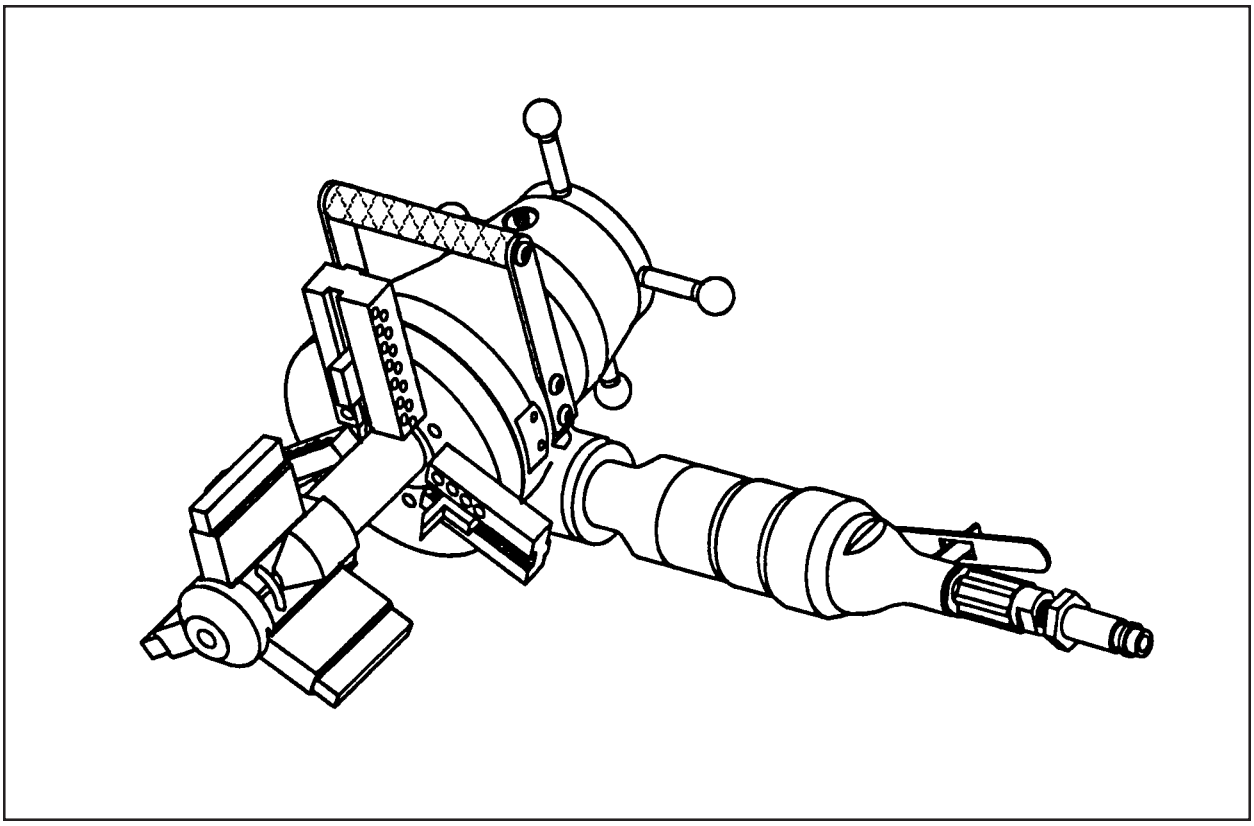

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SAFETY PRECAUTIONS

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 212B BEVELMASTER™ is a pipe beveler designed for facing, beveling and/or counterboring the ends of the 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 using the Model 212B.

The various interchangeable jaw blocks, ramps and adapters will secure the Model 212B Pipe Beveler to pipe and tubing having an inside diameter ranging from 4” (101.6 mm) through 12” (304.8 mm).

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

The Model 212B accepts the reaction torque generated by the machining operations through the mandrel.

No additional restraining devices are required.

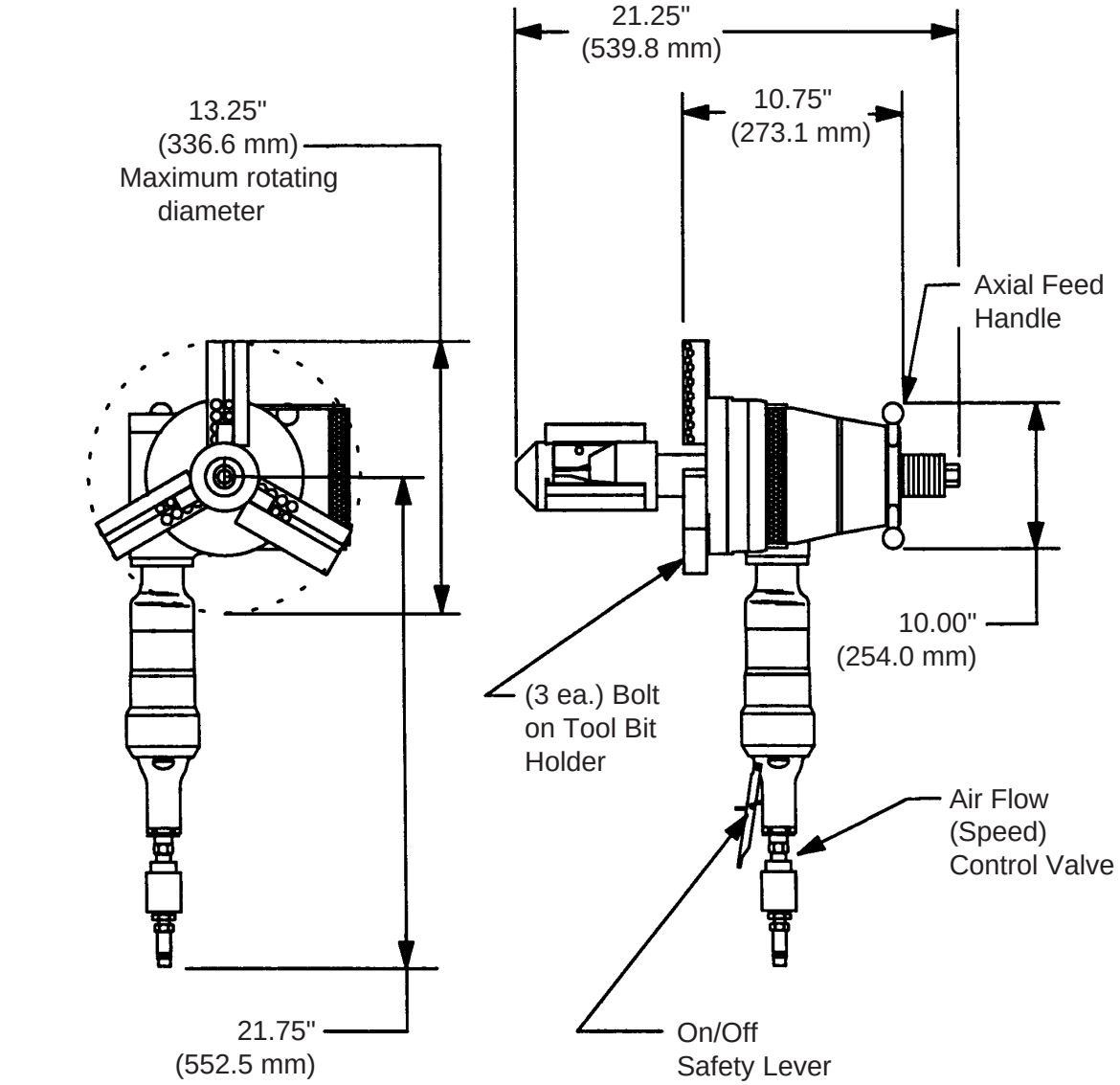
212B Models	
P/N	**Power**
01-1140	Air
01-1177	Electric, 110V AC, 60 Hz
01-1182	Electric, 220V AC, 50 Hz
01-1735	Hydraulic
01-1825	Electric, 115V AC, H.D., 40 - 60 Hz
01-1826	Electric, 230V AC, H.D., 40 - 60 Hz

SPECIFICATIONS

Model 212B BEVELMASTER™ with an Air Motor (Less Mandrel)

Weight	51 lbs (23 kg)
Power Requirements	85 cfm @ 90 psi (35 L/s @ 621 kPa)

Envelope Drawing, 212B with Air Motor



PIPE CUTTING CAPACITY

Basic Pipe Sizes

4” Pipe	Schedules 5 through 160
5” Pipe	All schedules

Basic Tube Sizes

Up to 1.312” (33.3 mm) wall tubing with a maximum OD of 12.75” (323.9 mm) and a minimum ID of 3.438” (87.3 mm) may be beveled with standard procedures.

WALL THICKNESS CAPACITY

Wall thickness of all standard pipe schedules, 1.312” (33.3 mm) maximum, in the range listed.

Tubing with greater wall thickness may be handled provided the ID is greater than 3.438” (87.3 mm) and the OD is less than 12.75” (323.9 mm).

Contact TRI TOOL INC. for heavier wall procedures.

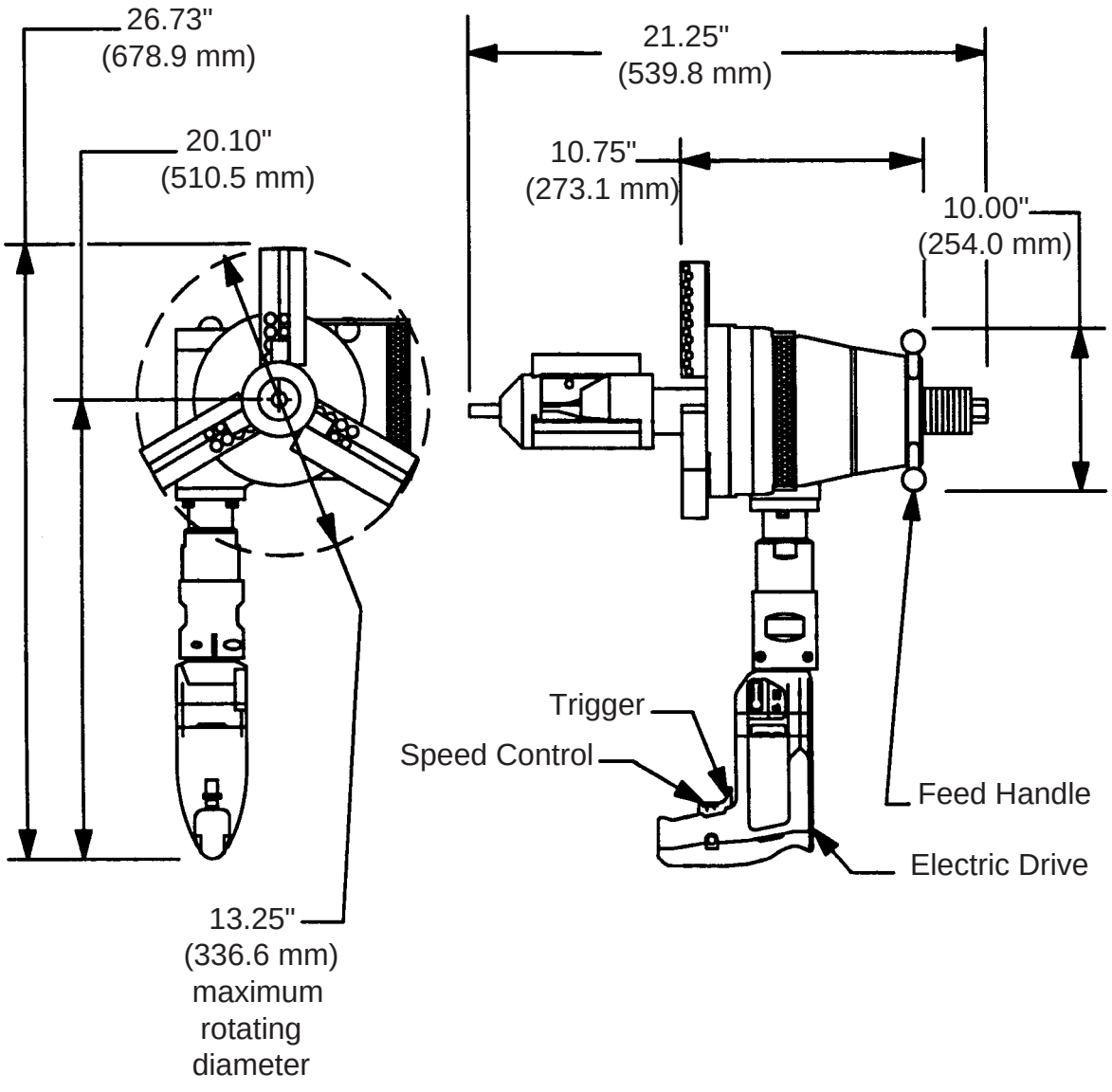
HEADSTOCK SPEEDS

Maximum Headstock Speed	22 rpm
Headstock Speed at Maximum HP	11 rpm
Functional Speed Range	5 to 22 rpm

Model 212B with an Electric Motor (less mandrel)

Weight	51 lbs (23.13 Kg)
Power Requirements	115 VAC, 60 Hz Or 220 VAC, 50 Hz

Envelope Drawing, 212B with Electric Motor



PIPE CUTTING CAPACITY

Basic Pipe Sizes

4”, 5” and 6”	Schedules 5 through 40
8”	Schedules 5 through 30
10” and 12”	Schedules 5 through 20

Basic Tube Sizes

Up to .280” (7.1 mm) wall tubing with a maximum OD of 12.75” (323.9 mm) and a minimum ID of 3.438” (87.3 mm) may be beveled with standard procedures.

