

OPERATION MANUAL

92-1739 Rev. 241203
Model 612RBL-G2 thru 642RBL-G2 Clamshells



ABOUT TRI TOOL TECHNOLOGIES



At Tri Tool Technologies, 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.

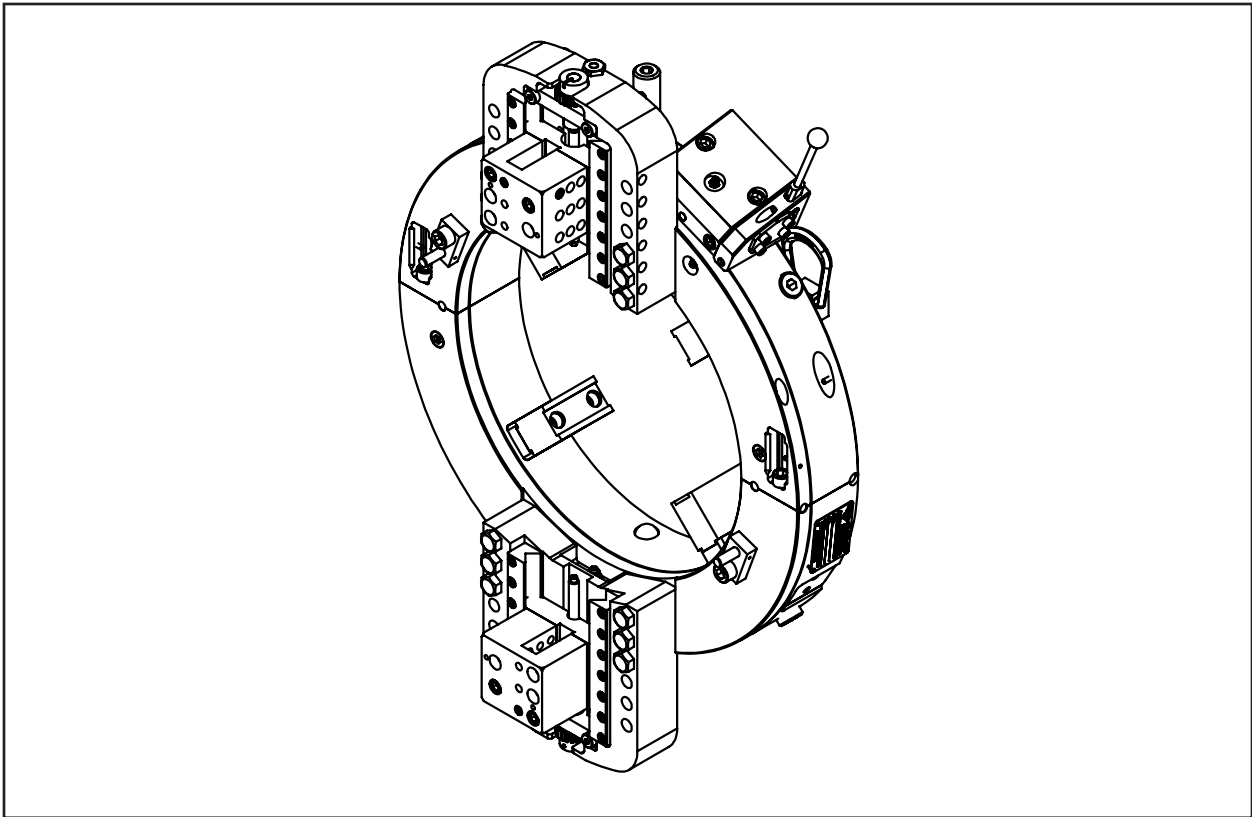


TABLE OF CONTENTS

TRI TOOL TECHNOLOGIES WARRANTY	2
TOOL BIT RESHARPENING POLICY	3
ABOUT THE MANUAL	4
SAFETY PRECAUTIONS	6
GENERAL DESCRIPTION	8
SPECIFICATIONS	10
MAINTENANCE	13
OPERATION	24
CUTTING SPEEDS AND FEEDS	36
MOUNTING SPACER BAR ASSEMBLY KITS	37
FULL SUPPORT PAD KITS	38
TOOL BITS	39
TROUBLESHOOTING	49
ACCESSORIES	52
ILLUSTRATED PARTS BREAKDOWN	53

Tri Tool Technologies 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 upon Buyer's request. Buyer is responsible for all shipping charges to and from Seller.



1. ABOUT THE MANUAL

Copyright

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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 Technologies 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.

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.



GLASSES

SAFETY GLASSES: Indicates a hazardous situation that requires the use of safety glasses.



HOT SURFACE

HOT SURFACE: Indicates a hazardous situation that hot surfaces may be present.



GLOVES

GLOVES: Indicates a hazardous situation that requires gloves.



SHOCK HAZARD

ARC FLASH & SHOCK HAZARD: High voltage. Entry by authorized personnel only. Appropriate PPE and tools required when working on this equipment.



READ MANUAL

READ MANUAL: Read manual before use, refer to manual for Tri Tool Technologies machine being used.



DISCONNECT FROM POWER

DISCONNECT FROM POWER: Disconnect main plug from electrical outlet before performing all maintenance.

2. SAFETY PRECAUTIONS

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

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.

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.

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.

Area Equipment

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

Ensure that both sides of the pipe at the cut site are 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.

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.

Tool Use

Use the right tool and tool bit for the job. Contact Tri Tool Technologies 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 600RBL-G2 Low Profile Clamshells are a type of split-frame pipe lathe designed to sever and bevel inline pipe.

Use standard Tool Blocks to configure the Model 600RBL-G2 Clamshells for the following operations:

- Sever inline pipe
- Sever and bevel inline pipe
- Sever and double bevel inline pipe

The following items are included with each Clamshell:

- Air or Hydraulic Motors
- Spacer Bars to cover the range of pipe sizes (refer to MOUNTING SPACER BAR ASSEMBLY KITS section).
- Jackscrews
- Two Tool Modules
- One Tripper Bracket Assembly

Operation Features

The adjustable precision 90° vee bearings pre-load and stabilize the rotating head to provide long life, low maintenance, stability, and precision.

The Clamshell splits into two halves for mounting on closed loop systems.

All parts are secured to the two halves, thus avoiding the loss of parts and at the same time providing maximum ease of handling.

The Clamshell is equipped with Jackscrews and adjustable mounting bars for out-of-round pipe conditions.

Dual tool blocks with auto-feed sprockets and adjustable slides provide maximum maintainability, life, and operator safety, with a minimum of operator training.

The gear reduction, auto-feed sprockets provide .0036" (.09mm) of radial feed per revolution of the Headstock for a controlled depth of cut.

The drive gears and bearing surfaces are covered for operator safety, and are sealed to protect from dust and chips.

For the safety of the operator, the controls are away from the rotating Headstock.

The modular design, which is easy to maintain, has drive and tooling options.

The detachable air, electric, or hydraulic motors are easy to handle and have low axial clearance.

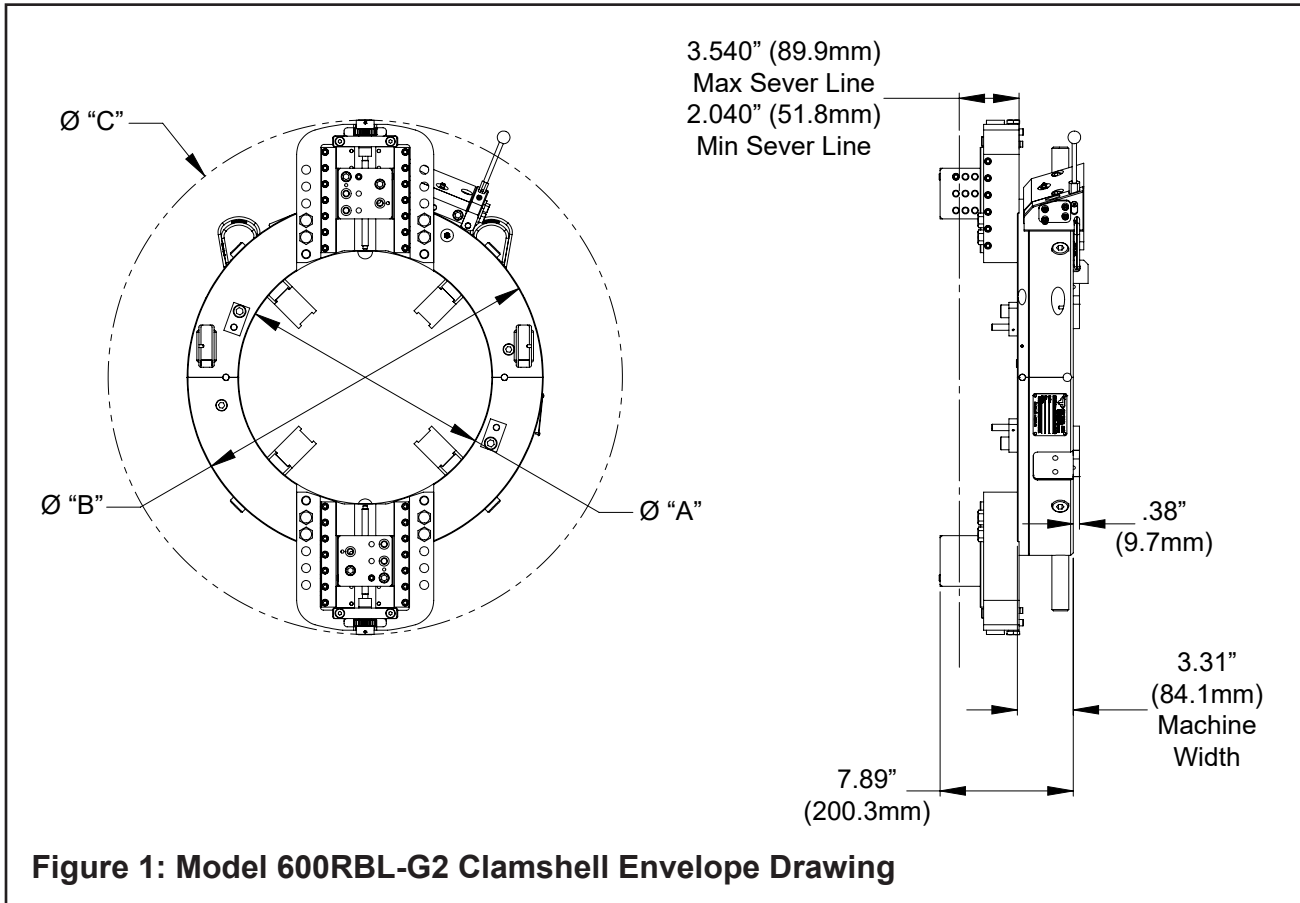
For maximum robustness and reliable performance in harsh environments, the components include high strength aluminum and alloy steel construction with corrosion resistant coatings.

Model 600RBL-G2 Clamshell Part Numbers

Part Number	Model	Power*
01-2582	612RBL-G2	Single Air
01-2583	612RBL-G2	Single Hydraulic
01-2584	612RBL-G2	Electric 110V
01-2585	612RBL-G2	Electric 220V
01-2140	614RBL-G2	Single Air
01-2142	614RBL-G2	Single Hydraulic
01-2144	614RBL-G2	Electric 110V
01-2145	614RBL-G2	Electric 220V
01-2146	616RBL-G2	Single Air
01-2148	616RBL-G2	Single Hydraulic
01-2150	616RBL-G2	Electric 110V
01-2151	616RBL-G2	Electric 220V
01-2152	620RBL-G2	Single Air
01-2154	620RBL-G2	Single Hydraulic
01-2156	620RBL-G2	Electric 110V
01-2157	620RBL-G2	Electric 220V
01-2158	624RBL-G2	Single Air
01-2160	624RBL-G2	Single Hydraulic
01-2162	624RBL-G2	Electric 110V
01-2163	624RBL-G2	Electric 220V
01-2165	630RBL-G2	Single Air
01-2167	630RBL-G2	Single Hydraulic
01-2195	630RBL-G2	Electric 110V
01-2196	630RBL-G2	Electric 220V
01-2169	636RBL-G2	Single Air
01-2171	636RBL-G2	Single Hydraulic
01-2197	636RBL-G2	Electric 110V
01-2198	636RBL-G2	Electric 220V
01-2173	642RBL-G2	Single Air
01-2175	642RBL-G2	Single Hydraulic
01-2199	642RBL-G2	Electric 110V
01-2200	642RBL-G2	Electric 220V

**Options for dual air motor or dual hydraulic motor are available as standard products. Contact Tri Tool Technologies for more information.*

4. SPECIFICATIONS



Dimensions

Model RBL-G2	"A" Inside DIA	"B" Outside DIA	"C" Maximum Rotating Parts DIA
612	13.75" (349.2mm)	19.85" (504.1mm)	29.32" (744.7mm)
614	15.00" (381.0mm)	21.10" (535.9mm)	30.47" (773.9mm)
616	17.00" (431.8mm)	23.10" (586.7mm)	32.57" (827.2mm)
620	21.00" (533.4mm)	27.10" (688.3mm)	36.67" (931.3mm)
624	25.00" (635.0mm)	31.10" (789.9mm)	41.02" (1041.8mm)
630	31.00" (787.4mm)	37.10" (942.3mm)	47.12" (1196.8mm)
636	37.00" (939.8mm)	43.10" (1094.7mm)	53.22" (1351.7mm)
642	43.00" (1092.2mm)	49.10" (1247.1mm)	59.23" (1504.4mm)



CAUTION: One person may not be able to lift the Clamshell.
 The weight range of the Clamshell models is from 100.0 lb (45.3 kg) to 280.0 lb (127.0 kg).

Weight by Model – Basic Machine w/ Two (2) Drive Housings

Model RBL-G2	Weight
612 (Single Drive Housing)	100 lb (45.3kg)
614	110 lb (49.9kg)
616	123 lb (55.8 kg)
620	148 lb (67.2 kg)
624	171 lb (77.6 kg)
630	203 lb (92.1 kg)
636	228 lb (103.5 kg)
642	280 lb (127.0 kg)

Mounting Pipe Ranges – Model 600RBL-G2 Clamshell Series

Model RBL-G2	Mounting Pipe Ranges																				
	6"	7"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	34"	36"	38"	40"	42"	
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Power Requirements

With Single and Dual Hydraulic Motors	20 gpm at 1250 psi (1.3 L/s at 8619 kPa)
With Dual Air Motors	190 cfm at 90 psi (90 L/s at 621 kPa)
With Single Air Motor	95 cfm @ 90 psi (45 L/s at 621 kPa)

Cutting Capacities with Standard Tool Modules

Tool Modules	Cutting Capacity
Severing with Standard Procedures	2.50" (63.5mm) wall
Severing and Single Bevel	2.00" (50.8mm) wall
Severing and Double Bevel	1.50" (38.1mm) wall
Severing and Beveling w/ Special Procedures	2.50" (63.5mm) wall

Materials

The following materials are the most commonly machined:

- Carbon steel
- Low alloy steel
- Chrome steel (20% maximum)
- Chrome/molly alloys (rc 32 maximum)
- Austenitic stainless steel
- Inconel
- Aluminum
- Copper
- Copper nickel alloys

5. MAINTENANCE

Periodic Maintenance

Daily Maintenance When the Unit Is In Operation

Wipe the equipment.

Examine the equipment for loose or missing parts and for damage.

If the weather is humid, spray the equipment with rust preventative.

After Every 20 Hours Of Operation

Coat the components with a light film of oil (refer to Fig 2). Use a clean, non-detergent oil, such as SAE 10 (90 SSU) or lighter.

Lubricate the Male and Female Tool Block Slides and Feed Screw(s).

After Every 40 Hours Of Operation

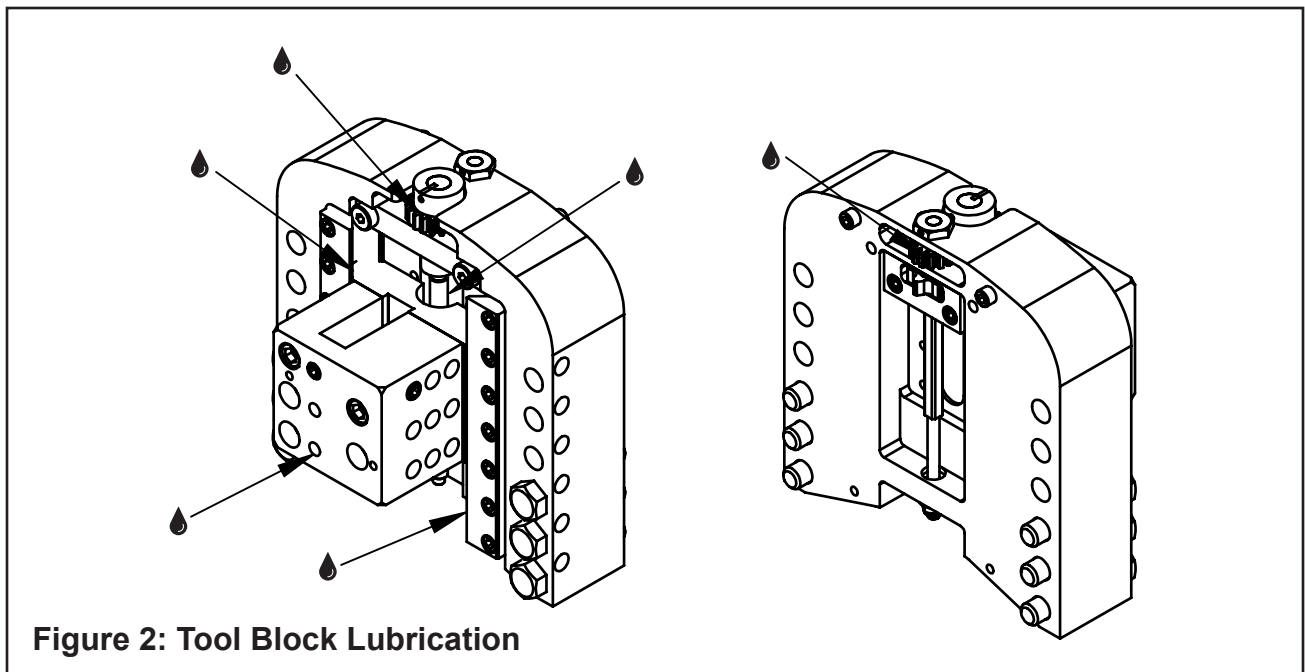
Clean and lubricate the Main Gear, Drive Gear, and Tripper Block Assembly.

Non-Scheduled Maintenance

If the Tool Blocks collect debris, clean the Tool Blocks and Feed Screws after operation.

If there are feed problems, clean and examine the Tool Blocks.

If the Headstock becomes loose on the Clamshell, refer to "Adjust the 90° Vee Bearings Pre-Load" later in this section.



Storage

If the Clamshell is to be stored, or will remain out of service for a significant period of time (30 days or more), it should be thoroughly cleaned, lubricated, and sprayed with a rust preventative prior to storage.

Adjust the 90° Vee Bearings Pre-Load



CAUTION

CAUTION: You must adjust the vee bearings according to these instructions to decrease the risk of excessive machine wear or damage that would void the warranty.

1. Loosen the Bearing Lock Screws and Adjustment Eccentric Nuts, about 1/4 turn (refer to Fig. 3).
2. Tighten the four (4) Bearing Adjustment Eccentric Nuts until they are tight.
3. Center the OD of the gear with the OD of the housing.
4. Lightly turn in the remaining Bearing Adjustment Eccentric Nuts until the bearings contact the Headstock. The safe torque range on the Bearing Adjustment Eccentric Nuts is 1 in-lbs (.1 Nm) to 3 in-lbs (.3 Nm).
5. Loosen the four (4) Bearing Adjustment Eccentric Nuts and tighten them so the bearings are evenly loaded against the gear race.



CAUTION

CAUTION: Do not overtighten the Bearing Adjustment Eccentric Nuts. This accelerates bearing and gear race wear and decreases available power.

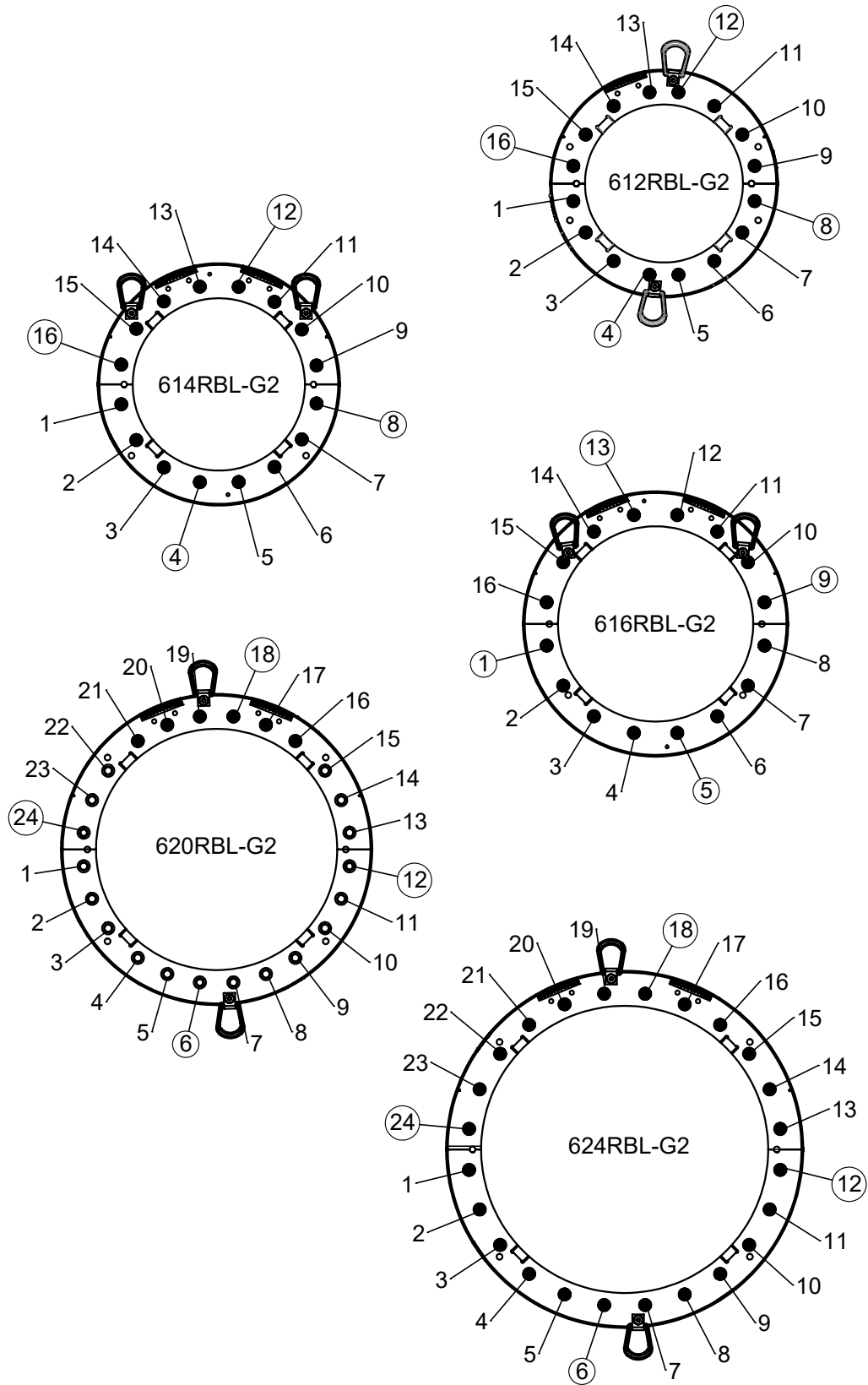


Figure 3: Locations of Eccentric Nuts 612-624 RBL-G2

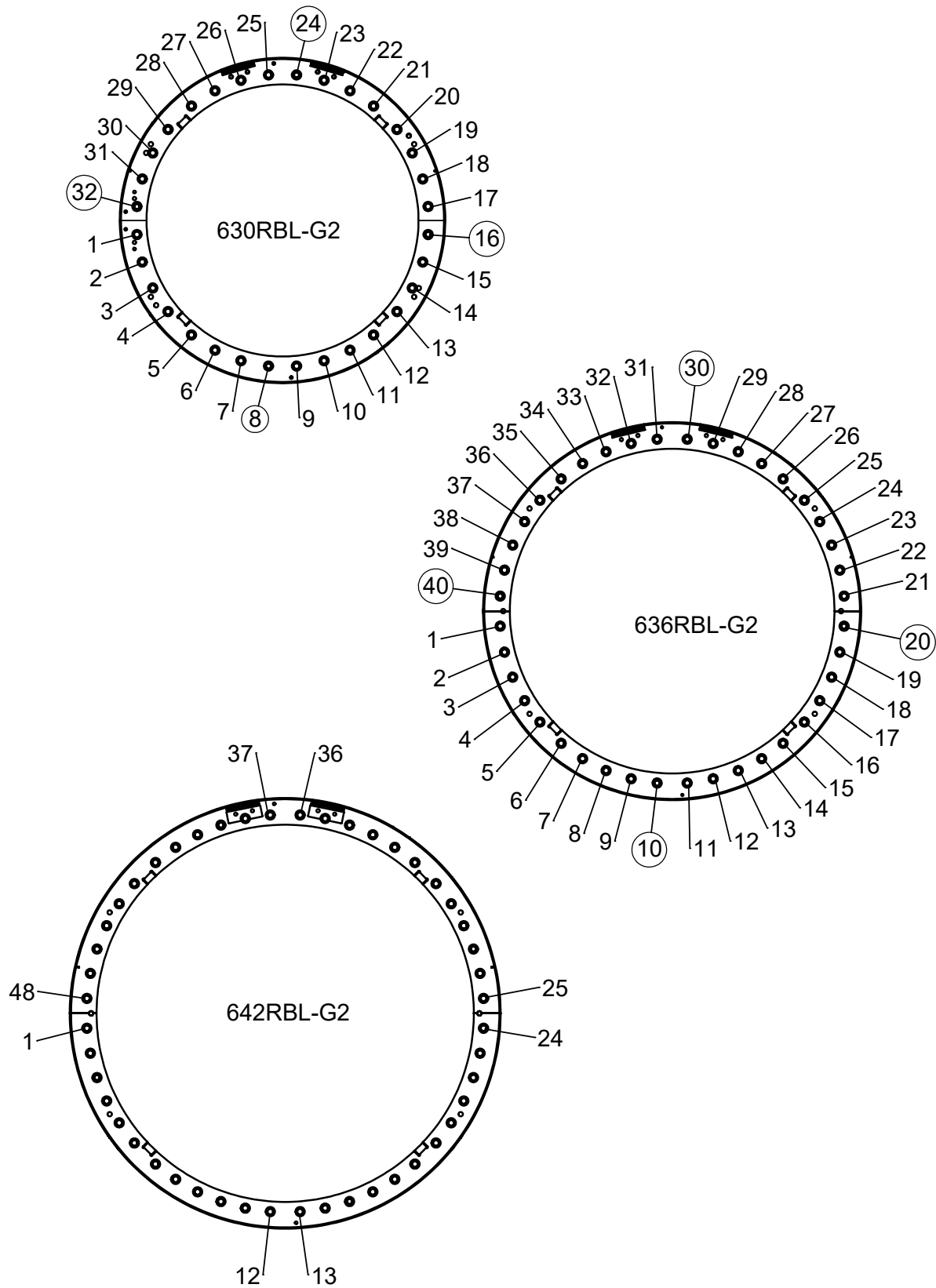


Figure 4: Locations of Eccentric Nuts 630-642 RBL-G2

Examine the Main Gear

If the Headstock does not run smoothly, even after you make adjustments, examine the Main Gear to ensure that chips, dirt, or dust did not damage the gear.

