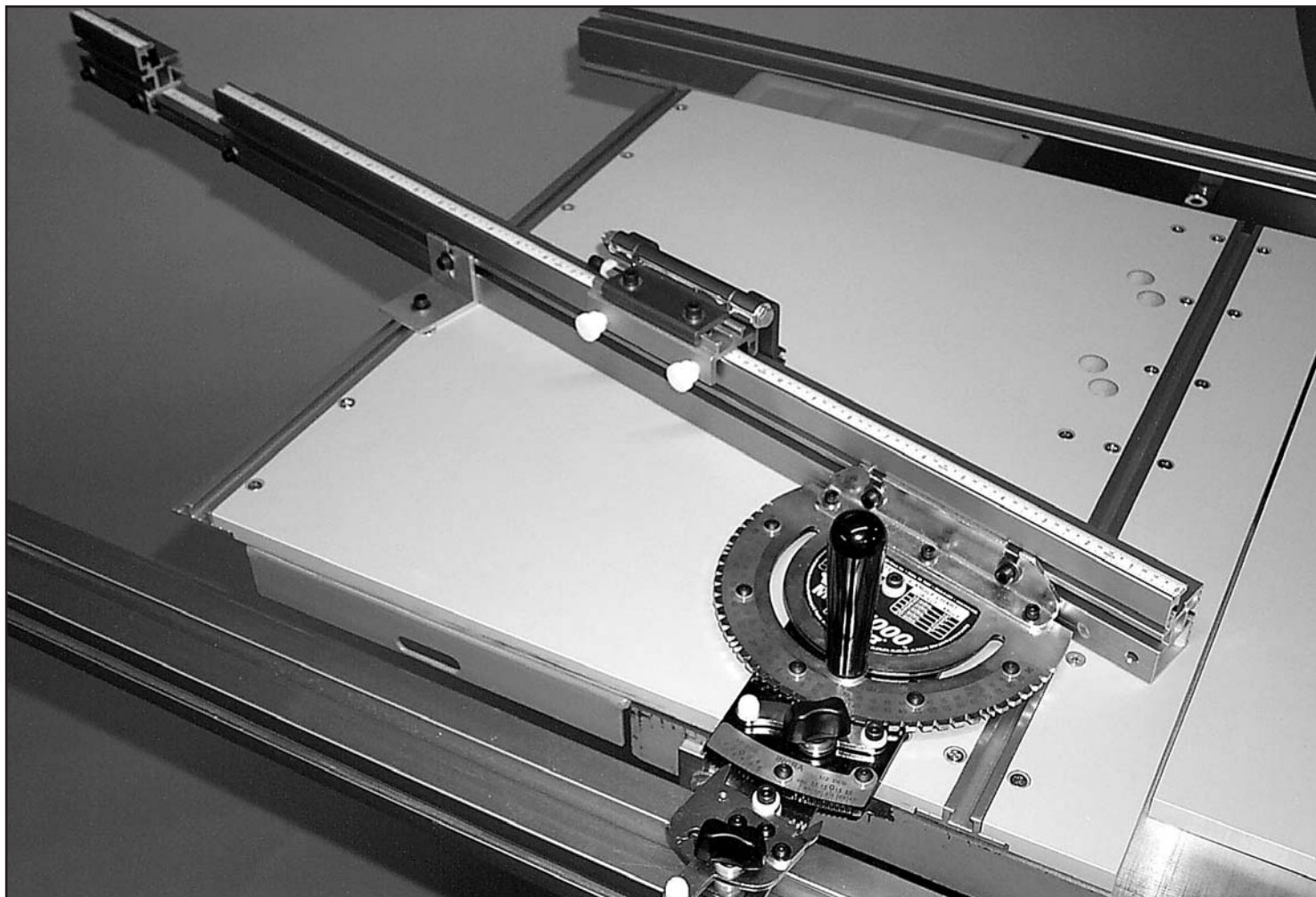


Miter5000™

by **Incra®**

Please read this owner's manual before use and keep it at hand for reference.

OWNER'S MANUAL



Safety

Important safety instructions for using the INCRA Miter5000

- Before using the INCRA Miter5000, read and follow all of the instructions and safety information in this owner's manual.
- When using the INCRA Miter5000 in conjunction with any other tool, first read and follow all instructions and safety information in that tool's owner's manual.
- Never let the saw blade come in contact with the aluminum or steel components of the INCRA Miter5000.
- Before making any cut, always make sure that the Miter5000's Right Sled Base is locked securely in the right-hand miter slot.
- When using the INCRA Miter5000, always keep your hands clear of the saw blade and the line of cut.
- Always turn off the power and make sure that the saw blade comes to a complete stop before changing the setting of any part of the INCRA Miter5000.
- Always securely tighten the large black clamping knob before starting any cut.
- Wear safety glasses, hearing protection, and follow all normal shop safety practices.
- After making any adjustments to the miter angle or fence position of your INCRA Miter5000, always verify safe clearance between the blade and fence before turning on the saw.
- After making any adjustments to the fence position on the INCRA Miter5000, always make sure that the four socket head screws on the fence mounting bracket and the outboard fence lock are securely tightened.
- When using the INCRA Flip Shop Stop to position a piece for a cut, always hold or otherwise clamp the board between the stop and the blade.

Warranty

Taylor Design Group, Inc. warrants this product for one year from date of purchase. We will repair any defects due to faulty material or workmanship, or at our option, replace the product free of charge. Please return the failing component only, postage prepaid, along with a description of the problem to the address on the back. This warranty does not apply to parts which have been subjected to improper use, alteration, or abuse.

Parts List

Note: If you have purchased the Miter3000 to Miter5000 Conversion Kit, begin with the instructions titled “Converting Miter3000 Miter Gauge to Miter5000 Miter Sled” on page 8, then continue with the assembly instructions.

Carefully Unpack Components

After carefully unpacking all components, remove the (2) phillips flat head screws and rectangular nuts that secure the (2) Miter Sled base panels and steel miter bar. Also, remove the phillips head screw that secures the aluminum miter bar to the protractor head. **Fig. 1** depicts the components included. Identify each part as listed below:

A. Left Sled Base w/Protractor Head Assembly

*(on Miter3000 to Miter5000 Conversion Kits,
Protractor Head Assembly not included)*

B. Hardware Pack C-09

C. Hardware Pack C-07

D. Hardware Pack C-08

E. Steel Miter Bar

F. Aluminum Miter Bar

G. 3/16" Ball End Hex Tool

H. Large Clamping Knob

I. Right Sled Base

J. Miter5000 Owner's Manual (not pictured)

*The following components are not included with
Miter3000 to Miter5000 Conversion Kits:*