WALL THICKNESS CAPACITY

Wall thickness of all standard pipe schedules, .280” (7.1 mm) maximum, in the range listed.

The machine will counterbore pipe and tubing with an ID range of 3.438” (87.3 mm) to 12.438” (315.9 mm).

COUNTERBORING OPERATION

The machine will counterbore pipe and tubing with an ID range of 3.438” (87.3 mm) to 12.438” (315.9 mm).

MATERIAL CUTTING CAPABILITY

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

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 INC. Engineering department for details.

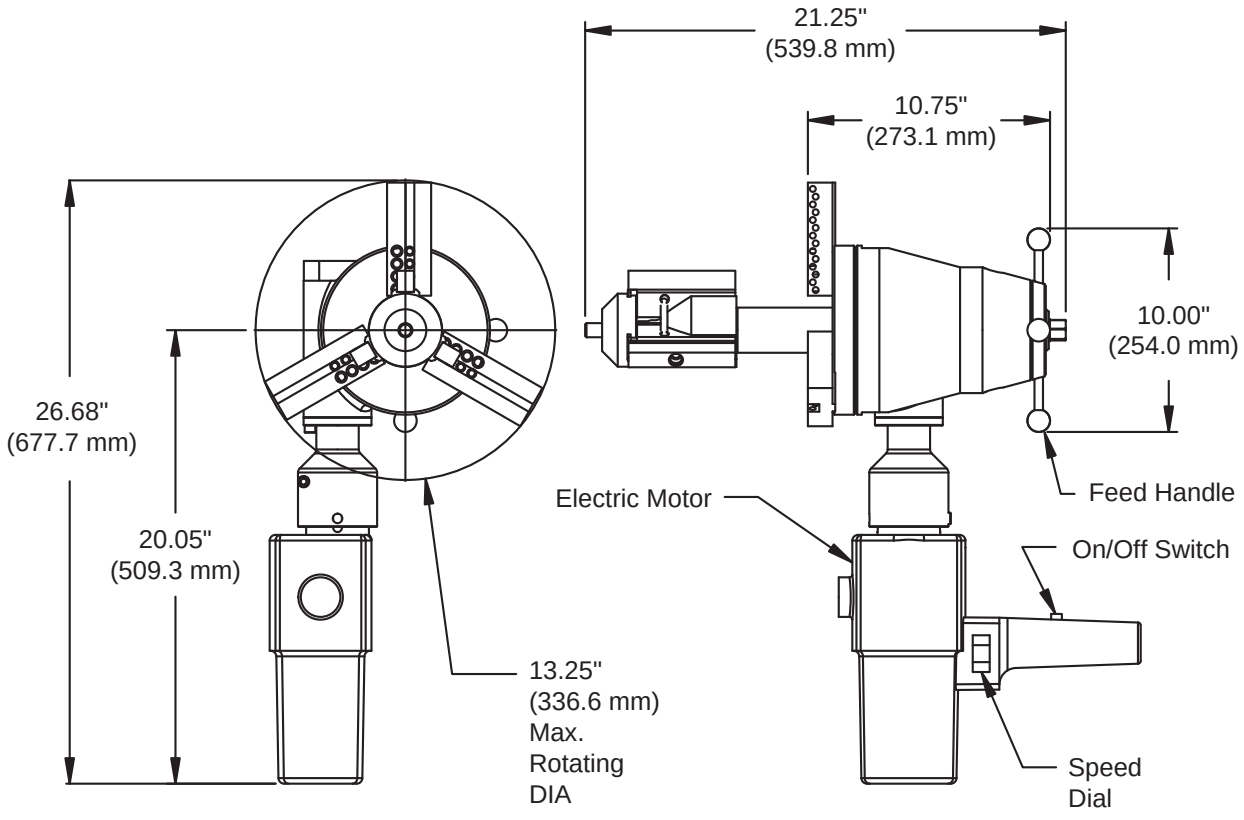
HEADSTOCK SPEEDS

Maximum Headstock Speed	9.5 rpm
Functional Speed Range	5 to 9.5 rpm

Model 212B 115V and 230V HD with an Electric Motor

Weight	less than 80 lbs (36.3 Kg)
Power Requirements	115V AC, 40 - 60 Hz, 2300 Watt Rated Supply NOTE: All 115V motors require a min. of a 20-amp circuit Or 230V AC, 40 - 60 Hz, 2300 Watt Rated Supply

Envelope Drawing, 212B 115V and 230V HD with an Electric Motor



PIPE CUTTING CAPACITY

Basic Pipe Sizes

4"	Schedules 5 through 160
5" through 12"	All schedules

Basic Tube Sizes

Up to 1.32" (33.4 mm) wall tubing with a maximum OD of 12.75" (323.9 mm) and a minimum ID of 3.44" (87.4 mm) may be beveled with standard mandrel.

WALL THICKNESS CAPACITY

Wall thickness of all standard pipe schedules 1.32" (33.4 mm) maximum in the range listed. Tubing with greater wall thickness may be handled provided the ID is greater than 3.44" (87.4 mm) and the OD is less than 12.75" (323.9 mm). Contact TRI TOOL Inc. for heavier wall procedures.

COUNTERBORING OPERATION

The tool will counterbore pipe and tubing with an ID range of 3.44" (87.4 mm) to 12.44" (316.0 mm).

MATERIAL CUTTING CAPABILITY

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

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 INC. Engineering department for details.

HEADSTOCK SPEEDS

Maximum Headstock Speed	10 rpm
Functional Speed Range	4 - 9 rpm

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.

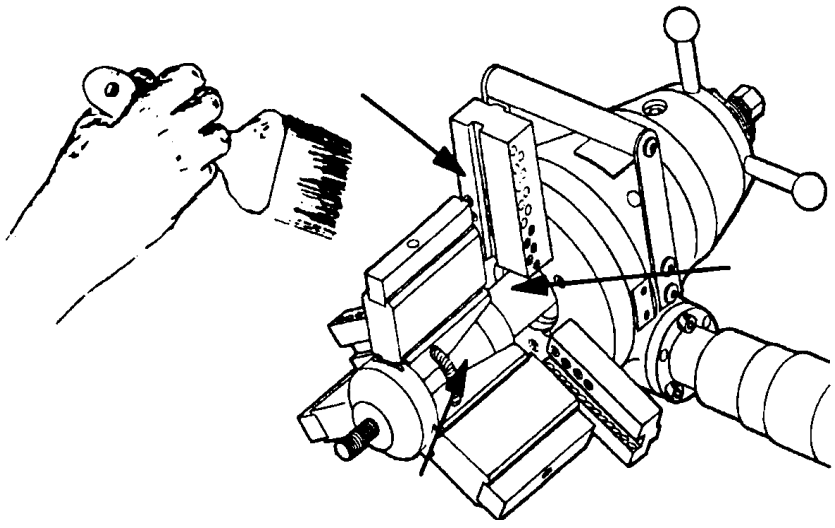
The air supply for the Model 212B with an air motor should include an adequate filter regulator and lubricator (FRL).

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

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 2 to 5 seconds is flowing.

If the Model 212B 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 2 to 3 seconds.

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

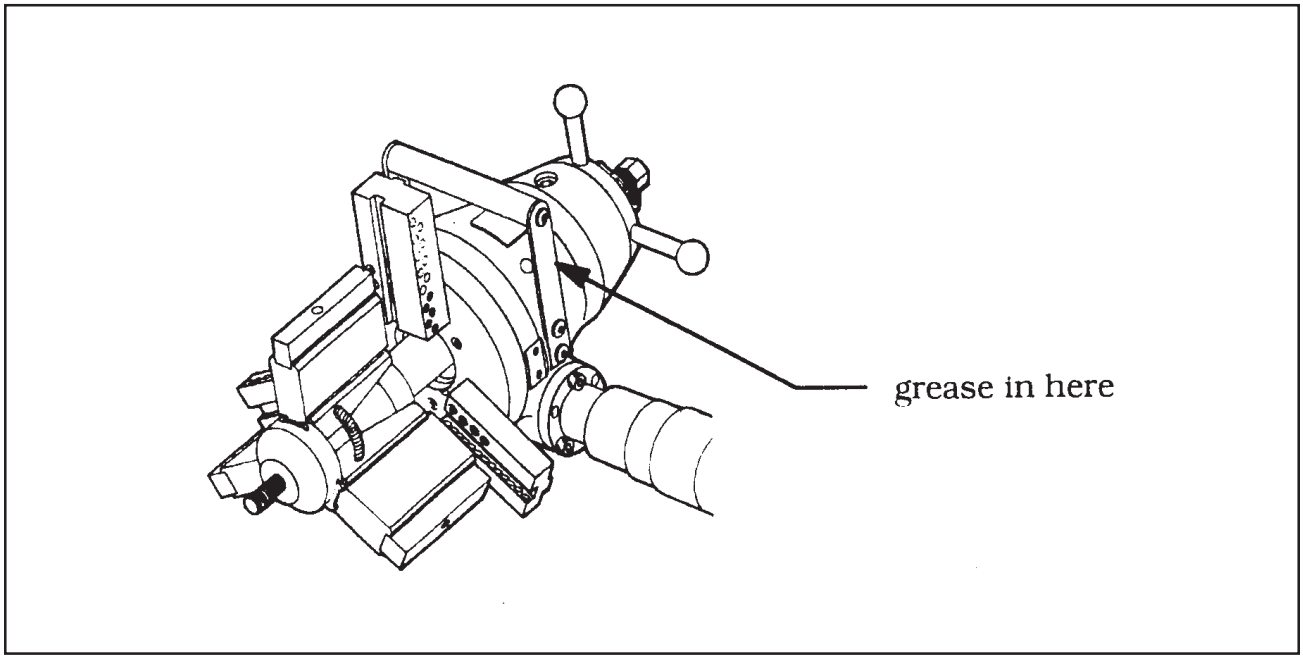


When the Model 212B is operated in the vertical position (cutting head up), it should be turned upside down and the chips and/or other debris removed after each bevel has been completed.

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

Verify that there is adequate grease in the gear box.

WARNING:	Disassembly of the Model 212B BEVELMASTER™ will void the warranty, except when performed by a TRI TOOL INC. designated repair technician.



LUBRICATION RECOMMENDATIONS

Gear Lubrication

The drive gears require a high string lubrication grease such as “Chevron Utility Grease, light, high string for gears” (P/N 68-0020).

Electric Motor Lubrication

The bearings in the electric motor are sealed and do not require any lubrication.

