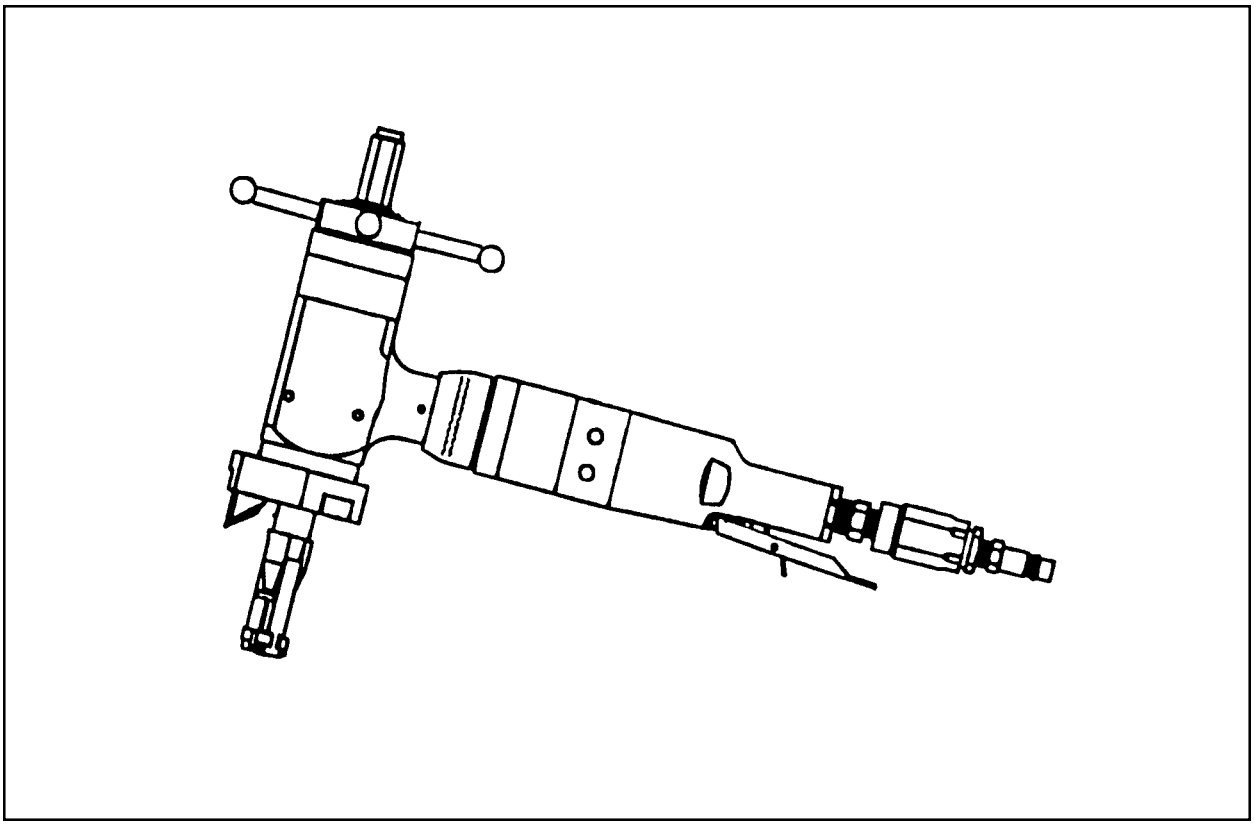

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SAFETY PRECAUTIONS

IN GENERAL

When using rotating head cutting equipment, basic safety precautions should always be followed to reduce the risk of personal injury.

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.

DRESS CONSIDERATIONS

Use standard safety equipment. Hard hats, safety shoes, safety harnesses, protective clothes, and other safety devices should always be used when appropriate.

Use safety glasses. Do not operate cutting tools without eye protection.

Dress properly. Do not wear loose clothing or jewelry. They can be caught in rotating and moving parts. Avoid slippery floors or wear nonskid footwear. If you have long hair, wear protective hair covering to contain it.

WORK AREA

Keep the work area clean. Cluttered work areas and benches invite injuries.

Consider the work area environment. Keep the area well lit. Keep electrical cords, cables, rags, rigging straps, and etc. clear of rotating equipment. Do not use power-cutting tools in the presence of flammable liquids and gasses.

Keep visitors away. Do not let visitors or untrained personnel at or near operating tools. Enforce eye protection requirements for all observers.

Do not over reach. Keep proper footing at all times.

Stay alert. Watch what you are doing. Use common sense. Do not operate tools when you are tired.

TOOL CARE

Maintain tools with care. Keep tools in good operating condition. Sharp tool bits perform better and safer than dull tool bits. Well maintained tools function properly when needed.

Check for damaged parts. If a tool has malfunctioned, been dropped or hit, it must be checked for damage. Run no-load tests and feed function checks. Do a complete visual inspection.

Electric motors. Use only with proper AC voltage power sources and observe all normal electric shock hazard procedures.

Do not abuse power and control cords. Pulling or running over cords and cables can result in electrical shock hazards and malfunctions. Keep control and power cords out of all cutting fluids and water.

Hydraulic drives. Observe proper procedures for electrically driven power sources. Avoid damage to hydraulic lines. Keep quick-disconnects clean. Grit contamination causes malfunctions.

Air tools. Check the exhaust muffler. Broken or damaged mufflers can restrict air flow or cause excessive noise. Use air motors only with a filtered, lubricated and regulated air supply. Dirty air, low-pressure air or over pressure air will cause malfunctions, including delayed starting.

AREA EQUIPMENT

Secure work. Whenever possible use clamps, vises, chains and straps to secure pipe.

Make sure the tool is secured; it is safer to have both hands free to operate the tool.

TOOL USE

Use the right tool and tool bit for the job. Do not use a tool, which is incorrect for the job you are doing.

Keep the tool bits fully engaged in the tool bit holders. Loose bits are a safety hazard.

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. Develop a habit of checking 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 feed and speed rate for which they were designed.

Do not reach into rotating equipment. Do not reach into the rotating head stock to clear chips, to make adjustments, or to check surface finish. A machine designed to cut steel will not stop for a hand or an arm.

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

Avoid unintentional starts. Do not carry or handle tools with your hand on the operating switches or levers. Do not lay the tool down in a manner that will start the drive. Do not allow the tool to flip around or move when adjusting or changing tool bits.

Store idle tools properly. Disconnect tools from the power source and store in a safe place. Remove tool bits for safe handling of the tool.

GENERAL DESCRIPTION

The Model 204B BEVELMASTER™ is a Pipe Beveler designed for facing, beveling and/or counterboring the ends of pipe or tubing in preparation for welding.

These machining operations may be performed either simultaneously or separately.

Pipe weld end preparations that meet all existing conventional codes including the more stringent nuclear codes may be machined.

The various interchangeable jaw blocks and ramps will secure the Model 204B BEVELMASTER™ to pipe and tubing having an inside diameter ranging from 1.25” (31.8 mm) through 4.33” (110.0 mm).

The expanding mandrel provides fast, accurate self-centering and alignment to the pipe or tubing to be machined.

The Model 204B BEVELMASTER™ accepts the reaction torque generated by the machining operations through the mandrel.

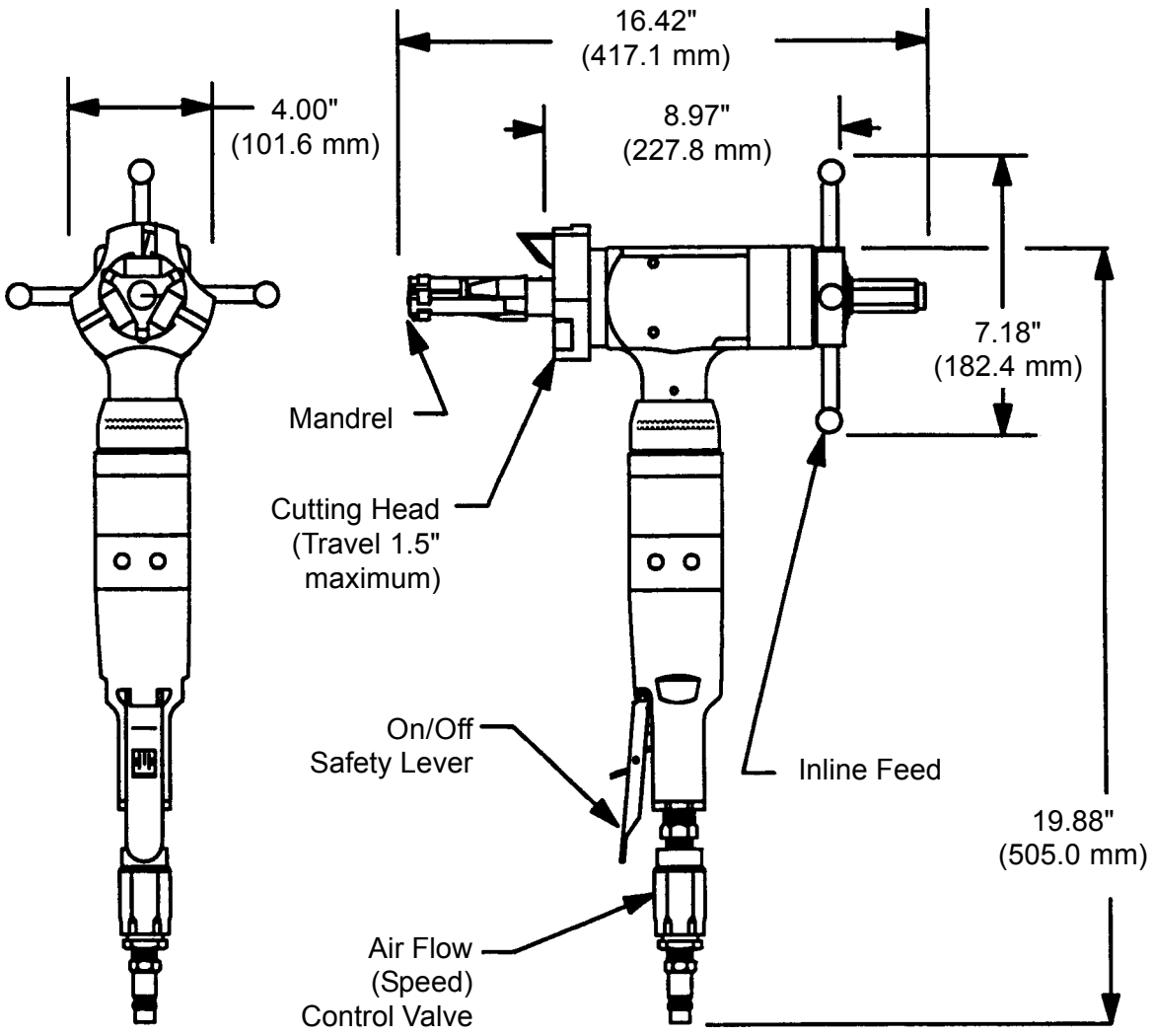
No additional restraining devices are required.

SPECIFICATIONS

MODEL 204B BEVELMASTER™ with an AIR MOTOR

Weight	18 lbs (8.1 kg)
Power Requirements	55 cfm at 90 psi (26 L/s at 621 kPn)

Envelope Drawing



PIPE CUTTING CAPACITIES

Basic Pipe Sizes

All schedules of 1 1/4” through 4” pipe.

Some schedules may require optional equipment.

Basic Tube Size

Up to .531” (13.5mm) wall tubing with a maximum O.D. of 4.50” (114.3mm) and a minimum I.D. of 1.25” (31.7mm) may be beveled with standard mandrel.

Wall Thickness Capacity

Wall thickness of all standard pipe schedules [.531” (13.5mm) maximum] in the range listed. Contact Tri Tool for heavier wall procedures.

Counterboring Operations

The tool will counterbore pipe and tubing with an I.D. range of 1.50” (38.1mm) to 4.33” (110.2mm).

