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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 your 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 224B ID Tracking Module Kit is an accessory option, which is used to expand the versatility of the Model 224B BEVELMASTER™.

The ID Tracking Module is designed to track out of round pipe where to control of the land is critical.

The 224B IDTM bolts directly to the to the 224B BEVELMASTER™ in lieu of the standard tool modules.

The tool holder has two tool bit slots to allow facing and beveling simultaneously.

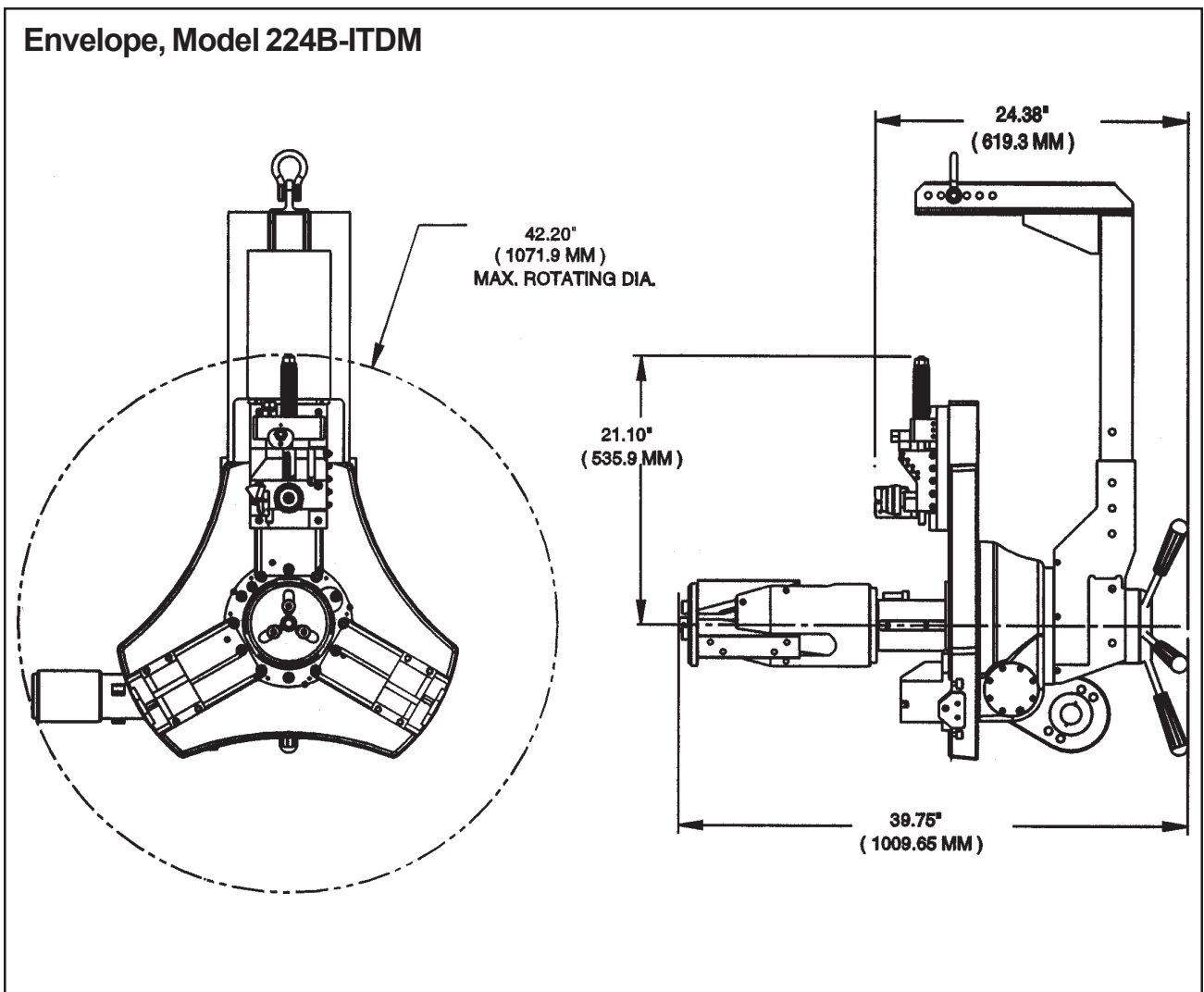
1.00" (25.4 mm) of radial tool holder spring travel accommodates pipes that are out of round.

