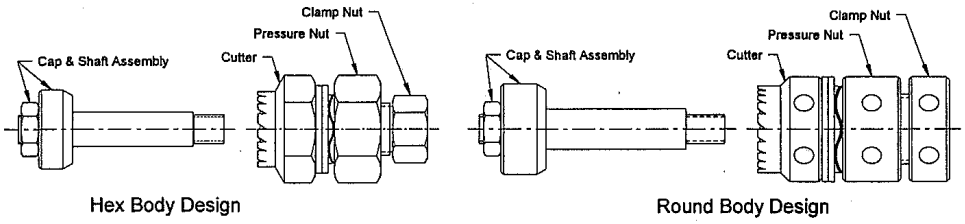
## Operating Instructions

1. Unscrew cap and shaft assembly from clamp nut insert in far side bearing.
   Note: Other parts of tool should remain together
2. Turn pressure nut up to clamp nut and screw tool onto cap and shaft assembly.
3. Tighten clamp nut securely.
   Note: Use standard box or open end wrench on hex body tools and pin type spanner wrench or round bar on round body tools.
4. Turn pressure nut up to exert light pressure nut 1/8 turn.
5. Turn cutter one full turn clockwise and then tighten pressure nut 1/8 turn.
6. Repeat Step 5 until cutter stops cutting.
   Note: This occurs when cutter has reached bottom of groove and is against the internal stop.
7. Remove tool by unscrewing clamping nut and removing cap and shaft assembly from bearing.
8. Push bearing out of housing.




## Tool Maintenance Instructions

Shafer tri-roller swaging tools and cutters require only an occasional application of light machine oil. This will assure continued smooth tool operation and prevent any corrosion on the tool parts. Disassembly and cleaning of the rollers and retainer are also recommended whenever the tool operates roughly or there is evidence of foreign materials under the retainer.

**To disassemble the drill press design**: Remove the set screw in the roller fixture.

**To disassemble the portable set screw design**: Remove the set screw just above the roller/retainer assembly and unscrew the pilot.

**To disassemble the portable o-ring design**: Pull the roller/retainer assembly away from the roller fixture with your fingers to dislodge the o-ring from its groove. Remove the o-ring from the pilot.

**This will allow the removal of the retainer and rollers**.

Thoroughly clean rollers, retainer, retainer pockets and roller fixture race surface. Apply a light coat of oil on the rollers and roller fixture race surface and reassemble.

**DO NOT USE GREASE.**

To reassemble reverse the disassembly process. Make sure the flat end of the rollers face the center of the tool and the roller/retainer assembly rotates freely.

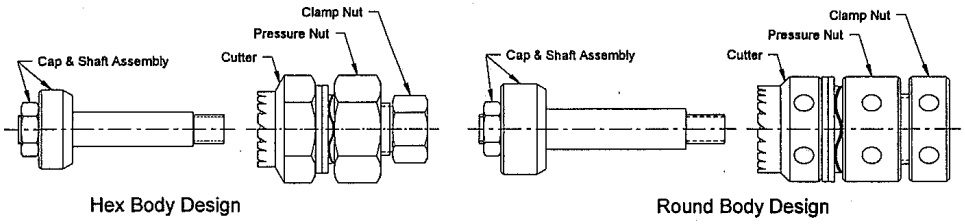
Tool storage: After reassembly, place tool in polybags and put them in the carton to prevent any damage to the tool.



Portable Cutting Tool Operating Instructions

Operating Instructions

1. Unscrew cap and shaft assembly from clamp nut insert in far side bearing.
   Note: Other parts of tool should remain together
2. Turn pressure nut up to clamp nut and screw tool onto cap and shaft assembly.
3. Tighten clamp nut securely.
   Note: Use standard box or open end wrench on hex body tools and pin type spanner wrench or round bar on round body tools.
4. Turn pressure nut up to exert light pressure nut 1/8 turn.
5. Turn cutter one full turn clockwise and then tighten pressure nut 1/8 turn.
6. Repeat Step 5 until cutter stops cutting.
   Note: This occurs when cutter has reached bottom of groove and is against the internal stop.
7. Remove tool by unscrewing clamping nut and removing cap and shaft assembly from bearing.
8. Push bearing out of housing.




