

router.raiZer

RZ 200
Instructions

Installation Procedures:

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**For Drilling Templates
See Separate Template Instructions**

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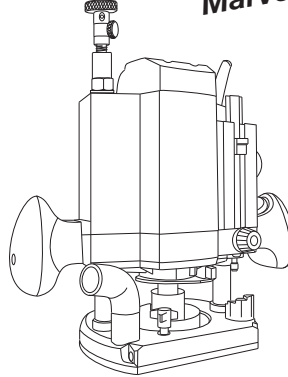
router TECHNOLOGIES INC. phone: 1-866-266-1293
2729 Delaware Ave, Des Moines, IA. 50317 fax: 1-515-265-4061

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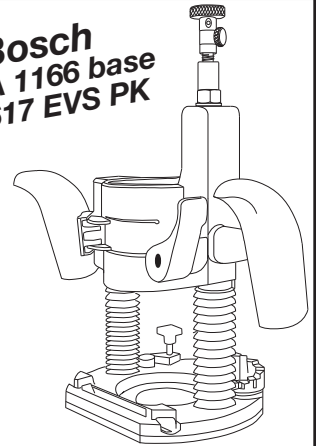
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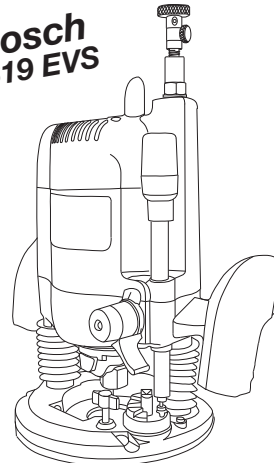
**Axminster
AW 127 R** **MLCS
Marvel 60**



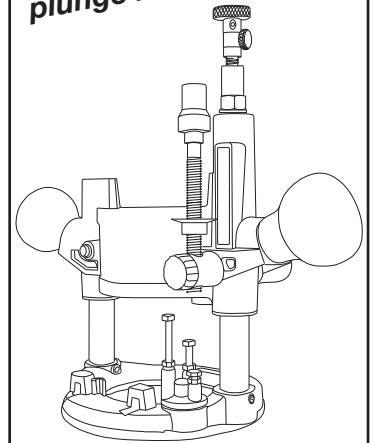
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1617 EVS PK**



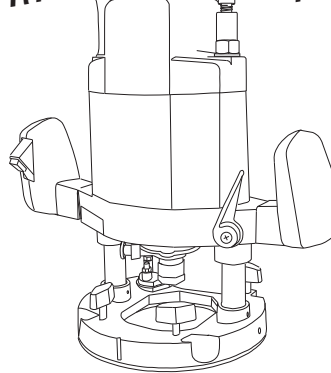
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1619 EVS**



