

router. raiZer

RZ 100

Installation Instructions:

TO AVOID CONFUSION DURING INSTALLATION
follow steps 1 through 5 listed below

- Step 1.** Remove pages 2 through 7 from book
- Step 2.** Remove your router install pages
- Step 3.** Return extra pages to box
- Step 4.** For smoothest plunging action purchase STP® before installation. SEE PAGE 2
- Step 5.** See page 3 for parts diagram

Router Install Pages

- Craftsman 27505-27506-27510-27511 -- (8-9-10)
- De Walt DW 625 & ELU 3337- 3338-3339 -- (11-12-13)
- De Walt DW 621 -- (14-15-16)
- Freud FT 2000 -- (17-18-19)
- Hitachi M12V -- (20-21-22)
- Hitachi TR12 -- (23-24-25)
- Makita 3612 Series -- (26-27-28-29)
- Porter Cable 6931 Plunge Base -- (30-31-32-33-34-35)
- Porter Cable 7538 / 7539 -- (36-37-38)
- Porter Cable 7529 / 8529 -- (39-40-41)
- Ryobi RE 600 -- (42-43-44)
- Ryobi RE 500 -- (instructions available on our website)

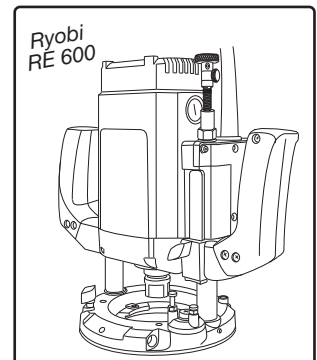
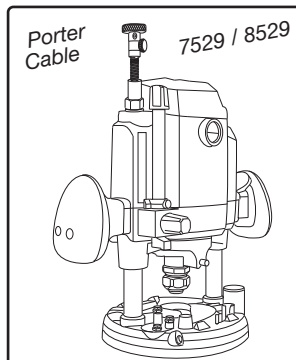
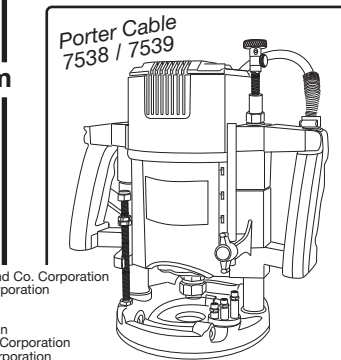
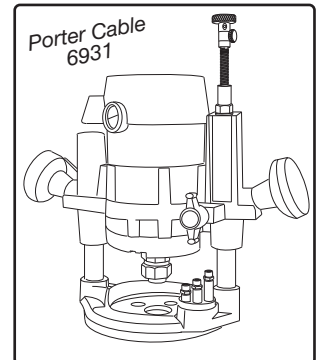
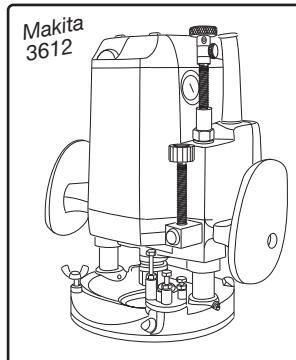
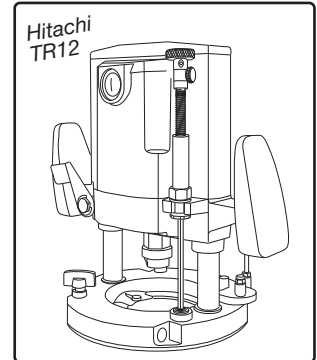
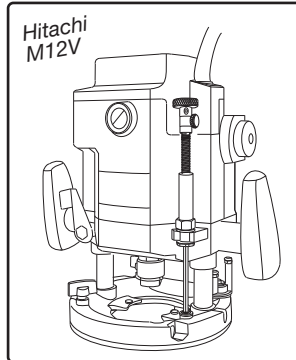
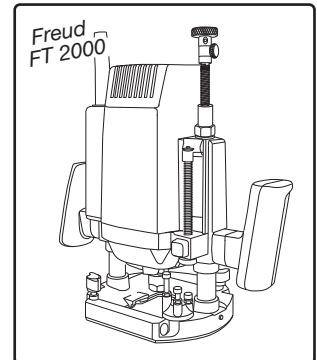
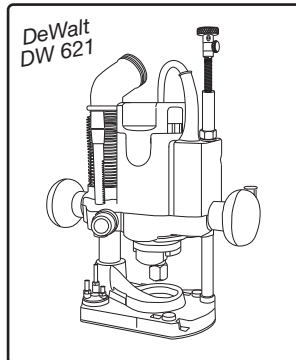
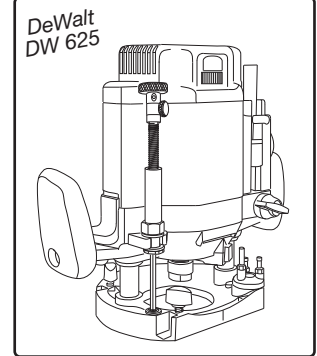
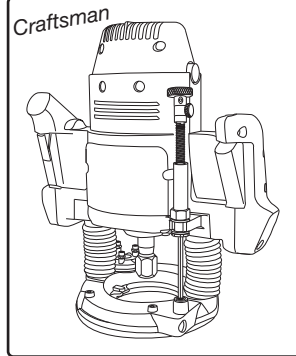
For Parts or Installation Assistance Contact

router
TECHNOLOGIES INC. phone: 1-866-266-1293
fax: 1-515-266-2122
2729 Delaware Ave, Des Moines, IA. 50317

Visit our Website @
www.routertechnologies.com

© 2000-2005 Router Technologies
All Rights Reserved

Craftsman is a registered trademark of the Sears, Roebuck and Co. Corporation
DeWalt is a registered trademark of the Black and Decker Corporation
ELU is a registered trademark of the A.G. Corporation
Freud is a registered trademark of Freud USA Ltd
Hitachi is a registered trademark of the Hitachi Ltd Corporation
Makita is a registered trademark of the Makita Electric Works Corporation
Porter Cable is a registered trademark of the Porter Cable Corporation
Ryobi is a registered trademark of the Ryobi Ltd Corporation



METRIC EQUIVILANTS FOR INTERNATIONAL CUSTOMERS

Note: The following metric drill bit or wrench sizes may be substituted for all operations other than drilling hole for #30 Dust Cover Insert.

1/8" = 0.125"	3.20mm = 0.126"
3/32" = 0.093	2.4mm = 0.094
5/32" = 0.156"	no metric equivalent, this hole must be drilled to 5/32"
7/32" = 0.218"	5.5mm = 0.216"
5/16" = 0.312"	8.0mm = 0.315
21/64" = 0.328"	8.3mm = 0.326" or 8.5mm = 0.334"
1/2" = 0.500"	12.8mm = 0.503 or 13mm = 0.511
11/16" = 0.687"	17.5mm = 0.689" or 18mm = 0.708"
3/4" = 0.750"	19.0mm = 0.748

30 Dust Cover Insert must be 0.500" use a 12.5mm bit and sand hole to fit cover. 12.5mm = 0.492"

This instruction manual covers several different makes and models of plunge routers. The instructions are written for a person with some mechanical ability. If you understand the parts and operation of a plunge router, installing the Router Raizer is not difficult. Before beginning installation compare the illustrations and photos to your router, original subbase or router table insert plate. Understand the location and function of both original and Router Raizer parts. Keep all spare parts, instruction manual and templates for future reference.

Responsibility of the Owner

Important: Read, understand and follow instructions to avoid personal injury.

1. The responsibility of the owner is to follow the instructions, cautions, and warnings bellow and in the instructions
2. Know and understand the location of both original and Router Raizer parts.
3. Follow all the assembly instructions carefully.
4. Correctly adjust the components making sure the plunge action is smooth and plunge lock operates properly.
5. Carefully read and follow all notes, tips, cautions and warnings.
6. Make sure all operators of the Router Raizer know how to correctly use it.

Caution: Before and during installation of Router Raizer make sure power switch is in the off position and tool is disconnected from power source to avoid accidental starting of the tool which may result in personal injury.

Caution: Always make sure router power switch is in the off position and disconnected from power source before and during any adjustments to the router or Router Raizer.

Warning: Never remove or reinstall #31 dust cover or make any depth of cut adjustments from either end of #1 mainshaft until router power switch is off, cutting tool has completely stopped rotating and tool is disconnected from power source.

Caution: Always secure plunge lock before and during routing operations.

ROUTER TECHNOLOGIES LIMITED TWO YEAR WARRANTY

Router Technologies warrants the Router Raizer to be free from defects in material and workmanship for a period of Two (2) Years from the original date of purchase to original owner. Our responsibility under this warranty is to replace, at no cost, any part which upon inspection at our facility is found to be defective in either material or workmanship. This warranty does not imply that the product is fit for a particular use or application, this warranty does not apply to parts which have been modified, altered, misused, damaged by improper storage. It also does not cover loss of parts during use, or mechanical adjustments which are covered in the instruction manual. In no event shall Router - Technologies be liable for any indirect, incidental or consequential damages from the sale or use of the product. This disclaimer applies both during and after the term of the warranty.

This warranty is your only remedy and parts are to be returned prepaid to our facility for inspection at Router Technologies, 2729 Delaware Ave, Des Moines, IA. 50317.

This warranty gives you specific legal rights, and you may have other rights which may vary from state to state. Any legal actions must be brought in Polk County Iowa.

FULL SIZE PARTS DIAGRAM ON BACK OF THIS PAGE (PAGE 3)

1. Remove Pages From Book

Before installation please remove the pages required for your router from this book. *Failure to do so can result in referring to the wrong page, confusion and damaged parts!*

2. Installation

The Router Raizer is designed to make the plunge router easy and enjoyable to adjust . It may appear to be complex and difficult to install, but the plunge router is an easy tool to disassemble and reassemble. Allow approximately 1½ hours for installation. For technical assistance call toll free 1-866-266-1293

3. Multiple Parts (After installation you will have extra parts)

The Router Raizer is a universal kit containing many parts you will not install into your router. Each instruction page lists the parts required for installation into that router. We advise keeping and storing all the extra parts and instructions.

