

ROUTER LIFT Model # 9581

Thank you for choosing this product from MLCS by Big Horn. We appreciate your support and are confident that this product will serve you well. Designed for long-lasting, reliable performance, it will deliver many years of service when used as intended and properly maintained.

This user manual provides guidance for assembly and general operation. It is not intended to teach woodworking. We assume you have basic skills and experience in working safely with power tools. If, after reviewing these instructions, you are unsure about any procedure or safe operation practice, please consult additional woodworking resources or training materials.

IMPORTANT!

Read and understand this entire manual before assembling or operating this product.

IMPORTANT SAFETY PRECAUTIONS

- Before operating any router, read and understand all safety instructions provided in the router manufacturer's owner's manual.
- If you do not have the manual, contact the manufacturer to obtain one before using any power tool.
- Always wear eye protection compliant with ANSI safety standards when operating power tools.
- Use proper guards and safety devices whenever operating power tools and machinery.
- Inspect router bits before each use. Do not use them if damage or defects are suspected.
- Do not exceed the recommended RPM for any router bit.
- Do not wear loose clothing or jewelry that may get caught in tools or equipment. Unplug the tool or machine before performing adjustments or maintenance.

WARNING!

DO NOT USE A CORDLESS DRILL TO RAISE OR LOWER THE LIFT CARRIAGE. EXCESSIVE FRICTION MAY CAUSE PREMATURE THREAD WEAR AND WILL VOID THE WARRANTY.

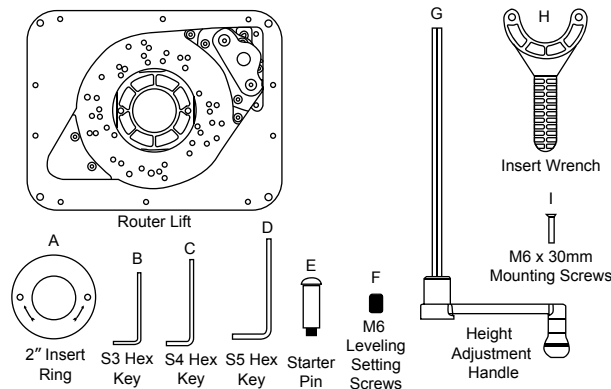
OPERATING INSTRUCTION MANUAL



As part of our Continuous Product Improvement Policy, products continue to evolve in both design and function. As a result, the product you receive may differ slightly from images or descriptions found in catalogs, online listings, or retail displays. We reserve the right to make beneficial changes at any time.

CONTENTS:

1-	Router Lift	1 Pcs
A-	2" insert Ring	1 Pcs
B-	S3 Hex Key	1 Pcs
C-	S4 Hex Key	1 Pcs
D-	S5 Hex Key	1 Pcs
E-	Starter Pin	1 pcs
F-	M6 Leveling Setting Screws	10 pcs
G-	Height Adjustment Handle	1 pcs
H-	Insert Wrench	1 pcs
I-	M6 x 30mm Mounting Screws	2 Pcs



SUGGESTED ROUTER BIT SPEEDS

Bit Diameter	Max Speed
1" (25mm)	24,000 RPM
1-1/4" - 2" (30-50mm)	18,000 RPM
2-1/4" - 2-1/2" (55-65mm)	16,000 RPM
3" - 3-1/2" (75-90mm)	12,000 RPM

ROUTER SAFETY PRECAUTIONS

- Never force the bit or overload the router beyond the expectations of the tool.
- Be sure that at least 3/4 of the shank length is inserted securely in the router collet.
- Never bottom out the bit in the collet. Allow 1/8" clearance between shank and bottom of collet.
- Always make sure the fence on your router table is locked into position before each use.
- Use reduced RPM speeds for large diameter bits.
- Always rout in two or more passes when large amounts of stock must be removed.

INSTALLING THE ROUTER - REFER TO INDIVIDUAL ROUTER ADJUSTMENTS ON PAGES 3 & 4 BEFORE BEGINNING

Your MLCS Router Lift comes predrilled to accommodate many router models. The first step is to remove the carriage plate from the lift.

Insert the crank handle into the hex opening in the lift's dial on the top plate. Lower the lift carriage approximately 1 inch from the top plate. This clearance is necessary to remove the carriage plate from the MLCS Router Lift (Figure 1).

