

ProLift™

Router Adjustment System

Stock No. 40-016

Thank you for purchasing ProLift. Your ProLift was designed to make adjusting and changing your router bits quick, easy, convenient, and safe. Moreover, you now have the ability to fine adjust your bits, and zero out your setting from any bit height. And remember, all this is done from above the router table!

Be sure to check out the great accessories and other fine products for your ProLift at www.benchdog.com.



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QUESTIONS?

1-800-786-8902

Be sure to check out our web site for all the latest and greatest accessories and tools.

benchdog.com

Owner's Manual

IMPORTANT!

Read and understand the entire contents of this manual before attempting assembly or operation of this tool! Inspect contents for shipping damage and shortages. Report problems directly to Bench Dog Tools, Inc.

PLEASE NOTE!

The plate on your new ProLift has been treated with an industrial grade electroless nickel plated coating for longer wear. Light scratches and surface blemishes are common, and do not indicate a defective part.

Contents of Box

	p/n
1 ProLift (partially assembled)	n/a
1 2" Reduction Ring	41-0139-01
1 2.625" Reduction Ring	41-0140-01
1 3.75" Reduction Ring	41-0141-01
1 Anti-vibration Shim	31-0040-01
1 3/8" Speed Wrench	13-0002-08

Hardware

	p/n
3 Cap Screws, 1/4-20 x 1-1/2"	10-0020-20
3 Cross Dowels, 1/4-20"	17-0047-01
2 Nord-Loc Washers, 1/4"	12-0010-04
2 Philips Machine Screws, 1/4-20 x 1"	10-0012-16
1 Column locking knob	18-0006-01
1 Column locking stud, brass	10-0033-24
1 Column locking spring	17-0040-01
12 Set Screws, #8-32 x 5/16	10-0041-05
3 Flat Head Cap Screws, #8-32 x 3/8"	10-0023-06
1 Starting Pin	41-0081-01
1 Socket 9/16" or 14mm	13-0014-01
1 Hex Wrench 3/32"	13-0002-03
1 Hex Wrench 5/64"	13-0001-04
1 Hex Wrench 3/16"	13-0001-06
1 Tube, Thread Lock	17-0050-01

Fine Adjustment Dial Assembly

	p/n
1 Anti-Friction Ring	62-0003-01
1 Decal	62-0026-01
1 O-Ring	17-0021-01
1 Zero Adjuster	41-0079-01

82-0006-07 1020

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General Conditions / Limited Two Year Warranty

We make every effort to assure that our products meet quality and durability standards, and warrant to the original retail purchaser that this product is free from defects in materials and workmanship for two years. Remedy shall be limited to Bench Dog's choice of repair, replacement or refund. This warranty does not provide remedy for consequential economic loss.

This is a limited two year warranty. It requires the purchaser to contact Bench Dog in writing within 30 days of discovering the defect. Warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, repairs or alterations, or due to lack of maintenance. It excludes components and parts not manufactured by Bench Dog Tools, defects caused by failure to provide a suitable installation environment, and damage caused by use for purposes other than those for which the product was designed.

BENCH DOG TOOLS DISCLAIMS AND BUYER EXPRESSLY WAIVES ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, IMPLIED CONDITIONS OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR ANY OTHER MATTER.

Important Safety Points

Before operating your router table please read this manual thoroughly. Retain it for future reference. Refer to your router owner's manual for safety instructions regarding use of that tool. These instructions do not constitute an instruction manual on how to do woodworking with a power tool. Bench Dog encourages all woodworkers to continually seek improvement in their woodworking skills, regardless of their craftsmanship or years of experience. The router table, fence and accessories must only be used for their intended purpose: woodworking via normal routing operations. "Normal operations" means basic shaping of wood in conditions where grounded electricity, sharp tools, dust, and rapidly spinning parts can be used or encountered safely. The following instructions elaborate on this concept.

