

# ASSEMBLY, OPERATING INSTRUCTIONS AND PARTS LIST FOR CRAFTSMAN BENCH SAW 10-INCH TILTING ARBOR

## MODEL NUMBER 113.29960

The Model Number will be found on a plate attached to your saw, at the back, near the bottom of the base. Always mention the Model Number when communicating with us regarding your saw or when ordering parts.

Carefully read the instructions provided, observe the simple safety precautions and you will have many hours of satisfactory use from your new Craftsman tool.

## HOW TO ORDER REPAIR PARTS

All parts listed herein may be ordered through SEARS, ROEBUCK AND CO. or SIMPSONS-SEARS LIMITED. When ordering parts by mail from the catalog order house which serves the territory in which you live, selling prices will be furnished on request or parts will be shipped at prevailing prices and you will be billed accordingly.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST:

1. The PART NUMBER
2. The PART NAME
3. The MODEL NUMBER 113.29960.
4. The NAME OF ITEM —  
10-INCH BENCH SAW.

## COAST TO COAST NATION-WIDE SERVICE FROM SEARS FOR YOUR CRAFTSMAN 10-INCH BENCH SAW



SEARS, ROEBUCK AND CO. and SIMPSONS-SEARS LIMITED in Canada back up your investment with quick, expert mechanical service and genuine CRAFTSMAN replacement parts.

If and when you need repairs or service, call on us to protect your investment in this fine piece of equipment.

**SEARS, ROEBUCK AND CO.-U. S. A.**  
**IN CANADA, SIMPSONS - SEARS LIMITED**

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# SAFETY RULES FOR POWER TOOLS

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## 1. KNOW YOUR POWER TOOL

Read owner's manual carefully. Learn its applications and limitations as well as the specific potential hazards peculiar to this tool.

## 2. GROUND ALL TOOLS — UNLESS DOUBLE-INSULATED

If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If adapter is used to accommodate two-prong receptacle, the adapter wire must be attached to a *known ground*. Never remove third prong.

## 3. KEEP GUARDS IN PLACE

and in working order.

## 4. KEEP WORK AREA CLEAN

Cluttered areas and benches invite accidents.

## 5. AVOID DANGEROUS ENVIRONMENT

Don't use power tool in damp or wet locations, and keep work area well lit.

## 6. KEEP CHILDREN AWAY

All visitors should be kept safe distance from work area.

## 7. STORE IDLE TOOLS

When not in use, tools should be stored in dry, high or locked-up place — out of reach of children.

## 8. DON'T FORCE TOOL

It will do the job better and safer at the rate for which it was designed.

## 9. USE RIGHT TOOL

Don't force small tool or attachment to do the job of a heavy duty tool.

## 10. WEAR PROPER APPAREL

No loose clothing or jewelry to get caught in moving parts. Rubber gloves and footwear are recommended when working outdoors.

## 11. USE SAFETY GLASSES

with most tools. Also face or dust mask if cutting operation is dusty.

## 12. DON'T ABUSE CORD

Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil and sharp edges.

## 13. SECURE WORK

Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.

## 14. DON'T OVERREACH

Keep proper footing and balance at all times.

## 15. MAINTAIN TOOLS WITH CARE

Keep tools sharp at all times, and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

## 16. DISCONNECT TOOLS

When not in use, before servicing; when changing accessories such as blades, bits, cutters, etc.

## 17. REMOVE ADJUSTING KEYS AND WRENCHES

Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

## 18. AVOID ACCIDENTAL STARTING

Don't carry plugged-in tool with finger on switch.

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# ASSEMBLY AND OPERATING INSTRUCTIONS

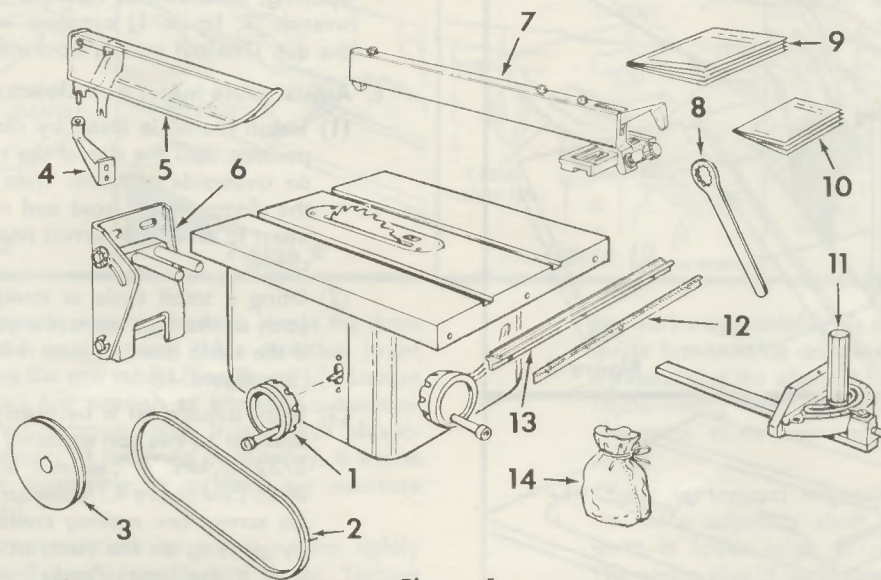


Figure 1

## UNPACKING AND CHECKING CONTENTS

This Craftsman Bench Saw is shipped complete in one carton (without motor).