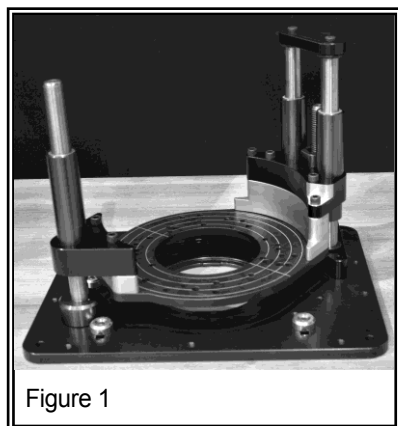


Figure 1

STEPS

1. Remove the five (5) 1-1/2" cap screws and one (1) 1" cap screw from the carriage brackets (Figures 2 and 3).

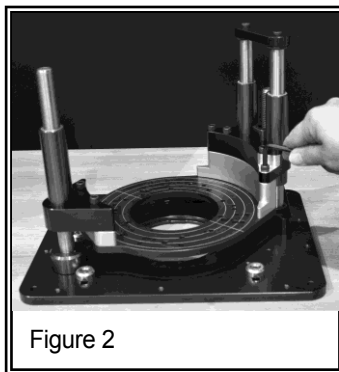


Figure 2

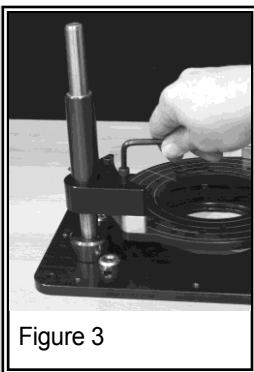


Figure 3

2. Remove the carriage plate from the lift.
3. Turn the carriage plate over and locate your router using the diagram on the top of the plate. Refer to Figure 4 and

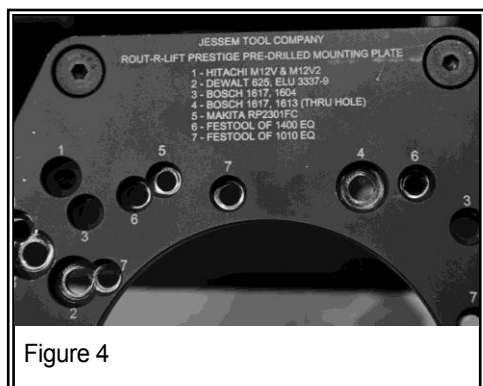


Figure 4

ROUTER LEGENT

Router	Hole Pattern
Hitachi M12V & M12V2	1
DeWalt 625, ELU 3337-9	2
Bosch 1617, 1604	3
Bosch 1617, 1613 (Thru Hole)	4
Makita RP2301FC	5
Festool OF 1400 EQ	6
Festool OF 1010 EQ	7

Table 1

4. With the router in an upright position, place the carriage plate onto the router base. Align the hole pattern on your router base with the corresponding number on the carriage plate (applicable if your router is one of the noted compatible models). Be mindful of the router's handle orientation - ensure the handles align approximately with the two engraved lines on the carriage plate (the side featuring the engraved circles).
5. Once properly aligned, use the provided screws to securely fasten the MLCS Router Lift carriage to your router. (See Figure 5.)

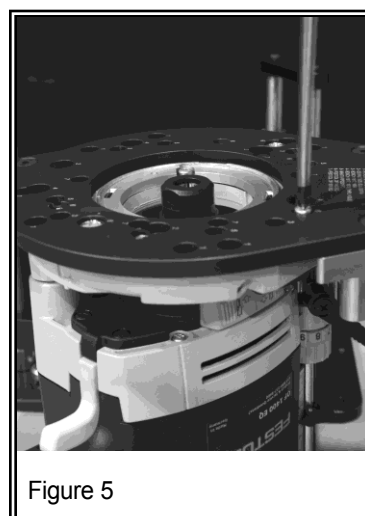


Figure 5

6. Slide the carriage assembly back onto the lift.
7. Reinstall the two 1/4"-20 x 1-1/2" cap screws you removed in Step 1, securing them into the left carriage bracket. (See Figure 6.)



Figure 6

8. Pull upward on the router until it contacts the right carriage bracket. Secure it in place using three (3) 1-1/2" cap screws and one (1) 1" cap screw. (See Figure 7.)

