



# **T-SLOT PRECISION SAW FENCE**

**MODEL TT45**

**MANUFACTURED BY  
SOMMERVILLE DESIGN & MANUFACTURING INC.**

Revision 05/2000  
Issue 6

**Dear Sommerville Design Customer:**

Thank you for purchasing an original EXCALIBUR product from Sommerville Design and Manufacturing. Our products are built to give years of trouble-free service and are designed to make your time in the workshop more efficient and your projects more accurate and rewarding than ever before.

From our experience, you will grow to appreciate your new Sommerville Design EXCALIBUR saw fence even more as time passes.

**Features:**

Your Sommerville Design EXCALIBUR T-Slot Precision Saw Fence:

- May be mounted to virtually any table saw.
- Glides smoothly on three point ball bearing suspension.
- Locks on both front and rear rails.
- Guarantees accurate, repeatable cuts.
- Allows for quick, easy adjustment of hairline cursor.
- May be used to the right or left of the saw blade.
- May be removed from the saw in seconds without tools.
- May be used with more available accessories than any other saw fence.

**Specifications:**

<b>Fence</b>	<b>TT45</b>	<b>TT58</b>
Length of fence body	45"	58"
Fits saw tables measuring: (front to back)	32" max.	44" max.
Height of fence body	2.5"	2.5"
Width of fence body	3"	3"
<b>Guide rails</b>	<b>R24L9</b>	<b>R50L12</b>
Overall length	49"	78"
Rip capacity (total, right or left of blade)	36"	65"
Scale graduations	Inch/mm	Inch/mm

**We want to hear from you:**

During your time in the shop you may often use your ingenuity to design a tool or jig for a special job. Or, you may have become frustrated by the inability of a current product to perform the task at hand. If you ever have ideas about how we can improve our products (or anyone else's), please write, call or fax us explaining your ideas. We make it our business to listen to you, our customer.

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## CONSTRUCTION OF EXTENSION TABLES

If the Guide Rails you have purchased will extend beyond the right or left hand edge of the saw table on which they are to be mounted, an extension table will be required. Your fence clamps front to rear across the rails, therefore the space between the rails must be filled with an extension table strong enough to keep the rails parallel when the fence is clamped across them. The extension table also provides additional working table surface, helpful when cutting large sheets.

If you are replacing an old fence with the Sommerville Design EXCALIBUR, it may be more convenient to build this extension table before dismantling the old fence and rails.

It is important that the extension table is built square, with the front and rear edges parallel to each other. The table may be constructed with hardwood framing, using a good quality glue and screws. In climates where the change of seasons brings a large change in humidity, solid wood extension tables may shrink or swell as they dry out or absorb moisture. In such cases, plywood or materials such as MDF will result in a more stable extension table.

Construct the frame of the extension table(s) from  $\frac{3}{4}$ " x  $2\frac{3}{4}$ " stock, with a  $\frac{1}{2}$ " thick plywood or particle board and plastic laminate top (Fig. #1). Make the right-hand extension table the same size, front to back, as the saw table and make the length of the extension table the same measurement that the rails extend to the right of the saw table. Dimension and construct the left-hand extension table, if required, in the same manner.

**Note: To allow for possible future installation of a Router Table Insert such as the Sommerville Design EXCALIBUR model EXRTA, leave an area 12" x 18" clear between two of the cross-members in the right-hand extension table, when constructing the frame.**