In order to prevent damage during shipment and facilitate packaging, certain items are removed at the factory and must be assembled when received by the purchaser. These "loose" parts are listed below and should be accounted for before discarding any packing material.

| Key No.<br>(Fig. 1) | Part Name  | Qty. |
|---------------------|--|------|
| 1                   | Handwheel Assembly (Tilt) 4-1/2 in. ....                   | 1    |
| 2                   | V-Belt 1/2 in. x 41 in. ....                               | 1    |
| 3                   | Pulley - V, Single Groove<br>2-1/2 in. x 5/8 in. Bore .... | 1    |
| 4                   | Bracket, Splitter Blade ....                               | 1    |
| 5                   | Guard Assembly - Saw ....                                  | 1    |
| 6                   | Support Assembly, Motor ....                               | 1    |
| 7                   | Fence Assembly, Rip ....                                   | 1    |
| 8                   | Wrench, Arbor ....   | 1    |
| 9                   | Operating Instructions ....                                | 1    |
| 10                  | Handbook ....  | 1    |
| 11                  | Gauge Assembly, Miter ....                                 | 1    |
| 12                  | Rack - Table ....  | 1    |
| 13                  | Bar Assembly - Fence ....                                  | 1    |
| 14                  | Bag of Loose Parts ....                                    | 1    |
|                     | (Containing the following:)                                |      |
|                     | Wrench, Hex "L", 3/32 in. ....                             | 1    |
|                     | Wrench, Hex "L", 1/8 in. ....                              | 1    |
|                     | Wrench, Hex "L", 5/32 in. ....                             | 1    |
|                     | Wrench, Hex "L", 3/16 in. ....                             | 1    |
|                     | Bolt, Carriage 5/16-18 x 3/4 in. ....                      | 4    |
|                     | Nut, Square 5/16-18 ....                                   | 4    |
|                     | Washer, 11/32 x 7/8 x 1/16 in. ....                        | 4    |
|                     | Lock Washer, 5/16 x .125 x .078 ....                       | 4    |
|                     | Screw, Mach., Hex-Hd., 5/16-18 x 5/8 in. ....              | 2    |
|                     | Spacer, Fence Guide ....                                   | 3    |
|                     | Screw, Mach., Rd.-Hd., Slotted, 1/4-20 x 2 in. ....        | 3    |
|                     | Nut, Hex, 1/4-20 x 7/16 x 3/16 in. ....                    | 3    |
|                     | Lockwasher, 1/4 x .109 x .062 in. ....                     | 3    |
|                     | Screw, Mach., Hex-Hd., 5/16-18 x 1 in. ....                | 2    |
|                     | Screw, Sems, Pen-Hd., Slotted ....                         | 1    |
|                     | Washer, 13/64 x 3/4 x .0239 in. ....                       | 3    |
|                     | Washer, 13/64 x 3/4 x .029 in. ....                        | 2    |
|                     | Support, Splitter ....                                     | 1    |

**WARNING:** Make sure the motor power cord is not plugged into the power supply socket when working on your saw.

## ASSEMBLY AND ADJUSTMENTS

1. Remove the "loose" parts from the package, clean the parts and basic saw assembly thoroughly. (See figure 1.) Items having a rust-preventive coating, (saw table, etc.) may be cleaned with a cloth saturated with kerosene.

**CAUTION:** Before attempting to use the saw, assemble it as outlined in the following instructions. All adjustments are carefully checked prior to shipping the saw, however, rough handling in transit may necessitate some readjustments.

2. Assemble the saw and check adjustments as follows:

a. Remove the table insert, by inserting a finger into the opening at end of the insert clamp and raising the clamp upward until it releases at the front. (See figure 2.) Then pull forward slightly to release the clip at the rear of the insert and lift the insert carefully off saw blade.

