

OPERATION MANUAL

92-0710 Rev. 230130
Model 302 Micro-Feed Assembly



ABOUT TRI TOOL TECHNOLOGIES

A thick red horizontal line spans the width of the page. On the left side, it turns downwards at a 45-degree angle, then turns back to horizontal, creating a stepped effect.

At Tri Tool, we are committed to your success through relentless innovation and powerful partnership. We insist on developing tools and equipment that exceed your expectations of performance, precision, safety, and durability. As a full-service engineering firm, we are here to support you every step of the way.

For more information on engineered solutions, products, and trainings, visit tritool.com or contact our engineers at +1(916) 288-6100.

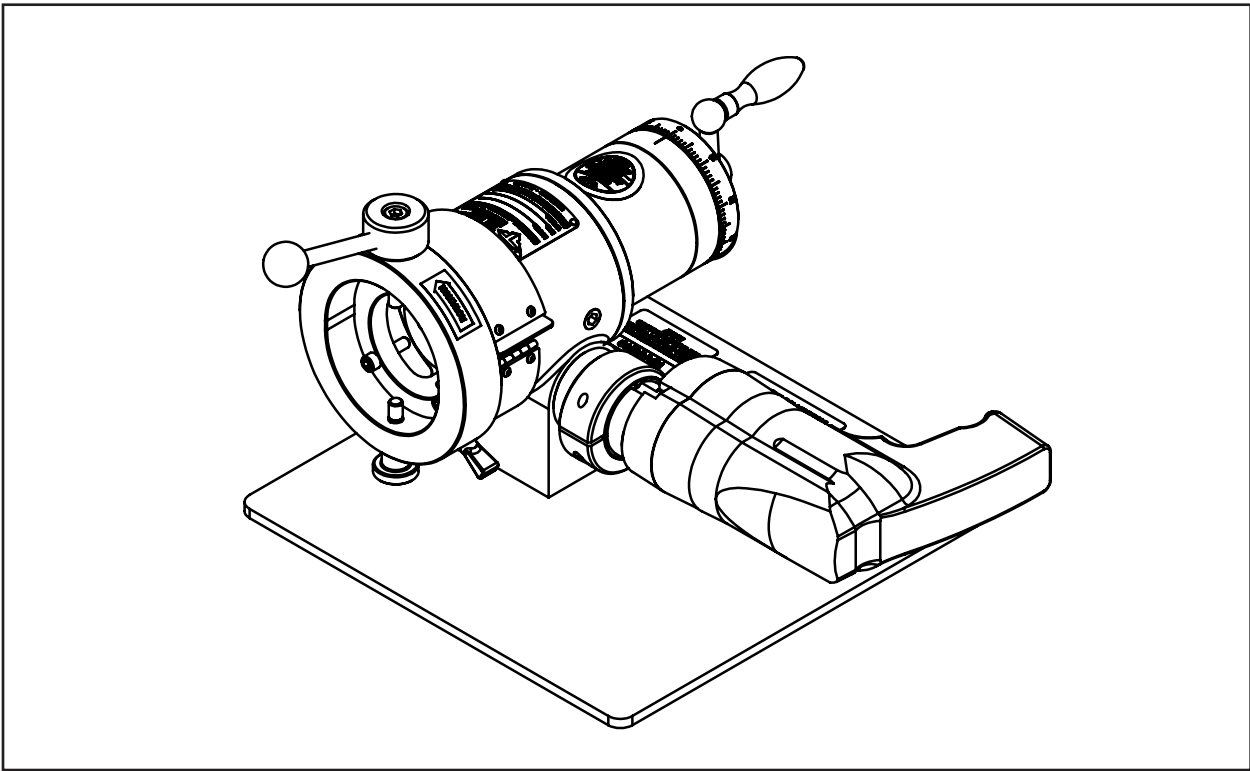


TABLE OF CONTENTS

| | |
|-----------------------------|----|
| Tri Tool Inc Warranty | 2 |
| Tool Bit Resharpener Policy | 3 |
| About the Manual | 4 |
| Safety | 5 |
| General Description | 7 |
| Installation | 8 |
| Illustrated Parts Breakdown | 12 |