Material Cutting Capabilities

Mild steels, Chrome steels (Rc 35 max), stainless steel, copper-nickel alloys and aluminum without limitations except size and wall thickness as specified in paragraph #2.

Inconel and some other high temperature alloys may require special procedures as a function of wall thickness and type of end preparation. Contact Tri Tool’s Engineering Department for details.

CLEARANCE AND DIMENSIONS

Rotating Head DIA.	4.00” (101.6mm)
Length Over Motor	19.88” (505.0mm)
Length (of machine)	8.97” (227.8mm)
Available Feed Travel	1.50” (38.1mm)

DRIVE SYSTEM

Final Drive	Gear Driven
Pneumatic Motor	
Free speed	325 rpm
Max. H.P. speed	162 rpm

POWER SUPPLY

Pneumatic motor requires 55 cfm (26 L/s) air supply at 90 psi (621 kPa) for maximum horsepower delivery.

Note: Air Supply must have a filter/regulator/lubricator (FRL) system to protect the warranty on the air motor.

CUTTING HEAD SPEEDS

Maximum Cutting Head Speed	162 rpm
Cutting Head Speed @ Maximum H.P.	82 rpm
Functional Speed Range	20-100 rpm
RPM at 300 Surface Inches Per Minute	
4.50” (114.3mm)	21 rpm
1.25” (31.8mm)	76 rpm

SPEED CONTROL

On/off safety lever valve and twist-type air flow control valve.

MOUNTING

Manually actuated draw rod expands mandrel ramps and jaw blocks.

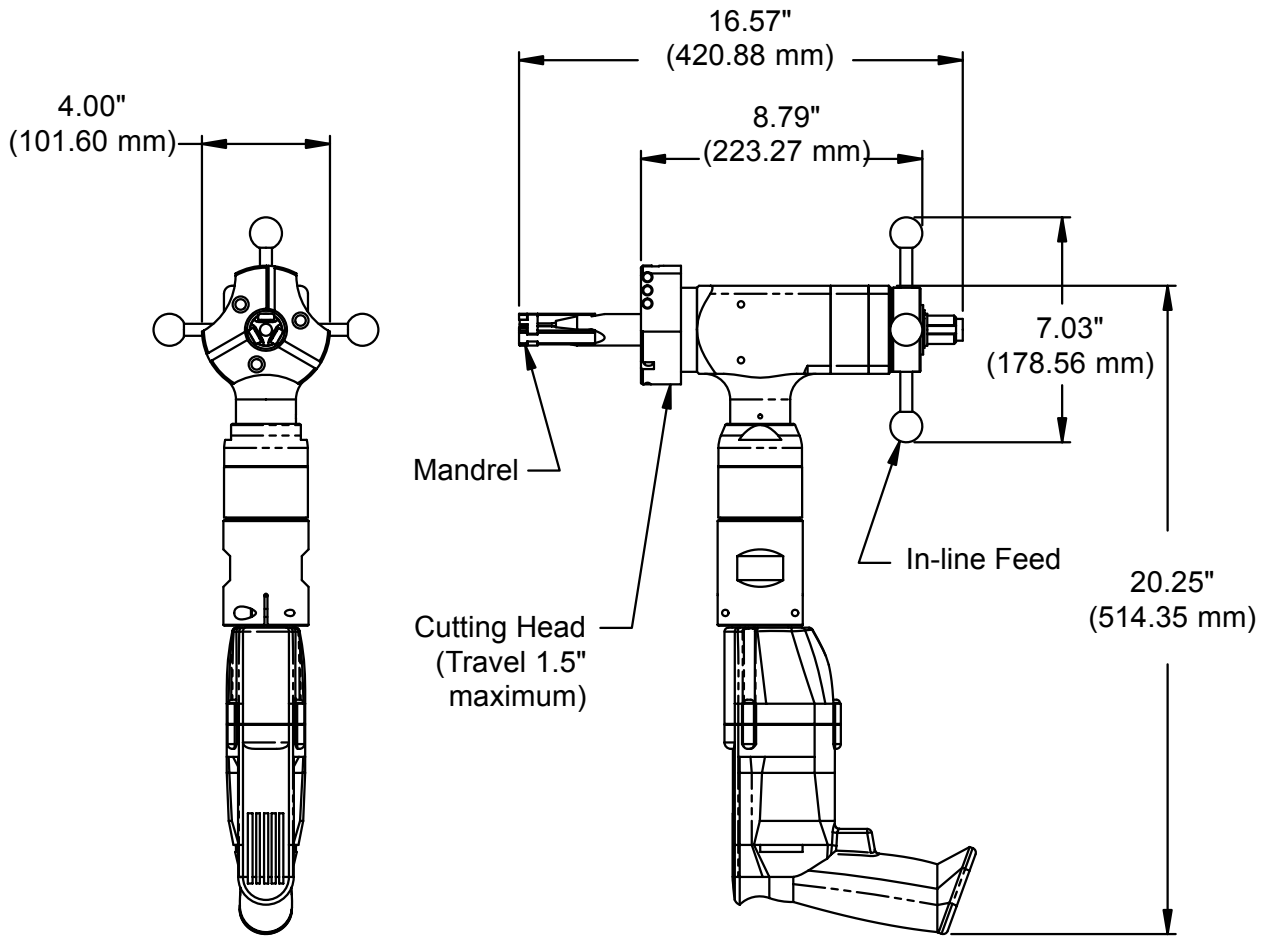
FEED

Manual-Feed Handle is in line at the back of the machine. Feed rate is .100” (2.5mm) per revolution of the feed handle.

MODEL 204B BEVELMASTER™ with an ELECTRIC MOTOR

Weight	18 lbs (8.1 kg)
Power Requirements	115 VAC, 28 to 60 Hz 5.25 amp

Envelope Drawing



PIPE CUTTING CAPACITIES

Basic Pipe Sizes

1” Pipe

Schedule 40 (Small Mandrel required to mount in 1” schedule 80 and above.)

1 1/4” through 2 1/2” Pipe

Up to Schedule 80

3” through 4” Pipe

Up to Schedule 40

* Some Schedules may require optional equipment.

Basic Tube Sizes

Up to .250” (6.4 mm) wall tubing with a maximum OD of 4.50” (114.3 mm) and a minimum ID of 1.25” (31.7 mm) may be beveled with standard mandrel.

Wall Thickness Capacity (Limitations)

Wall thickness of schedules listed, .276” (7 mm) maximum, in the range listed can be machined without limitations.

Wall thicknesses greater than .276” (7 mm) require special procedures and are subject to Duty Cycle limitations to prevent motor damage. Contact Tri Tool Inc. for heavier wall procedures.

Counterboring Operations

The tool will counterbore pipe and tubing with an ID of 1.50” (38.1 mm) to 4.33” (110.2 mm).

DUTY CYCLE

The 204BE with an electric motor (P/N 58-0147 or equivalent) duty cycle on high cutting load applications (see above), is limited to 50% ‘On’ time with a maximum of five (5) minutes continuos ‘On’ time.

MATERIAL CUTTING CAPABILITIES

Mild steels, chrome steels, (Rc 35 max), stainless steel, copper-nickel alloys and aluminum without limitations except size and wall thickness as specified in the above paragraphs.

Inconel and some other high temperature alloys may require special procedures as a function of wall thickness and type of end preparations. Contact Tri Tool's Engineering Department for details.

CLEARANCE AND DIMENSIONS

Rotating Head DIA.	4.00" (101.6 mm)
Length	8.97" (227.8 mm)
Length Over Motor	20.25" (514.35 mm)
Available Feed Travel	1.50" (38.1 mm)

DRIVE SYSTEM

Final Drive	Gear Driven
Electric Motor - 2 speed Ranges & 6:1 Gear Reduction	
Free speed	
Low Range	168 rpm
High Range	316 rpm
Max. HP Speed	
Low Range	112 rpm
High range	210 rpm

POWER SUPPLY

115 VAC, 5.25 Amps, 28 to 60 Hz.

CUTTING HEAD SPEEDS

Max. Cutting Head Speed

Low Range	84 rpm
High Range	156 rpm

Cutting Head Speed @ Max. H.P.

Low Range	56 rpm
High Range	105 rpm

Functional Speed Range 20 to 100 rpm

Speed Control

On/Off Trigger control with Variable Speed.

MOUNTING

Manually actuated draw rod expands mandrel ramps and jaw blocks.

FEED

Manual-Feed Handle is in line at the back of the machine. Feed rate is .100” (2.5mm) per revolution of the feed handle.

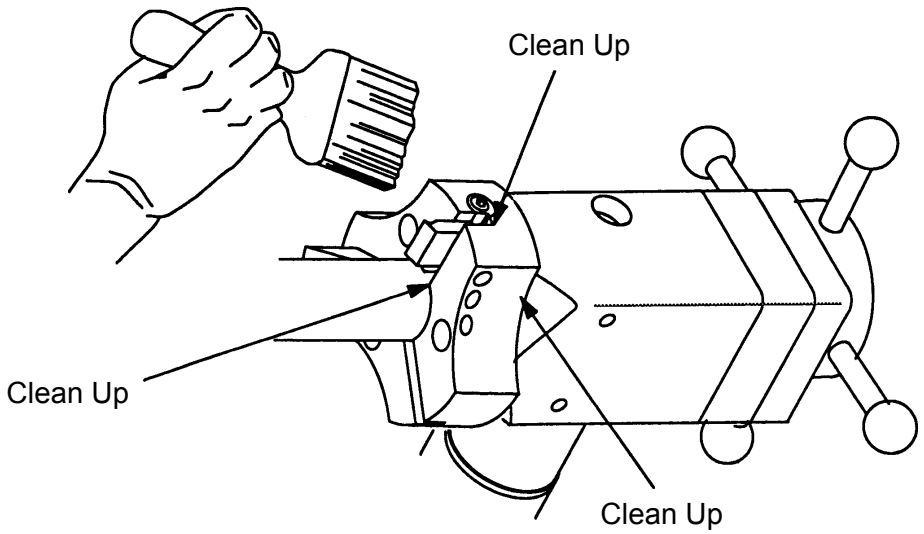
MAINTENANCE

All components should be cleaned and coated with a light film of oil prior to use.

Use a clean, non-detergent oil, preferably SAE 10 (90 SSU) or lighter or oil as specified for the air motor.

Air supply for the Model 204B BEVELMASTER™ with an Air Motor requires an adequate filter/regulator/lubricator (FRL) to be used.

A maximum of 90 psi (621 kPa) line pressure is recommended.

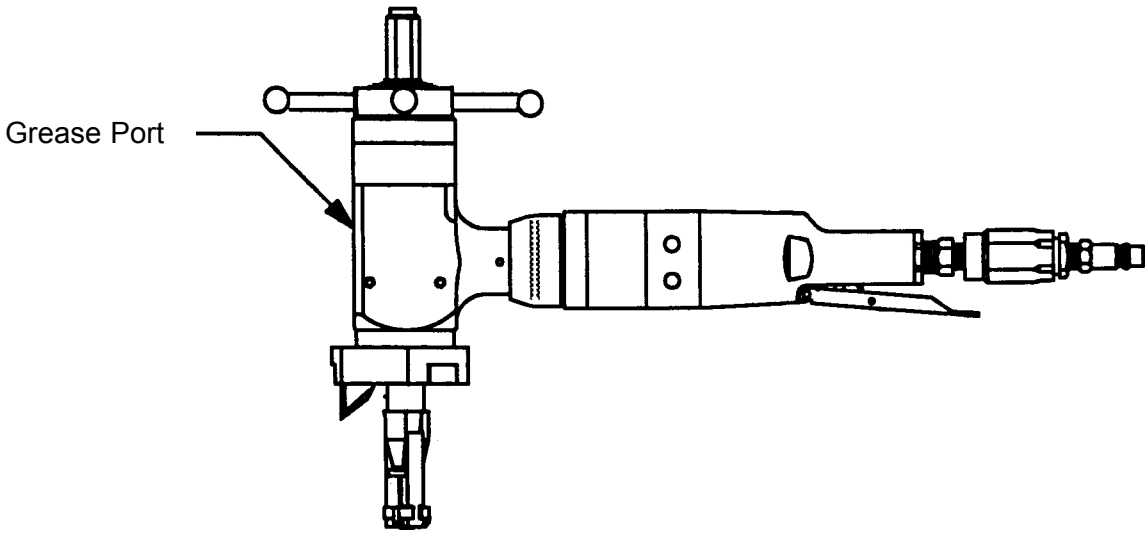


NOTE:	The motor warranty is void if damage occurs from contaminated air or lack of lubrication.