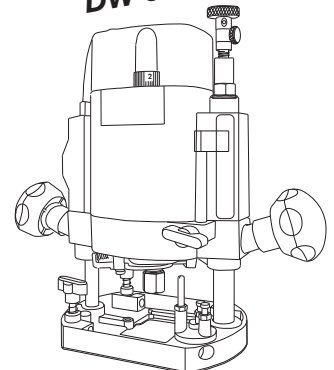
**Makita
RF & RP 1101
plunge base**



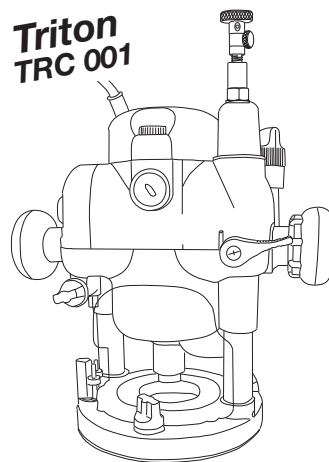
**Fein
RT 1800** **Trend
T9**



**Elu
MOF96(E)** **Trend
T5**
**DeWalt
DW 613**



**Triton
TRC 001**



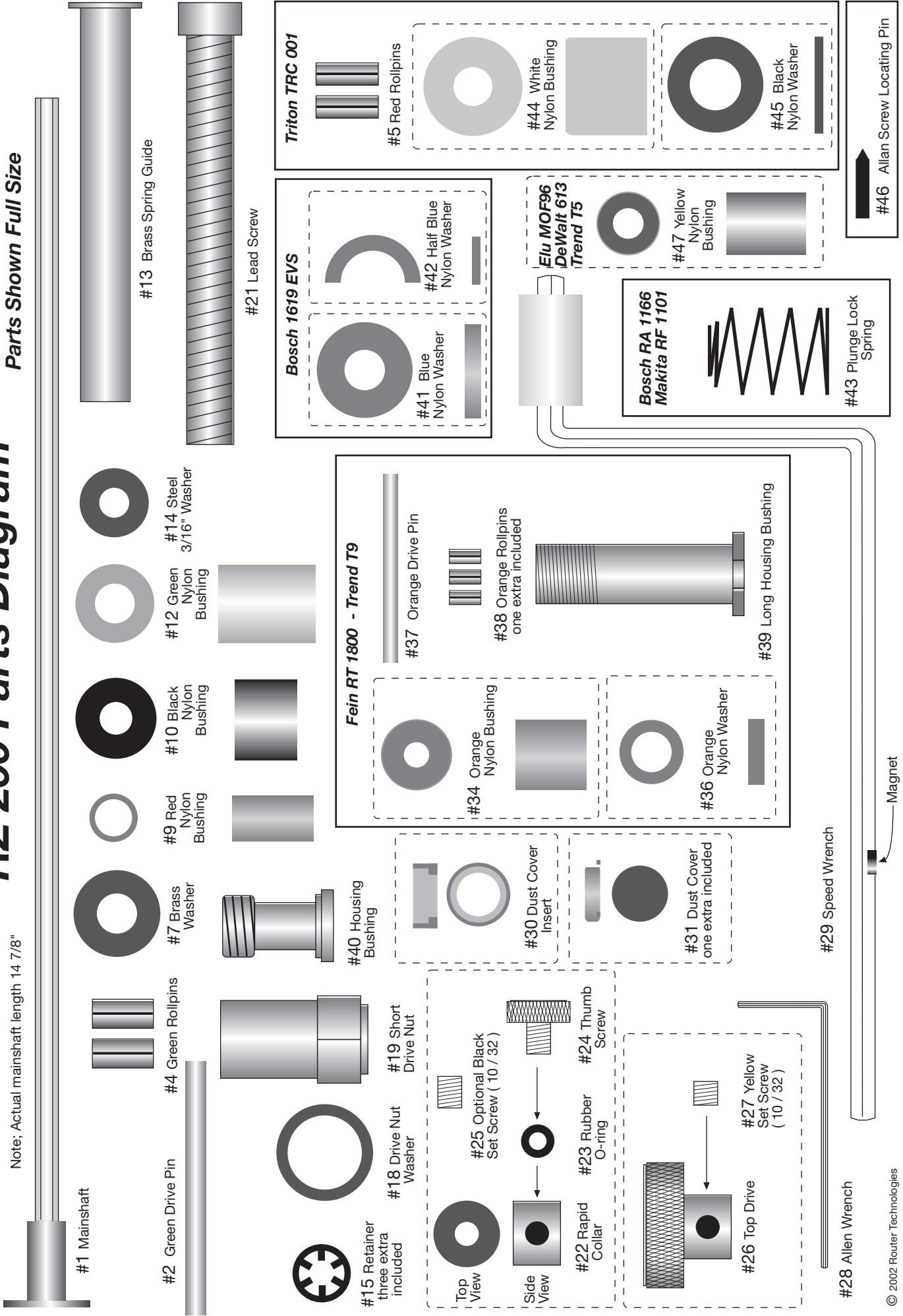
To avoid confusion during installation remove this page and router being installed pages, return others to box.

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.

RZ 200 Parts Diagram

Parts Shown Full Size

Note: Actual mainshaft length 14 7/8"



TOOLS REQUIRED: Phillips screwdriver, straight screwdriver, hammer, 12.8mm or 1/2" and 8mm drill bits.

ROUTER RAIZER PARTS REQUIRED: #1, #7, #9, #10, #12, (#13 for installation tool only,) #14, (three of #15), #18, #19, #21, #22, #23, #24, #26, #27, #28, #29, #40

Note: before installation refer to page 26 lead screw update, check parts.

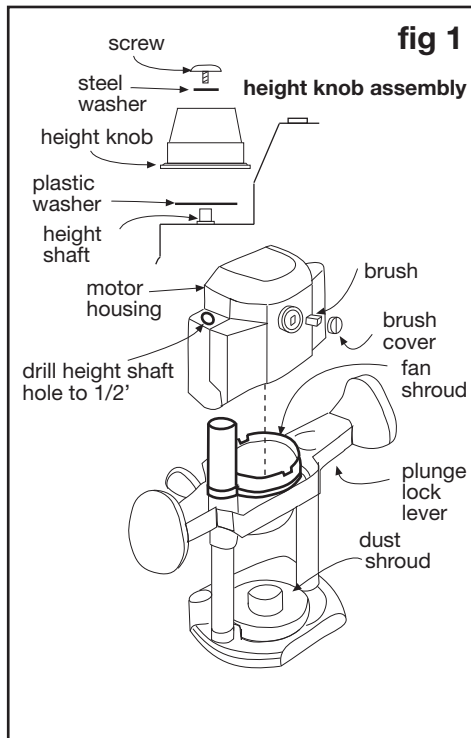


fig 1

NOTE: Cut #1 mainshaft to 13" overall length and lightly debur cut end.

1. Remove height knob assembly (fig 1). Remove both brush covers (fig 1) remove brushes one at a time, labeling the top and side of router removed from on each brush.

2. Remove four screws securing lower motor housing (fig 2). Secure the power switch in the on position by wrapping it with tape or a plastic tie strap, to hold it in position when the router is separated. Separate the upper and lower case halves by pulling them apart. No loose parts will fall out., the armature will remain in the bottom housing.

3. Remove subbase (fig 2). Stand bottom housing upright, Using (fig 3) press down black spring cover and remove C clip. Remove black spring cover, spring, and spring bushing. Using a small screwdriver remove internal C clip (fig 4) **NOTE: unthreading height shaft from internal nut improves C clip removal.** Remove internal nut. The pressed plug and plastic spacer in bottom of post must be removed. Place height rod into post, tap with hammer to remove plug. Store plug, plastic spacer, internal nut & height rod, internal C clip, external C clip washers & height knob.