1. Do not use your ProLift free handed, only use when mounted in a quality and robust router table.
2. Make sure all power cords are clear of the ProLift components.
3. Your router bits must never contact the router bit reduction rings.
4. Keep work area clean, dry and well lit.
5. The hardware affixing the insert to the routertop must be installed for safe use. Tighten insert hold-down screws before each use.
6. Safe operation requires a router table fence, bit guard, dust collection system, starting pin or fulcrum, and speed reducer for large diameter bits. You must reduce the router speed for 1" or larger diameter bits. Consult your router bit manufacturer for the speed reduction data.
7. Use the right tool for the job. Do not force a tool or attachment to do a job for which it was not designed.
8. Secure your work with a featherboard, clamps, or a vice when appropriate. The use of inappropriate accessories may cause injury.
9. Wear safety glasses, dust mask, face shield and ear protection. This is not an exhaustive list. Every-day eye glasses do not substitute for safety glasses.
10. Do not wear gloves or jewelry while using a power tool and ProTop.
11. Maintain your equipment and its accessories in good working condition. Look for wear, poor alignment of moving parts, binding of moving parts, breakage, poor mounting, or other conditions that may affect operation and safety. Repair or replace any damaged parts.
12. Disconnect the power before moving, adjusting, or repairing parts, or otherwise maintaining your router table and any accessories you may be using.
13. Keep children, pets, and those who may disregard safety away from work area, cords, sockets and tools.
14. Wear snug fitting clothes and keep long hair back to avoid catching in moving parts.
15. Do not overreach. Maintain balanced footing and stance.
16. Stay alert. Use common sense.

In any correspondence with Bench Dog Tools, Inc. please refer to the date and place of purchase. You may reach us at (612) 782-8205 or (800) 786-8902 and via the web at www.benchdog.com

Before You Begin

Please read and understand all of these directions before you begin! Failure to follow the directions properly can result in personal injury or permanent damage to your ProLift. If you have any questions or problems, please contact Bench Dogs Tools toll free at 1-800-786-8902.

IMPORTANT!

The ProLift will only work with fixed base routers and will not work with plunge routers! Also, without an adapter, the ProLift fits 4.2" diameter router motors such as the Porter Cable model 7518. If the diameter of your router is smaller than 4.2", then you must use an adapter which is sold separately. See the table below or the router adapter appendix:

Stock No.	Description
40-002	4.2" to 3.5" adapter (Porter Cable 690/890 series, Bosch 1617/18 series, DeWalt 610 and 616/618 series.)
40-003	4.2" to 3.2175" adapter (Makita RF1100/01 series)
40-078	4.2" to 3.270" adapter (Hitachi M12VC)

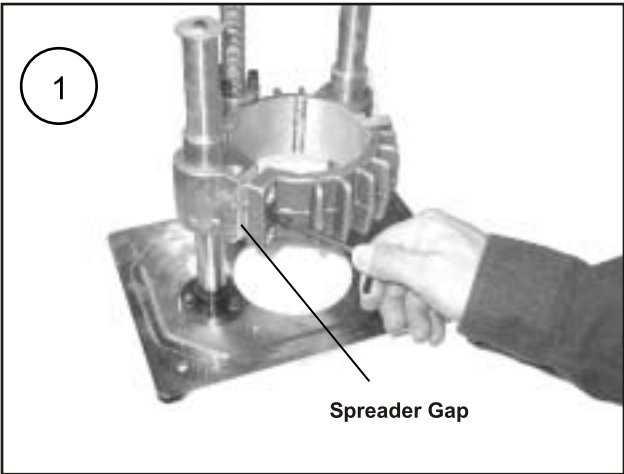
Assembly Instructions

1. Install the middle spreader bolt.

Install a 1/4-20 x 1-1/4" socket head cap screw (p/n 10-0020-20) into the housing's middle hole, as shown. Keep turning in the bolt until you see the housing spread apart a little. **DO NOT EXCEED A 3/8" GAP** or the aluminum housing may crack!

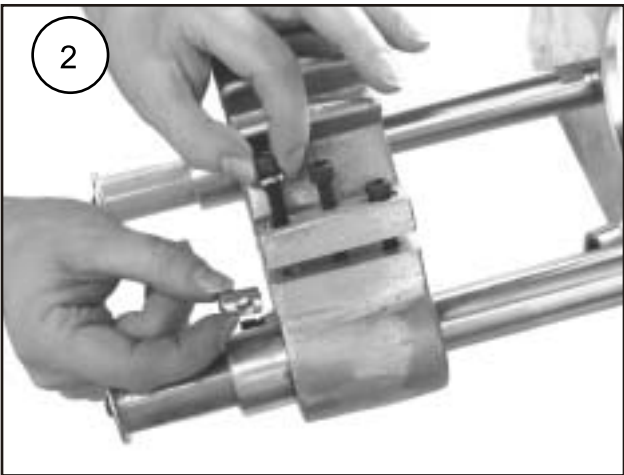


1/4-20 x 1-1/4" SHCS
p/n 10-0020-20



2. Install the housing clamping bolts.

Install two (2) 1/4-20 x 1-1/4" socket head cap screw (p/n 10-0020-20), lock washers (p/n 12-0010-04), and cross dowels (p/n 17-0047-01) as shown. Only finger start the bolts at this time. Note: the cross dowels must first be installed into the hole. **DO NOT TIGHTEN THESE BOLTS YET!**