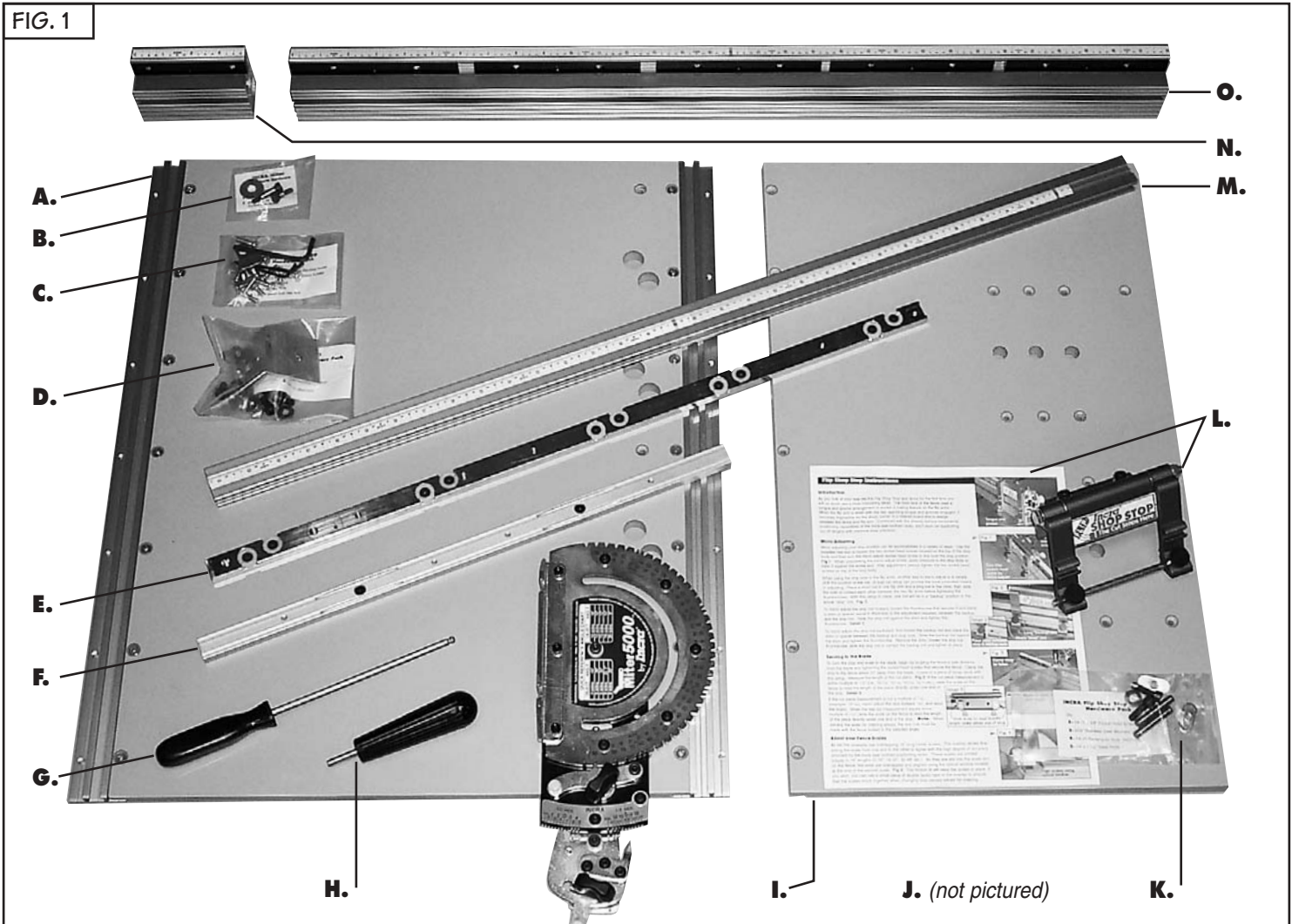
K. Hardware Pack C-05

L. Flip Shop Stop & Instructions

M. Extender Bar

N. 4" Flip Fence Extender

O. 32" Flip Fence



Assembly

1 Adjust the Steel Miter Bar

Open **Hardware Pack C-07** and, using the supplied $\frac{3}{32}$ " hex key, adjust the steel miter bar at each of the (10) expansion mechanism locations for a good fit in your table saw's left-hand miter slot. Turning the screw clockwise expands the mechanism. Expand a little at each of the locations until the bar slides smoothly with no sideplay.

TIP Thread the large clamping knob into the bar while adjusting to aid in sliding the bar in your miter slot, **Fig. 2**.

FIG. 2

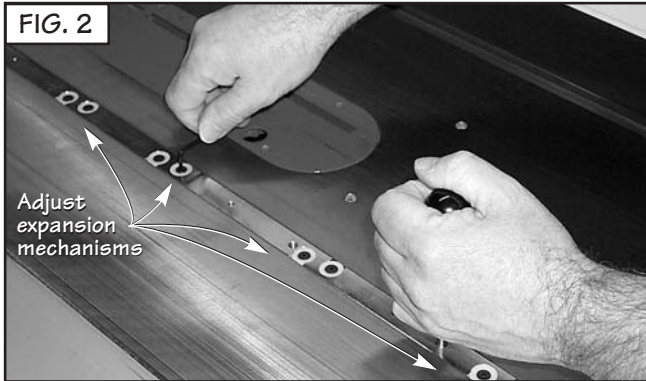
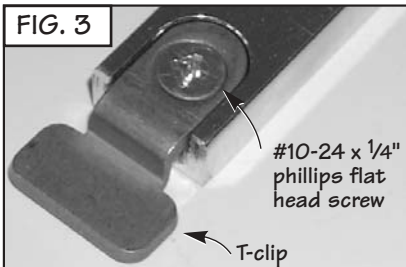


FIG. 3

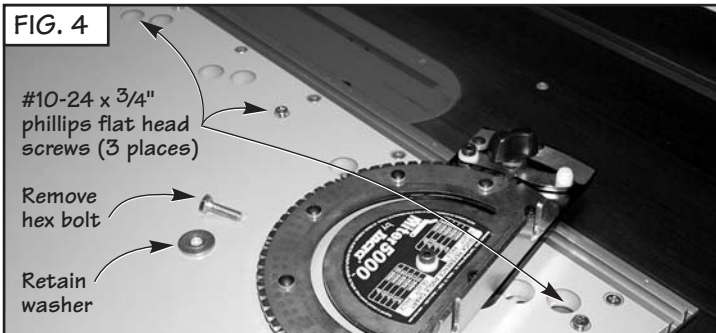


If the miter slot in your table saw has a T-slot, attach the T-clip to the end of the bar as shown in **Fig. 3**.