When the Model 204B BEVELMASTER™ is operated in the vertical position, cutting head up, it should be turned upside down and the chips and/or other debris removed after each bevel has been completed.

NOTE:	Tool life may be severely shortened, unless chips and/or other debris that have been deposited on the cutting head during the machining operations are removed.

Verify that there is adequate grease in the gear box. Gears and bearings are to be lubricated using a lithium based grease.



NOTE:	Disassembly of a power unit voids warranty, except when performed by a TRI TOOL INC. designated repair technician. A letter of designation is required.

AIR MOTOR LUBRICATION

No direct maintenance is normally required on the air motor.

However, the air supply must flow through a filter/regulator/lubricator (FRL) unit or separate units before arriving at the air motor.

The FRL unit must be maintained as required, frequency dependent on the basic air supply, to keep the water trap drained, filter cleaned and the lubricator oil reservoir filled so that a drop of oil every two (2) to five (5) seconds is flowing.

If the Model 204B BEVELMASTER™ is to be left idle for 24 hours or more after being run on ‘wet’ air, it is advisable to squirt oil directly into the air motor inlet and run the motor for two (2) to three (3) seconds.

This will prevent rusting and ‘freezing‘ of the rotor vanes.

Lubricant Recommendations

The air motor requires a Class 2 lubricant, viscosity of 100 to 200 SSU at 100˚ F (38° C) minimum aniline point of 200° F (93° C).

TRI TOOL Inc. – 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

The bearings in the Air and Electric Motor are sealed and do not require any lubrication.

The drive gears require a lithium based grease.

OPERATION

Read the operating instructions carefully before attempting to operate the Model 204B BEVELMASTER™

Use eye protection at all times when operating the Model 204B BEVELMASTER™

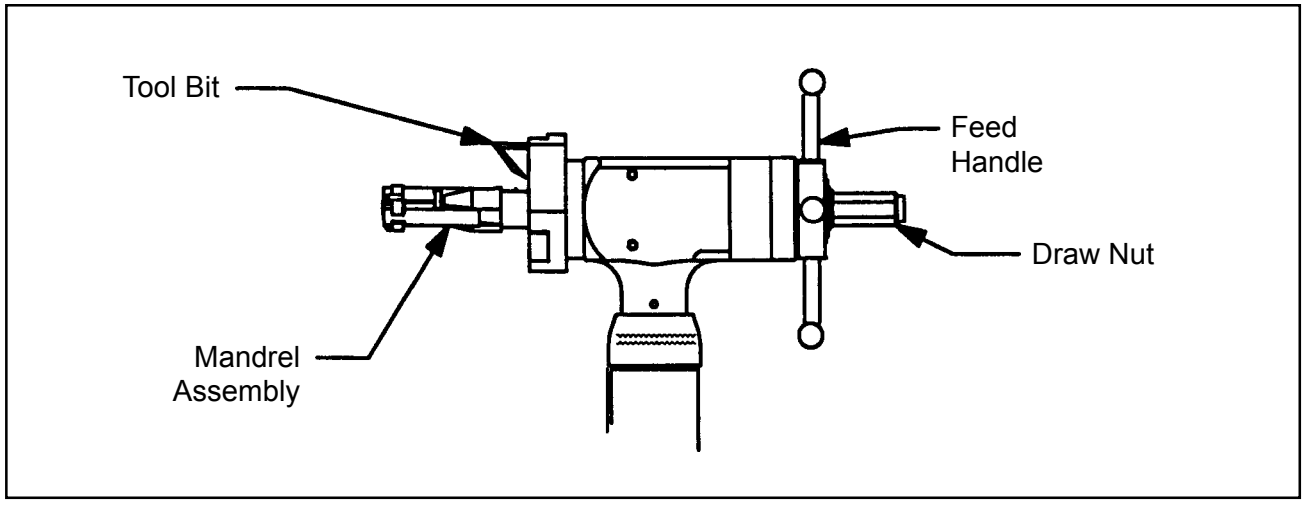
INSTALLATION

Select the recommended jaw blocks for the pipe size to be machined.

Gently slide the mandrel assembly into the Model 204B BEVELMASTER™ until it comes to a stop against the torque acceptance key.

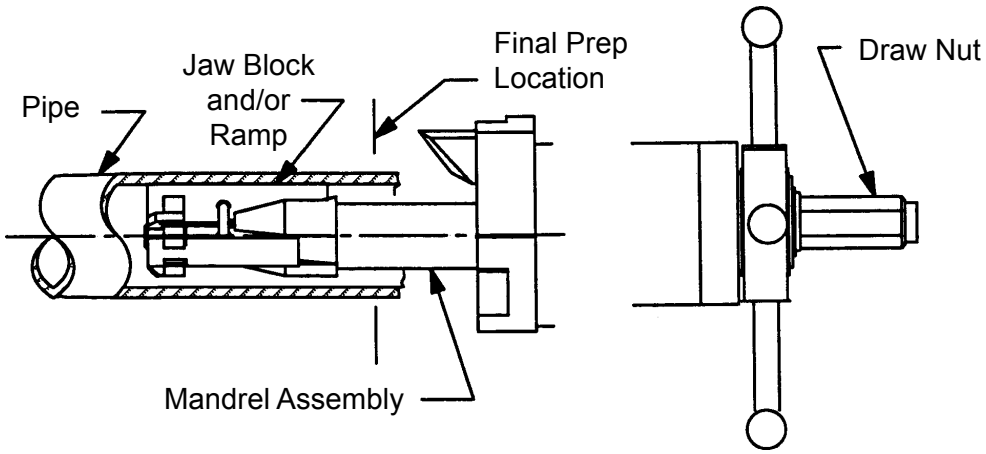
Rotate the mandrel assembly as required to engage the torque acceptance key of the Model 204B BEVELMASTER™ with the slot in the mandrel shaft.

NOTE:	Since the mandrel shaft will contact the torque acceptance key before the feed nut engages the mandrel shaft threads, caution should be taken not to force, or allow, the machine to impact the lead threads of the feed nut with the lead threads of the mandrel.



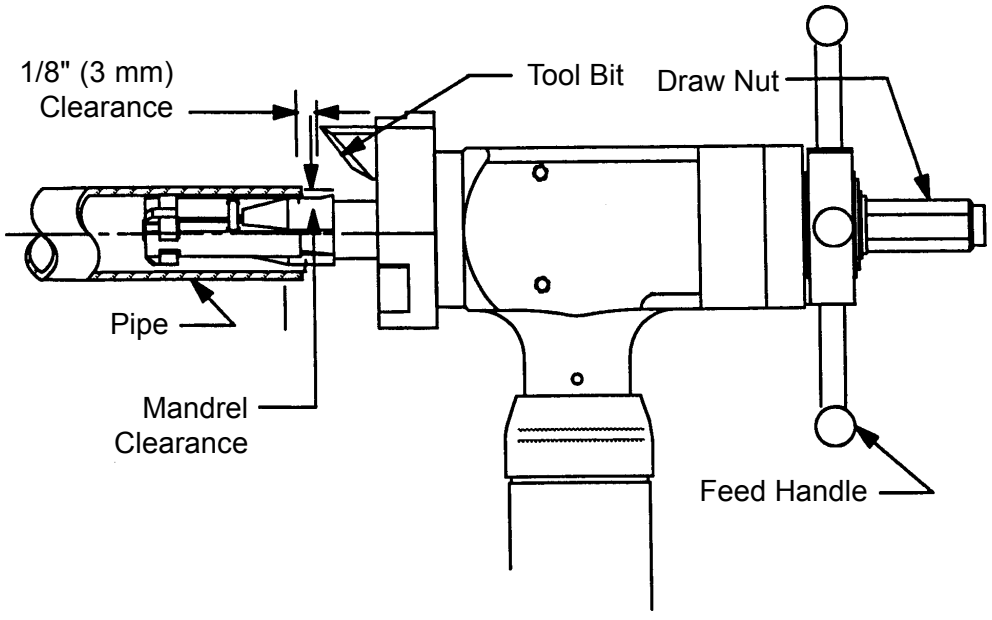
Rotate the feed handle clockwise to engage the feed nut with the thread on the mandrel shaft.

The Model 204B BEVELMASTER™ with the mandrel assembly installed maybe mounted into the pipe or tube as one unit.



NOTE:	In order to avoid cutting the ramps and/or jaw blocks during the machining operation, the mandrel must be installed beyond the final preparation location.

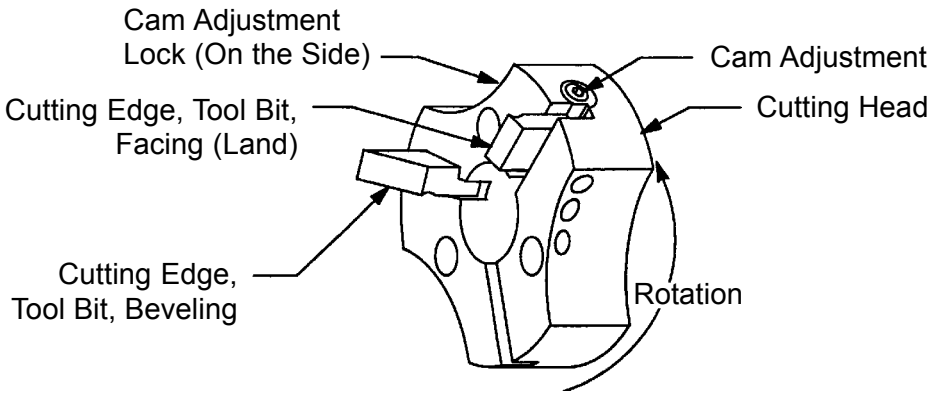
Tighten the draw nut to force the jaw blocks out to the inside diameter of the pipe or tube.



Verify a clearance of 1/8” (3 mm) minimum between the tool bit and the pipe face.

Select the tool bit(s) required to machine the pipe to the configuration desired.

WARNING: Use of dull or improperly designed tool bits or tool bits not manufactured by TRI TOOL INC. may result in poor performance and may constitute abuse of the machine and therefore voids the TRI TOOL INC. factory warranty.



When performing any multiple machining operation such as facing and beveling, the facing tool bit should be installed as shown.

Insert the tool bit(s) into the slot(s) in the cutting head.

CAUTION: The cutting edge of the tool bit(s) must be located on the radial centerline.

CAUTION: Insure that no tool bit is installed backwards.