TRI TOOL INC. Warranty

LIMITED WARRANTY: All products manufactured by Seller are warranted to be free from defects in materials and workmanship under normal use. The period of this warranty shall be three years from the date of shipment for all products, except for welding and Non-Standard Products which shall be one year from the date of shipment. The Buyer shall bear all shipping, packing and insurance costs and all other costs to and from a designated repair service center. All return goods must be authorized in advance and communicated upon issuance of a Return Material Authorization (RMA) by Seller. The product will be returned to the Seller accompanied by a RMA number and associated paperwork, freight prepaid and billed to the Buyer. This warranty is not transferable and will not apply to tool bits or other consumables, or to any Goods to have been (i) mishandled, misused, abused or damaged by Buyer or any third party; (ii) altered without the express permission in writing by Seller, (iii) repaired by a party other than Seller without Seller's prior written approval; or (iv) improperly stored, installed, operated, or maintained in a manner inconsistent with Seller's instructions. This warranty does not apply to defects attributed to (i) normal wear and tear or (ii) failure to comply with Seller's safety warnings.

No warranty for any parts or other supplies provided to seller by buyer, whether or not they are incorporated into goods. Goods supplied by seller which are designed or manufactured by a third party are subject strictly to the third party's warranty for those goods. Seller makes no warranty and disclaims all statutory or implied warranties for these goods, including the implied warranties of merchantability, freedom from patent infringement and fitness for a particular purpose.

Neither this warranty nor any other warranty, expressed or implied, including implied warranties of mechanical ability, fitness for a particular use, or merchantability, shall extend beyond the warranty period. No responsibility is assumed for any incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts and some states do not allow the exclusion or limitations incidental or consequential damages, so the above limitation of exclusion does not apply to all Buyers. This warranty gives the Buyer specific legal rights. Other rights vary from state to state.

Warranty Claims and Remedies

Buyer must promptly notify Seller in writing during the applicable warranty period, of any defective Goods covered by Seller's warranties under the Limited Warranty section herein, and no later than fifteen (15) calendar days after discovery of the defect. Seller has no obligation to honor any warranty claim made after the expiration of the warranty period. However, despite the expiration of the warranty period, Seller, at its reasonable discretion, may accept warranty claims submitted up to fifteen (15) calendar days after the expiration of the warranty period provided that Buyer provides Seller with credible and persuasive documentary evidence that the defect was discovered during the warranty period. No warranty claims submitted after this fifteen (15) day calendar period will be considered by Seller.

Buyer's notice of a defective Goods must identify the specific Goods affected, and the nature of the defect. It is required when returning the defective Goods, that it is suitably packed, fully insured, and transportation and insurance prepaid in accordance with instructions issued by Seller. Seller, at its sole option, will either repair or replace any Goods authorized for return to Seller. Such repair, replacement, or credit shall be Buyer's sole remedy for defective Goods. Buyer must promptly provide Seller with all information requested regarding the identified defect.

If the defect claimed by Buyer cannot be reproduced or otherwise verified by Seller, the Goods will be returned to Buyer unmodified at Buyer's expense.

The warranty period for repaired or replaced Goods shall be (i) ninety (90) days or (ii) the unexpired portion of the original warranty period. Under no circumstances is Seller liable for recall, retrieval, removal, dismantling, re-installation, redeployment, or re-commissioning of any defective Goods or any costs associated therewith.

Tool Bit Resharpener Policy

Buyer is required to check all tool bits prior to returning and ensure they are packaged well for shipment. The price structure is available from the Seller's sales coordinator. Seller cannot resharpen badly gouged, chipped, or broken tool bits. Seller will return tool bits that are not suitable for resharpening with the tool bits that were resharpened, unless Seller is instructed otherwise. Buyer is responsible for all shipping charges to and from Seller.



1. ABOUT THE MANUAL

1.1 Copyright

©Copyright Tri Tool Inc. Proprietary property of Tri Tool Inc. No reproduction, use, or duplication of the information shown hereon is permitted without the express written consent of Tri Tool Inc.

1.2 Disclaimer

The instructions and descriptions in this manual were accurate when the manual was written. However, the information in the manual is subject to change without notice. Check for updated information before you start any job. The Tri Tool Inc. web site has the most current information.


Do not operate or work on this equipment unless you have read and understood the instructions in this Manual. Failure to follow the instructions or follow the safety instructions could result in serious injury or death. This manual describes conditions and hazards that are common and anticipated during equipment operation. No manual can address all conditions which may occur.