2 Attach Left Sled Base to Miter Bar

Using (3) #10-24 x $\frac{3}{4}$ " phillips flat head screws, attach the Left Sled Base to the steel miter bar. To access the rear mounting hole position, remove the hex bolt that secures the protractor head and disengage the rear actuator tooth from the $\frac{1}{2}$ " adjustment plate. (Retain the large washer for use with the large clamping knob.) Pivot the protractor head for access to the rear mounting hole and tighten all (3) fasteners, **Fig. 4**. Check the sliding motion of your Left Sled Base now and adjust before continuing. (See Tip below)

FIG. 4

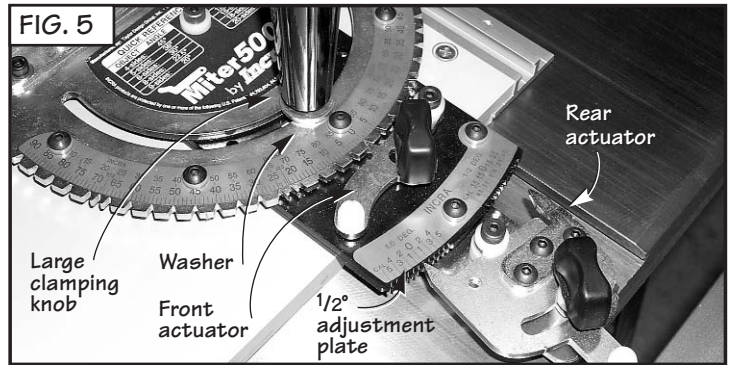


TIP Future fine adjustments to the miter bar's expansion mechanisms can be made through the access holes in the Left Sled Base. Pivot the protractor head as described above for access to the rear expansion location.

3 Install Large Clamping Knob

Pivot the protractor head to firmly re-engage the left-hand tooth of the rear actuator with the 0° notch on the $\frac{1}{2}$ " adjustment plate and tighten the thumbscrew. Place the large washer retained in Step 2 on the large clamping knob and thread through the slotted hole in the protractor head into the Left Sled Base. Before tightening, engage the front actuator tooth with the 0° notch on the protractor head. Tighten the front actuator thumbscrew, then the large clamping knob, **Fig. 5**.

FIG. 5

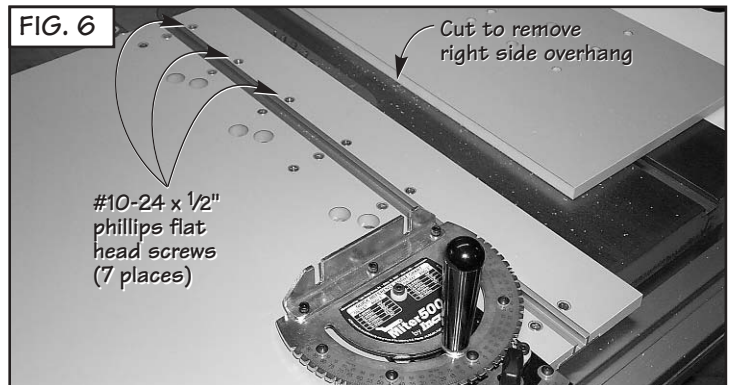


4 Attach Right Sled Base and Cut Off Overhang

Using (7) #10-24 x $\frac{1}{2}$ " phillips flat head screws, attach the Right Sled Base to the panel connector on the Left Sled Base. Raise your saw blade about $\frac{3}{4}$ " and make a cut to remove the portion of the Right Sled Base that extends to the right of the blade, **Fig. 6**.

Caution: Make sure blade is set at 90° and miter bar is adjusted so that no sideplay exists. Turn off the saw, lower the blade and remove the Left Sled Base from the table saw.

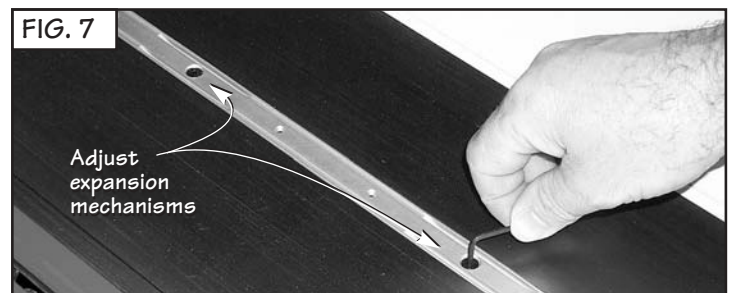
FIG. 6



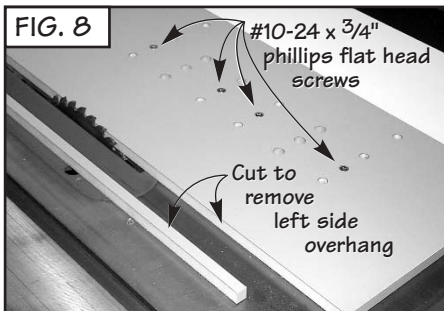
5 Adjust Aluminum Miter Bar

Using the supplied $\frac{3}{32}$ " hex key, adjust the aluminum miter bar at each of the (2) expansion mechanism locations for a good fit in your table saw's right-hand miter slot. Turning the screw clockwise expands the mechanism. Expand a little at each of the locations until the bar slides smoothly with no sideplay, **Fig. 7**.

FIG. 7



6 Attach Remainder of Right Sled Base and Cut Off Overhang

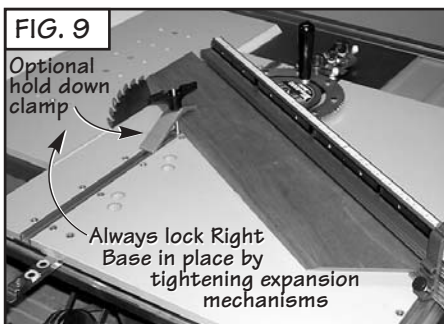


Using (4) #10-24 x 3/4" phillips flat head screws, attach the remainder of the Right Sled Base to the aluminum miter bar. Use the row of mounting holes that permit the least amount of overhang beyond the left side of the saw blade. Raise the saw blade

about 3/4" and make a cut to remove the portion of the Right Sled Base that extends beyond the left side of the blade, **Fig. 8**. Turn off the saw, lower the blade and return the Left Sled Base to the table saw.

In use, only the Left Sled Base slides to move your workpiece through a cut. The Right Sled Base will be positioned adjacent to the blade and locked in place by tightening the (2) expansion mechanisms to provide zero clearance and workpiece cutoff support, **Fig. 9**.

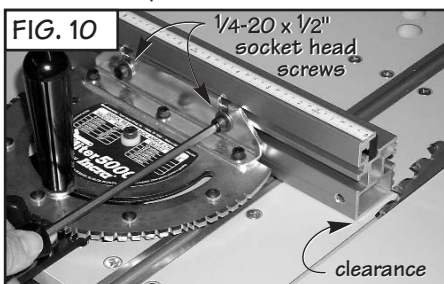
Additional Right Base Panels can be purchased and cut as described



above with the blade tilted for zero clearance support during compound mitering. Just mark each of the panel parts with the blade tilt angle for future reference. Optional hold down clamps can be attached into the panel connector T-slot as shown.