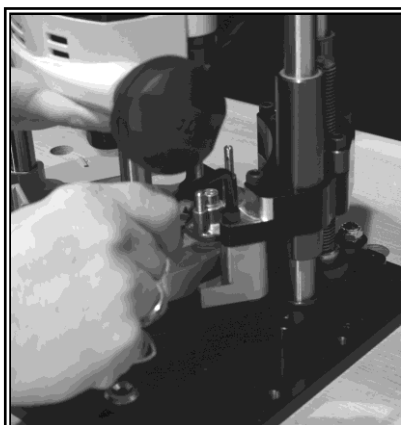


Figure 7

9. With the router and carriage firmly attached to the lift, use the adjustment handle to raise the carriage fully until it reaches the top plate.
10. Engage the router's plunge mechanism by pushing the router completely downward and locking it in this position.



Figure 8

Your MLCS Router Lift is now ready to be installed into your tabletop.

Because each router model has unique characteristics, individual adjustments or modifications may be required to ensure proper compatibility with the MLCS Router Lift.

After reviewing and understanding any special instructions applicable to your router model, proceed with Steps 1 through 9.

MOUNTING A DEWALT 625

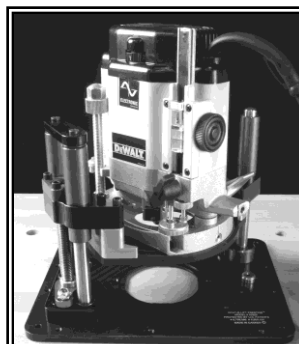


Figure 9

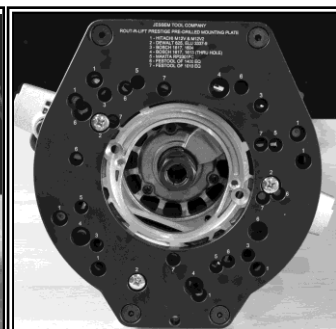


Figure 10

Special Instructions:

Remove both handles from the router before mounting.

Mounting Screws:

Three (3) M6 × 15 mm screws (included)

MOUNTING THE BOSCH 1613 EVS

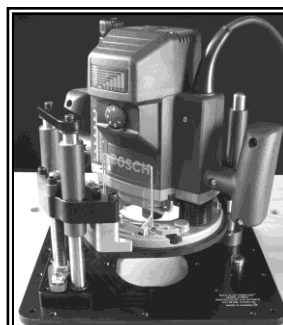


Figure 11

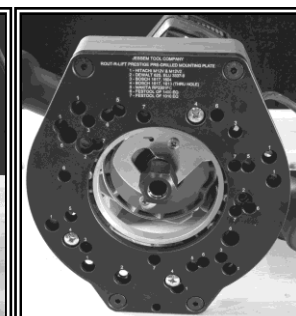


Figure 12

Special Instructions:

The depth stop knob and bar must be removed prior to mounting.

Mounting Screws:

Three (3) M6 × 25 mm screws (included)

Three (3) M6 hex nuts (included)

BOSCH 1617 EVS – PLUNGE BASE

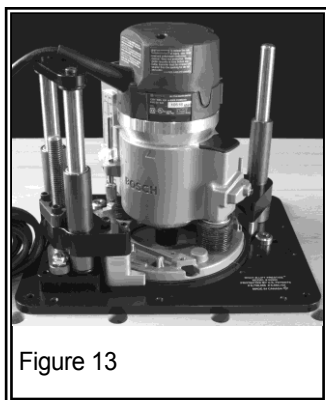


Figure 13

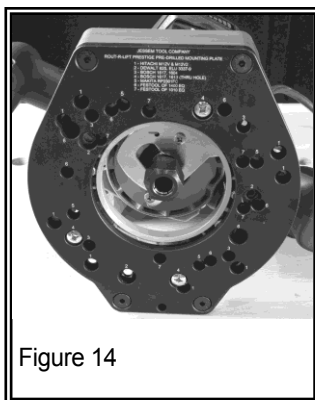


Figure 14

Special Instructions:

Remove the handles prior to installation. The depth stop knob and bar must also be removed.