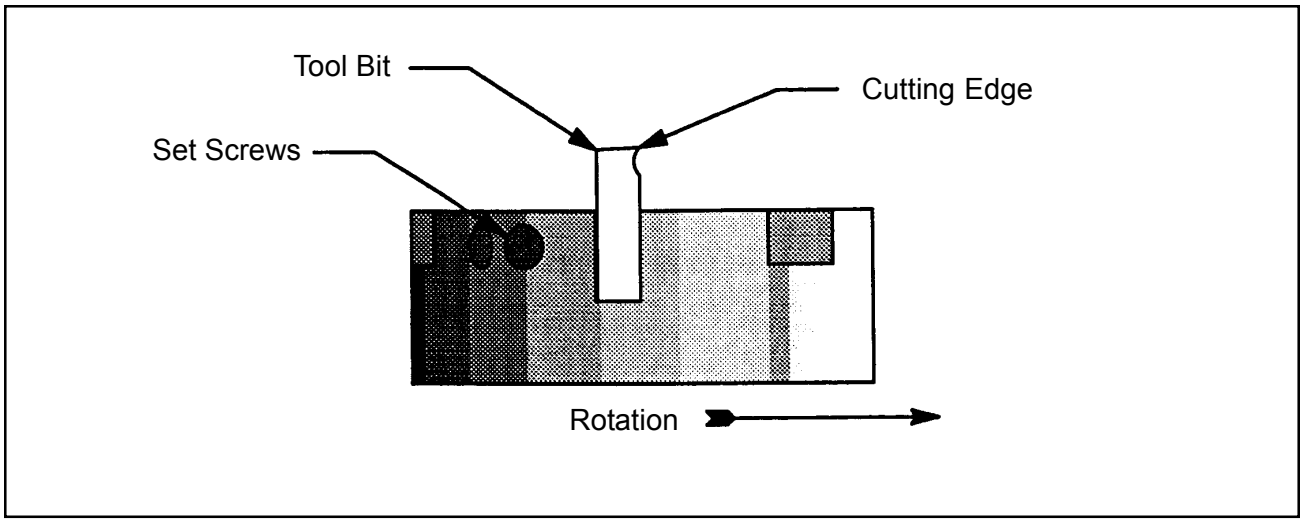
Make sure that there is a clearance between the tool bit(s) and the mandrel.

Tighten the setscrews to secure the tool bit in the tool bit slot.

Adjust the bevel tool bit radially to control the land width.

Adjust the cam to alter the width of the land with the facing tool bit.

Attach the proper air supply line to the Model 204B BEVELMASTER™



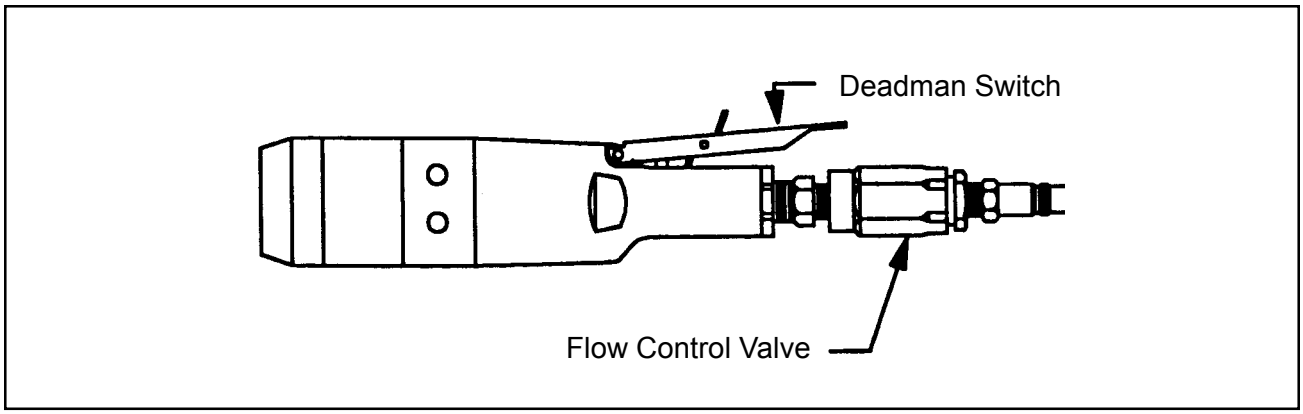
NOTE: Check that the filter/regulator/lubricator (FRL) is installed and set properly.

MACHINING SEQUENCE

Depress the air motor trigger. Adjust the cutting speed by rotating the flow valve at the air connection.

Rotate the feed handle clockwise to bring the tool bit(s) and pipe closer together.

WARNING: DO NOT OVERRIDE THE DEADMAN SWITCH ON THIS UNIT. Locking down, obstructing, or in any way defeating the deadman switch on this unit may result in serious injury.



CAUTION: The actual machining operation will begin when the first tool bit contacts the pipe.

When the pipe end is not square to the pipe axis, the Tool Bit will contact only a small segment of the pipe during each revolution.

To avoid tool bit damage, the feed rate should be very slow until the tool bit(s) is in contact with the pipe continually during at least one full revolution.

Continue rotating the feed handle clockwise until the end of the pipe is completely machined.

Discontinue feed and allow the head to rotate one (1) to three (3) revolutions to improve finish of the prep surface.

Release the air motor trigger to stop the head rotation.

Rotate the feed handle counterclockwise to separate the tool bit(s) from the pipe.

Rotate the feed handle counterclockwise until the tool bit to pipe relationship is the same as described.

Loosen the draw nut on the mandrel to release the mandrel from the pipe.

The mandrel assembly may be left in the Model 204B BEVELMASTER™ and installed as a complete assembly.

CUTTING SPEEDS AND FEEDS

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)
1"	1.315"	33.4 mm	48	61	73
2"	2.375"	60.3 mm	27	34	40
3"	3.500"	88.9 mm	18	23	27
3 1/2"	4.000"	101.6 mm	16	20	24
4"	4.500"	114.3 mm	14	18	21
Cutting Speed (Approximately)					

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

Stainless steels in general when no coolant is allowed, all heavy-wall tube and some chrome/molybdenum steels.

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

Mild steels and some thin-wall stainless steels when coolants are permitted and applied.

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

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

BASIC FEED RECOMMENDATION

Use very light feed for initial beveling or until a continuous cut is established.

This is very important for longer tool bit life when cutting through flame cut or out of square pipe ends.

Use adequate feed, .003” to .006” (.08 mm to .15 mm) per revolution thereafter, to establish a continuous chip cut.

If the feed is too light, only light stringer chips will be removed.

If the feed is too heavy the drive will start to overload and the chip will start to have a rough or torn appearance.

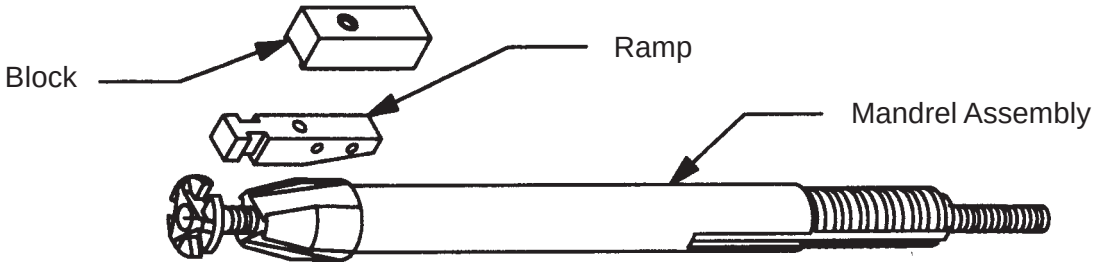
Stainless steel, which work hardens, must be worked with a heavy enough feed to stay under the work hardened surface .003" (.08 mm) to .006" (.15 mm).

Never allow the Tool Bit to burnish the surface.

Reduced feeds and speeds will normally minimize chatter problems.

JAW BLOCKS AND RAMP SETS

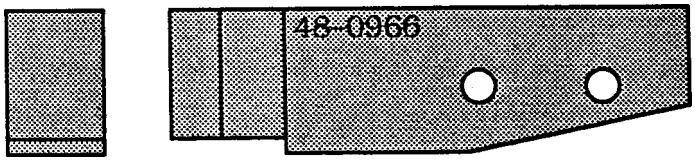
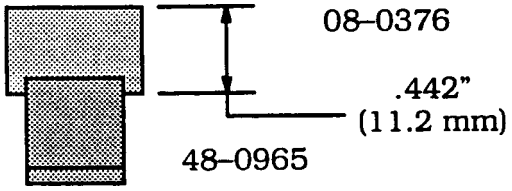
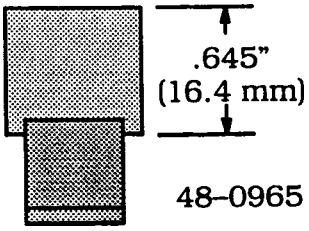
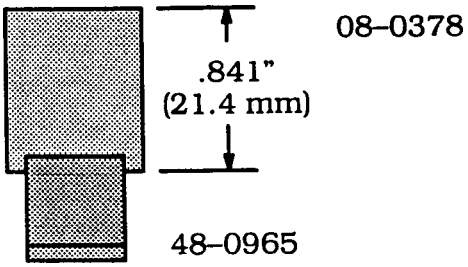
STEEL JAW BLOCKS AND RAMPS



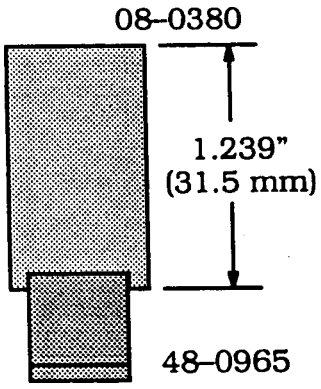
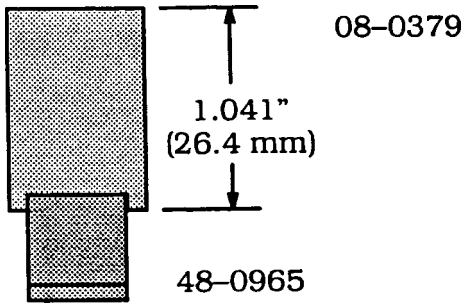
Used with Mandrel Assembly (P/N 06-0419)

ID Mounting Range	Standard Ramp (3 Req'd)	Jaw Block Assembly (3 Req'd)	Block Height
1.250" to 1.630" (31.8 mm to 41.4 mm)	48-0964	N/A	N/A
1.560" to 2.000" (39.6 mm to 50.8 mm	48-0965	N/A	N/A
1.930" to 2.390" (49.0 mm to 60.7 mm)	48-0966	N/A	N/A
2.320" to 2.780" (58.9 mm to 70.6 mm)	48-0965	08-0376	.442" (11.2 mm)
2.710" to 3.160" (68.8 mm to 80.3 mm)	48-0965	08-0377	.645" (16.4 mm)
3.090" to 3.550" (78.5 mm to 90.2 mm)	48-0965	08-0378	.841" (21.4 mm)
3.480" to 3.940" (88.4 mm to 100.1 mm)	48-0965	08-0379	1.041" (26.4 mm)
3.870" to 4.330" (98.3 mm to 110.0 mm)	48-0965	08-0380	1.239" (31.5 mm)
NOTE: Blocks can only be mounted on the #2 Ramp (P/N 48-0965)			

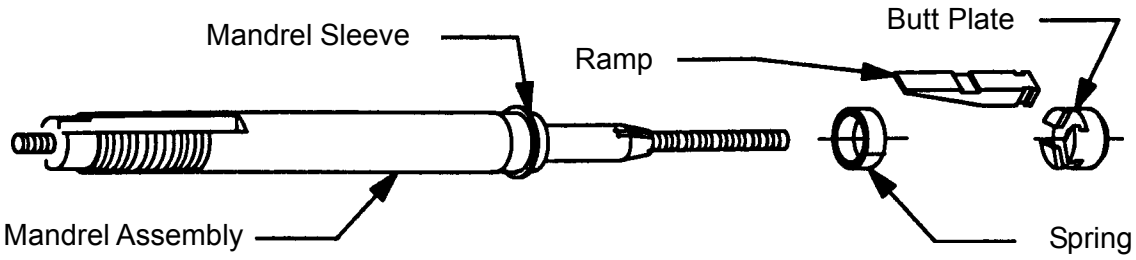
STEEL JAW BLOCK AND RAMP PROFILES - STANDARD MANDREL

Mounting ID	Ramp and Block Combination
1.250" to 1.630" (31.8 mm to 41.4 mm)	
1.560" to 2.000" (39.6 mm to 50.8 mm)	
1.930" to 2.390" (49.0 mm to 60.7 mm)	
2.320" to 2.780" (58.9 mm to 70.6 mm)	
2.710" to 3.160" (68.8 mm to 80.3 mm)	
3.090" to 3.550" (78.5 mm to 90.2 mm)	

STEEL JAW BLOCK AND RAMP PROFILES - STANDARD MANDREL

Mounting ID	Ramp and Block Combination
3.480" to 3.940" (88.4 mm to 100.1 mm)	
3.870" to 4.330" (98.3 mm to 110.0 mm)	