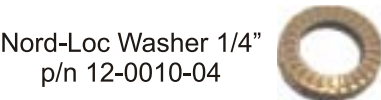
1/4-20 x 1-1/4" SHCS
p/n 10-0020-20



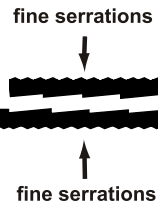
1/4-20 Cross Dowel
p/n 17-0047-01

Nord-Loc Washer Assembly Note.

This type of lock washer uses two halves for each washer assembly. Position the fine serrations as show.



Nord-Loc Washer 1/4"
p/n 12-0010-04



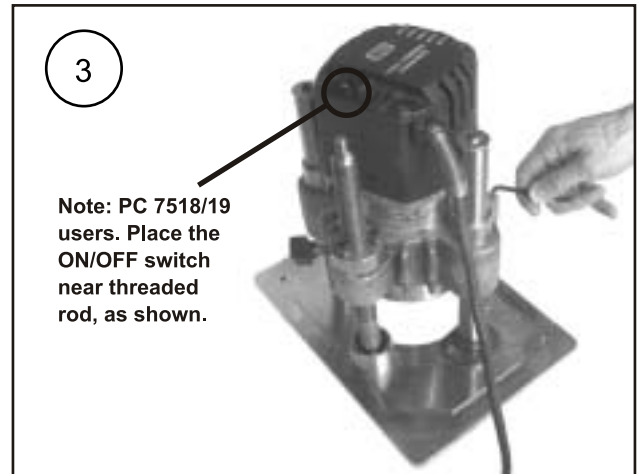
3. Install your router motor.

Slowly tighten the middle bolt to spread apart the housing until your router drops into the housing. Do not overspread the housing! Spreader gap must NOT exceed 3/8". **Important: Porter Cable routers have (4) locating pins. Align these pins with the grooves machined into the ProLift housing (and motor adapters).**

See the Router Adapter Appendix if your router motor is NOT the Porter Cable model 7518/19 (4.2" motor diameter).

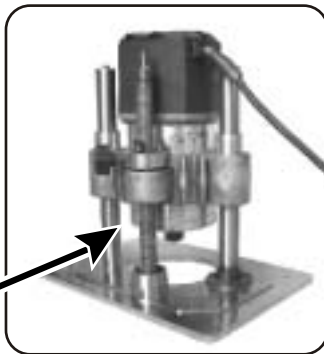


No portion of the router's power cord and related housing should contact any part of the ProLift.



For PC 7518/19 motors leave approximately 1.5" of protrusion, as shown.

1.5" protrusion



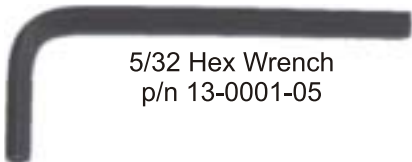
Motor adapters MUST be fully contained inside the ProLift housing!

For all router motors smaller than 4.2" in diameter, center the adapter in the housing, as shown. No portion of the adapter should be above or below the ProLift housing. See the Router Adapter Appendix for proper adapter orientation and notes for your specific router.

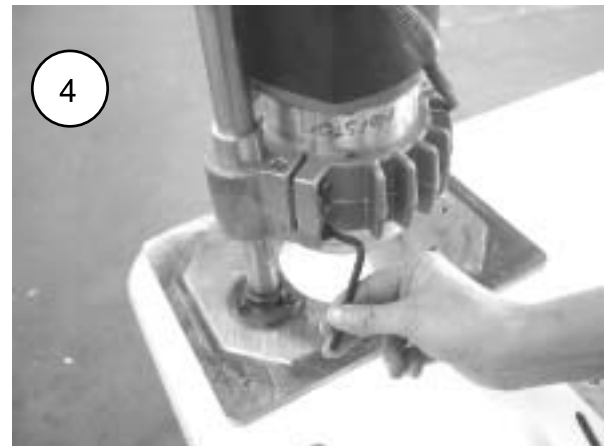
4. Remove the middle screw and Tighten the motor housing.

Remove the cap screw from the middle hole after your router is positioned in the housing.