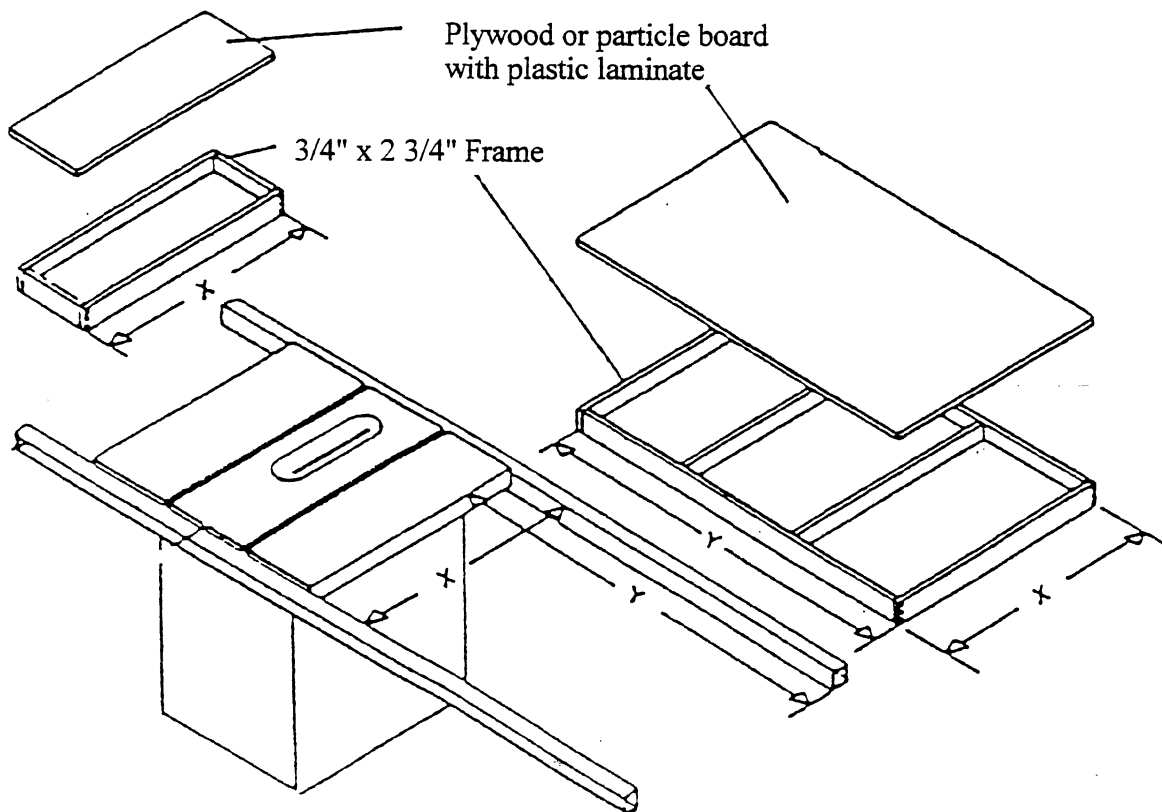


Figure #1

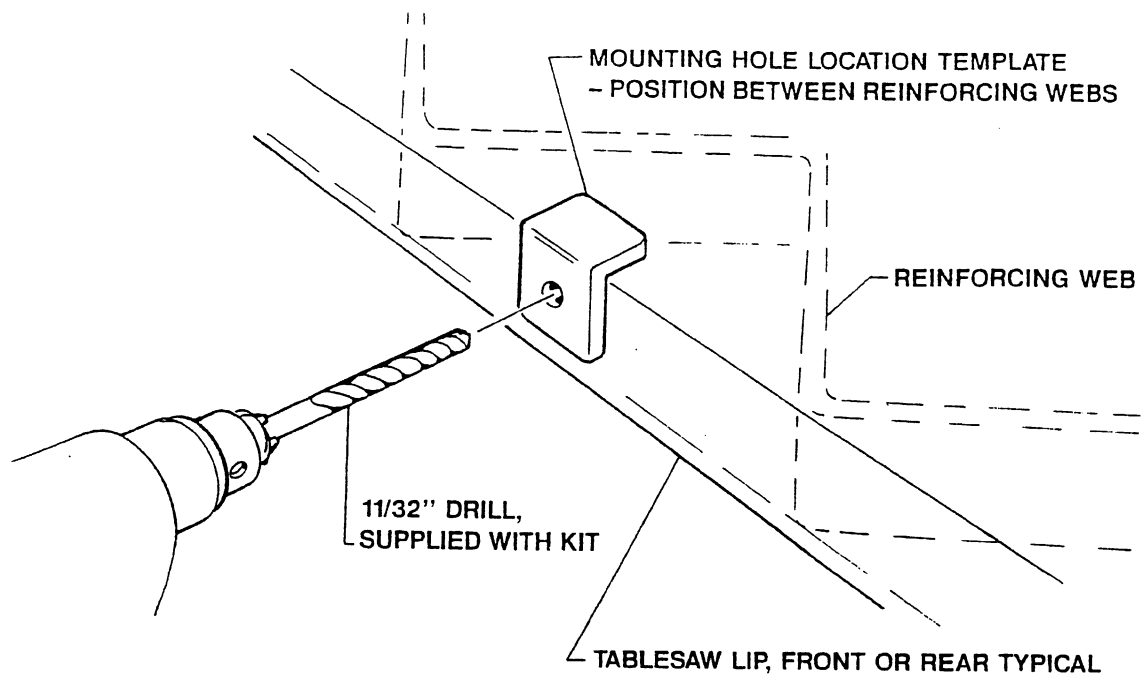


Figure #2

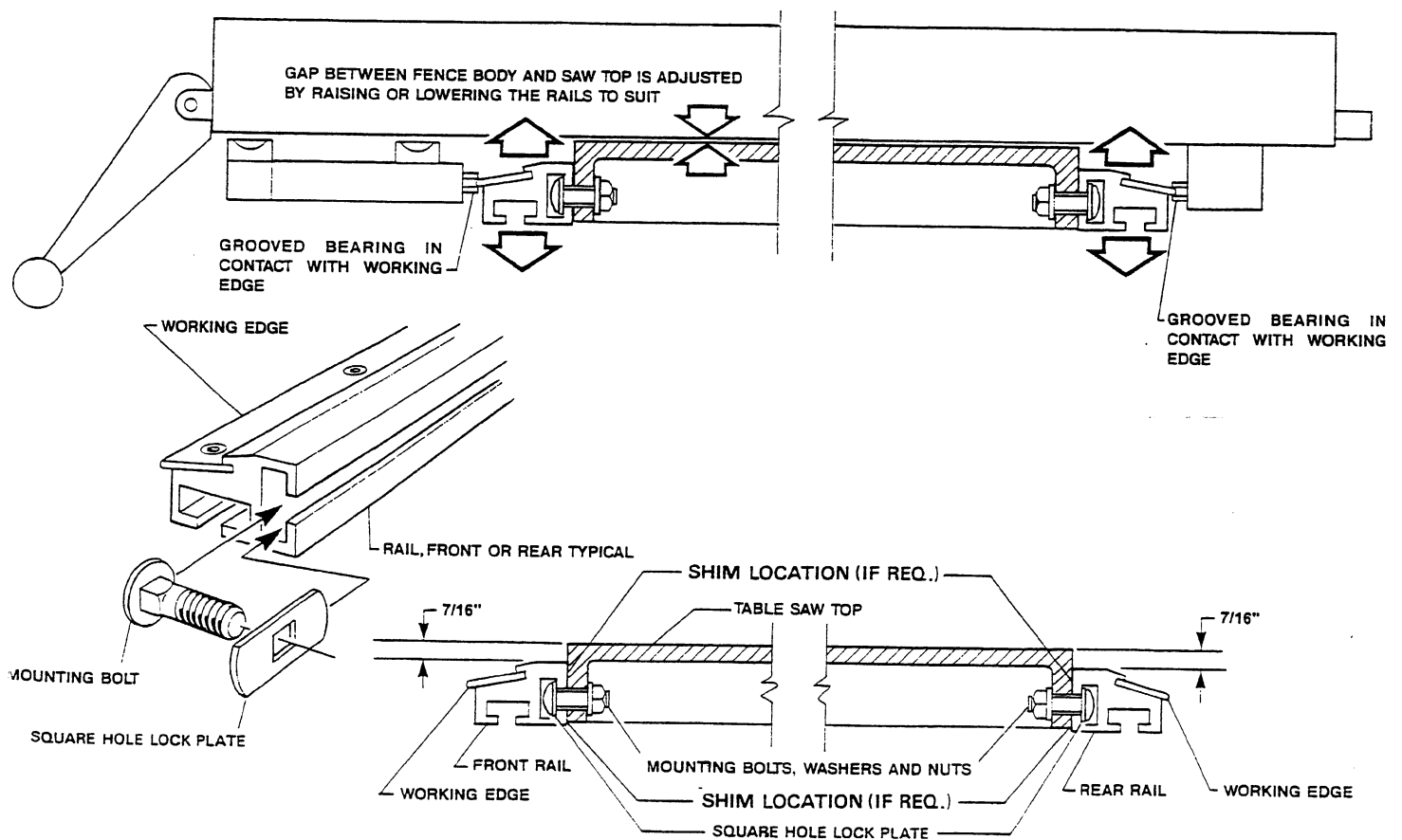


Figure #3

## FENCE ASSEMBLY INSTRUCTIONS

### Step 1:

Lay the fence body upside down on the saw or workbench. Remove the two #38 bolts and washers, #16, from the extrusion mount, #2. Place the T-bracket, #15, upside-down over the tapered boss projecting from the bottom of the extrusion mount. The square protrusion at the rear of the T-bracket should fit between the #4 set screws. Reinstall the 2 bolts and washers finger tight. Turn the #4 set screws in against the T-bracket and adjust them in or out to set the T-bracket roughly square to the fence body. (This will be fine tuned later.) Tighten the mounting bolts.

### Step 2:

Fasten the cursor lens, #10, to the underside of the T-bracket, #15, using the 1/4" x 3/4" flathead cursor screw, #12, and the #11 1/4" square nut. The pocket in the T-bracket is wider than the cursor to allow side to side adjustment of the cursor later. Position the cursor in the centre of its adjustment and snug the cursor screw. Do not over-tighten. A spare cursor is provided to replace the original in case of breakage.

