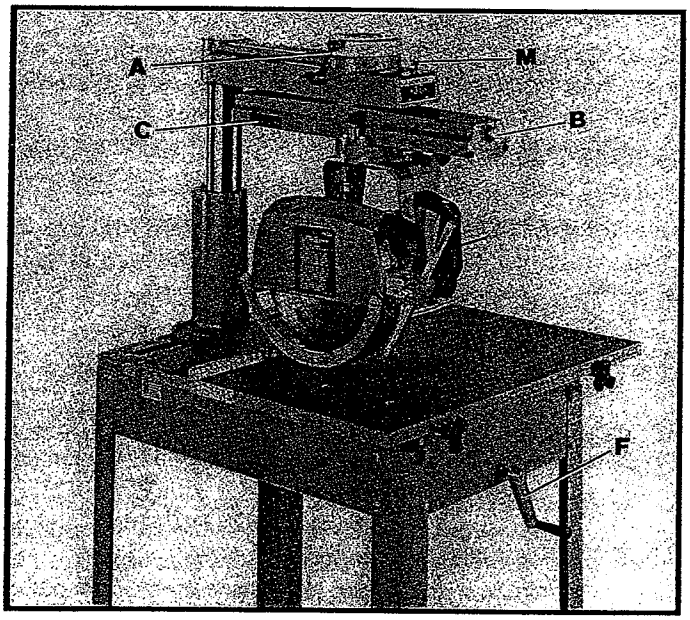


Fig. 2

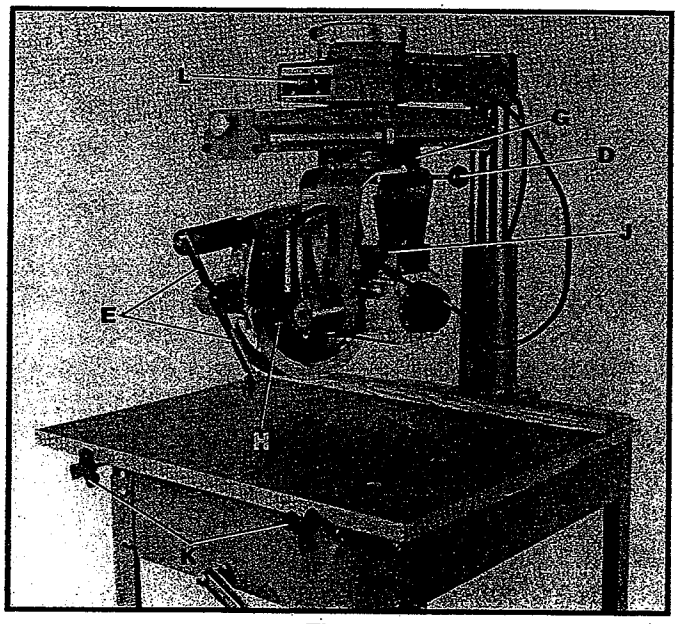


Fig. 3

A – TRACK ARM CLAMP KNOB. Controls swing of track arm for all miter cutting operations. Locks track arm at any angle for the full 360° rotation. To rotate track arm loosen clamp knob and rotate arm. The arm will stop at the 0° and 45° positions right and left. To move the arm past these points the track arm index knob (B) must be pulled out.

B – TRACK ARM INDEX KNOB. Locates 0° and 45° position, right and left, of the track arm.

C – YOKE INDEX LEVER. Locates each 90° position of the yoke for ripping or cross-cutting operations. When rotating the yoke the yoke clamp handle must first be loose.

D – YOKE CLAMP HANDLE. The yoke clamp handle must be loose when rotating the yoke to the rip or cross-cut position.

E – ANTI-KICKBACK DEVICE. When ripping, the yoke is positioned and clamped so that the blade is parallel to the fence. The rear of the blade guard is lowered until it almost touches the workpiece. The anti-kickback rod is then lowered so that the fingers catch and hold the workpiece. Never rip from the anti-kickback end of the blade guard.

F – OVERARM ELEVATING HANDLE. Controls the depth of cut in all operations. Turning the handle raises or lowers the overarm.

G – CUTTINGHEAD CLAMP KNOB. Locks cuttinghead at any position on the track arm. When ripping the cutting clamp knob must be tight.