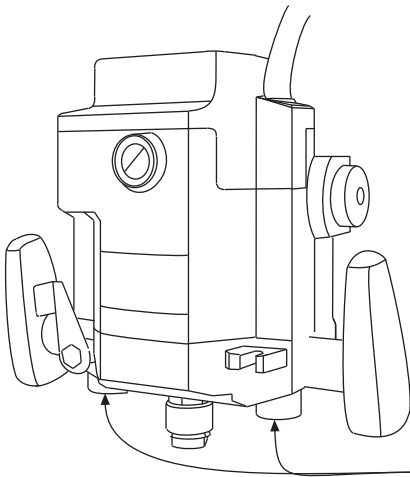
4. STP® for Lubricating The Plunging Action (All Plunge Routers)

For maximum performance and smoothest plunging action all plunge posts require a light film of lubrication. We only recommend using STP® MOTOR OIL TREATMENT.

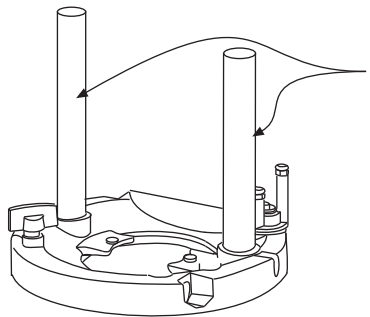
Before beginning the installation please purchase a bottle of STP®. Apply a light film to the posts and inside the post bushings just before reassembling the router.

1. Install the Router Raizer components into the base and motor housing of the router.
2. Before reinstalling the motor housing onto the base, use a Q tip, brush or little finger to apply a film of STP® to the inside of both post bushings and the outside of both plunge posts.

NOTE: STP® on the posts can attract dust, but the lubricating properties are not affected. periodically wiping the posts clean and reapplying STP® to the posts only will keep the router operating smoothly.



Post Bushings Apply light film on the inside surface of both post bushings.



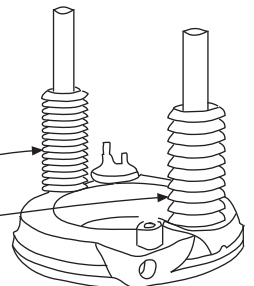
Plunge Posts Apply light film to the outside surface of both plunge posts.

5. Plunge Post Boots

Some plunge routers use rubber boots to seal the posts from dust and debris.

We recommend leaving these boots off when reassembling the router, and using the above lubrication and maintenance to keep the router operating smoothly.

Plunge Post Boots

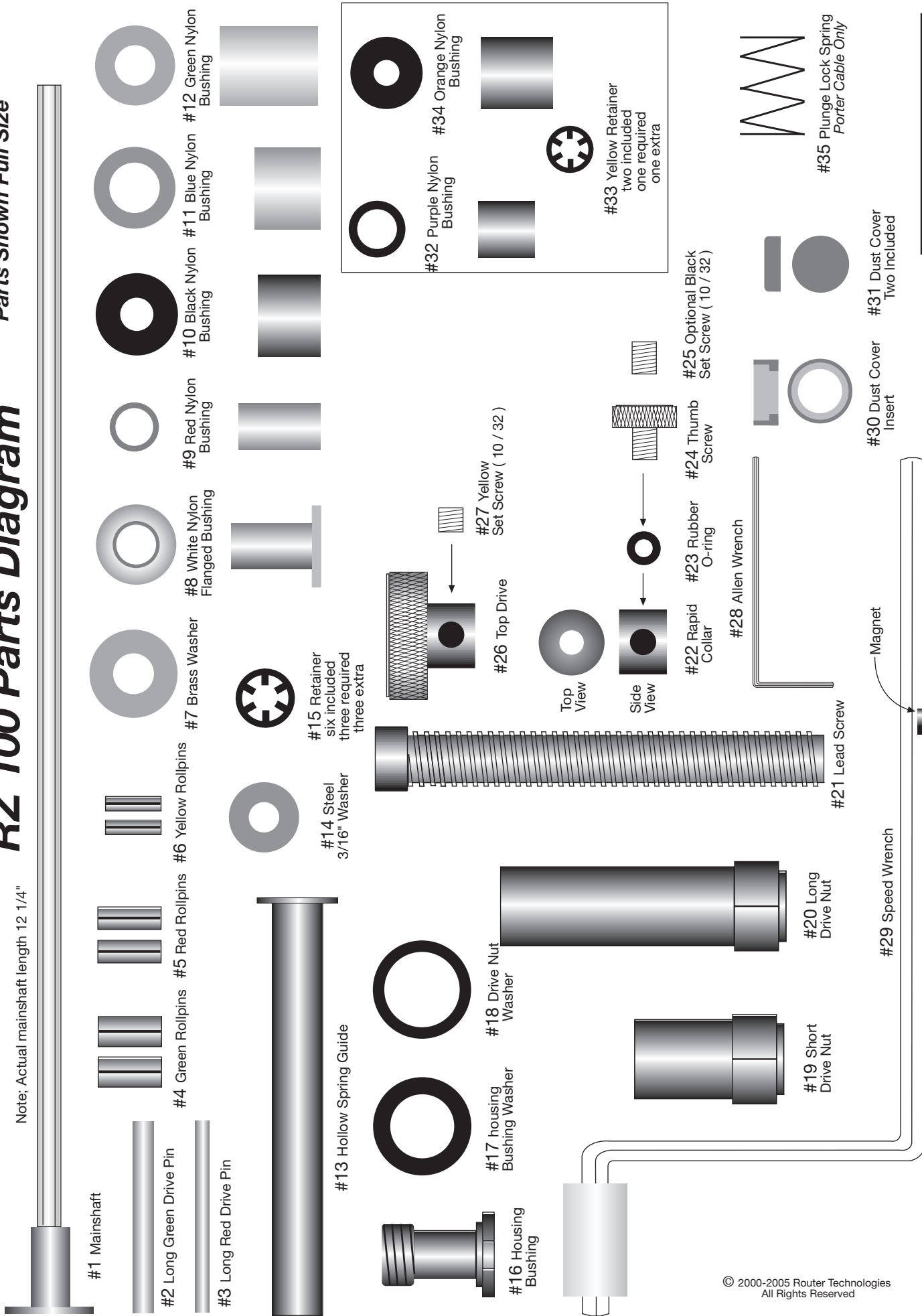


To avoid confusion during installation remove this page and router being installed pages, return others to box.

RZ 100 Parts Diagram

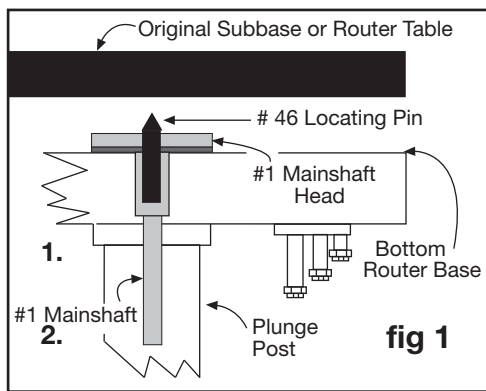
Parts Shown Full Size

Note: Actual mainshaft length 12 1/4"



Caution: Before and during installation of Router Raizer make sure power switch is in the off position and tool is disconnected from power source to avoid accidental starting of the tool which may result in personal injury.

Use this pin to simplify locating the Router Raizer access hole required through the original subbase or router table.



Locating Hole in Original Subbase

Using fig 1 support router upside down on bench and place locating pin into bottom of #1 mainshaft head. Secure subbase to router base gently tightening screws. Using a hammer gently tap the subbase over the pin. Remove subbase and drill hole on center punch mark using the Router Raizer template instructions.

Locating Hole in Router Table

If your router table is already drilled to mount the router, use above step using table or insert plate in place of original subbase.

If your router table or insert plate have not been drilled use the provided paper template or original subbase to first locate and drill the router mounting holes, then use #46 locating pin to drill Router Raizer access hole.