SPECIFICATIONS

PIPE CUTTING CAPACITIES

Basic Pipe Sizes:	12" schedule 80 through 24" pipe
Maximum Rotating Diameter:	42.20" (1071.9 mm)
Radial Tracking Travel:	1.00" (25.4 mm)

Envelope, Model 224B-ITDM



MAINTENANCE

IN GENERAL

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

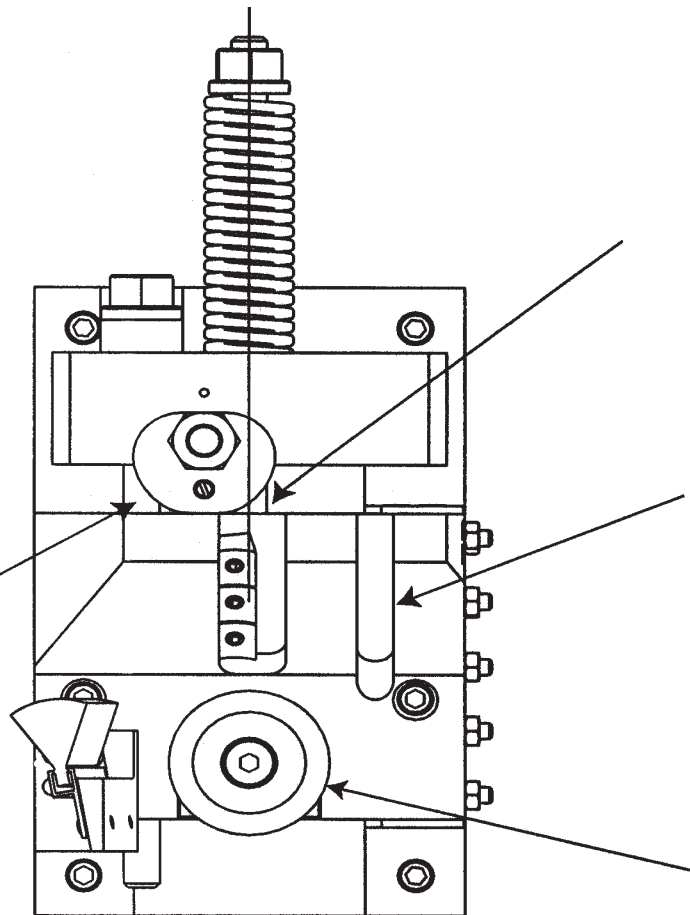
If the Model 224B- IDTM is operated in such a manner that the tool block collects debris while cutting, the tool holder, lock block and the feed screws should be cleaned after each cutting operation.

Use a clean, non-detergent oil, preferably SAE 10 (SSU or lighter).

CAUTION:

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.

Clean Up



RECOMMENDED MAINTENANCE SCHEDULE

Daily maintenance when the unit is in operation:

Wipe the unit down and spray with rust preventative under severe humidity conditions.

Visually inspect for loose screws, missing screws, damaged, etc.

After every 20 hours of actual operation:

Clean and lubricate the slide rails.

Disassemble the unit and wipe the slide rails.

Excess lubricant will collect grit and/or chips and tend to cause jamming and/or damage to the slide rails.

If the ID Tracking Module is to be stored or if it 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.