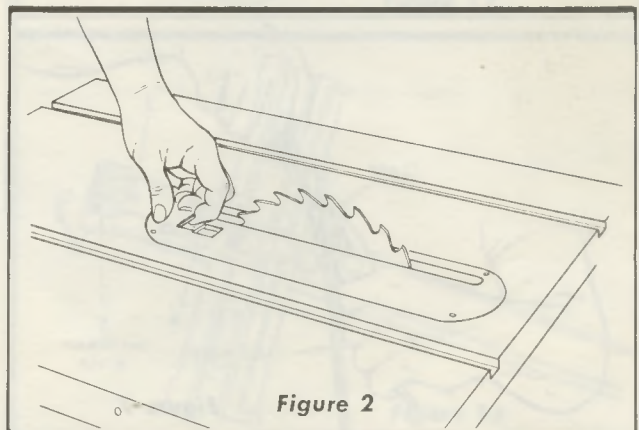


Figure 2



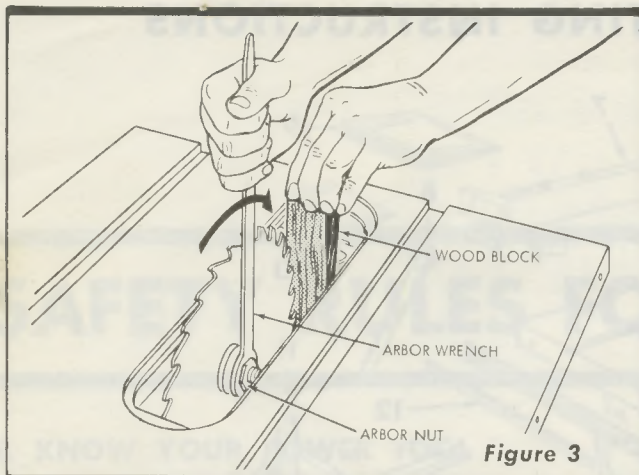


Figure 3

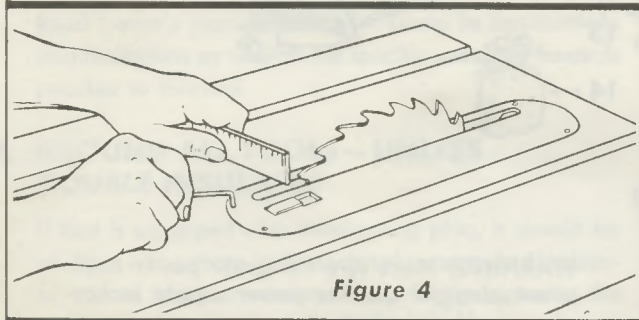


Figure 4

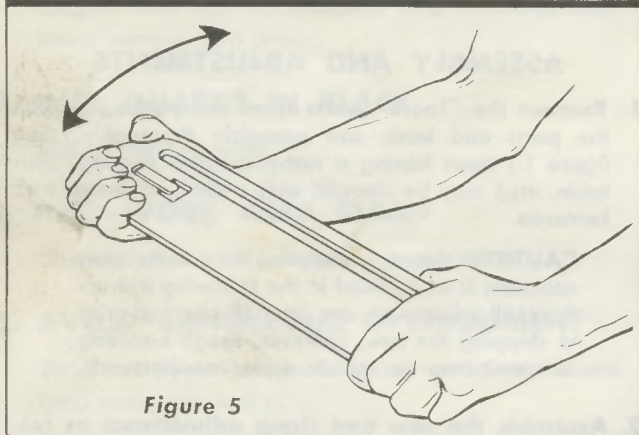


Figure 5

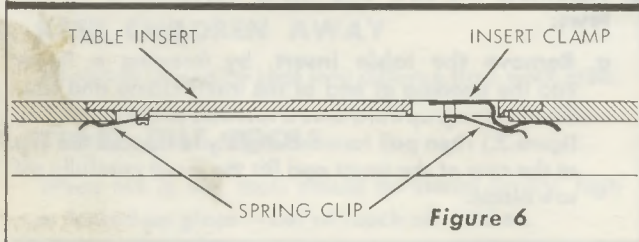


Figure 6

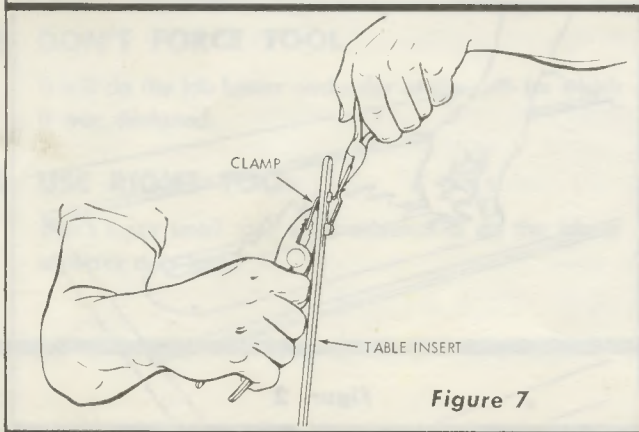


Figure 7

b. **Check tightness of saw arbor nut.** Wedge a small block of wood between the saw blade and table opening, as shown in figure 3 and using the arbor wrench (8, figure 1) supplied with the saw, tighten the nut. (The nut rotates clockwise to tighten.)

c. **Adjust table insert as follows:**

- (1) Install the table insert by sliding it carefully into position until the clip at the rear slides into place on underside of table. Then with a finger, raise the clamp at the front end enough to permit the insert to drop into correct position and release the clamp.
- (2) Using a small scale or straightedge, check near each of the four set screw positions to determine if the table insert is even with saw table surface. (See figure 4.)
- (3) If an adjustment is necessary rotate each of the four set screws (or as many as required) with a 3/32-in. hex "L" wrench until the surfaces are even. (See figure 4.) Make sure that ends of all four set screws are making contact with table recess by pressing on the insert at each set screw location. If the insert "rocks" when pressed at any position adjust set screws until the "rocking" is eliminated.
- (4) If the table insert cannot be adjusted (with set screws) at all four corners, it may have a slight twist which can be eliminated by removing it and giving it a corrective twist with two hands. (See figure 5.) Exercise care to avoid an over correction and readjust set screws after each trial. Several trials may be required to achieve an accurate adjustment.
- (5) After adjusting the table insert even (flush) with the saw table, check the insert clamp and spring clip to make sure the insert is held securely in the table opening, and that the insert clamp is below the surface of the insert. (See figure 6.) If the clamp protrudes above the surface, remove the table insert and bend the clamp as shown in figure 7. Bend only a small amount each time and install the insert after each trial to check results. Several trials may be necessary.

d. **Install the tilt hand-wheel** (1, figure 1) and secure it by tightening the set screw with a 5/32-inch hex "L" wrench.

e. **Rotate the elevation hand-wheel** (1, figure 1) clockwise until it stops. This will position the saw blade for deepest cut in preparation for aligning the saw blade with table grooves. Also, loosen the clamp screw handle (figure 8) and rotate the tilt handwheel clockwise until the tilt pointer is at the approximate "0" position (figure 8). This will position the saw blade in a vertical position.