### Step 3:

The locking handle on the fence has three positions. When the handle is in the vertical position the fence is released from the rails and may be lifted off the saw. When it is in the horizontal position the fence is held captive on the rails and may be rolled side to side with very little pressure to set the width of cut. When the handle is in the down position the fence locks securely on both front and rear rails.

To install the fence on the rails, with the fence right side up put the handle in the vertical position and set the fence on the saw table. Push the two suspension rollers protruding from the front edge of the T-bracket against the running edge of the front rail and move the locking handle to the horizontal position. Go to the rear of the saw and use a wrench on the adjusting nut to turn the adjuster rod counterclockwise until the suspension roller in the sliding block engages the running edge on the rear rail.

Continue to turn the adjuster rod counterclockwise while moving the fence side to side until the fence clamps on the rails and will not move with light pressure. Now turn the adjuster approximately one turn clockwise. The fence should now glide smoothly from side to side with the handle in the horizontal position and lock securely at front and rear with the handle in the down position. If it does not lock securely you must tighten the adjustment slightly by turning the adjuster rod counterclockwise. If the fence feels tight and does not move freely you must loosen the adjustment slightly by turning the adjuster rod clockwise.

**All adjustments must be made with the locking handle in the horizontal position. Do not adjust with the handle in the locked position.** Fine tune the adjustment by turning the adjuster rod only approximately 1/8 of a turn at a time.

Try locking the fence at various places along the rails. If the fence locks securely in one place but not in another the rails are not parallel. For example, if the fence locks securely over the saw table but not over the extension table the rails must be shimmed out from the extension table until the fence does lock securely.

The fence is now easily removed from the saw by moving the locking handle to the vertical position and lifting the fence off the rails.

### Step 4:

The vertical position of the fence may need to be adjusted to ensure that it glides just above the table surface without touching it. To do this, slightly loosen the nuts on the mounting bolts holding the rails to the table and move the rails up or down as necessary. Retighten all fasteners.

## PARALLEL ADJUSTMENT

It is imperative that any rip fence on a table saw remain parallel to the blade at all times. This is the reason that the Sommerville Design EXCALIBUR fences have been designed to lock at both front and rear. An out-of-square condition can cause binding of the workpiece which may result in a kickback that can cause serious injury to the operator.