INSTALLATION

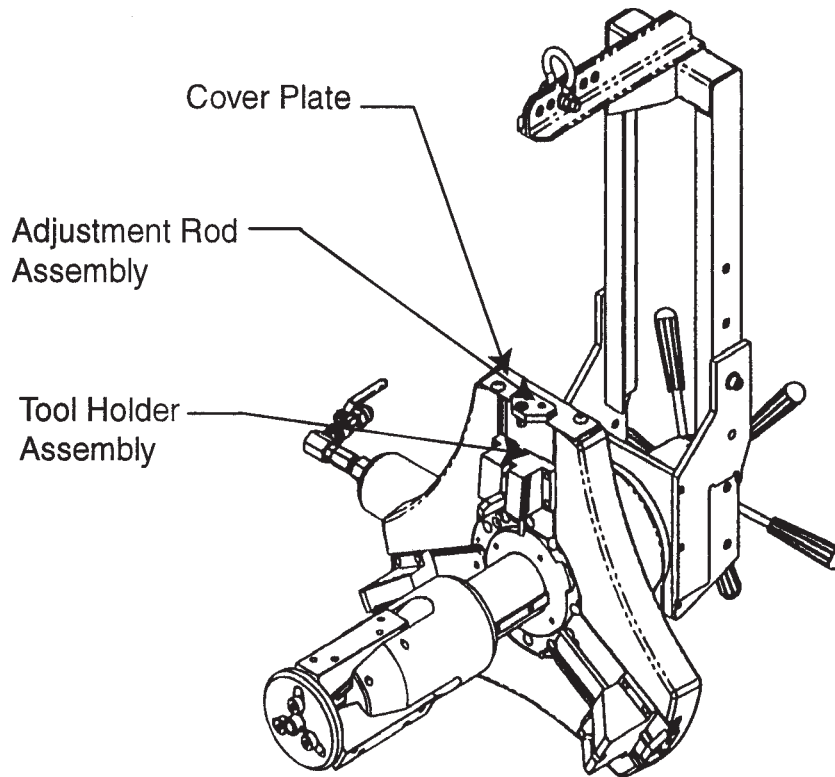
ATTACHING THE MODEL 224B ID TRACKING MODULE TO THE 224B

Remove the Counterbore, Tool Holder Assembly, Adjustment Rod Assembly and the Cover Plate from the Model 224B Machine.

NOTE:

The bevel tool module and the facing tool module do not have to be removed from the Model 224B while the ID Tracking Module is in use. These two modules help balance the Headstock of the 224B. However, the tool bits, if any, should be removed from these modules to avoid injuries.

Tool Configuration Prior to ID Tracking Module Installation



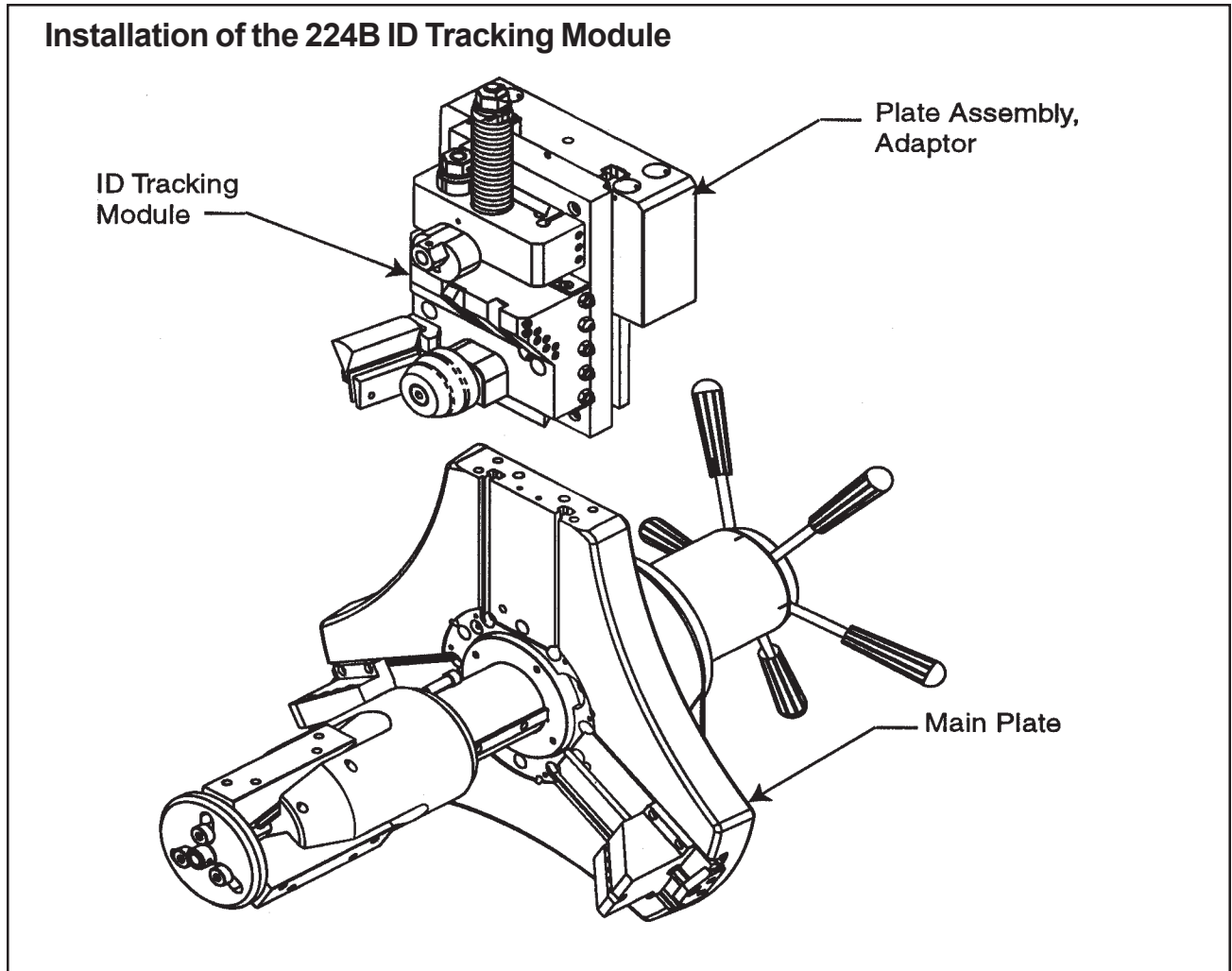
Install the Plate Assembly, Adapter (P/N 24-1722) onto Main Plate (flat), secure in place with retaining cap screws.