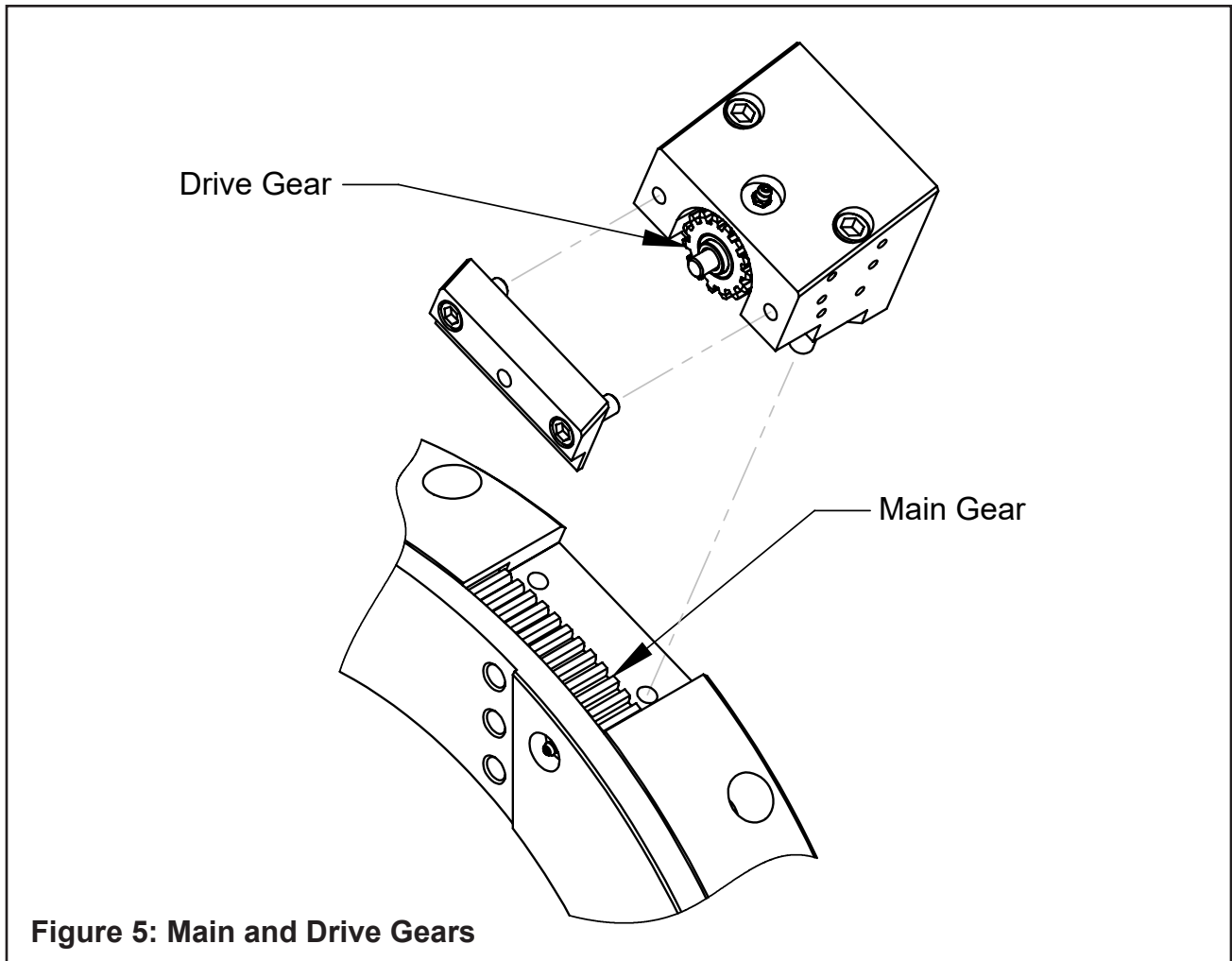


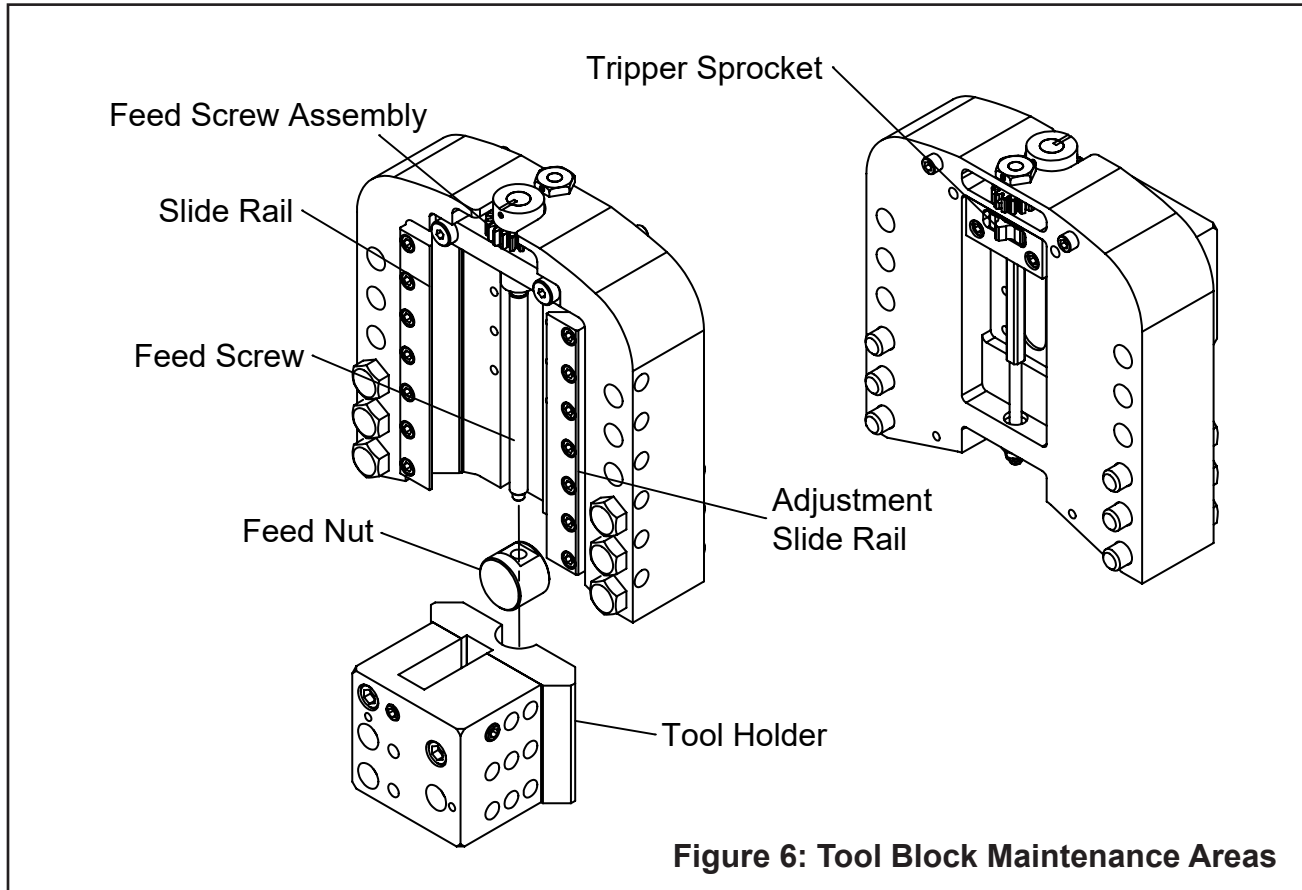
Figure 5: Main and Drive Gears

Lubricate Drive Gear and Main Gear

1. Remove the Drive Housing(s).
2. Examine both the Drive and Main Gears for chips or burrs, then clean.
3. Coat the teeth of the Drive and Main Gear with a lubricant approved by Tri Tool Technologies.

Maintenance of Tool Block

1. Clean the slide rails, the Feed Nut, the Feed Screw Assembly and the Tripper Sprocket.
2. Examine the parts for damage and replace as required.



Lubricate and Reassemble Tool Block



CAUTION: Excess lubricant collects grit and chips that can damage or jam the thread.

1. Use lubricant sparingly on the Feed Screw or wipe to a film condition.
2. Adjust the Adjustable Slide Rail until there is firm, rotational pressure on the Sprocket. You should be able to move the Sprocket with your hand, which is about 12 in-lb (1.4 Nm) to 16 in-lb (1.8 Nm) of torque applied to the hex on the front face of the Sprocket Assembly.
3. After lubrication, tighten the Slide Rails to squeeze the oil into a thin film against the male and female surfaces by doing the following:
 - Loosen the Hold-down screws.
 - Tighten the adjustment set screws to more than 16 in-lb (1.8 Nm) of torque.
 - Loosen the adjustment set to 12-16 in-lb (1.4-1.8 Nm) setting for normal operation.
 - Tighten the Hold-down screws.

NOTE: Refer to “Adjust Tool Holder” later in this section for procedures to adjust the Tool Module on the Clamshell.

Set Timing of Tool Module and Tripper Sprocket

1. Before mounting the Tool Module to the Headstock, position the Tripper Sprocket. The Tool Module has four (4) possible mounting positions (refer to Fig. 7).
2. Determine the position of the Tool Module.
 - Position #1 is for the largest pipe the Clamshell can mount on.
 - Position #2 is the next pipe size down and so on.
3. Remove the two (2) 1/4-20 Cap Screws from the Sprocket Block. Slide the Sprocket Block and Sprocket to the correct position and reinstall the two (2) 1/4-20 Cap Screws.
4. Mount the Tool Module to the Headstock.

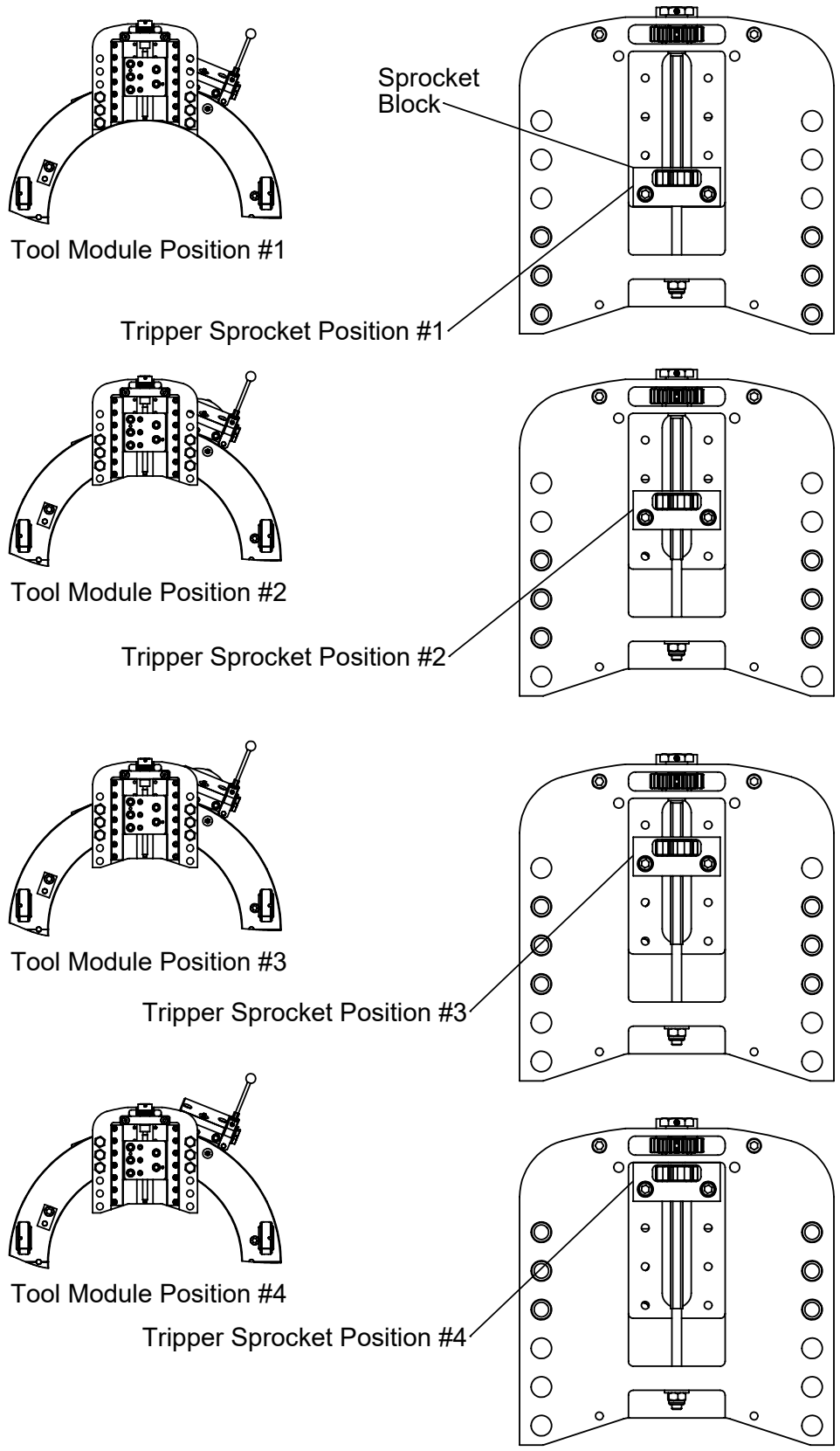


Figure 7: Positions for Tool Module and Tripper Sprocket Timing

Adjust Tool Holder



CAUTION: If you over-stress the Mounting Brackets when you adjust them off of the Clamshell, the Slide Rails may become loose.

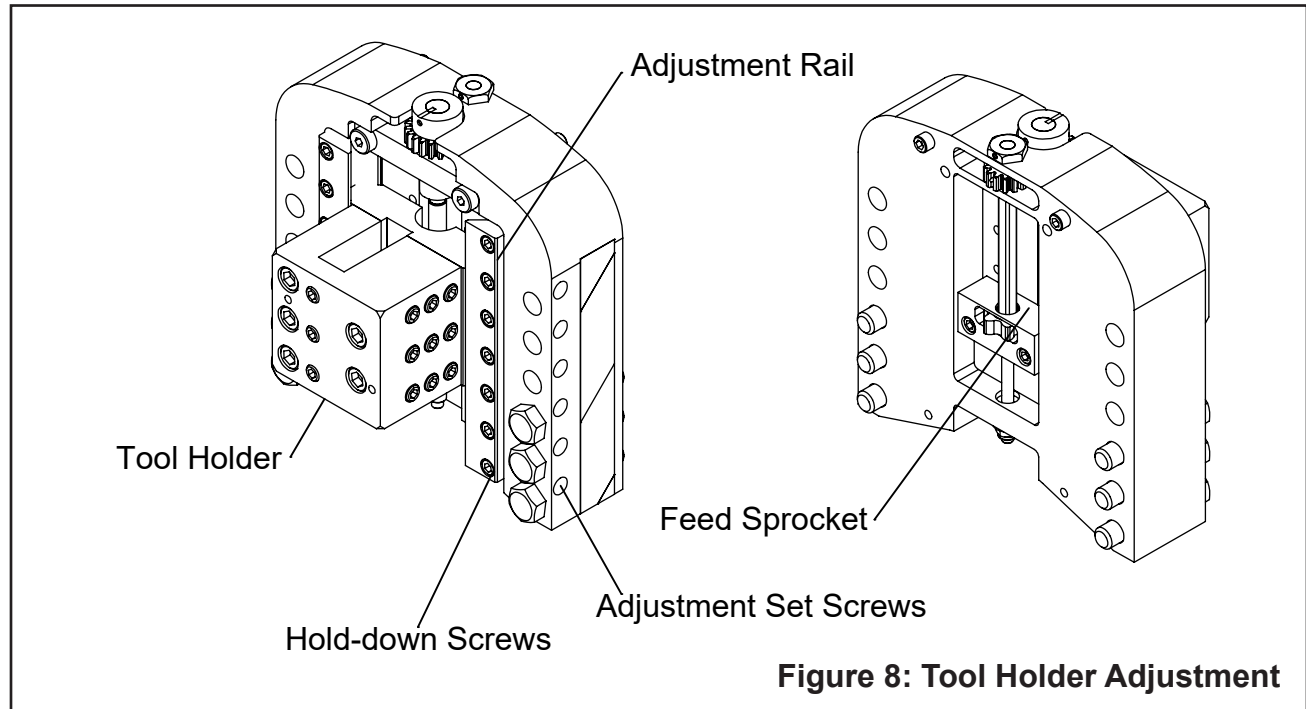
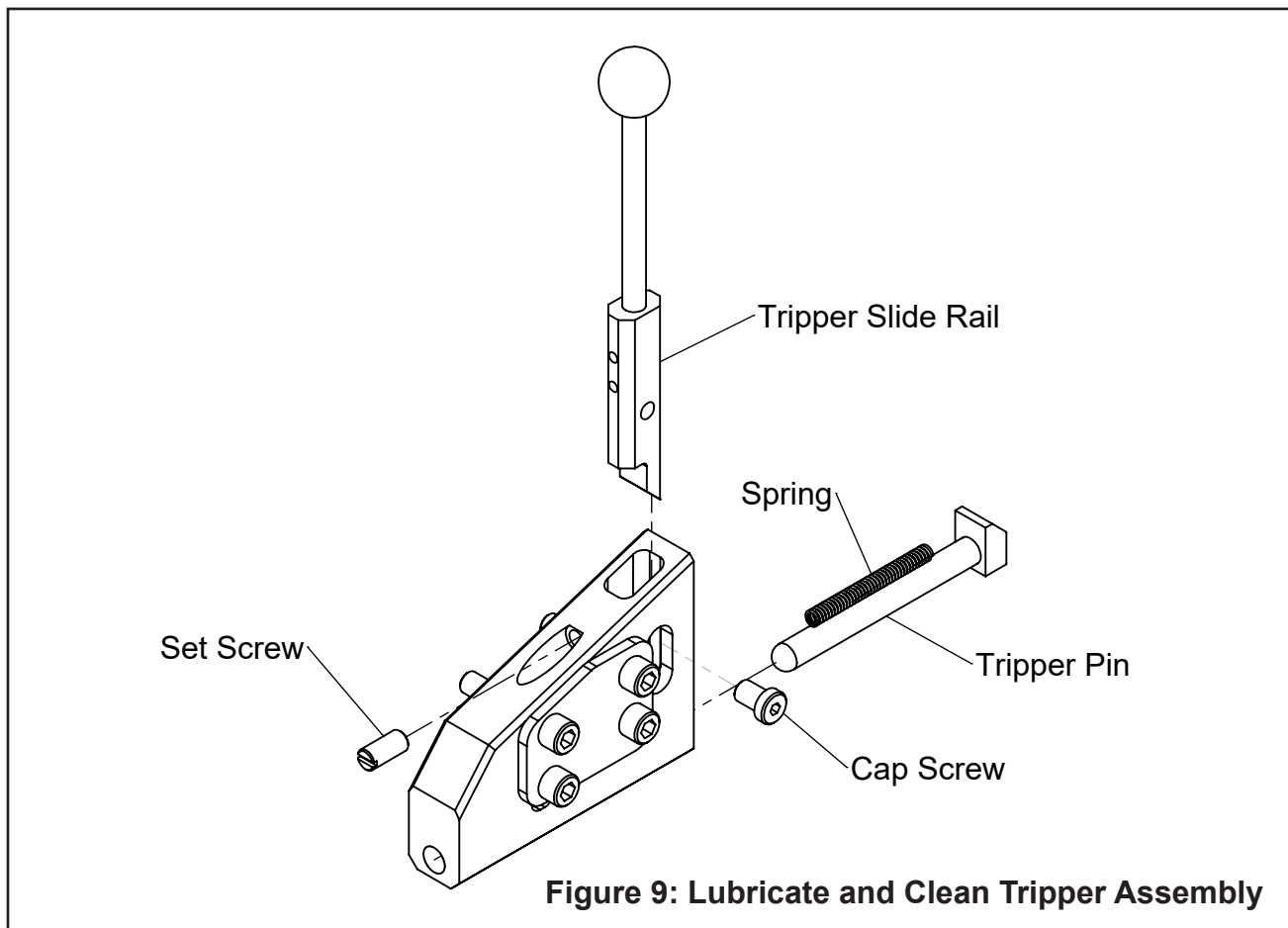


Figure 8: Tool Holder Adjustment

1. Be sure that the Tool Module is mounted firmly.
2. Loosen the Hold-down Screws on the Adjustable Slide Rail.
3. Move the Tool Holder to the most outward position.
4. Use the Adjustment Set Screws to apply light force to the side of the Adjustable Slide Rail until it is in positive contact with the Tool Holder.
5. Only adjust the screws that are in line with the Tool Holder.
6. Tighten the Hold-down Screws to about 12 in-lb (1.4 Nm) to 24 in-lb (2.7 Nm).
7. Use a hex key to finger-tighten the Hold-down Screws.
8. Use a hex wrench, to move the Tool Holder to the inward most position. Note any changes in the feed pressure.
9. Adjust the remaining Adjustment Set Screws so that the Tool Holder has a smooth, even feel.
10. Run the Tool Holder the full length of the Slide Rail.

11. Tightly lock the Adjustable Slide Rail in place with the Hold-down Screws and fully snug the Adjustment Set Screws.
12. Be sure that the Tool Holder runs smoothly and evenly for the full length of travel.
13. Readjust as necessary. The Tool Holder should move with some resistance.

Lubricate and Clean Tripper Assembly



1. Back off the Set Screw until it disengages from the Tripper Slide Rail.
2. Unscrew the Cap Screw.
3. Pull the Tripper Slide Rail out of the Tripper Block. Look for the small spring that the Tripper Slide Rail retains.
4. Pull the Tripper Pin out of the Tripper Block.
5. Clean off old lubrication and debris from the Tripper Slide Rail and Tripper Pin.
6. Apply a light coat of lubrication to the Tripper Slide Rail and Tripper Pin.
7. Reassembly the Tripper Assembly.

RBL-G2 Lubricant Recommendations

The Drive Gears require a heavy-duty grease such as Chevron Ultra Duty NLGI 2 (P/N 68-0024).

The Slide Rails and Tool Blocks require a light oil such as SAE 10 light machine oil.

The Feed Screw for the Tool Block and Tripper Block Assembly requires a SAE 10 light machine oil for normal conditions, and under dusty conditions a silicone, graphite, or molybdenum disulfide 'dry' lubricant.

You can use a light film of all-purpose grease. Be sure to examine it for grit contamination frequently.

The Bearings in the Hydraulic Motors are sealed and do not require any lubrication.

Lubricant Recommendations for Air Motors

Air Motors require a Class 2 lubricant, viscosity of 100 to 200 SSU at 100°F (38°C) minimum aniline point of 200°F (93°C), such as the following:

- Tri Tool Technologies – Air Tool Lubricant (P/N 68-0022)
- Amoco – American Industrial Oil No. 32
- Atlantic Richfield – Duro Oil S-150
- Chevron – A.W. Machine Oil 32
- Exxon – Nuto H32
- Shell – Tellus Oil 32

NOTE: The Bearings in the Air Motors are sealed and do not require additional lubrication.



CAUTION: If a contaminated hydraulic fluid, or a contaminated air supply is used, it may damage the equipment, which would void the warranty.

6. OPERATION



WARNING

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



WARNING

WARNING: LOSS OF POWER SUPPLY: If the power supply is lost during equipment operation, lock out the controls and disconnect the power until the supply is restored. This prevents the equipment from accidentally restarting and causing personal injury.



WARNING

WARNING: Avoid unintentional motor starts. They may cause death or serious personal injury.

Do not carry or handle tools while your hand is on the operating switches or levers.

Do not put the controls for the HPU pendant or the controls for the air motors where they may cause the drive to start.

Do not adjust, service, or handle the machine with the power connected to the motor drive(s).



CAUTION

CAUTION: PNEUMATIC TOOLS

Do not touch the components of pneumatic systems, except for the controls during and after equipment operation. The pneumatic system can get hot enough to cause burns. Wait for the equipment to cool down before handling.

Check the exhaust muffler. Broken or damaged mufflers can restrict air flow or cause excessive noise.

Bleed off all residual air pressure before disconnecting air lines.

Air that is over and under pressure or contaminated can cause malfunctions including delayed or irregular starts.

Preparation

Each time you operate the Model 600RBL-G2 Low Profile Clamshell, read the Operation Manual.

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

Before you mount the equipment, consider the following:

- Is the selected pipe lathe suitable for the task?
- Is there enough space for the equipment and personnel to do the task safely?
- Is enough support in place for the severed pipe and the remaining section?
- Is there enough scaffolding to access the pipe section to be cut?
- Is there enough clearance for the pipe to rotate?
- Is the power source for the pipe lathe accessible?
- Does the Clamshell have enough clearance to fully rotate without obstruction?

Mount the Tool Blocks and Tripper Bracket

Mount the Tool Blocks in either location. You can apply the Tool Blocks before you mount the Clamshell halves to the pipe.



WARNING: Wait for the rotating Tool Block to pass the Tripper Block before you push the Tripper Shaft. This reduces the risk of serious personal injury.

Do not put your hands or other body parts on the drive housing or the Tripper Bracket Assembly when the Headstock is rotating. This reduces the risk of serious personal injury.



CAUTION: Do not install cutting tools, like the Tool Bits, until the Clamshell halves are mounted on the pipe or the equipment will be damaged.