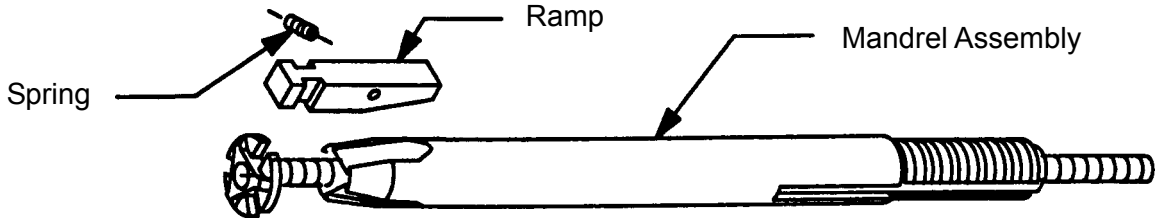
BUTT PLATE, SPRING AND RAMPS



Used with Mandrel Assembly (P/N 06-0413)

ID Mounting Range	Butt Plate P/N	Spring P/N	Ramp P/N
.610" to .800" (15.5 mm to 20.3 mm)	24-1463	40-0130	48-0596
.800" to 1.000" (20.3 mm to 25.4 mm)	24-1464	40-0136	48-0597

BUTT PLATE, SPRING AND RAMP

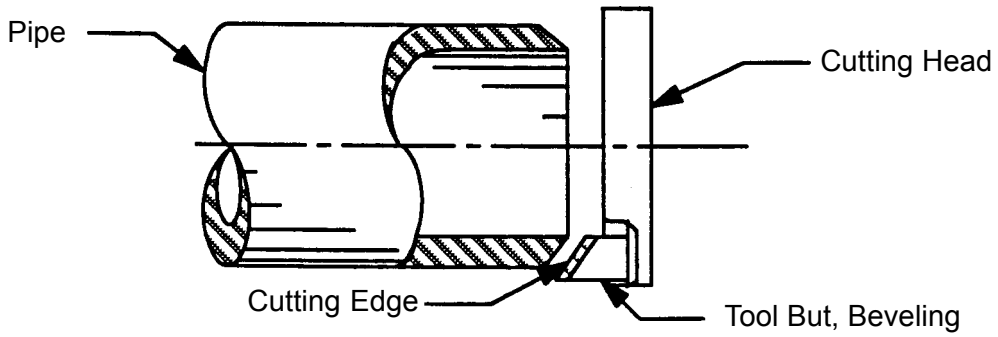


Used with Mandrel Assembly (P/N 06-0414)

ID Mounting Range	Butt Plate P/N	Spring P/N	Ramp P/N
1.000" to 1.250" (25.4 mm to 31.8 mm)	24-1462	40-0108	48-0976

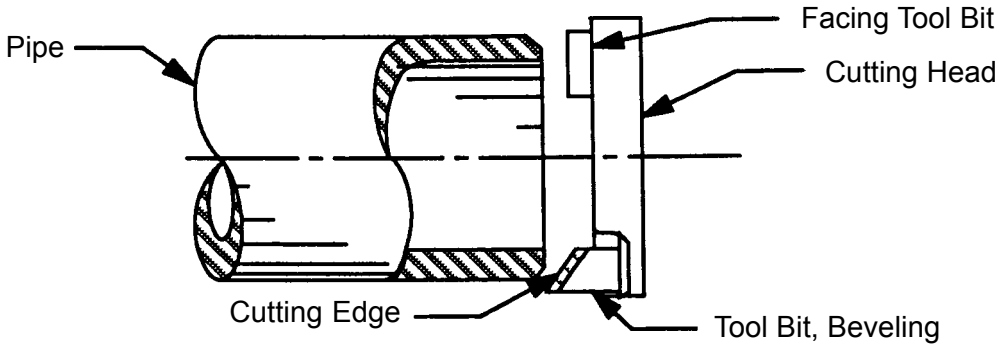
TOOL BITS

TOOL BIT, 37.5° BEVELING



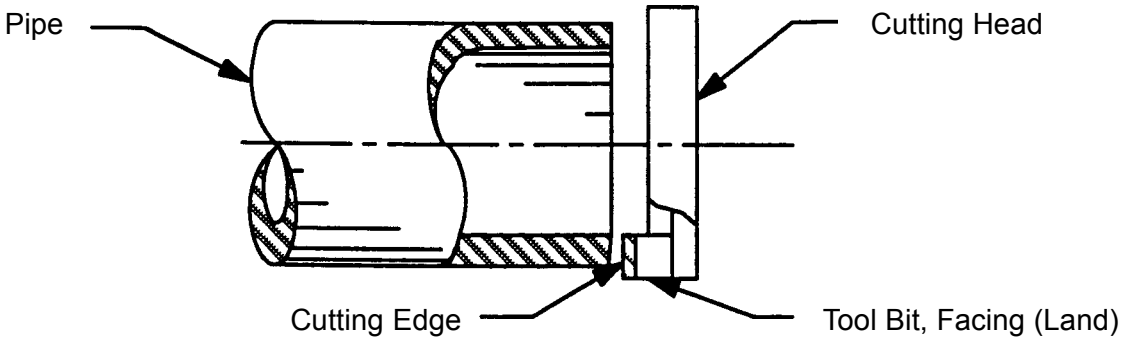
Range	Max. Wall Thickness	Pipe or Tube Mat'l	37.5° Beveling Tool Bit P/N
1 1/4" ID thru 3" pipe (31.8 mm ID thru 88.9 mm OD)	.531" (13.5 mm)	CS	99-0333
1 1/4" ID thru 3" pipe (31.8 mm ID thru 88.9 mm OD)	.531" (13.5 mm)	SS	99-3111
3" thru 4" pipe (2.11 mm ID thru 114.3 mm OD)	.531" (13.5 mm)	CS	99-3711
3" thru 4" pipe (2.11 mm ID thru 114.3 mm OD)	.531" (13.5 mm)	SS	99-3712

TOOL BIT, BEVELING AND FACING



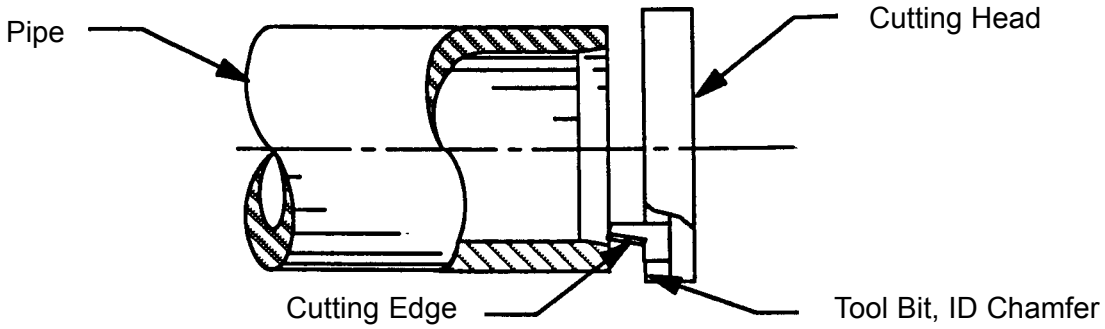
Range	Max. Wall Thickness	Pipe or Tube Mat'l	37.5° Beveling Tool Bit P/N	Facing Tool Bit P/N
1 1/4" pipe - sch 10 thru 40 up to 2 1/2" pipe - all schs	.531" (13.5 mm)	CS	99-0333	99-0257
1 1/4" pipe - sch 10 thru 40 up to 2 1/2" pipe - all schs	.531" (13.5 mm)	SS	99-3111	99-0789
3" and 3 1/2" pipe - all schs	.531" (13.5 mm)	CS	99-3711	99-3571
3" and 3 1/2" pipe - all schs	.531" (13.5 mm)	SS	99-3712	99-0714
4" pipe - sch 40 thru 160	.531" (13.5 mm)	CS	99-3711	99-3571
4" pipe - sch 40 thru 160	.531" (13.5 mm)	SS	99-3712	99-0714

TOOL BIT, FACING (LAND)



Range	Max. Wall Thickness	Pipe or Tube Mat'l	Facing Tool Bit P/N
1 1/4" ID thru 4" pipe (31.8 mm ID thru 114.3 mm OD)	.531" (13.5 mm)	CS	99-0485
1 1/4" ID thru 4" pipe (31.8 mm ID thru 114.3 mm OD)	.531" (13.5 mm)	SS	99-0277

TOOL BIT, ID CHAMFER



Range	Pipe or Tube Material	ID Chamfer Tool Bit P/N
1.60" ID thru 2.66" ID (40.6 mm thru 67.6 mm)	CS	99-0168
1.60" ID thru 2.66" ID (40.6 mm thru 67.6 mm)	SS	99-3713
2.14" ID thru 3.32" ID (54.4 mm thru 84.3 mm)	CS	99-0833
2.14" ID thru 3.32" ID (54.4 mm thru 84.3 mm)	SS	99-3714
2.90" ID thru 4.19" ID (73.7 mm thru 106.4 mm)	CS	99-0320
2.90" ID thru 4.19" ID (73.7 mm thru 106.4 mm)	SS	99-0288

TROUBLE SHOOTING

Problem: The 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: There is 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: The surface finish is rough

The tool bit is dull, chipped, etc.
Metal buildup on the cutting edge of the tool bit is creating a false cutting edge.
Cutting fluid is required.

Problem: There is a 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: There is a 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 hydraulic motor will not start

The hydraulic power supply is shut off.
The hydraulic motor is damaged and will not run free.

ACCESSORIES

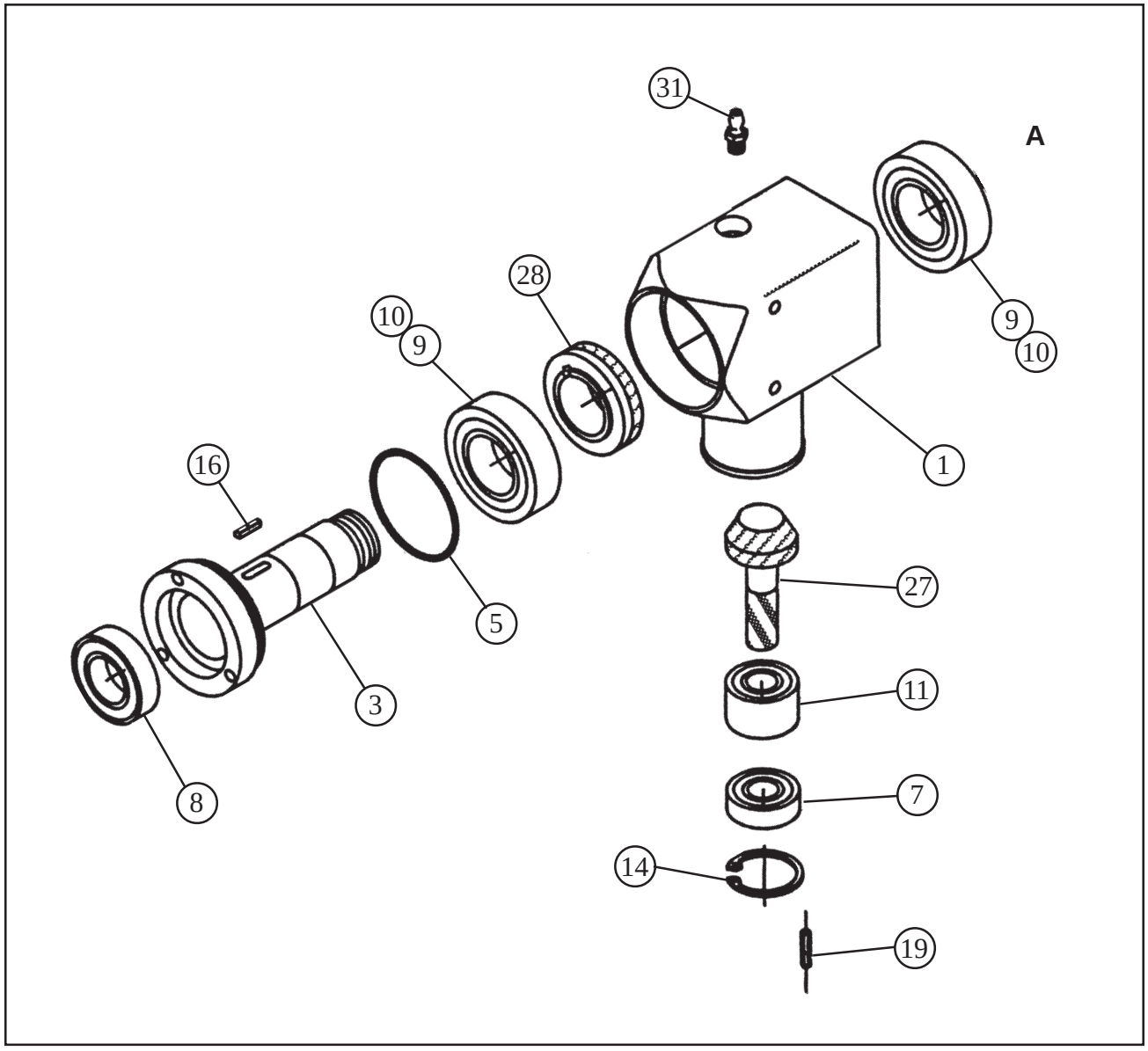
The following accessories are recommended for use with the Model 204B BEVELMASTER™ and are available from TRI TOOL INC.