7 Attach Fence and Fence Extender to Left Sled Base

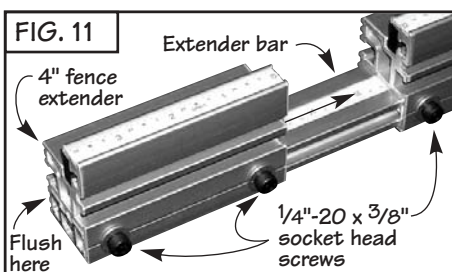
Note: Miter3000 to Miter5000 Conversion Kits do not include Fence Extender components.



Open **Hardware Pack C-08** and using (2) 1/4-20 x 1/2" socket head screws with washers and rectangular nuts, attach the fence to the fence mounting bracket. Slide the fence to a position that leaves

safe clearance between the fence and blade, then tighten the (2) fasteners, **Fig. 10**.

Loosely install (1) 1/4-20 x 3/8" socket head fastener with washer and rectangular nut to the left end of the fence and slide extender bar into fence with the scale face up. (The higher numbers on the scale should go in first.) Loosely install (2) 1/4-20 x 3/8" socket head screws with washers and rectangular nuts to the 4" fence extender

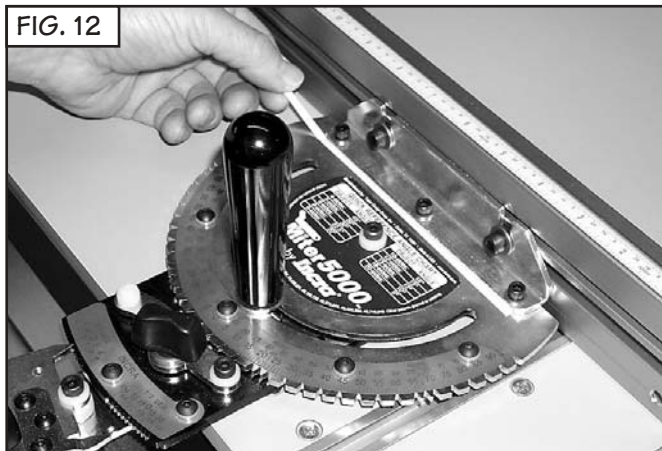


and slide onto the end of the extender bar. Position the 4" fence extender flush with the end of the extender bar and tighten all (3) fasteners, **Fig 11**.

TIP

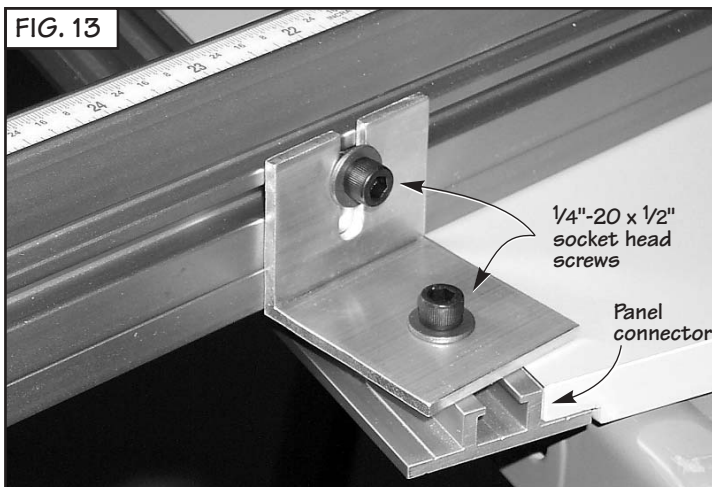
Squaring the fence to your sled base

The method used to join the fence mounting bracket to the protractor head makes it easy to fine-tune the fence perfectly perpendicular to your sled base. To adjust, loosen the (3) #10-24 socket head screws that secure the bracket and slide a paper or plastic shim between the bracket and the protractor head, **Fig. 12**. Placing the shim **behind** the screws will **decrease** the angle. Placing the shim in **front** of the screws will **increase** the angle.



8 Attach Outboard Fence Lock

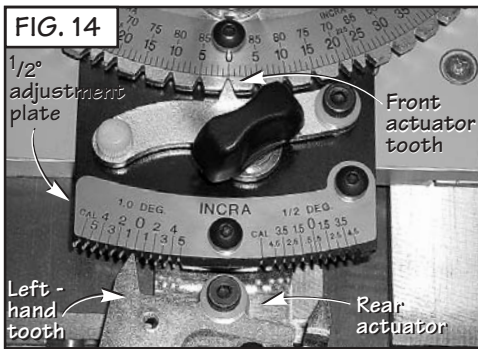
Loosen the large clamping knob, disengage the front actuator and pivot the fence just over the left rear corner of the sled base, about 20°. Loosely install (1) 1/4-20 x 1/2" socket head screw with washer and rectangular nut through the hole in the outboard fence lock. Slide the remaining 1/4-20 x 1/2" socket head screw with washer and rectangular nut into the T-slot on the back of the fence. Slide the slotted end of the outboard fence lock under the washer on the fence fastener, then slide the rectangular nut of the other fastener into the T-slot on the gold panel connector, **Fig. 13**. Rotate the fence to engage the front actuator with the 0° notch on the protractor head. Tighten the front actuator thumbscrew then tighten the large clamping knob.



In operation, after setting the protractor head angle and tightening the large clamping knob, you must tighten the outboard lock to the fence before tightening to the sled base. Try setting a few angles to get the hang of it, then leave both outboard lock fasteners loose as you continue with the final calibration.

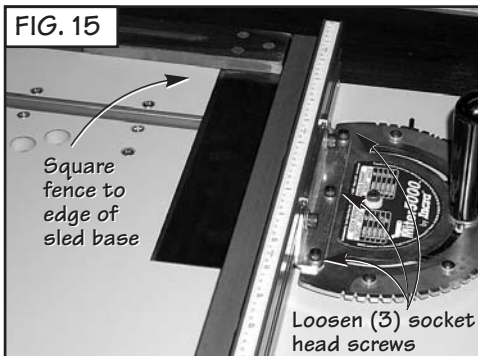
Calibration

1 Adjust Fence Mounting Bracket 90° to Cut Edge of Left Sled Base



Loosen the large clamping knob and make sure that the rear actuator left-hand tooth is engaged firmly with the 0° notch on the 1/2° adjustment plate. Engage the front actuator tooth with the 0° notch located on the protractor head, **Fig. 14**. Tighten the front actuator thumbscrew then tighten the large clamping knob.