1.3 Safety Symbols

The manual may contain one or more safety symbols. These symbols and the associated text warn you of potentially hazardous conditions. Examples of the safety symbols and the associated text follow:

| | |
|--|--|
|  DANGER | DANGER: Indicates a hazardous situation that, if not avoided, will result in serious injury or death. |
|--|--|

| | |
|---|--|
|  WARNING | WARNING: Indicates a hazardous situation that, if not avoided, could result in serious injury or death. |
|---|--|

| | |
|---|---|
|  CAUTION | CAUTION: Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury, or cause property damage. |
|---|---|

2. SAFETY PRECAUTIONS

2.1 In General

Use standard safety equipment such as: hard hats, safety shoes, safety harnesses, protective clothes, and other safety devices when appropriate.

Operate this tool only in accordance with specific operating instructions.



WARNING

WARNING: Do not override the dead-man switch on the power unit. Locking down, obstructing, or in any way defeating the dead-man switch on the power drive unit may result in serious injury.

2.2 Personal Protective Equipment

Use standard safety equipment such as: hard hats, safety shoes, safety harnesses, protective clothes, and other safety devices when appropriate.

Wear safety glasses.

Do not wear loose clothing or jewelry.

Wear nonskid footwear.

Put long hair in a cap or a net to make sure hair does not get tangled in equipment.

2.3 Personnel

Only personnel who are trained or are being trained may operate the equipment.

Keep the operation manual available where the equipment is used.

The operator must read the operation manual before using the equipment.

The equipment must be operated in accordance with the manual information.

The operator must follow the safety precautions in this manual and good engineering practices to reduce the risk of injury.

Before using the equipment, the operator must ensure that all safety messages on the equipment are legible.

2.4 Work Area

Keep the work area clean.

Keep the area well lit.

Keep items such as electrical cords, cables, rags, rigging straps, away from rotating equipment.

Do not use power-cutting tools in the presence of flammable liquids and gases.

Do not let visitors or untrained personnel near tools that are in use.

Ensure all observers wear eye protection.

Keep proper footing at all times.

2.5 Area Equipment

Secure the pipe with clamps, vises, chains or straps.

Ensure that both sides of the pipe at the cut site is fully supported so that the pipe will not move after the cut is completed. Long lengths of pipe may be under load and the separation of the pipe can release pressure. This pressure can cause both sides of the pipe to move.

2.6 Tool Care

Keep tools in good operating condition. Sharp tool bits perform better and are safer than dull tool bits.

Do not use damaged tools. Always check your tools for damage especially if a tool has malfunctioned, been dropped or hit, check it for damage.

Before you start operating the equipment, do no-load tests and feed function checks.

2.7 Tool Use

Use the right tool and tool bit for the job. Contact Tri Tool to help with your application.

Keep the tool bits fully engaged in the tool bit holders. Loose bits are sharp and can cause cuts or punctures.

Disconnect power supply during setup and maintenance. Use all 'Stop' or Shut off' features available when changing or adjusting tool bits, maintaining the tool, or when the tool is not in use.

Remove adjusting keys and wrenches before applying power to the equipment. Check the tool before turning it on to make sure that all keys and wrenches have been removed.

Do not force tools. Tools and tool bits function better and safer when used at the recommended speeds.

Do not reach into rotating equipment.

Do not reach into the rotating head stock to remove chips, to make adjustments, or to check the surface finish.

Handle chips with care. Chips have very sharp edges and are hot. Do not try to pull chips apart with bare hands.

Store tools properly. Disconnect tools from the power source, remove the tool bits, and store in a safe place.

3. GENERAL DESCRIPTION

The Model 302 Micro-Feed Assembly is a lightweight, portable machine designed for facing and squaring .188" (4.8mm) to 2.375" (60.3mm) outside diameter. The micro-feed system provides an accurate, controlled feed in .001" (.025mm) increments.

Information in this operating manual should be used in conjunction with Operating Manual 92-0547.