1. Portable Air Caddy (P/N 75-0115)
2. Tool Bits
3. Mandrel Assembly (P/N 06-0413) .610" to 1.00" Range
4. Mandrel Assembly (P/N 06-0414) 1.00" to 1.25" Range
5. Mandrel Kit, Elbow (P/N 05-0293)
6. Squaring Plate Kit, Elbow Mandrel (P/N 05-1330)
7. Flange Facer Kit (P/N 05-0292)
8. Pointer Kit, Elbow Mandrel 204B (P/N 05-0316)
9. Indicator Kit, Dial (P/N 05-0317)
10. Adjustable Pin Kit, Elbow Mandrel (P/N 05-0355)

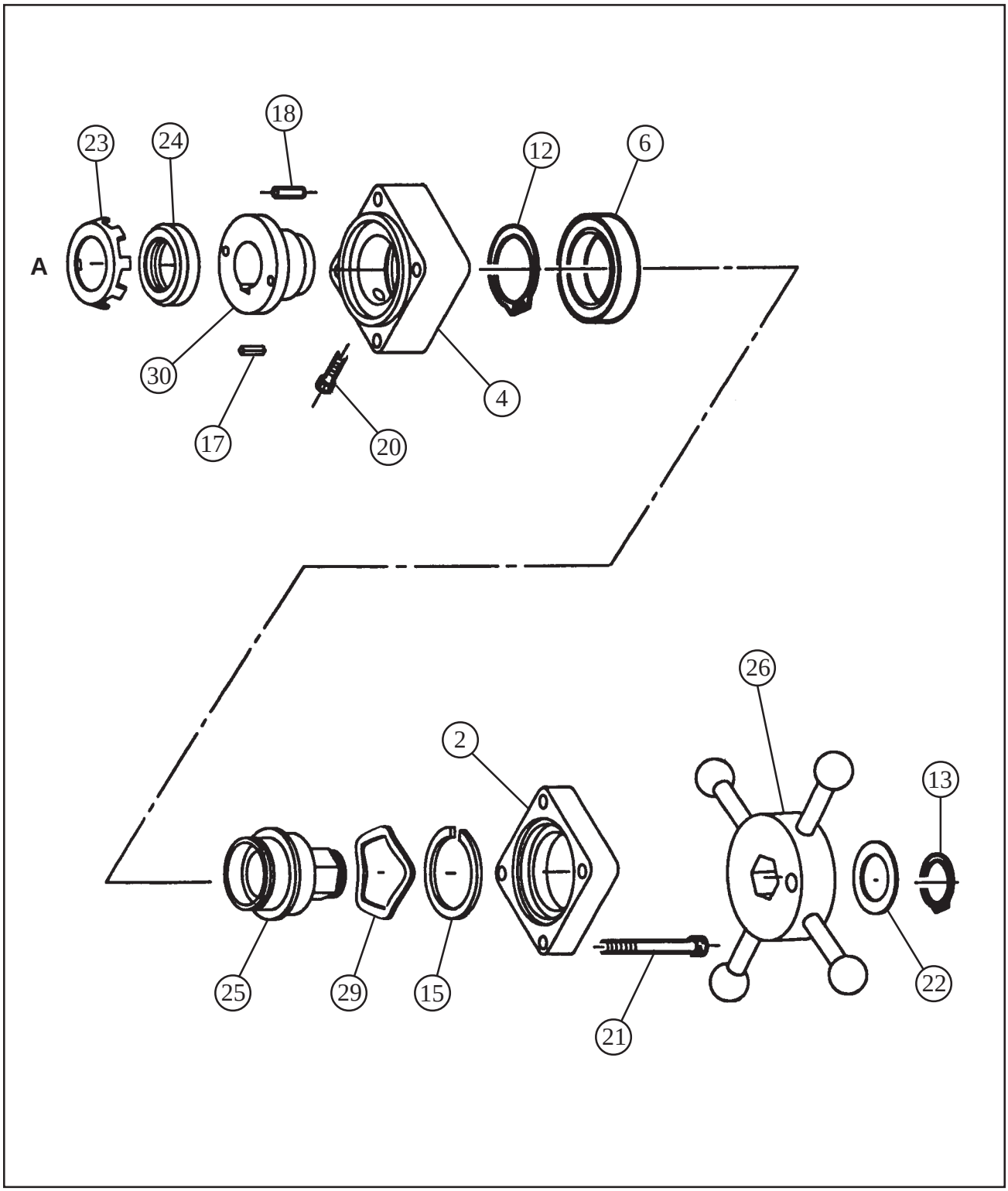
A portable Air Caddy (FRL) is required to protect the warranty on all TRI TOOL INC air driven tools.

ILLUSTRATED PARTS BREAKDOWN

MODEL 204B BEVELMASTER™ SUB-ASSEMBLY (P/N 02-2222)



MODEL 204B BEVELMASTER™ SUB-ASSEMBLY (P/N 02-2222) Con't



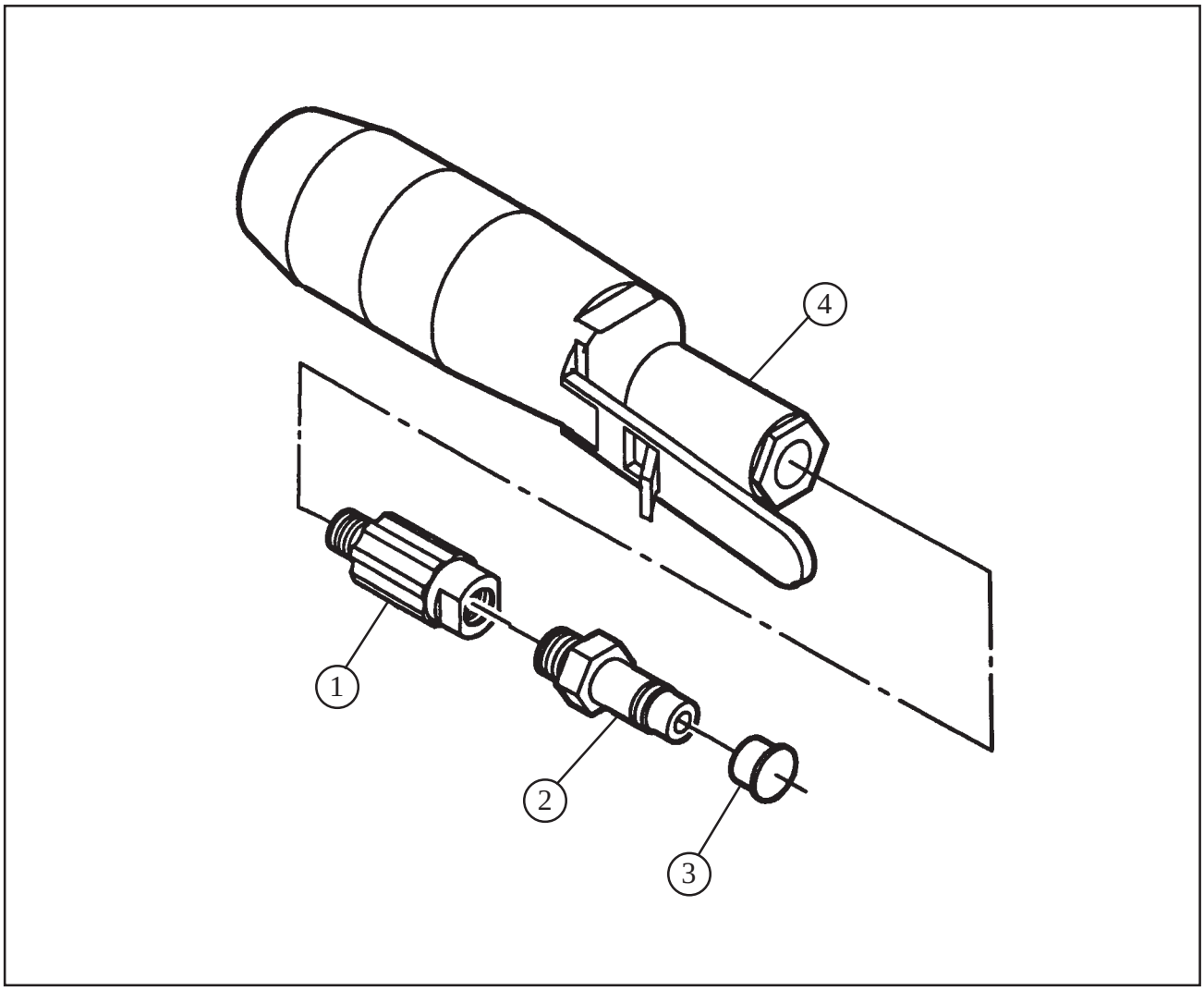
Parts List, Model 204B BEVELMASTER™ Sub-Assembly (P/N 02-2222)

Item No.	Part No.	Description	Qty
1.	19-0764	HOUSING, MAIN	1
2.	19-0729	HOUSING, FEED	1
3.	20-1025	SHAFT, MAIN	1
4.	27-0513	ADAPTER, FEED	1
5.	28-0248	O-RING	1
6.	29-0005	BEARING, BALL	1
7.	29-0326	BEARING, BALL	1
8.	29-0327	BEARING, BALL	1
9.	29-0328	BEARING, TAPER, CONE	2
10.	29-0329	BEARING, TAPER, CUP	2
11.	29-0345	BEARING, BALL	1
12.	30-0309	RING, RETAINING, EXTERNAL	1
13.	30-0411	RING, RETAINING, EXTERNAL	1
14.	30-2358	RING, RETAINING, INTERNAL	1
15.	30-2359	SHIM	1
16.	31-0103	KEY, SQUARE, ROUND ENDS	1
17.	31-0155	KEY, SQUARE	1
18.	32-0081	PIN, DOWEL, 3/16" DIA X 3/4"	2
19.	32-0493	PIN, DOWEL, 1/8" DIA X 7/8"	1
20.	33-0030	SCREW, CAP, #10-24 X 3/4"	1
21.	33-0047	SCREW, CAP, 1/4-20 X 2 1/4"	4
22.	34-0236	WASHER, THRUST	1
23.	34-0310	WASHER, LOCK	1
24.	35-0443	NUT, LOCK	1
25.	35-0444	NUT, FEED	1
26.	41-0136	HANDLE ASSEMBLY	1
27.	39-0754	GEAR, BEVEL, PINION	1
28.	39-0755	GEAR, BEVEL	1
29.	40-0227	SPRING, WAVE	1
30.	45-0248	BUSHING, FEED ADAPTER	1
31.	54-0375	FITTING, GREASE	1