- (1) Tighten the clamp screw with clamp screw handle. (See figure 8.)
- (2) Make a pencil mark on the saw tooth that is just above the table top surface at front of the blade. (See figure 9.)
- (3) Measure the distance from this tooth to the right-hand table groove.
- (4) Rotate blade by hand to locate this (marked) saw tooth just above table top at rear of blade, and again measure the distance from the saw tooth to the right-hand table groove. These two measurements must be exactly the same.



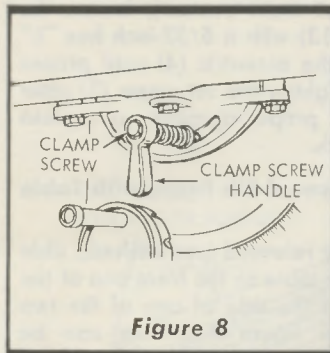


Figure 8

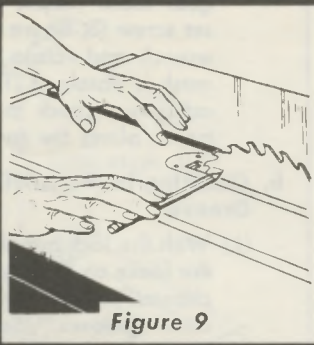


Figure 9

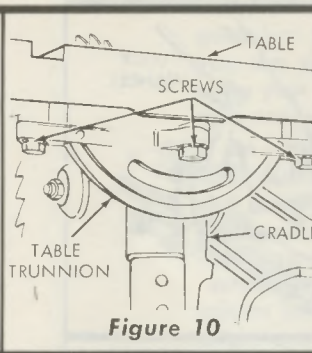


Figure 10

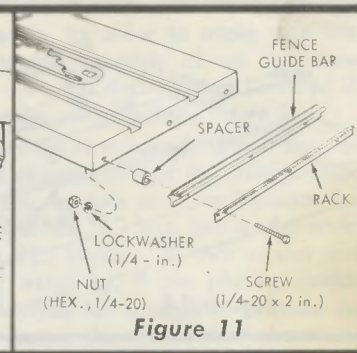


Figure 11

- (5) If measurements are not the same, locate the three screws which secure each table trunnion (front and rear) to the saw table. (See figure 10.) Loosen these screws just enough to permit the trunnion to "slip" when tapped with a mallet or plastic-tipped hammer. (If loosened completely, it would be almost impossible to achieve an accurate adjustment.)
- (6) Shift the two trunnions by tapping them lightly until the two measurements are equal. Tighten trunnion screws and recheck measurements to make sure tightening screws did not alter the setting.

#### f. Install Table Rack

- (1) Position the table rack (12, figure 1) against lower edge of fence guide bar (13, figure 1) so that rack teeth are on upper edge of rack and pointing outward. Align the three holes in both parts. (See figure 11.)
- (2) Insert one of the three 1/4-20 x 2-inch screws through holes at one end of rack and guide bar and place a guide bar spacer on the end of the screw. Insert the screw through the saw table and install a 1/4-inch lockwasher and 1/4-20 hex nut.
- (3) Install the remaining two screws, spacers, lockwashers and nuts. When tightening the three screws make sure the guide bar is parallel to the table top.

### 3. Adjust Rip Fence

Your Craftsman Rip Fence has been designed to provide accuracy, reliability and long life. In order for your fence to work properly it is imperative that it be adjusted accurately. The fence is adjusted at the factory, but due to shipping hazards, and slight tolerance build-up between individual saws, it is sometimes necessary that your fence be adjusted to your particular saw. Therefore, check your fence and adjust it (if necessary) as outlined in the instructions that follow:

**CAUTION:** It is imperative that these instructions be followed precisely as an incorrect adjustment could damage the fence and the fence guide bar attached to your saw.

#### a. Installation of Rip Fence

- (1) Raise the lock handle and position the rip fence (7, figure 1) on the saw table. Do not latch the lock handle.
- (2) Slide the rip fence along the guide bar while watching the clearance between lower edge of fence and table top. If any portion of the fence (except sliding pad at rear) drags on the table top, or if clearance between fence and table

top varies appreciably as the fence is moved, the guide bar must be adjusted. This is accomplished by loosening the attaching screws (figure 11) and repositioning the guide bar until a consistent clearance exists over entire top surface of the table.