4. Lay top housing on bench. Drill height shaft hole to 1/2" or 12.8 mm using standard drill bit (fig 1). Select #19 short drive nut #18 drive nut washer #40 housing bushing. Drop #40 housing bushing, threads up onto #1 mainshaft. Using mainshaft as installation tool only, feed mainshaft from bottom into the height shaft hole just drilled (fig 5). Drop the

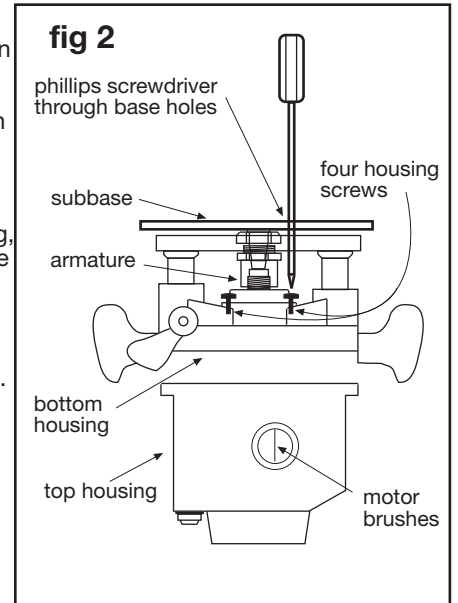


fig 2

#18 washer, then #19 drive nut onto the mainshaft, Thread #19 onto #40 housing bushing. Tighten #19 onto #40 using 11/16 wrench (fig 5). **Tip: If nut will not tighten insert flat blade screwdriver into housing to wedge bushing while tightening the nut.** **Remove mainshaft.**

5. Select #10 black nylon bushing, turn bottom housing upside down, Place plunge post upside down onto block of scrap wood. Drive #10 black bushing into post until flush with bottom of post (fig 5). **NOTE: the black bushing will drive in hard, sanding slight bevel on edge will aid in installing. Do not reduce size of bushing, it must be tight in the post. Use #12 GREEN bushing to drive the black bushing in flush with bottom of the post.** Drill the hole in the black bushing with 8 mm drill bit. #1 mainshaft must spin free when placed into black bushing. Select #1 mainshaft #7 brass washer #9 red bushing #14 3/16 steel washer, one #15 retainer clip #13 hollow spring guide.

6. Place small amount of included red grease onto both sides of #7 brass washer, place washer down #1 mainshaft. Slide mainshaft through #10 black bushing until flush with base. Stand base upright place #9 red bushing first, followed by #14 3/16 steel washer onto #1 mainshaft drop both into the post. Select #13 hollow spring bushing, place #15 retainer clip teeth up onto the top of the mainshaft. Using #13 hollow guide flange up, advance #15 clip down shaft. Place screwdriver or #29 wrench on flange of #13 guide, advance #15 clip into post until tight. #1 Mainshaft should be secure in the base if you can move it back and forth, retighten #15 retainer clip **Remove and store #13 guide.**

7. Place original black spring bushing into top of post, place spring on top of bushing and plastic spring cover over spring. Reassemble housings, aligning mainshaft through the housing bushing. Secure housings with four housing screws.

See other side to finish installation.

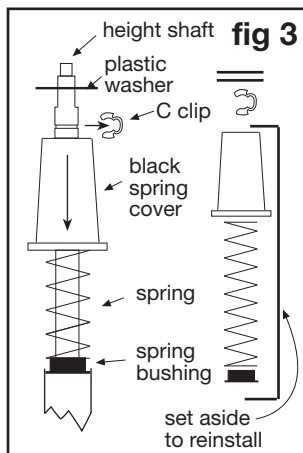


fig 3

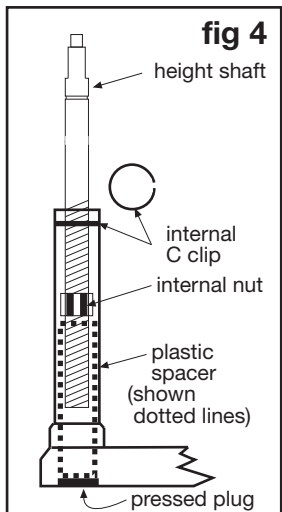


fig 4

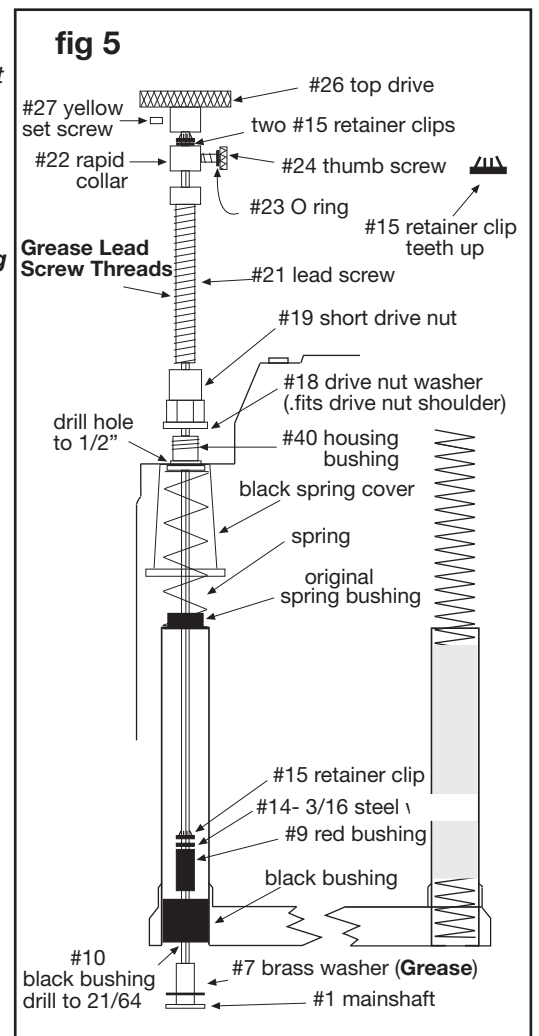
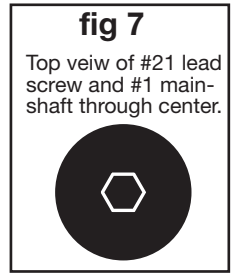