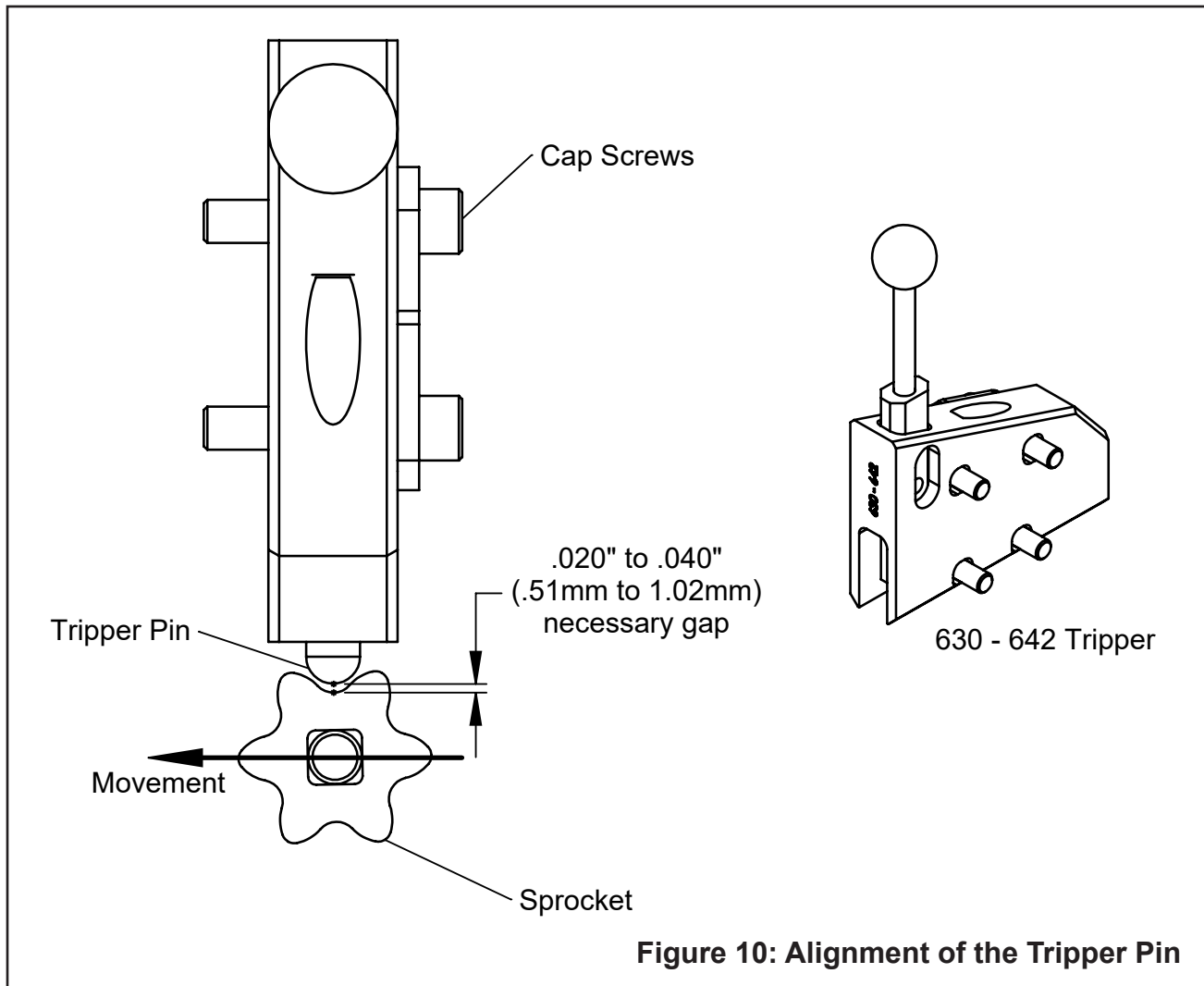
Do not let the Tripper Shaft strike the Sprocket tooth straight on or the Tripper Shaft and the Sprocket may be damaged or broken.

1. Unbolt the two Red Lock Blocks attached to the Headstock.



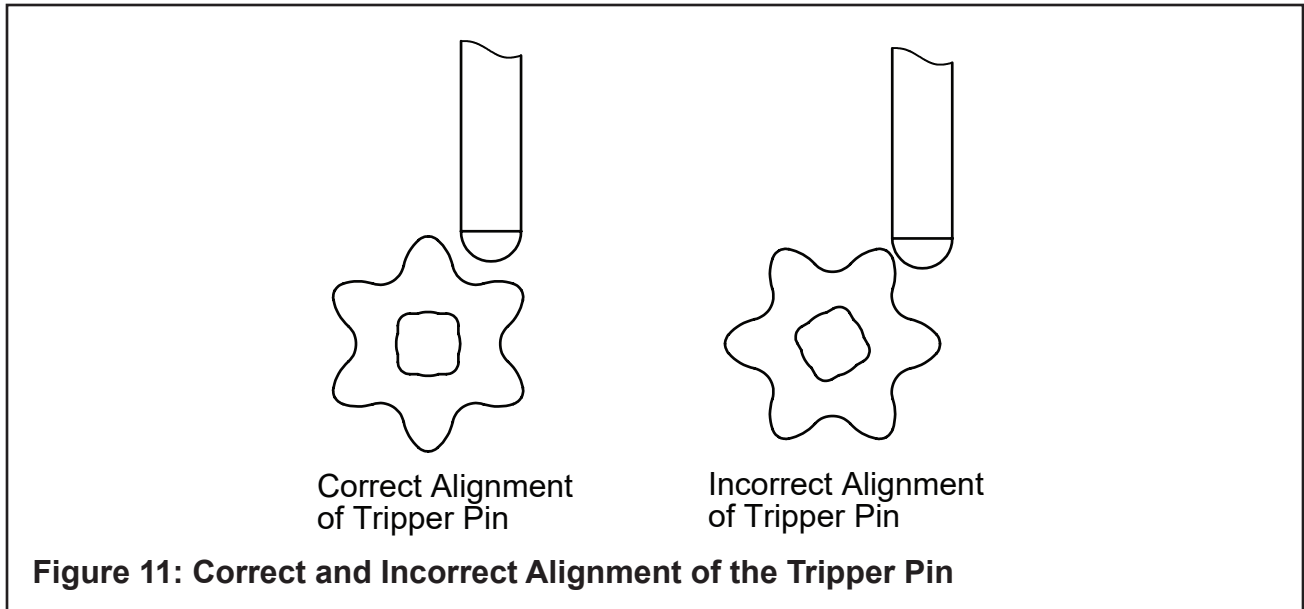
WARNING: When the Red Lock Blocks are removed, the Headstock will rotate freely. Do this procedure on a work bench to prevent the Headstock from rotating free of the Clamshell.

2. Flip the Red Lock Blocks over and reattach them with the dowel pin pointing outward. The Headstock is now free to rotate.
3. Examine the engagement of the Tripper Shaft to the Sprocket (refer to Fig. 10).



CAUTION: Install the proper Tripper Assembly for the Clamshell being used (P/N 47-2587 for 612-624 or P/N 47-2588 for 630-642). Refer to ILLUSTRATED PARTS BREAKDOWN section.

4. Rotate the Headstock until the Sprocket on the Tool Block begins to approach the Tripper Shaft (refer to Fig. 11).
5. Do the following if you need to correct the engagement of Tripper Shaft to Sprocket:
 - Loosen the four (4) Cap Screws on the Tripper Bracket.
 - Adjust the gap to between .020" (.51mm) to .040" (1.02mm).
6. Refer to MOUNTING SPACER BAR ASSEMBLY KITS section to select the Kit that matches the Clamshell to OD of the pipe.



CAUTION: The alignment of the Tripper Pin to the Sprocket must be correct. If it is not, operation of the Clamshell may cause serious damage or destroy the Tripper Pin and Sprocket.

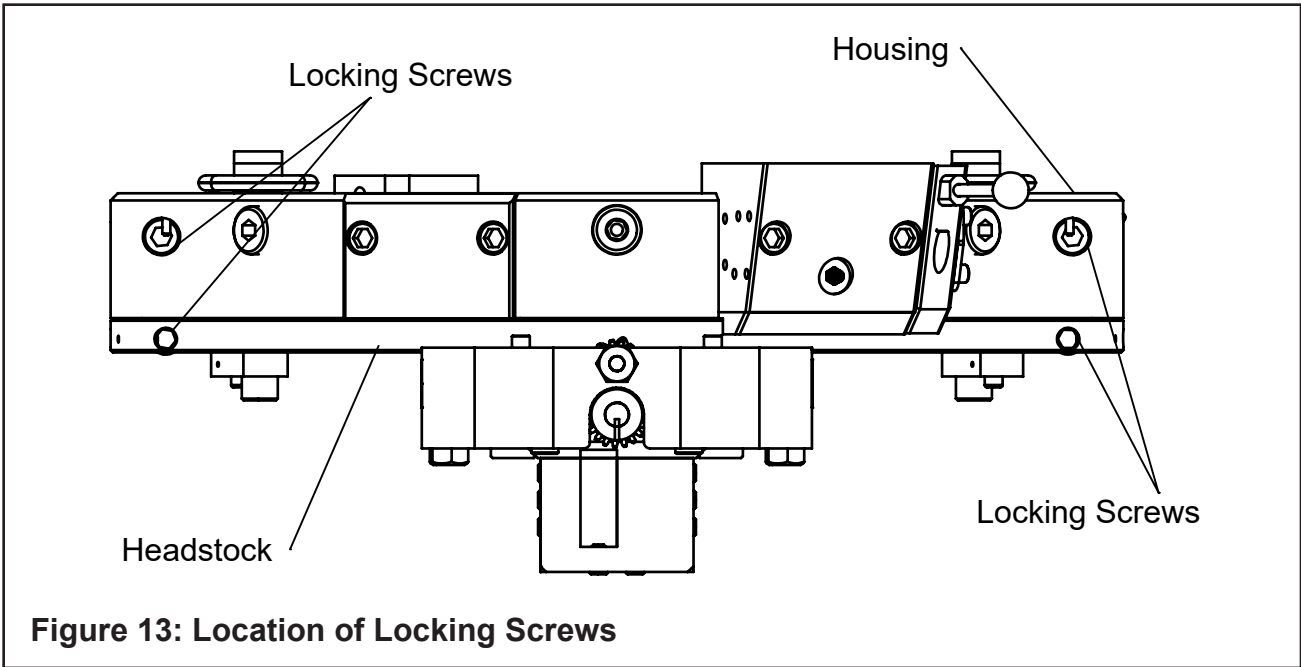
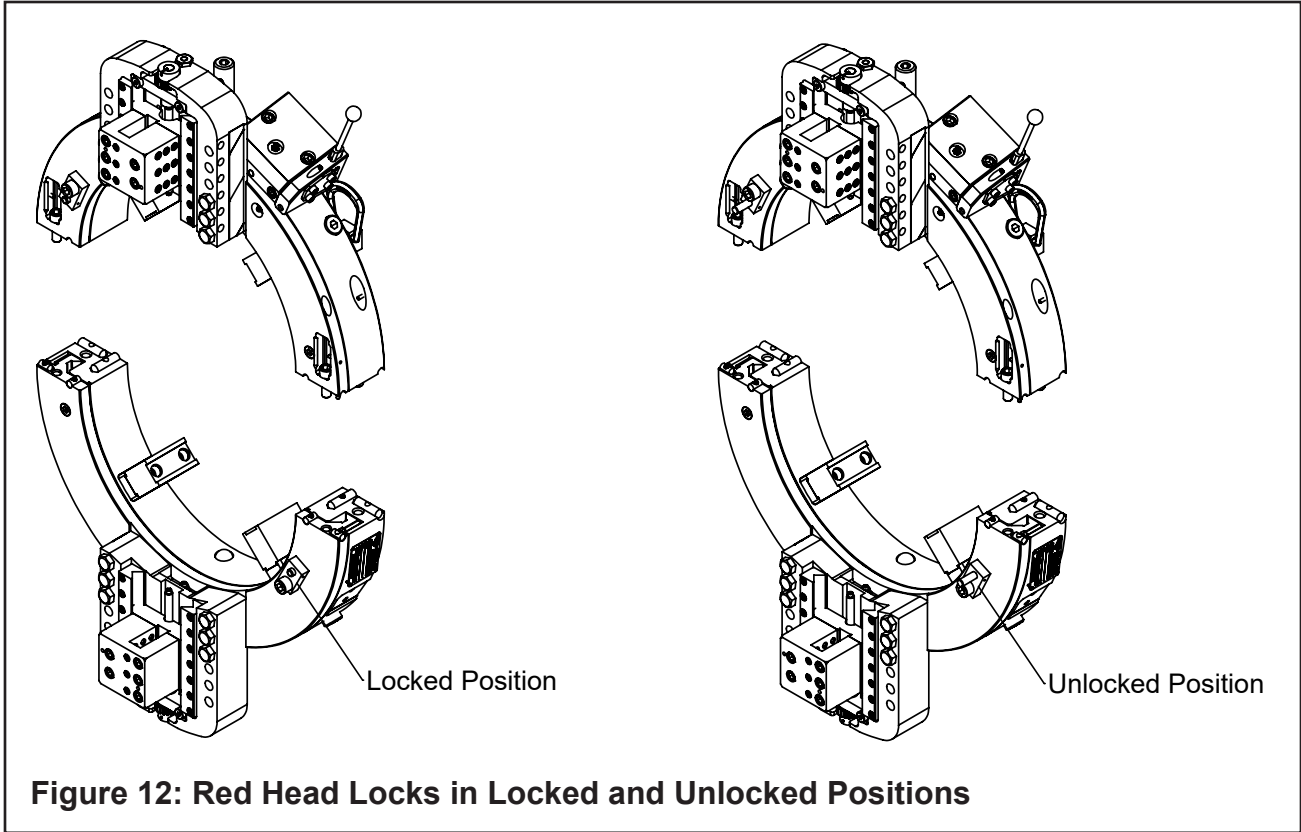
Install Clamshell on Inline Pipe

Preparation for Separating the Clamshell

1. Rotate the Headstock until the splitlines of the Headstock match the splitlines of the Housing.
2. Unbolt the two Red Lock Blocks attached to the Headstock.
3. Flip the Blocks over.
4. Re-attach the Blocks with the dowel pin by passing the pin through the Headstock and into the Housing. The Headstock is now locked into place and cannot rotate out of the Housing while the Clamshell is in half (refer to Fig. 12).



WARNING: Do not let the Headstock rotate out of the Housing while the Clamshell is in half. If it rotates out of the Housing, it could fall on the user and cause personal injury, damage the equipment, or both.



Separate the Clamshell

The Locking Screws are retained in the Housing. You cannot remove them.

1. Unbolt the two Locking Screws on the Housing (refer to Fig. 13).
2. Unbolt the two Locking Screws on the Headstock.
3. Hold the Clamshell at 10 o'clock and 2 o'clock positions.
4. Pull the Clamshell halves apart as evenly and as straight as you can.
5. If the Clamshell does not easily separate at the splitline, do the following:
 - Ensure that the Headstock is aligned with the splitline.
 - Ensure that the splitline assembly bolts are loose.



CAUTION: Do not use tools to separate the Clamshell or force it open. This may damage the equipment.

Secure the Clamshell

1. Clean the mating surfaces and the contact surface of the Adjustable Bars and the Jackscrews on each half of the Clamshell (refer to Fig. 14).
2. Wipe the mounting surface on the pipe.
3. Be sure that the Tool Blocks clear the pipe when the Clamshell is mounted.
4. Close the two (2) halves of the Clamshell around the pipe, and keep the mating surfaces clean.
5. Ensure that the Alignment Pins seated the two (2) halves correctly.
6. Use the Locking Screws in the Housing and in the Headstock to bolt the halves of the Clamshell.
7. Tighten the Locking Screws to torque to between 50 ft-lb (68 Nm) to 60 ft lb (81 Nm).
8. Tighten the Spacer Bars while centering the Clamshell around the pipe. Wiggle the Clamshell around to position the Adjustable Bars. If the Clamshell moves, or if the Adjustable Bars are not on the pipe, adjust the Adjustable Bars to ensure a good fit despite variations in the circumference of the pipe.
9. Tighten Adjustable Bars 1 and 3 to no more than 10 ft-lb (14 Nm) of torque.
10. Tighten Adjustable Bars 2 and 4 to no more than 10 ft-lb (14 Nm) of torque.

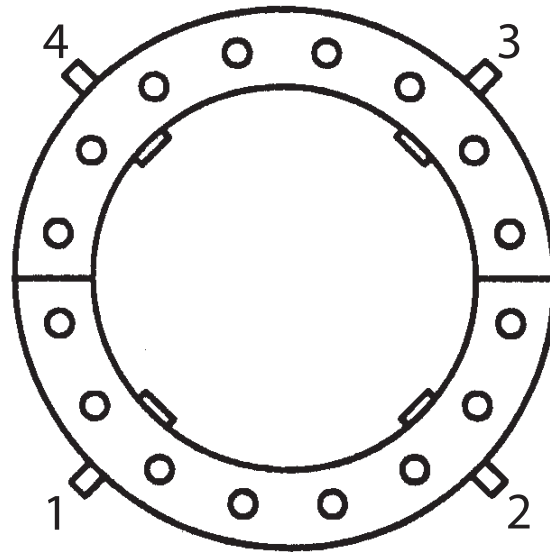


Figure 14: Adjustable Bars

11. To ensure that the Clamshell is centered, do one of the following:
12. Measure from the pipe OD to the Housing ID.
13. Use a dial indicator to sweep around the outside diameter of the pipe.
14. Before you do additional centering or squaring, loosen the Adjustable Bars before you move the Clamshell. If you would like more information about alignment, contact Tri Tool Technologies.

Tighten the Jackscrews

Model 612RBL-G2, 614RBL-G2, and 616RBL-G2

1. Tighten Jackscrews 1 and 2 to 10 ft-lb (14 Nm) of torque.

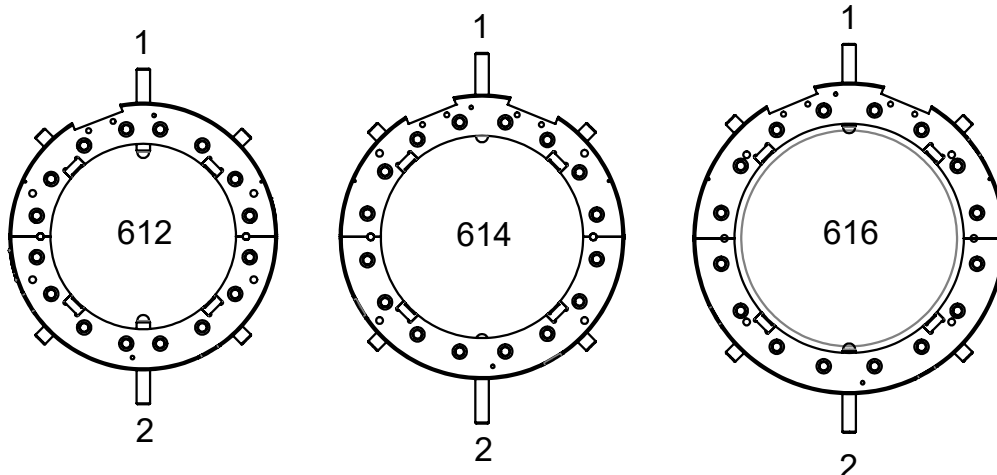


Figure 15: Model 612RBL-G2, 614RBL-G2 and 616RBL-G2 Jackscrews

Model 620RBL-G2 and 624RBL-G2

1. Tighten Jackscrews 2 and 5 to 10 ft-lb (14 Nm) of torque.
2. Tighten Jackscrews 3 and 6 to 10 ft-lb (14 Nm) of torque.
3. Tighten Jackscrews 1 and 4 to 10 ft-lb (14 Nm) of torque.

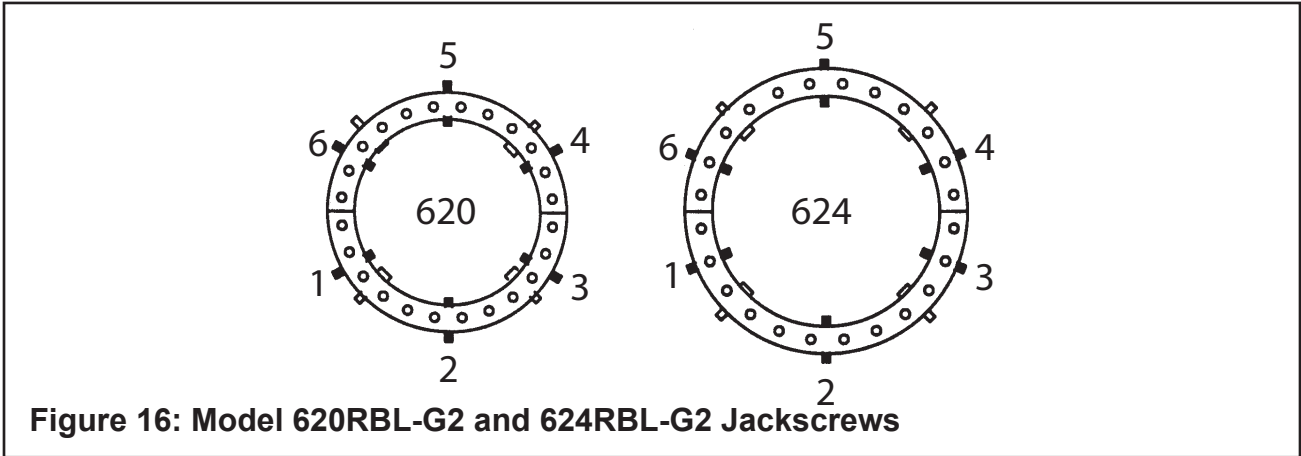


Figure 16: Model 620RBL-G2 and 624RBL-G2 Jackscrews

Model 630RBL-G2 and 636RBL-G2

1. Tighten Jackscrews 3 and 8 to 10 ft-lb (14 Nm) of torque.
2. Tighten Jackscrews 5 and 10 to 10 ft-lb (14 Nm) of torque.
3. Tighten Jackscrews 1 and 6 to 10 ft-lb (14 Nm) of torque.
4. Tighten Jackscrews 2 and 7 to 10 ft-lb (14 Nm) of torque.
5. Tighten Jackscrews 4 and 9 to 10 ft-lb (14 Nm) of torque.

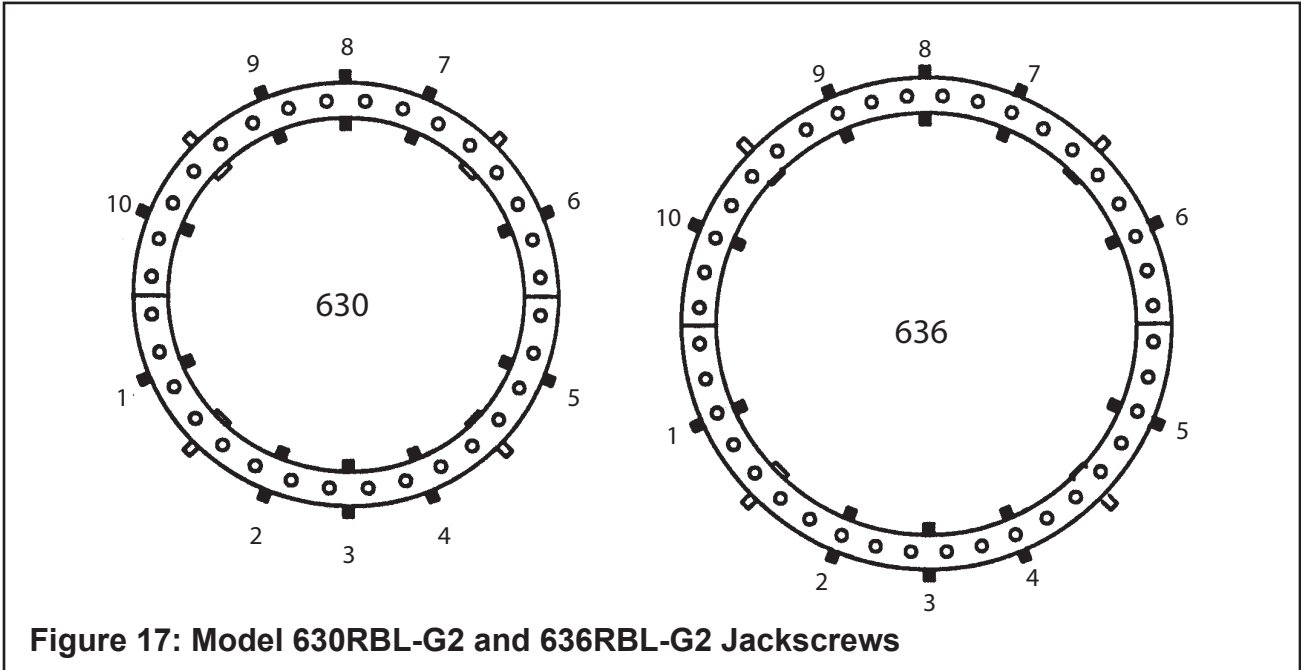


Figure 17: Model 630RBL-G2 and 636RBL-G2 Jackscrews

Model 642RBL-G2

1. Tighten Jackscrews 3 and 8 to 10 ft-lb (14 Nm) of torque.
2. Tighten Jackscrews 5 and 10 to 10 ft-lb (14 Nm) of torque.
3. Tighten Jackscrews 1 and 6 to 10 ft-lb (14 Nm) of torque.
4. Tighten Jackscrews 2 and 7 to 10 ft-lb (14 Nm) of torque.
5. Tighten Jackscrews 4 and 9 to 10 ft-lb (14 Nm) of torque.

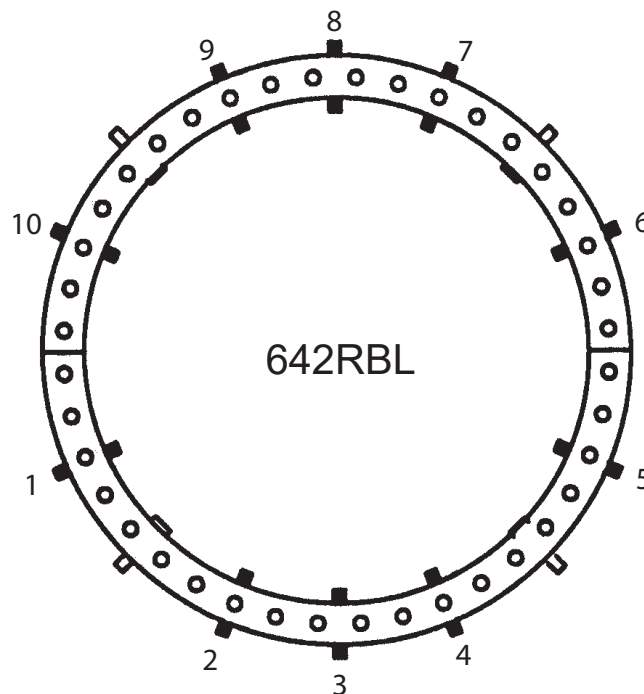


Figure 18: Model 642RBL-G2 Jackscrews

All Clamshell Models

1. Verify that the Clamshell is mounted square and centered to the pipe.
2. Adjust the Jackscrews and Adjustable Bars in opposing pairs to correct any off-center positioning.
3. After the Clamshell is mounted square and centered to the pipe, tighten the Adjustable Bars and Jackscrews to 25 ft-lb (34 Nm) to 30 ft-lb (41 Nm) of torque following the same sequence you used to set them up.
4. If you cannot rotate the Headstock with your hand with the motor(s) removed, the Jackscrews and/or the Adjustable Bars are too tight. Loosen them before you power up the Clamshell.

Install the Drive Motors

1. Install the required Motor(s) and the Drive Housing(s), into the Slots. The Motor Mounts react to the torque of the Motor only when the Motor Hold-down Bolts are in place.
2. Bolt the motors to the Clamshell.
3. Ensure that the Clamshell can rotate clockwise when viewed from the Headstock front face.
4. Be sure that the hydraulic motor pressure hose is connected to Port B and that the return hose is connected to Port A.
5. Unbolt the two Red Lock Blocks attached to the Headstock.
6. Flip them over.
7. Attach them with the dowel pin pointing outward. The Headstock can rotate.
8. Connect the correct power supply to the Model 600RBL-G2.
9. Rotate the Headstock slowly with the Tripper Shaft pushed in for one full revolution to ensure that the Tripper Shaft is aligned with the Sprocket so that the Tripper Shaft connects with the Sprocket on all Tool Blocks.