Air Motor Lubrication

The air motor requires a Class 2 lubricant, viscosity of 100 to 200 SSU at 100^0 F (38^0 C) minimum aniline point of 200^0 F (93^0 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 Motor are sealed and do not require any lubrication.

OPERATION

Read the operating instructions carefully before attempting to operate the Model 212B BEVELMASTER™.

Use eye protection at all times when operating the Model 212B.

JAW BLOCKS

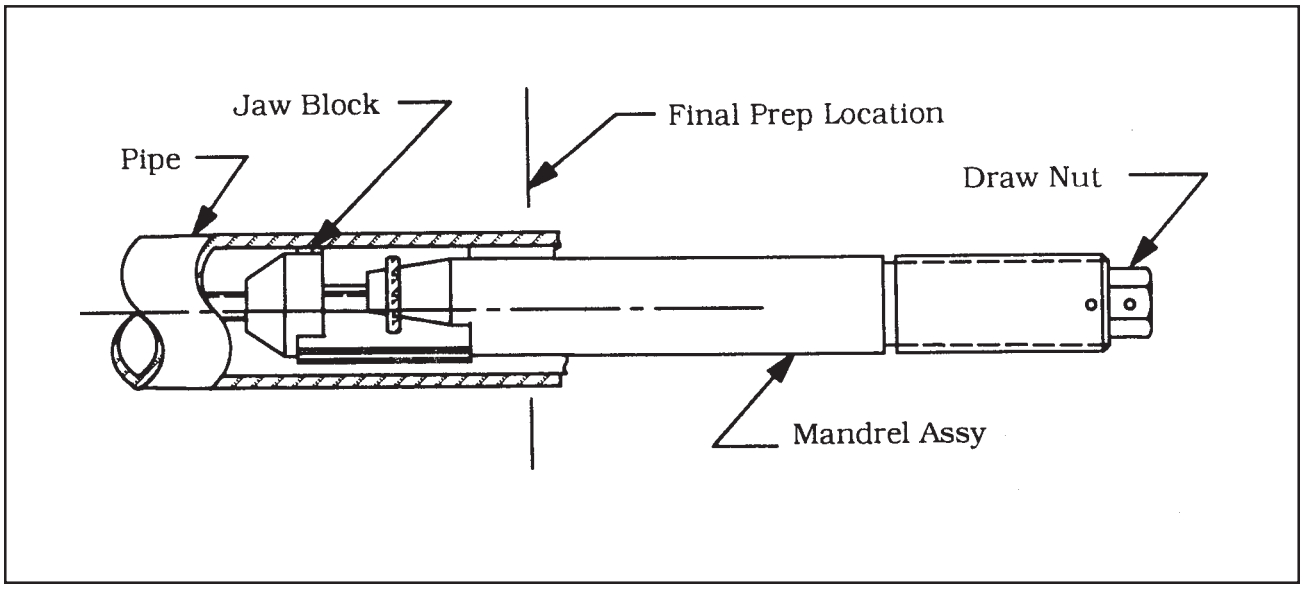
Select the recommended ramps, jaw blocks and adapters for the pipe size to be machined.

Install the ramps, jaw blocks and adapters as required onto the mandrel.

Loosen the draw nut to retract the jaw blocks to a diameter smaller then the ID of the pipe to be prepped.

Install the mandrel assembly into the pipe.

NOTE:	In order to avoid cutting the jaw blocks during the machining operation, the mandrel must be installed beyond the end preparation location.



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

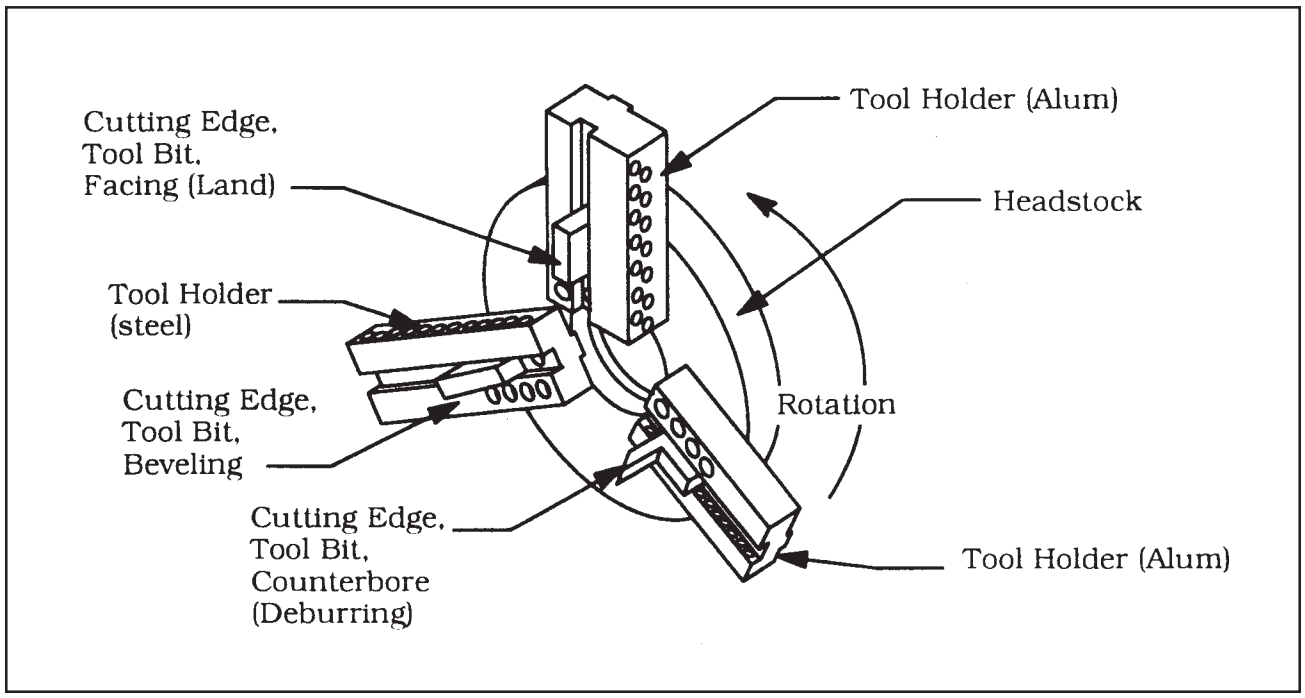
TOOL BITS

Attach the tool holders in the appropriate position. Select the tool bit(s) required to machine the pipe for the configuration desired.

NOTE:	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 this machine and therefore voids the TRI TOOL Inc. factory warranty.

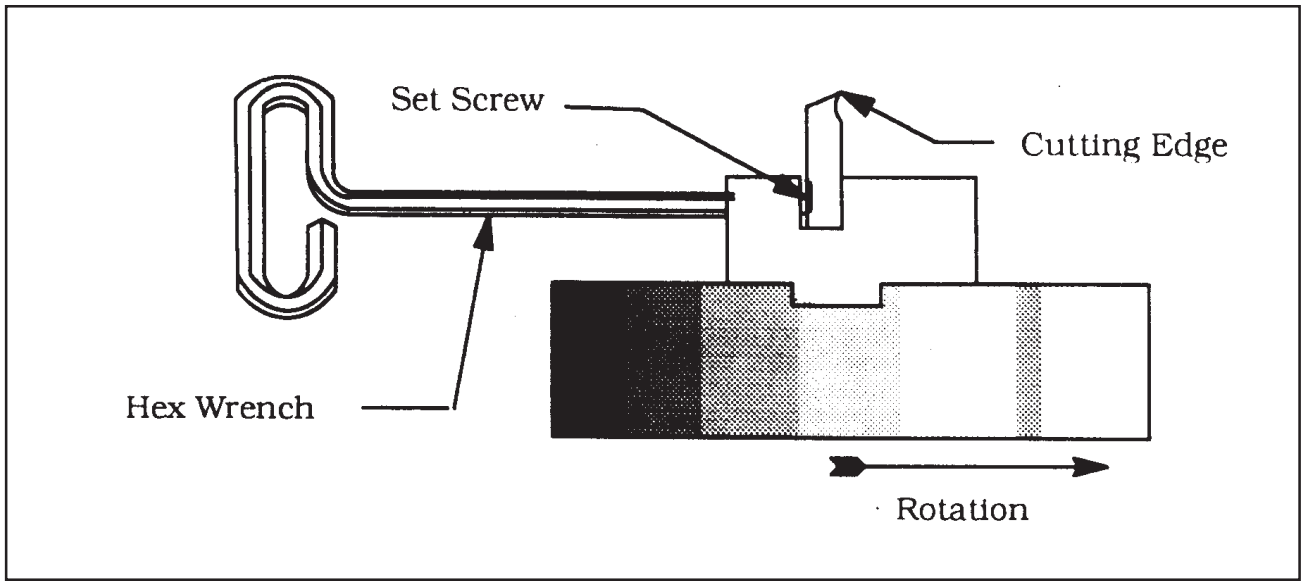
When performing any separate machining operation such as facing, beveling or counterboring, the tool bit should be installed in the correct tool bit holders.

The beveling tool bit should be installed in the steel tool holder.



When performing any multiple machining operation such as facing, beveling, and/or counterboring, the counterbore tool bit should be installed to ‘lead’ the bevel tool bit.

Insert the tool bit(s) into the slot(s) in the tool holder(s).



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

CAUTION: Insure that the tool bit is not installed backwards.

Tighten the set screws that come in contact with the tool bit to secure the tool bit(s) in the tool holder(s).

Adjust the counterbore tool bit radially to control counterbore diameter.

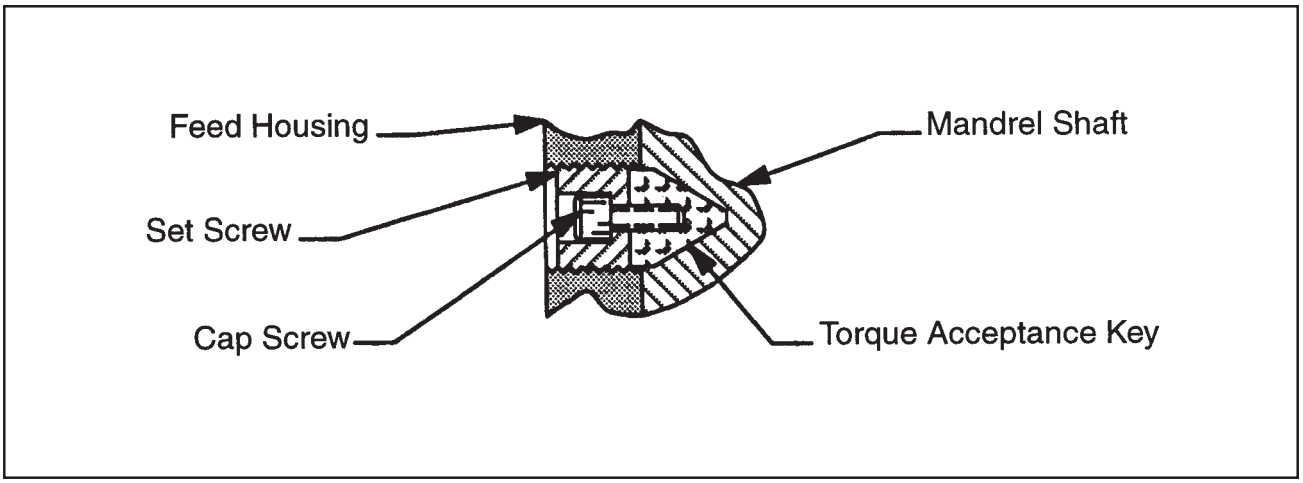
Adjust the bevel tool bit radially to control the counterbore depth to the bevel relationship.

Install the Mandrel in the Model 212B

Slide the Model 212B gently onto the mandrel assembly until it comes to a solid stop against the torque acceptance keys.

Rotate the Model 212B as required to engage the torque acceptance keys with the slots in the mandrel shaft.

NOTE: Since the mandrel shaft will contact the torque acceptance keys, 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.