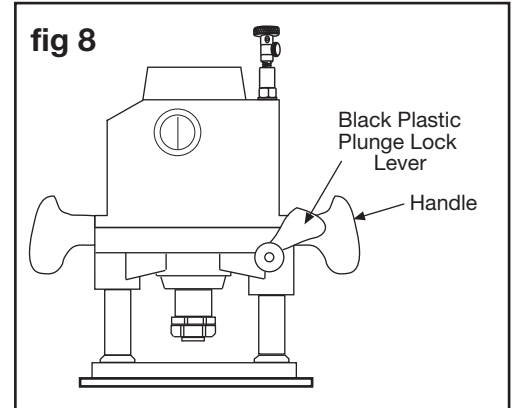
fig 5

8. 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 Allen wrench, red grease. Using (fig 6) 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 7).
Tip: # 29 speed wrench can be used to speed threading.



9. Press #23 O-ring onto #24 thumb screw shaft. Thread thumb screw into #22 rapid collar. Place rapid collar onto #1 mainshaft 1/2" from top of mainshaft to top of rapid collar and tighten (fig 6). 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 as installation tool press retainer into contact with collar,repeat with second #15 retainer and press 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. Reinstall motor brushes

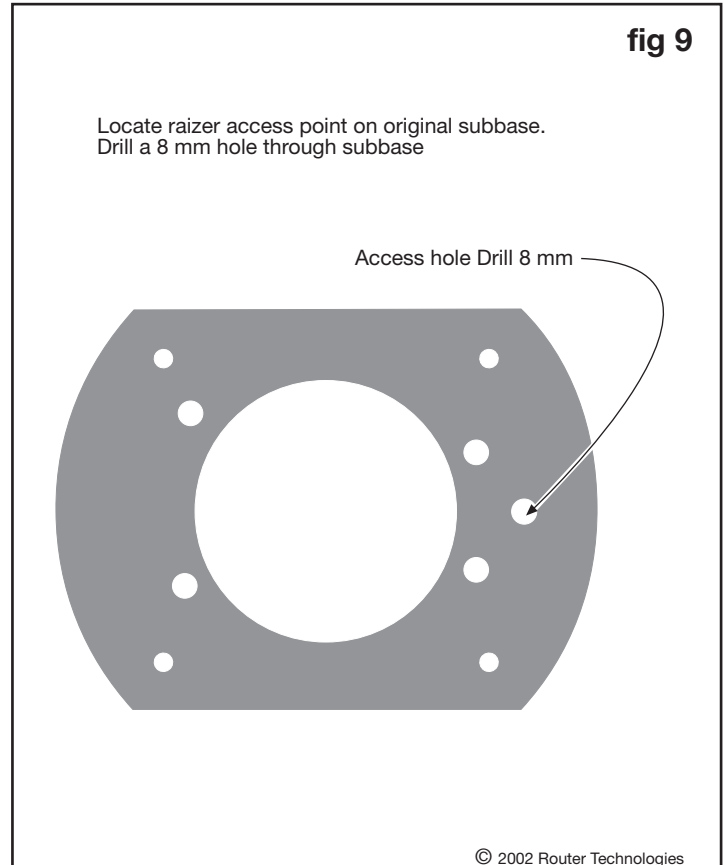
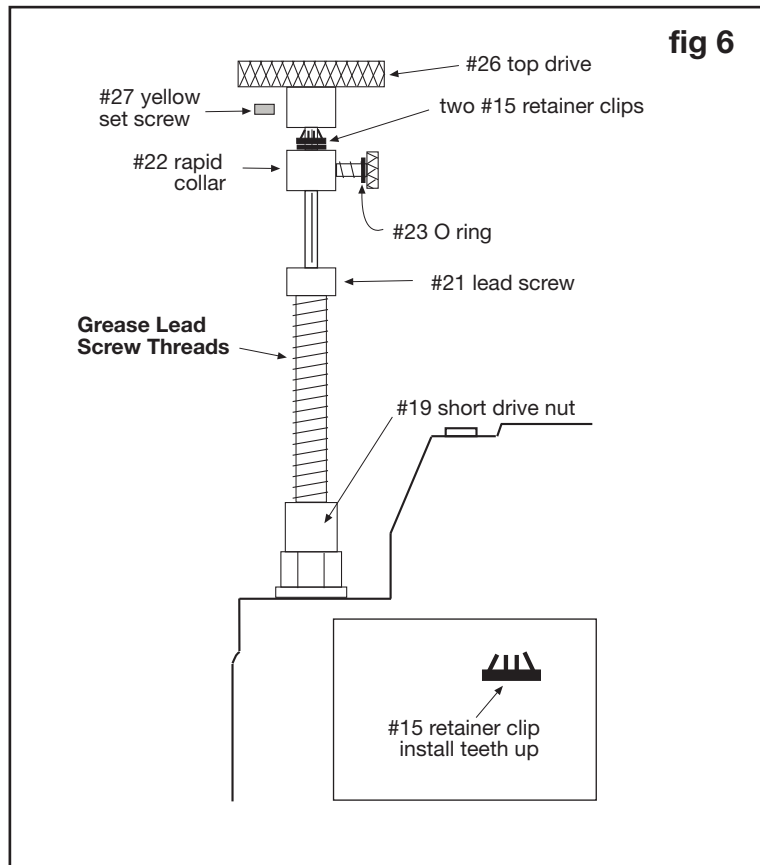
10. To ease router raizer adjustments, using fig (8) slide the small tail of the plunge lock lever spring off the aluminum boss, allowing the handle to remain in the unlocked position.