WARNING

WARNING: Wait for the rotating Tool Block to pass the Tripper Block before you push the Tripper Shaft. If your hand is in the path of the Tool Block before it passes the Tripper Block, this can result in serious personal injury.

Do not put your hands or other parts of your body on the Drive Housing or the Tripper Bracket Assembly when the Headstock is rotating. Serious personal injury can occur.



CAUTION

CAUTION: The Tripper Shaft must strike the Sprocket on the edge of the tooth or the Clamshell can break the Tripper Shaft, the Sprocket, or both.

Select and Install Tool Bit Set

Refer to TOOL BITS section for a description of Tool Bit Sets and installation drawings.



CAUTION

CAUTION: Do not touch the Tool Bits with your hands. The Tool Bits are very sharp and can cut or puncture your skin. Be sure to use gloves when you handle Tool Bits.

Do not use dull Tool Bits or Tool Bits that are not made by Tri Tool Technologies. If you use these Bits, the Clamshell may perform poorly. This constitutes abuse of the equipment and may void the warranty.

1. Be sure that the wall thickness plus 3/4" (19.0mm) of the Tool Bit protrudes from the end of the Tool Holder.
2. Tighten the Tool Bit Set Screws.
3. Do a full rotation of the Headstock to be sure there is adequate radial clearance.
4. Be sure that the Leading Tool Bit contacts the pipe approximately .020" (.51mm) to .040" (1.02mm) before the Trailing Tool Bit.

Basic Machining

1. Turn the motor(s) on to full speed.
2. Push the Tripper Shaft in to engage the feed.



WARNING

WARNING: Wait for the rotating Tool Block to pass the Tripper Block before you push the Tripper Shaft. If your hand is in the path of the Tool Block before it passes the Tripper Block, this can result in serious personal injury.

Do not put your hands or other parts of your body on the Drive Housing or the Tripper Bracket Assembly when the Headstock is rotating. Serious personal injury can occur.

3. Monitor the cutting operation.
4. Apply cutting fluid as necessary.



WARNING

WARNING: Do not remove chips when the tool is moving. Your hand or other body parts can be caught in rotating components. Serious injury or death could result.

The chips have sharp edges and can cut or puncture your skin. Wear gloves and be careful when you remove the chips.

5. If there are so many chips that they tangle in the Clamshell, disengage the feed for 2-3 revolutions, and then stop the Clamshell and remove the chips.
6. Before you finish the cut, examine the supports and the scaffolds to be sure that nothing will move after the pipe is severed.

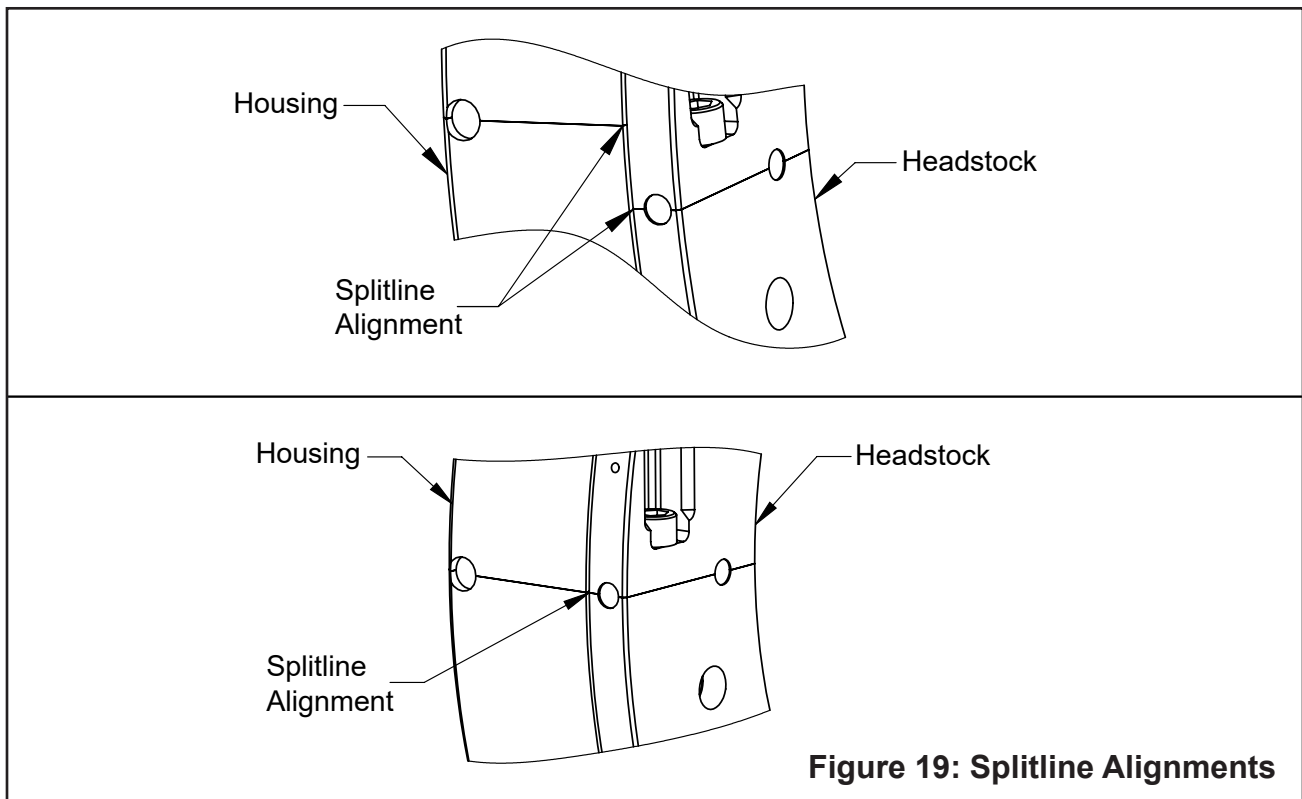


WARNING

WARNING: If the pipe or equipment moves as the cut is completed, do not try to stop them by holding them. Holding a moving pipe or moving equipment may cause injury to the operator and others.

7. After the machining operation is finished, disengage the Tripper Shaft by pulling it to the 'out' position.

8. Allow the Headstock to continue for three (3) revolutions to complete cutting.
9. Turn off the motor(s).
10. Retract the Tool Holder(s) to let the Tool Bit(s) clear the pipe OD.
11. Retract The Tool Holder(s), rotating the Feed Sprocket Shaft clockwise using the hex wrench supplied with the Clamshell.
12. Run the motor(s) until the splitlines of the Headstock and the Housing align.
13. Loosen the Jackscrews and the Adjustable Bars.
14. Remove the Clamshell from the pipe.



15. Unbolt the two Red Lock Blocks attached to the Headstock.
16. Flip them over and reattach them with the dowel pin going through the Headstock and into the Housing.
17. The Headstock is locked into place. If you need to split the Clamshell to remove it, refer to earlier in this section. Ensure the halves of the Clamshell are supported.



WARNING: Do not let the Headstock rotate out of the Housing while the Clamshell is in half. If it rotates out of the Housing it could fall on the user and cause personal injury, damage the equipment, or both.

7. CUTTING SPEEDS AND FEEDS



WARNING: Do not let the Headstock rotate out of the Housing while the Clamshell is in half. If it rotates out of the Housing it could fall on the user and cause personal injury, damage the equipment, or both.

Pipe Size	True DIA	RPM for 200 in/min (5080 mm/min)	RPM for 250 in/min (6350 mm/min)	RPM for 300 in/min (7620 mm/min)	RPM for 450 in/min (11430 mm/min)	RPM for 720 in/min (18288 mm/min)
42"	42.00" (1066.8mm)	1.5	1.9	2.3	3.4	5.5
40"	40.00" (1016.0mm)	1.6	2	2.4	3.6	5.7
38"	38.00" (965.2mm)	1.7	2.1	2.5	3.8	6
36"	36.00" (914.4mm)	1.8	2.2	2.7	4	6.4
34"	34.00" (863.6mm)	1.9	2.3	2.8	4.2	6.7
32"	32.00" (812.8mm)	2	2.7	3	4.5	7.2
30"	30.00" (762.0mm)	2.1	2.7	3.2	4.8	7.6
28"	28.00" (711.2mm)	2.3	2.8	3.4	5.1	8.2
26"	26.00" (660.4mm)	2.4	3.1	3.7	5.5	8.8
24"	24.00" (609.6mm)	2.6	3.3	4	6	9.5
22"	22.00" (558.8mm)	2.9	3.6	4.3	6.5	10.4
20"	20.00" (508.0mm)	3.2	4	4.8	7.2	11.5
18"	18.00" (457.2mm)	3.5	4.4	5.3	8	12.7
16"	16.00" (406.4mm)	4	5	6	9	14.3
14"	14.00" (355.6mm)	4.5	5.7	6.8	10.2	16.4
12"	12.75" (323.9mm)	5	6.2	7.5	11.2	18
10"	10.75" (273.1mm)	5.9	7.4	8.9	13.3	21.3
8"	8.63" (219.2mm)	7.4	9.2	11.1	16.6	26.6
7"	7.63" (193.8mm)	8.3	10.4	12.5	18.8	30
7"	7.00" (177.8mm)	9.1	11.4	13.6	20.5	32.7
6"	6.63" (162.3mm)	10.6	12	14.4	21.6	34.6

Use 200 to 250 surface inches per minute (5080 to 6350 millimeters per minute) for:

- Stainless steels, mild steel, heavy wall tube, and chrome/ molybdenum steels.

Use 300 to 450 surface inches per minute (7620 to 11430 millimeters per minute) for:

- Aluminum and some thin wall mild steel and tube with coolant.

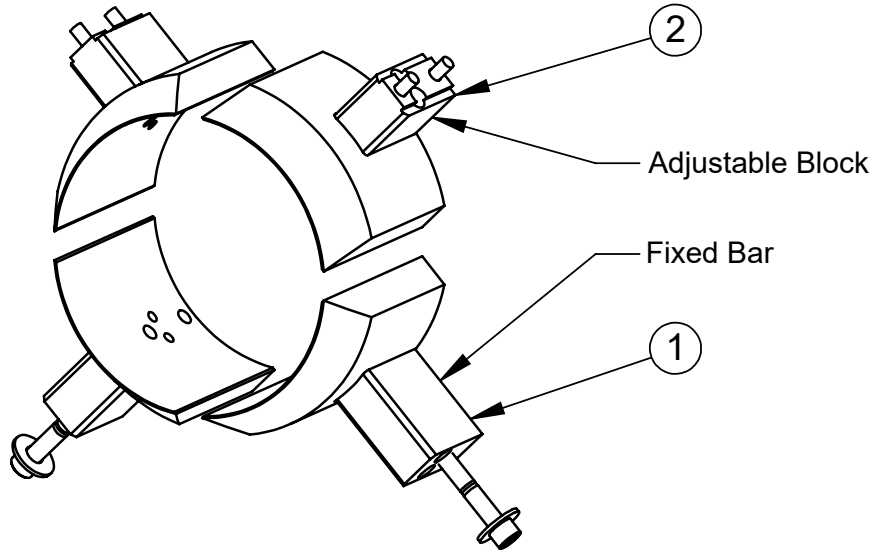
Use 450 to 720 surface inches per minute (11430 to 18288 millimeters per minute) for:

- Free cutting materials with carbide when application permits.

8. MOUNTING SPACER BAR ASSEMBLY KITS

Pipe DIA	True OD		P/N Mounting Spacer Bar Assembly P/N
	in.	mm	
Model 612 RBL-G2			
6"	6.63"	168.3mm	08-0348
8"	8.63"	219.2mm	08-0347
10"	10.75"	273.1mm	08-0346
Model 614 RBL-G2			
7"	7.00"	177.8mm	08-0353
7"	7.63"	193.8mm	08-0352
8"	8.63"	219.2mm	08-0351
10"	10.75"	273.1mm	08-0350
12"	12.75"	323.9mm	08-0349
Model 616 RBL-G2			
10"	10.75"	273.1mm	08-0351
12"	12.75"	323.9mm	08-0350
14"	14.00"	355.6mm	08-0346
Model 620 RBL-G2			
14"	14.00"	355.6mm	08-0348
16"	16.00"	406.4mm	08-0347
18"	18.00"	457.2mm	08-0346
Model 624 RBL-G2			
18"	18.00"	457.2mm	08-0348
20"	20.00"	508.0mm	08-0347
22"	22.00"	558.8mm	08-0346
Model 630 RBL-G2			
24"	24.00"	609.6mm	08-0348
26"	26.00"	660.4mm	08-0347
28"	28.00"	711.2mm	08-0346
Model 636 RBL-G2			
30"	30.00"	762.0mm	08-0348
32"	32.00"	812.8mm	08-0347
34"	34.00"	863.6mm	08-0346
Model 642 RBL-G2			
36"	36.00"	914.4mm	08-0348
38"	38.00"	965.2mm	08-0347
40"	40.00"	1016.0mm	08-0346

9. FULL SUPPORT PAD KITS



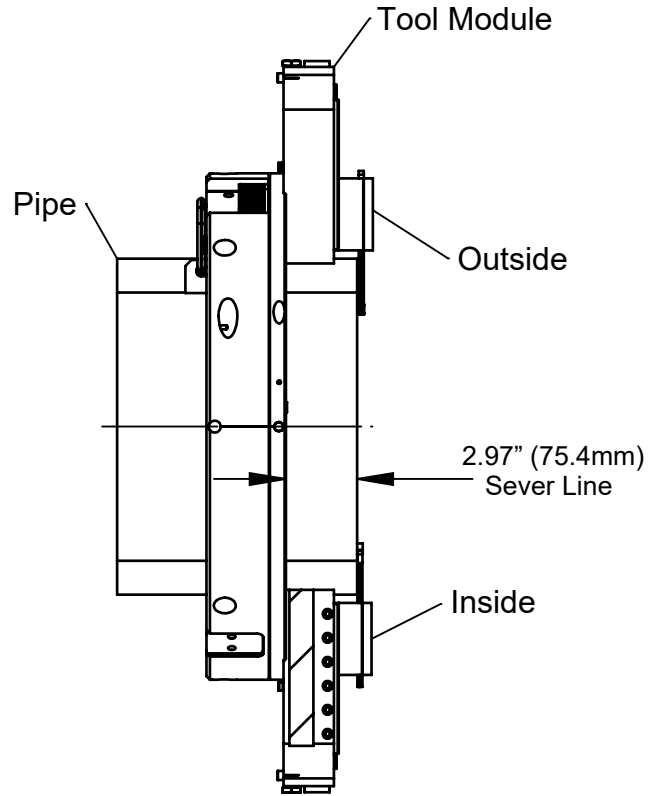
Machine Size	Pipe OD	Pad Set	Item #1 Fixed Pad Ass'y	Fixed Bar	Item #2 Adjustable Pad Ass'y	Adjustable Block
612RBL	6.625" (168.3mm)	05-1538	67-5309	26-2024 (3.433")	67-5382	48-4535 (2.338")
	8.625" (219.1mm)	05-1539	67-5310	26-2029 (2.433")	67-5383	48-4549 (1.338")
	10.750" (273.1mm)	05-1540	67-5311	26-2032 (1.370")	67-5384	48-4552 (0.425")
614RBL	8.625" (219.1mm)	05-1520	67-5289	26-2024 (3.433")	67-5290	48-4535 (2.338")
	10.750" (273.1mm)	05-1541	67-5312	26-2030 (2.370")	67-5322	48-4550 (1.275")
	12.750" (323.9mm)	05-1542	67-5313	26-2032 (1.370")	67-5323	48-4552 (0.425")
616RBL	10.750" (273.1mm)	05-1543	67-5314	26-2027 (3.370")	67-5324	48-4547 (2.275")
	12.750" (323.9mm)	05-1544	67-5315	26-2030 (2.370")	67-5325	48-4550 (1.275")
	14.000" (355.6mm)	05-1545	67-5316	26-2031 (1.745")	67-5326	48-4551 (0.650")
620RBL	14.000" (355.6mm)	05-1546	67-5317	26-2026 (3.745")	67-5327	48-4546 (2.650")
	16.000" (406.4mm)	05-1547	67-5318	26-2028 (2.745")	67-5328	48-4548 (1.650")
	18.000" (457.2mm)	05-1548	67-5319	26-2031 (1.745")	67-5329	48-4551 (0.650")
624RBL	18.000" (457.2mm)	05-1549	67-5320	26-2026 (3.745")	67-5330	48-4546 (2.650")
	20.000" (508.0mm)	05-1550	67-5321	26-2028 (2.745")	67-5331	48-4548 (1.650")

Mounting Instructions for Full Support Pad Kits

1. Remove two (2) of the Adjustable Bar Assemblies (26-1351) to allow for mounting the two (2) Fixed Full Support Pad assemblies.
2. Mount the two (2) Fixed Full Support Pad Assemblies by fastening the 1/2-13 cap screw to the Fixed Bar through the Clamshell housing.
3. Mount the two (2) Adjustable Full Support Pad Assemblies to the Adjustable Bar Assemblies still on the machine using the tooling access holes on the clamping face of the Adjustable Full Support Pad Assemblies.
4. Fully retract the Adjustable Full Support Pad Assemblies prior to mounting the 600 Series Clamshell on a pipe.

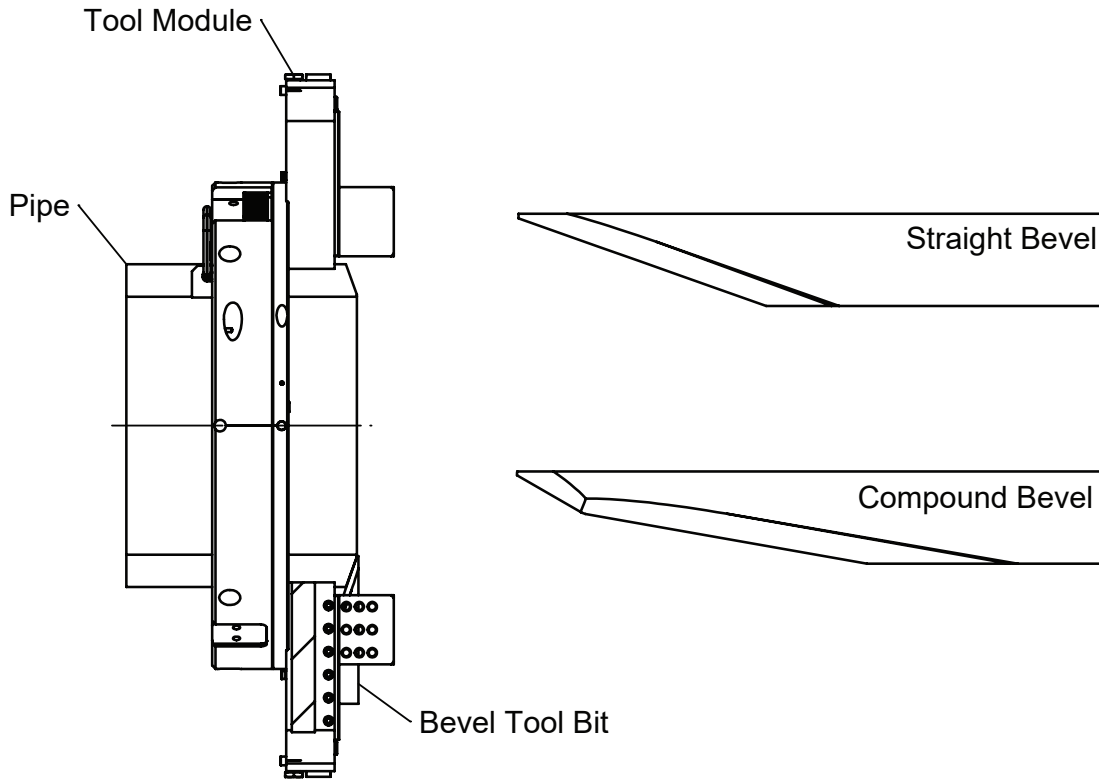
10. TOOL BITS

Carbide Sever (P/N 05-0807)



Item No.	Part No.	Description	Qty
1	49-0792	SEVER TOOL HOLDER	2
2	30-3716	SEVER CARBIDE INSERT	2

Right Hand Bevel Using Carbide Sever Kit (P/N 05-0807)



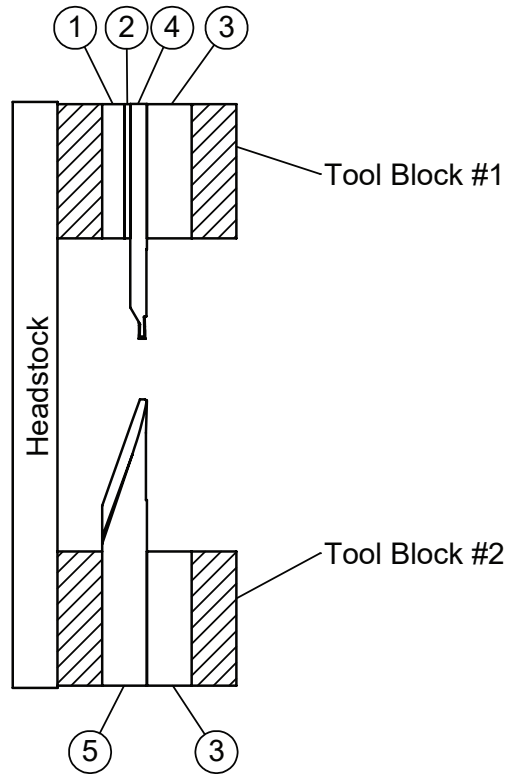
Straight Bevel Tool Bits

Part Number	Angle	Max Wall
99-10626	20	2.00" (50.8mm)
99-10627	22.5	2.00" (50.8mm)
99-10628	25	1.81" (46.0mm)
99-10629	27.5	1.63" (41.4mm)
99-10630	30	1.44" (36.6mm)
99-10631	37.5	1.12" (28.4mm)
99-10632	40	1.00" (25.4mm)
99-10633	45	.81" (20.6mm)

Compound Bevel Tool Bits

Angle	Primary Angle	Secondary Angle	Max Wall
99-10650	30	10	1.50" (32.1mm)
99-10651	37.5	10	
99-10652	37.5	15	
99-10563	30	15	

Sever and Right Hand Bevel

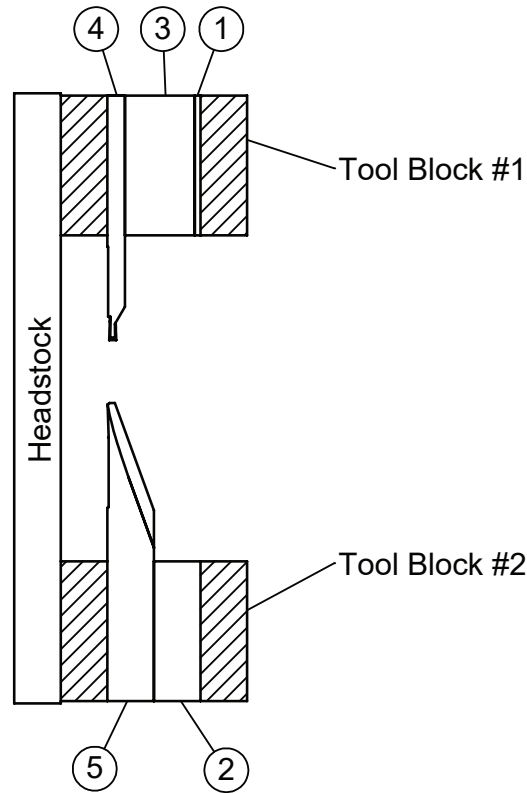


Item No.	Part No.	Description	Qty
1	30-0206	SPACER, TOOL, 1/2" X 3/4" X 3"	1
2	30-0223	SPACER, TOOL, 1/8" X 3/4" X 3"	1
3	30-0225	SPACER, TOOL, 3/4" X 1" X 3"	2
4	99-4077	TOOL BIT, SEVER FOR RIGHT HAND BEVEL	1
5	TAB	RIGHT HAND BEVEL	1

Sever and Right Hand Bevel Tool Bits

Part Number	Angle	Max Wall
99-10610	20	2.00" (50.8mm)
99-10611	22.5	1.75" (44.5mm)
99-10612	25	1.50" (38.1mm)
99-10613	27.5	1.38" (35.1mm)
99-10614	30	1.25" (31.8mm)
99-10615	37.5	0.93" (23.6mm)
99-10616	40	0.88" (22.4mm)
99-10617	45	0.69" (17.5mm)

Sever and Left Hand Bevel

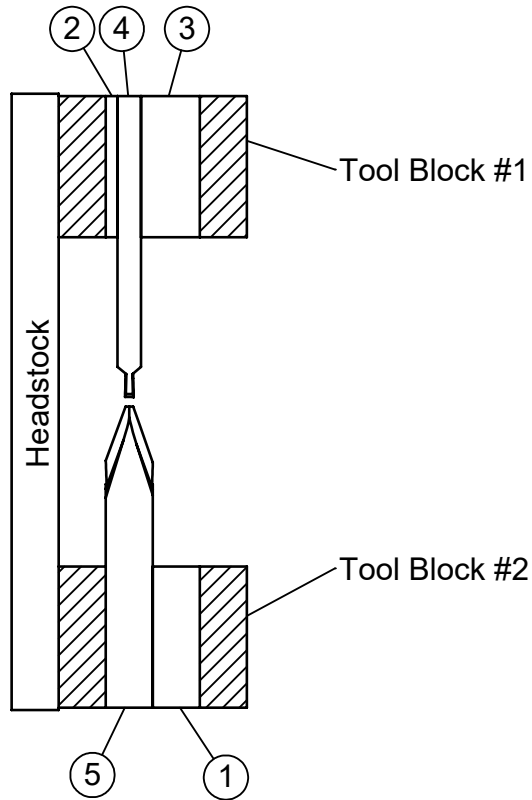


Item No.	Part No.	Description	Qty
1	30-0223	SPACER, TOOL, 1/8" X 3/4" X 3"	1
2	30-0225	SPACER, TOOL, 3/4" X 1" X 3"	1
3	30-0295	SPACER, TOOL, 3/4" X 1 1/2" X 3"	1
4	99-4078	TOOL BIT, SEVER FOR LEFT HAND BEVEL	1
5	TAB	LEFT HAND BEVEL	1

Sever and Left Hand Bevel Tool Bits

Part Number	Angle	Max Wall
99-10618	20	2.00" (50.8mm)
99-10619	22.5	1.75" (44.5mm)
99-10620	25	1.50" (38.1mm)
99-10621	27.5	1.38" (35.1mm)
99-10622	30	1.25" (31.8mm)
99-10623	37.5	0.93" (23.6mm)
99-10624	40	0.88" (22.4mm)
99-10625	45	0.69" (17.5mm)