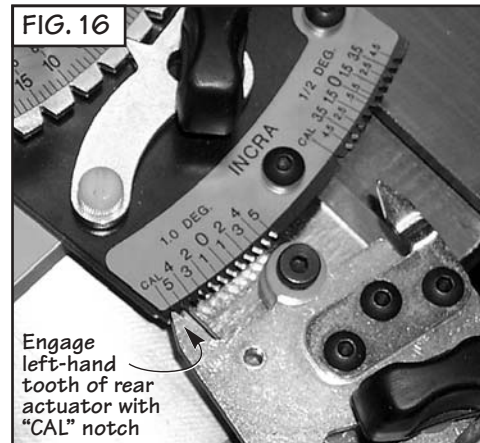
Using the supplied 5/32" hex key, loosen the (3) #10-24 x 5/16" socket head screws that secure the fence mounting bracket to the protractor head. Unplug your table saw, then use a reliable machinist square to set the fence at 90° to the cut right hand edge of the Left Sled Base, **Fig. 15**. Tighten the (3) socket head screws. This one-time calibration prepares your INCRA Miter5000 for work. **Just remember that the accuracy of the INCRA Miter5000 at any**



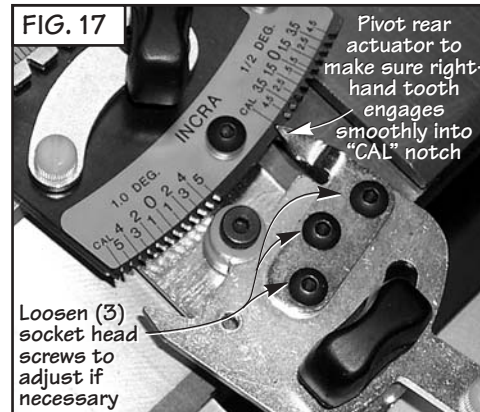
subsequent setting is dependent upon the accuracy of your initial 90° calibration. After completing the "Calibration" and "Operation" sections of this manual, verify this important calibration with a test cut and fine-tune as

2 Calibrating the 1/2° Indexing Tooth

The 1/2° indexing tooth located on the rear actuator is factory calibrated and should require no further adjustment. Follow the instructions below should you wish to check the calibration or re-calibrate.



Loosen the large clamping knob and the rear actuator thumbscrew. Engage the left-hand tooth of the rear actuator firmly with the notch marked "CAL" on the rear scale and hold while you tighten the large clamping knob, **Fig. 16**.



Now pivot the rear actuator to engage the right-hand tooth with the notch marked "CAL" on the rear scale, **Fig. 17**. If adjusted properly, it will pivot perfectly into the notch. To adjust, loosen the (3) socket head screws that secure the tooth and fine-tune the position

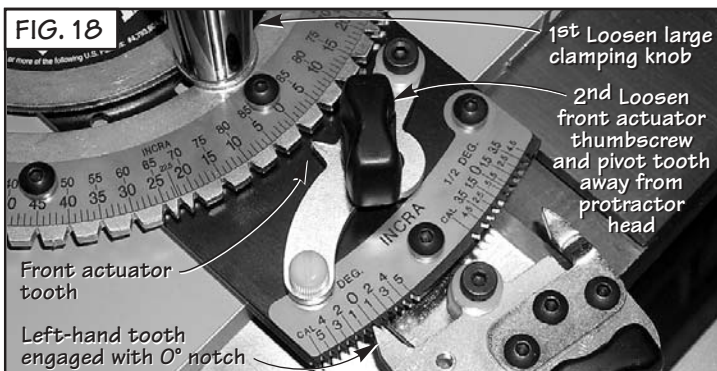
to align with the "CAL" notch. Pivot back and forth between the two "CAL" notches to verify the calibration.

Operation - Changing Angle Settings

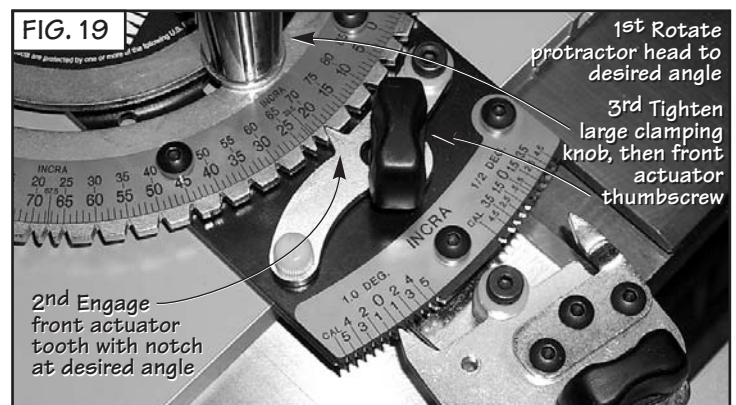
The dual actuator design of the INCRA Miter5000 provides two levels of adjustment. The front actuator is used for coarse adjustments (5°), while the rear actuator is used for fine adjustments (1/2°). For most mitering work, you'll have the left-hand tooth of the rear actuator engaged at 0° while you make angle changes using only the front actuator. When using the rear actuator for fine adjustments, you are simply adding or subtracting from the coarse adjustment setting.

1 5° Indexing (including 22.5° and 67.5°) settings

Loosen the large clamping knob and make sure that the rear actuator left-hand tooth is engaged in the 0° notch on the 1/2° adjustment plate. Loosen the front actuator thumb-screw and pivot the actuator tooth away from the notches located on the protractor head, **Fig. 18**.

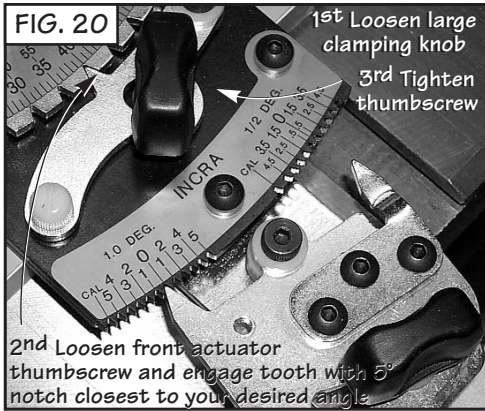


2 Rotate the protractor head to the desired angle, then firmly engage the tooth on the front actuator with the corresponding notch on the protractor head. The actuator tooth should point directly to the desired angle on the scale. Tighten the large clamping knob, then tighten the front actuator thumbscrew, **Fig. 19**.



1 1/2° Indexing

Loosen the large clamping knob. Loosen the front actuator thumbscrew and pivot the actuator tooth away from the notches located on the protractor head. Rotate the protractor head and engage the front actuator tooth at the 5° notch closest to the angle you want. Tighten the front actuator thumbscrew, Fig. 20.



2

Loosen the rear actuator thumbscrew. Use the left-hand tooth to add or subtract from the coarse adjustment setting in 1° intervals. Use the right-hand tooth to add or subtract from the coarse adjustment setting in 1/2° intervals. Engage the tooth firmly in the selected notch, then tighten the large clamping knob and the rear actuator thumbscrew, Fig. 21.



Important: After completing your cut, return the rear actuator setting to the 0° notch.