After the middle cap screw has been removed. Tighten the two remaining bolts securely with the 5/32" hex wrench. **It is important to re-tighten after the first hour of use and again after the next four hours.**



5/32 Hex Wrench
p/n 13-0001-05



5. Adjust the column.

Now that your router is installed and the motor housing is tight, you must release the tension and misalignments caused by slight variations in router motor diameters. Position the router and housing about half way up the threaded rod, as shown. Next, loosen the three (3) cap screws at the base of the column with the 5/32" wrench, and then re-tighten them. **Also, after the first hour of use and again after the next four hours, it is important to re-tighten these screws.** If you remove the screws from the plate, be sure to properly reassemble the washers (see Nord-Loc Washer Assembly Note for step 2).



6. Install the column lock knob.

Thread the column locking knob but do not tighten so that it makes contact with the acme screw. If tightened, the column locking knob will prevent the router motor from being raised or lowered (see Using Your ProLift step 5 for more information).

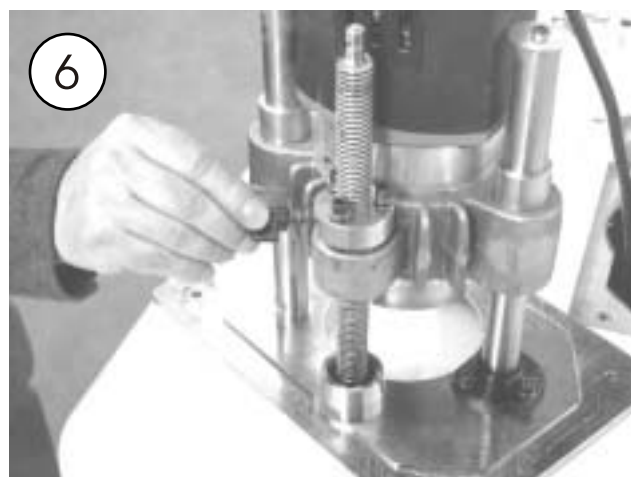
Locking Knob
p/n 18-00006-01



Brass Stud
p/n 10-0033-24

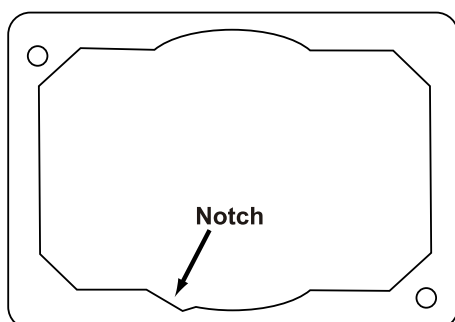


Spring
p/n 17-0040-01

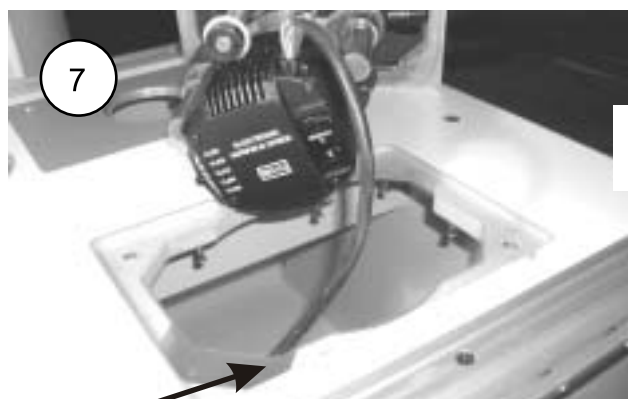


7. Install ProLift into your router table.

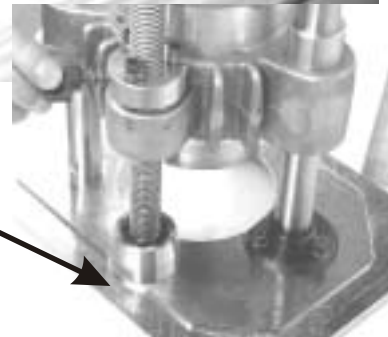
Always use the plastic anti-vibration shim (p/n 31-0040-01) between your ProLift and the router table's leveling screws. Be sure to orient the shim's notch closest to the Acme screw housing.



Anti-Vibration Shim
p/n 31-0040-01



ORIENT THE SHIM'S
NOTCH CLOSEST TO
THE ACME LEAD
SCREW, HERE.