Sever and Double Bevel

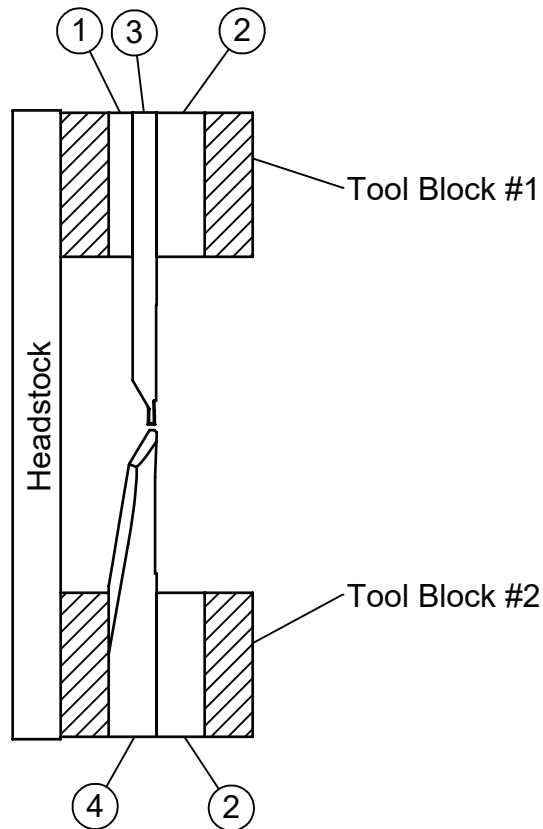


Item No.	Part No.	Description	Qty
1	30-0225	SPACER, TOOL, 3/4" X 1" X 3"	1
2	30-0227	SPACER, TOOL, 1/4" X 3/4" X 3"	1
3	30-0288	SPACER, TOOL, 3/4" X 1 1/4" X 3"	1
4	99-10659	SEVER, DOUBLE BEVEL	1
5	TAB	DOUBLE BEVEL	1

Sever and Double Bevel Tool Bits

Part Number	Angle	Max Wall
99-10634	20	1.00" (25.4mm)
99-10635	22.5	.88" (22.4mm)
99-10636	25	.75" (19.1mm)
99-10637	27.5	.68" (17.3mm)
99-10638	30	.62" (15.7m)
99-10639	37.5	.46" (11.7mm)
99-10640	40	.44" (11.2mm)
99-10641	45	.37" (9.4mm)

Sever and Right Hand Compound Bevel

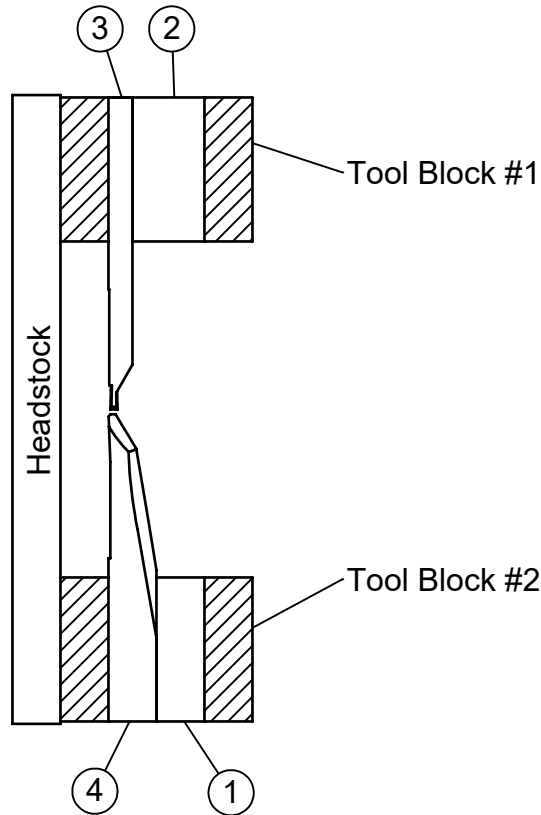


Item No.	Part No.	Description	Qty
1	30-0206	SPACER, TOOL, 1/2" X 3/4" X 3"	1
2	30-0225	SPACER, TOOL, 3/4" X 1" X 3"	2
3	99-4912	TOOL BIT, SEVER FOR RIGHT HAND BEVEL	1
4	TAB	RIGHT HAND COMPOUND BEVEL	1

Sever and Right Hand Compound Bevel Tool Bits

Angle	Primary Angle	Secondary Angle	Max Wall
99-10642	30	10	
99-10643	37.5	10	2.00" (50.8mm)
99-10644	37.5	15	
99-10645	30	15	

Sever and Left Hand Compound Bevel

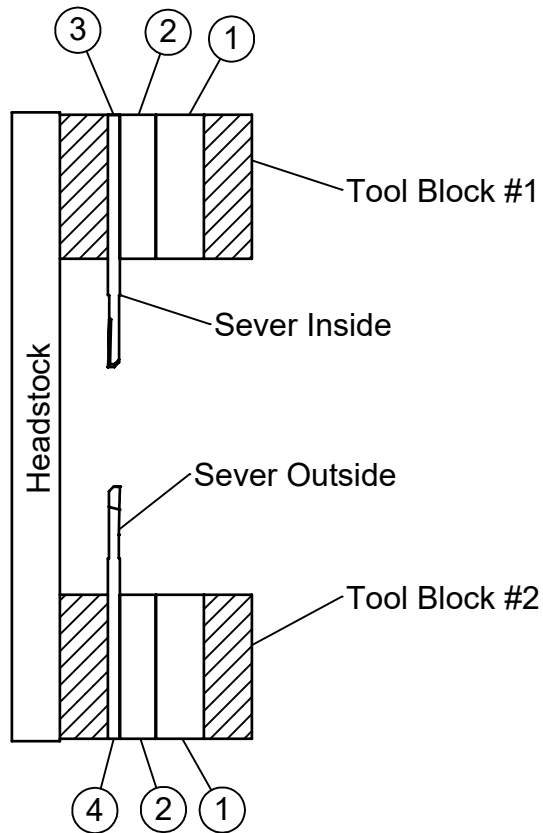


Item No.	Part No.	Description	Qty
1	30-0225	SPACER, TOOL, 3/4" X 1" X 3"	1
2	30-0295	SPACER, TOOL, 3/4" X 1-1/2" X 3"	1
3	99-4936	TOOL BIT, SEVER FOR LEFT HAND BEVEL	1
4	TAB	LEFT HAND COMPOUND BEVEL	1

Sever and Left Hand Compound Bevel Tool Bits

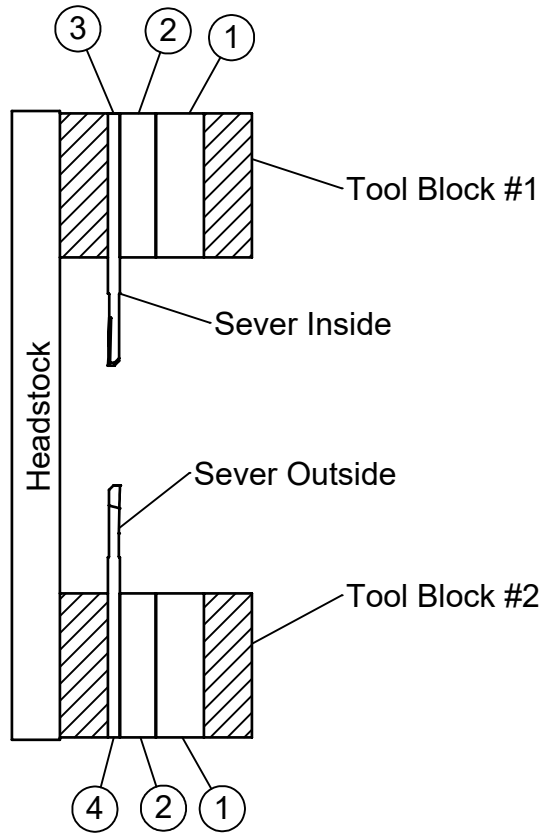
Angle	Primary Angle	Secondary Angle	Max Wall
99-10646	30	10	
99-10647	37.5	10	2.000" (50.8mm)
99-10648	37.5	15	
99-10649	30	15	

Sever 1/4" (6.35mm) Wide



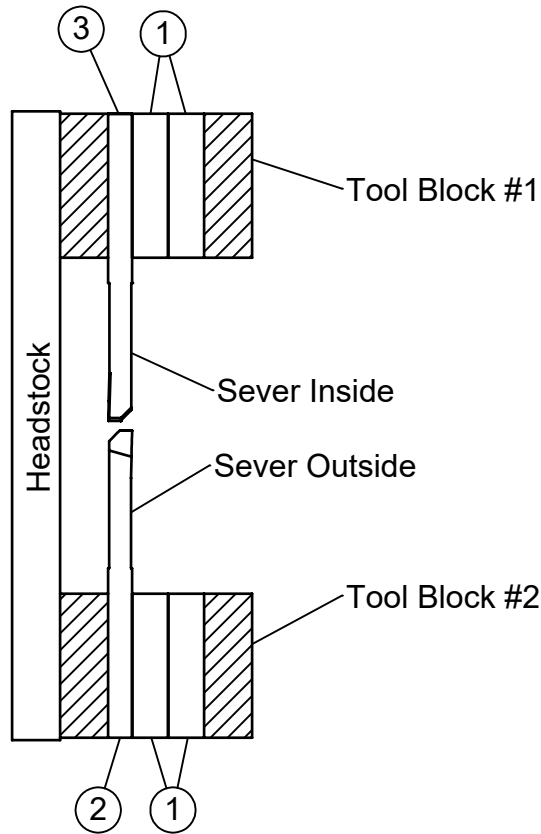
Item No.	Part No.	Description	Qty	Max Wall
1	30-0225	SPACER, TOOL, 3/4" X 1" X 3"	2	
2	30-0310	SPACER, TOOL, 3/4" X 1-1/2" X 3"	2	
3	99-5982	TOOL BIT, SEVER, INSIDE	1	1.375 (34.9mm)
4	99-5983	TOOL BIT, SEVER, OUTSIDE	1	

Sever 3/8" (9.53mm) Wide



Item No.	Part No.	Description	Qty	Max Wall
1	30-0223	SPACER, TOOL, 1/8" X 3/4" X 3"	2	
2	30-0295	SPACER, TOOL, 3/4" X 1-1/2" X 3"	2	
3	99-5673	TOOL BIT, SEVER, INSIDE	1	2.000" (50.8mm)
4	99-5674	TOOL BIT, SEVER, OUTSIDE	1	

Sever 1/2" (12.7mm) Wide



Item No.	Part No.	Description	Qty	Max Wall
1	30-0310	SPACER, TOOL, 3/4" X 3/4" X 3"	4	
2	99-5680	TOOL BIT, SEVER, OUTSIDE	1	2.750" (69.9mm)
3	99-5681	TOOL BIT, SEVER, INSIDE	1	

11. TROUBLESHOOTING

Problem: Tool Bit Chatters

- The tool bit is loose or overextended.
 - The tool bit is damaged.
 - The tool holder is too loose in the slides.
 - The cutting speed is too fast.
 - The clamping pads are loose on the pipe or tube.
 - Cutting fluid is required.
 - The main bearing pre-load is loose.
-

Problem: Excessive Tool Bit Wear

- The pipe or tube material is too hard or abrasive.
 - The cutting speed is too fast.
 - Cutting fluid is required.
 - A dull Tool Bit is causing surface hardening conditions (Stainless pipe or tubing).
 - There is scale or other foreign matter on the pipe or tube, which is dulling the tool bit at the start of the cut.
 - The tool bit is incorrect for the material being cut.
-

Problem: Rough Surface Finish

- The tool bit is dull, chipped, etc.
 - Metal build-up on the cutting edge of the tool bit is creating a false cutting edge.
 - Cutting fluid is required.
 - The cutting speed is incorrect.
-

Problem: Tool Holder Is Not Feeding

- The feed pin is broken or out of position.
 - The feed sprocket shear pin is broken.
 - The feed screw is stripped.
 - The feed nut is stripped.
 - The slide rails are too tight.
-

Problem: Tool Bit Does Not Reach Work

Incorrect tool blocks are installed for the size of the pipe or tube being worked on.
Incorrect tool bit is installed.

Problem: Air Motor Does Not Start

The air power supply is shut off.

The air motor is damaged and will not run free.

The air motor needs lubrication. Add lubrication and do not run the air motor for a few minutes, then try running the motor.

Sand or other foreign material may be in the vanes of the air motor. Tap on the side of the air motor casing lightly with a piece of wood or with a soft rubber mallet just in case the vanes may be sticking.

Problem: Electric Motor Does Not Start

The electric power supply is shut off.

The electric motor is damaged and will not run free.

Problem: Hydraulic Motor Does Not Start

The hydraulic power supply is shut off.

The hydraulic motor is damaged and will not run free.

Problem: Loss Of Air Power

The air supply pressure is too low.

The air filter is plugged.

The air line size is insufficient.

The air line is too long.

Problem: Loss Of Hydraulic Power

The hydraulic supply pressure is too low.

The hydraulic filter is plugged.

The hydraulic line size is insufficient.

The hydraulic line is too long.

Problem: The Clamshell Is Slipping On The Pipe Or Tube

The Clamping Pads are not in full contact with the pipe or tube.

The clamping pressure is too light.

Scale and/or other foreign material is present on the pipe or tube.

Weld seams, swelling, or bumps under the Clamping Pads are preventing full contact.

Dull Tool Bits are causing extra force in the axial and/or radial direction.

The pipe or tube wall is too thin, which allows the tube wall to flex and the machine to move.

Problem: The Clamshell Will Not Center On The Pipe Or Tube

The Clamshell will not center on the pipe or tube. (Fixed Pads)

Incorrect Clamping Pad Set is installed.

Scale and/or foreign material is present on the pipe or tube.

One of the Clamping Pads is on a seam.

The pipe or tube has an out-of-round condition or is oversized or undersized.

Problem: Tool Bit Is Diving And Clamshell Is Stalling

The Feed Pin is broken or out of position.

The Feed Sprocket shear pin is broken.

The Tool Bit is dull, chipped, etc.

The Tool Holder Adjustment Slide is too loose.

The Parting Tool Bit is leading the Beveling Tool Bit by too much for proper chip clearance.

The Tool Bit is over-extended.

The Main Bearing pre-load is too loose.

Problem: Headstock Is Hard To Rotate By Hand

The Air Motor is still engaged.

The Clamping Pads are too tight on the pipe or tube.

Foreign material is on the mating surface of the splitlines.

Chips and/or other foreign material are in the rotating section.

The Tool Bit is in contact with the pipe or tube.

The Tool Block is in contact with the pipe or tube.

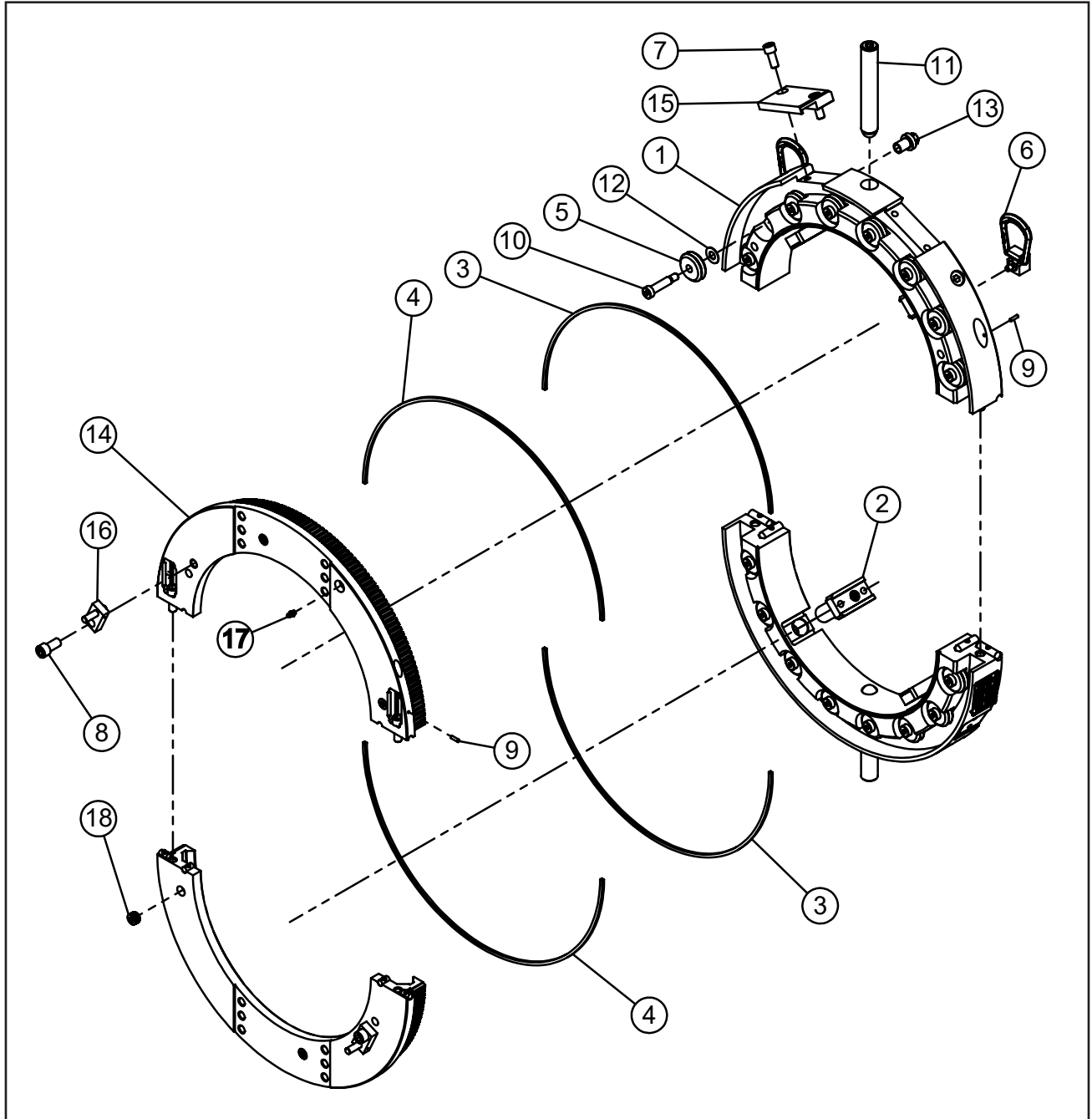
12. ACCESSORIES

The following accessories are recommended for use with the Model 600RBL-G2 Clamshells and are available from Tri Tool Technologies.

- Model 765RVC Hydraulic Power Supply (for single or dual hydraulic drive systems)
 - Available in 480 volt, 380 volt and 240 volt configurations
- Model 757RSS Hydraulic Power Supply (for single hydraulic drive systems)
 - Available in 480 volt, 380 volt and 240 volt configurations
- Portable Air Filter Caddy (P/N 75-0078) (for single or dual air drive systems)
 - A Filter/Regulator/Lubricator (FRL) is required to protect the warranty on all Tri Tool Technologies air-driven tools
- 600RBL Single Point Module Kit
- 600RBL OD Tracking Module Kit
- 600RBL Full Support Pad Sets
- Heavy Duty Electric Drive Motor Kit (115 VAC or 230 VAC)
- CBM-3 Counterbore Module Kit (P/N 05-0220)
- Heavy Duty Sever Accessory Kit (P/N 05-0203)
 - Converts Tool Modules (P/N 08-1354) into heavy duty sever modules
- SANDVIK Sever Accessory Kit (P/N 05-0807)
 - Converts Tool Modules (P/N 08-1354) into SANDVIK sever modules
- Repair Kit, G2 Tool Module (P/N 05-0814)
- Repair Kit, G2 Tripper (P/N 05-0815)
- Metal Jobsite and Shipping cases
- Kit, ISCAR Sever, 600RBL-G2 (P/N 05-1587)
 - Use Kit (P/N 05-1587) addendum with Manual 92-1619 (TTM - Template Tracer Module)

13. ILLUSTRATED PARTS BREAKDOWN

MODEL 600RBL-G2 CLAMSHELL SUB-ASSEMBLIES



Parts List, Model 612RBL-G2 Clamshell Sub-Assembly (P/N 02-3168)

Item No.	Part No.	Description	Qty
1	19-1948	HOUSING, MAIN, 612RBL-G2	1
	32-0438	PIN, SPLITLINE, 1/2" DIA	4
	33-0021	SCREW, CAP, #8-32 X 5/8"	4
	33-0115	SCREW, CAP, 1/2-13 X 3-1/2"	2
2	26-1351	BAR ASSEMBLY, ADJUST, 600RBL	4
3	28-0057	SEAL, FELT, 1/8" X 3/16" X BULK	46" (117 cm)
4	28-0057	SEAL, FELT, 1/8" X 3/16" X BULK	62" (157 cm)
5	29-0290	BEARING, 90°, DUAL VEE	16
6	30-0415	RING, HOIST, 5/16-18	2
7	33-4066	SCREW, CAP, 7/16-14 X 1", ZINC	2
8	33-4064	SCREW, CAP, 1/2-20 X 1", ZINC PLATED	2
9	33-0483	SCREW, SET, #8-32 X 5/8", CUP PT	4
10	33-1770	SCREW, SHOULDER, 12MM X 40MM	16
11	33-1792	JACKSCREW, 1'-12UNF X 6-5/8"	2
12	34-0271	WASHER, THRUST, 12MM ID	16
13	35-0374	NUT, ADJUSTMENT	16
14	39-1441	GEAR, HEADSTOCK, 612RBL-G2	1
	32-0236	PIN, SPLITLINE	4
	33-0019	SCREW, CAP, #8-32 X 3/8"	4
	33-0090	SCREW, CAP, 7/16-14 X 1-1/4"	2
16	48-0768	LOCK-BLOCK ASSEMBLY	2
17	54-0375	FITTING, GREASE	1
18	54-0304	PLUG, THREADED	2

Parts List, Model 614RBL-G2 Clamshell Sub-Assembly (P/N 02-2270)

Item No.	Part No.	Description	Qty
1	19-0605	HOUSING, MAIN	1
	32-0438	PIN, SPLITLINE, 1/2" DIA	4
	33-0021	SCREW, CAP, #8-32 X 5/8"	4
	33-0115	SCREW, CAP, 1/2-13 X 3-1/2"	2
2	26-1351	BAR ASSEMBLY, ADJUSTABLE	4
3	28-0057	SEAL, FELT	44" (122cm)
4	28-0057	SEAL, FELT	66" (168cm)
5	29-0290	BEARING, 90° VEE	16
6	30-0415	RING, HOIST	2
7	33-4066	SCREW, CAP, 7/16-14 X 1", ZINC	2
8	33-4064	SCREW, CAP, 1/2-20 X 1", ZINC	2
9	33-0483	SCREW, SET, #8-32 X 5/8", CUP PT	4
10	33-1770	SCREW, SHOULDER, 12MM X 40MM	16
11	33-1792	JACKSCREW	2
12	34-0271	WASHER, THRUST	16
13	35-0374	NUT, ECCENTRIC, ADJUSTMENT	16
14	39-0647	GEAR, HEADSTOCK	1
	32-0236	PIN, SPLITLINE	4
	33-0019	SCREW, CAP, #8-32 X 3/8"	4
	33-0090	SCREW, CAP, 7/16-14 X 1 1/4"	2
15	43-0400	COVER, DRIVE HOUSING SLOT	1
16	48-0768	LOCK-BLOCK ASSEMBLY	2
17	54-0375	FITTING, GREASE	1
18	54-0304	PLUG, THREADED	4

Parts List, Model 616RBL-G2 Clamshell Sub-Assembly (P/N 02-2271)

Item No.	Part No.	Description	Qty
1	19-0606	HOUSING, MAIN	1
	32-0438	PIN, SPLITLINE, 1/2" DIA	4
	33-0021	SCREW, CAP, #8-32 X 5/8"	4
	33-1855	SCREW, CAP, 1/2-13 X 3-3/4"	2
2	26-1351	BAR ASSEMBLY, ADJUSTABLE	4
3	28-0057	SEAL, FELT	55" (140cm)
4	28-0057	SEAL, FELT	73" (186cm)
5	29-0290	BEARING, 90° VEE	16
6	30-0415	RING, HOIST	2
7	33-4066	SCREW, CAP, 7/16-14 X 1", ZINC	2
8	33-4064	SCREW, CAP, 1/2-20 X 1", ZINC	2
9	33-0483	SCREW, SET, #8-32 X 5/8", CUP PT	4
10	33-1770	SCREW, SHOULDER, 12MM X 40MM	16
11	33-1792	JACKSCREW	2
12	34-0271	WASHER, THRUST	16
13	35-0374	NUT, ECCENTRIC, ADJUSTMENT	16
14	39-0648	GEAR, HEADSTOCK	1
	32-0236	PIN, SPLITLINE	4
	33-0019	SCREW, CAP, #8-32 X 3/8"	4
	33-0090	SCREW, CAP, 7/16-14 X 1-1/4"	2
15	43-0400	COVER, DRIVE HOUSING SLOT	1
16	48-0768	LOCK-BLOCK ASSEMBLY	2
17	54-0375	FITTING, GREASE	1
18	54-0304	PLUG, THREADED	4

Parts List, Model 620RBL-G2 Clamshell Sub-Assembly (P/N 02-2272)

Item No.	Part No.	Description	Qty
1	19-0607	HOUSING, MAIN	1
	32-0438	PIN, SPLITLINE, 1/2" DIA	4
	33-0021	SCREW, CAP, #8-32 X 5/8"	4
	33-0116	SCREW, CAP, 1/2-13 X 4"	2
2	26-1351	BAR ASSEMBLY, ADJUSTABLE	4
3	28-0057	SEAL, FELT	68" (173cm)
4	28-0057	SEAL, FELT	85" (216cm)
5	29-0290	BEARING, 90° VEE	24
6	30-0415	RING, HOIST	2
7	33-4066	SCREW, CAP, 7/16-14 X 1", ZINC	2
8	33-4064	SCREW, CAP, 1/2-20 X 1", ZINC	2
9	33-0483	SCREW, SET, #8-32 X 5/8", CUP PT	4
10	33-1770	SCREW, SHOULDER, 12MM X 40MM	24
11	33-1792	JACKSCREW	6
12	34-0271	WASHER, THRUST	24
13	35-0374	NUT, ECCENTRIC, ADJUSTMENT	24
14	39-0649	GEAR, HEADSTOCK	1
	32-0236	PIN, SPLITLINE	4
	33-0019	SCREW, CAP, #8-32 X 3/8"	4
	33-2419	SCREW, SPLITLINE, 7/16-14 X 1-3/4"	2
15	43-0400	COVER, DRIVE HOUSING SLOT	1
16	48-0768	LOCK-BLOCK ASSEMBLY	2
17	54-0375	FITTING, GREASE	1
18	54-0304	PLUG, THREADED	4

Parts List, Model 624RBL-G2 Clamshell Sub-Assembly (P/N 02-2273)