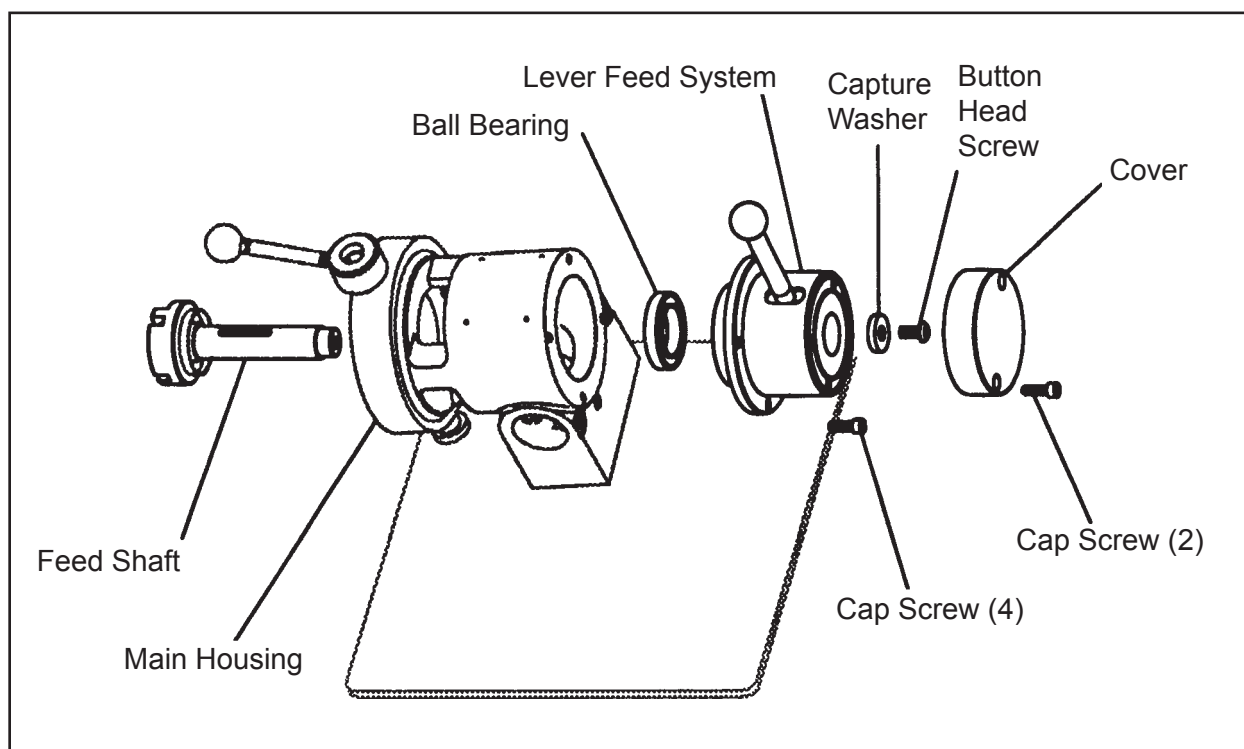
4. INSTALLATION

Removing the Lever Feed Assembly

In order to install the micro-feed assembly onto the back of the Model 302, the existing lever feed assembly must be removed.

Remove the two (2) cap screws from the back of the cover.

Remove the cover from the lever feed assembly.



Remove the Button head screw and capture washer from the end of the feed shaft.

Remove the four (4) cap screws from the flange on the lever feed system.

The lever feed assembly may now be removed.

The ball bearing on the end of the feed shaft may come off if it is loose, otherwise leave it in place.