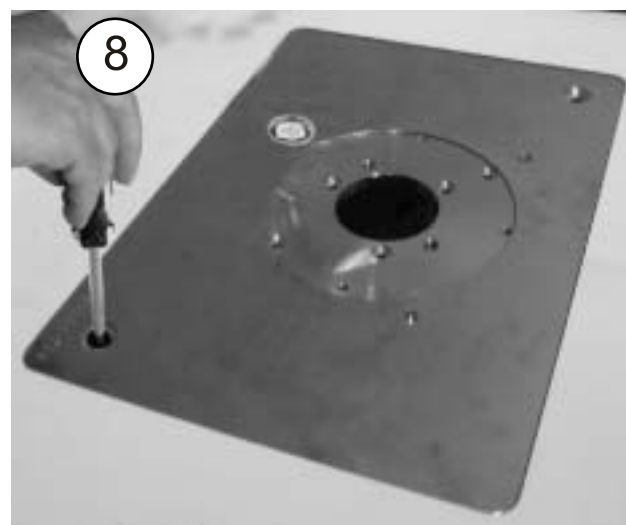


8. Level and Attach ProLift to your router table

Adjust the leveling screws (located underneath the ProLift) as advised in your Bench Dog Tools router table's manual until the ProLift is flush with the router table. Attach the ProLift to the router table with two (2) 1/4-20 x 3/4" phillips head machine screws. **Do not over-tighten these screws.**



1/4-20 x 1"
Phillips head machine screw
p/n 10-0012-16



9. Install the reduction ring leveling screws.

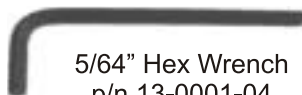
The rings' leveling screws require thread lock to prevent unwanted movement. Use the twelve (12) #8-32 x 5/16" leveling screws (four screws per ring) and the 5/64" wrench. Apply the non-permanent thread lock adhesive liberally to completely cover the threads. Turn the screws until they are flush with the bottom surface of the ring.



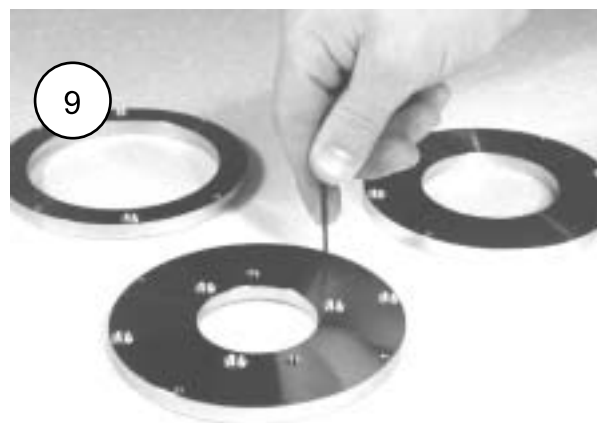
Thread Lock
1ml tube
p/n 17-0050-01



#8-32 x 5/16" Set Screw
p/n 10-0041-05



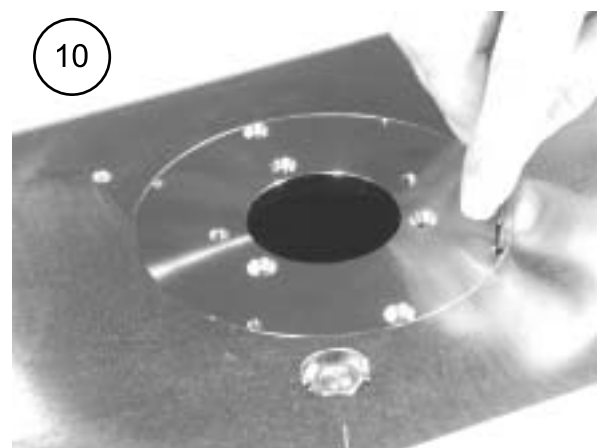
5/64" Hex Wrench
p/n 13-0001-04



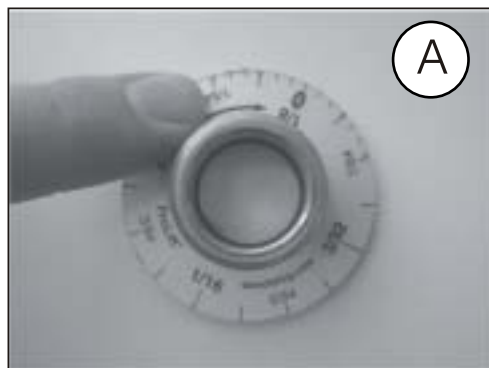
10. Once the thread lock adhesive is set up, adjust the screws to level the reduction rings. Minimum set-up time for the thread lock adhesive is about 10 minutes. It fully cures in 24 hours. If the screws loosen simply remove and reapply the thread lock.