Item No.	Part No.	Description	Qty
1	19-0608	HOUSING, MAIN	1
	32-0438	PIN, SPLITLINE, 1/2" DIA	4
	33-0021	SCREW, CAP, #8-32 X 5/8"	4
	33-0117	SCREW, CAP, 1/2-13 X 4-1/2"	2
2	26-1351	BAR ASSEMBLY, ADJUSTABLE	4
3	28-0057	SEAL, FELT	80" (204cm)
4	28-0057	SEAL, FELT	98" (249cm)
5	29-0290	BEARING, 90° VEE	24
6	30-0415	RING, HOIST	2
7	33-4066	SCREW, CAP, 7/16-14 X 1", ZINC	2
8	33-4064	SCREW, CAP, 1/2-20 X 1", ZINC	2
9	33-0483	SCREW, SET, #8-32 X 5/8", CUP PT	4
10	33-1770	SCREW, SHOULDER, 12MM X 40MM	24
11	33-1792	JACKSCREW	6
12	34-0271	WASHER, THRUST	24
13	35-0374	NUT, ECCENTRIC, ADJUSTMENT	24
14	39-0650	GEAR, HEADSTOCK	1
	32-0236	PIN, SPLITLINE	4
	33-0019	SCREW, CAP, #8-32 X 3/8"	4
	33-2419	SCREW, SPLITLINE, 7/16-14 X 1-3/4"	2
15	43-0400	COVER, DRIVE HOUSING SLOT	1
16	48-0768	LOCK-BLOCK ASSEMBLY	2
17	54-0375	FITTING, GREASE	1
18	54-0304	PLUG, THREADED	4

Parts List, Model 630RBL-G2 Clamshell Sub-Assembly (P/N 02-2274)

Item No.	Part No.	Description	Qty
1	19-0609	HOUSING, MAIN	1
	32-0438	PIN, SPLITLINE, 1/2" DIA	4
	33-0021	SCREW, CAP, #8-32 X 5/8"	4
	33-0118	SCREW, CAP, 1/2-13 X 5"	2
2	26-1351	BAR ASSEMBLY, ADJUSTABLE	4
3	28-0057	SEAL, FELT	99" (252cm)
4	28-0057	SEAL, FELT	117" (298cm)
5	29-0290	BEARING, 90° VEE	32
6	30-0415	RING, HOIST	2
7	33-4066	SCREW, CAP, 7/16-14 X 1", ZINC	2
8	33-4064	SCREW, CAP, 1/2-20 X 1", ZINC	2
9	33-0483	SCREW, SET, #8-32 X 5/8", CUP PT	4
10	33-1770	SCREW, SHOULDER, 12MM X 40MM	32
11	33-1792	JACKSCREW	10
12	34-0271	WASHER, THRUST	32
13	35-0374	NUT, ECCENTRIC, ADJUSTMENT	32
14	39-0651	GEAR, HEADSTOCK	1
	32-0236	PIN, SPLITLINE	4
	33-0019	SCREW, CAP, #8-32 X 3/8"	4
	33-2420	SCREW, SPLITLINE, 7/16-14 X 2"	2
15	43-0400	COVER, DRIVE HOUSING SLOT	1
16	48-0768	LOCK-BLOCK ASSEMBLY	2
17	54-0375	FITTING, GREASE	1
18	54-0304	PLUG, THREADED	4

Parts List, Model 636RBL-G2 Clamshell Sub-Assembly (P/N 02-2275)

Item No.	Part No.	Description	Qty
1	19-0610	HOUSING, MAIN	1
	32-0438	PIN, SPLITLINE, 1/2" DIA	4
	33-0021	SCREW, CAP, #8-32 X 5/8"	4
	33-0119	SCREW, CAP, 1/2-13 X 5-1/2"	2
2	26-1351	BAR ASSEMBLY, ADJUSTABLE	4
3	28-0057	SEAL, FELT	118" (300cm)
4	28-0057	SEAL, FELT	135" (343cm)
5	29-0290	BEARING, 90° VEE	40
6	30-0415	RING, HOIST	2
7	33-4066	SCREW, CAP, 7/16-14 X 1", ZINC	2
8	33-4064	SCREW, CAP, 1/2-20 X 1", ZINC	2
9	33-0483	SCREW, SET, #8-32 X 5/8", CUP PT	4
10	33-1770	SCREW, SHOULDER, 12MM X 40MM	40
11	33-1792	JACKSCREW	10
12	34-0271	WASHER, THRUST	40
13	35-0374	NUT, ECCENTRIC, ADJUSTMENT	40
14	39-0652	GEAR, HEADSTOCK	1
	32-0236	PIN, SPLITLINE	4
	33-0019	SCREW, CAP, #8-32 X 3/8"	4
	33-2420	SCREW, SPLITLINE, 7/16-14 X 2"	2
15	43-0400	COVER, DRIVE HOUSING SLOT	1
16	48-0768	LOCK-BLOCK ASSEMBLY	2
17	54-0375	FITTING, GREASE	1
18	54-0304	PLUG, THREADED	4

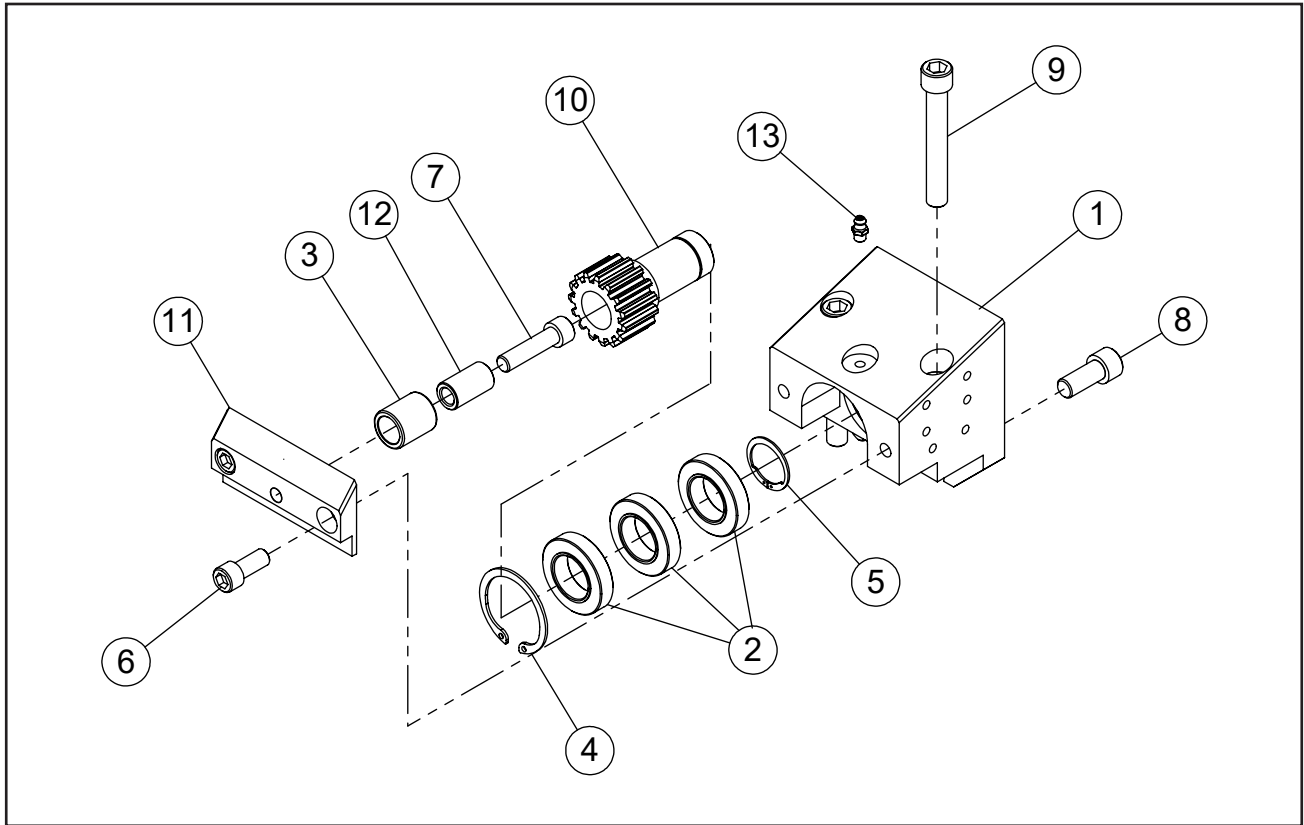
Parts List, Model 642RBL-G2 Clamshell Sub-Assembly (P/N 02-2704)

Item No.	Part No.	Description	Qty
1	19-1440	HOUSING, MAIN	1
	32-0438	PIN, SPLITLINE, 1/2" DIA	2
	32-0897	PIN, ALIGNMENT	2
	33-0021	SCREW, CAP, #8-32 X 5/8"	2
	33-0039	SCREW, CAP, 1/4-20 X 5/8"	2
	33-0136	SCREW, CAP, 5/8-11 X 4-1/2"	2
2	26-1351	BAR ASSEMBLY, ADJUSTABLE	4
3	28-0057	SEAL, FELT	120" (305cm)
4	28-0057	SEAL, FELT	137" (348cm)
5	29-0290	BEARING, 90° VEE	48
6	30-0222	RING, HOIST	2
7	33-4066	SCREW, CAP, 7/16-14 X 1", ZINC	2
8	33-4064	SCREW, CAP, 1/2-20 X 1", ZINC	4
9	33-0483	SCREW, SET, #8-32 X 5/8", CUP PT	2
10	33-1770	SCREW, SHOULDER, 12MM X 40MM	48
11	33-1792	JACKSCREW	10
12	34-0271	WASHER, THRUST	48
13	35-0374	NUT, ECCENTRIC, ADJUSTMENT	48
14	39-1184	GEAR, HEADSTOCK	1
	32-0236	PIN, SPLITLINE	4
	33-0019	SCREW, CAP, #8-32 X 3/8"	4
	33-2420	SCREW, SPLITLINE, 7/16-14 X 2"	2
15	48-0768	LOCK-BLOCK ASSEMBLY	4
16	54-0375	FITTING, GREASE	2
17	54-0304	PLUG, THREADED	4

Parts List, Wrench Kit for 612-642RBL-G2 Clamshell (P/N 05-0820) *Not Shown*

Item No.	Part No.	Description	Qty
1	36-0003	WRENCH, L, 3/32" HEX	1
2	36-0010	WRENCH, L, 1/4" HEX	1
3	36-0011	WRENCH, L, 5/16" HEX	1
4	36-0021	WRENCH, T, 3/16" HEX	1
5	36-0063	WRENCH, COMBINATION, 3/4"	1
6	36-0087	RATCHET, 3/8" DRIVE	1
7	36-0183	WRENCH, L, HEX, 3/8", BALL POINT	1
8	36-0184	WRENCH, T, 5/8" HEX SOCKET	1
9	36-0185	WRENCH, L, HEX, 6MM, 5-1/2" LG	1
10	36-0571	SOCKET, 3/8" DRIVE X 3/4" HEX	1

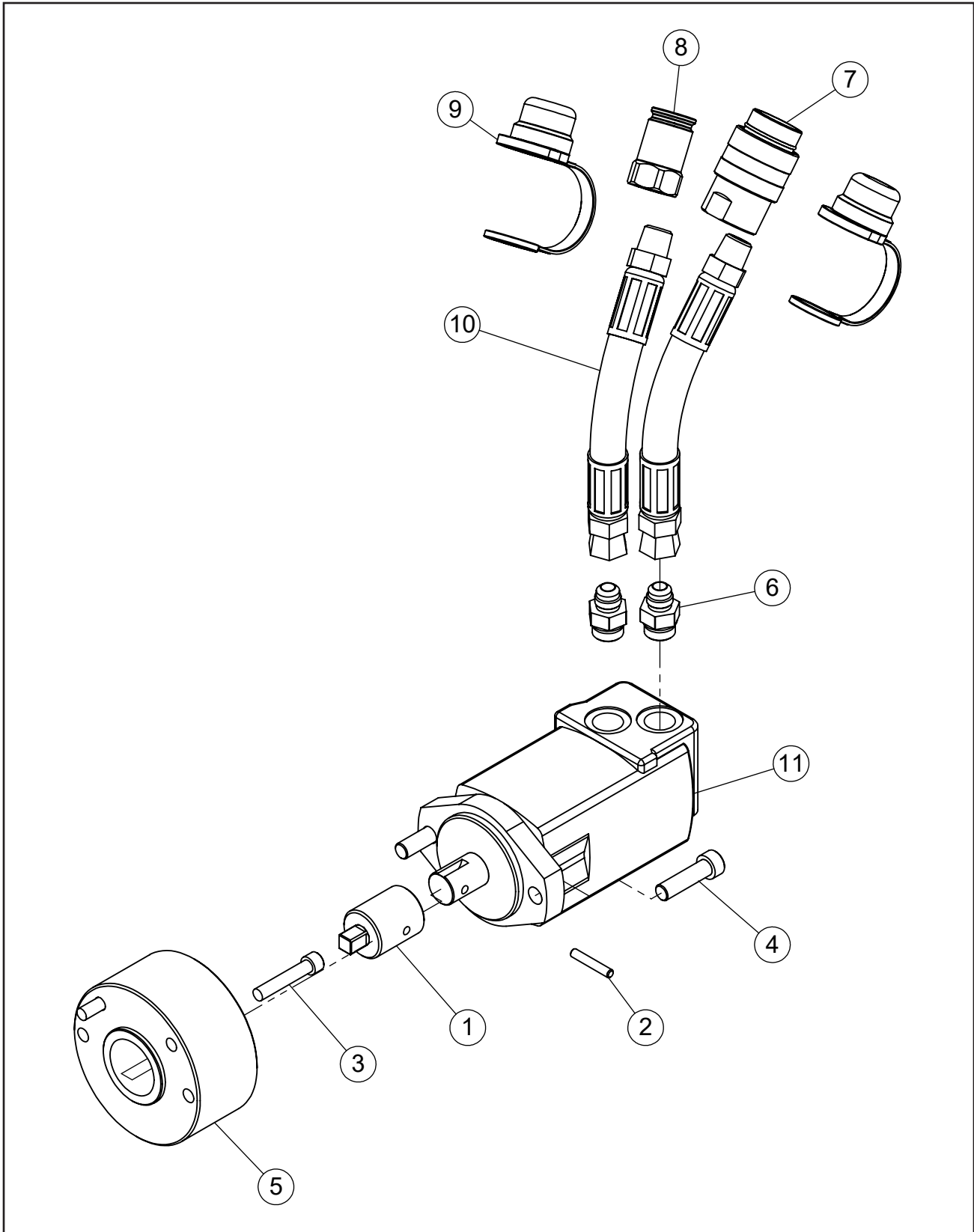
DRIVE HOUSING ASSEMBLY (P/N 19-1667)



Parts List, Drive Housing Assembly (P/N 19-1667)

Item No.	Part No.	Description	Qty
1	19-1634	HOUSING, DRIVE, 600RBL-G2	1
2	29-0065	BRG, BALL, 1" X 1-3/4" X 7/16"	3
3	29-0291	BRG, ROLLER, 5/8" X 7/8" X 1" LONG	1
4	30-0294	RING, RETAIN, INT, 1-3/4" ID	1
5	30-2101	RING, RET, EXT, 1" OD	1
6	33-3098	SCREW, CAP, 3/8-16 X 3/4", ZN	2
7	33-4062	SCREW, CAP, 3/8-24 X 1-1/2", ZN	1
8	33-4066	SCREW, CAP, 7/16-14 X 1", ZN	2
9	33-4067	SCREW, CAP, 7/16-14 X 3", ZN	2
10	39-0657	GEAR, PINION, DRIVE, 15T	1
11	43-1108	COVER, DRIVE HOUSING, 600RBL-G2	1
12	45-0205	BUSHING	1
13	54-0375	FITTING, GREASE	1

MOTOR ASSEMBLY, HYDRAULIC (P/N 56-0155)



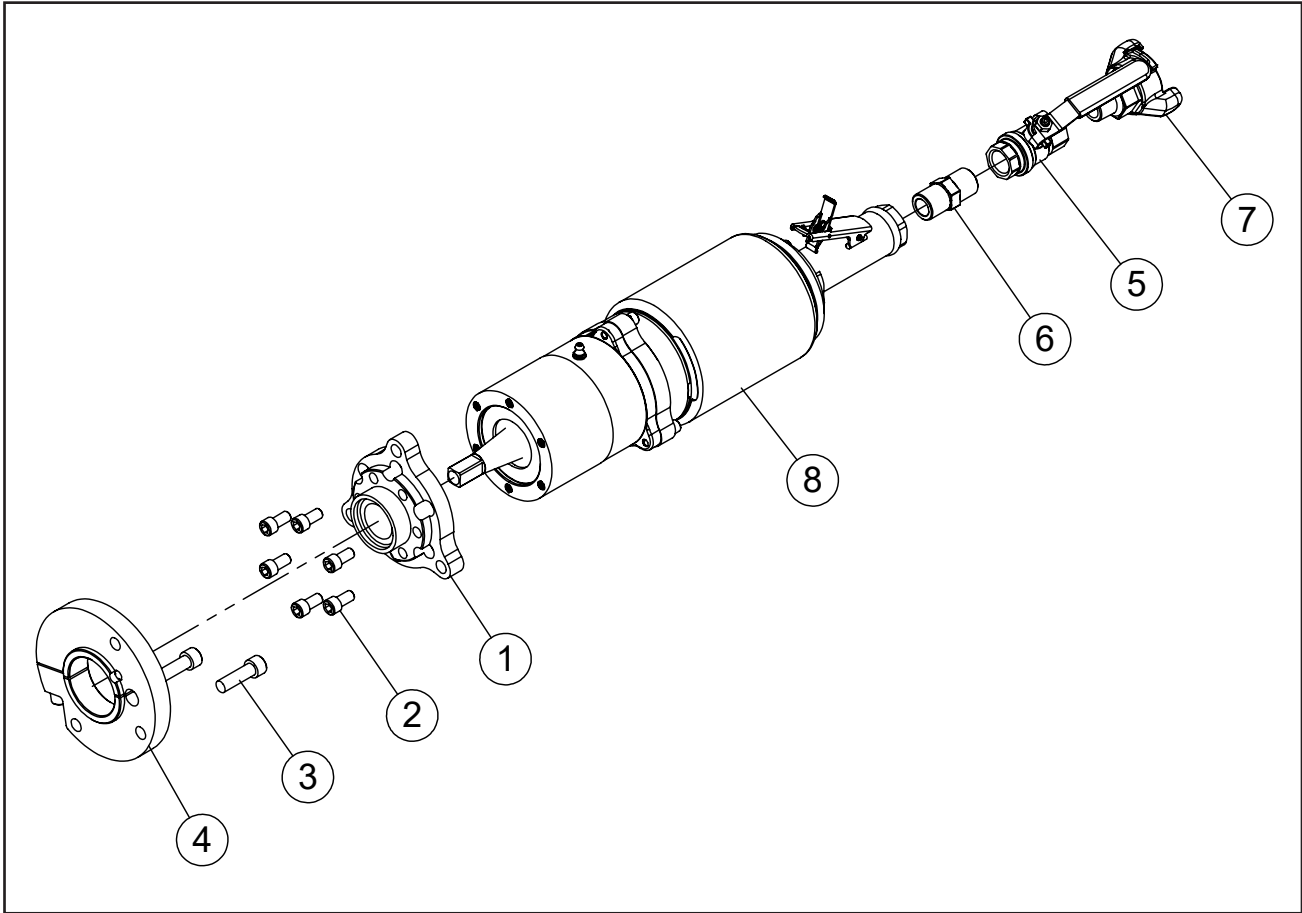
Parts List, Motor Assembly, Hydraulic (P/N 56-0155)

Item No.	Part No.	Description	Qty
1	27-0460	ADAPTER, DRIVE	1
2	32-0090	PIN, SHEAR, 1/4" DIA X 1.41"	1
3	33-0075	SCREW, CAP, 3/8-16 X 2"	2
4	33-0108	SCREW, CAP, 1/2-13 X 1-3/4"	2
5	47-0914	BRACKET, TORQUE RESTRAINT	1
6	54-0002	ADAPTER, 7/8" O-RING TO 1/2-37D	2
7	54-0333	COUPLER, QD, HYDRAULIC, DRIPLESS, FEMALE	1
8	54-0334	NIPPLE, QD, HYDRAULIC, DRIPLESS, MALE	1
9	54-0335	DUST PLUG, DRIPLESS	2
10	55-0156	HOSE ASSEMBLY, HYD	2
11	56-0102	MOTOR, HYDRAULIC, MOD	1

REFERENCE: Hose Manifold Assemblies to Connect the Dual Hydraulic Motor Assemblies

55-0169	HOSE ASSEMBLY, MANIFOLD, FEMALE	1
55-0170	HOSE ASSEMBLY, MANIFOLD, MALE	1

MOTOR ASSEMBLY, AIR, INLINE, SINGLE (P/N 57-0343)



Parts List, Motor Assembly, Air, Inline, Single (P/N 57-0343)

Item No.	Part No.	Description	Qty
1	27-1471	ADAPTER, INLINE, 4800Q	1
2	33-0053	SCREW, CAP, 5/16-18 X 5/8"	6
3	33-0072	SCREW, CAP, 3/8-16 X 1-1/4"	2
4	47-2590	BRKT ASSEMBLY, TORQUE RESTRAINT	1
5	53-0016	VALVE, BALL SHUTOFF, 1/2" PIPE	1
6	54-0019	NIPPLE, 1/2" EPIPE TO 1/2" EPIPE	1
7	54-0157	COUPLING, VACUUM, 1/2" MP	1
8	57-0344	MOTOR, AIR, INLINE, 375 RPM	1

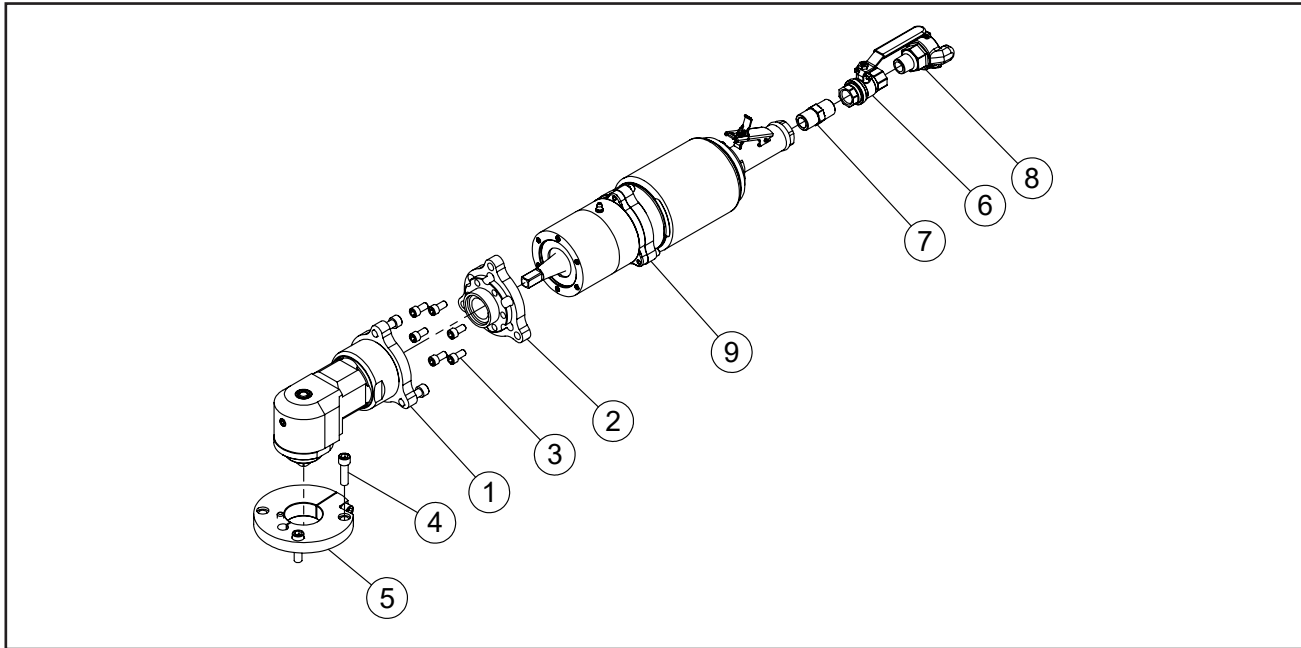
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30-0508	LABEL, "WARNING, DISCONNECT"	1
30-0961	LABEL, WARNING, SAFETY SWITCH	1
30-0962	LABEL, FRL	1
32-1060	PIN, SAFETY, COUPLING, W/ LANYARD	1

REFERENCE: Hose Manifold Assembly to Connect the Dual Air Motor Assembly

76-0101	MANIFOLD, ASSEMBLY, HOSE, AIR CHICAGO	1
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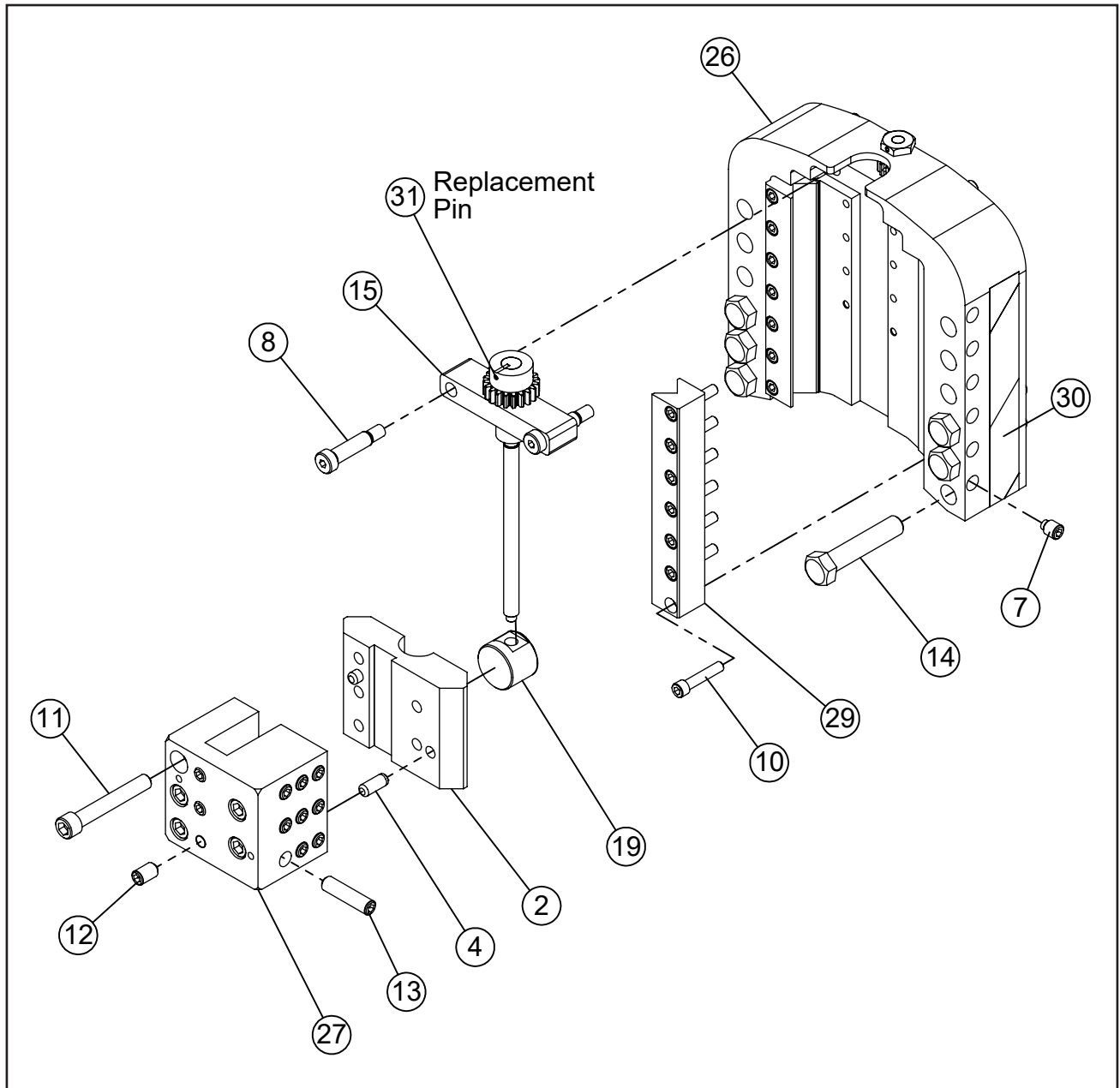
MOTOR ASSEMBLY, RA, 1/2" SQ, 188 RPM (P/N 57-0346)