Slide the ID Tracking Module into the “T” slots on the Adapter Plate Assembly and let it slide to the end of the “T” slots (minimum cutting diameter).

Secure the module with the (6) cap screws on the base plate.

Slide the Cutter Assembly into T-slots on Adapter Plate Assembly to position desired and secure the (6) cap screws on the base.

Installation of the 224B ID Tracking Module



OPERATION

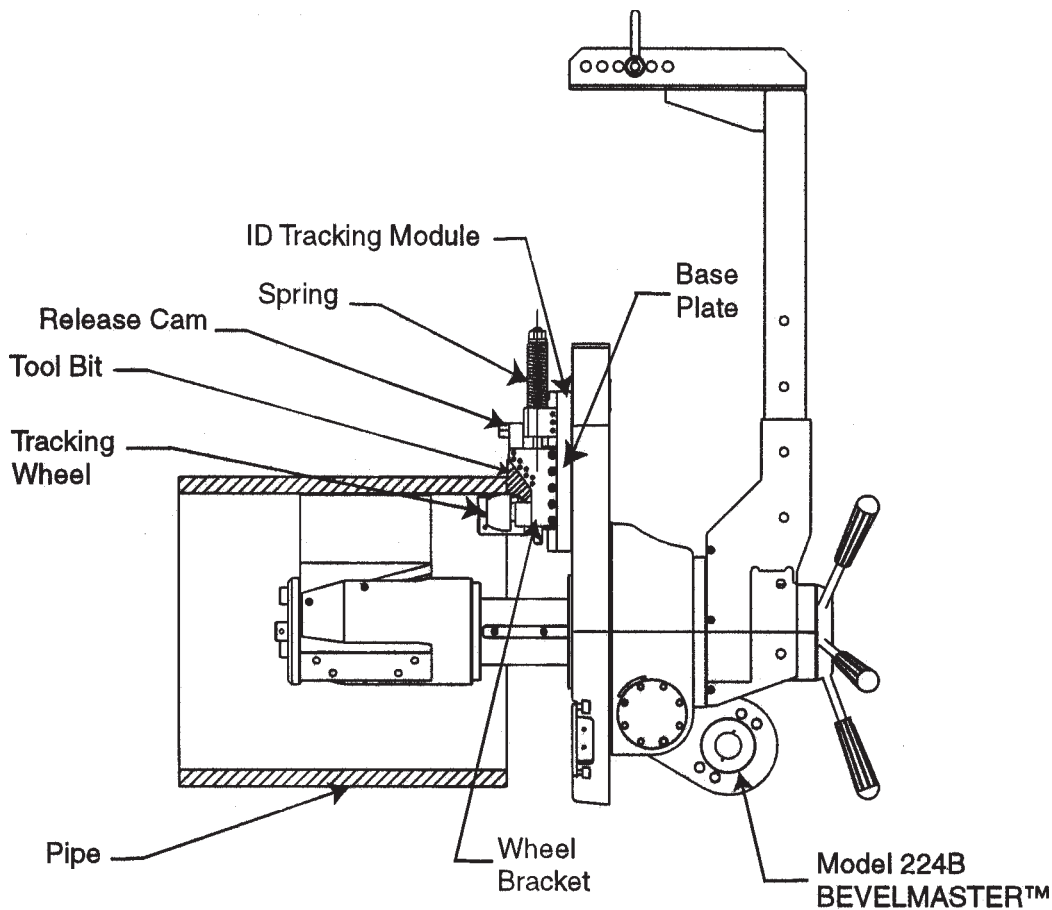
Read the Operating Instructions carefully before attempting to operate the Model 224B IDTM.

Refer to the Operator's manual for Operating Instructions for the Model 224B BEVELMASTER™.

The easy to assemble unit bolts directly to the BEVELMASTER™ in lieu of the standard tool modules.

1" (25.4 mm) of radial tool holder spring travel accommodates pipes that are out of round.

Model 224B with an ID Tracking Module Mounted Inside a Pipe



Install the 224B into the pipe with the ID Tracking Module and secure the mandrel according to the 224B instruction manual.

Rotate the 224B feed handle to position the tracking wheel fully engage inside of the pipe.

NOTE:

Make sure that there is enough feed travel left in the 224B to be able to prep the pipe.