Tool Maintenance Instructions

Shafer tri-roller swaging tools and cutters require only an occasional application of light machine oil. This will assure continued smooth tool operation and prevent any corrosion on the tool parts. Disassembly and cleaning of the rollers and retainer are also recommended whenever the tool operates roughly or there is evidence of foreign materials under the retainer.

**To disassemble the drill press design**: Remove the set screw in the roller fixture.

**To disassemble the portable set screw design**: Remove the set screw just above the roller/retainer assembly and unscrew the pilot.

**To disassemble the portable o-ring design**: Pull the roller/retainer assembly away from the roller fixture with your fingers to dislodge the o-ring from its groove. Remove the o-ring from the pilot.

**This will allow the removal of the retainer and rollers**.

Thoroughly clean rollers, retainer, retainer pockets and roller fixture race surface. Apply a light coat of oil on the rollers and roller fixture race surface and reassemble.

**DO NOT USE GREASE.**

To reassemble reverse the disassembly process. Make sure the flat end of the rollers face the center of the tool and the roller/retainer assembly rotates freely.

Tool storage: After reassembly, place tool in polybags and put them in the carton to prevent any damage to the tool.

FORM No: F-E-0513 Swaging Tool Operating Instructions

## Drill Press Swaging Tool Set-up and Operating Instructions

### Equipment Required

A Rexnord Shafer tri-roller drill press swaging tool is simple to setup and operate. With a minimum of setup delay and previous machine experience, positive and repeatable swaging of grooved bearings can be accomplished. A small, hand-fed drill press with an extension on the handle is recommended for swaging. This allows proper operator "feel" for the swaging operation.

### Set-up Instructions

1. Install roller fixture into chuck.
2. Adjust spindle speed – recommend approximately 100 rpm for initial pieces.
   Note: This can later be increased up to 250 rpm, once operator proficiency has been developed.
3. Guide bars or fixtures can be used to position the locating fixtures for repetitive swaging.

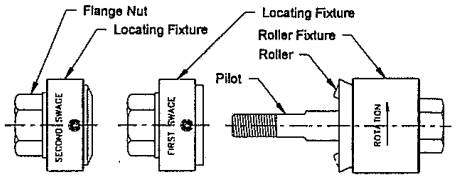
### Operating Instructions

1. Insert bearing into housing
2. Position locating fixture (flat surface) in bearing bore.
3. With housing/bearing/locating fixture positioned under roller fixture slowly lower the spindle – take care to ensure roller fixture bushing is piloted into the bearing bore.
4. Utilize light pressure for initial revolutions to allow rollers to center in bearing grove.
5. Apply normal arm pressure and maintain swaging tool engagement for approximately 5 seconds.
6. Release pressure and remove tool from bearing/housing sub-assembly.
7. Turn sub-assembly over and repeat Steps 2-6 complete swaging on opposite side (use angled surface locating fixture for this operation if supplied.)

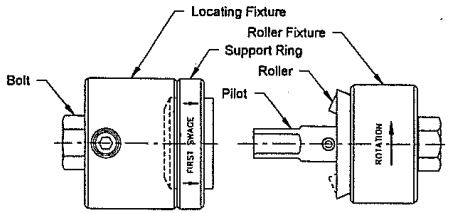
## Portable Swaging Tool Operating Instructions

### Operating Instructions

1. Insert roller fixture assembly into bearing so that rollers seat against the lip of the bearing groove.
2. Mount locating fixture assembly on opposite side bearing. This is done by threading that bold into the pilot of the roller fixture (for the set screw design), or by threading the flanged nut onto the pilot of the roller fixture (for the o-ring design).
   Note: Do not over tighten, but ensure that the face of the locating fixture support ring or locating fixture (flat side) is flush with the face the bearing outer race and housing.
3. Rotate roller fixture by hand to ensure there are no restrictions.
4. Turn locating fixture nut clockwise approximately 30 degrees.
5. Rotate roller fixture three complete revolutions or until it rotates without resistance.
6. Repeat Steps 4 & 5 above until the unit is rotated 180 degrees or until the bearing lip is completely swaged. This will vary with bearing groove size and housing chamfer size.
7. Remove the locating fixture from the roller fixture by unscrewing the locating fixture bolt or nut. Do not let locating fixture rotate.
8. Repeat Steps 1-7 to swage the opposite side of the bearing. Reverse the support ring (angled side) or use the second swage locating fixture (angled side).
   Note: Do not grease rollers or bearing lip use light machine oil only.
   Note: Reversible support rings (set screw design) and double locating fixtures (o-ring design) are only supplied for double v-grooved bearings.