Adjustment of the Torque Acceptance Keys

Adjustment of the torque acceptance keys will be required if the BEVELMASTER™ is loose radially on the mandrel shaft.

This may appear as chatter in the tool bit.

Loosen the cap screws in both torque acceptance keys.

Rotate the set screw as required until the torque acceptance keys are riding snugly in the slots in the mandrel shaft.

Run the feed in and out to insure that the torque acceptance keys are not so tight that the feed is impaired.

Retighten the cap screws to retain the new setting.

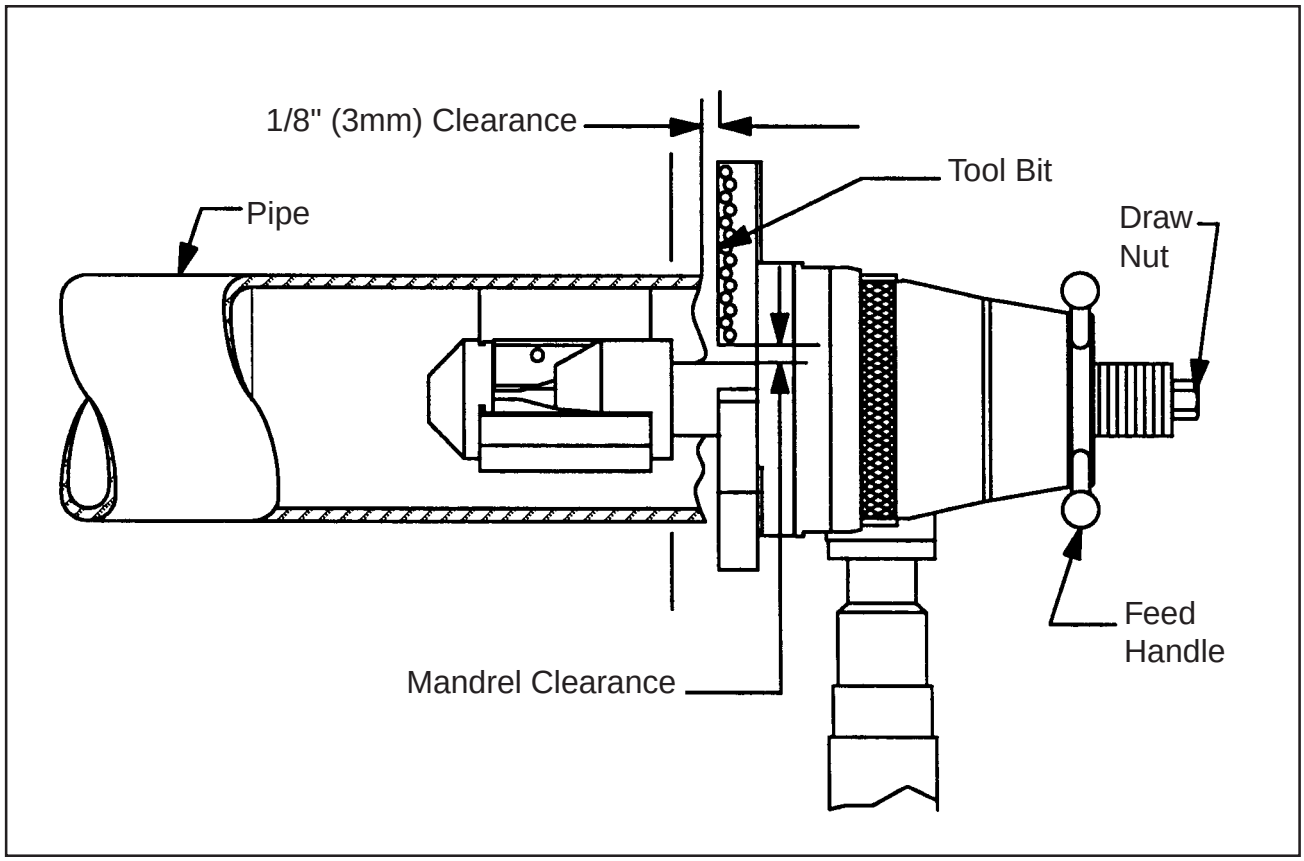
Rotate the feed handle clockwise to engage the feed nut with the thread on the Mandrel shaft.

The Model 212B with the mandrel assembly installed may be mounted into the pipe as one unit.

NOTE:	A minimum of ten (10) threads must be engaged to keep the threads from stripping during the machining operation.

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

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



MACHINING SEQUENCE

Electric Motor

Attach the power cord to the proper AC outlet.

Depress the trigger.

Adjust the cutting speed by rotating the speed control dial on the trigger.

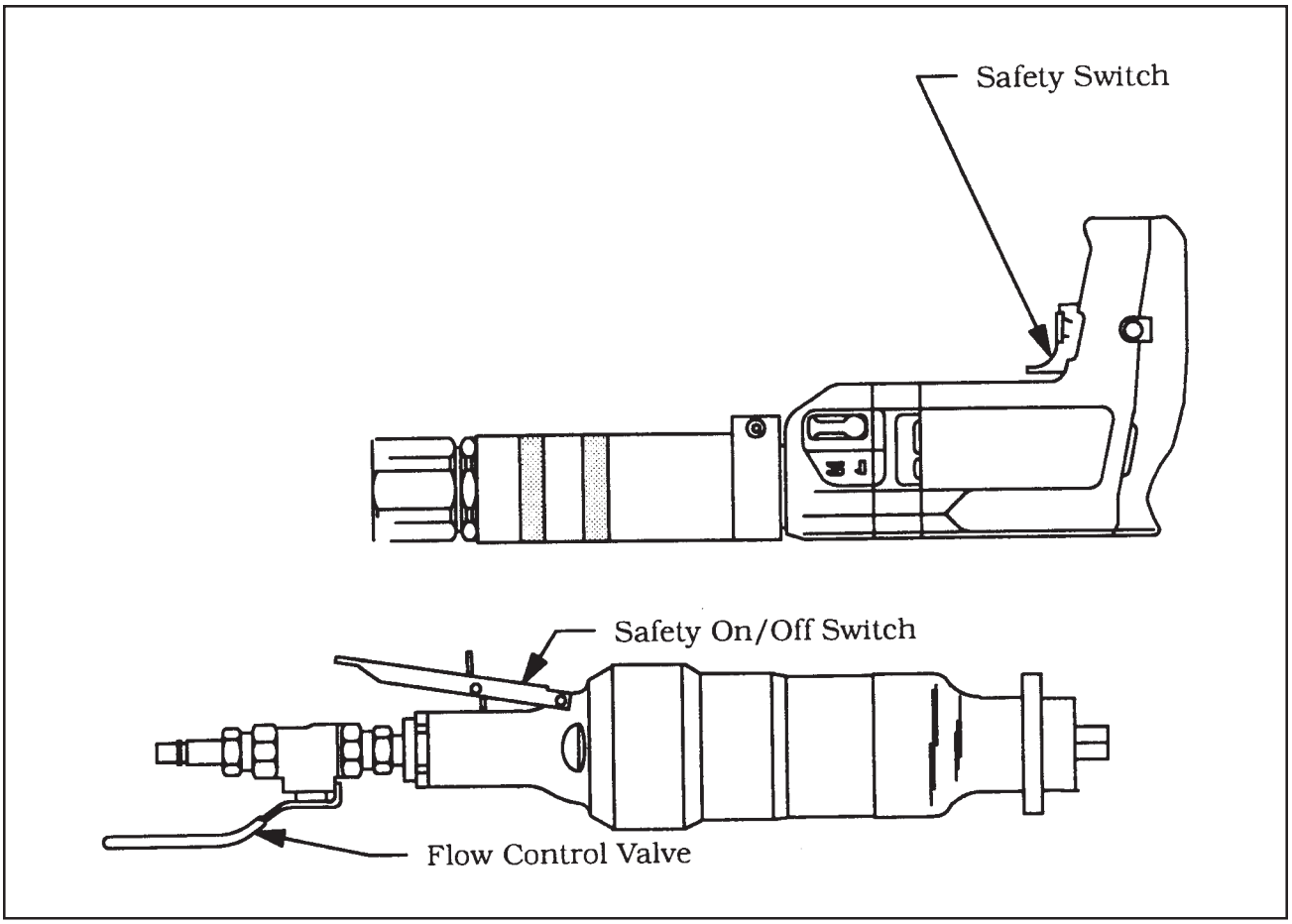
Air Motor

Attach the proper air supply line to the Model 212B.

Depress the air motor trigger.

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

Adjust the cutting speed by rotating the air flow control valve at the air connection.



Feeding the Tool Bit Into the Work

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

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

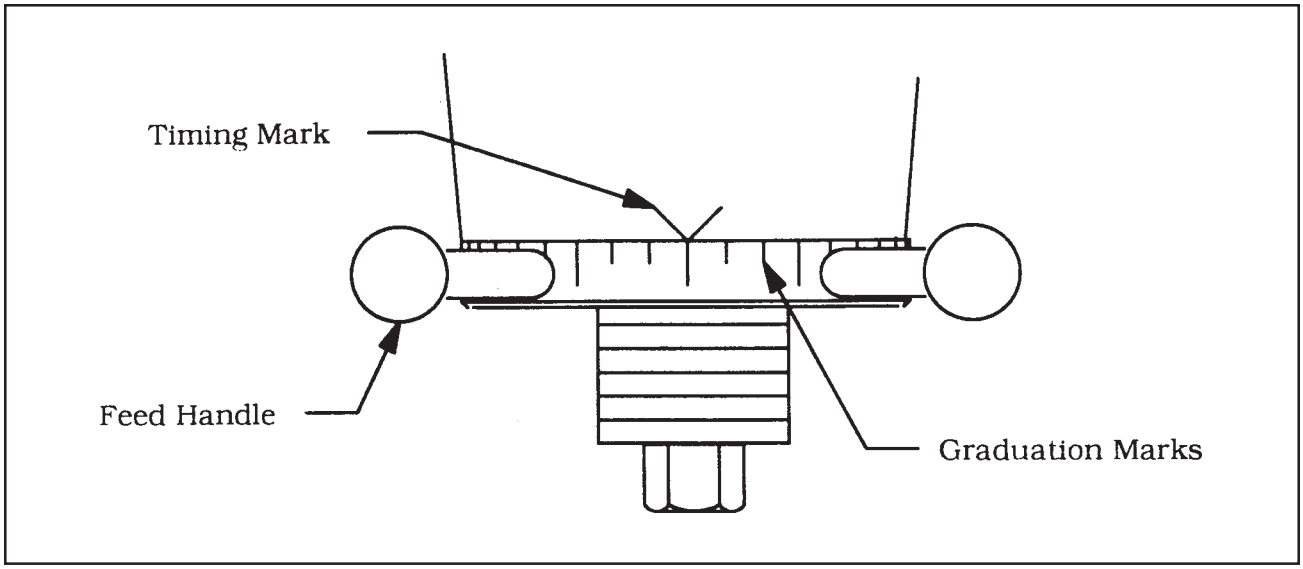
If the pipe end is not square to the pipe axis, the tool bit will contact only a small segment of the pipe during each revolution.

To avoid tool bit damage, the feed rate should be very slow until all of the tool bit(s) are 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.

The axial feed rate of the tool bit is .0023” (.06 mm) for each graduation or .083” (2.11 mm) for each complete revolution of the feed handle.

Continue machining until the end of the pipe has a complete prep.



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

Release the 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 is approximately 1/8" (3 mm) away from the end of the pipe.

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

Slowly pull the Model 212B and the mandrel from the end of the pipe.

The mandrel assembly may be left in the Model 212B and installed as a complete assembly in the next pipe to be machined.