H – BEVEL INDEX KNOB. Locates 0° and 45° and 90° positions of the motor when bevel cutting. When tilting the motor for bevel cutting, the bevel clamp handle must first be loose.

J – BEVEL CLAMP LEVER. Controls tilt of motor for bevel cutting operations. Locks motor at any desired angle on the bevel scale.

K – TABLE CLAMP KNOBS. Allows the operator to quickly set the desired fence position.

L – ON-OFF SWITCH. Conveniently placed at eye level; switch can be turned on or off in an instant for added operator protection.

M – MITER SCALE. Indicates degrees left and right for setting track arm.

ASSEMBLING ACCESSORY 33-967 MOULDING CUTTERHEAD GUARD

To assemble the accessory 33-967 Moulding Cutterhead Guard to your Radial Arm Saw, proceed as follows:

1. **DISCONNECT MACHINE FROM POWER SOURCE.**

2. Remove blade, and blade guard assembly.

3. Move motor so that the arbor is in the down position, as shown in Fig. 60.

4. Place guard (A) Fig. 60, on motor with stud on motor inserted through hole in guard. Thread special nut (B) on motor stud and fasten with screwdriver, as shown in Fig. 60.

5. When using the moulding cutterhead, the motor should be positioned as shown in Fig. 61. The height of the guard (A) Fig. 61, can be adjusted by loosening three screws (C).

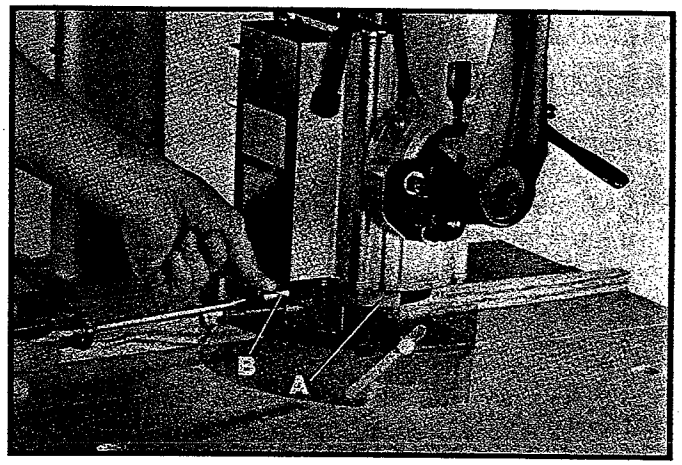


Fig. 60

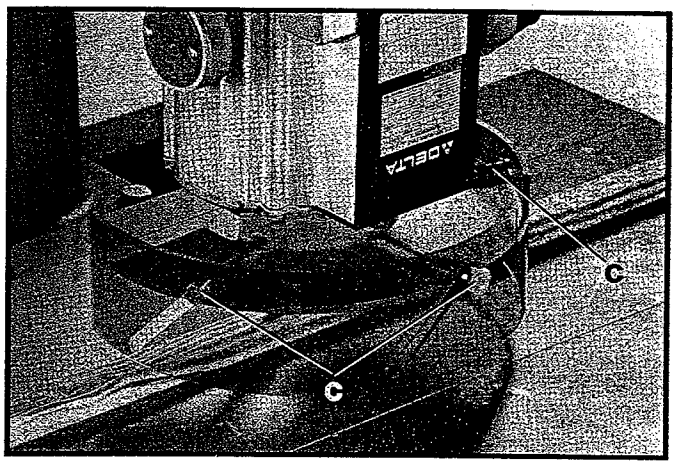


Fig. 61

OPERATIONS

CROSS-CUTTING

The first operation which should be learned on the radial saw is cross-cutting. Cross-cutting consists of supporting the workpiece against the fence and pulling the saw blade through the material at right angles to it.

When cross-cutting, the track arm (A) should be indexed at "0" and the track arm clamp handle (B) Fig. 62, tightened. The fence should be clamped between the table boards. The saw blade is to be to the left and behind the fence. The workpiece is placed on the table and butted against the fence. The saw blade should be clear of the fence and table when the machine is turned on. Then the saw blade is lowered until it lightly cuts into the table surface. The operator should position himself a little to the left of the machine for better visibility while cutting. Pull the saw blade across the work, just far enough to cut it off, and return the saw blade to its starting position. Wait for the blade to stop before touching the cut off piece. **CAUTION:** The operator must always be conscious of where his hands are; that they are clear of the blade and holding the workpiece firmly. As an added measure of operator safety, since the splitter and anti-kickback fingers are not used in the cross-cutting operation, the anti-kickback rod (C) can be turned upside down and locked in place so the rod just clears the workpiece. In this position the rod can act as a guard from the exposed teeth of the blade. Fig. 62 shows a cross-cutting operation on a radial saw. The operator should always be sure to return the cutterhead carriage to the full rear position after each cross-cut operation.