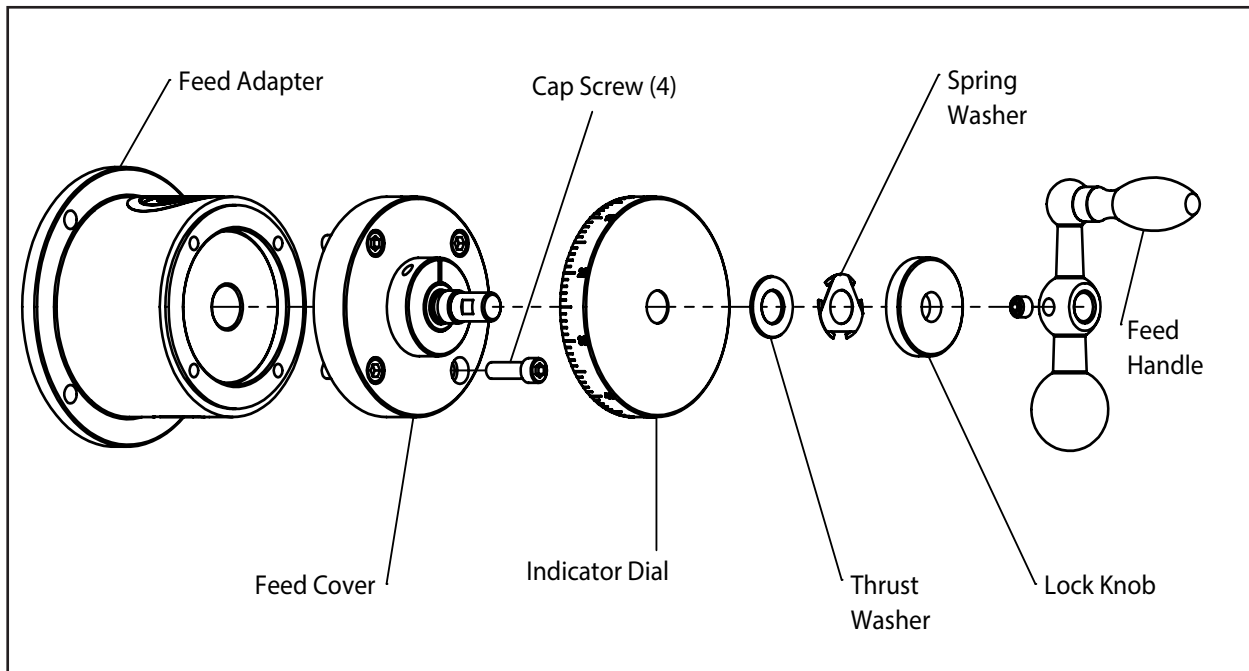
Prepare the Micro-Feed Assembly

Loosen the set screw from the feed handle.

Remove the feed handle from the micro-feed assembly.

Remove the lock knob from the end of the feed shaft.

Remove the thrust washer and the spring washer from the end of the feed shaft.



Remove the indicator dial from the feed shaft.

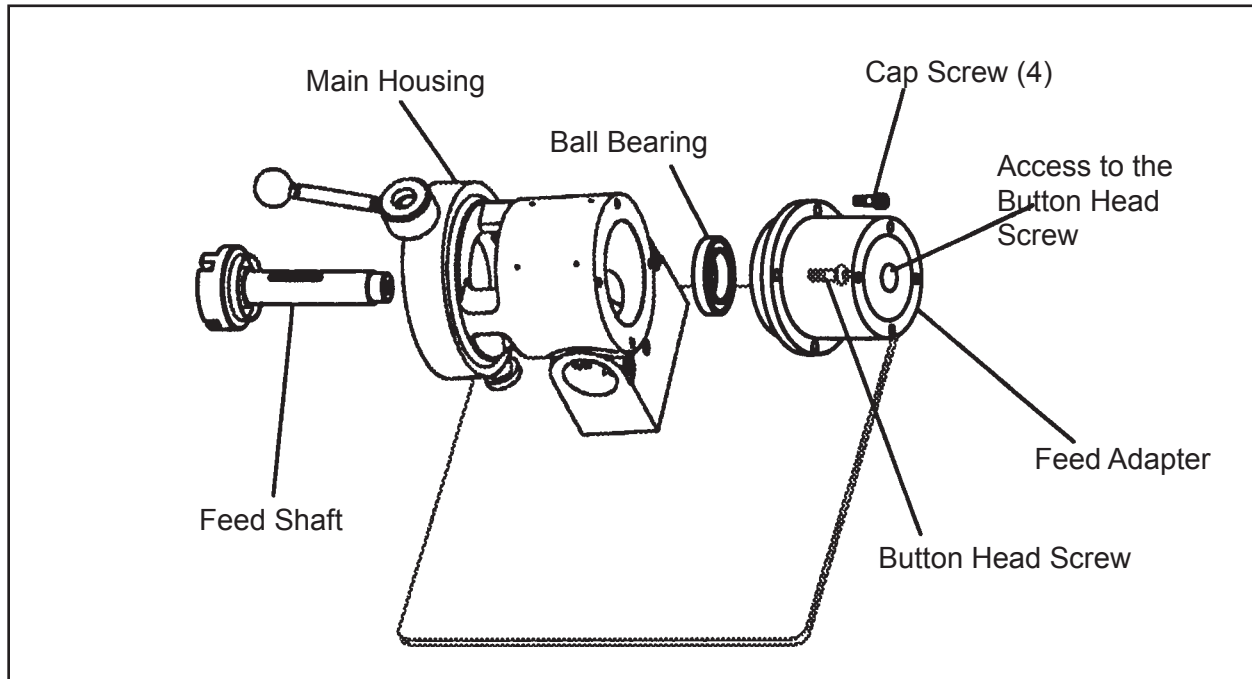
Remove the four (4) cap screws from the feed cover.