Mounting Screws:

Three (3) 8 mm × 25 mm screws (included)
Three (3) 6 mm hex nuts (included)

BOSCH 1617 EVS – FIXED BASE

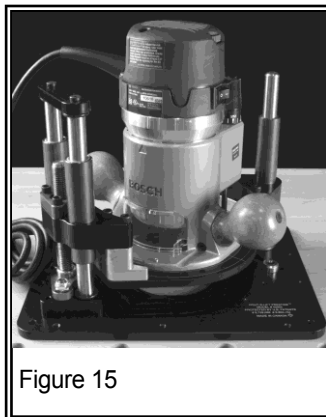


Figure 15



Figure 16

Special Instructions:

No special preparation is required for this router.

Mounting Screws:

Four (4) 4 mm × 10 mm screws (included)

MAKITA RP2301FC



Figure 17

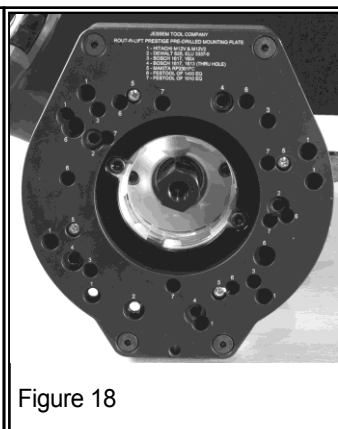


Figure 18

Special Instructions:

Remove the handle that does not contain the switch. Keep the sub-base attached when mounting the unit to the carriage.

Mounting Screws:

Use four (4) 4mm x 16mm screws.

HITACHI M12V & M12V2



Figure 19

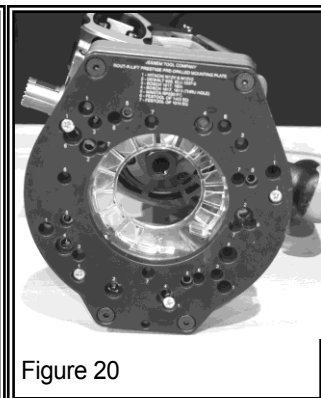


Figure 20

Special Instructions:

Remove the turret stop adjustment knob.
Remove the handle without speed adjustment.
Lower the lift carriage before installing or removing the router from the table top.

Mounting Screws:

Four (4) 5mm x 10mm screws (included).

FESTOOL OF 1400

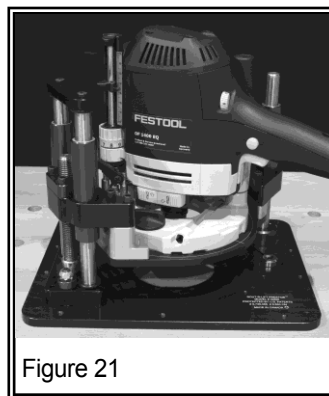


Figure 21

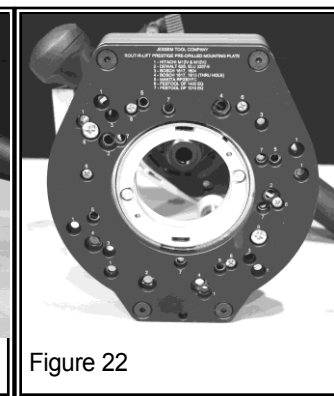


Figure 22

Special Instructions:

No special instructions required.

Mounting Screws:

Two (2) 6mm x 14mm screws (included)
Five (5) 4mm x 8mm screws (included)

FESTOOL OF 1010



Figure 23

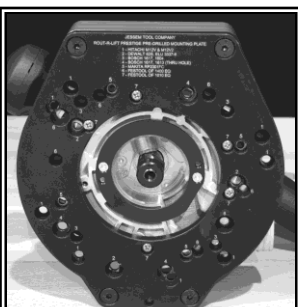


Figure 24

Special Instructions:

There are no special instructions required for this router.

Mounting Screws:

Four (4) 4 mm x 8 mm screws are included.

The MLCS Router Lift is manufactured to exacting tolerances. After installing your router, if you find that the lift is not operating as smoothly as expected, perform the following adjustment:

Raise the lift carriage - with the router installed - to a position close to the top plate.

Loosen the five 1/4-20 low head socket screws that secure the spindle assembly and guide shaft by one quarter turn.

Retighten the screws.

This procedure helps the shafts self-align with the carriage after installation, ensuring smooth, resistance-free movement of the carriage throughout its travel.