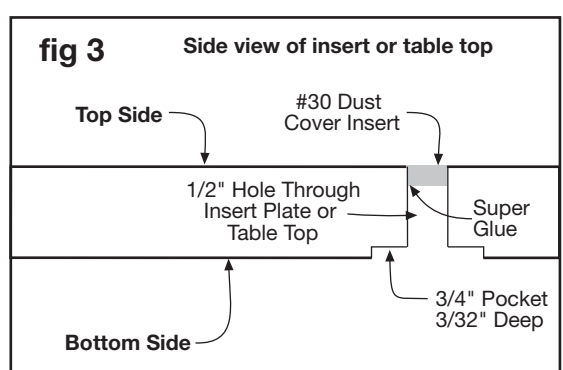
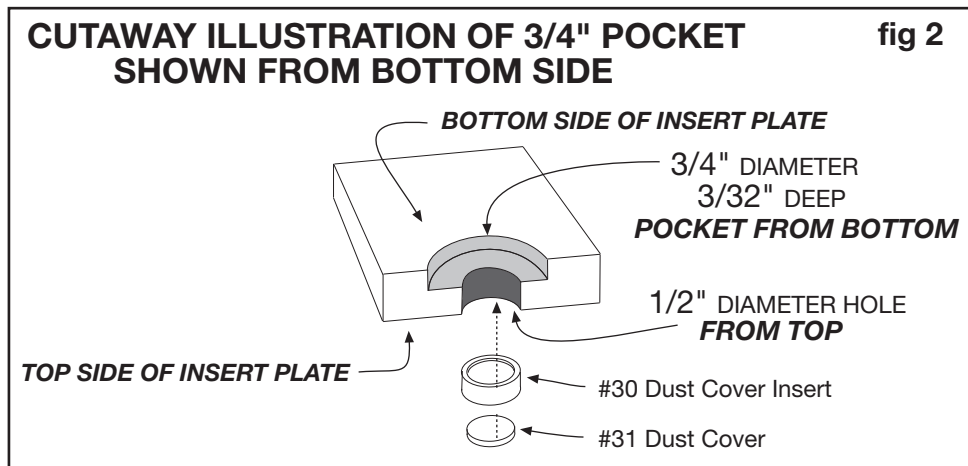
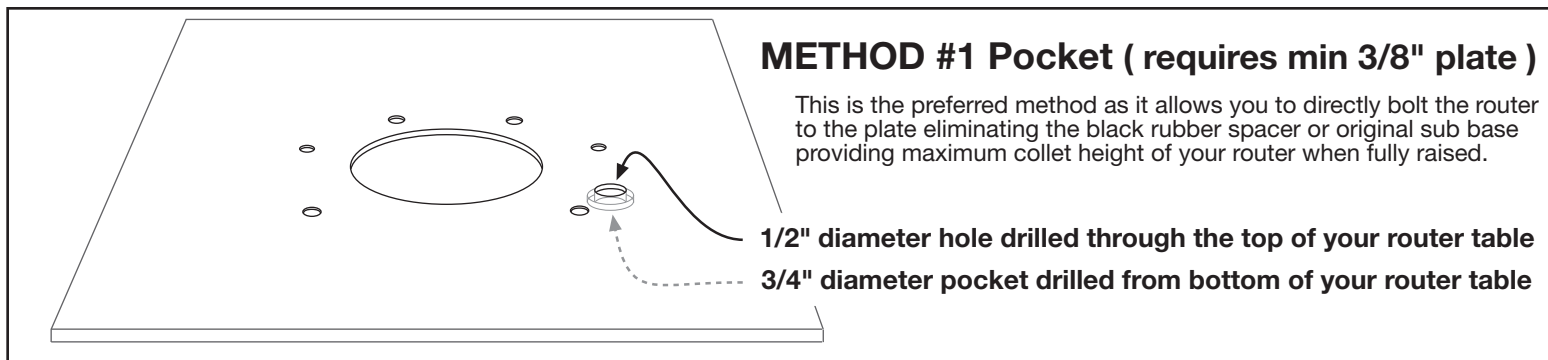
NOTE: For highest accuracy, the locating pins point should just project above the #1 mainshaft head. Shorten the pin to desired length by securing pointed end of locating pin in jaws of cordless or electric drill. Grind but end of pin off and debur ground end. Cool pin before removing from chuck jaws!

Preparing and Drilling Router Table Top

- Determine if the head of the #1 mainshaft protrudes above the base of your router (shown Fig 1 above)
 - If the head of the #1 mainshaft does not protrude above the base of your router, use #46 locating pin then drill a 1/2" hole through table top or insert plate and install #30 dust cover insert as shown at bottom of page 5
 - If the head of the #1 mainshaft protrudes above the base of your router clearance is required for the head of #1 mainshaft to rotate freely. Select either method #1 or #2 (page 4 and 5) and follow instructions for selected method.

METHOD #1 (Drilling 3/4" Pocket in Back of Insert Plate requires min 3/8" thick plate)

- Use the #46 locating pin to mark the back of the insert plate or table top.
- Center 1/8" drill bit on locating pin center mark and drill completely through plate or top.
- CAUTION 3/4" pocket must be drilled on the bottom side of plate or table top. (fig's 2 & 3)**
From bottom side, center 3/4" forstner bit on 1/8" pilot hole and drill pocket **no deeper than 3/32"**
- From top side, center 1/2" drill bit on 1/8" pilot hole and drill through into 3/4" pocket.
- From top side, press #30 dust cover insert into 1/2" hole until flush with top surface. If insert is loose in 1/2" hole, place a drop of super glue from bottom side around edge of the insert ring. (fig's 3 & 4)



Preparing and Drilling Router Table Top Method #2 (A) and (B)

NOTE: All installations require a 1/2" diameter hole drilled through the top of your router table top or insert plate to accept the #30 dust cover insert shown bottom of page.

If method #1 drilling pocket is not possible, a spacer must be placed between the router and table top providing space for #1 mainshaft rotation.

METHOD #2 (A) Black Rubber spacer

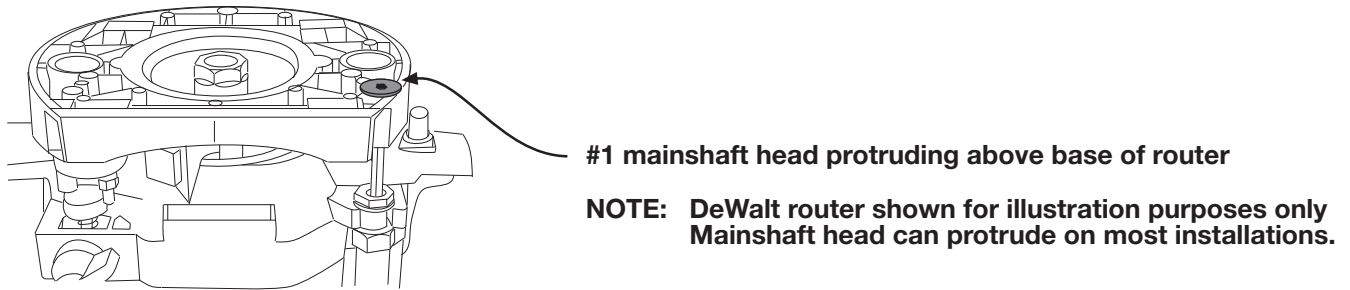
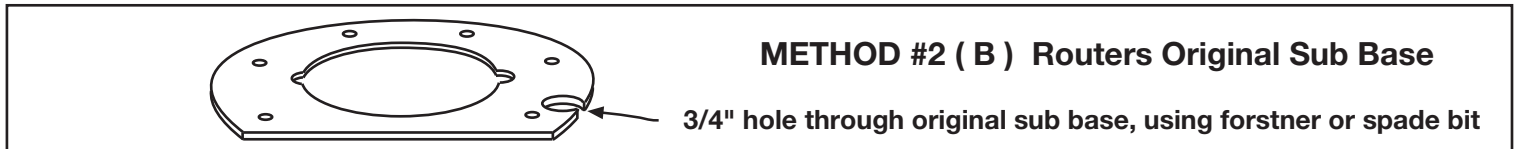
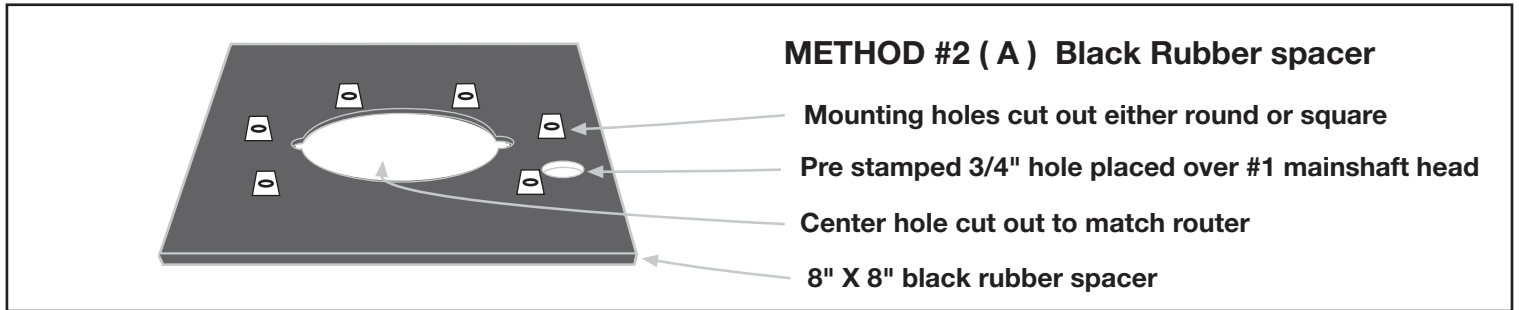
Some table tops and steel insert plates do not allow cutting the pocket from the back side. An 8" X 8" black rubber spacer is provided to cut out and place between the router and the table top or insert plate.

1. Place the rubber spacer onto base of your router with the pre-punched 3/4" hole centered on the #1 mainshaft head.
2. Use a utility knife or raiser blade to cut out the center hole and router mounting holes. **Note:** Mounting holes can be cut square and rounding outside of spacer is optional. This method may require slightly longer mounting screws.

METHOD #2 (B) Routers Original Sub Base

Preferred method for steel insert plates or installations where the router is secured to the plate using a pre designed clamping system. This method may also be used in place of method #2 (A)

1. Use #46 locating pin, then drill 3/4" hole through original sub base and secure subbase to router with original screws.



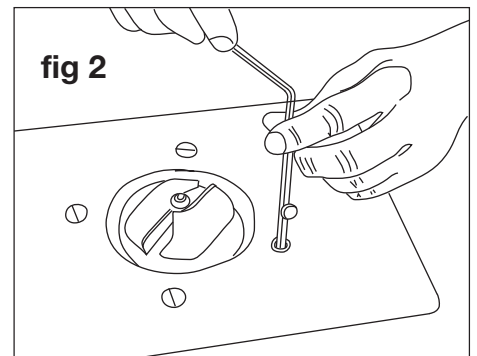
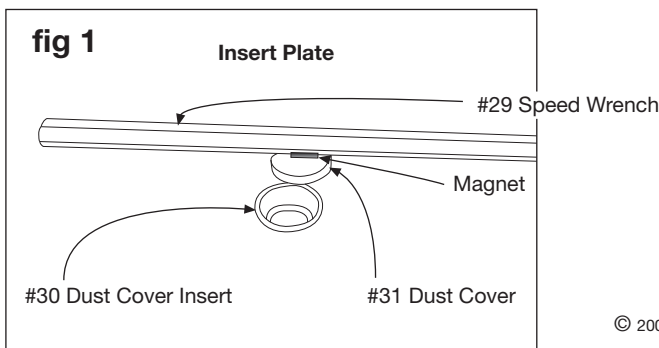
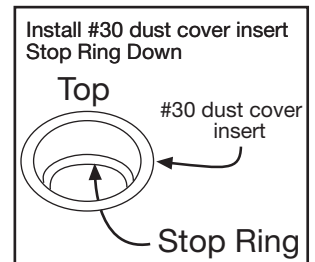
Installing #30 Dust Cover Insert and #31 Dust Cover