Rotate the feed screw to remove the feed cover and the feed screw from the back of the feed adapter.

Installing the Micro-Feed Assembly

The ball bearing in the front of the feed adapter is the same as the one in the back of the Model 302 main housing.

Only one ball bearing is required, remove the one or the other.

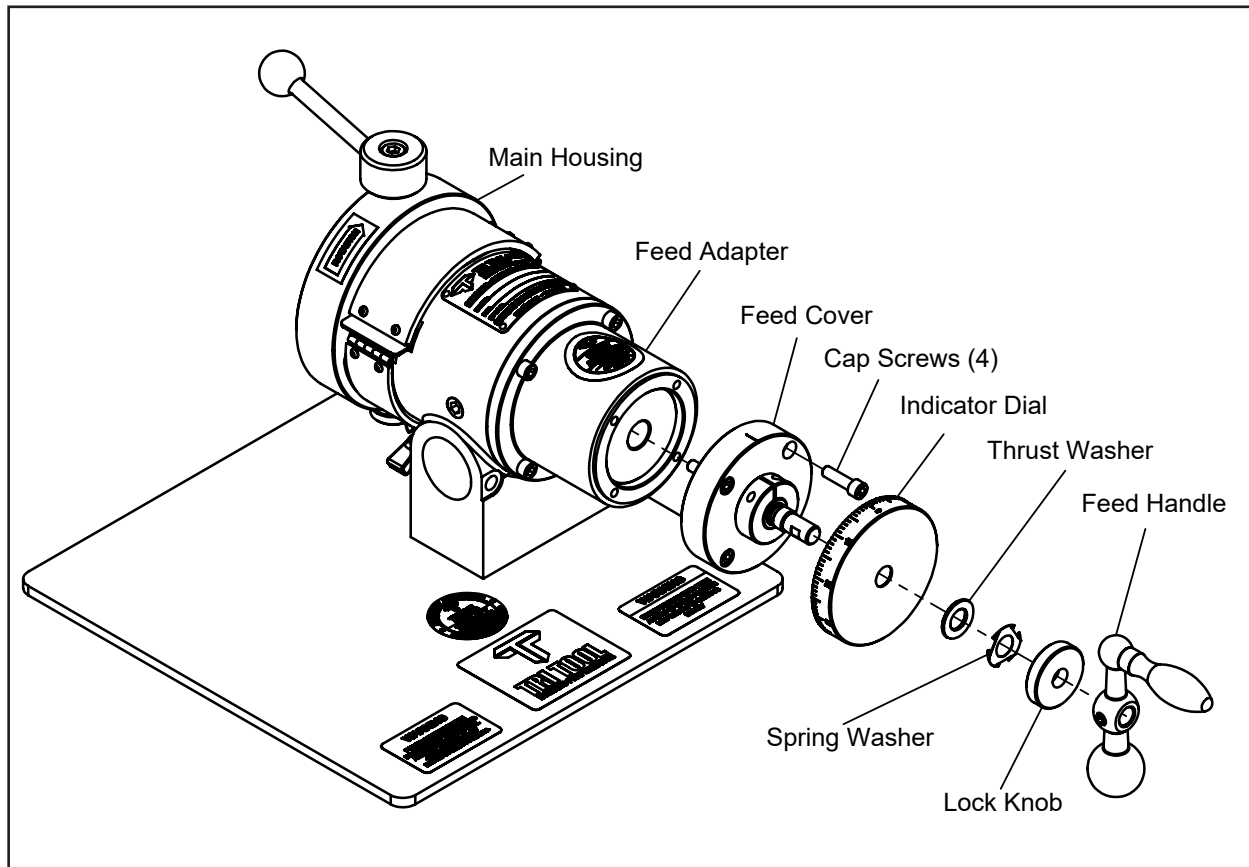


Slide the feed adapter onto the end of the main housing.