Installing a MLCS Router Lift in a Custom Router Table Application

A MLCS Router Lift installs similarly to a standard router mounting plate. Your table top must include a machined port to accept the plate. MLCS provides solid phenolic router table tops that are pre-machined for all MLCS router lifts. If you are installing this lift in a custom table, you will need to machine the opening yourself. MLCS also offers a separate template to assist with this process.

Leveling the Lift in the Table Top

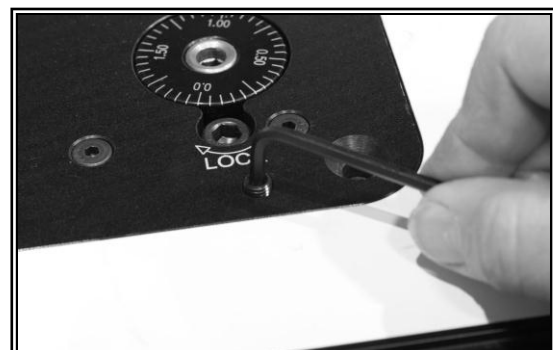


Figure 25

With the MLCS Router Lift positioned in the table top opening, install ten (10) set screws into the holes located around the perimeter of the lift plate. Adjust the four corner screws first (Figure 25), raising the plate until it sits flush with the table surface. Then adjust the remaining perimeter screws as needed to provide additional support.

Adjusting the Fit in the Table Port

Your MLCS Router Lift is equipped with adjustable snigger buttons that allow you to fine-tune the fit of the lift in the table top opening, eliminating any lateral movement. Use a 1/8" hex key to loosen the set screws on each snigger button. Slide the button outward to make contact with the table opening, then check the fit. Adjust further if needed (Figure 26).

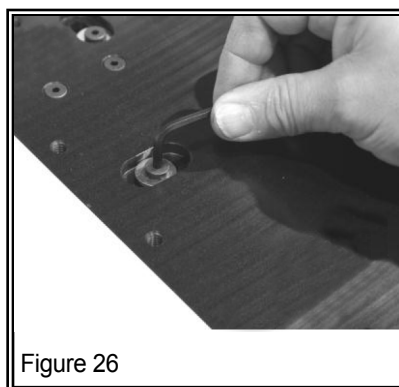


Figure 26

Tab-Loc Phenolic Insert Rings

Your MLCS Router Lift is supplied with one 2" insert ring featuring a pre-drilled center hole. Additional insert ring sets are available with various pre-drilled diameters and/or undrilled centers for custom hole sizing.

To install an insert ring:

1. Position the insert ring over the center opening on the lift's top plate (Figure 27).
2. Using the insert wrench provided, insert the prongs into the matching holes on the ring and turn the wrench counterclockwise to lock the ring into place.

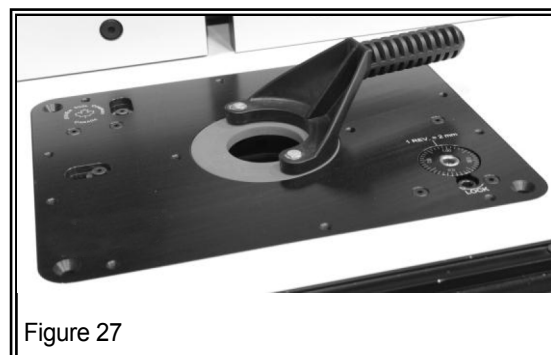


Figure 27

To remove an insert ring, turn the insert wrench clockwise. If an insert ring becomes too tight for removal by hand, tap the wrench lightly with a block of wood to loosen it.

Using Your MLCS Router Lift

To raise the router, rotate the height-adjustment handle clockwise. To lower it, rotate the handle counterclockwise. Note that one full revolution of the handle results in approximately 1/16" of vertical movement. Once your adjustment is complete, remove the handle and place it safely away from the work surface.

Using the Friction Lock on Your MLCS Router Lift

The MLCS Router Lift features a friction lock that allows you to secure the lift in a fixed position for extended routing operations. This provides stability and ensures your height setting remains unchanged.

To lock the lift, turn the lift handle clockwise (Figure 28).

To unlock the lift, turn the handle counterclockwise (Figure 29).