CUTTING SPEEDS

Pipe Size	Actual OD	RPM for 200 in/min (5080 mm/min)	RPM for 250 in/min (6350 mm/min)	RPM for 300 in/min (7620 mm/min)
4"	4.500" (114.3 mm)	16	20	24
6"	6.625" (168.3 mm)	10	13	15
8"	8.625" (219.1 mm)	8	10	12
10"	10.750" (273.1 mm)	6	8	9
12"	12.750" (323.9 mm)	5	7	8
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 RECOMMENDATIONS

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

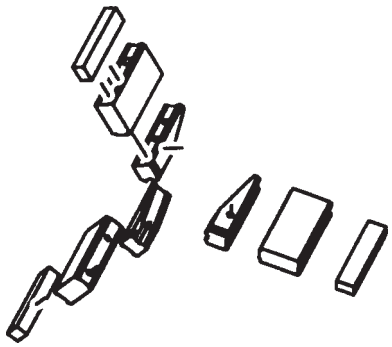
This is very important for longer tool bit life when cutting through flame cut or out of square pipe ends.

Use adequate feed, .003" (.08 mm) to .006" (.15 mm) feed.

Never allow the tool bit to burnish the surface.

Reduced feeds and speeds will normally minimize chatter problems.

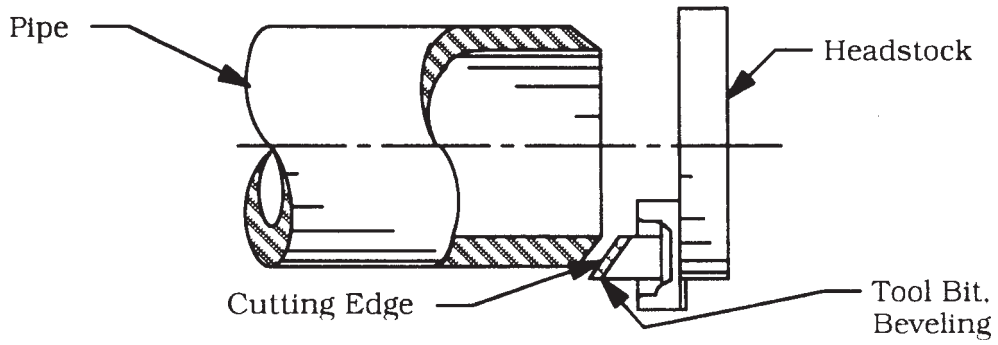
JAW BLOCKS AND RAMP SETS



ID Mounting Range	Standard Ramp (3 Req'd)	Jaw Block Assembly (3 Req'd)	Adapters (3 Req'd)
3.31" thru 4.35" (84.1 mm ID thru 110.5 mm ID)	48-0520	N/A	N/A
4.25" thru 5.31" (108.0 mm ID thru 134.9 mm ID)	48-0520	08-0185	N/A
5.21" thru 6.27" (132.3 mm ID thru 159.3 mm ID)	48-0520	08-0186	N/A
6.17" thru 7.24" (156.7 mm ID thru 183.9 mm ID)	48-0520	08-0187	N/A
7.14" thru 8.21" (181.4 mm ID thru 208.5 mm ID)	48-0520	08-0188	N/A
8.11" thru 9.18" (206.0 mm ID thru 233.2 mm ID)	48-0520	N/A	08-0189
9.10" thru 10.17" (231.1 mm ID thru 258.3 mm ID)	48-0520	08-0185	08-0189
10.07" thru 11.14" (255.8 mm ID thru 283.0 mm ID)	48-0520	08-0186	08-0189
11.04" thru 12.11" (280.4 mm ID thru 307.6 mm ID)	48-0520	08-0187	08-0189
12.01" thru 13.09" (305.1 mm ID thru 332.5 mm ID)	48-0520	08-0188	08-0189
Jaw Block Assembly Ranges			

TOOL BITS

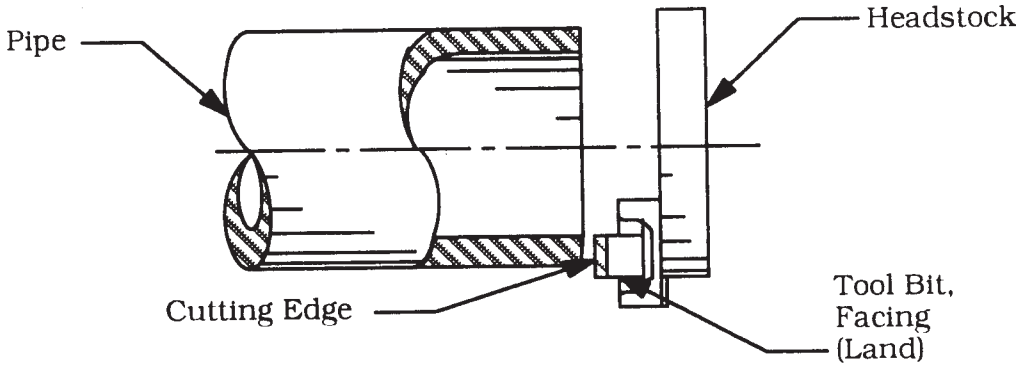
TOOL BITS, BEVELING



Range[1]	Pipe or Tube Material	37.5 Degree Beveling Tool Bit P/N	Facing Tool Bit P/N
3.312" ID thru 10.750" ID (84.1 mm ID thru 273.1 mm ID)	CS	99-3341	99-2904
3.312" ID thru 10.750" ID (84.1 mm ID thru 273.1 mm ID)	SS[2]	99-3338	99-2917
3.312" ID thru 12.000" ID (84.1 mm ID thru 304.8 mm ID)	CS	99-2906	99-2904
3.312" ID thru 12.000" ID (84.1 mm ID thru 304.8 mm ID)	SS[2]	99-2919	99-2917
[1] .280" (7 mm) maximum wall.			
[2] Cobalt High Heat Tool Bits are available.			

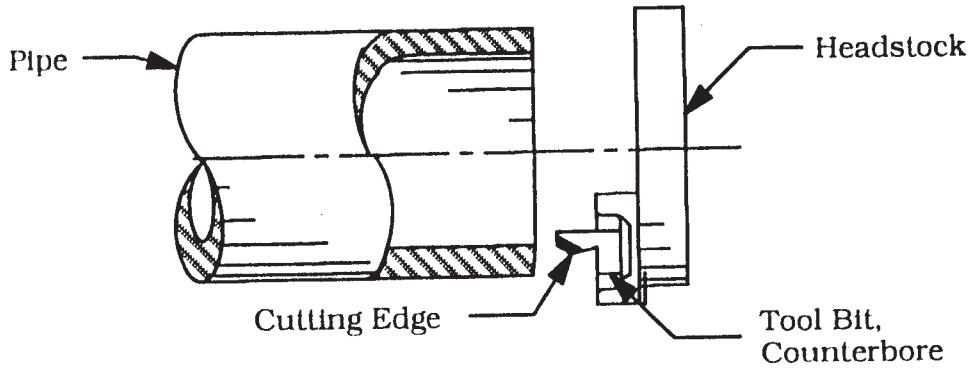
Range[1]	Pipe or Tube Material	45 Degree Beveling Tool Bit P/N	Facing Tool Bit P/N
3.312" ID thru 11.906" ID (84.1 mm ID thru 302.4 mm ID)	CS	99-2914	99-2904
3.312" ID thru 11.906" ID (84.1 mm ID thru 302.4 mm ID)	SS[2]	99-2927	99-2917
3.515" ID thru 10.844" ID (89.3 mm ID thru 275.4 mm ID)	CS	99-3343	99-2904
3.515" ID thru 10.844" ID (89.3 mm ID thru 275.4 mm ID)	SS[2]	99-3344	99-2917
[2] Cobalt High Heat Tool Bits are available.			

TOOL BIT, FACING (LAND)



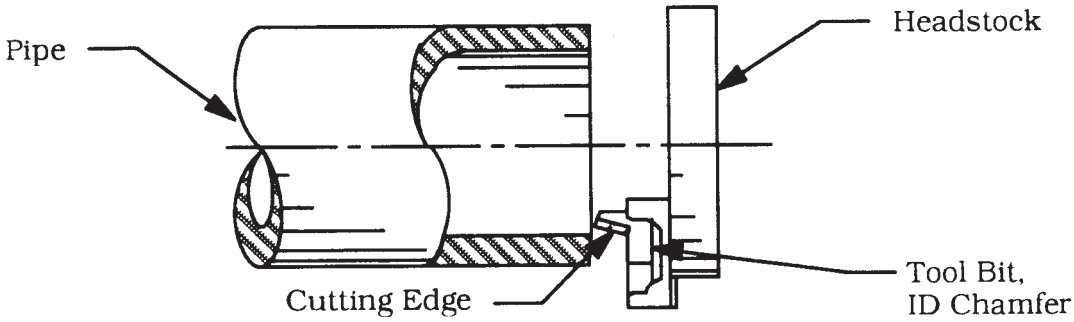
Range	Pipe or Tube Material	Facing (Land) Tool Bit P/N
3.312" ID thru 12.750" OD (84.1 mm ID thru 323.9 mm OD)	CS	99-2904
3.312" ID thru 12.750" OD (84.1 mm ID thru 323.9 mm OD)	SS[2]	99-2917
3.312" ID thru 12.750" OD (84.1 mm ID thru 323.9 mm OD)	SS	99-2979*
3.312" ID thru 12.750" OD (84.1 mm ID thru 323.9 mm OD)	Copper	99-4537
* M42		
[2] Colbalt High Heat Tool Bits are available.		

TOOL BIT, COUNTERBORING, 14.5° (4:1)



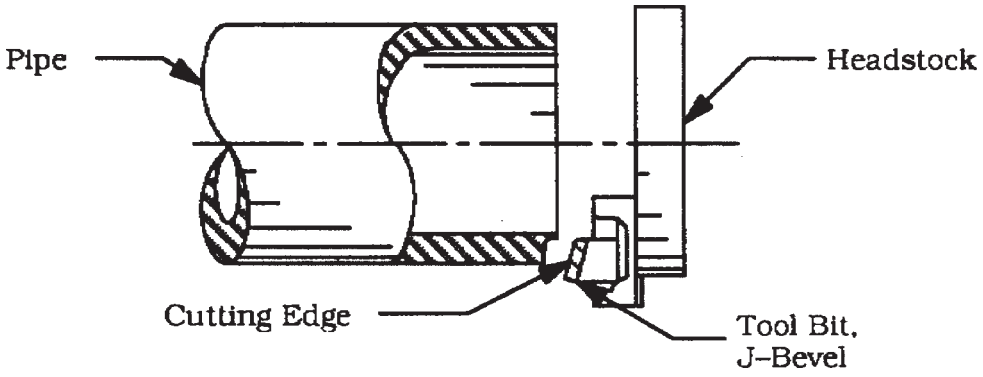
Range	Pipe or Tube Material	14.5 Degree (4:1) C'Bore 1/2" Deep Tool Bit P/N	Facing Tool Bit P/N
3.328" ID thru 11.781" ID (84.5 mm ID thru 299.2 mm ID)	CS	99-2908	99-2904
3.328" ID thru 11.781" ID (84.5 mm ID thru 299.2 mm ID)	SS	99-2921	99-2917
4.125 " ID thru 12.750" ID (104.8 mm ID thru 323.9 mm ID)	CS	99-2909	99-2904
4.125" ID thru 12.750" ID (104.8 mm ID thru 323.9 mm ID)	SS	99-2922	99-2917

TOOL BIT ID CHAMFER, 10°



Range	Pipe or Tube Material	10 Degree ID Chamfer Tool Bit P/N	Facing Tool Bit P/N
3.328" ID thru 12.000" ID (84.5 mm ID thru 304.8 mm ID)	CS	99-2911	99-2904
3.328" ID thru 12.000" ID (84.5 mm ID thru 304.8 mm ID)	SS[2]	99-2924	99-2917
4.171" ID thru 12.609" ID (105.9 mm ID thru 320.3 mm ID)	CS	99-2912	99-2904
4.171" ID thru 12.609" ID (105.9 mm ID thru 320.3 mm ID)	SS[2]	99-2925	99-2917
[2] Cobalt High Heat Tool Bits are available.			