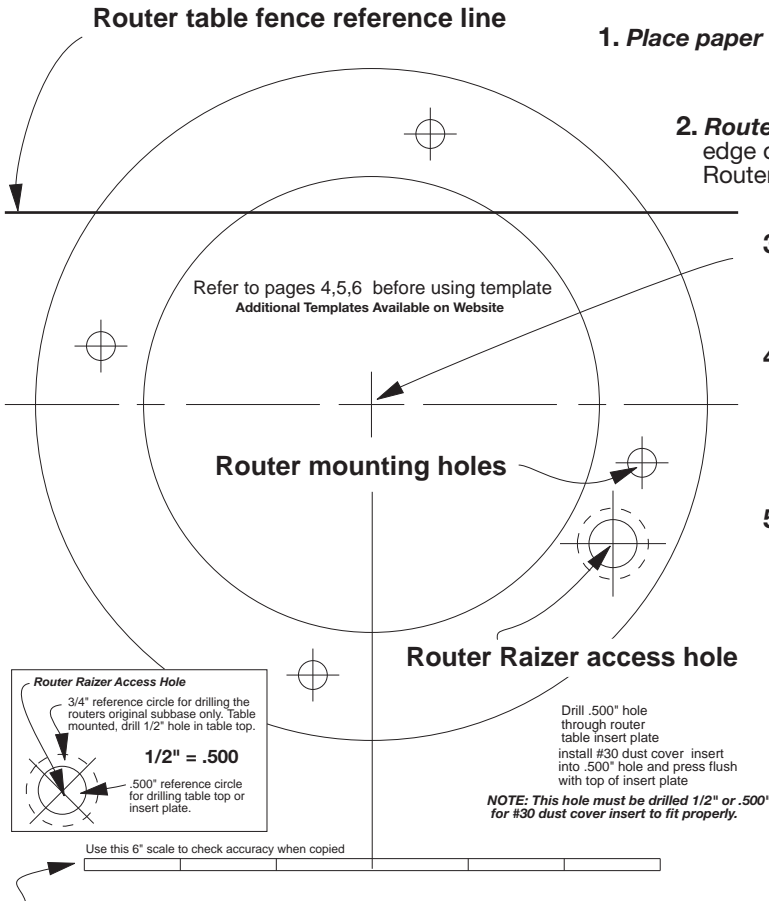
1. Using (fig 7) select #30 dust cover insert (1/2" dia, X 3/16" tall, turned aluminum ring) and #31 dust cover (3/8" dia. X 1/8 thick stamped steel plug) From top of insert plate, press #30 cover insert into the 1/2" Router Raizer access hole until flush.

Tip: If cover insert fits loosely, secure with drop of Super Glue® or Crazy Glue®.

2. Mount router to insert plate and install into table

3. Place #31 dust cover into #30 dust cover insert. Using (fig's 1 & 2) remove #30 dust cover with magnet on back of #29 speed wrench. With dust cover on speed wrench, insert wrench to make adjustments. To reinstall dust cover, place cover into insert and slide wrench away. **Caution: Remove dust cover with speed wrench before removing router from table or cleaning table with vacuum sweeper.**





1. Place paper template lettering up onto top side of router table or inset plate.

2. Router table fence reference line. Setting this line parallel with the back edge of the router table or insert plate positions the router so the Router Raizer access hole will be drilled out in front of the fence.

3. Center cross hairs. Accurately center this point in the hole of the router table or insert plate, using a pencil compass or tape measure. Tape in place and recheck before drilling holes.

4. Router mounting holes. For highest accuracy place the routers original subbase over the templates router mounting holes and tape subbase down. Use a Vix bit, center punch or drill bit to transfer holes to the router table or insert.

5. Router Raizer access hole. Use page 4 and # 46 locating pin to accurately mark the access hole location

WARNING: IF 3/4" POCKET IS REQUIRED PAGES 4 & 5. DO NOT DRILL 3/4" HOLE COMPLETELY THROUGH THE TABLE TOP OR INSERT PLATE. A 1/2" HOLE IS REQUIRED IN THE TOP TO ACCEPT THE #30 DUST COVER INSERT.

IF ORIGINAL SUBBASE IS USED BETWEEN ROUTER AND TABLE PAGES 4 & 5. USE #46 LOCATING PIN THEN DRILL 3/4" HOLE THROUGH ORIGINAL SUBBASE.

6" Scale. If template is copied or downloaded from web site, use this scale to accurately check template size.

Troubleshooting

Problem	Cause	Solution
Router Raizer will not raise or lower the router	#19 or #20 Drive nut loose	The drive nut cannot rotate, Retighten the drive nut on router.
	Router plunge posts dry	Clean posts and lubricate with STP® MOTOR OIL TREATMENT
Router Raizer Speed Wrench turns hard	Pocket in table top or insert plate not counter sunk deep enough	Check pocket depth and deepen if necessary. #1 mainshaft head must rotate freely.
	#21 lead screw has no lubrication	Re lubricate using supplied red grease or heavy wheel bearing grease.
	Router plunge posts dry	Clean posts and lubricate with STP® MOTOR OIL TREATMENT
Router Raizer will not raise router high enough	Turret stop on router improperly set	Locate rotating turret stop on base of router and adjustable stop directly above. Adjustable stop must be retracted as high as possible. Turret stop must be rotated so shortest post is under adjustable stop.
	Reached maximum plunge depth of router	All plunge routers have a predetermined plunge stroke, the Router-Raizer will not increase this stroke. With router fully compressed-check amount of plunge post still visible. 1/16" to 1/4" post should be visible. If more than 1/16" to 1/4" of post is visible, Call 1-866-266-1293 Addition of a collet extension is required to safely run some bits.
Router becomes harder to raise and lower	Router plunge posts dry	Clean posts and lubricate with STP® MOTOR OIL TREATMENT

Caution: Always make sure router switch is in the off position, and tool is disconnected from power source when performing maintenance or making any adjustments to either the router or height adjustments to avoid accidental starting of tool which may result in personal injury.

Using in a Router Table

Dust Cover Insert and Dust Cover

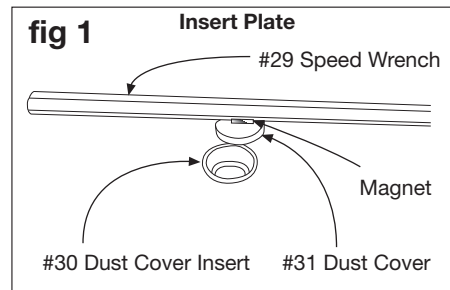
The dust cover insert and dust cover allow easy adjustment access to the Router Raizer mainshaft and restricts dust and debris infiltration during use. A small magnet is recessed into speed wrench handle to remove and hold the dust cover during adjustments.

1. Removing dust cover: Using (fig 1) place #29 speed wrench over #31 dust cover, lift speed-wrench to remove dust cover. Leave dust cover on wrench while making height adjustments.

2. Replacing dust cover: Position speed wrench with dust cover over the insert, press cover into insert and swipe wrench away leaving the dust cover in the insert.

3. Always remove #31 dust cover before removing router and insert from table. Or cleaning table with vacuum sweeper
Warning: Never remove the dust cover while the router is running. Always wait until the bit has stopped spinning.

4. Rapid collar positioning: The rapid collar is for hand held use only, for router table use position collar against retainer clips and top drive (fig 2). Secure with #24 thumb screw or optional #25 black set screw.



Using Handheld

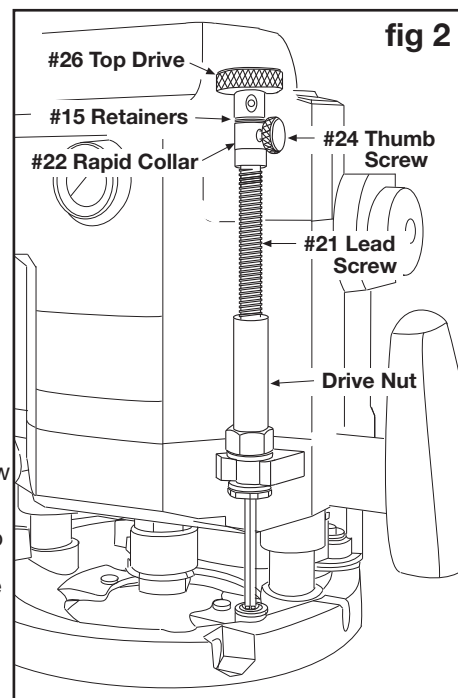
When used hand-held the hex shaped #1 mainshaft provides a constant engagement of the Router Raizer mechanism, allowing easy height adjustments while retaining original plunge capabilities and all other original functions of the router.

1. Height adjustments can be made from either end of the router. To adjust from the base, engage #29 speed wrench into the head of #1 mainshaft. To adjust from the top, engage #29 speed wrench into the top of #26 top drive. The knurled #26 top drive also allows adjustments by hand.

The #24 thumb screw and #22 rapid collar allow positioning the cutter to height. bypassing multiple revolutions of the speed wrench

1. (fig 2) Illustrates compressing the plunge router with rapid collar locked in the router table position. Insert #29 speed wrench into #26 top drive, or lay router on its side and insert #29 speed wrench into bottom of #1 mainshaft. Rotating the speed wrench will thread #21 lead screw in or out of the drive nut, compressing and un compressing the router.

2. (fig 3) Illustrates compressing the plunge router with the rapid collar. Thread #21 lead screw into the drive nut leaving approx 1/2" exposed threads, the router will be un compressed. Secure desired router bit in collet, stand router upright hand plunge to approx desired depth lock plunge lock lever. Release #24 thumb screw and drop rapid collar into contact with #21 lead screw. secure thumb screw and release plunge lock lever. Insert #29 speed wrench into #26 top drive, lay router on its side and insert #29 speed wrench into bottom of #1 mainshaft and adjust to required depth. Re lock plunge lock before routing. When done release thumb screw and router will quickly return to the un compressed position for easier bit removal.