Sub-base Plate or Router Table Insert Plate Installation

1. Use #46 locating pin to locate the Router Raizer access hole on the original subbase or router table. For detailed instructions see page 18.
2. See pages 19 & 20 for further instruction, #30 dust cover insert and #31 dust cover, are router table only. Drill a 1/2" hole through insert plate at the 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.



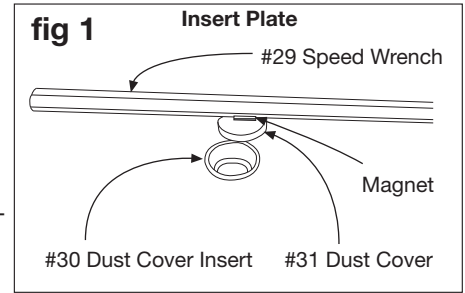
Caution: Always make sure router switch is in the off position, and tool is disconnected from power source when performing maintenance or making any adjustments to either the router or height adjustments to avoid accidental starting of tool which may result in personal injury.

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.

Using Handheld

Caution: #22 rapid collar is for handheld operations only. For router table operation, lock #22 rapid collar in contact with #15 retainers.

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.

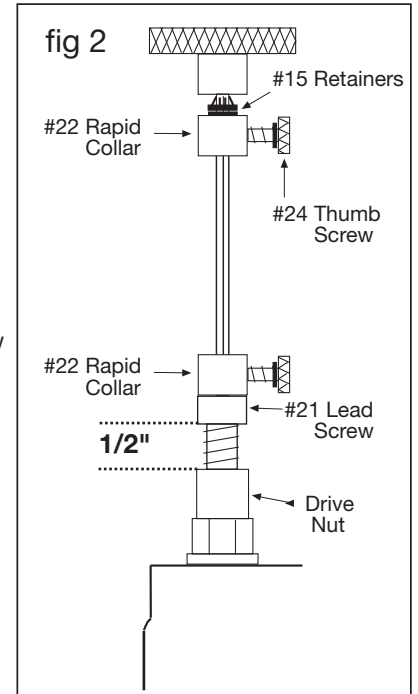
When used hand-held the hex shaped #1 mainshaft provides a constant engagement of the Router Raizer mechanism, allowing easy height adjustments while retaining original plunge capabilities and all other original functions of the router.

- 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.** Using (fig 2) Adjust #21 lead screw, leaving approximately 1/2" exposed threads. Plunge router by hand 1/8" past desired height, and secure plunge lock.
- 2.** Release rapid collar from position shown grey and slide down shaft to position shown black and lock in place.
- 3.** Release plunge lock. Using speed wrench or top knob decrease depth of cut to desired position and engage plunge lock.
- 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.

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



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 :

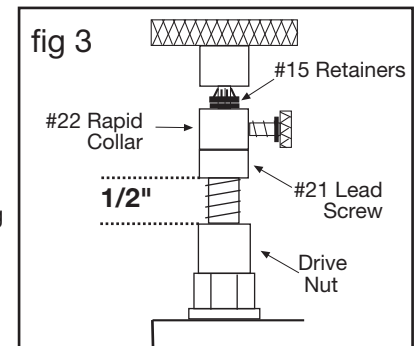
Clockwise rotation **Increases** depth of cut. Counterclockwise rotation **Decreases** depth of cut.

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

Using (fig 3) 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.



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. The Router Raizer can be removed from any router and reinstalled into another.

Responsibility of the Owner

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.

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

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.