Rotate the spring retracting cam to separate the tool module from the spring bracket.

Loosen the hold down screws while holding the tool module.

Position the module so that the tracing wheel is approximately 1/8" from the ID of the pipe at the smallest point of the ID of the Pipe.

Take in consideration the out of roundness of the pipe to have enough travel in the tracking slide to do the prep.

Secure the tool module by tightening all of the 6 hold down screws, including the 2 through the access holes into the front of the tool slide.

Rotate the spring drawrod nut until enough spring pressure is achieved, leaving enough room between the coils for tracking travel.

CAUTION:

Do not tighten the spring to the point that it gets coil bound during the cutting operation this could damage the tool.

Rotate the spring retracting cam to let the tracking wheel get into contact with the ID of the pipe.

After the set up is accomplished, back off the end of the pipe a little by rotating the 224B feed handle counterclockwise.

Actuate the 224B drive motor slowly and observe the tracking wheel to make sure that it stays in contact with the ID of the pipe all the way around.

Rotate the feed handle slowly clockwise and start the cutting operation.

When you have achieved a full continuous cut and a consistent land, stop rotating the 224B feed handle.

Let the 224B rotate a few revolutions to release the chip at a very slow speed (1 to 2 rpm), this will insure a smooth finish.

Rotate the feed handle counterclockwise to back off the tool bits from the prep while the machine is rotating but do not let the tracking wheel get off the end of the pipe.

Stop the 224B drive motor.

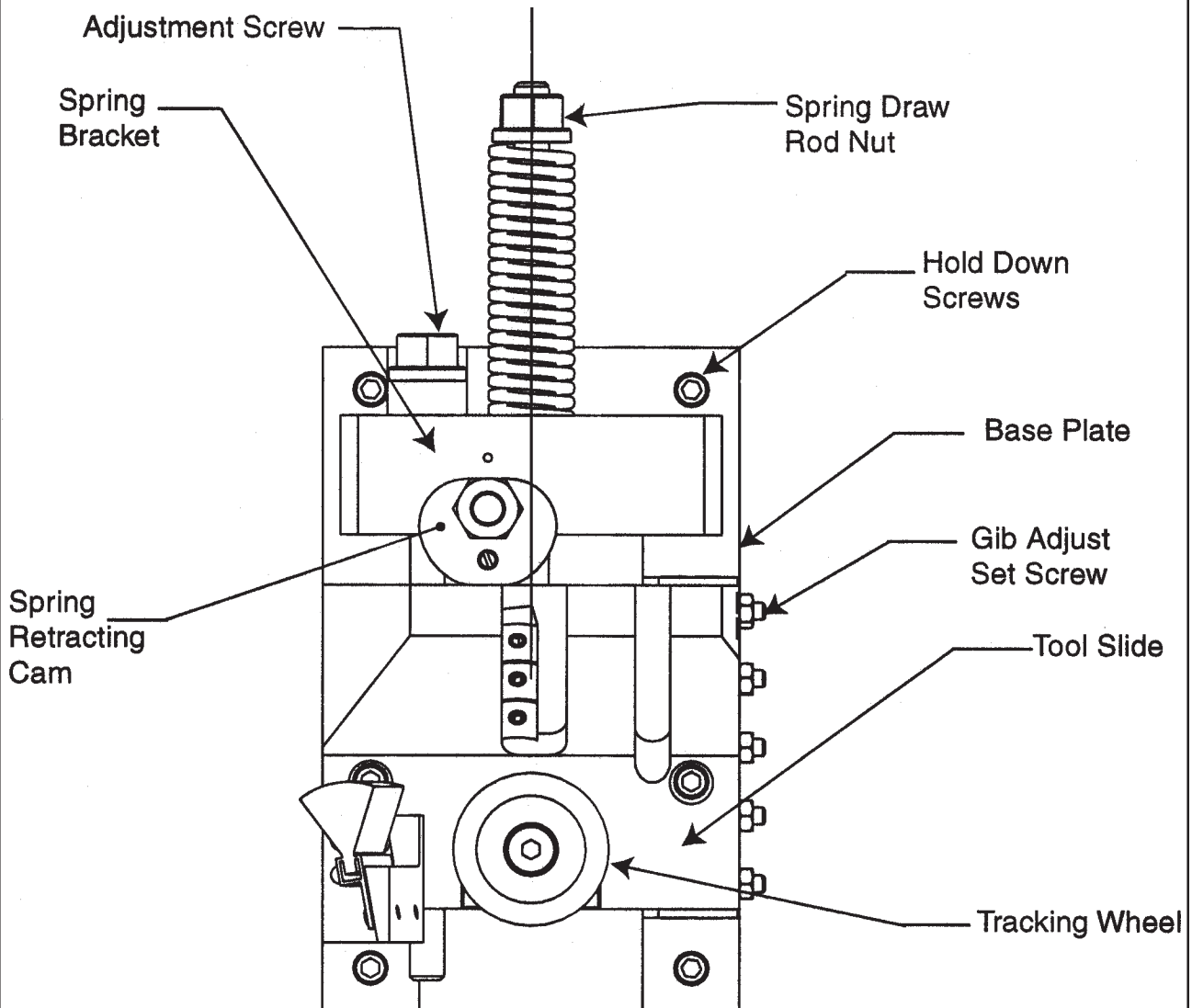
Rotate the spring retracting cam to release the tracking wheel from the pipe.