- (3) Check for correct engagement (mesh) of teeth on fence adjusting shaft pinion with the gear teeth in lower edge of rack. (See figure 12.) The pinion should be adjusted up or down so that gear teeth are in full contact lengthwise and meshed as far as possible, just short of binding. This adjustment is made as follows: Push the fence adjusting knob all the way down, and look underneath the rack to determine if the pinion and rack teeth are aligned. (See figure 12.) If the pinion extends too far (or not far enough) loosen the set screw (1, figure 13) with a 5/32-inch hex "L" wrench and slide the knob assembly on the pinion shaft to achieve proper alignment. Tighten the set screw (1, figure 13.) To adjust for correct

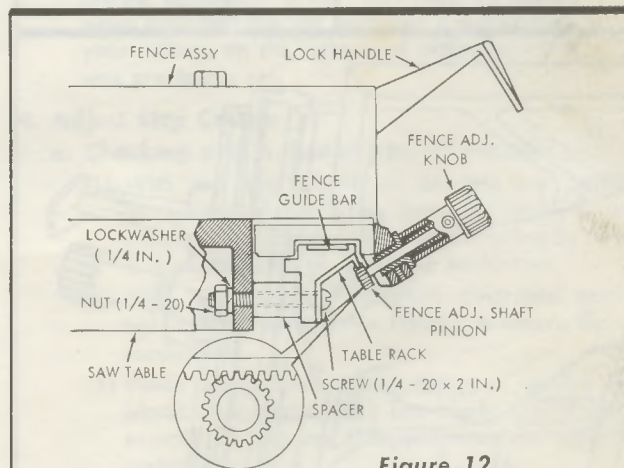


Figure 12

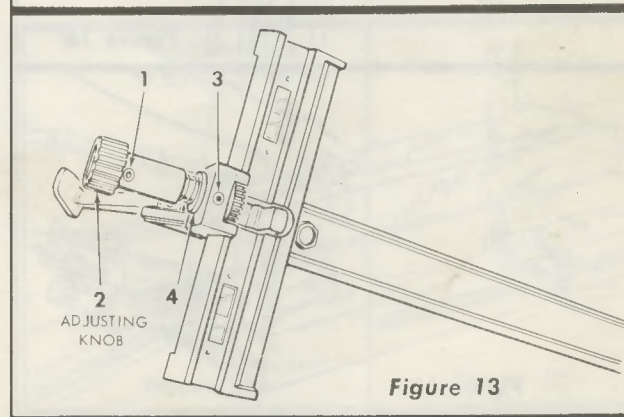


Figure 13



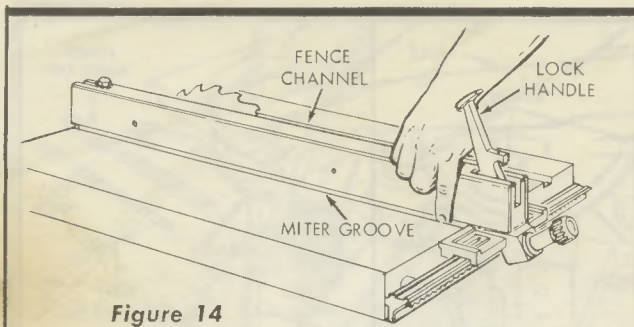


Figure 14

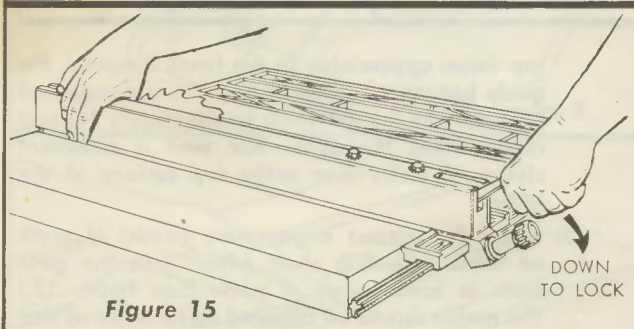


Figure 15

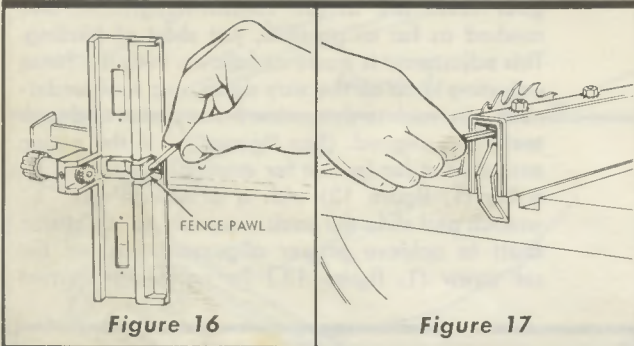


Figure 16

Figure 17

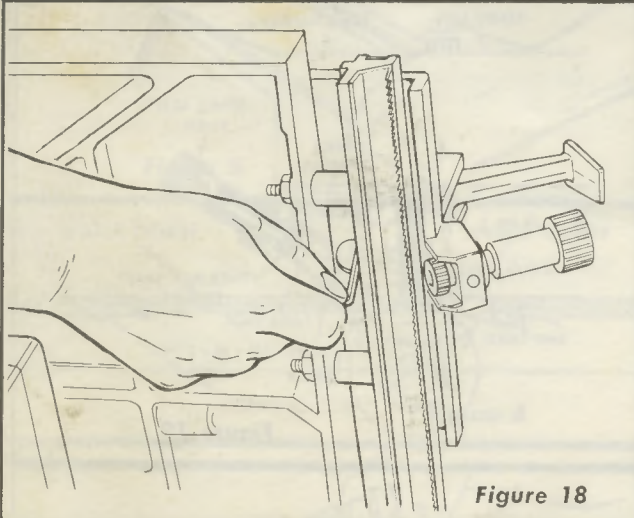


Figure 18

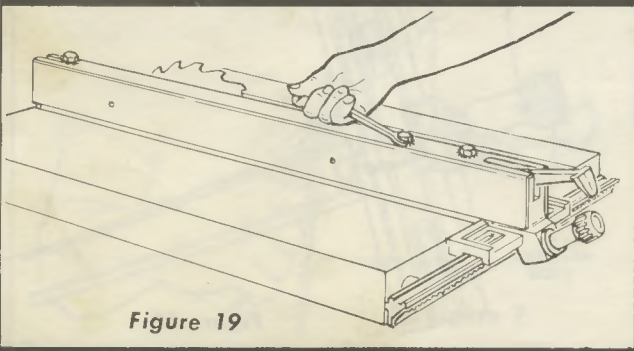


Figure 19

gear mesh (depth of tooth contact), loosen the set screw (3, figure 13) with a 5/32-inch hex "L" wrench and rotate the eccentric (4) until proper mesh is obtained. Tighten the set screw (3) after adjusting. Check for proper operation at various points along the rack.

#### b. Checking for Parallelism of Rib Fence with Table Groove

- (1) With the lock handle released (not latched), slide the fence on the saw table so the front end of the channel is flush with the side of one of the two miter grooves. (See figure 14.) This can be checked by using your fingers as shown to "feel" for correct alignment. Shift the rear of the fence to the right or left slightly, causing fence not to be square with the front edge of the table, nor parallel to the miter groove.
- (2) Push down on the lock handle carefully (do not force) while watching the rear of the fence for its correcting action.

**CAUTION:** Do not force the lock handle. If the handle does not lock down readily, an adjustment is necessary — and to force it could cause damage to both the fence and guide bar.

- (3) The lock handle should lock all the way down (figure 15), the rear of the fence should move to correct itself, and do so parallel (flush) with the miter groove in saw table. Alignment may be checked with the forefingers to determine if the fence is flush with the side of miter groove, as shown in figure 14.