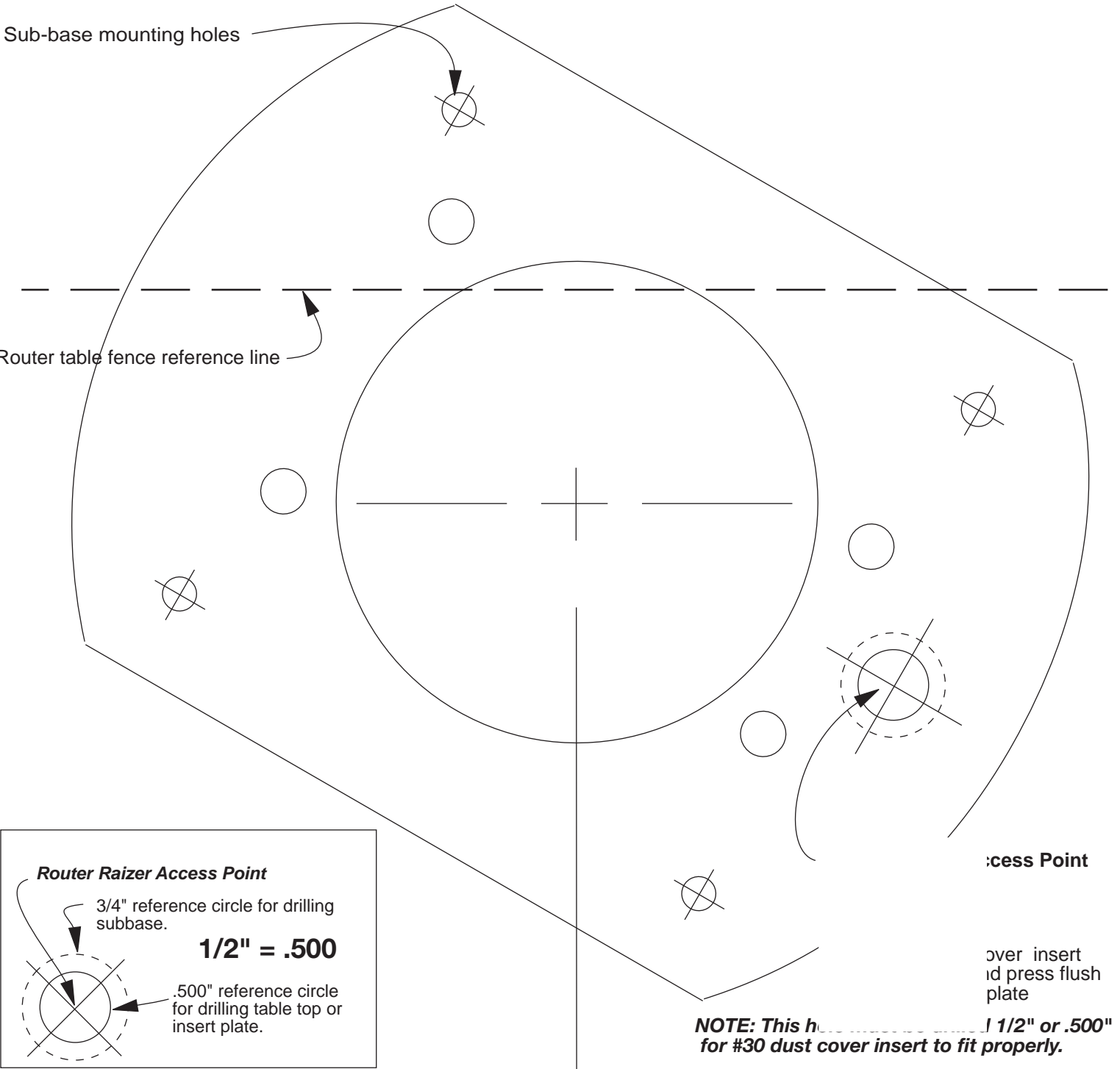
Warning: Never remove or reinstall #31 dust cover or make any depth of cut adjustments from either end of #1 mainshaft until router power switch is off, cutting tool has completely stopped rotating and tool is disconnected from power source.

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.



Router Raizer Access Point

3/4" reference circle for drilling subbase.

1/2" = .500

.500" reference circle for drilling table top or insert plate.

**AXMINSTER AW127R
MLCS Marvel 60**

Use this 6" scale to check accuracy when copied



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 gasket if required.

Access Hole Locating Pin

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

NOTE. Read Router Raizer template instructions before using locating pin

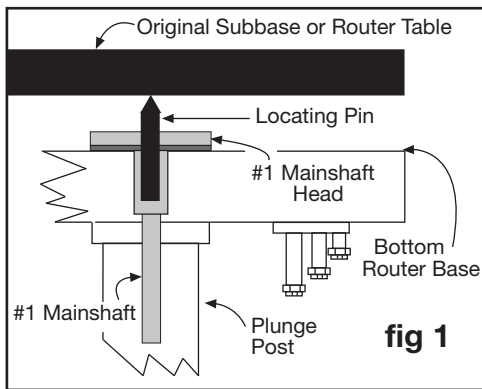
Locating Hole in Original Subbase

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.



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"

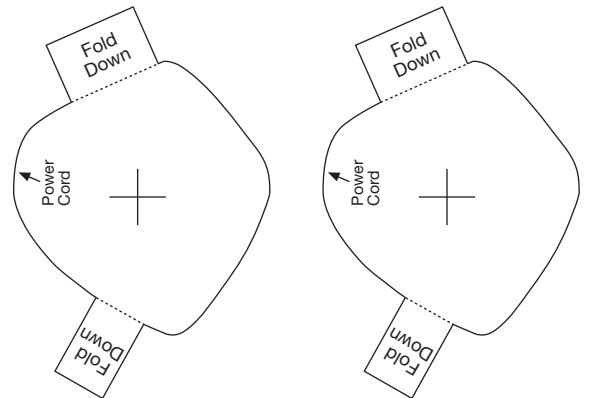
1/2" = 0.500" — — - 12.8mm = 0.503 or 13mm = 0.511

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"

Duplicate templates for Bosch 1619 EVS

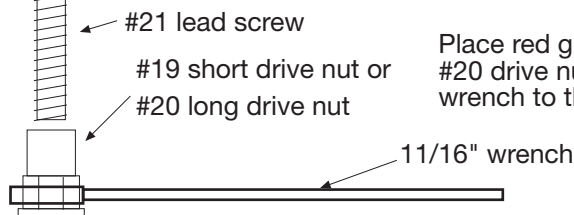


#29 Speed Wrench

21 Lead Screw Update

#21 lead screw, #19 short drive nut, #20 long drive nut are hardened parts. You may experience resistance when threading #21 lead screw into #19 short drive nut, or #20 long drive nut. This resistance is only the first 1/4" of the # 21 lead screw and once threaded in will not affect the Router Raizers performance. If you encounter this problem follow instructions below.

Caution: As these parts are hardened **Do Not Attempt To Retap These Threads With A Tap Or Die**



Place red grease onto threads of #21 lead screw. Place a 11/16" wrench on the #19 or #20 drive nut. Insert # 29 speed wrench into top of #21 lead screw. Use the speed wrench to thread #21 lead screw into drive nut until resistance is no longer felt.