Caution: #22 rapid collar is not designed to maintain cutter height during routing operations. Always secure plunge lock before and during all routing operations.

4. If #24 thumb screw will not provide enough pressure to secure #22 rapid collar, replace thumb screw with #25 optional black set screw and #28 allen wrench.

Direction of Rotation for Adjustment

Adjustments from #26 top drive:

Clockwise rotation Decreases depth of cut. Counterclockwise rotation Increases depth of cut.

Adjustments from #1 Mainshaft Head :

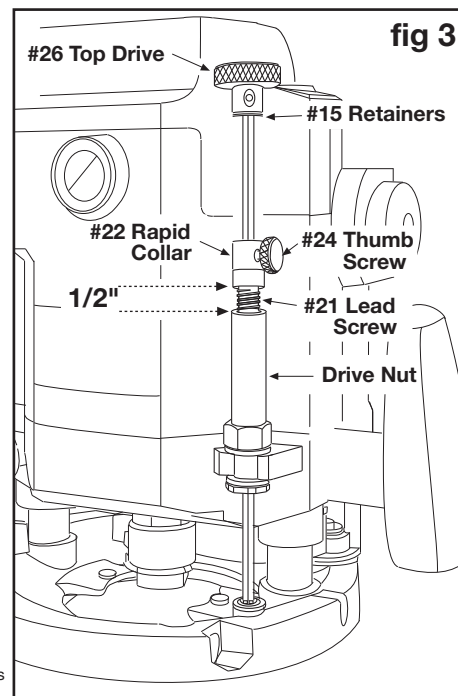
Clockwise rotation Increases depth of cut. Counterclockwise rotation Decreases depth of cut.

One complete rotation of the speedwrench, raises or lowers the bit 1/16"

Caution: Always secure plunge lock during routing operations.

Transporting or Storing Router

To prevent damage to the #1 mainshaft and #21 lead screw, adjust the lead screw leaving 1/2" threads exposed. Grasp router handles, release plunge lock, advance router up until lead screw rapid collar and retainers are all in contact, engage plunge lock.



Porter Cable 6931 plunge base

Due to inconsistent plunge action when this base is used upside down, please read and follow the instructions below before installing the Router Raizer.

For the Router Raizer to operate properly the plunge base must operate smoothly throughout its plunge travel. Some 6931 plunge bases bind and lock up when adjusted upside down. First determine if your base will operate smoothly by following steps below.

1. Stand base upright, hold plunge lever in the unlocked position. Push down on **turret stop side handle only**. If base chatters or locks up try following steps.
2. Using masking tape or nylon tie strap, secure the plunge lock lever to the handle in the unlocked position. Adjust the router to the top of its plunge stroke, (fully unplunged). Grasp the round base, and hold the router upside down. Using the knurled height adjustment nuts raise the router until its fully compressed (fully plunged). If the plunge stroke operates smoothly continue to type of base. If base chatters or locks up follow step 3 below.
3. Apply a light film of STP ® oil treatment to each post. The anti friction properties of this lubricant help to eliminate binding and locking. If plunge action shows no improvement, The internal brass plunge post bushings may require cleaning and a direct application of STP ®.
NOTE: Substituting STP® with any other lubrication will not be as effective.
4. If plunge action shows no improvement, remove **plunge lock side plunge spring** and recheck plunging action.
5. If plunge action shows no improvement, installing the Router Raizer will not correct the plunging action. Chattering, binding, or locking up may be experienced. See page 26 for further information.

TYPE OF BASE (older type 1) (type 1) (type 2)

Three types of 6931 base have been produced, with three different ways of securing the threaded height rod into the base. First determine type of base by removing the round black plastic subbase.

- A. Older type 1 base. Instructions page 31 this base will have no screw to securing the height rod pin. Illustration fig (6) page 31
- B. Type 1 base. Instructions pages 31,32, this base will have a phillips or torx style screw securing the height rod pin. Fig (6) page 31
- C. Type 2 base. Instructions page 32 this base will have a 3/8" nut securing the height rod.

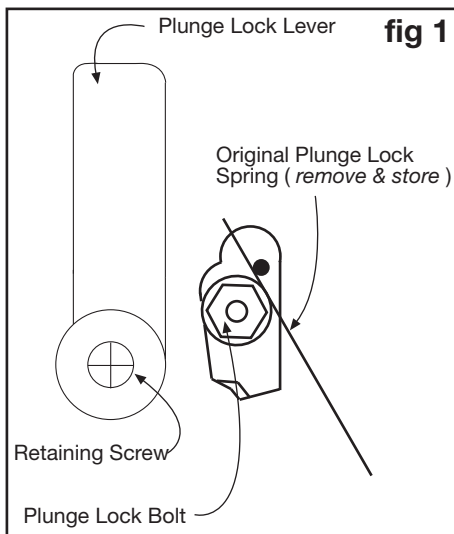
INSTALLATION

These instructions contain 4 installation procedures. **Preparing Motor Housing, Preparing the Base, Modifying Plunge Springs Reassembling Router-** Preparing Motor Housing and Reassembling Router are generic for all base types. For Preparing the Base and Modifying Plunge Springs select the base type you have and circle specific instructions and illustrations, work from those only. With all instructions check off each step when done.

Tools Required: 11/16" wrench, phillips & straight screwdrivers, hammer, 1/2" drill bit, drill, hacksaw,

Router Raizer Parts Required: (page 1) #1, #7, #8, #12 #13, (three #15) #16, #17, #18, #19, #21, #22, #23, #24, #26, #27, #28, #29, #35 #30, & #31 for router table installation.

All base types require Steps 1 through 4 Preparing Motor Housing as first installation procedure.



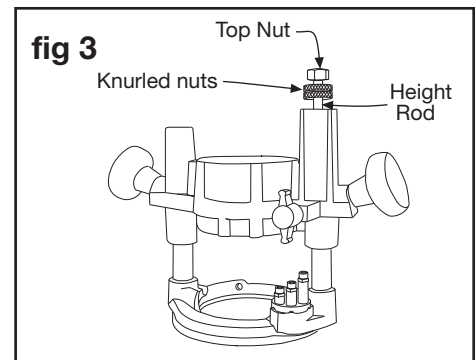
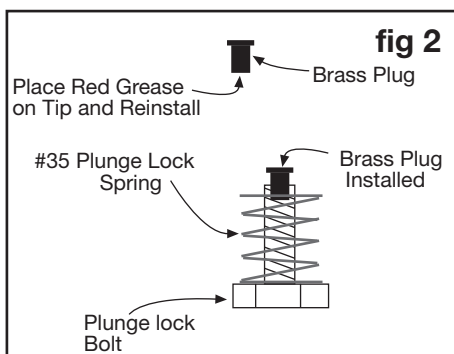
1. Cut #1 mainshaft to 10,3/4" overall length and debur cut end for all types. Set aside to install later.

Preparing Motor Housing (follow steps 1 through 4 on all base types)

For proper Router Raizer operation, the plunge lock is modified so the lock lever remains open during height adjustments, then manually locked during routing operations. When finished with step one, the original spring is removed and replaced with a spring providing constant tension.

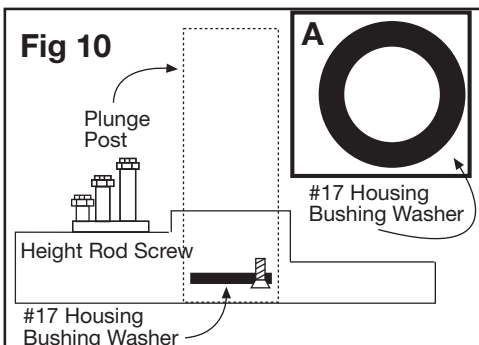
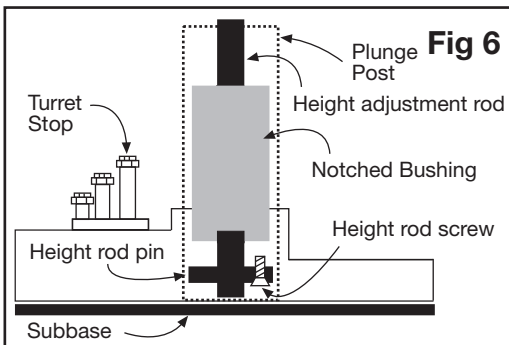
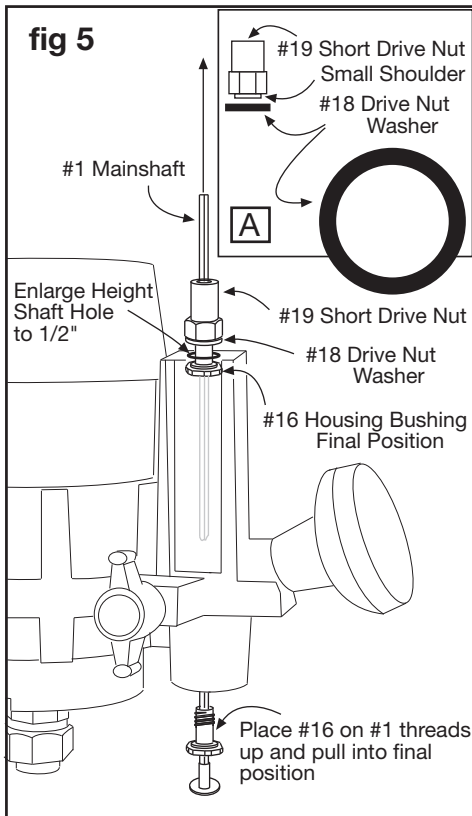
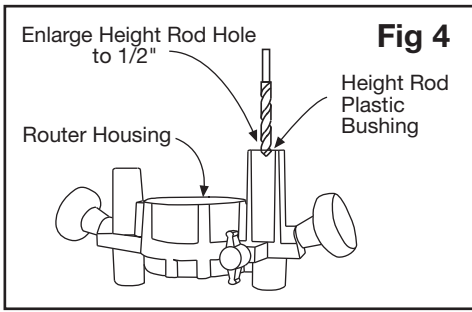
1. Select # 35 plunge lock spring. Release plunge lock, raising router to maximum height. Using fig (1) remove the plunge lock lever by removing retaining screw. Using a clockwise rotation unthread and remove the plunge lock bolt. Remove and store the original plunge lock spring. Using Fig (2) the brass plug must be in the end of the plunge lock bolt. To keep the brass plug secured, place a spot of included red grease on the small diameter end and press back into plunge lock bolt. Place #35 plunge lock spring onto the plunge lock bolt and using a counter-clockwise rotation rethread into motor housing until tight. Replace handle onto lock bolt and install retaining screw. Check operation of plunge lock, spring should hold handle open.
2. Plunge router slightly and secure plunge lock. Using fig (3) remove top nut and both knurled nuts from height rod, Grasp router handles, release plunge lock, and quickly lift to clear plunge springs. Remove and set aside plunge springs and black plastic spring guide located in top of the plunge spring on the plunge lock side of router.