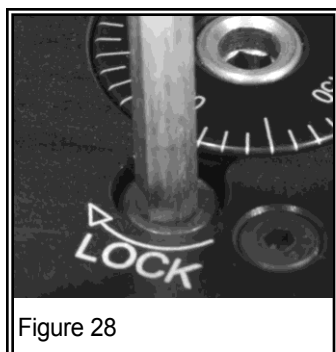


Figure 28

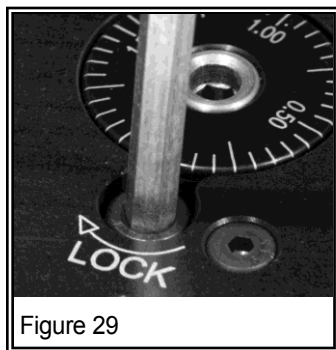


Figure 29

Re-Adjusting the Thread Tension

MLCS Router Lifts utilize a patented thread-tensioning system. Each lift is factory-set, but depending on usage and load, periodic readjustment may be required to maintain optimal performance. If you notice the bit height drifting during operation, the thread tension likely needs to be reset.

To adjust thread tension:

1. Turn the lift upside down on a stable surface with the threaded height-adjustment rod facing you.
2. Remove the four 1/4" x 1" cap screws from the carriage nut cover (Figure 30), then remove the cover and O-ring.

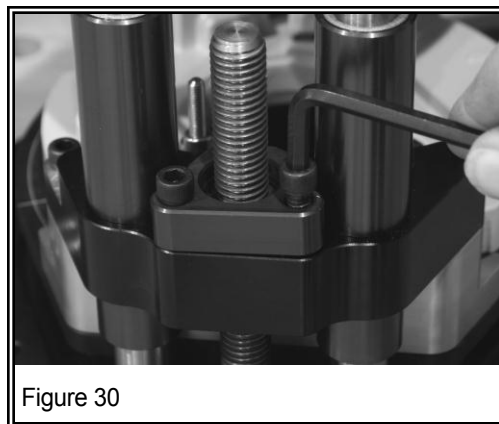


Figure 30

3. Slide the carriage fully upward toward the top plate to expose the carriage nut, O-ring, and antibacklash nut.
4. Thread the carriage nut and antibacklash nut further up the threaded rod to improve access.

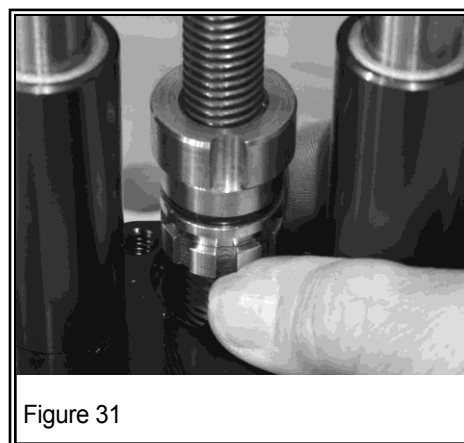


Figure 31

5. Rotate the carriage nut clockwise while applying light pressure to the O-ring. Ensure that when the adjustment is complete, the slot in the carriage nut aligns with a slot in the antibacklash nut (Figure 31).
6. Slide the carriage back down, making sure the nib on the carriage engages with the slot in the carriage nut (Figure 32).



Figure 32

7. Reinstall the O-ring and carriage nut cap, then securely fasten the carriage nut cap using the screws removed in Step 2 (see Figure 30).

Mounting Your Router to a Blank MLCS Router Lift Carriage Plate

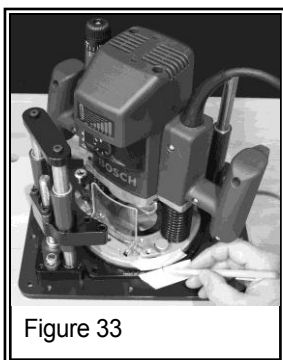


Figure 33

1. Place the optional blank mounting plate on the lift. Position your router so the handles, switch, and variable-speed control are in the desired orientation. Apply a strip of masking tape to both the router and the blank plate, then draw a reference line across the tape to mark the router's alignment position (see Figure 33).