O-Ring Design




Set Screw Design



## Drill Press Swaging Tool Set-up and Operating Instructions

### Equipment Required

A Rexnord Shafer tri-roller drill press swaging tool is simple to setup and operate. With a minimum of setup delay and previous machine experience, positive and repeatable swaging of grooved bearings can be accomplished. A small, hand-fed drill press with an extension on the handle is recommended for swaging. This allows proper operator "feel" for the swaging operation.

### Set-up Instructions

4. Install roller fixture into chuck.
5. Adjust spindle speed – recommend approximately 100 rpm for initial pieces.
   Note: This can later be increased up to 250 rpm, once operator proficiency has been developed.
6. Guide bars or fixtures can be used to position the locating fixtures for repetitive swaging.

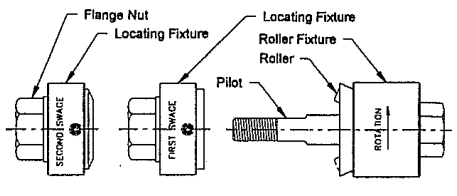
### Operating Instructions

8. Insert bearing into housing
9. Position locating fixture (flat surface) in bearing bore.
10. With housing/bearing/locating fixture positioned under roller fixture slowly lower the spindle – take care to ensure roller fixture bushing is piloted into the bearing bore.
11. Utilize light pressure for initial revolutions to allow rollers to center in bearing grove.
12. Apply normal arm pressure and maintain swaging tool engagement for approximately 5 seconds.
13. Release pressure and remove tool from bearing/housing sub-assembly.
14. Turn sub-assembly over and repeat Steps 2-6 complete swaging on opposite side (use angled surface locating fixture for this operation if supplied.)

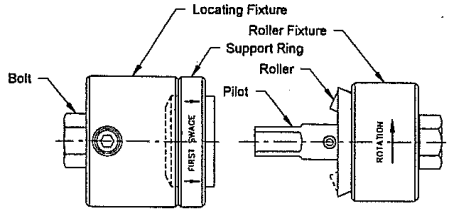
## Portable Swaging Tool Operating Instructions

### Operating Instructions

9. Insert roller fixture assembly into bearing so that rollers seat against the lip of the bearing groove.
10. Mount locating fixture assembly on opposite side bearing. This is done by threading that bold into the pilot of the roller fixture (for the set screw design), or by threading the flanged nut onto the pilot of the roller fixture (for the o-ring design).
    Note: Do not over tighten, but ensure that the face of the locating fixture support ring or locating fixture (flat side) is flush with the face the bearing outer race and housing.
11. Rotate roller fixture by hand to ensure there are no restrictions.
12. Turn locating fixture nut clockwise approximately 30 degrees.
13. Rotate roller fixture three complete revolutions or until it rotates without resistance.
14. Repeat Steps 4 & 5 above until the unit is rotated 180 degrees or until the bearing lip is completely swaged. This will vary with bearing groove size and housing chamfer size.
15. Remove the locating fixture from the roller fixture by unscrewing the locating fixture bolt or nut. Do not let locating fixture rotate.
16. Repeat Steps 1-7 to swage the opposite side of the bearing. Reverse the support ring (angled side) or use the second swage locating fixture (angled side).
    Note: Do not grease rollers or bearing lip use light machine oil only.
    Note: Reversible support rings (set screw design) and double locating fixtures (o-ring design) are only supplied for double v-grooved bearings.




O-Ring Design




Set Screw Design