Note: the black plastic spring guide may stick inside the motor housing check and remove.



See back of page to finish installation.

Porter Cable 6931 plunge base



3. Using (fig 4) Remove and store the height rod plastic bushing . Using a standard 1/2" drill bit, enlarge the height rod hole to 1/2". Height rod hole is located on top of depth scale side of base.

4. Select #1 mainshaft, #16 housing bushing, #18 drive nut washer, #19 short drive nut. Using (fig 5) drop #16 housing bushing threads up onto #1 mainshaft. Start #1 mainshaft into bottom of housing and push up through drilled hole. Grasp top of #1 mainshaft and pull #16 bushing into final position. Drop #18 washer then #19 nut onto #1 mainshaft, and tighten #19 nut onto #16 bushing using 11/16" wrench. Remove #1 mainshaft
NOTE: #18 washer must fit on small shoulder #19 nut see inset A (fig 5) Compare #19 To washer illustrated bottom inset A (fig 5).
Tip: If #19 nut will not tighten insert long flat blade screwdriver from bottom into post bore to wedge #16 housing bushing while tightening #19 short nut.

Preparing the Base (follow instructions for your type base) (OLD STYLE TYPE 1 / TYPE 1 / TYPE 2)

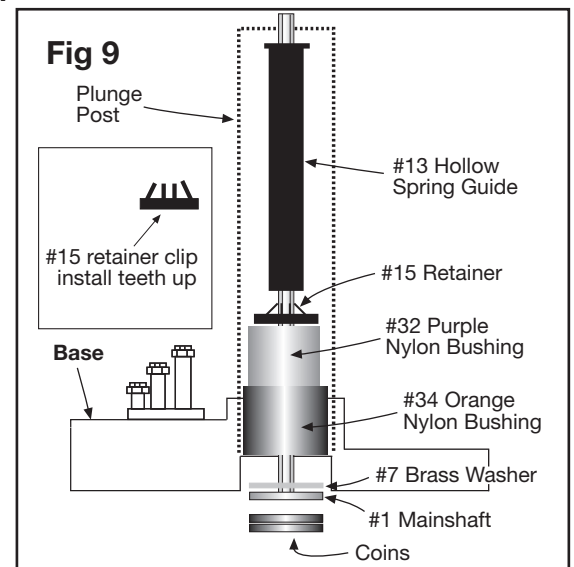
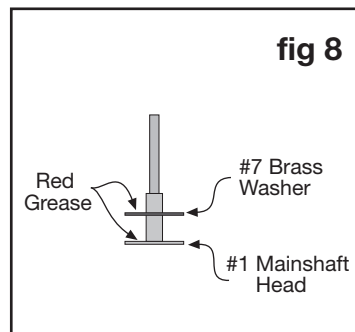
Old Style Type 1 Base

- Using fig (6) Remove and store height rod and steel notched bushing from inside plunge post. Select # 34 orange nylon bushing. Using fig (7) clean inside the bottom 1" of the plunge post. **Place small amount of super glue ® or epoxy inside post and onto #35 orange nylon bushing and drive into bottom of plunge post until flush with bottom of post.** Drill hole in #34 orange nylon bushing to 21/64" or ream with 5/16" drill bit until #1 mainshaft head spins freely when placed into the bushing.
- Select #1 mainshaft, #7 brass washer, #13 hollow spring guide, One #15 retainer, #29 speed-wrench. **Cut #1 mainshaft to 10 & 3/4" overall length, and lightly debur cut end.**
- Select #1 mainshaft, #7 brass washer, #13 hollow spring guide, one # 15 retainer, one #32 purple nylon bushing. Using fig (8) Place small amount of red grease on mainshaft head. Drop #7 brass washer down mainshaft place grease on top of washer. Using fig (9) Place #1 mainshaft with washer into #34 orange nylon bushing. Set base upright on bench with two coins or washers under #1 mainshaft head. Place #32 purple nylon bushing onto mainshaft and drop into post. Place #15 retainer teeth up on top of mainshaft. Use #13 hollow spring guide with flange up to start and push the retainer down the shaft and into the post. When hollow guide flange meets top of post, set end of #29 speed wrench or screwdriver on flange and push guide into post until tight.
Return #13 hollow spring guide to box.
Check end play of mainshaft, if there is movement up and down, retighten with above step.

Type 1 Base (with height rod screw)

- Using (fig 6) Remove height rod screw, remove height rod with height rod pin from base. Remove and set aside notched bushing. Select #17 housing bushing washer, Using (fig 10) compare #17 washer to washer illustrated in box A. Place #17 washer into recess in base where height rod pin was secured. Replace height rod screw to secure #17 washer. **Note:** #17 washer may not remain flat in recess when tightened, **Tilting of washer is acceptable, but washer must be secured tightly.**

See page (16) to finish installation.



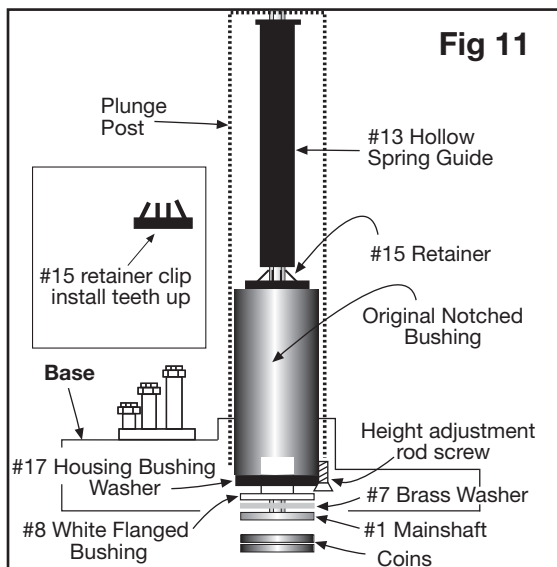


Fig 11

1. Select #1 mainshaft, #7 brass washer, #8 white flanged bushing, #13 hollow spring guide one #15 retainer, #29 speedwrench.

NOTE: Cut #1 mainshaft to 10 & 3/4" overall length, and lightly debur cut end.

3. Using (fig 8, page 31) Place small amount of red grease on #1 mainshaft head. Drop #7 washer down #1 mainshaft place grease on top of washer. Using fig (11) Drop #8 white flanged bushing flange first down #1 mainshaft. Insert #1 mainshaft into plunge post. Set base upright on bench with two coins or washers under #1 mainshaft head. Drop the original notched bushing, **Notch** down into the top of the post. Set #15 retainer, teeth up on top of #1 mainshaft. Use #13 hollow spring guide with flange up to start and push the retainer down the shaft and into the post. When hollow guide flange meets top of post, set end of # 29 speed wrench or screwdriver on flange and push guide into post until tight. **Return #13 hollow spring guide to box.**
Check end play of #1 mainshaft retighten if necessary.

Type 2 Base

NOTE: Cut #1 mainshaft to 10 & 3/4" overall length, and lightly debur cut end.

1. Using fig (12) Turn base upside down and shake to remove notched bushing from height rod post. Remove height rod nut with 9/16" socket and pull height rod from base.

2. Using figs (13,14) The height rod slot must have a 5/16" hole drilled in center. This hole needs to be reasonably accurate, but can be done using a round file or rotary tool.

Two methods for drilling 5/16" hole

- A. Hold #35 orange nylon bushing with pliers, and drill through center hole with 6" or longer 5/16" bit. Using fig (15) Position #34 bushing near point of drill bit. Place bushing and bit into top of plunge post, advance bit slowly to drill 5/16" hole through height rod slot. **NOTE: #34 bushing must move freely in post. If bushing fits tight , reduce diameter with bushing on bit against sandpaper.**

- B. Select 6931 type 2 height rod template page (35). Tape template to a 3/4" thick hardwood board. Using a drill press, drill and counter sink subbase mounting screw holes so original screws will secure template board to router base. Drill the Router Raizer hole 5/16". Secure pattern board to base of router, advance 5/16" drill bit slowly through Router Raizer hole to bore slot in base.