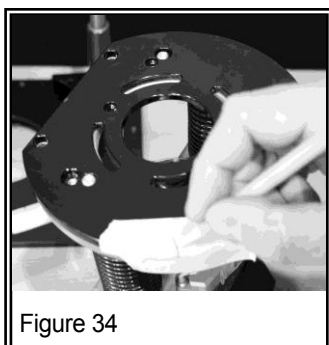


Figure 34

2. Turn the router upside down and transfer this alignment mark to the router's sub-base (see Figure 34).

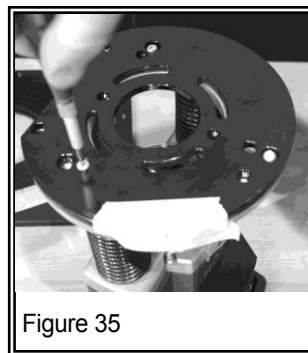


Figure 35

3. Remove the router sub-base (see Figure 35).

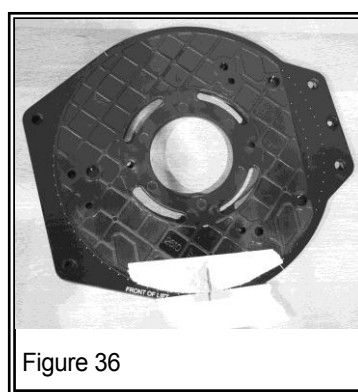


Figure 36

4. Center the router sub-base on the blank plate by aligning the two marks made in Step 1 (see Figure 36). Ensure the sub-base is also centered relative to the engraved rings on the blank plate.

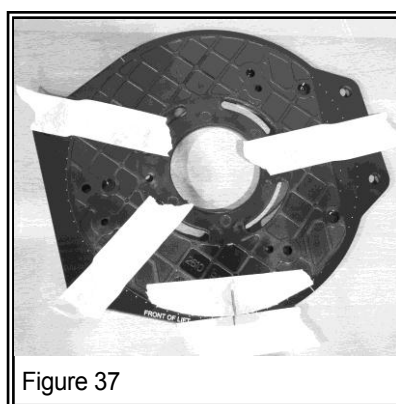


Figure 37

5. Secure the router sub-base to the blank plate with masking tape or by clamping it in place (see Figure 37).

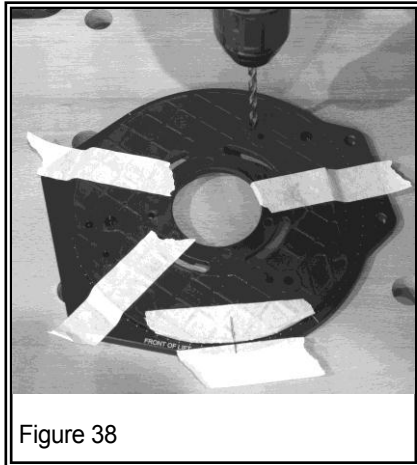


Figure 38

6. Select the appropriate drill bit and transfer the mounting hole locations from your router's sub-base to the blank plate. Using your drill, lightly spot each hole on the blank plate, then remove the sub-base and complete the drilling.

From the opposite side of the blank plate, countersink or counterbore the holes as required for your router's mounting screws. You may need to obtain the correct screw size from your local hardware supplier. (See Figure 38.)



Figure 39

7. Remove the plate risers from the pre-drilled router mounting plate that came with your lift, then install them on the blank plate. Follow Steps 6 through 10 to mount the router plate (carriage) on your MLCS Router Lift. (See Figure 39.)

MLCS Router Lift Limited Warranty

MLCS Router Lifts are warranted to be free from defects in materials and workmanship. MLCS will repair or replace any product that, upon inspection, is found to be defective for a period of one (1) year from the date of receipt and with proof of purchase.

All warranty claims must be made directly to MLCS. Contact MLCS for a warranty claim return authorization and for further instructions. The consumer is responsible for shipping costs to return the product to MLCS. We will repair or replace the product at our discretion and return it to you at no charge.

WARRANTY LIMITATIONS

This warranty does not cover:

- Repairs or alterations performed by anyone other than MLCS or an authorized MLCS service professional.
- Normal wear and tear.
- Abuse, misuse, or neglect.
- Improper care or maintenance.
- Continued use after partial failure.
- Products that have been modified in any way.
- Products used with improper accessories.
- Premature thread wear caused by adjusting height with an electric or cordless drill.