TOOL BIT, J-BEVEL, 25°, .187" RADIUS



Range	Pipe or Tube Material	25 Degree J-Bevel with .187" Radius Tool Bit P/N	Facing Tool Bit P/N
3.312" ID thru 10.500" ID (84.1 mm ID thru 266.7 mm ID)	CS	99-2915	99-2904
3.312" ID thru 10.500" ID (84.1 mm ID thru 266.7 mm ID)	SS[2]	99-2929	99-2917
3.312" ID thru 11.750" ID (84.1 mm ID thru 298.5 mm ID)	CS	99-2916	99-2904
3.312" ID thru 11.750" ID (84.1 mm ID thru 298.5 mm ID)	SS[2]	99-2928	99-2917
4.125" ID thru 12.750" ID (104.8 mm ID thru 323.9 mm ID)	CS	99-3349	99-2904
4.125" ID thru 12.750" ID (104.8 mm ID thru 323.9 mm ID)	SS[2]	99-3350	99-2917
[2] Cobalt High Heat Tool Bits are available.			

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 tool bit is diving and the BEVELMASTER™ is stalling

The tool bit is dull, chipped, etc.
The tool holder adjustment slide is too loose.
The tool bit is overextended.

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.
The cutting speed in incorrect .
The feed per revolution is too great.

Problem: The tool holder is not feeding

The cam feed knob roller clutch is broken.
The slide rails are too tight.

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 length is insufficient.
The water trap is full.

Problem: The pipe or tube is slipping in the collet

The clamping pressure is not tight enough.
Scale and/or other foreign material is present on the pipe or tube.
Weld seams, swelling, or bumps are preventing full contact of the collet.
Dull tool bits are causing extra force in the axial and/or radial direction.

Problem: The tool bit will not reach the work

Incorrect tool bit is installed.

Problem: The air motor will not start

The air supply pressure is too low.
The air filter is plugged.
The air supply line size is insufficient.
The air supply line is too long.
The water trap is full.
Sand or other foreign material is in the vanes of the air motor.

Problem: The air motor will not run free

The air motor may need lubrication. Add lubrication to the air motor and wait a few minutes before attempting to run it again. Try running the motor again. If it still will not run, the vanes may be sticking; tap on the air motor casing lightly with a piece of weed or with a soft rubber mallet.

ACCESSORIES

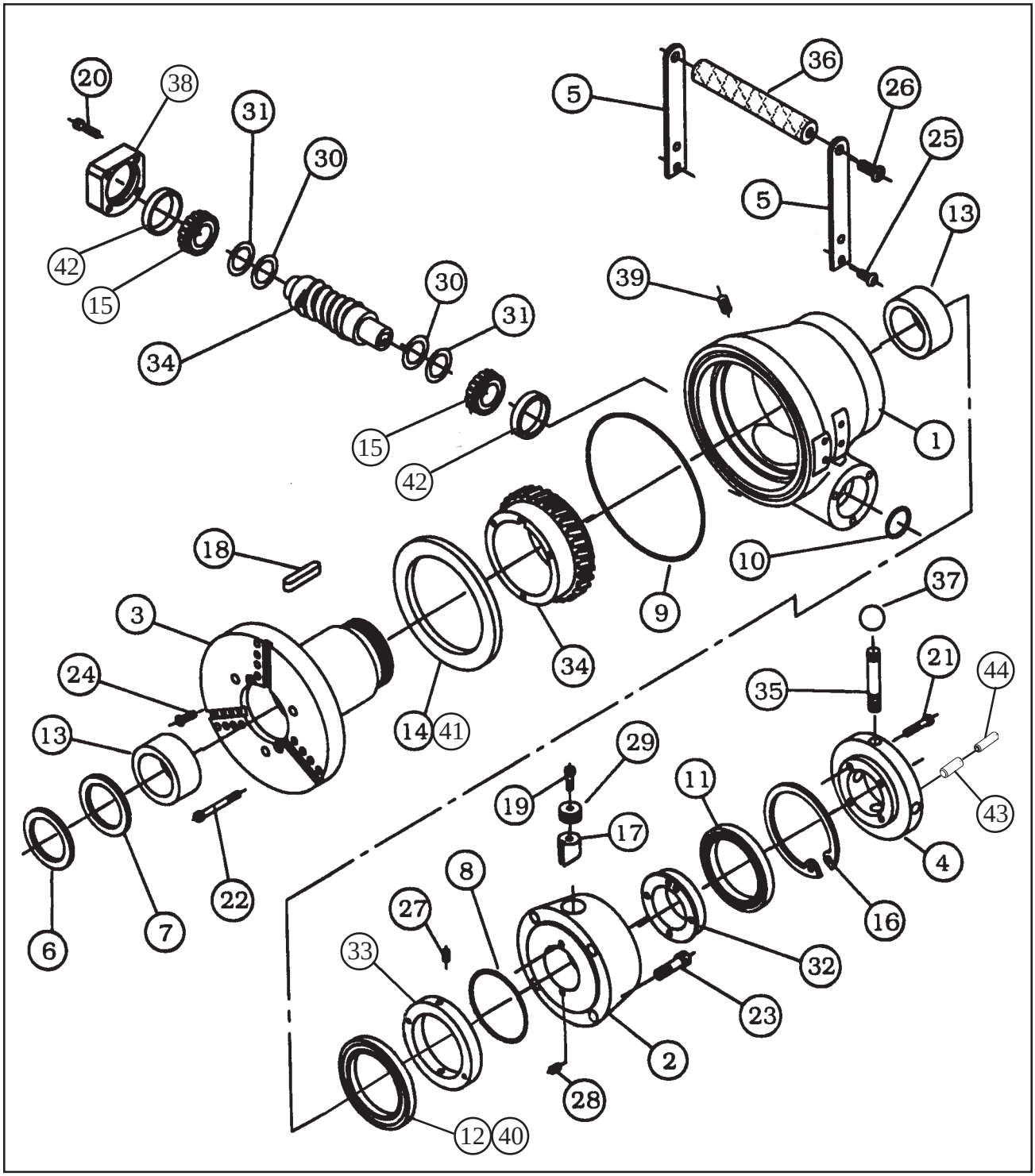
The following accessories are recommended for use with the Model 212B Pipe Beveler and are available from TRI TOOL INC.

1. Portable Air Caddy (P/N 75-0115)
2. Elbow Mandrel (P/N 05-1282)
3. Elbow Mandrel Pointer Kit (P/N 05-0154)
4. Flange Facer Kit (P/N 05-1283)
5. Sleeve Mandrel Kit, 4" - 12" pipe (P/N 05-1287)
6. Sleeve Mandrel Kit, 8" - 12" pipe (P/N 05-1288)
7. Miter Mandrel Kit (P/N 05-0178)
8. Dial Indicator Kit (P/N 05-0181)
9. ID Tracking Module Kit (P/N 05-0182)
10. Single Point Kit (P/N 05-1332)

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

ILLUSTRATED PARTS BREAKDOWN

MODEL 212B BEVELMASTER™ (P/N 02-2115)



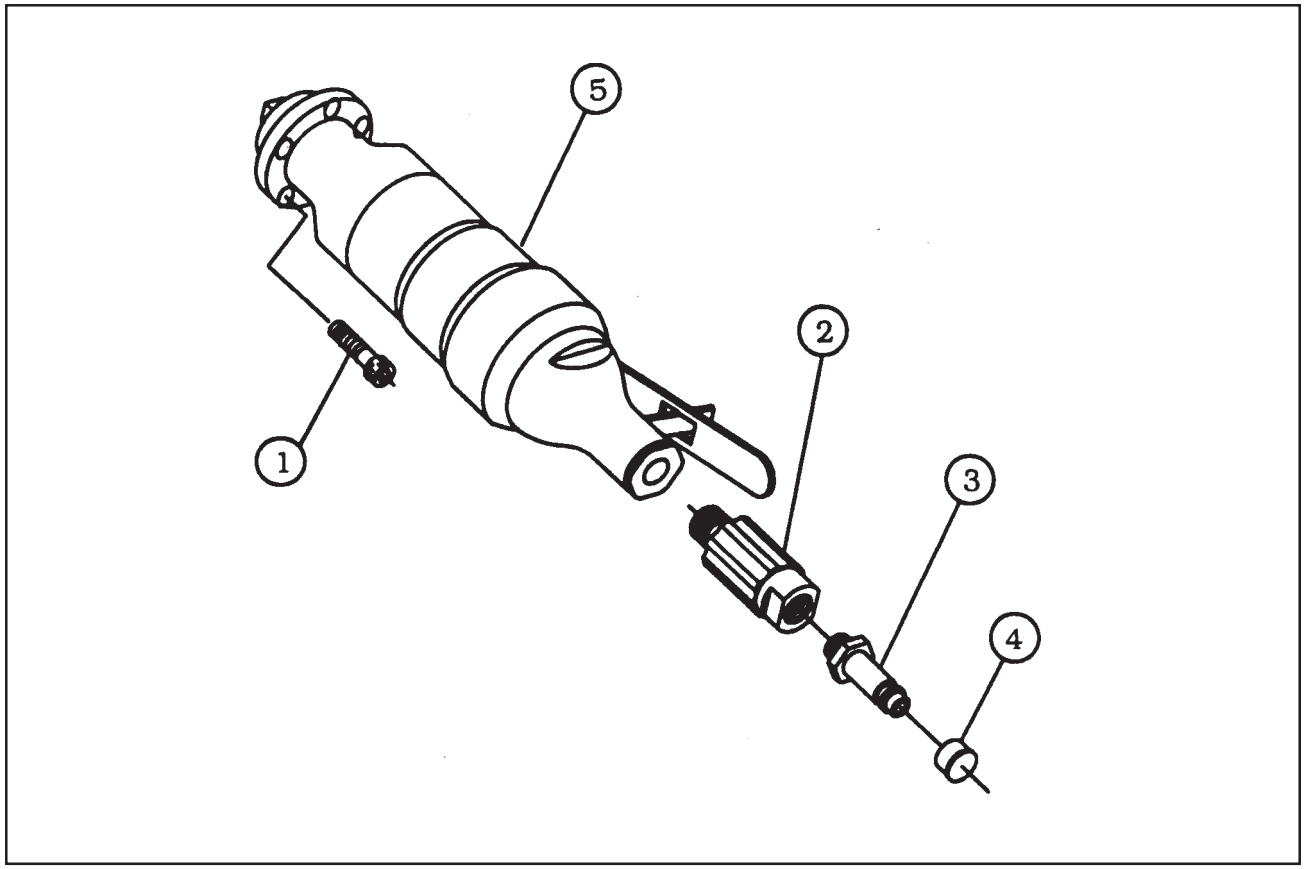
Parts List, Model 212B BEVELMASTER™ (P/N 02-2115)

Item No.	Part No.	Description	Qty
1.	19-0449	HOUSING, MAIN	1
2.	19-0450	HOUSING, FEED	1
3.	20-0391	SHAFT, MAIN	1
4.	24-0781	PLATE, FEED	1
5.	24-0782	PLATE, HANDLE	2
6.	24-0783	PLATE, SEAL	1
7.	28-0175	SEAL, SHAFT	1
8.	28-0176	SEAL, EXTRUDED, 3/16" X BULK	10.50" (27 CM)
9.	28-0176	SEAL, EXTRUDED, 3/16" X BULK	21.25" (54 CM)
10.	28-0177	O-RING	1
11.	29-0002	BEARING, BALL	1
12.	29-0216	BEARING, TAPERED CONE, 3" ID X 17/32"	1
13.	29-0226	BEARING, ROLLER	2
14.	29-0229	BEARING, TAPERED CONE, 4 1/2" ID X 27/32"	1
15.	29-0232	BEARING, TAPERED CONE, 1" ID X 9/16"	2
16.	30-0300	RING, RETAINING, INTERNAL	1
17.	31-0091	KEY, BRONZE	2
18.	31-0092	KEY, SQUARE	1
19.	33-0038	SCREW, CAP, 1/4-20 X .50"	2
20.	33-0042	SCREW, CAP, 1/4-20 X 1.00"	4
21.	33-0043	SCREW, CAP, 1/4-20 X 1.25"	4
22.	33-0047	SCREW, CAP, 1/4-20 X 2.25"	3
23.	33-0057	SCREW, CAP, 5/16-18 X 1.25"	4
24.	33-0284	SCREW, BUTTON HEAD, 1/4-20 X .38"	2
25.	33-0291	SCREW, BUTTON HEAD, 5/16-18 X .50"	4
26.	33-0300	SCREW, BUTTON HEAD, 3/8-16 X 1.00"	2
27.	33-0503	SCREW, SET, CUP POINT, 1/4-20 X .50"	2
28.	33-0903	SCREW, SET, HALF DOG, 1/4-20 X .31"	2
29.	33-1572	SCREW, SET, 1-12 X .75"	2
30.	34-0225	SHIM, BEARING	2