Any further problems please call for assistance
1-866-266-1293

Templates

Individual templates are provided for locating router base, bolt patterns and the Router Raizer access hole. The templates locate holes on both the original subbase, and router table insert plates. **Caution:** *Photocopying templates may result in reference marks not reproducing accurately. Place photocopy on original and hold up to window to view accuracy of registration.*

Duplicating Templates

Additional templates available free off website www.routertechnologies.com (If website access is unavailable follow step below)

Duplicating the template allows original to be used multiple times. Place original template on a blank sheet of paper. lay both on a carpet floor. Place one straight pin through center crosslines, use second straight pin to pierce through remaining crosslines. Remove original and circle pin holes to be used.

Using Template

1. When using either the original or duplicate template, always double check before drilling. **If Template is used upside down, the Router Raizer access hole will be on the wrong side!**
2. To avoid placing the Router Raizer access hole under the fence, all templates have a router table fence reference line. When aligned to the back edge of the router table insert plate, or fence the router is offset placing the Router Raizer access hole in front of the fence.
3. To center template on a router table insert plate, align the center cross lines on the template to the center hole in the insert plate. **Measure the center hole in the router table top or insert plate. Center an inexpensive compass on the center crosshairs and transfer the circle to both sides of the template.** Tape the template to the insert. Make sure template is on correctly (see step above) drill holes.

Mounting original Subbase or Router Table Insert Plate

Due to variations in mounting subbase or table insert plate, please read instructions below and back of page before drilling any holes.

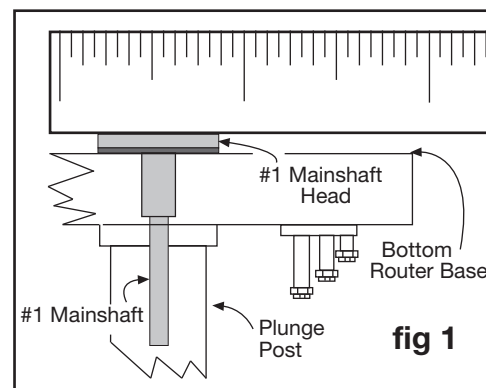
1. **Drilling Original Subbase.** Using (fig 2) align template mounting holes with the subbase holes. Mark the Router Raizer access point onto the subbase. Before drilling, place subbase on router base, check the Raizer access point is over the mainshaft head. When marked properly drill a 3/4" access hole through the subbase and install onto router.

Caution: The 3/4" Hole is Through the Original Subbase Only.

Never Drill a 3/4" Hole in Any Router Table Insert Plate or Router Table Top.

On some routers the #1 mainshaft head may not be flush with the bottom of the router base. Shown fig 1.

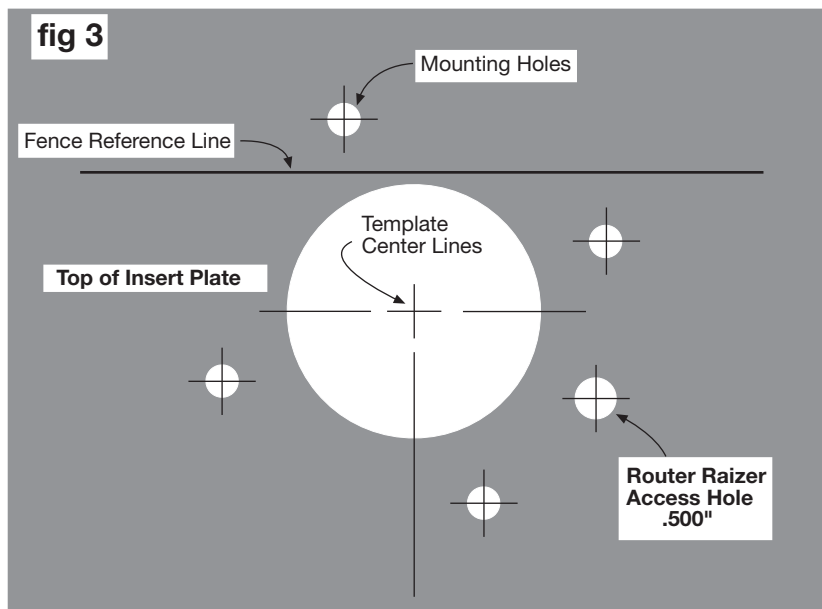
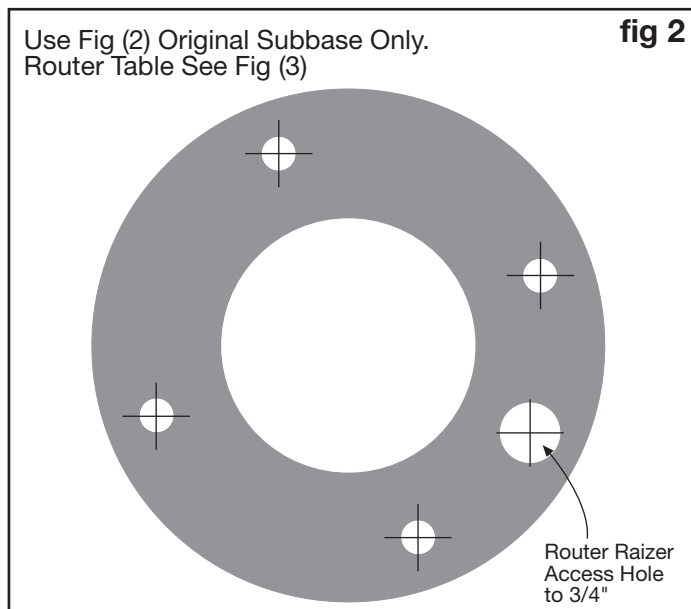
To determine if mainshaft head is flush, sight, or lay a straight edge over the #1 mainshaft head. Shown fig 1. If head is below flush or flush with the base, proceed to step two below. If head is above the base proceed to back of page.