Continuous Adjustments – For angle settings finer than the 1/2° settings, first use the 1/2° indexing instructions above to locate the protractor head as close as possible to the desired angle. With the large clamping knob loosened, pivot the rear actuator tooth slightly away from the notch on the 1/2° adjustment plate. Rotate the protractor head in the direction of required adjustment and tighten the large clamping knob. Do not tighten the rear actuator thumbscrew. As with any mitering tool, odd angle adjustments may require a little trial and error.

Caution:

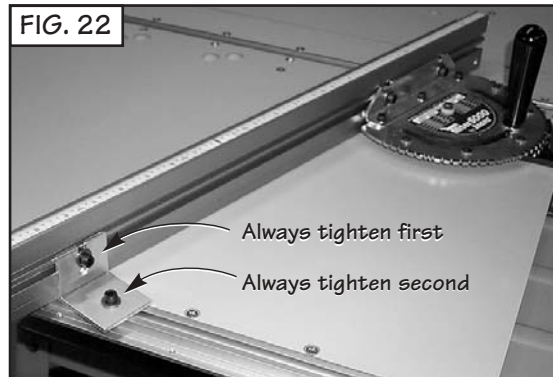
After making any adjustments to the miter angle of your INCRA Miter5000, always verify safe clearance between the fence and the blade before turning on the saw.

Operation - Fence Components

Outboard Fence Lock

For heavy duty applications, use the outboard fence lock to provide rock solid support for the left end of the fence. To make a change to your fence angle, first loosen both 1/4-20 fasteners that secure the outboard fence lock to the fence and Left Sled Base.

Adjust the angle at the protractor head as previously described and tighten the thumbscrews and large clamping knob. Now tighten the fastener that secures the outboard fence lock to the back of the



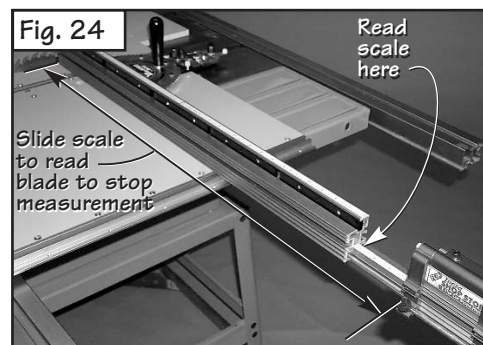
fence. Finally, tighten the fastener that secures the outboard fence lock to the Left Sled Base, Fig. 22.

To use the outboard fence lock for angle settings that pivot the fence off of the left rear corner of the sled base, you can shift the position of the gold panel connector. Just remove the fasteners and shift the panel connector back 3 or 4 holes, Fig. 23.



Fence Extender

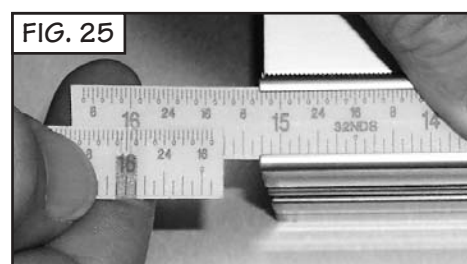
For stopped cuts beyond the 32" range of the standard fence, clamp the INCRA Flip Shop Stop to the 4" fence extender. Now loosen the 1/4-20 socket head screw located at the left end of the 32" fence and slide the 4" fence extender to the left. Tighten the fastener when you reach the desired scale reading. To set the scales for accurate readout, set the protractor to the desired angle, then measure the



distance between the blade and the stop surface on the flip arm. Slide the scale to read this measurement directly under the end of the 32" fence, Fig. 24. Slide the extender bar out to also adjust the overlapping scale.

About your Fence Scales

All INCRA products use overlapping 16" long Lexan scales. The overlap allows fine-tuning the scale from one end to the other to agree with the high degree of accuracy provided by the INCRA saw toothed positioning racks. These scales are printed in 16" lengths (0-16", 16-32", 32-48" etc.). As they are slid into the scale slot on the fence, the ends are overlapped and aligned using the optical window located at the end of the second scale, Fig. 25. The friction fit will keep the scales in place. If you wish, you can use a



small piece of double faced tape at the overlap to ensure that the scales move together when changing your zeroed setups for mitering.

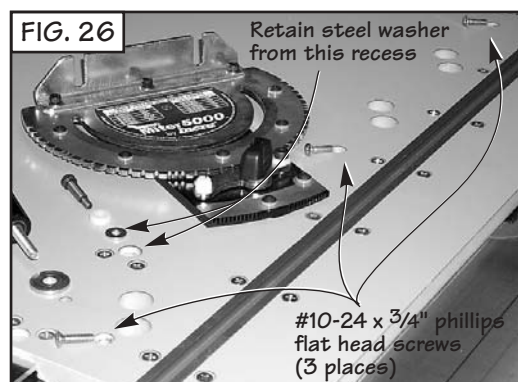
Conversions

The modular design of your INCRA Miter5000 permits conversion of the unit from a miter sled to the more compact miter gauge. The design further allows Miter3000 owners to upgrade their miter gauge to the miter sled configuration.

Converting Miter5000 Miter Sled to Miter3000 Miter Gauge

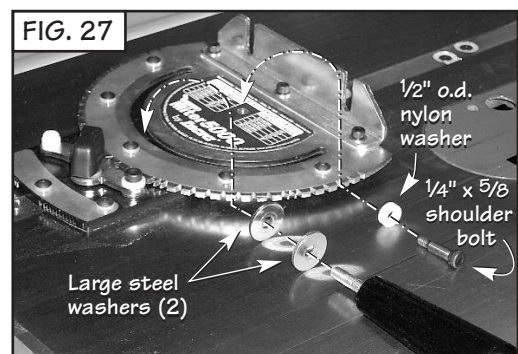
Note: When a shoulder bolt is called out in the instructions, (for example $\frac{1}{4} \times \frac{1}{2}$ " shoulder bolt), the first dimension refers to the diameter of the shoulder, while the second dimension describes the length of the shoulder, not the threads.

- 1** Remove the fence from the protractor head. Remove the large clamping knob, $\frac{1}{4} \times \frac{3}{4}$ " shoulder bolt and washers that secure the protractor head to the miter sled and lift the protractor top and bottom plates off, **Fig. 26**. (Retain the $\frac{1}{2}$ " o.d. steel washer located in the recess on the sled base for reassembly.)