Using a hex wrench through the middle of the feed adapter, rotate the button head screw to thread it into the end of the feed shaft inside of the main housing.

Once the button head screw is tight, then install the four (4) cap screws, which hold the feed adapter to the main housing.

Reinstall the feed cover by rotating the feed screw to thread it into the feed spacer.



Rotate the feed cover so that the indicator mark is on the top.

Reinstall the four (4) cap screws that hold the feed cover to the back of the feed adapter.

Reinstall the indicator dial onto the feed shaft.

Reinstall the thrust washer and then the spring washer onto the end of the feed shaft.

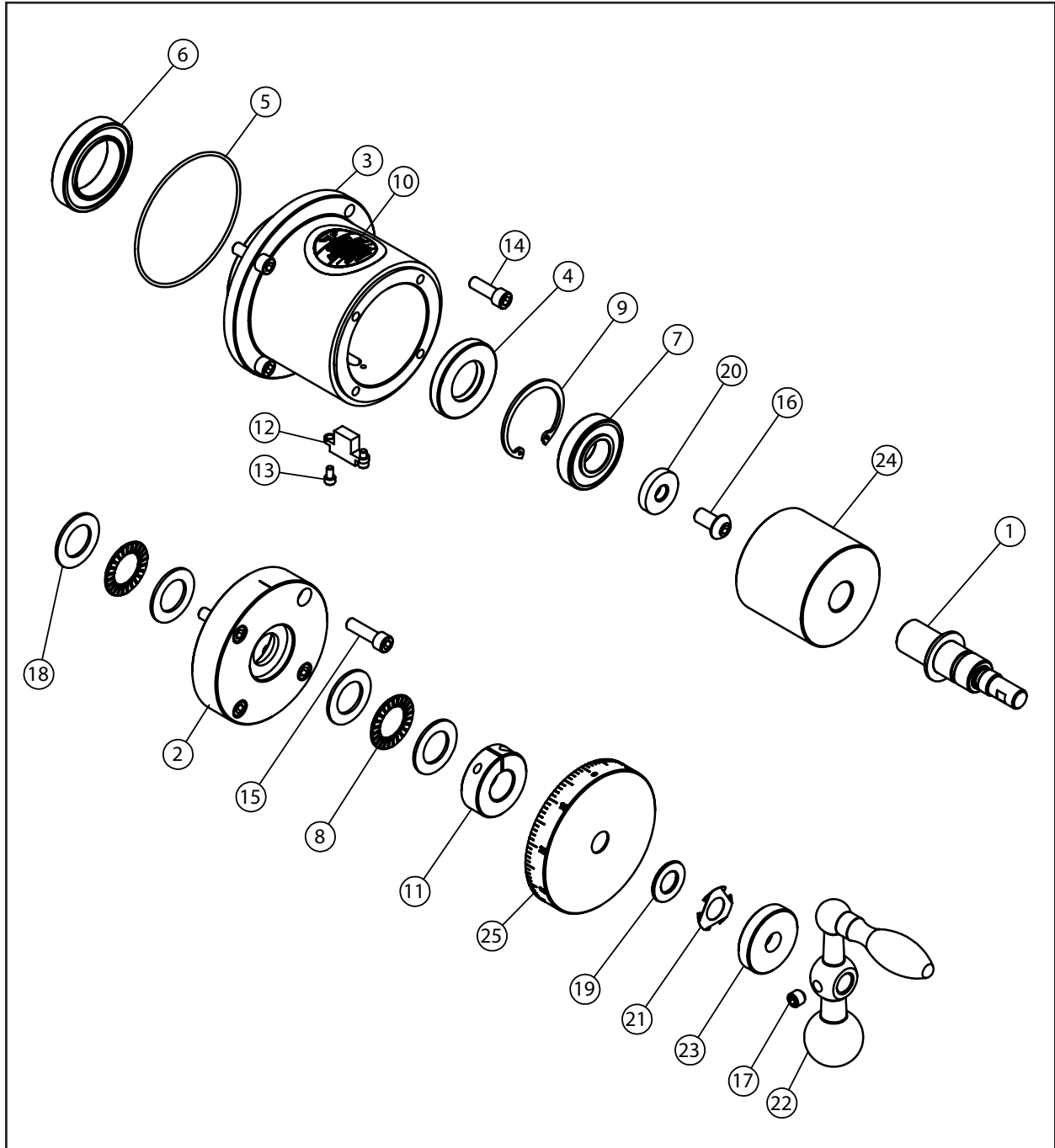
Thread the lock knob onto the end of the feed shaft.