### Step 1:

Your table saw top should be adjusted so that the mitre slots are parallel to the blade. You can verify this by raising the blade to its maximum height, clamping a piece of stock to the face of the mitre gauge so that it just touches the blade at the front edge, then sliding the gauge along its slot. The stock should just touch the rear edge of the blade as well. If it does not, adjust the table as per the manufacturer's instructions.

To adjust the fence parallel to the blade, position the fence along side of one of the mitre slots, loosen the #38 T-bracket mounting bolts and turn the #4 set screws with the supplied hex key. By turning one set screw in and the other out you can adjust the angle of the fence body. When the fence is parallel to the mitre slot snug both set screws and tighten the mounting bolts.

### Step 2:

If you have a straightedge with parallel sides, verify that the fence is parallel to the blade by placing the straightedge against the blade and bringing the fence along side. The fence should be parallel to the straightedge along its entire length. Make a test cut in scrap material to ensure that the blade is not binding. Readjust if necessary.

## INSTALLATION OF MEASURING TAPE

### Step 1:

With the saw off, position the fence against the right side of the blade and lock. Make a pencil mark on the top of the rail body in line with the hairline of the cursor. Lower the blade, unlock fence and roll to the left of the blade out of the way.

### Step 2:

Ensure that the top surface of the aluminum rail body is clean and dry. The measuring tape is self adhesive. Remove the first few inches of the paper backing and align the "0" mark on the tape with the pencil mark on the rail. With the front edge of the tape aligned with the front edge of the rail body, stick down the first few inches of the tape. Remove the remaining paper backing from the tape, pull the tape straight and press down firmly on top of the rail. Trim excess off the end. Fine adjust the position of the cursor in the T-bracket as necessary to achieve accurate measurements.

**\*\* Exercise great care when applying the tape. \*\***  
**Once attached, it cannot be removed without damaging it.**

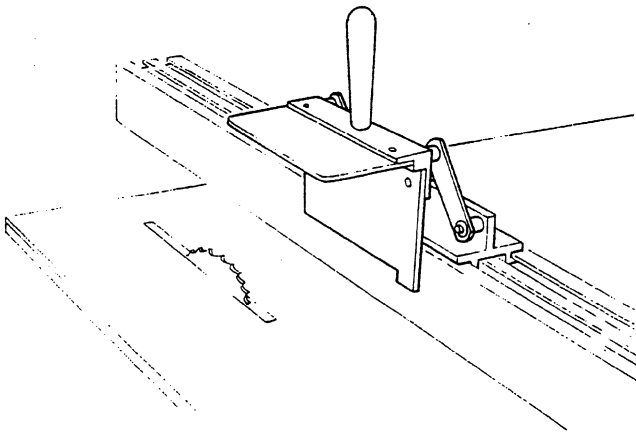
## MAINTENANCE

The locking handle should be lubricated occasionally. Swing the handle to the vertical position and apply a small quantity of stick wax or white lithium grease to the flat surfaces that bear against the extrusion mount. Your Sommerville Design EXCALIBUR fence needs no other maintenance, aside from an occasional cleaning.

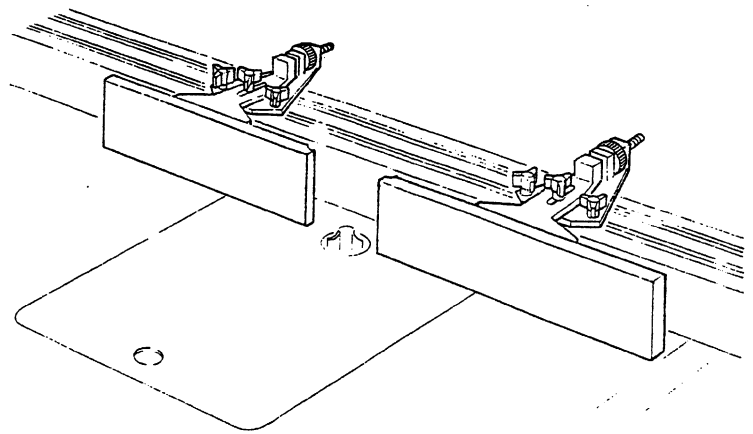
## LIFETIME WARRANTY

All component parts of this Sommerville Design EXCALIBUR product are guaranteed to be free of defects in material and workmanship. Any part that fails, excluding parts subjected to misuse, abuse or normal wear and tear, will be replaced free of charge, freight collect, by the manufacturer. Parts considered defective must be returned, freight pre-paid, for inspection by the manufacturer and must be accompanied by a copy of the original sales invoice for the product. Write, phone or fax for a return authorization number. Unauthorized returns will not be accepted.