Parts List, Model 204B BEVELMASTER™ Sub-Assembly (P/N 02-2222) Con't

Item No.	Part No.	Description	Qty
NOT SHOWN			
	05-1327	WRENCH KIT, 204B	
	36-0004	WRENCH, L, 7/64" HEX	1
	36-0006	WRENCH, L, 9/64" HEX	1
	36-0007	WRENCH, L, 5/32" HEX	1
	36-0010	WRENCH, L, 1/4" HEX	1
	36-0018	WRENCH, T, 1/8" HEX	1
	36-0020	WRENCH, T, 5/32" HEX	1
	36-0076	WRENCH, COMBINATION, 9/16"	1
	86-0214	CARRYING CASE	1

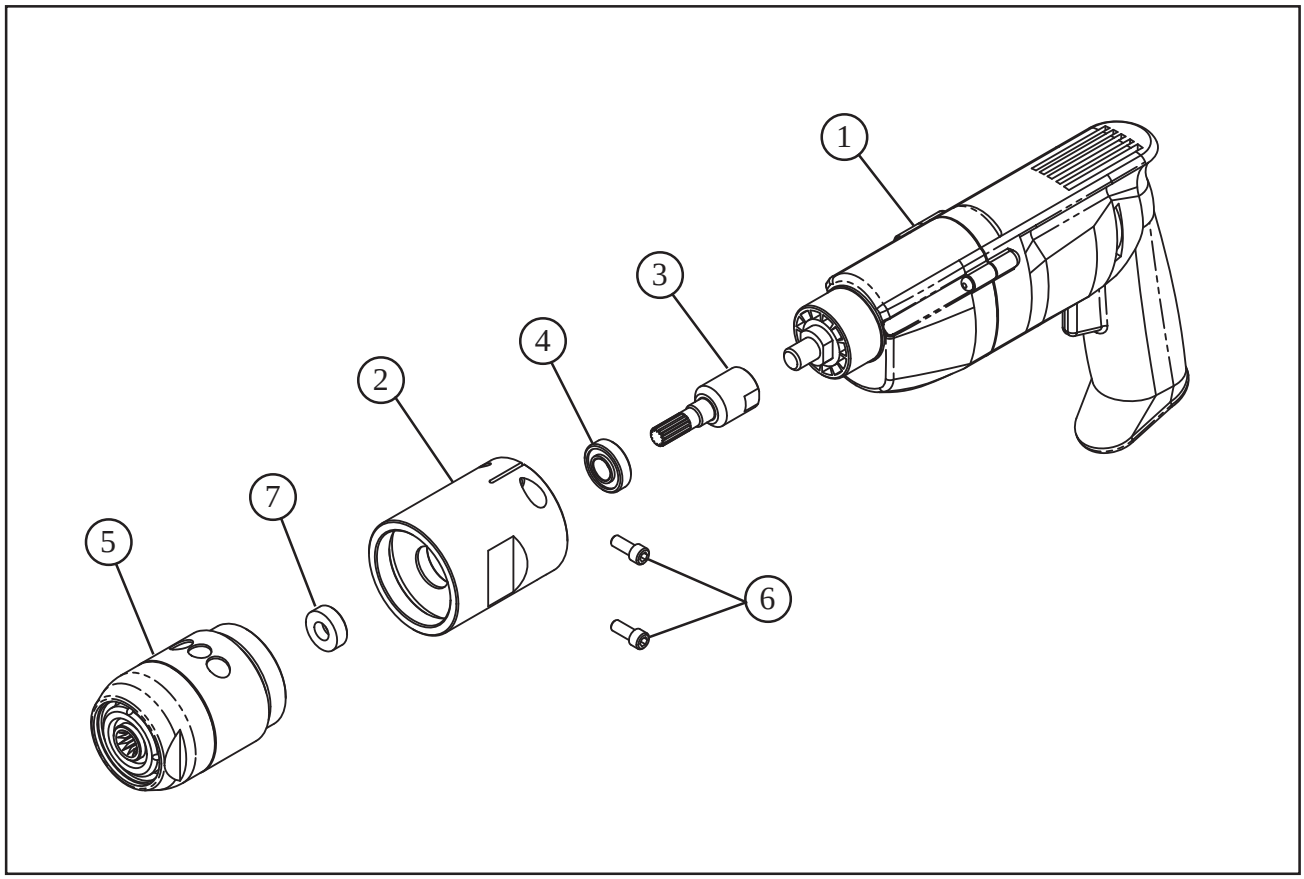
MOTOR ASSEMBLY, AIR (P/N 57-0224)



Parts List, Motor Assembly, Air (P/N 57-0224)

Item No.	Part No.	Description	Qty
1.	53-0046	VALVE, FLOW CONTROL	1
2.	54-0126	COUPLING, MALE QD	1
3.	54-0201	CAP, YELLOW	1
4.	57-0223	MOTOR, INLINE AIR	1

ELECTRIC MOTOR ASSEMBLY, 220V, 110V



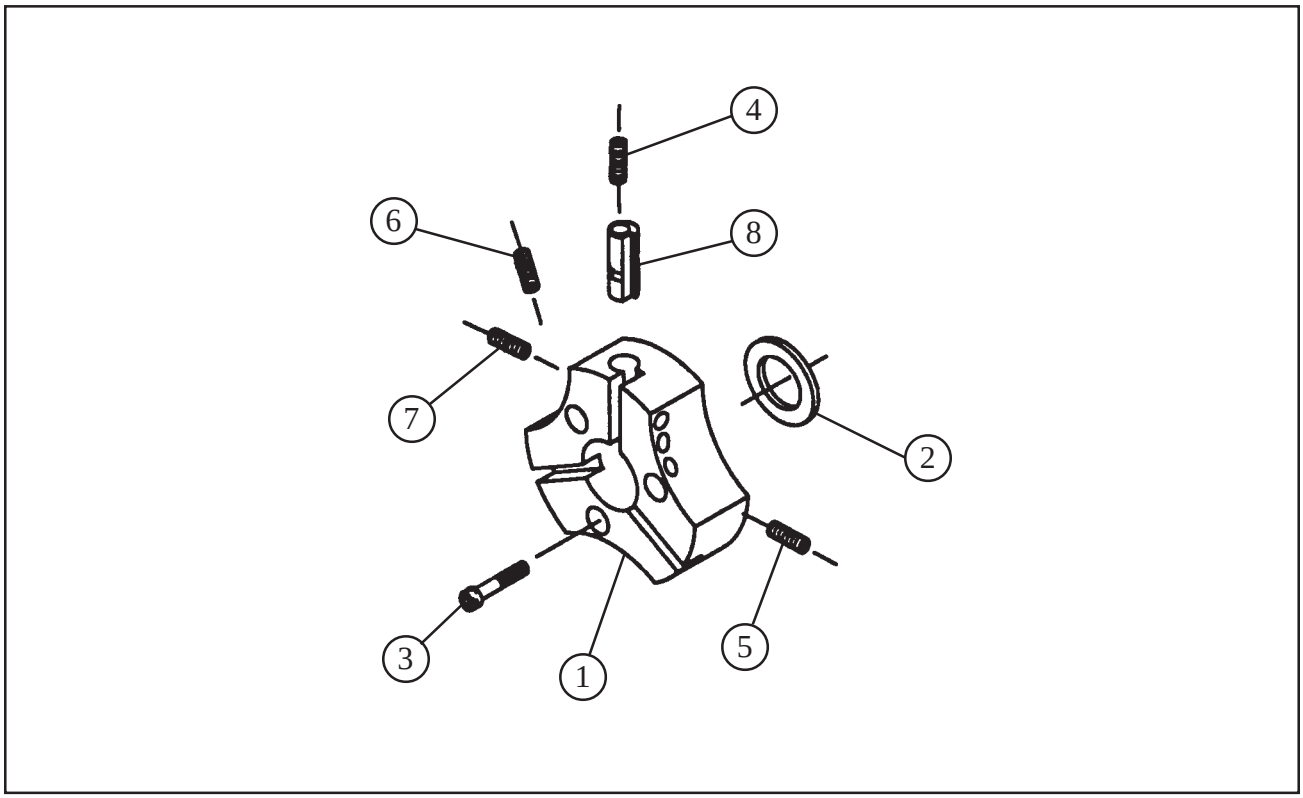
Parts List, Electric Motor Assembly, 220V

Item No.	Part No.	Description	Qty
	58-0133	MOTOR ASSEMBLY, 220V	1
1.	58-0039	MOTOR, MOD, ELECTRIC, 220V	1
2.	27-0357	ADAPTER, MOTOR	1
3.	39-0568	GEAR, DRIVE	1
4.	29-0182	BEARING, BALL, 1/2" X 1 1/8" X 3/8"	1
5.	91-0545	GEAR ASSEMBLY	1
6.	33-0039	SCREW, CAP, 1/4-20 X 5/8"	2
7.	44-0441	SPACER	1

Parts List, Electric Motor Assembly, 110V

Item No.	Part No.	Description	Qty
	58-0147	MOTOR ASSEMBLY, 110V	1
1.	58-0038	MOTOR, MOD, ELECTRIC, 110V	1
2.	27-0357	ADAPTER, MOTOR	1
3.	39-0568	GEAR, DRIVE	1
4.	29-0182	BEARING, BALL, 1/2" X 1 1/8" X 3/8"	1
5.	91-0545	GEAR ASSEMBLY	1
6.	33-0039	SCREW, CAP, 1/4-20 X 5/8"	2
7.	44-0441	SPACER	1

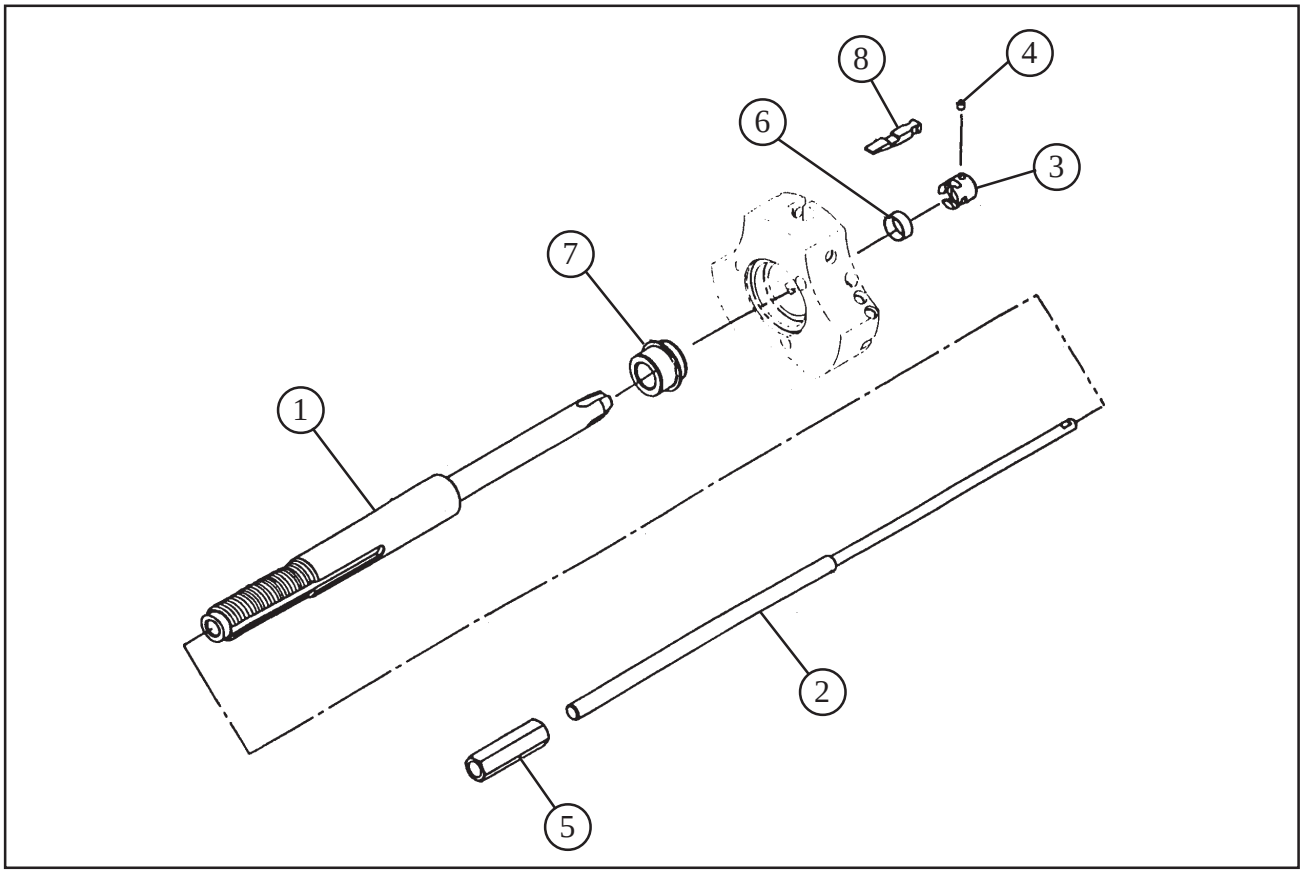
CUTTING HEAD KIT, 4" DIA (P/N 03-0049)