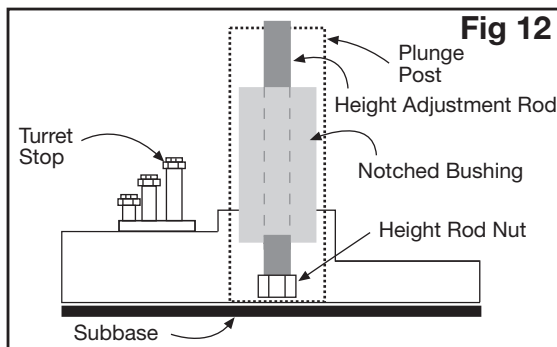


Fig 12

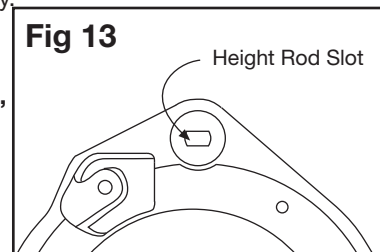


Fig 13

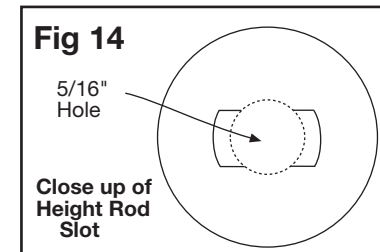


Fig 14

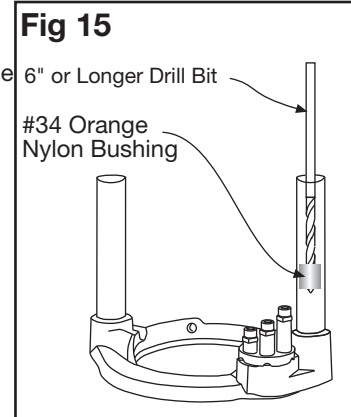


Fig 15

3. Select #1 mainshaft, #7 brass washer, #13 hollow spring guide one #15 retainer, #29 speedwrench.

4. **Cut #1 mainshaft to 10 & 3/4" overall length, and lightly debur cut end.**

5. Using (fig 8, page 31) Place small amount of red grease on #1 mainshaft head. Drop #7 washer down #1 mainshaft place grease on top of washer. Using fig (16) Insert #1 mainshaft into plunge post. Set base upright on bench with two coins or washers under #1 mainshaft head. Drop the original notched bushing, **Notch** down into the top of the post. Set #15 retainer, teeth up on top of #1 mainshaft. Use #13 hollow spring guide with flange up to start and push the retainer down the shaft and into the post. When hollow guide flange meets top of post, set end of # 29 speed wrench or screwdriver on flange and push guide into post until tight. **Return #13 hollow spring guide to box.**
Check end play of #1 mainshaft retighten if necessary.

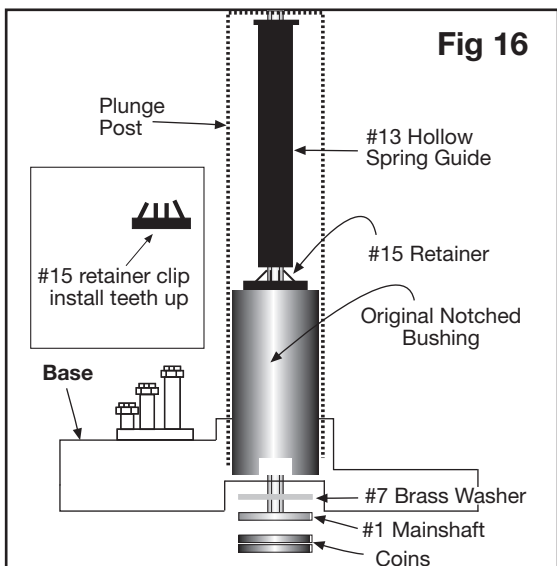


Fig 16

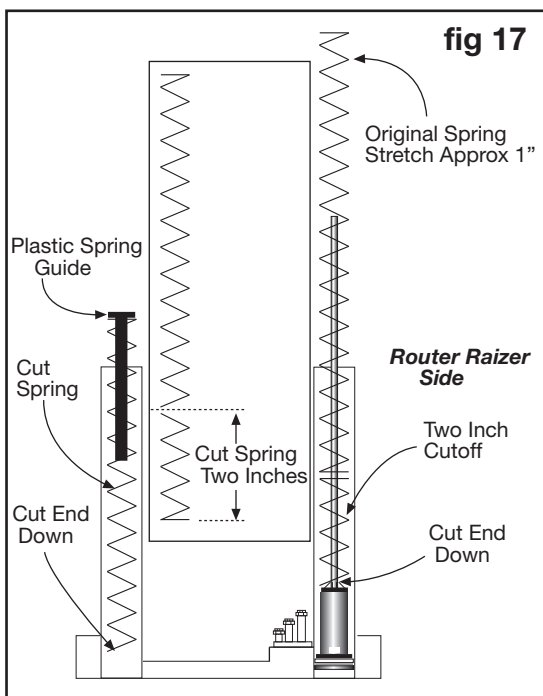
Clean brass post bushings located inside housing. **Brass bushings must be lubricated !** For smoothest plunge action lubricate inside of the bushings with STP ® oil treatment. The anti friction properties of this lubricant help to eliminate binding.

Modifying Plunge Springs

Due to the clearance between the Posts and brass housing bushings, this base can bind or lock up when raised and lowered. Modifying the plunge spring offsets the spring pressure. This modification does not affect the performance or functions of this router.

See page (19) to finish installation.

Porter Cable 6931 plunge base



Type 1 Base (with height rod screw)

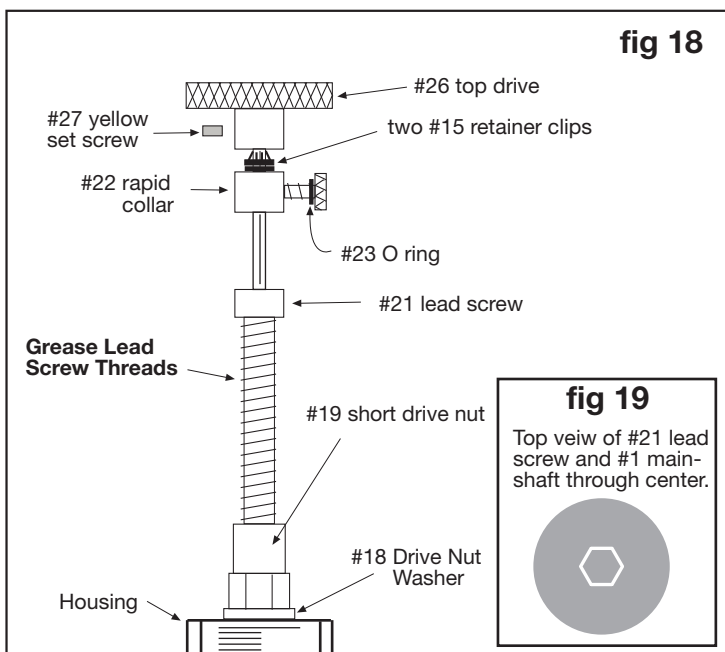
- Using (fig 17) select either spring, measure 2" from one end, cut at 2" mark using side cutters or grinding wheel. Place long piece of spring into non- Router Raizer post, cut end down. Place 2" cut off into Router Raizer post, cut end first. Take remaining original spring and stretch approx 1". Place stretched spring into Router Raizer post on top of cut spring. Replace original black plastic spring guide in top of non-Router Raizer spring.
NOTE: (for router table use only) after performing above spring modification, the non-Router Raizer side shortened plunge spring and plastic spring guide can be left out, improving the plunging action. **CAUTION:** leaving this spring out will not provide enough lift for hand held use. **For further information see page 27.**

Old Style Type 1 Base and Type 2 base

Caution: Old style type1 base and type 2 base use different springs than above Type1. 2" cut off in mainshaft post can reduce plunge depth 3/4". Follow Instructions below.

- (FOR ROUTER TABLE USE ONLY)** Using (fig 17) select either spring, measure 1" from one end, cut at 1" mark using side cutters or grinding wheel, Place 1" cut off into Router Raizer post cut end first take remaining un cut spring and stretch approx 1". Place stretched spring into Router Raizer side post on top of cut spring. Store remaining cut spring and black plastic spring guide. **CAUTION:** leaving this spring out will not provide enough lift for handheld use. **For Further informaton see page 27.**
- (FOR HAND HELD USE)** Using (fig 17) select either spring, from one end place two cut marks at 1" and 3" using side cutters or grinding wheel, cut spring at both marks. **store 2" long cut off.** Place 1" cut off into Router Raizer post cut end first. Take remaining un cut spring and stretch approx 1". Place stretched spring into Router Raizer side post. Place remaining cut spring into other post cut end first and replace original plastic spring guide into top of spring. **For further information see page 27.**

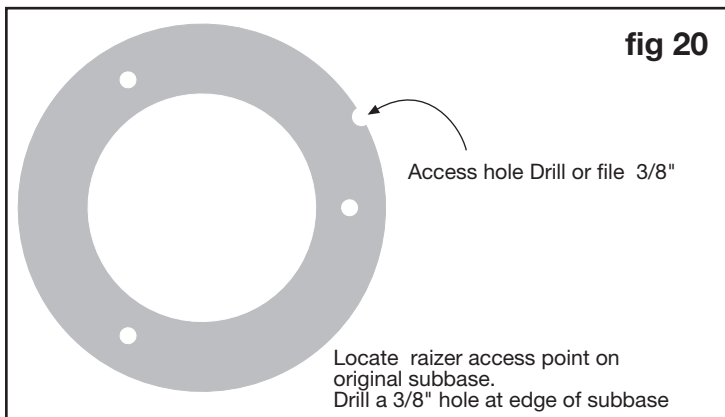
Reassembling Router



- Unlock plunge lock lever. Grasp router handles , lower motor housing onto springs. Align #1 mainshaft through #19 short drive nut, plunge router down and engage plunge lock.
- Select #12 green bushing (Two #15 retainers) #21 lead screw, #22 rapid collar, #23 O-ring, #24 thumb screw, #26 top drive, #27 yellow set screw, #28 allenwrench, red grease. Using (fig 18) place grease on threads of #21 lead screw. Place lead screw down #1 mainshaft and thread into #19 short nut until one inch of mainshaft extends above the head #21 lead screw. Alignment of #1 mainshaft and #21 screw hex is required (fig 19).
Tip: # 29 speed wrench can be used to speed threading.

- The following step is used to set the two # 15 retainers 1/2" down from the top of the #1 mainshaft.** Press #23 O-ring onto #24 thumb screw shaft. Thread thumb screw into #22 rapid collar. Place rapid collar onto #1 mainshaft. Secure rapid collar 1/2" from top of collar to top of mainshaft. Release plunge lock and slowly raise the router until lead screw contacts the rapid collar. If the collar moves, reset to 1/2". Place one #15 retainer teeth up on top of #1 mainshaft. Using #12-green bushing installation tool, push retainer into contact with collar, repeat with second #15 retainer and push flush with first retainer. **Return # 12 green bushing to box.** Place #26 top drive onto #1 mainshaft until it contacts retainer clip, Thread #27 yellow set screw into #26 top drive using #28 allen wrench and tighten.