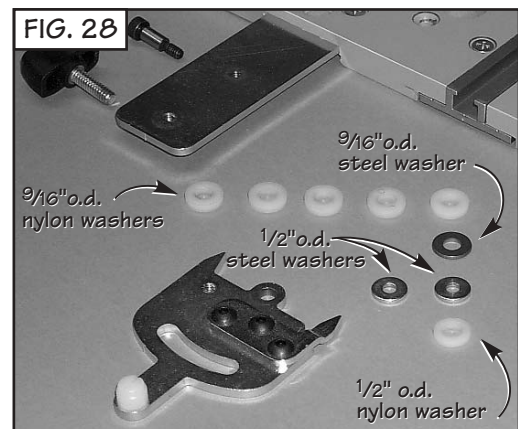
Remove the (3) #10-24 x $\frac{3}{4}$ " phillips flat head screws that secure the steel miter bar to the underside of the Left Sled Base. Place the miter bar in your table saw's miter slot.

- 2** Open **Hardware Pack C-09** and, using the supplied $\frac{1}{4} \times \frac{5}{8}$ " shoulder bolt and the $\frac{1}{2}$ " o.d. nylon washer from the shoulder bolt previously removed, attach the protractor top and bottom plates to the steel miter bar. (5th hole from rear end of miter bar.) Tighten the shoulder bolt. Add a second large steel washer to the large clamping knob and thread into the steel miter bar through the



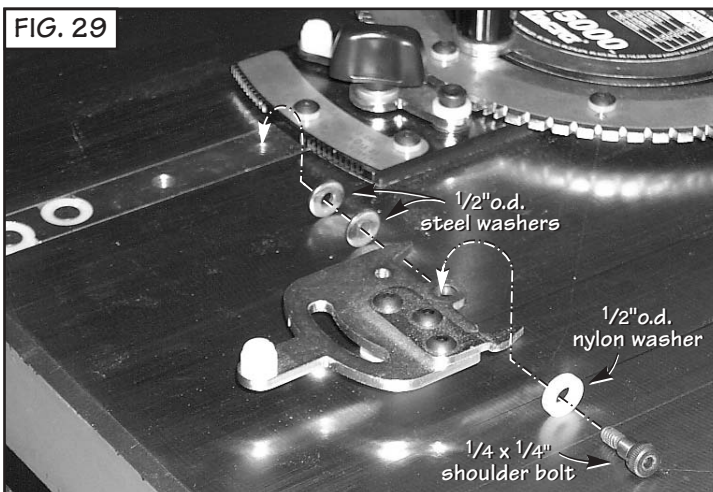
slotted holes in the protractor top and bottom plates. Lock the protractor to the 0° setting and tighten the actuator thumbscrew and the large clamping knob, **Fig. 27**.

- 3** Carefully remove the $\frac{1}{4} \times 20 \times \frac{3}{4}$ " thumbscrew, $\frac{1}{4} \times \frac{1}{2}$ " shoulder bolt and washers from the rear actuator, **Fig. 28**. After disassembling the rear actuator you should have the following washers:

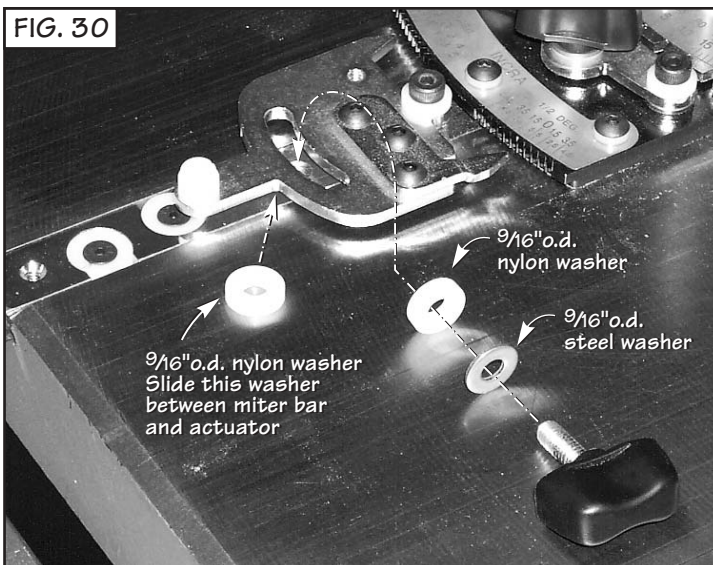


(5) $\frac{9}{16}$ " o.d. nylon washers
(1) $\frac{9}{16}$ " o.d. steel washer
(2) $\frac{1}{2}$ " o.d. steel washers (this includes the washer retained from Step 1 above)
(1) $\frac{1}{2}$ " o.d. nylon washer

- 4** Place the $\frac{1}{2}$ " o.d. nylon washer on the supplied $\frac{1}{4} \times \frac{1}{4}$ " shoulder bolt provided and insert through the pivot hole in the rear actuator. Add the (2) $\frac{1}{2}$ " o.d. steel washers to the threaded end of the shoulder bolt and screw into the threaded hole on the steel miter bar, **Fig. 29**. (3rd hole from rear end of bar.) Tighten the shoulder bolt.



- 5** Place a $\frac{9}{16}$ " o.d. steel washer and then a $\frac{9}{16}$ " o.d. nylon washer on the $\frac{1}{4} \times 20 \times \frac{3}{4}$ " thumbscrew. Slide another $\frac{9}{16}$ " o.d. nylon washer between the rear actuator and the steel miter bar. Insert the thumbscrew threads through the actuator's slotted hole, passing through the nylon washer and into the steel miter bar, **Fig. 30**.



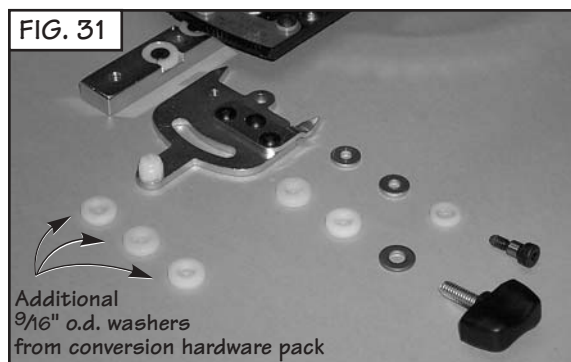
After conversion you should have remaining (3) $\frac{9}{16}$ " o.d. nylon washers, (1) $\frac{1}{4} \times \frac{3}{4}$ " shoulder bolt and (1) $\frac{1}{4} \times \frac{1}{2}$ " shoulder bolt. Retain these for future use in converting back to the Miter5000 Miter Sled configuration. Now re-attach the fence and check the calibration of the $\frac{1}{2}$ " indexing tooth as described on page 5, Step 2. Also verify the 90° fence to blade calibration with a test cut. Adjust as necessary.