5/64" Hex Wrench
p/n 13-0001-04



11. Assemble the fine adjustment tool.



A. Attach Dial Decal

CAREFULLY! peel dial decal and attach the sticker to the fine adjustment housing. **Note: The adhesive is VERY sticky, so attach the sticker slowly with extra care to avoid wrinkles!**



B. Install O-ring

Install the o-ring (p/n 17-0021-01) into the inside groove, as shown.



C. Attach the anti-friction ring.

Remove the protective paper backing and attach the anti-friction ring (p/n 62-0003-01) to the bottom of the adjustment tool as shown. This will prevent the adjustment tool from scratching the surface of your ProLift.

Using Your ProLift.

The following instructions are not a substitute for knowing how to use your router table. Please, know and understand how to use a router table before using this product!

1. Adjusting bit height.

Use the 9/16" or 14mm socket and speed wrench (as shown). Turning the socket clockwise will raise the router, and turning it counterclockwise will lower the router.



Do not forcefully bottom out ProLift. This will damage the product.

2. Using the fine adjuster.

ProLift allows you to "zero-out" the fine adjustment tool no matter the height of the bit. To zero-out the adjustment tool, simply take up the socket slace in the direction you are planning to rotate, and then, without turning the socket, rotate the fine adjustment tool until the zero "0" lines up with the engraved line on the plate (see photo).

One revolution raises or lowers the lift exactly 1/8". The six short marks on the fine adjustment sticker to the left and right of the zero "0" mark represent .0025".

Engraved Mark on Plate is used to "zero" the fine adjustment tool.

3. Changing router bits from above the table.

Simply raise the bit until the motor protrudes out the top. Remove the router bit reduction ring hold down screws, if installed.



Unplug your router before changing router bits!

4. Selecting router bit reduction rings.

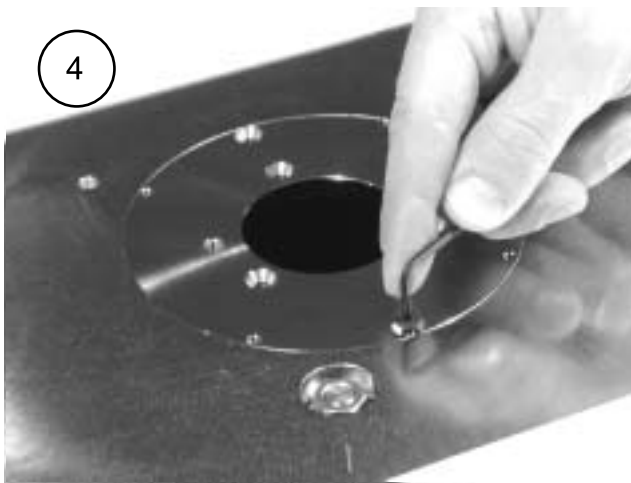
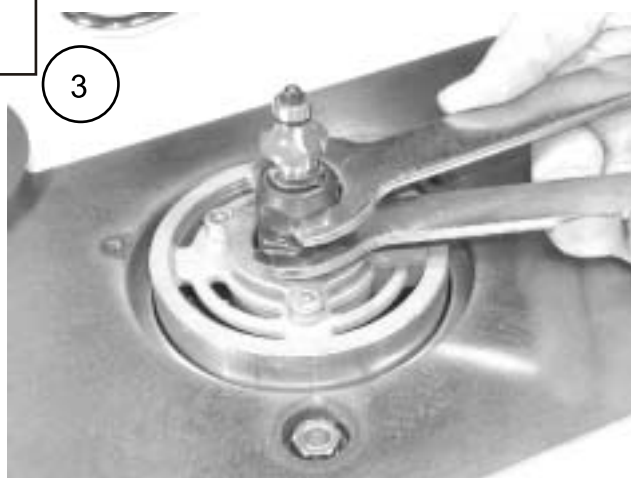
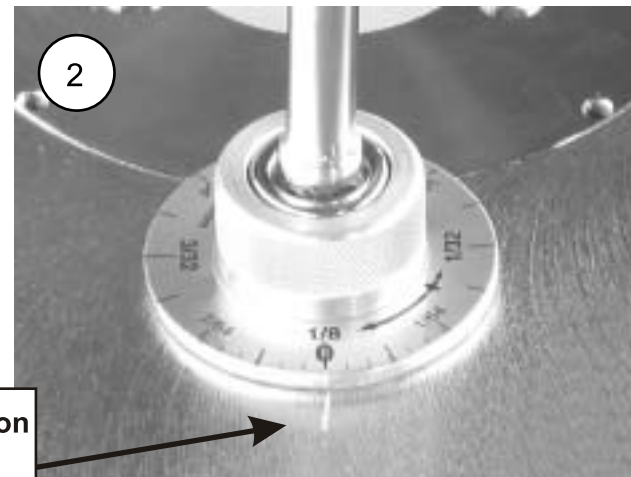
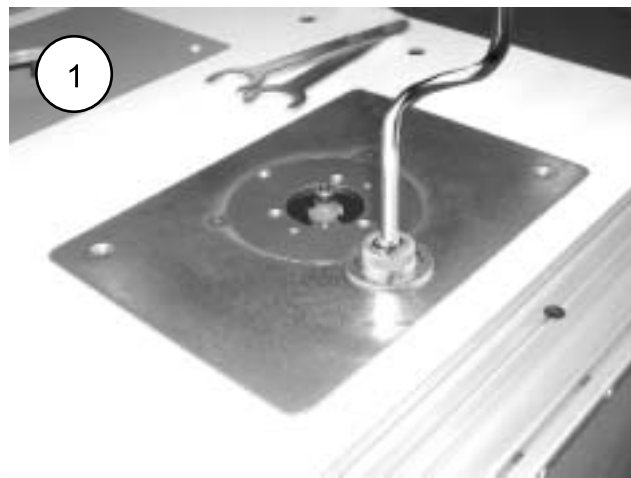
ProLift comes with three steel rings: 2", 2.625", and 3.75". Use the ring that most closely matches your router bit diameter. You must use the two (2) #8-32 x 3/8" flat head socket head screws (p/n 10-0023-06) to hold down and prevent the rings from lifting or rotating.