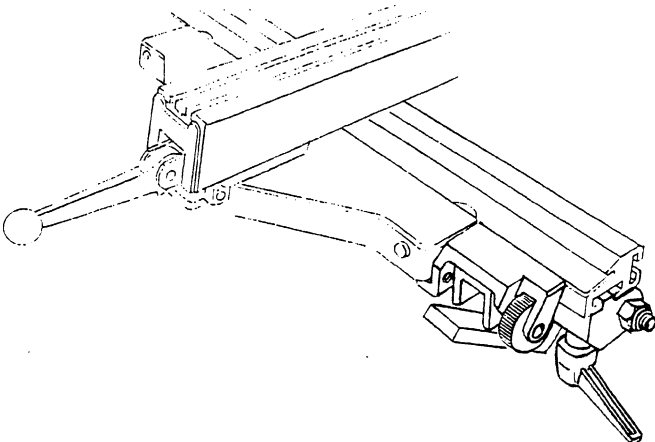
The following accessories are designed for use with your Sommerville Design EXCALIBUR T Slot Fence. They are available from your local EXCALIBUR dealer.



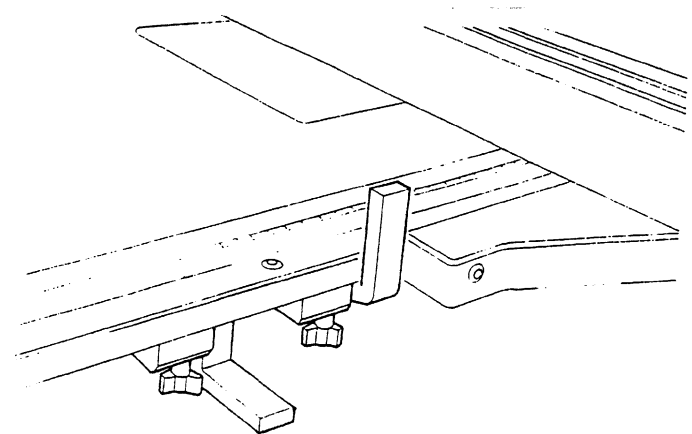
**EXPU-** Stock Pusher- For making narrow cuts close to the blade.