Parts List, Model 212B BEVELMASTER™ (P/N 02-2115) Continued

Item No.	Part No.	Description	Qty
31.	34-0226	SHIM, BEARING	2
32.	35-0284	NUT, FEED	1
33.	35-0285	NUT, LOCK	1
34.	39-0508	GEAR SET, MOD	1
35.	41-0076	HANDLE, FEED	4
36.	41-0080	HANDLE	1
37.	42-0017	KNOB, SPHERICAL	4
38.	43-0313	COVER, GEAR	1
39.	54-0375	FITTING, GREASE	1
40.	29-0215	BEARING, TAPERED CUP, 4 5/32" OD X 3/8"	1
41.	29-0230	BEARING, TAPERED CUP, 6" OD X 21/32"	1
42.	29-0233	BEARING, TAPERED CUP, 1 31/32" OD X 3/8"	2
43.	32-0304	PIN, LK	1
44.	33-0507	SCREW, SET, 1/4-20 X 1", CUP PT	1
NOT SHOWN			
	05-1270	SHIPPING KIT	1
	36-0007	WRENCH, L, 5/32" HEX	1
	36-0008	WRENCH, L, 3/16" HEX	1
	36-0010	WRENCH, L, 1/4" HEX	1
	36-0020	WRENCH, T, 5/32" HEX	1
	36-0021	WRENCH, T, 3/16" HEX	1
	36-0023	WRENCH, T, 1/4" HEX	1
	36-0042	WRENCH, COMBINATION, 7/8"	1
	36-0062	WRENCH, L, 9/16" HEX	1
	86-0133	CASE, CARRYING	1

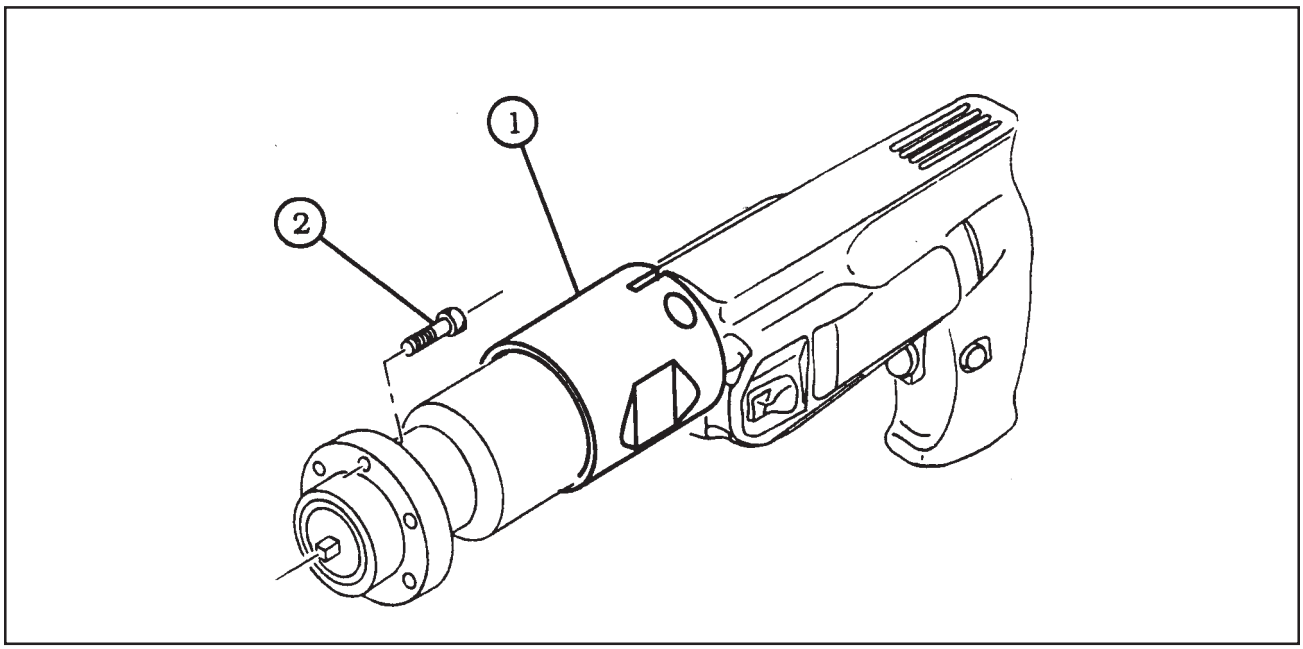
MOTOR ASSEMBLY, AIR (P/N 57-0167)



Parts List, Motor Assembly, Air (P/N 57-0167)

Item No.	Part No.	Description	Qty
1.	33-0056	SCREW, CAP, 5/16-18 X 1"	3
2.	53-0046	VALVE, FLOW CONTROL	1
3.	54-0126	COUPLING, QD	1
4.	54-0201	CAP, PLASTIC	1
5.	57-0160	MOTOR, AIR	1

MOTOR ASSEMBLY, ELECTRIC (P/N 58-004X)



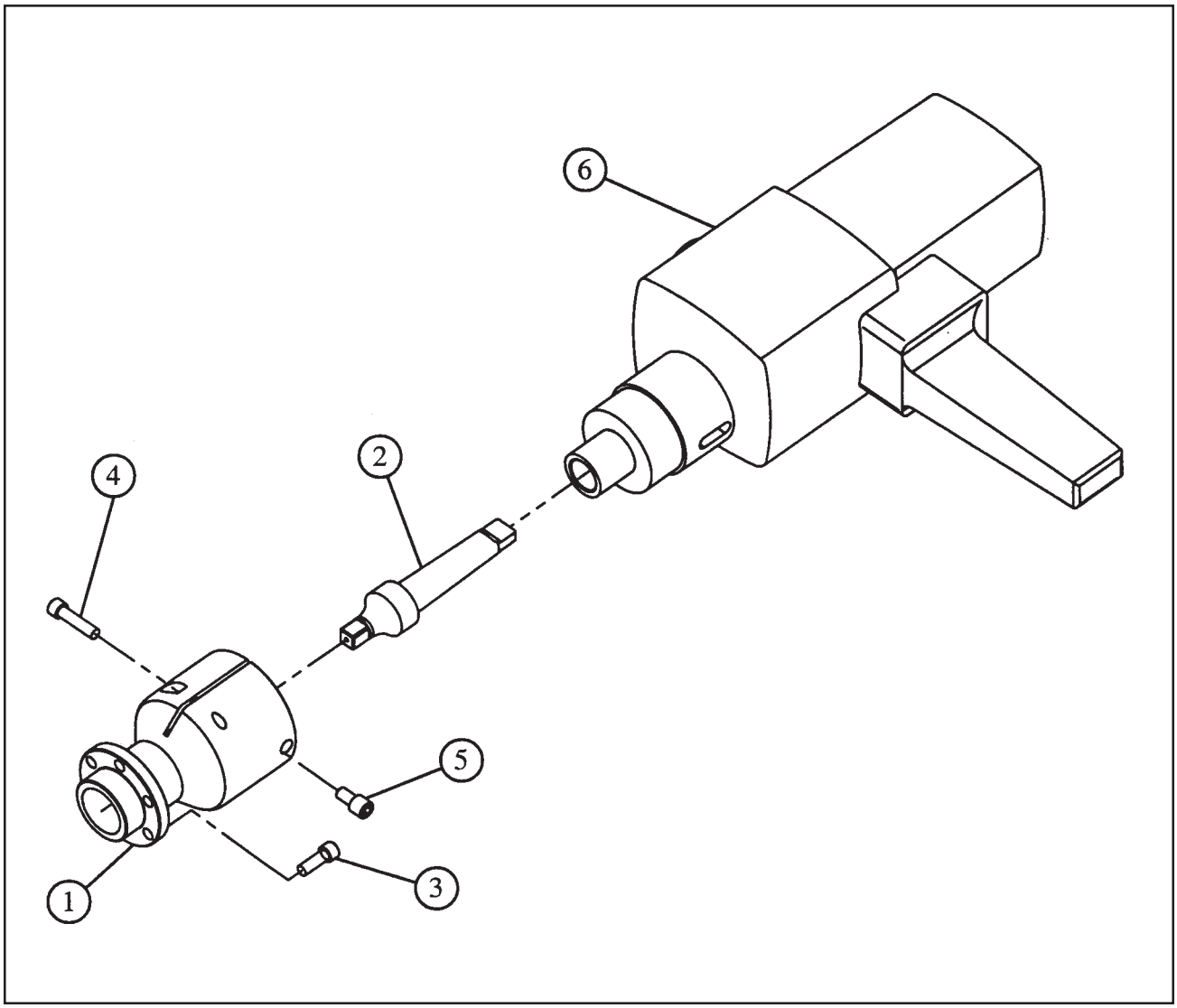
Parts List, Motor Assembly, Electric 110V (P/N 58-0045)

Item No.	Part No.	Description	Qty
1.	58-0045	MOTOR ASSEMBLY, ELECTRIC	1
	58-0038	MOTOR, MOD, ELECTRIC, 110V	1
2.	33-0056	SCREW, CAP, 5/16-18 X 1"	3
NOT SHOWN			
	27-0347	ADAPTER, MOTOR	1
	39-0564	GEAR, DRIVE	1
	91-0310	BEARING, ROTOR	1
	04-0099	DRIVE, ASSEMBLY, ELECTRIC	1
	33-0039	SCREW, CAP, 1/4-20 X 5/8"	1
	33-0056	SCREW, CAP, 5/16-18 X 1"	1

Parts List, Motor Assembly, Electric 220V (P/N 58-0047)

Item No.	Part No.	Description	Qty
1.	58-0047	MOTOR ASSEMBLY, ELECTRIC	1
	58-0039	MOTOR, MOD, ELECTRIC, 220V	1
2.	33-0056	SCREW, CAP, 5/16-18 X 1"	3
NOT SHOWN			
	27-0347	ADAPTER, MOTOR	1
	39-0564	GEAR, DRIVE	1
	91-0310	BEARING, ROTOR	1
	04-0099	DRIVE, ASSEMBLY, ELECTRIC	1
	33-0039	SCREW, CAP, 1/4-20 X 5/8"	1
	33-0056	SCREW, CAP, 5/16-18 X 1"	1