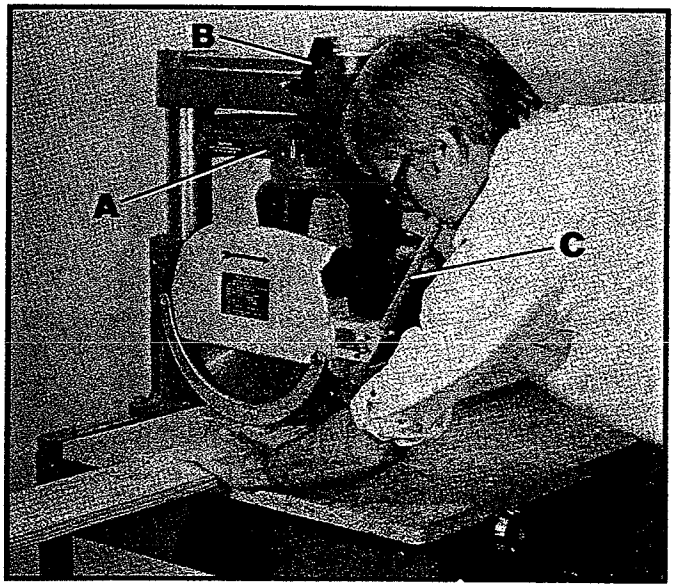


Fig. 62

NOTE: When cross-cutting material more than 1" thick, the fence must be positioned immediately behind the fixed front table board.

MITER CUTTING

Miter cutting is similar to cross-cutting except the workpiece is cut off at an angle (up to 45 degrees right or left) rather than being cut off square. The settings and operation are performed in the same manner as cross-cutting except that the track arm (A) Fig. 63, is first positioned to the desired angle on the miter scale before it is clamped in place with clamp handle (B). The operator should position the hand holding the workpiece on the opposite side to the direction of the miter so the blade is pulled through the workpiece and away from the hand. Fig. 63, shows a typical miter cutting operation on the radial saw.

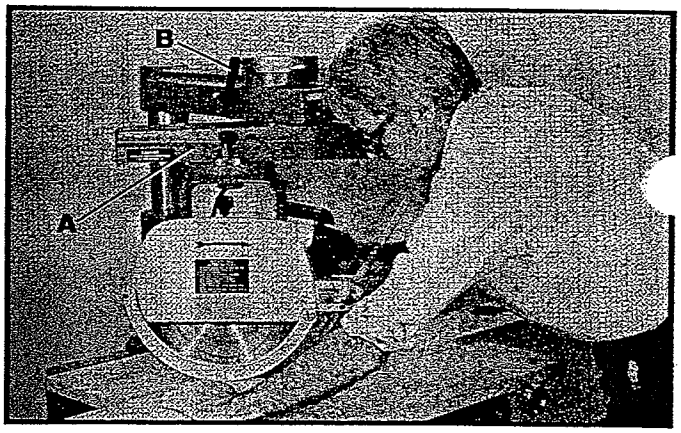


Fig. 63

COMPOUND MITER CUTTING

Compound miter cutting is performed in the same manner as miter cutting except the saw blade is also tilted to cut a bevel. The settings and operation are similar to miter cutting except that the blade is first tilted to the desired angle on the bevel scale before it is clamped in place. Fig. 64, shows a compound miter cutting operation on the radial saw.