- (4) If the lock handle responded as described above, and the fence aligned itself with the table groove at both ends, the fence is properly adjusted and no further attention is necessary. If not, perform the following adjustment routine.

#### c. Adjusting the Rip Fence

- (1) Remove the fence and turn it over. Then, with a 1/8-inch hex "L" wrench, loosen the pawl set screw, located just behind the fence pawl, approximately two turns. (See figure 16.)
- (2) Using a 5/32-inch hex "L" wrench, loosen the set screw at the rear of the fence approximately two turns, (See figure 17). This screw is located in the fence lock just inside the channel, as shown.
- (3) Place the fence back on saw table and notice that the lock handle offers no resistance at any position.
- (4) Place the lock handle in "locked" position and, using a 1/8-inch hex "L" wrench inserted into the fence-pawl set screw from underneath the saw table, tighten the set screw finger tight. (See figure 18.) Do not use wrench or pliers — finger tight only.
- (5) Raise the lock handle, push the fence to one side (off square) at the rear. Then lock the fence with the lock handle, while watching to make sure it "corrects" itself. Repeat this operation two or more times. The fence should "correct" itself each time it is locked.
- (6) Raise the lock handle and align the fence with the miter groove (at the front end of the groove) as shown in figure 14. Push the lock handle down.
- (7) Check for correct alignment with saw table



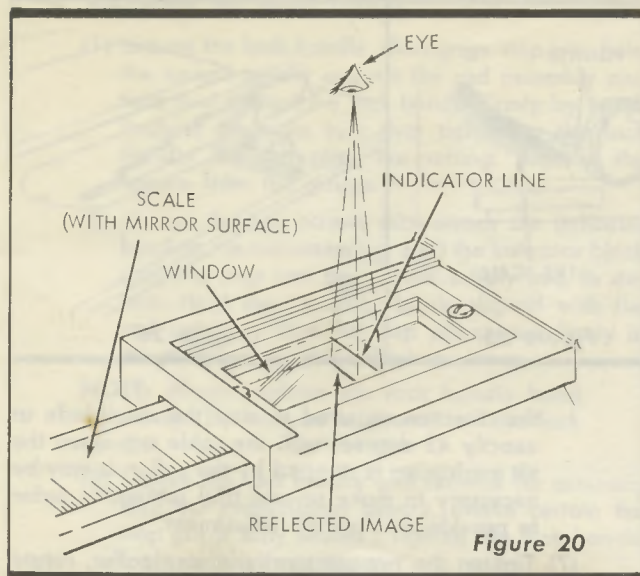


Figure 20

groove for the full length of the fence. If it is aligned at the front but out of alignment at the rear, loosen the two hex-head screws on top of the channel near the front (figure 19) just enough to permit the channel to slip when tapped lightly with the palm of one hand. Tap the channel at the rear of the fence with one hand until it is aligned with the table groove. Tighten the two hex-head screws securely and recheck. More than one trial may be required as tightening the screws may change the setting slightly.