Parts List, Cutting Head Kit, 4" DIA (P/N 03-0049)

Item No.	Part No.	Description	Qty
1.	21-0475	HEAD, 4.0" DIA	1
2.	28-0249	SEAL, OIL	1
3.	33-0057	SCREW, CAP, 5/16-18 X 1 1/4"	3
4.	33-0514	SCREW, SET, 5/16-18 X 3/8", CUP PT	1
5.	33-0517	SCREW, SET, 5/16-18 X 5/8", CUP PT	6
6.	33-0518	SCREW, SET, 5/16-18 X 3/4", CUP PT	3
7.	33-0996	SCREW, SET, 5/16-18 X 1/2", HDOG	1
8.	62-0104	CAM, FACING BIT	1

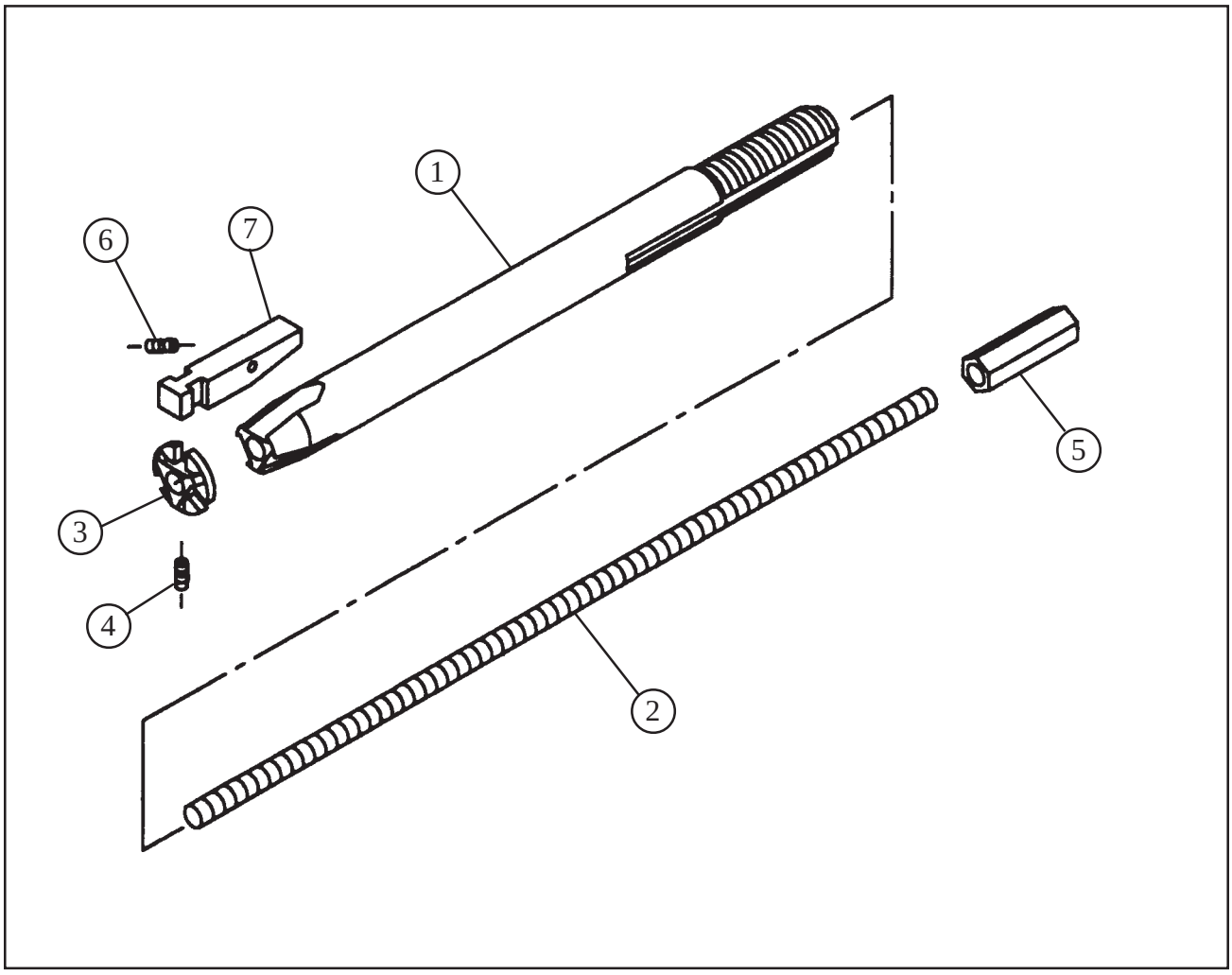
MANDREL ASSEMBLY (P/N 06-0413)



Parts List, Mandrel Assembly (P/N 06-0413)

Item No.	Part No.	Description	Qty
1.	13-0429	MANDREL	1
2.	23-0298	ROD, DRAW	1
3.	24-1463	PLATE, BUTT #1	1
	24-1464	PLATE, BUTT #2	1
4.	33-0477	SCREW, SET, #8-32 X 3/16", CUP PT	1
	33-0478	SCREW, SET, #8-32 X 1/4", CUP PT	1
5.	35-0523	NUT, DRAW ROD, 3/8-16	1
6.	40-0130	SPRING, FLAT	1
	40-0136	SPRING, FLAT	1
7.	46-0437	SLEEVE, MANDREL	1
8.	48-0596	BLOCK, RAMP #1	3
	48-0597	BLOCK, RAMP #2	3

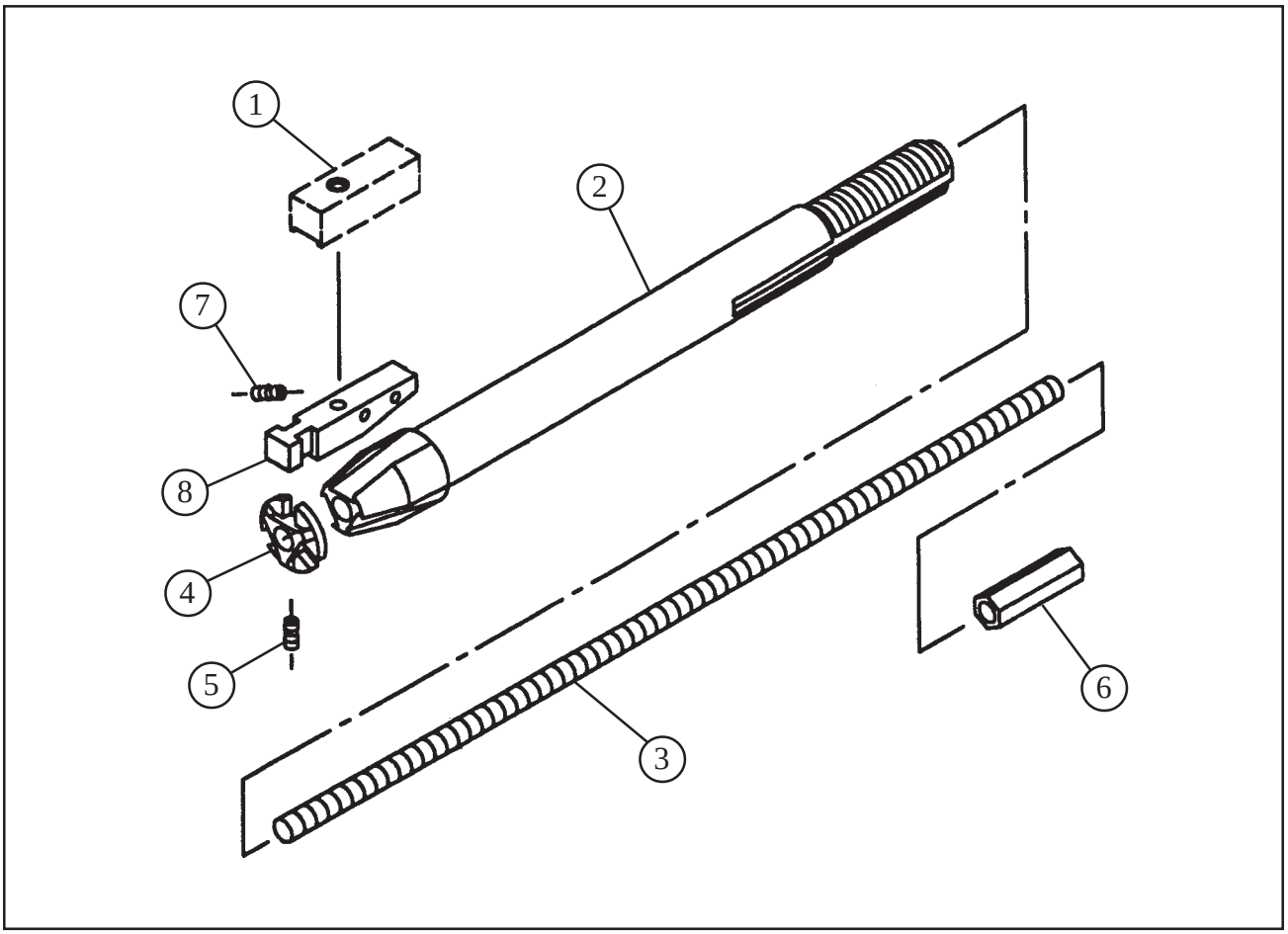
MANDREL ASSEMBLY (P/N 06-0414)



Parts List, Mandrel Assembly (P/N 06-0414)

Item No.	Part No.	Description	Qty
1.	13-0426	MANDREL	1
2.	23-0297	ROD, DRAW	1
3.	24-1462	PLATE, BUTT	1
4.	33-0489	SCREW, SET, #10-24 X 5/16", CUP PT	1
5.	35-0523	NUT, DRAW ROD, 3/8-16	1
6.	40-0108	SPRING, EXTENSION	1
7.	48-0976	BLOCK, RAMP	3

MANDREL ASSEMBLY (P/N 06-0419)



Parts List, Mandrel Assembly (P/N 06-0419)

Item No.	Part No.	Description	Qty
1.	08-XXXX	BLOCK, JAW (Ref. the 'Jaw Blocks' section.)	REF
2.	13-0424	MANDREL	1
3.	23-0295	ROD, DRAW	1
4.	24-1384	PLATE, BUTT	1
5.	33-0490	SCREW, SET, #10-24 X 3/8", CUP PT	1
6.	35-0523	NUT, DRAW ROD, 3/8-16	1
7.	40-0001	SPRING, EXTENSION	5
8.	48-0964	BLOCK, RAMP, #1	3
	48-0965	BLOCK, RAMP, #2	3
	48-0966	BLOCK, RAMP, #3	3