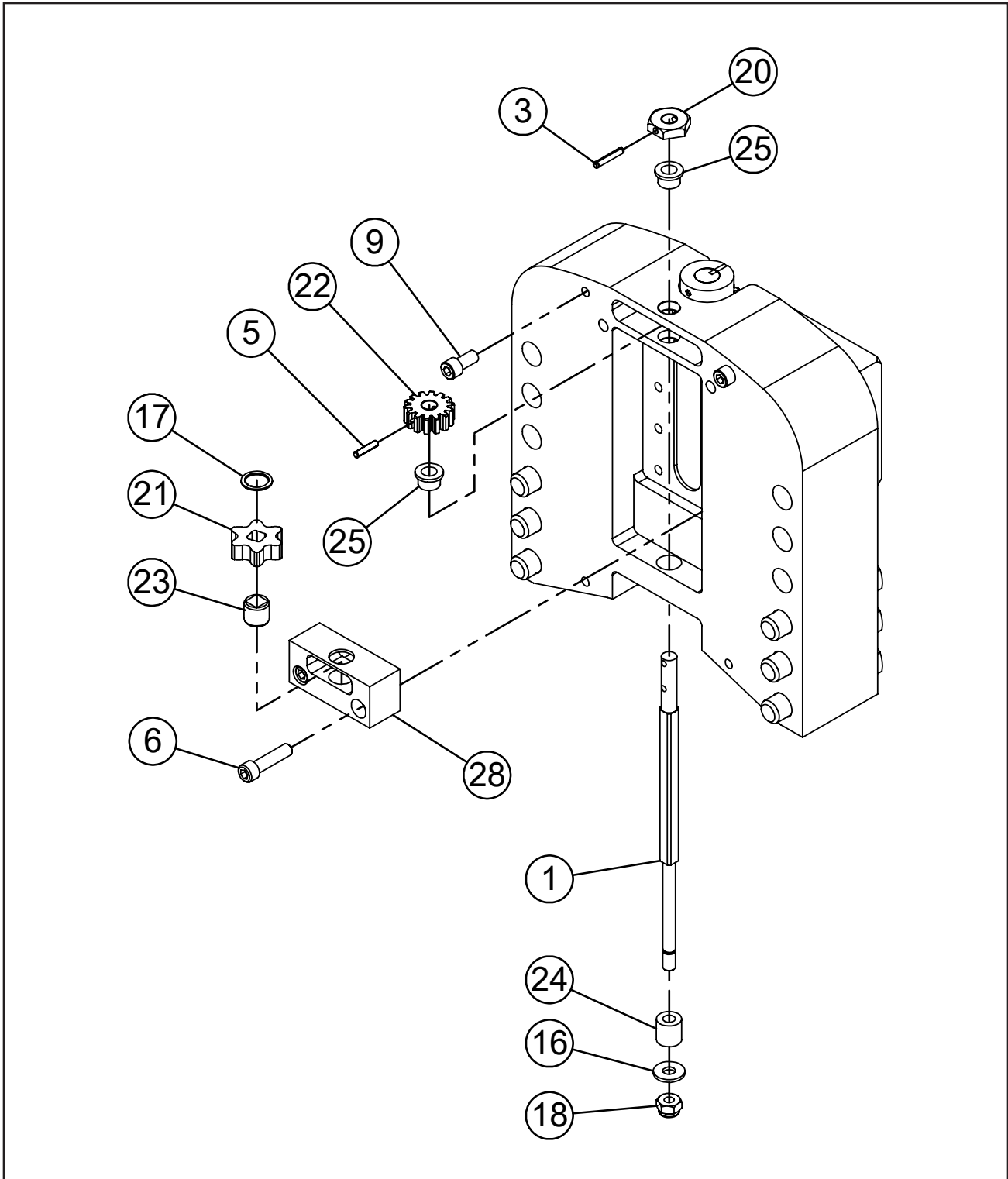
Parts List, Motor Assembly, RA, 1/2" SQ, 188 RPM (P/N 57-0346)

Item No.	Part No.	Description	Qty
1	05-0808	KIT, RA HEAD, AIR MOTOR	1
2	27-1471	ADAPTER, INLINE,4800Q	1
3	33-0053	SCREW, CAP, 5/16-18 X 5/8"	6
4	33-0072	SCREW, CAP, 3/8-16 X 1-1/4"	2
5	47-2590	BRKT ASSEMBLY, TORQUE RESTRAINT	1
6	53-0016	VALVE, BALL SHUTOFF, 1/2" PIPE	1
7	54-0019	NIPPLE, 1/2" EPIPE TO 1/2" EPIPE	1
8	54-0157	COUPLING, VACUUM, 1/2" MP	1
9	57-0344	MOTOR, AIR, INLINE, 375 RPM	1
<i>NOT SHOWN</i>			
	30-0508	LABEL, "WARNING, DISCONNECT"	1
	30-0961	LABEL, WARNING, SAFETY SWITCH	1
	30-0962	LABEL, FRL	1
	32-1060	PIN, SAFETY, COUPLING, W/ LANYARD	1
REFERENCE: Hose Manifold Assembly to Connect the Dual Air Motor Assembly			
	76-0101	MANIFOLD, ASSEMBLY, HOSE, AIR CHICAGO	1

BLOCK ASSEMBLY, TOOL, 600RBL-G2, FRONT (P/N 08-1354)



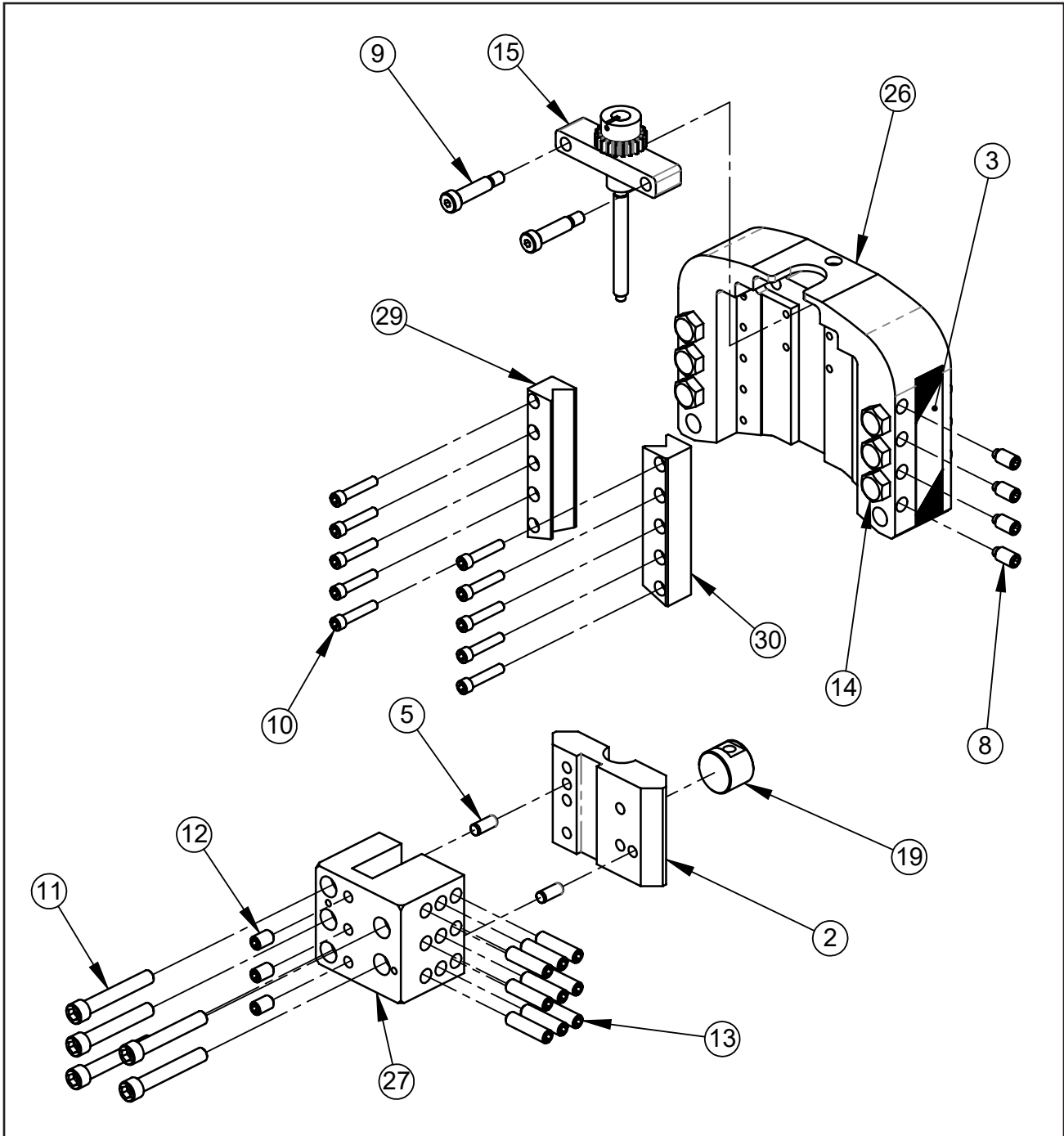
BLOCK ASSEMBLY, TOOL, 600RBL-G2, BACK (P/N 08-1354)



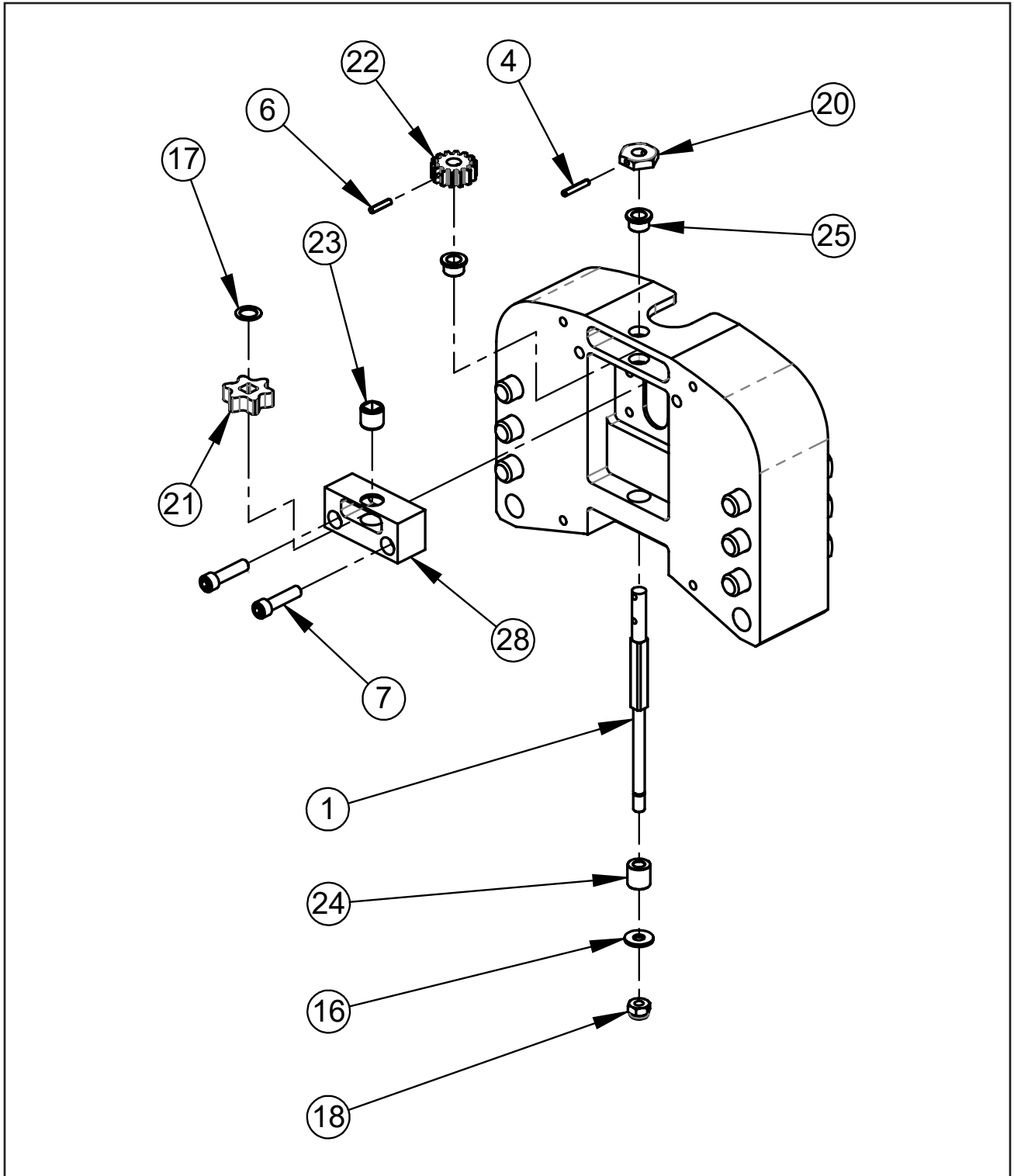
Parts List, Block Assembly, Tool, 600RBL-G2 (P/N 08-1354)

Item No.	Part No.	Description	Qty
1	20-1602	SHAFT, SQ, TRIPPER SPROCKET	1
2	24-1260	PLATE, SLIDE	1
3	32-0026	PIN, ROLL, 1/8" DIA X 3/4"	1
4	32-0495	PIN, DOWEL, 5/16" DIA X 3/4"	2
5	32-1053	PIN, GROOVE TYPE A, 1/8" D X 5/8"	1
6	33-0042	SCREW, CAP, 1/4-20 X 1"	2
7	33-1369	SCREW, SET, 3/8-24 X 1/2", HDOG	6
8	33-1757	SCREW, SHOULDER, 3/8" X 1-1/4"	2
9	33-3091	SCREW, CAP, 1/4-20 X 1/2", SS	2
10	33-4058	SCREW, CAP, 1/4-20 X 1-1/4" ZINC	14
11	33-4061	SCREW, CAP 3/8-16 X 2-1/2"	5
12	33-4063	SCREW, SET, 3/8-16 X 5/8" ZINC CUP PT	3
13	33-4065	SCREW, SET, 3/8-16 x 1-1/2" ZINC CUP PT	9
14	33-4068	SCREW, HEX, 1/2-20 X 2-1/2" ZINC	6
15	33-4121	FEED SCREW ASSEMBLY, 600RBL-G2	1
16	34-0684	WASHER, THRUST, 1/4" X 5/8" X 1/16"	1
17	34-0687	WASHER SHIM, 7/16" X 5/8" X 1/32"	1
18	35-0055	NUT, LK, 1/4-20 X 5/16"	1
19	35-0989	NUT, FEED, 3/8-32 UN LH	1
20	35-0990	NUT, HEX FEED	1
21	38-0228	SPROCKET, FEED, 6PT, SQ HOLE	1
22	39-1266	GEAR, SPUR, 14 TH, 16P, TOOL MODULE	1
23	45-0542	BUSHING, SQ HOLE, .3125"	1
24	45-0554	BUSHING, BZ, 1/4" X 1/2" X 1/2"	1
25	45-0555	BUSHING, FL, 5/16" ID, 7/16" OD, 5/16" LG	2
26	47-2554	BRACKET, MOUNT, TOOL MODULE	1
27	48-0841	BLOCK, TOOL	1
28	48-3779	BLOCK, FEED SPROCKET ADJ	1
29	66-0135	RAIL, SLIDE	2
30	30-5693	TAPE, HAZARD, YELLOW/BLACK, 1" W	6.75
31	32-0028	PIN, ROLL, 1/8" DIA X 1"	1

BLOCK ASSEMBLY, TOOL, 2 POSITION (P/N 08-1432) 1 of 2



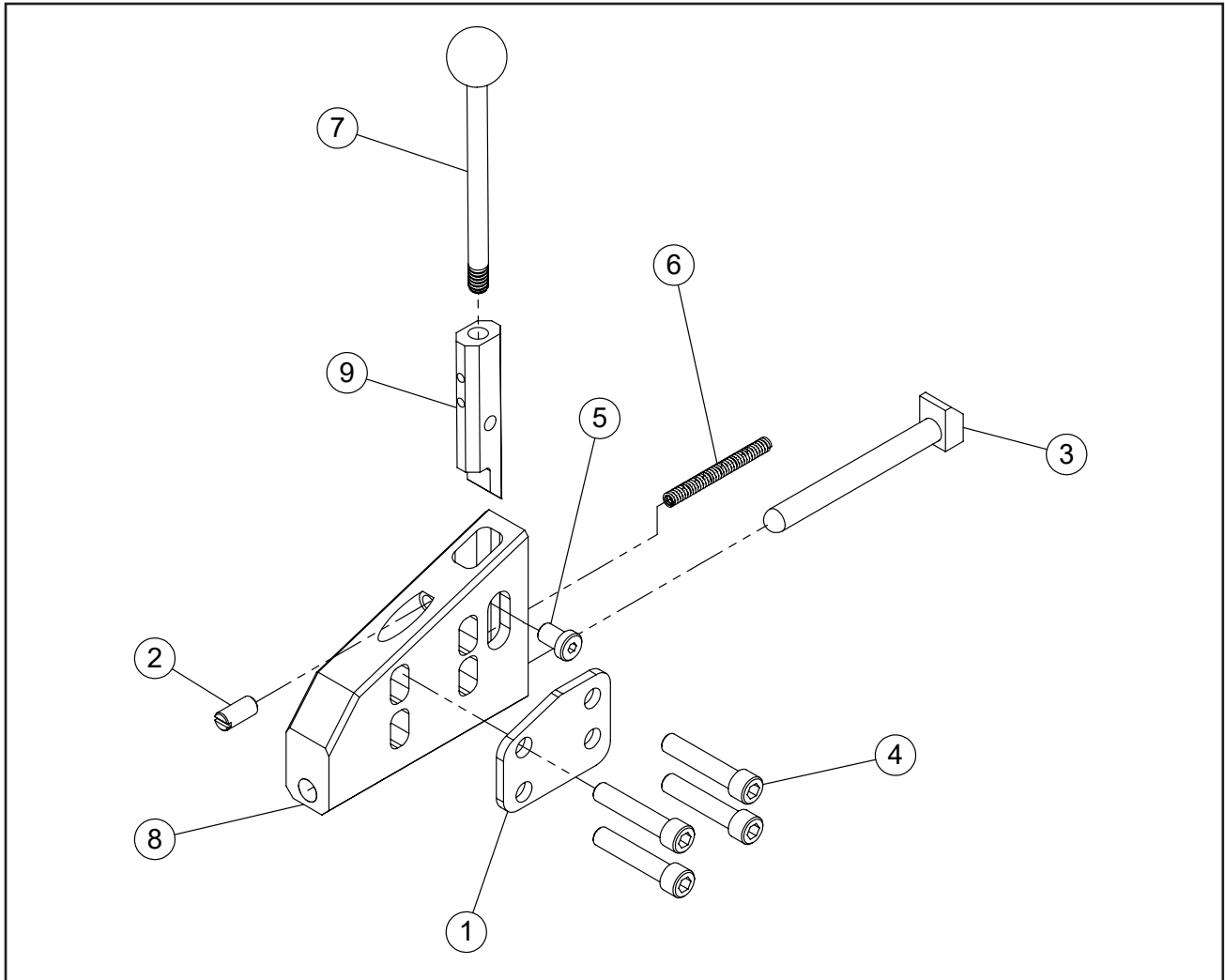
BLOCK ASSEMBLY, TOOL, 2 POSITION (P/N 08-1432) 2 of 2



Parts List, Block Assembly, Tool, 2 Position (P/N 08-1432)

Item No.	Part No.	Description	Qty
1	20-1666	SHAFT, SQUARE, TRIPPER	1
2	24-1260	PLATE, SLIDE	1
3	30-5693	TAPE, HAZARD, YELLOW/BLACK, 1" WIDE	4.5"
4	32-0026	PIN, ROLL, 1/8" DIA. X 3/4"	1
5	32-0495	PIN, DOWEL, 5/16" DIA. X 3/4"	2
6	32-1053	PIN, GROOVE, 1/8" DIA. X 5/8"	1
7	33-0042	SCREW, CAP, 1/4 - 20 X 1"	2
8	33-1261	SCREW, SET, 3/8-24 X 3/4", HDOG	4
9	33-1757	SCREW, SHOULDER, 3/8" X 1-1/4"	2
10	33-4058	SCREW, CAP, 1/4-20 X 1-1/4", ZINC	10
11	33-4061	SCREW, CAP, 3/8-16 X 2-1/2", ZINC	5
12	33-4063	SCREW, SET, 3/8-16 X 5/8", CUP POINT, ZINC	3
13	33-4065	SCREW, SET, 3/8-16 X 1-1/2", ZINC	9
14	33-4068	SCREW, HEX, 1/2-20 X 2-1/2", ZINC	6
15	33-4283	SCREW ASSEMBLY, FEED	1
16	34-0684	WASHER, THRUST, 1/4" X 5/8" X 1/16"	1
17	34-0687	WASHER, THRUST, .385" ID X .562" OD	1
18	35-0055	NUT, LOCK, 1/4-20 X 5/16"	1
19	35-0989	NUT, FEED, 3/8-32 LH	1
20	35-0990	NUT, HEX FEED	1
21	38-0228	SPROCKET, FEED, 6 PT., SQ. DR.	1
22	39-1266	GEAR, SPUR, 16 D.P., 14 T., .875" P.D.	1
23	45-0542	BUSHING, SQUARE DRIVE, 5/16"	1
24	45-0554	BUSHING, BRONZE, 1/4" X 1/2" X 1/2"	1
25	45-0555	BUSHING, FLANGE, 5/16" X 7/16" X 5/16"	2
26	47-2667	BRACKET, TOOL MODULE	1
27	48-0841	BLOCK, TOOL	1
28	48-3779	BLOCK, FEED SPROCKET	1
29	66-0532	RAIL, SLIDE, LEFT	1
30	66-0533	RAIL, SLIDE, RIGHT	1

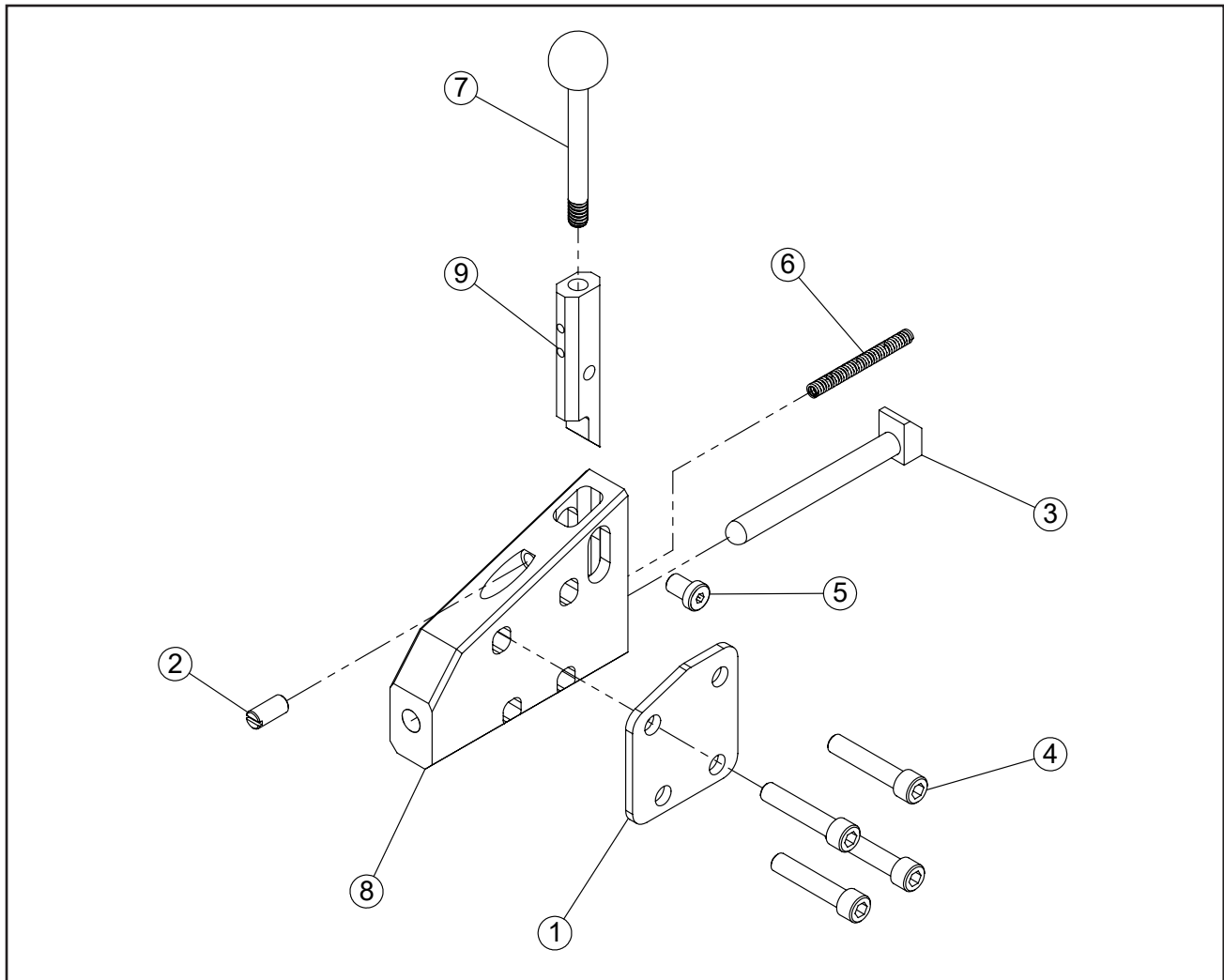
BLOCK ASSEMBLY, TRIPPER, 612-624RBL-G2 (P/N 47-2587)



Parts List, Block Assembly, Tripper, 612-624RBL-G2 (P/N 47-2587)

Item No.	Part No.	Description	Qty
1	24-4246	PLATE, WASHER, 600RBL	1
2	30-0125	PLUNGER, BALL, 1/4-20 X 17/32"	1
3	32-1048	PIN, TRIPPER	1
4	33-4058	SCREW, CAP, 1/4-20 X 1-1/4" ZN	4
5	33-4059	SCREW, LOW HD, 1/4-20 X 3/8" ZN	1
6	40-0486	SPRING, COMP, .187" OD, 1.75" LG	1
7	41-0259	HANDLE, TRIPPER ASSEMBLY	1
8	48-3802	BLOCK, TRIPPER, 612-624	1
9	66-0498	RAIL, SLIDE, TRIPPER PIN	1