**EXAUX-** Auxiliary Fences- Used as in and out-feed fences in conjunction with a router table.



**EXMA-**Micro Adjust- For precise setting and adjustment of fence position.



**EXSTOP-** Adjustable Work Stops- for making repetitive cuts.

# EXCALIBUR T-SLOT PRECISION SAW FENCE MODEL TT45

## PARTS LISTING

PART #	DWG#	QTY.	DESCRIPTION
F101E001	01	1	Fence Body
F102C013	02	1	Extrusion Mount
F103N206	03	4	Hex Nut- 1/4"
F104B301	04	2	Set Screw- 5/16" x 3/4"
F105B203	05	6	Button Head Bolt- 1/4" x 1/2"
F106A006	06	3	Suspension Roller
F107S002	07	3	Roll Pin
F108C009	08	3	Clevis
F109S005	09	36	Disc Spring
F110X004.1	10	2	Cursor
F111N208	11	1	Square Nut- 1/4"
F112B205	12	1	Flat Head Cursor Screw- 1/4" x 3/4"
F115D003	15	1	T-Bracket
F116W201	16	2	Flat Washer- 1/4"
F118N403	18	1	Adjusting Nut- 3/8" Acorn
F119S006	19	1	Adjusting Spring
F120N402	20	1	Slide Block Lock Nut- 3/8" Nylon Insert
F120N101	21	2	Retainer Plate Nut- 10-32 Nylon Insert
F122P004	22	1	Slide Block Retainer Plate
F123E003	23	1	Slide Block
F124B114	24	2	Slide Block Bolt- 10-32 x 2 1/2"
F125H002	25	1	Tie Rod
F126H003	26	1	Adjuster Rod
F127N101	27	1	Tie Rod Nut
F128C029	28	1	Rear End Cap
F129C014	29	1	Front End Cap
F130C021	30	1	Locking Handle
F131M014	31	1	Pivot Sleeve
F132B203	32	2	Button Head Bolt- 1/4" x 1/2"
F135W301	35	12	5/16" Lock Washer
F136N301	36	12	5/16" Hex Nut
F138B206	38	1	Button Head Bolt- 1/4" x 1"
F139F011	39	1	Long Clevis
F140B210	40	3	Clevis Screw- 1/4" x 3/4" Tamper Proof
F141T004	41	1	Measuring Tape
F142P005A	42.1	2	Rail Working Edge- 49"
F142P005	42.1	2	Rail Working Edge- 78"
F143B203	43	(10) 16	Button Head Bolt- 1/4" x 1/2"
F144E002A	44	2	Rail Body- 49"
F144E002	44	2	Rail Body- 78"
F145B307	45	12	Rail Mounting Bolt- 5/16" x 1 1/2" Carriage
F146F010	46	12	Locking Plate
F147N405	47	1	Lock Nut- 3/8"
F151T003	-	1	Hex Key
F152F005	-	1	Drill Template
F153T002	-	1	11/32 Drill Bit

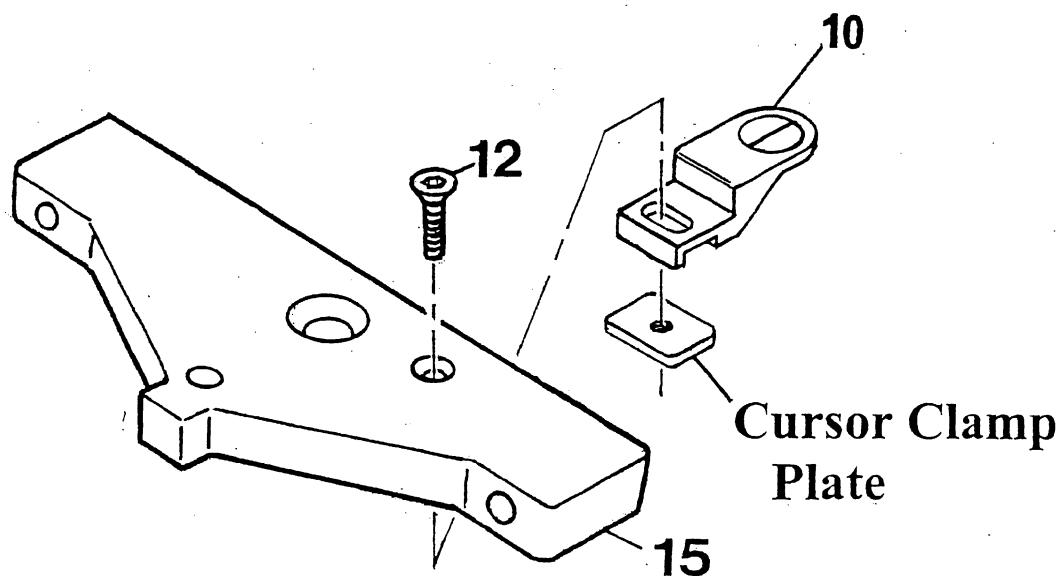




### Addendum to TT45 Manual

Your Excalibur TT45 rip fence includes a part not illustrated in the manual. The new Cursor Clamp Plate, shown below, is a direct replacement for the 1/4" nut formerly used to hold the cursor (#10) to the T bracket (#15). The cursor clamp bolt (#12) has not changed.

This new Clamp Plate offers more support for the Cursor, making it less susceptible to damage from an accidental bump.