Release the 224B from the pipe.

NOTE:

If the tool slide is loose on the base plate, re-adjust the gib using the adjustment set screws. Loosen the lock nuts, then tighten the adjustment set screws so that there is no play between the tool slide and the base plate, (the tool slide must still move freely on the base plate) and secure in place with the locknuts.

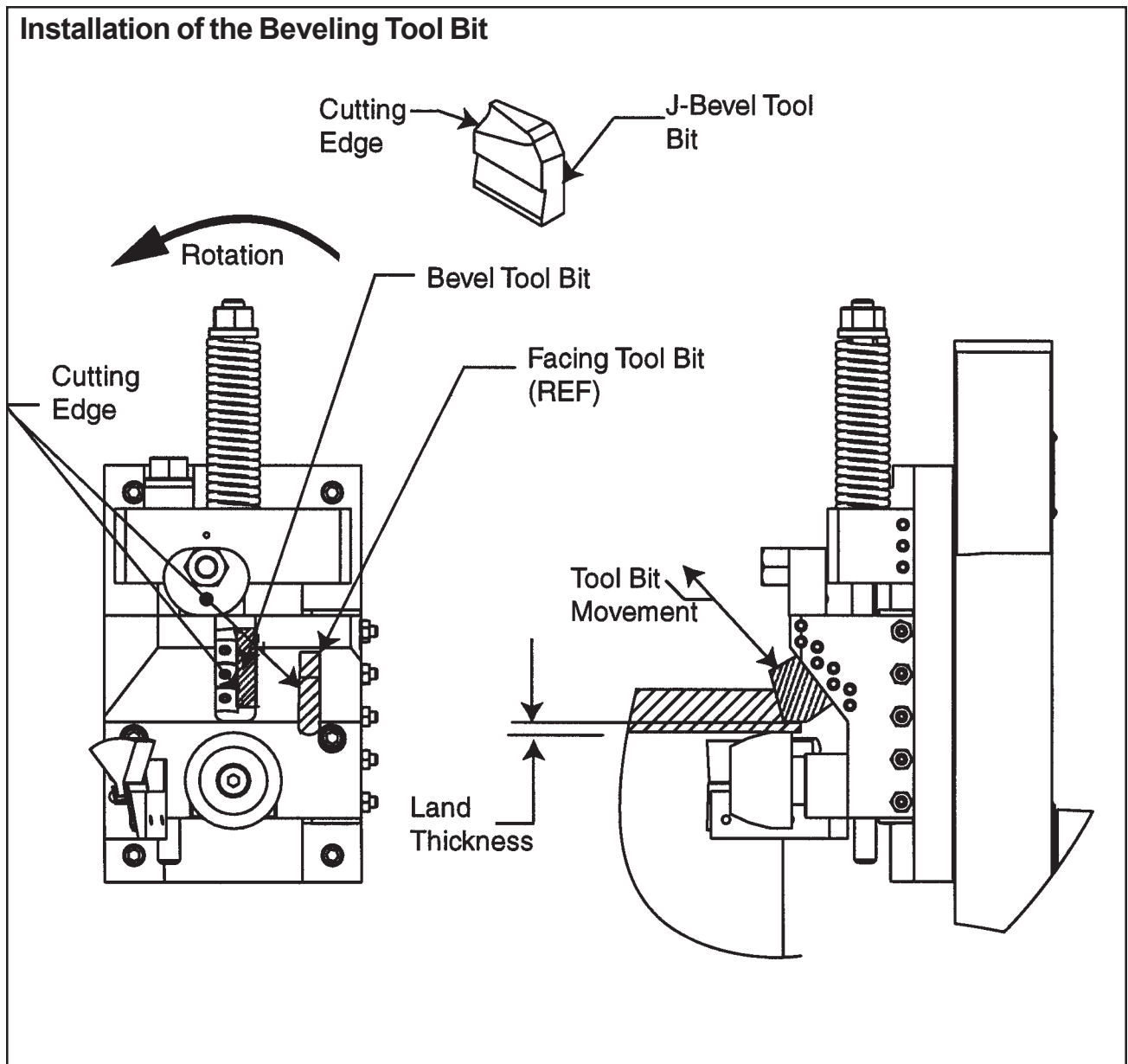
Location of Retaining Plates



TOOL BITS

Install the bevel tool bit into the slot with the wedge lock clamping system making sure that the wedges are on the cutting edge side of the tool bit.