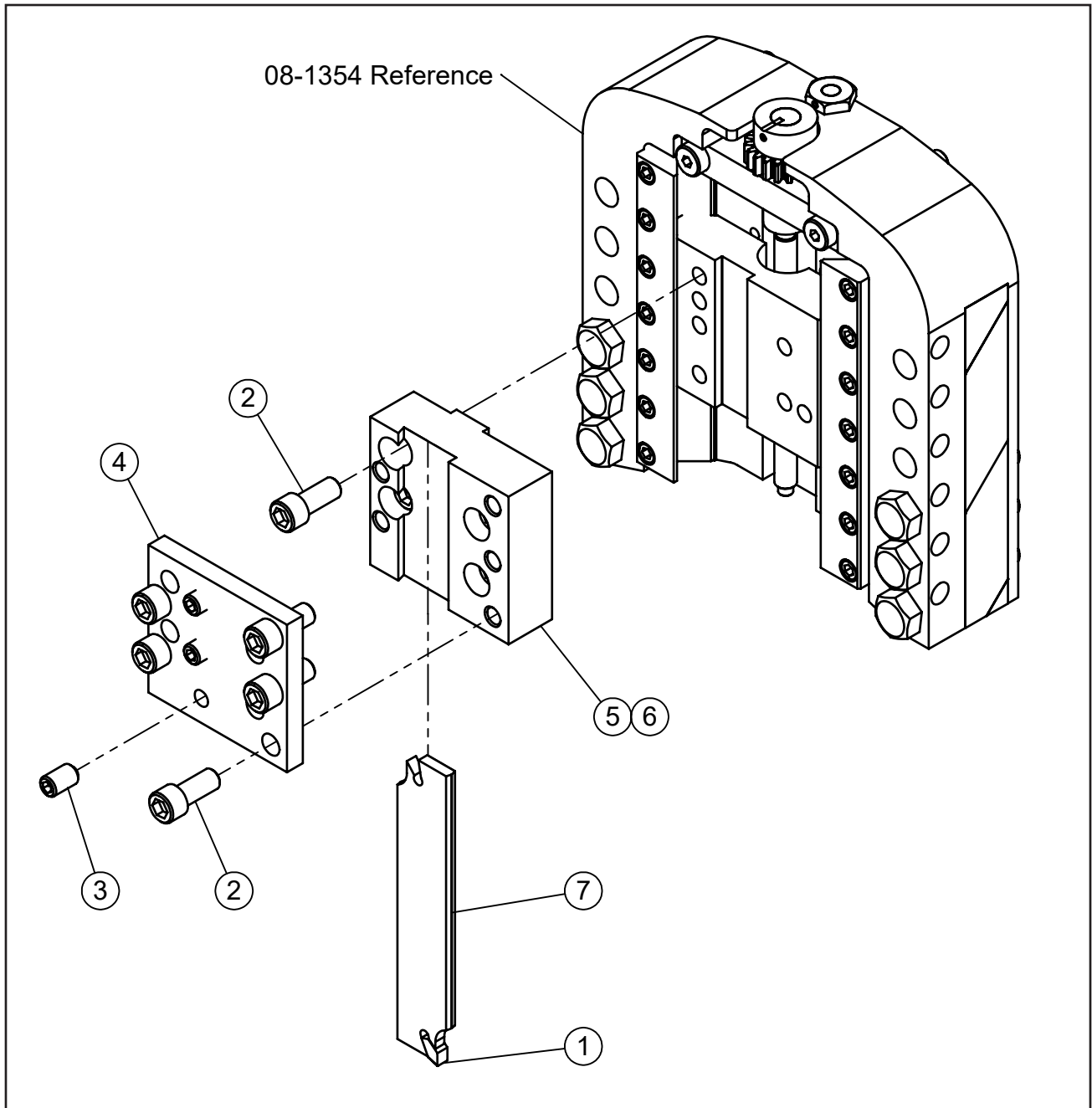
BLOCK ASSEMBLY, TRIPPER, 630-642RBL-G2 (P/N 47-2588)



Parts List, Block Assembly, Tripper, 630-642RBL-G2 (P/N 47-2588)

Item No.	Part No.	Description	Qty
1	24-4309	PLATE, WASHER, 630-642RBL	1
2	30-0125	PLUNGER, BALL, 1/4-20 X 17/32"	1
3	32-1048	PIN, TRIPPER	1
4	33-4058	SCREW, CAP, 1/4-20 X 1-1/4" ZN	4
5	33-4059	SCREW, LOW HD, 1/4-20 X 3/8" ZN	1
6	40-0486	SPRING, COMP, .187" OD, 1.75" LG	1
7	41-0261	HANDLE, 1/4-20 X 2-1/2"	1
8	48-3854	BLOCK, TRIPPER, 630-642	1
9	66-0498	RAIL, SLIDE, TRIPPER PIN	1

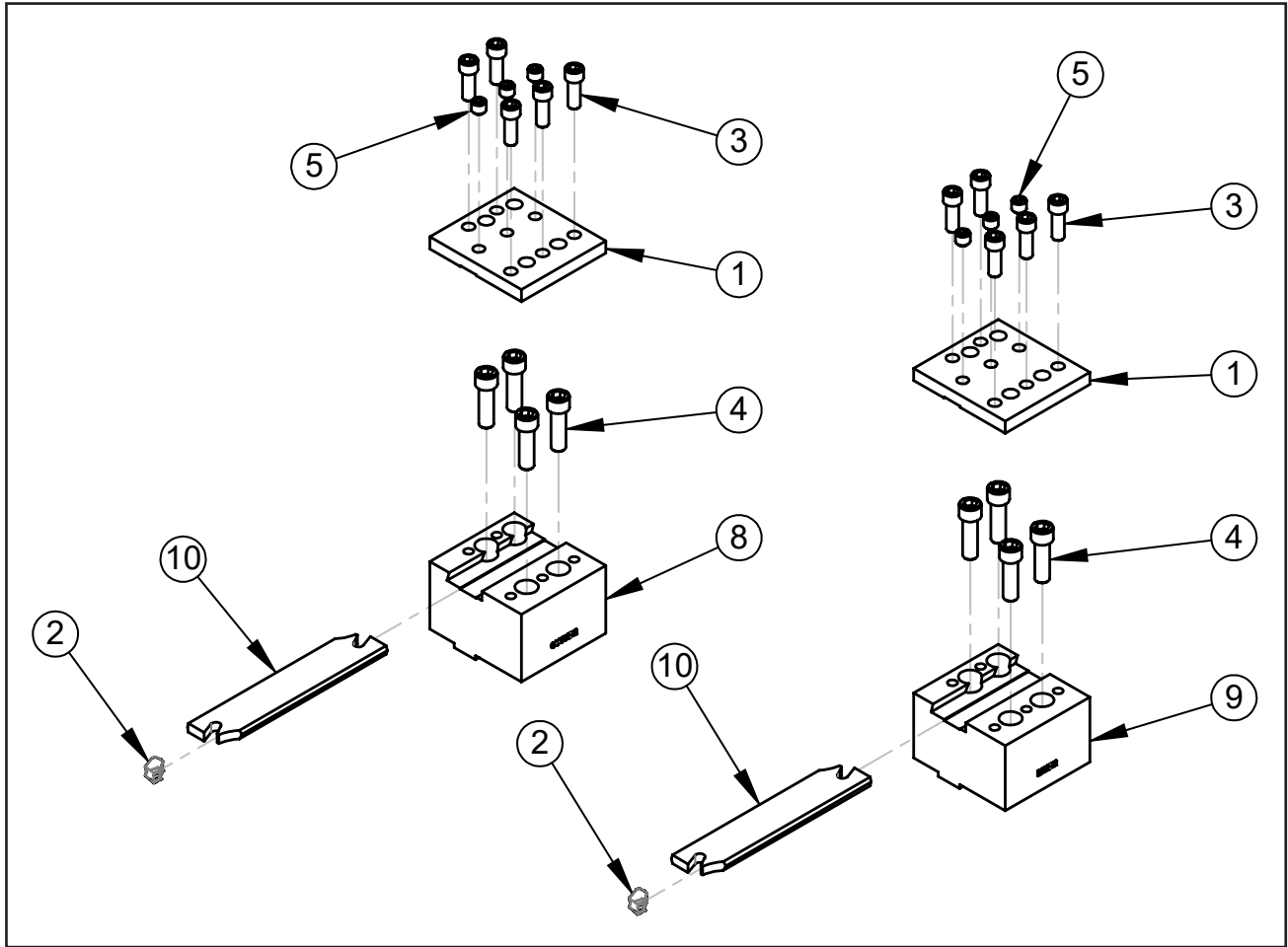
KIT, SEVER, RBL-G2, SANDVIK (P/N 05-0807)



Parts List, Kit, Sever, RBL-G2, Sandvik (P/N 05-0807)

Item No.	Part No.	Description	Qty
1	30-3716	INSERT, CARBIDE SEVER	2
2	33-4060	SCREW, CAP, 3/8-16 X 7/8" ZINC	18
3	33-4063	SCREW, SET, 3/8-16 X 5/8" ZINC	6
4	43-1116	COVER, SEVER, TOOL HOLDER	2
5	48-3784	BLOCK, SEVER, INSIDE	1
6	48-3855	BLOCK, SEVER, OUTSIDE	1
7	49-0792	HOLDER, TOOL, SEVER	2
<i>NOT SHOWN</i>			
	36-0524	WRENCH, INSERT REMOVAL	1

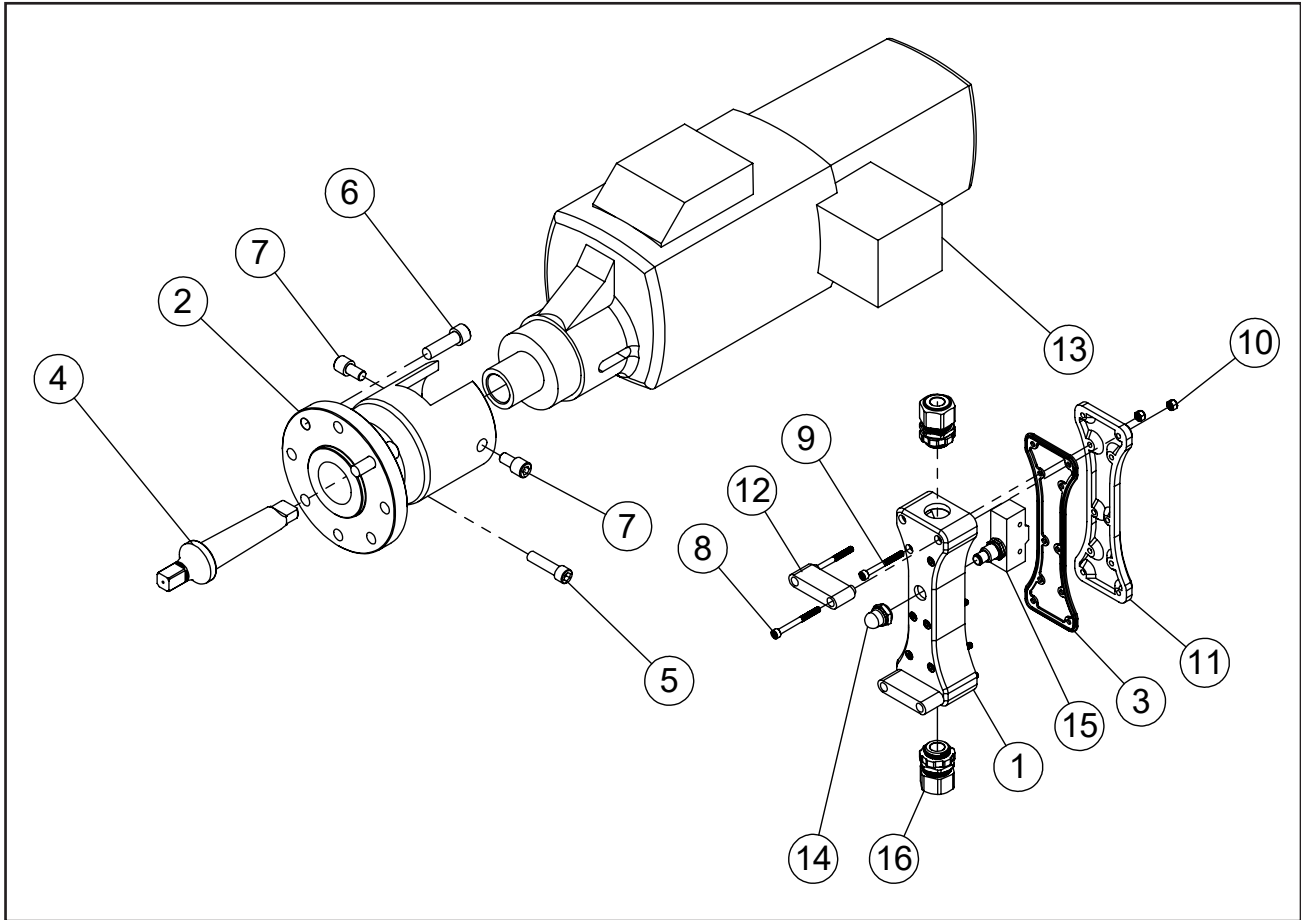
KIT, ISCAR SEVER, 600RBL-G2 (P/N 05-1587)



Parts List, Kit, ISCAR Sever, 600RBL-G2 (P/N 05-1587)

Item No.	Part No.	Description	Qty
1	24-5011	PLATE, RETAINING	2
2	30-2245	INSERT, CARBIDE, .315" (8.00MM)	2
3	33-0055	SCREW, CAP, 5/16-18 X 7/8"	10
4	33-0072	SCREW, CAP, 3/8-16 X 1-1/4"	8
5	33-0527	SCREW, SET, 3/8-16 X 3/8" CUP PT	6
6	36-0008	WRENCH, L, 3/16" HEX	1
7	36-0024	WRENCH, T, 5/16" HEX	1
8	48-4596	BLOCK, SEVER, OUTSIDE	1
9	48-4597	BLOCK, SEVER, INSIDE	1
10	49-0287	HOLDER, BLADE, TRAILING	2

MOTOR ASSEMBLY, ELECTRIC 110V/220V (P/N 58-0308, 58-0309)



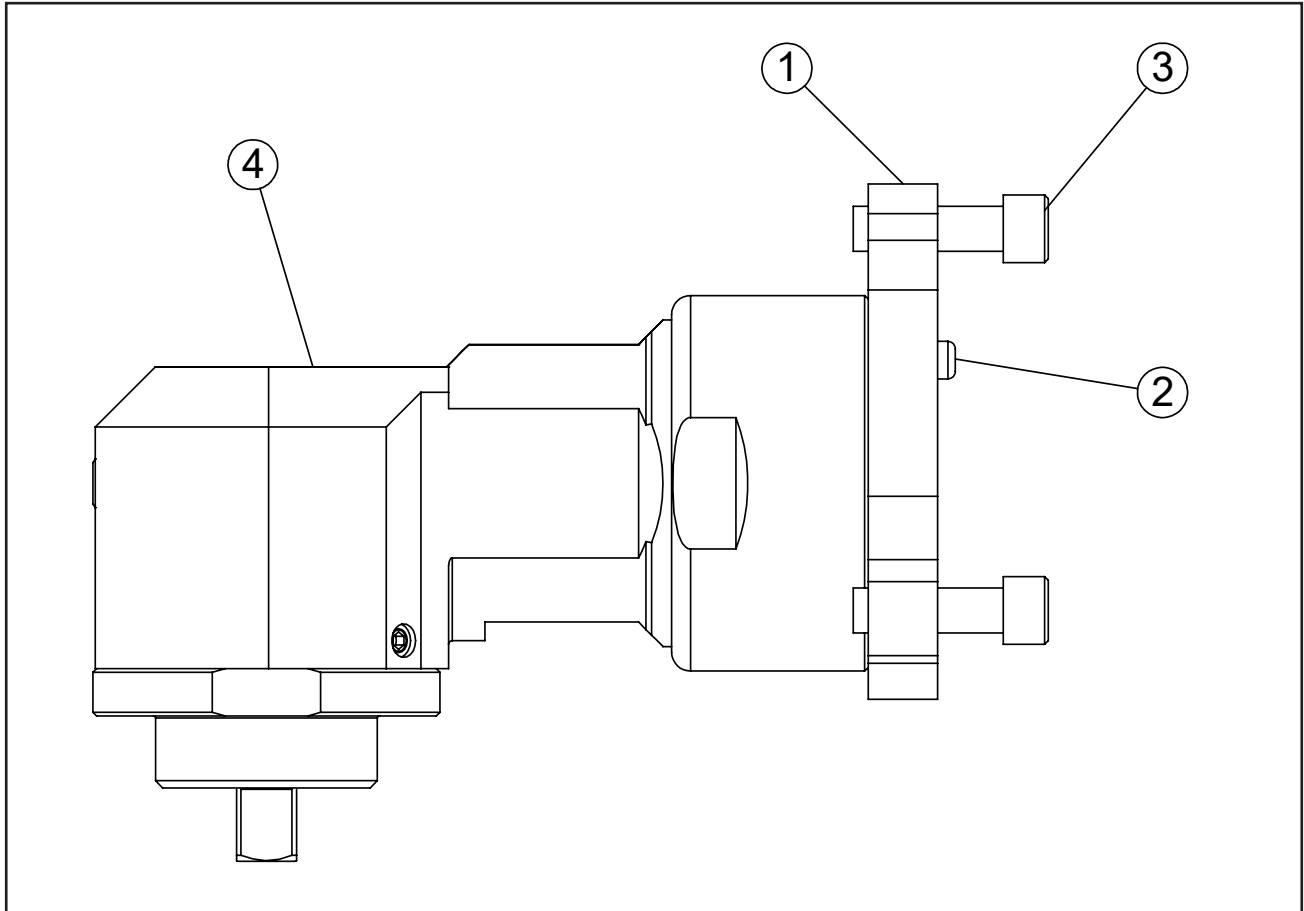
Parts List, Motor, Assembly, Electric 110V (P/N 58-0308)

Item No.	Part No.	Description	Qty
1	19-1696	HOUSING, PEND, ELEC MTR SWITCH	1
2	27-1496	ADAPTER, ELEC MTR, RBL-G2	1
3	28-0616	GASKET, PEND, ELEC MTR SWITCH	1
4	30-3143	SHAFT, ELEC MTR, RBL-G2	1
5	33-0057	SCREW, CAP, 5/16-18 X 1-1/4"	1
6	33-0072	SCREW, CAP, 3/8-16 X 1-1/4"	2
7	33-1874	SCREW, ANTI-ROTATION	2
8	33-4171	SCREW, CAP, M4 X 0.7" X 45MM	4
9	33-4172	SCREW, CAP, M4 X 0.7" X 40MM	6
10	35-1009	NUT, LK, M4	10
11	43-1147	COVER, PEND, ELEC MTR SWITCH	1
12	48-3873	BLOCK, BUMPER, ELEC MTR PENDANT	2
13	58-0306	MOTOR, ELECTRIC, 110V, UNITEC	1
14	65-0058	BOOT, PUSH BUTTON, ELEC SWITCH	1
15	70-2613	SWITCH, SNAP ACTION, PANEL MT, 20A	1
16	70-2614	CORD GRIP, .450" DIA CABLE, HEYCO	2
<i>NOT SHOWN</i>			
	70-0545	CONNECTOR, BUTT SPLICE, 12-10, NYLON	2
	70-1061	TERM, RING, #8, INSUL, 14-16 AWG	2

Parts List, Motor, Assembly, Electric 220V (P/N 58-0309)

Item No.	Part No.	Description	Qty
1	19-1696	HOUSING, PEND, ELEC MTR SWITCH	1
2	27-1496	ADAPTER, ELEC MTR, RBL-G2	1
3	28-0616	GASKET, PEND, ELEC MTR SWITCH	1
4	30-3143	SHAFT, ELEC MTR, RBL-G2	1
5	33-0057	SCREW, CAP, 5/16-18 X 1-1/4"	1
6	33-0072	SCREW, CAP, 3/8-16 X 1-1/4"	2
7	33-1874	SCREW, ANTI-ROTATION	2
8	33-4171	SCREW, CAP, M4 X 0.7" X 45MM	4
9	33-4172	SCREW, CAP, M4 X 0.7" X 40MM	6
10	35-1009	NUT, LK, M4	10
11	43-1147	COVER, PEND, ELEC MTR SWITCH	1
12	48-3873	BLOCK, BUMPER, ELEC MTR PENDANT	2
13	58-0307	MOTOR, ELECTRIC, 220V, UNITEC	1
14	65-0058	BOOT, PUSH BUTTON, ELEC SWITCH	1
15	70-2613	SWITCH, SNAP ACTION, PANEL MT, 20A	1
16	70-2614	CORD GRIP, .450" DIA CABLE, HEYCO	2
<i>NOT SHOWN</i>			
	70-0545	CONNECTOR, BUTT SPLICE, 12-10, NYLON	2
	70-1061	TERM, RING, #8, INSUL, 14-16 AWG	2

KIT, RA HEAD, AIR MOTOR (P/N 05-0808)



Parts List, Kit, RA Head, Air Motor (P/N 05-0808)

Item No.	Part No.	Description	Qty
1	27-1472	ADAPTER, RA ASSEMBLY	1
2	32-0257	PIN, DOWEL, 5/16" DIA X 3/4"	1
3	33-0072	SCREW, CAP, 3/8-16 X 1-1/4"	3
4	91-0611	RA GEAR ASSEMBLY, 1/2" SQ	1

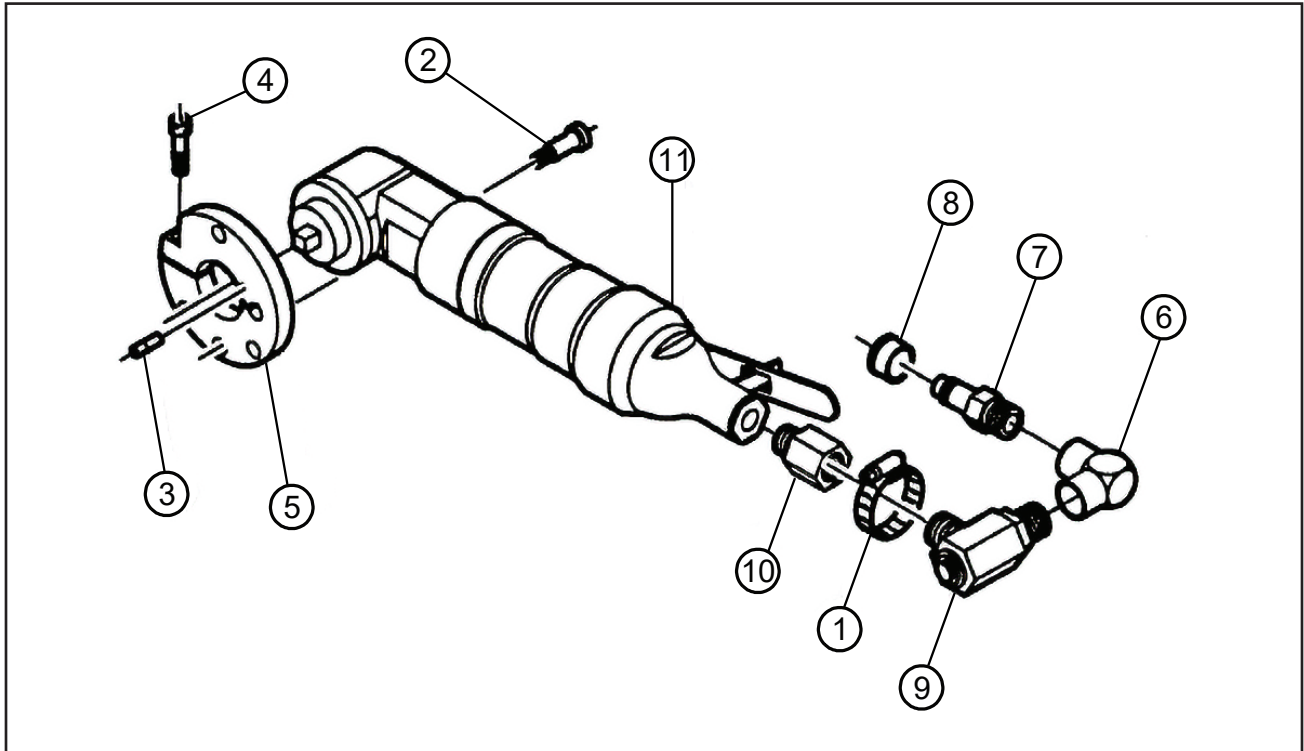
Parts List, Accessory Repair Kit G2 Tool Module (P/N 05-0814)

Item No.	Part No.	Description	Qty
1	32-0026	PIN, ROLL, 1/8" DIA X 3/4"	1
2	32-0028	PIN, ROLL, 1/8" DIA X 1"	1
3	32-1053	PIN, GROOVE TYPE A, 1/8" D X 5/8"	1
4	33-1369	SCREW, SET, 3/8-24 X 1/2", HDOG	6
5	33-4121	FEED SCREW ASSEMBLY, 3/8-32 LH	1
6	35-0989	NUT, FEED, 3/8-32 LH	1
7	36-0147	PUNCH, PIN, 1/8" DIA	1
8	38-0228	SPROCKET, FEED, 6PT, SQ DR	1
9	45-0542	BUSHING, SQ DR, 5/16"	1

Parts List, Accessory Repair Kit G2 Tripper (P/N 05-0815)

Item No.	Part No.	Description	Qty
1	32-1048	PIN, TRIPPER	1
2	33-4059	SCREW, LOW CAP, 1/4-20 X 3/8" ZINC	1
3	40-0486	SPRING, COMPRESSION, 3/16" X 1-3/4"	1
4	41-0259	HANDLE, 1/4-20 X 3-1/2"	1
5	41-0261	HANDLE, 1/4-20 X 2-1/2"	1

MOTOR ASSEMBLY, AIR, DUAL DRIVE (P/N 57-0209)



Parts List, Dual Drive Air Motor Assembly (P/N 57-0209)

Item No.	Part No.	Description	Qty
1	30-0621	CLAMP, HOSE	1
2	33-0945	SCREW, SHOULDER, 1/2" X 3/4"	2
	47-0660	BRACKET ASSEMBLY, TORQUE RESTRAINT	1
3	32-0257	PIN, DOWEL, 5/16" X 7/8"	1
4	33-0073	SCREW, CAP, 3/8-16 X 1-1/2"	1
5	47-0658	BRACKET, TORQUE RESTRAINT	1
6	54-0062	ELBOW, 90°	1
7	54-0126	COUPLING, MALE, QUICK DISCONNECT	1
8	54-0201	CAP, PLASTIC	1
9	54-0204	SWIVEL JOINT	1
10	54-0329	FITTING, EXTENSION	1
11	57-0158	MOTOR, AIR	1

REFERENCE: Hose Manifold Assembly to Connect the Dual Air Motor Assembly

76-0031	MANIFOLD, HOSE, ASSEMBLY	1
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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!



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