Sommerville Design & Mfg. Inc. reserves the right to make changes in design or improve the product at any time without notice and without obligation to make such changes to previously manufactured products.

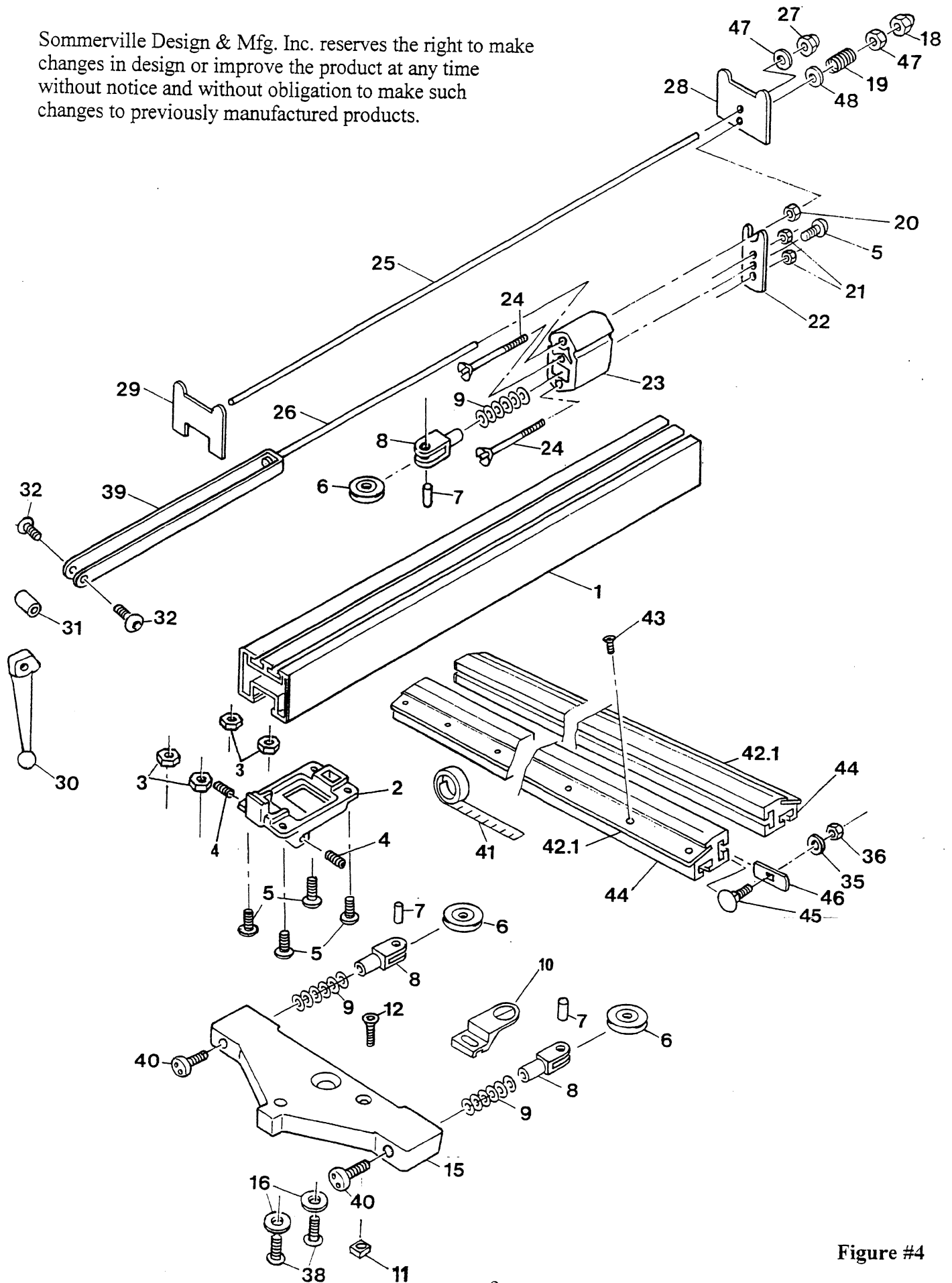


Figure #4