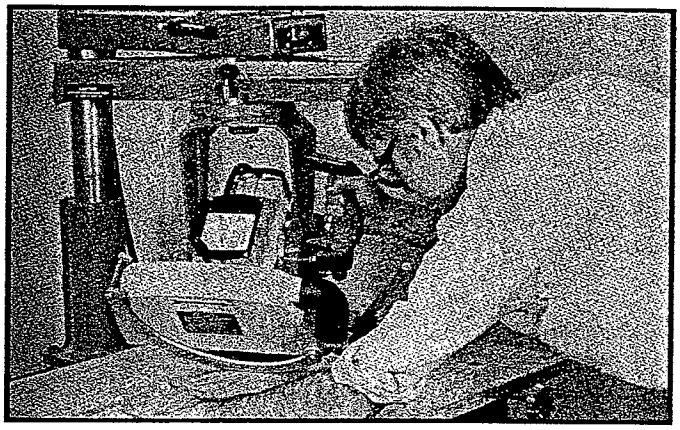


Fig. 64

RIPPING

Ripping involves making a lengthwise cut through a board along the grain. When ripping, the track arm (B) Fig. 65 and 66, are clamped at "0" on the miter scale. The yoke is then positioned and clamped so that the blade is parallel to the fence in either the inboard or outboard position.When feeding the material, one edge rides against the fence while the flat side of the board rests on the table. The guard should be lowered on the infeed side until it almost touches the workpiece, as shown in Figs. 65 and 66, to act as a holddown. The splitter and anti-kickback fingers (A) Fig. 65, should be adjusted accordingly. The operator's hands should always be well away from and to the side of the blade. When ripping narrow work, always use a push stick such as shown in Fig. 66, to push the work between the fence and blade. **NOTE:** The workpiece must have one straight edge to follow the fence. If board is bowed, place hollow side down. **IMPORTANT:** The cuttinghead clamp knob (C) Figs. 65 and 66, should be securely tightened for all ripping operations. Pay particular attention to warning label which states that material must never be fed into the outfeed end of the blade guard.

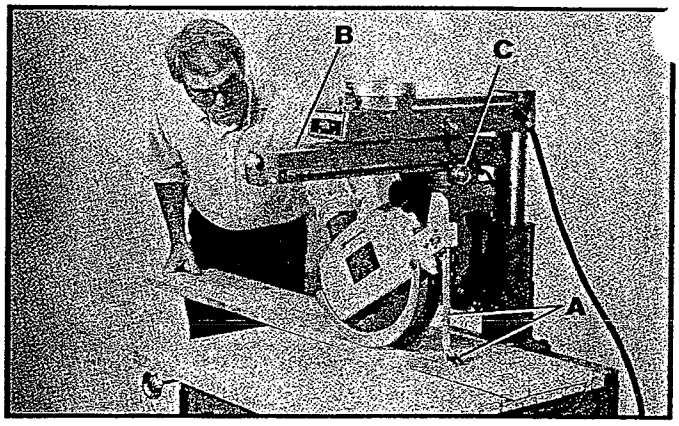


Fig. 65

OUT-RIPPING

Out-ripping involves all of the general conditions stated under **RIPPING**. The yoke is clamped at right angle to the track arm with the blade guard facing the front of the machine. The cuttinghead is positioned on the out-rip scale to the desired setting and clamped in position. The workpiece is fed from the left side of the saw. Fig. 65, shows a typical out-ripping operation on the radial saw.

IN-RIPPING

In-ripping involves all of the general conditions stated under **RIPPING.** The yoke is clamped at right angle to the track arm with the blade guard facing the rear of the machine. The cuttinghead is positioned on the in-rip scale to the desired setting and clamped in position. The workpiece is fed from the right side of the saw. Fig. 66, shows a typical in-ripping operation on the radial saw. Note the push stick being used due to the narrow workpiece.

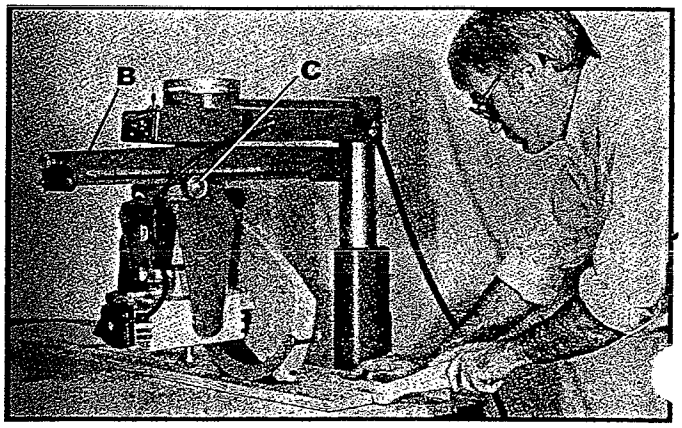


Fig. 66