#8-32 x 3/8"
Socket head machine screw
p/n 10-0023-06



ALWAYS Confirm that your router bits DO NOT contact the reduction rings!



5. Using the column lock knob.

The column lock is used to preserve your setting from accidental movement, and to prevent backdriving during extreme vibration. The column lock will also prevent backdriving even if your preload nut is out of adjustment or worn out. Use of the column lock is also recommended when using the tool for extended periods of time.

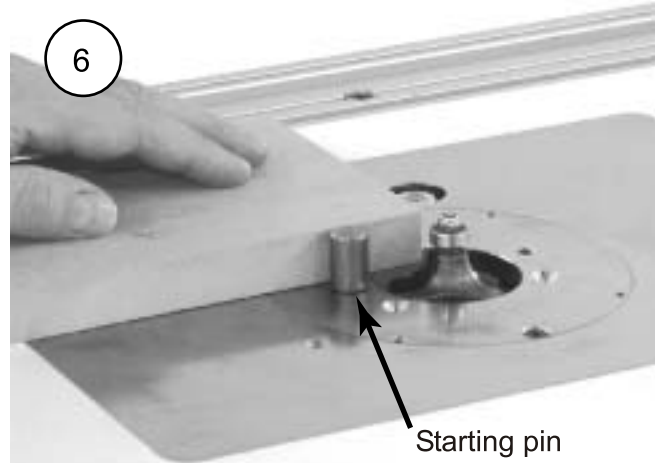


Always disengage the column lock before attempting to adjust ProLift.



6. Using the starting pin.

Depending on which reduction ring you have installed, you have up to four locations to install the starting pin. The starting pin acts as a fulcrum for gaining leverage during the beginning of your cut. At the beginning of your cut, before your stock engages the router bit guide bearing, the stock is most vulnerable to catching the bit and being thrown. Use of a starting pin greatly reduces this possibility. Be sure the pin is screwed in tightly before use.



ProLift Options



Stock No. 40-039

Zero Clearance Insert

The zero clearance insert option attaches to the 2" ProLift insert ring.