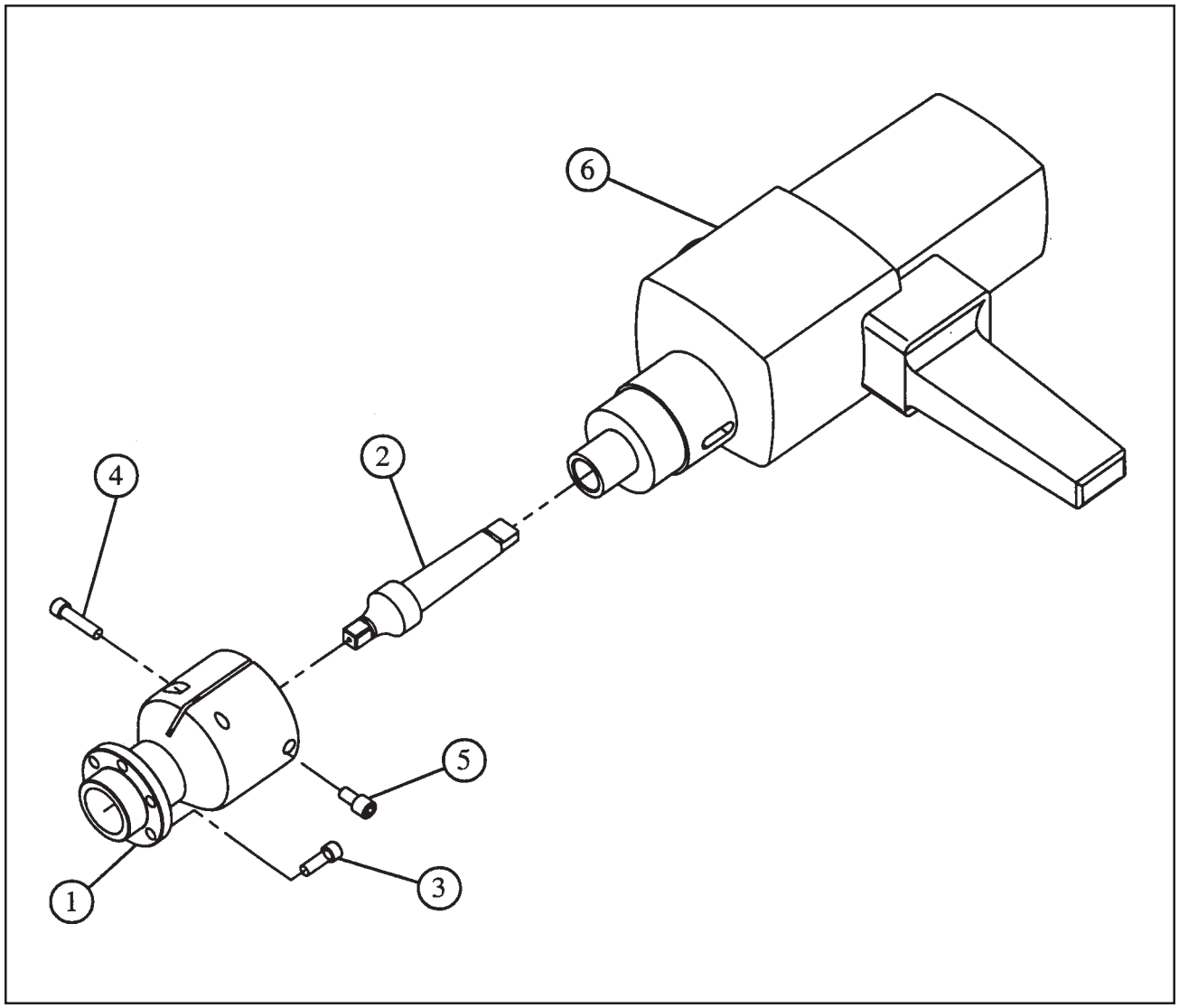
MOTOR ASSEMBLY, ELECTRIC DRIVE, 115V HD (P/N 58-0167)



Parts List, Motor Assembly, Electric Drive, 115V HD (P/N 58-0167)

Item No.	Part No.	Description	Qty
1.	27-0826	ADAPTER, DRIVE	1
2.	30-3143	1/2" SQUARE DRIVE	1
3.	33-0055	SCREW, CAP, 5/16-18 X 7/8" LG.	3
4.	33-0057	SCREW, CAP, 5/16-18 X 1 1/4" LG.	1
5.	33-1874	SCREW, ANTI-ROTATION	2
6.	58-0192	MOTOR, ELECTRIC, 115V, MODIFIED	1

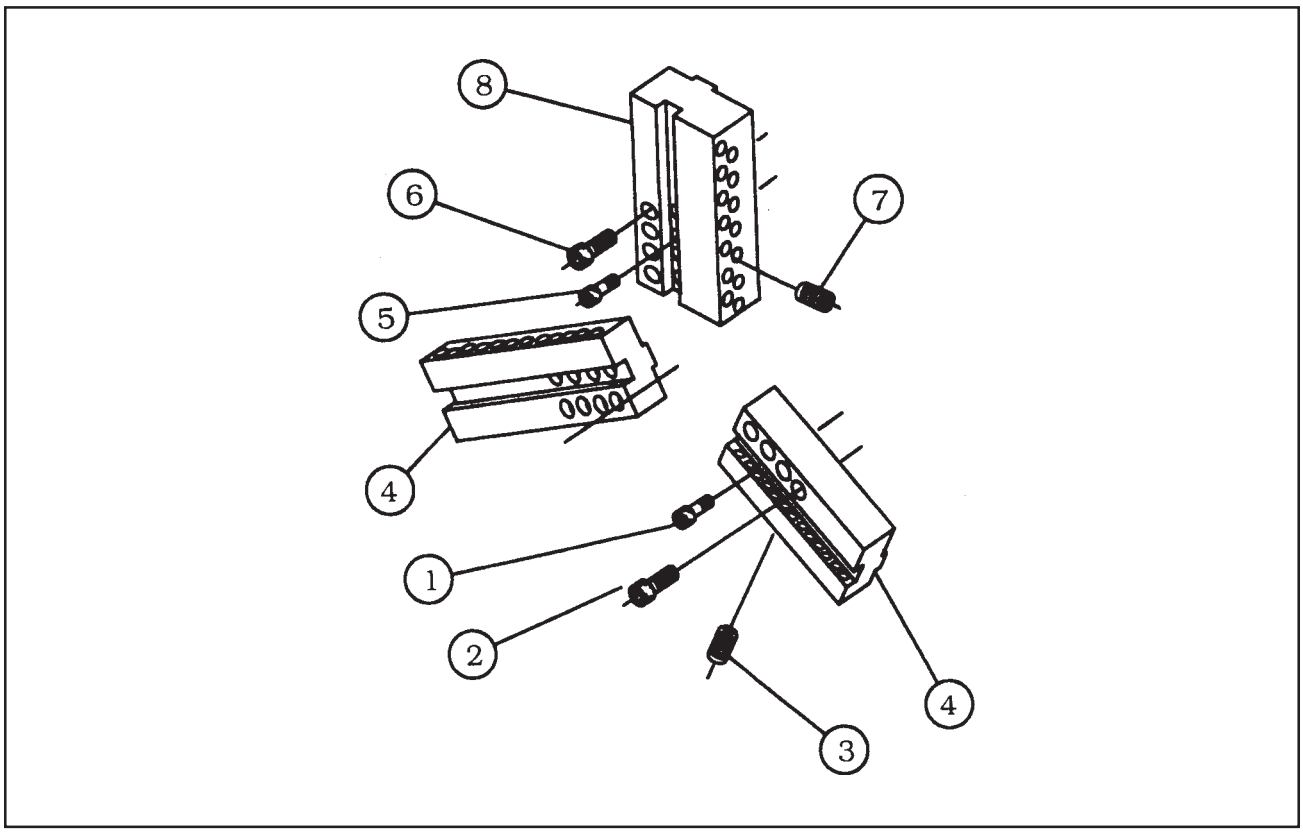
MOTOR ASSEMBLY, ELECTRIC DRIVE, 230V HD (P/N 58-0174)



Parts List, Motor Assembly, Electric Drive, 230V HD (P/N 58-0174)

Item No.	Part No.	Description	Qty
1.	27-0826	ADAPTER, DRIVE	1
2.	30-3143	1/2" SQUARE DRIVE	1
3.	33-0055	SCREW, CAP, 5/16-18 X 7/8" LG.	3
4.	33-0057	SCREW, CAP, 5/16-18 X 1 1/4" LG.	1
5.	33-1874	SCREW, ANTI-ROTATION	2
6.	58-0173	MOTOR, ELECTRIC, 230V, MODIFIED	1

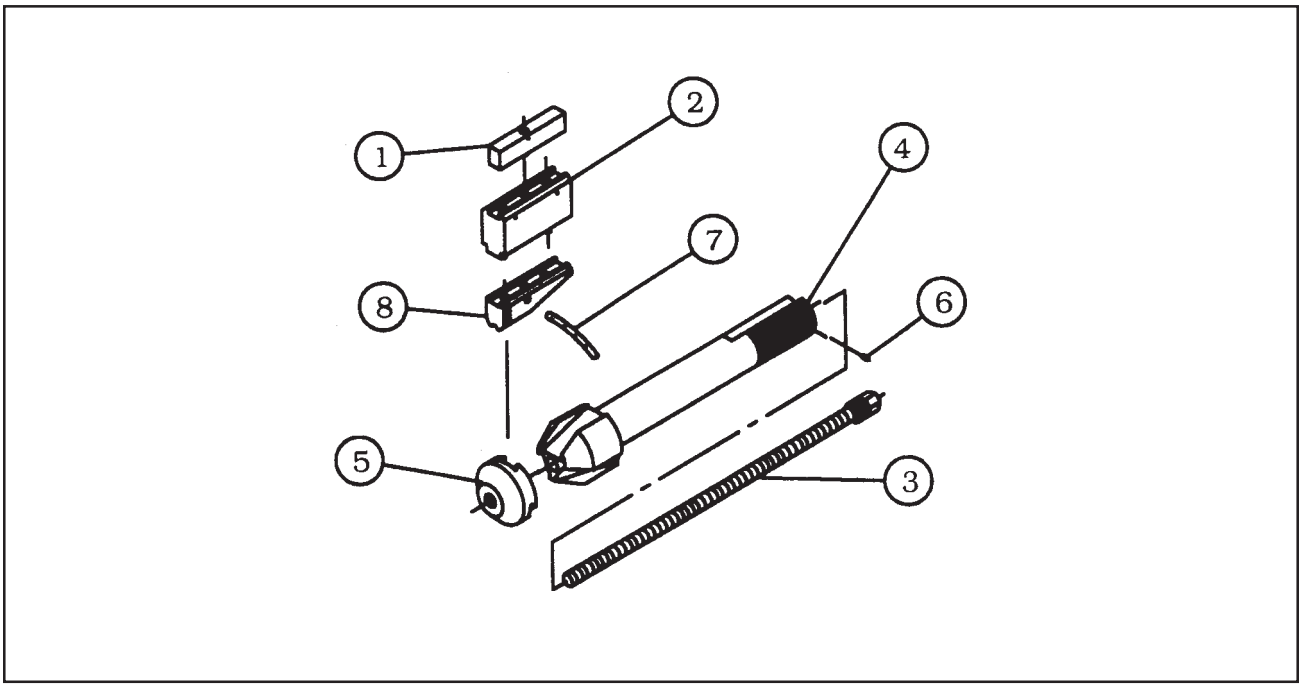
HOLDER ASSEMBLY, TOOL



Parts List, Holder Assembly, Tool

Item No.	Part No.	Description	Qty
	49-0104	HOLDER ASSEMBLY, TOOL	2
1.	33-0041	SCREW, CAP	4
2.	33-0057	SCREW, CAP	4
3.	33-0518	SCREW, SET	14
4.	49-0102	HOLDER, TOOL	1
	49-0105	HOLDER ASSEMBLY, TOOL	1
5.	33-0041	SCREW, CAP	4
6.	33-0057	SCREW, CAP	4
7.	33-0518	SCREW, SET	14
8.	49-0103	HOLDER, TOOL	1

MANDREL ASSEMBLY (P/N 06-0311)



Parts List, Mandrel Assembly (P/N 06-0311)

Item No.	Part No.	Description	Qty
1.	08-0185	BLOCK, ASSEMBLY, JAW, .609"	3
	08-0186	BLOCK, ASSEMBLY, JAW, 1.096"	3
	08-0187	BLOCK, ASSEMBLY, JAW, 1.583"	3
	08-0188	BLOCK, ASSEMBLY, JAW, 2.070"	3
2.	08-0189	BLOCK, ASSEMBLY, ADAPTER	3
3.	11-0060	ROD ASSEMBLY, DRAW	1
4.	13-0309	MANDREL	1
5.	24-0799	PLATE, BUTT	1
6.	33-0928	SCREW, SET, HALF DOG, 1/4-20 X 3/8"	2
7.	40-0172	SPRING, EXTENSION, MOD	1
8.	48-0520	BLOCK, RAMP	3