Slide the feed handle onto the end of the feed shaft and rotate it so that the set screw is over the flat.

Tighten the set screw in the feed handle to lock the feed handle onto the feed shaft.

5. ILLUSTRATED PARTS BREAKDOWN

MICRO-FEED ASSEMBLY (P/N 82-0122)



Parts List, Micro-Feed Assembly (P/N 82-0122)

| Item No. | Part No. | Description | Qty |
|----------|-----------|------------------------------------|-----|
| 1. | 20-0654 | SHAFT, FEED | 1 |
| 2. | 24-4999 | PLATE, END | 1 |
| 3. | 27-0574 | ADAPTER, FEED | 1 |
| 4. | 28-0231 | SEAL | 1 |
| 5. | 28-0234 | O-RING | 1 |
| 6. | 29-0011 | BEARING, BALL | 1 |
| 7. | 29-0020 | BEARING, BALL | 1 |
| 8. | 29-0067 | BEARING, THRUST ROLLER | 2 |
| 9. | 30-1089 | RING, RETAINING | 1 |
| 10. | 30-2061 | LABEL, TRI TOOL | 1 |
| 11. | 30-2544 | COLLAR, SHAFT | 1 |
| 12. | 31-0169 | KEY | 1 |
| 13. | 33-0011 | SCREW, CAP, #6-32 X .25" | 2 |
| 14. | 33-0040 | SCREW, CAP, 1/4-20 X .75" | 4 |
| 15. | 33-0041 | SCREW, CAP, 1/4-20 X .88" | 4 |
| 16. | 33-0292 | SCREW, BUTTON HEAD, 5/16-18 X .63" | 1 |
| 17. | 33-0513 | SCREW, SET, 5/16-18 X .31", CUP | 1 |
| 18. | 34-0106 | WASHER, THRUST | 4 |
| 19. | 34-0163 | WASHER, THRUST | 1 |
| 20. | 34-0278 | WASHER, CAPTURE | 1 |
| 21. | 34-0325 | WASHER, SPRING | 1 |
| 22. | 41-0142 | HANDLE, FEED | 1 |
| 23. | 42-0172 | KNOB, LOCK | 1 |
| 24. | 44-0476 | SPACER, FEED | 1 |
| 25. | 50-0039 | DIAL, INDICATOR | 1 |
| | NOT SHOWN | | |
| | 36-0008 | WRENCH, L, 3/16" HEX | 1 |
| | 36-0021 | WRENCH, T, 3/16" HEX | 1 |



WARNING



Read the manual and be familiar with all safety precautions before operating equipment. The following are general warnings for industrial equipment with moving parts. Refer to the manual for specific warnings applicable to your equipment.



EYE HAZARD - Always wear appropriate eye protection while operating the equipment.



PINCH HAZARD - Keep your hands and clothing away from moving parts.



CRUSH HAZARD - The machinery, pipe, or work piece can shift, separate, lurch, or fall.



CHIP HAZARD - Metal chips may be hot and sharp. Be careful when you clear the tooling path or clean up chips.



TIE DOWN HAZARD - Deliberate overriding of safety triggers can result in serious injury. Never lock or tie down any safety triggers.



SHOCK HAZARD - Ensure that the equipment is properly installed and grounded. Ensure that the equipment is not damaged and that the power cord is intact.

OTHER HAZARDS

- Tool bits are sharp and can cause serious injury.
- Do not defeat or modify safety features.
- Disconnect power sources before servicing or moving the equipment.
- Remove all loose articles of clothing and jewelry before operating the equipment.

Be Safety Conscious!



3041 Sunrise Blvd.
Rancho Cordova, CA 95742
+1(916) 288-6100 • +1(800) 345-5015
www.tritool.com