Stock No. 40-015

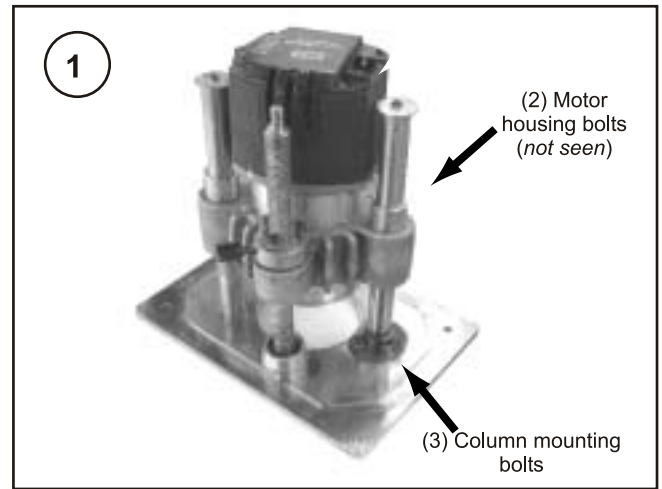
Porter Cable Guide Bushing Adapter with Centering Cone

This adapter attaches to the 2" ProLift insert ring and includes a centering cone for setup accuracy.

Maintaining Your ProLift.

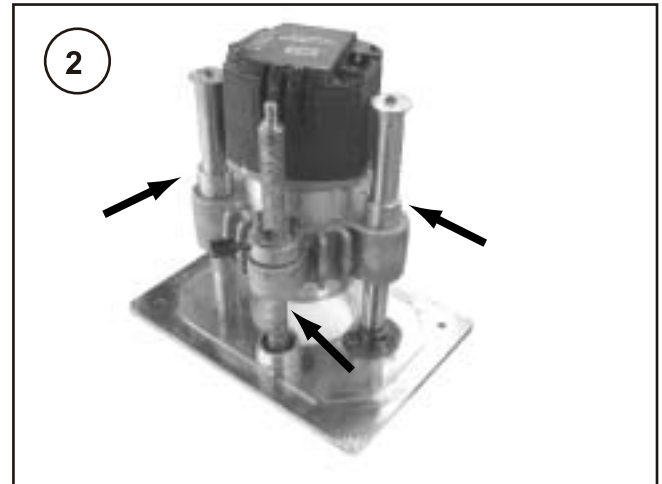
1. Tighten bolts.

During the break in period you must re-tighten all the bolts after one hour, and again after four more hours of use. Periodically check all bolts to ensure they are tight, especially the (3) column mounting bolts and (2) router motor housing bolts. This should be done at least every 20 hours of use.



2. Grease.

At least once a year (more if needed) remove the grease from the columns and acme threaded rod. WD-40 and a brush will make removing the grease easier. When clean, re-apply a good quality multi-purpose grease (such as white lithium) to the acme rod and columns. Wipe off excess grease. Performing this simple task will greatly increase the life of your ProLift.



3. Backlash adjustment.

After a fair amount of wear the anti-backlash nut may need adjustment. If your router back drives downward you know it is time to adjust the preload nut. To do so, simply tighten the three preload screws 1/4 turn. DO NOT EXCEED 1-1/2 TURNS TOTAL PER SCREW! Factory setting for the preload nut is 27/32". See the illustration below.



4. Clean your router (no photo shown).

Use an air hose or vacuum to keep your router motor as clean as possible. Built up dust and debris is a fire hazard. Never walk away from your router without confirming it is clean and free from dust and debris and the potential for fire.

5. Dust collection (no photo shown).

Use dust collection. Dust collection in your cabinet and at the fence will dramatically reduce the amount of dust and debris build-up on your ProLift. It will also ensure your router runs cooler, and will make maintaining your ProLift much easier.

Router Adapter Appendix

Routers with motor diameters **SMALLER** than 4.2" require the proper adapter. Find your router model number below, and be sure to read any special notes that apply. Confirm that your adapter matches the Stock No. listed.



Do not align the two gaps in adapter with the spreader gap in the ProLift housing!



Stock No.	Description
40-002	4.2" to 3.5" adapter
Porter Cable 690/890 series, Bosch 1617/18 series, DeWalt 610, 616/618 series.	

Note: Porter Cable 890 series routers: You must first remove the factory height adjustment rack from the motor housing.

Note: DeWalt 610 routers: You must first remove the factory height adjustment rack from the motor housing. Also, be sure to use the factory supplied stainless steel shim that wraps around the motor housing. Make sure there are no kinks in the shim before placing the adapters around the motor.



Stock No.	Description
40-003	4.2" to 3.2175" adapter
Makita RF1100/01 series	



Stock No.	Description
40-078	4.2" to 3.270" adapter
Hitachi M12VC	

Do not align the two gaps in adapter with the spreader gap in the ProLift housing!