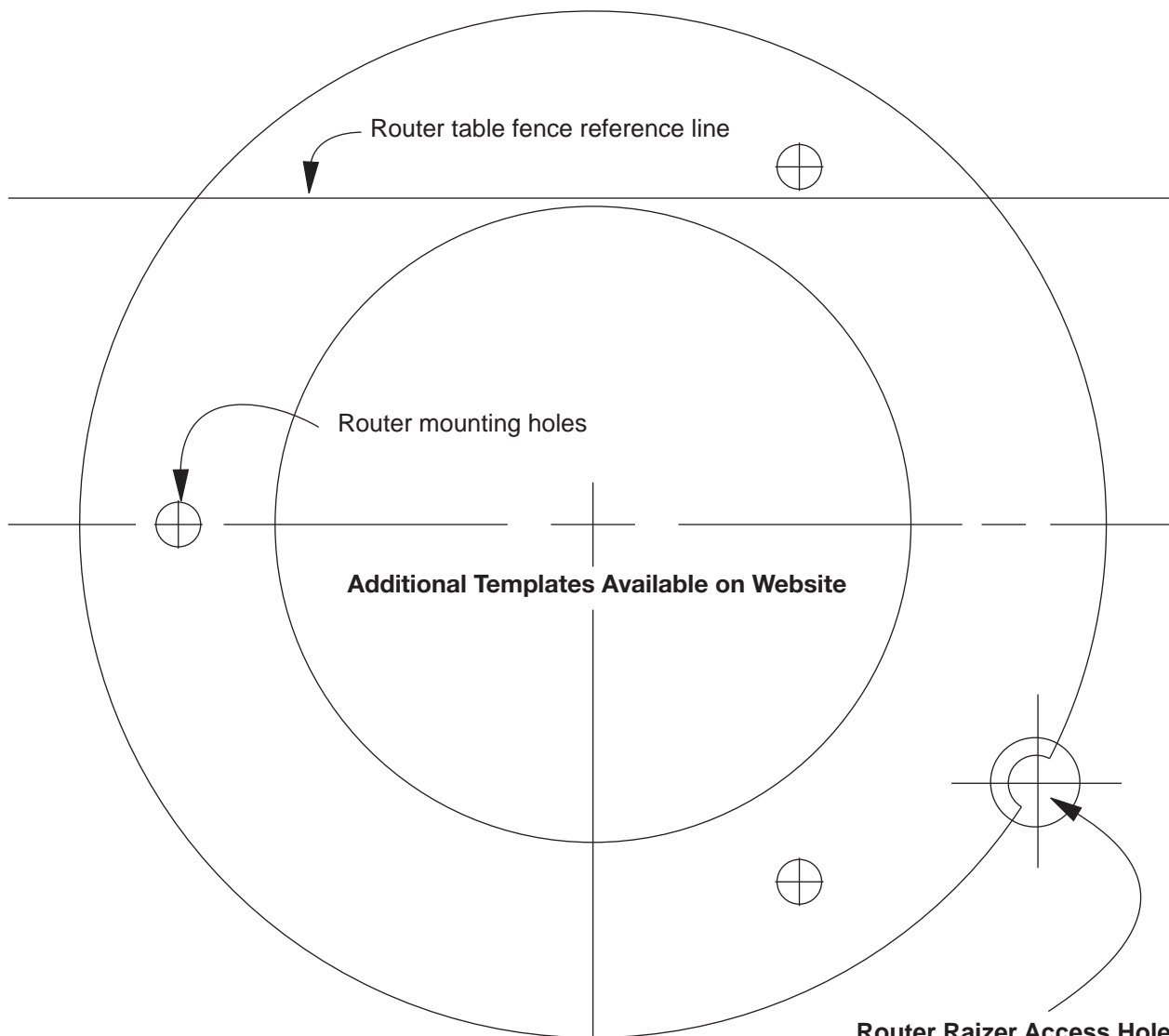
Sub-base Plate or Router Table Insert Plate Installation



- Use #46 locating pin to locate the Router Raizer access hole on the original subbase or router table. For detailed instructions see page 4. Drill a 3/8" access hole at the edge of the original subbase (fig 20).
- See pages 4.5.6. for further instruction, #30 dust cover insert and #31 dust cover, are table insert only. Drill a 1/2" hole through insert plate at the Router Raizer access point and press #30 in from top until flush. # 31 sets in #30 and is removed during adjustments with magnet on back edge of # 29 speed handle. These components keep dust from entering the Router Raizer hex drive.

3. Periodic inspection and re-greasing of #21 lead screw is recommended.

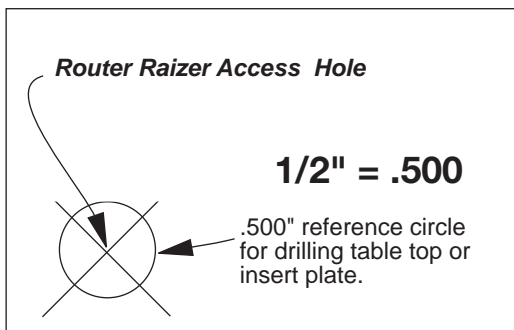
Refer to pages 4,5,6. before using template



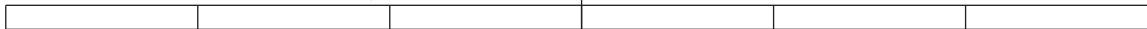
Router Raizer Access Hole

Drill .500" hole through router table insert plate install #30 dust cover insert into .500" hole and press flush with top of insert plate

NOTE: This hole must be drilled 1/2" or .500" for #30 dust cover insert to fit properly.

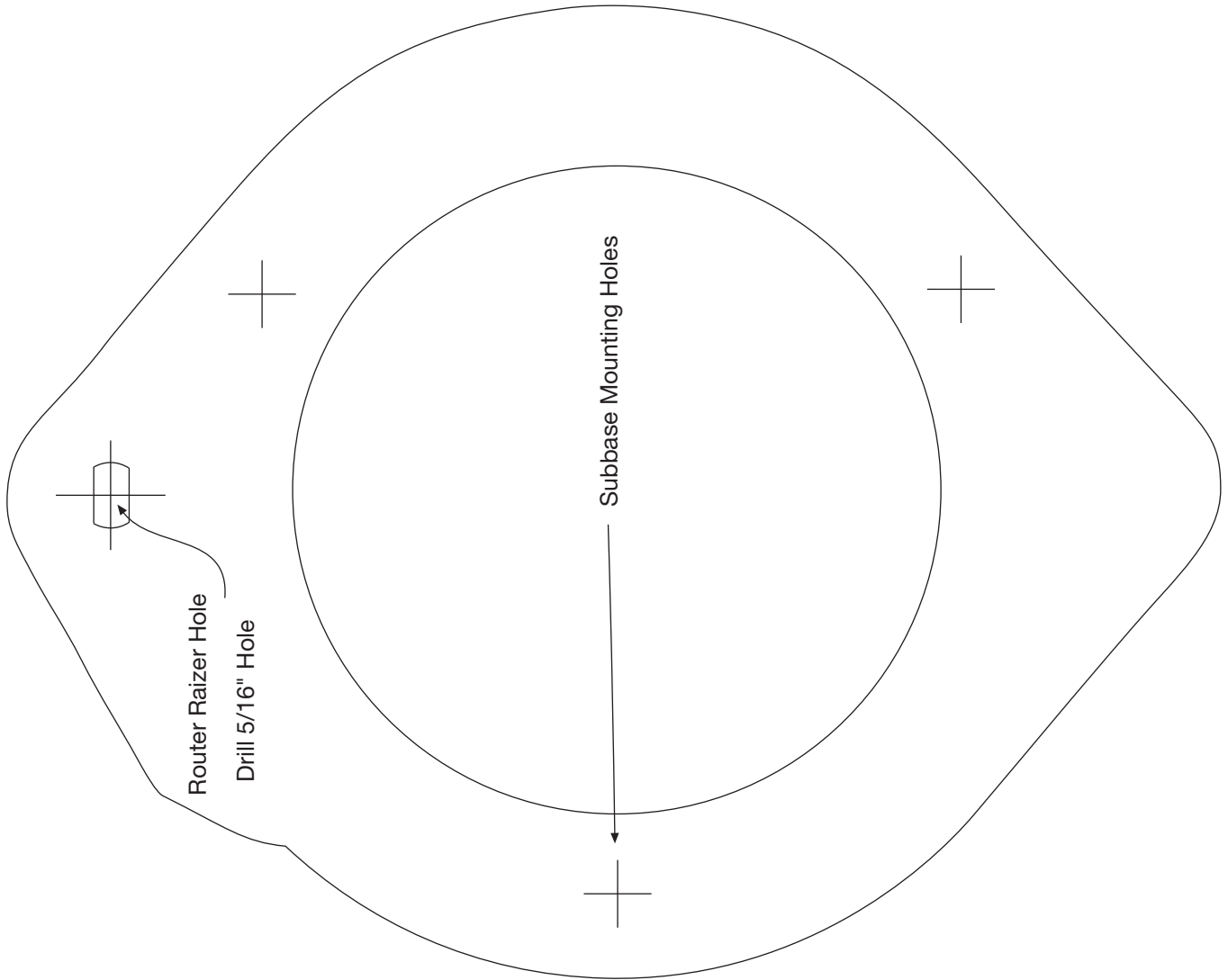


Use this 6" scale to check accuracy when copied



Porter Cable 693

Note: Cross lines for locating and drilling holes are accurate. The illustration of subbase may vary slightly in size and design, but is accurate enough for cutting the rubber spacer if required.



**Porter Cable 6931 type 2 base
Height Rod Template**



Note: Cross lines for locating and drilling holes are accurate. The illustration of subbase may vary slightly in size and design