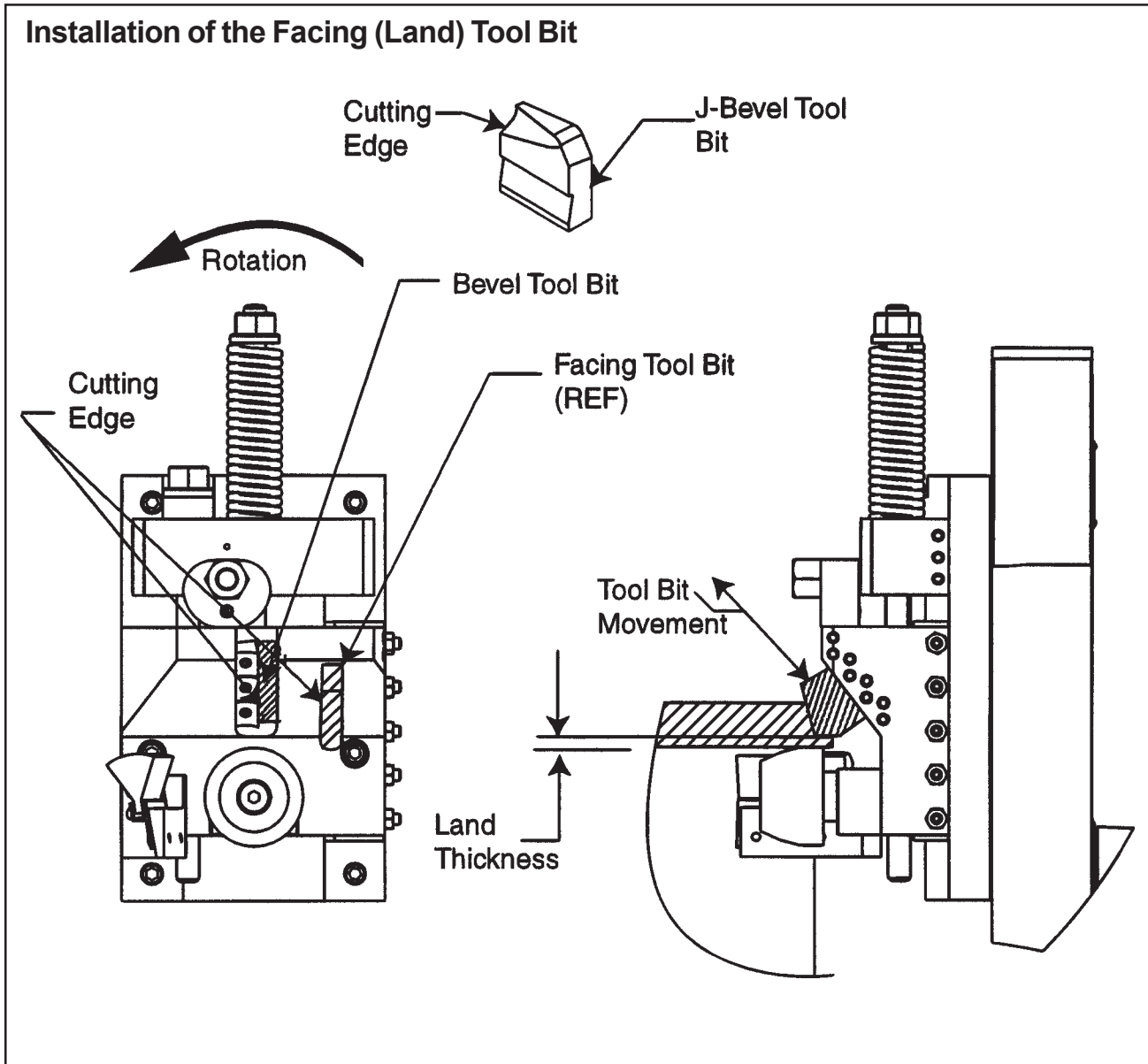
If the tool bit is a "J" bevel bit adjust the height of the bit to leave the proper land thickness as required.