- (8) Check for "automatic correcting" by releasing the lock lever, shifting the fence off square at the rear, then locking it. The fence should square itself automatically and be flush (parallel) with the miter groove each time the handle is locked down.
- (9) Lock the fence with the lock handle and using a 5/32-inch hex "L" wrench, tighten the fence-lock set-screw at the rear, hand tight only. (See figure 17.) Make sure the fence is "secure" to the table at the rear.

**NOTE:** If the fence fails to square itself every-time, check for any burr or foreign material on the surface of the fence head where it contacts the saw table. Also check for nicks or burrs in edge of saw table. Stone off any irregularities on these surfaces.

#### d. Aligning Rip Fence Plastic Indicators

- (1) If for any reason the tilt handle has been rotated during preceding operations, loosen the clamp screw handle (figure 8) and rotate the tilt hand-wheel clockwise until it stops (tilt pointer at "0"). Tighten the clamp screw handle.
- (2) Position the rip fence on the right-hand side of saw blade with the fence channel one inch from the blade and lock the fence. Be sure to use one of the teeth bent (set) to the right of blade. Measure from this to the fence, since this determines your width of cut. This distance should be measured accurately with a scale.
- (3) Set the right-hand indicator (a scribed line in the plastic window) to "1" inch on the guide-bar scale. This is accomplished as follows:
  - (a) A close look will show a reflection of the

indicator line on the mirror surface of the guide-bar scale. In order to make sure that you are sighting squarely above the scale, move your eye until the indicator line and its reflected image coincide. (See figure 20.)

- (b) If an adjustment is required, loosen the two screws (one at each end of the window) and shift the plastic window until the indicator line is aligned with the "1" inch line on the scale. (See figure 21.) Tighten the two screws and recheck for accuracy. If the plastic window cannot be shifted far enough to provide this alignment, loosen the screws that secure the guide-bar scale to the guide-bar at its ends, shift the scale slightly and tighten the screws. Then proceed to adjust the plastic window as described above.
- (c) When the fence is correctly adjusted and moved to any position at the right of the saw blade, the scale will indicate the width of the desired cut. Make several trial settings and check by measuring with a scale from the fence to the blade.

**NOTE:** When properly adjusted, the indicators may be used for most operations thus eliminating the need for actual measurements, except for extreme requirements. When sighting the indicator, always use the system shown in figure 20, in order to make sure the sight angle is correct.

- (d) Move the fence to the left-hand side of saw blade and adjust the left-hand indicator (right-hand side) in the same manner as for the right-hand indicator.

**NOTE:** Remember if the scale must be moved when adjusting the left indicator, it will change your settings on the right-hand indicator which was previously set.

#### 4. Adjust Stop Collars

##### a. Checking and Adjusting the 0° Position

- (1) With the saw blade in deepest cut position loosen the clamp screw handle (figure 8) and check the tilt hand wheel by attempting to rotate it clockwise until it will rotate no farther.
- (2) With saw blade in position described above, tighten the clamp screw handle to secure the tilt mechanism.
- (3) Place a square on table top and against saw blade. (See figure 22.) The blade should be at exactly 90 degrees (perpendicular) to table-top surface.