Caution: Before drilling router table. Positioning template, place router under insert or table top and check Router Raizer access point, all hole locations, and possible router clearance problems.

2. **Drilling Top of Router Table Insert Plate.** Using (fig 3) Align template fence reference line with back edge of insert plate or fence. Place the template lettering up onto the insert or table top. Make sure router handles and controls are accessible and clear any obstacles. The template may be rotated to any position required, we recommend placing the Router Raizer access hole in front of the fence. When the template is positioned properly, center it to the insert hole by placing a compass on the template center cross lines. Rotate and size the compass until centered in insert hole. Center punch holes onto insert plate. recheck hole locations before drilling. Drill Router Raizer access hole .500" through insert. Drill mounting holes same as original subbase. See back of page for installing #30 dust cover insert and #31 dust cover into .500" Router Raizer access hole.

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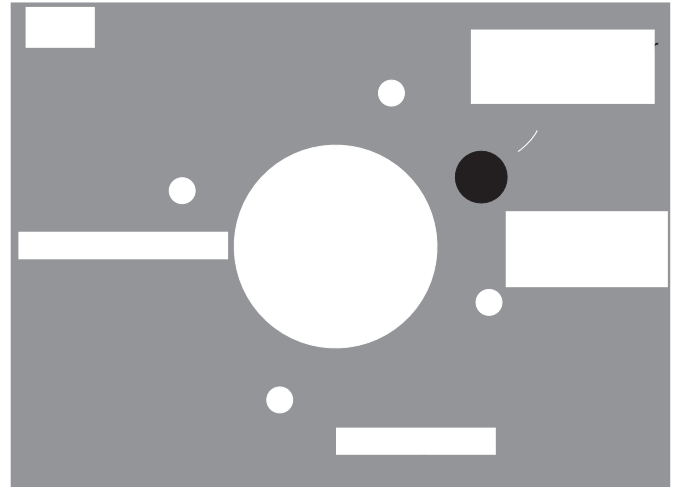
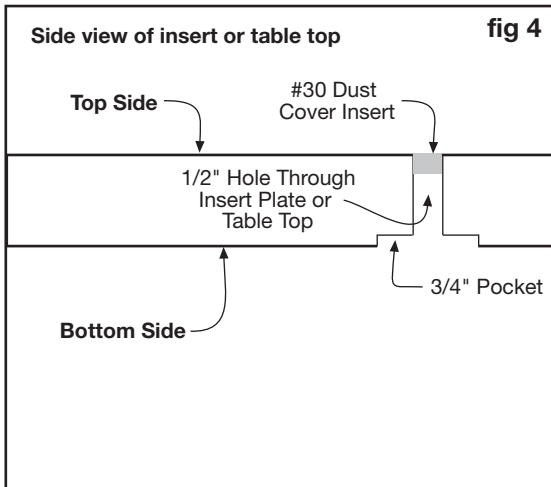


If mainshaft head is not flush with the base, use step below or rubber spacer gasket for mounting to table insert or router table top.

Drilling Pocket in Back of Router Table Insert Plate. Boring a pocket on the backside of the table insert or router table top provides clearance for the mainshaft head to rotate. **Caution:** Do not drill pocket over 3/32" deep. **Note:** The pocket requires a 3/8" or thicker insert plate. If insert plate is thinner than 3/8" or steel, use the 8" X 8" rubber spacer gasket. See instructions below.

1. With template properly located on insert or table top, center punch on crosshairs all router mounting holes and the Router Raizer access. Using a 1/8" drill bit, drill the Router Raizer access hole through the insert or table top. Turn insert or table top over (fig 5) locate the 1/8" raizer access hole. Center a 3/4" spade or forsnor bit on the 1/8" hole and drill a pocket deep enough for the #1 mainshaft head to turn freely. Turn insert or table top over. Center a .500" drill bit on the 1/8" hole and drill completely through into the 3/4" pocket. Finish by drilling and countersinking remaining holes, and installing the dust cover insert. **See below for instructions.**

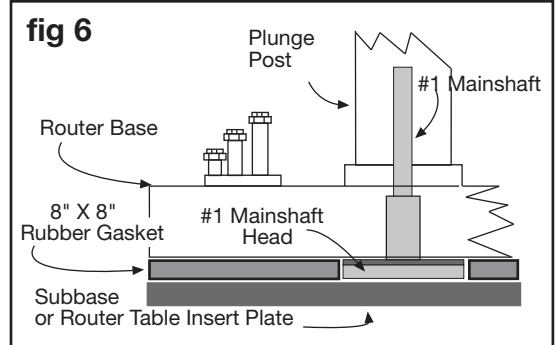
Caution: Do not drill pocket over 3/32" deep. #30 dust cover insert must be installed into top of .500" Raizer access hole. **See installing dust cover insert below.**



Using the 8" X 8" Rubber Gasket

The 8" X 8" rubber gasket is provided for spacing #1 mainshaft head.

1. The easiest way to prepare the gasket is to first drill the Router Raizer access hole through the **original subbase**. Place the rubber gasket on a scrap piece of wood. Align the pre-punched 3/4" gasket hole and the Raizer access hole in subbase. Using ink pen, transfer mounting hole locations to the gasket. Using a utility knife or razor blade, hold the subbase in position while cutting around inside and outside of the subbase. Remove subbase and cut mounting holes. Using (fig 6) place the gasket between the router base and subbase or insert. **Tip:** mounting holes can be cut as square holes. If original subbase is unavailable the template may be used to cut the gasket.



Installing the Dust Cover Insert

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 .500" 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 7 & 8) 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.**