Conversions

Converting Miter3000 Miter Gauge to Miter5000 Miter Sled

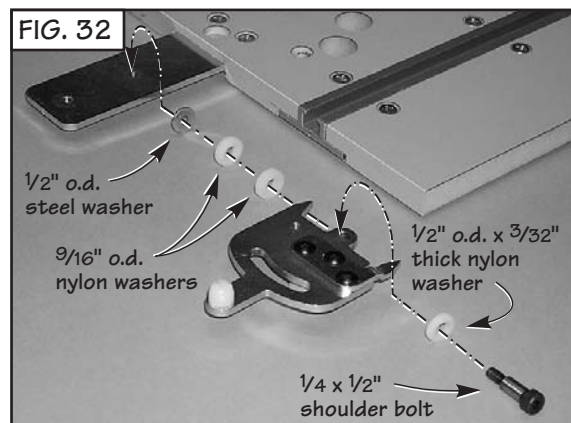
Note: When a shoulder bolt is called out in the instructions, (for example: $\frac{1}{4} \times \frac{1}{2}$ " shoulder bolt), the first dimension refers to the diameter of the shoulder, while the second dimension describes the length of the shoulder, not the threads.

- 1** Carefully remove the $\frac{1}{4}$ -20 x $\frac{3}{4}$ " thumbscrew, $\frac{1}{4} \times \frac{1}{4}$ " shoulder bolt and all washers from the rear actuator, **Fig. 31**. Combined with the washers in the conversion hardware pack, you will need the following washers to attach the rear actuator to the mounting plate on the Miter5000 sled base:



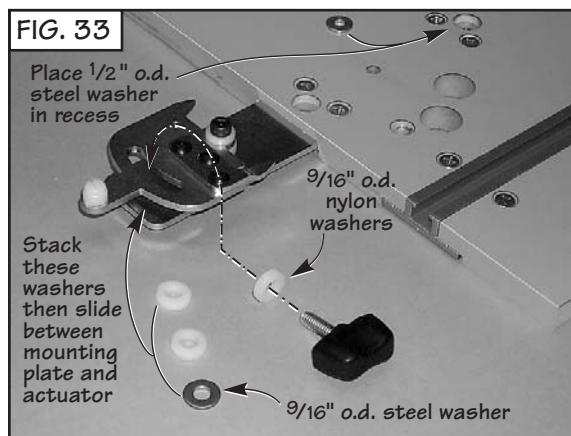
(5) $\frac{9}{16}$ " o.d. nylon washers
(1) $\frac{9}{16}$ " o.d. steel washer
(2) $\frac{1}{2}$ " o.d. steel washers
(1) $\frac{1}{2}$ " o.d. x $\frac{3}{32}$ " thick nylon washer

- 2** Place the $\frac{1}{2}$ " o.d. x $\frac{3}{32}$ " thick nylon washer on the supplied $\frac{1}{4} \times \frac{1}{2}$ " shoulder bolt, then insert through the pivot hole on the rear actuator. Now add (2) $\frac{9}{16}$ " o.d. nylon washers



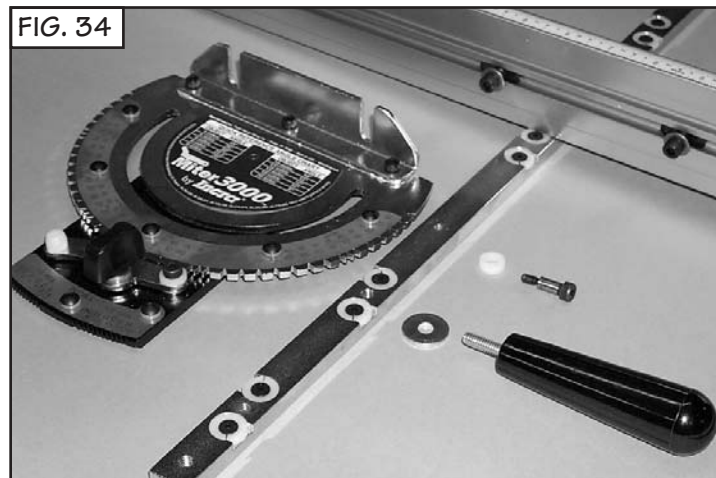
followed by (1) $\frac{1}{2}$ " o.d. steel washer and thread the shoulder bolt into the #10-24 hole on the Miter5000 mounting plate, **Fig. 32**. Tighten the shoulder bolt.

- 3** Place a $\frac{9}{16}$ " o.d. nylon washer on the $\frac{1}{4}$ -20 x $\frac{3}{4}$ " thumbscrew. Carefully position the remaining (2) $\frac{9}{16}$ " nylon and (1) $\frac{9}{16}$ " steel washers in a stack directly over the $\frac{1}{4}$ -20 hole on the Miter5000 mounting plate. Now pivot the slotted hole on the rear actuator over the washer stack and insert the $\frac{1}{4}$ -20 x $\frac{3}{4}$ " thumbscrew through the slotted hole and washers. Thread the

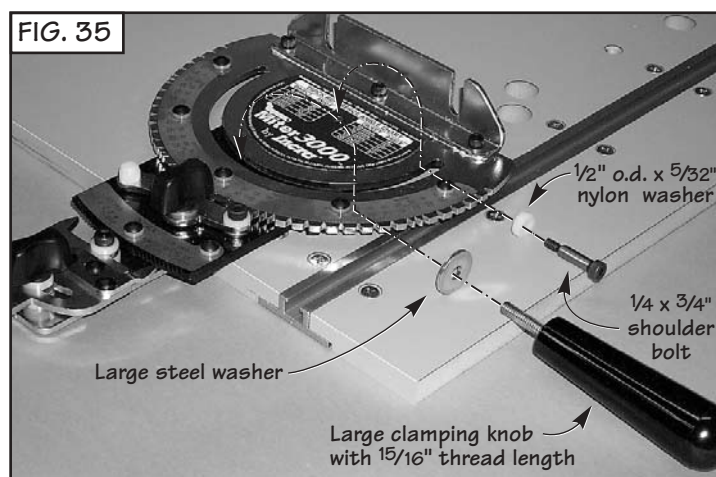


thumbscrew into the mounting plate. Place the remaining $\frac{1}{2}$ " o.d. steel washer in the recessed hole on the Miter5000 sled base as shown, **Fig. 33**

- 4** Remove the fence from the protractor head. Remove the large clamping knob, $\frac{1}{4} \times \frac{5}{8}$ " shoulder bolt and washers that secure the protractor to the miter bar. Lift the protractor top and bottom plates off, **Fig. 34**.



- 5** Using the supplied $\frac{1}{4} \times \frac{3}{4}$ " shoulder bolt and the $\frac{1}{2}$ " o.d. x $\frac{5}{32}$ " thick nylon washer, attach the protractor top and bottom plates to the Miter5000 sled base. Tighten the shoulder bolt. Place (1) large steel washer on the large clamping knob and screw through the slotted holes in the protractor top and bottom plates into the Miter5000 sled base, **Fig. 35**.



Important:

If you have purchased the Miter3000 to Miter5000 Conversion Kit, it includes a large clamping knob with a $\frac{15}{16}$ " thread length. Use this longer thread length in attaching the protractor head to the Miter5000 sled base.

Continue with the "Assembly" and "Calibration" instructions beginning on page 3.