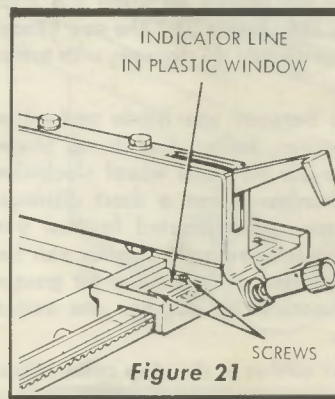


Figure 21

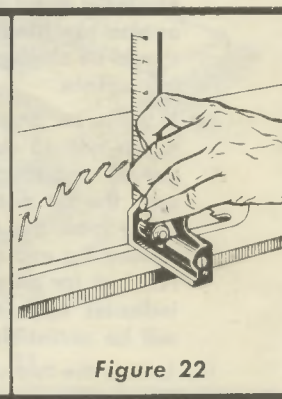


Figure 22



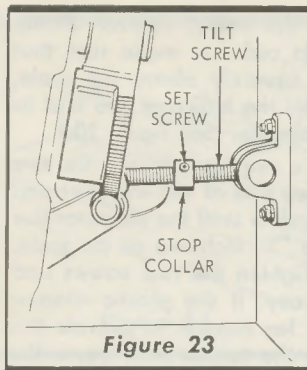


Figure 23

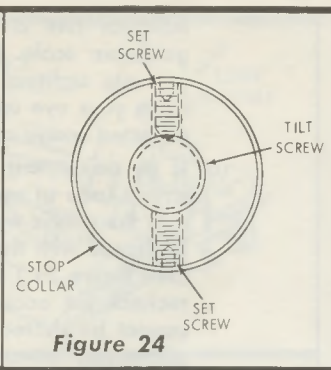


Figure 24

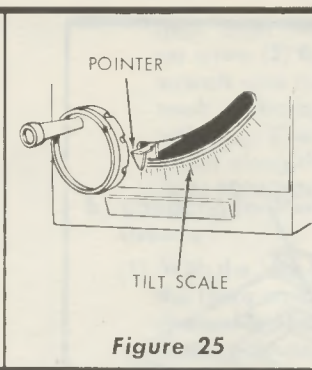


Figure 25

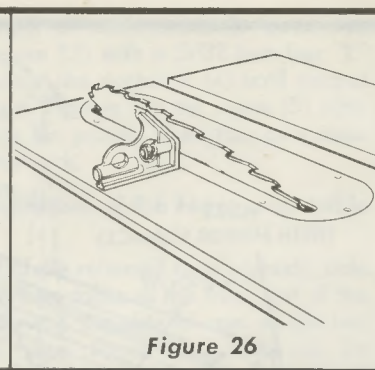


Figure 26

- (4) If the blade is not square with table top, loosen the clamp screw handle (figure 8) and rotate the tilt handwheel counterclockwise until the tilt mechanism moves a short distance away from the stop collar on tilt screw. When the pointer on tilt scale indicates approximately 10 degrees, the stop collar can be reached. (See figure 23.) Loosen the two set screws in the stop collar located on the tilt screw nearest tilt hand wheel with a 1/8-inch hex "L" wrench. (See figures 23 and 24.)
- (5) Rotate the stop collar (on tilt screw) in direction required to stop the saw blade at exactly 90 degrees with the table top. It may be necessary to make several trial settings checking position of saw blade after each setting in order to provide an accurate adjustment.
- (6) When the 90-degree setting has been completed, tighten the two set screws in the stop collar that has just been adjusted and rotate the tilt handwheel counterclockwise several turns, then clockwise until it stops. Tighten the clamp screw handle and make a final check of the saw blade for squareness with table top. (See figure 22.)
- (7) Check the tilt pointer on tilt gauge which should be positioned at exactly "0" (zero) degrees (see figure 25). If not aligned, with the mark, bend the pointer carefully with fingers until it remains at "0"

#### b. Checking and Adjusting the 45° Position

- (1) Loosen the clamp screw with clamp screw handle (figure 8).
- (2) Rotate tilt hand wheel (1, figure 1) counterclockwise until it will rotate no farther.
- (3) Tighten the clamp screw handle to secure the tilt mechanism.
- (4) Remove the blade from a combination square and place the head of the square on table top and against saw blade. (See figure 26.) The saw blade should be setting at exactly 45 degrees with table top surface.
- (5) If the acute angle between saw blade and table top is not 45 degrees, loosen the clamp screw handle and rotate the tilt hand wheel clockwise until the tilt mechanism moves a short distance away from the stop collar located farthest out toward the end of tilt screw so the collar can be reached for an adjustment. When the tilt gauge indicates approximately 25 degrees the collar will be accessible.
- (6) Loosen the two set screws in the stop collar. (See figure 27.) Rotate the stop collar on tilt screw in

the direction required to stop the saw blade at exactly 45 degrees with the table top when the tilt mechanism is stopped by the collar. It may be necessary to make several trial settings in order to provide an accurate adjustment.

- (7) Tighten the two set screws in stop collar, rotate the tilt handwheel several turns in a clockwise direction; then rotate the handwheel counterclockwise until it will turn no farther.
- (8) Tighten the clamp screw handle and make a final check for accuracy of the 45 degree position as shown in figure 26. If tightening set screws in stop collar changed the adjustment make correction as described in preceding instructions.

**NOTE:** If the above adjustments have been accurately performed, the saw will now have a positive stop at "0" and "45" degrees and the pointer on tilt scale should stop at both positions.

### 5. Check and Adjust the Miter Gauge

The miter gauge was set at the factory. During shipment, however, rough handling might have disturbed the setting. To assure maximum accuracy the "0" (zero) degree stop should be checked and adjusted (if required) as follows:

#### a. Checking the Miter Gauge

- (1) Loosen the lock handle and push stop pin firmly into the middle detent ("0" position on the scale). The stop pin will be seated more effectively if it is rotated slightly as it is being "pushed" into the detent. Tighten the lock handle firmly hand tight. (See figure 28.)
- (2) Using a combination square, check for an exact 90-degree angle between the miter gauge and rod assembly. If this measurement is exactly 90 degrees, the adjustment has not been disturbed and the gauge is ready for use. If not accurate at 90 degrees, adjust the gauge as follows:

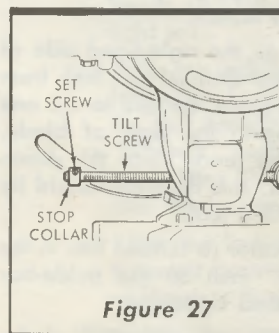


Figure 27

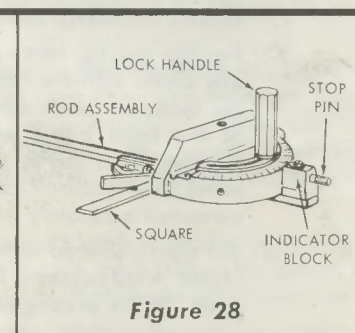


Figure 28