Install the facing tool bit into the remaining tool slot behind the bevel tool bit.

Adjust the land length of the prep as required by moving the facing tool bit up and down the tool slot.

Secure the tool bit with the corresponding clamping set screws.



TROUBLE SHOOTING

Problem: The Tool Bit Chatters

Probable causes:

- 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

Probable causes:

- 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

Probable causes:

- 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.

Problem: The tool holder is not feeding

Probable causes:

- 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: There is a loss of air power

Probable causes:

- 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

Probable causes:

- 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 tool bit will not reach the work

Probable causes:

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

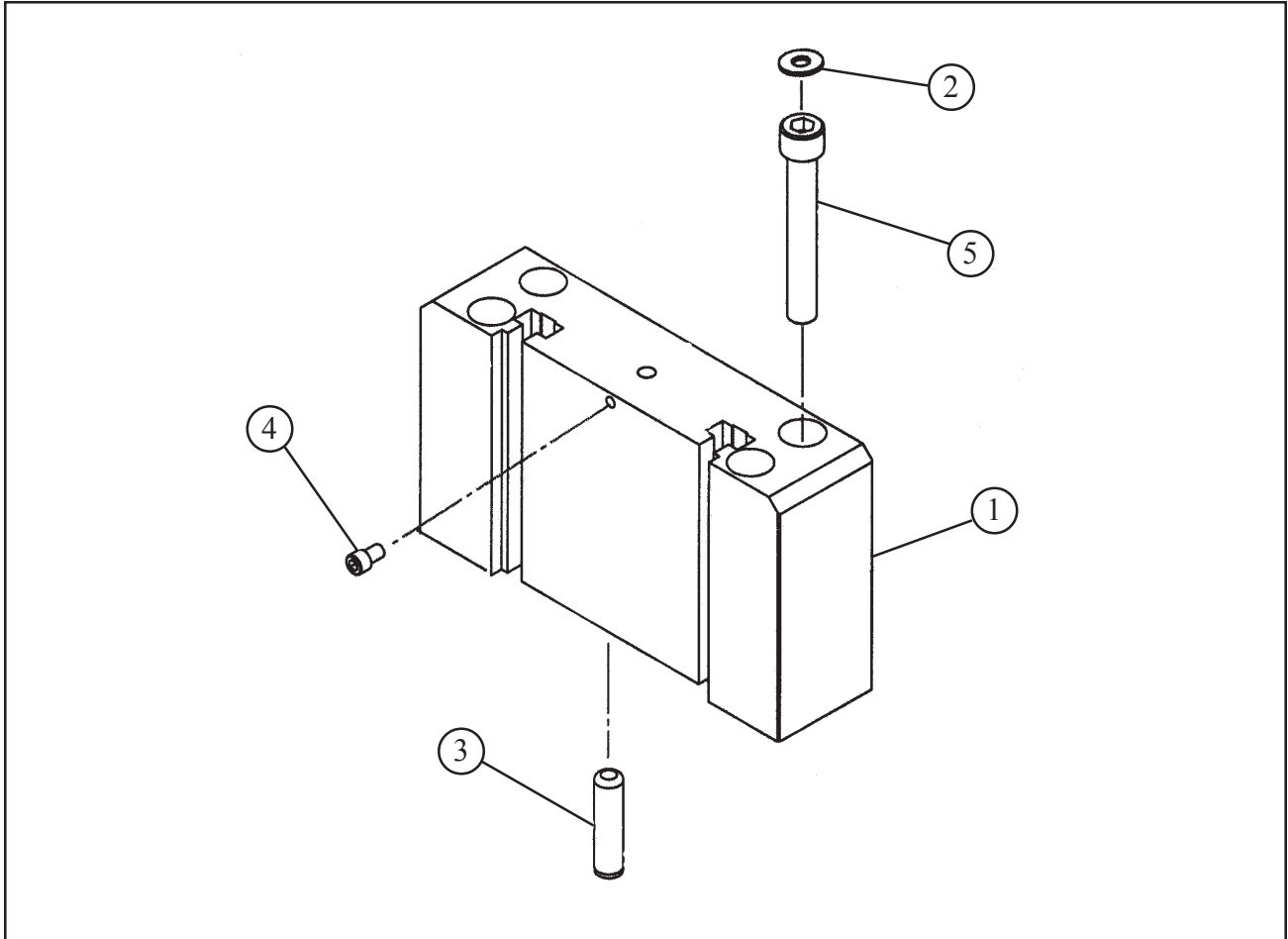
Problem: The hydraulic motor will not start

Probable causes:

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

ILLUSTRATED PARTS BREAKDOWN

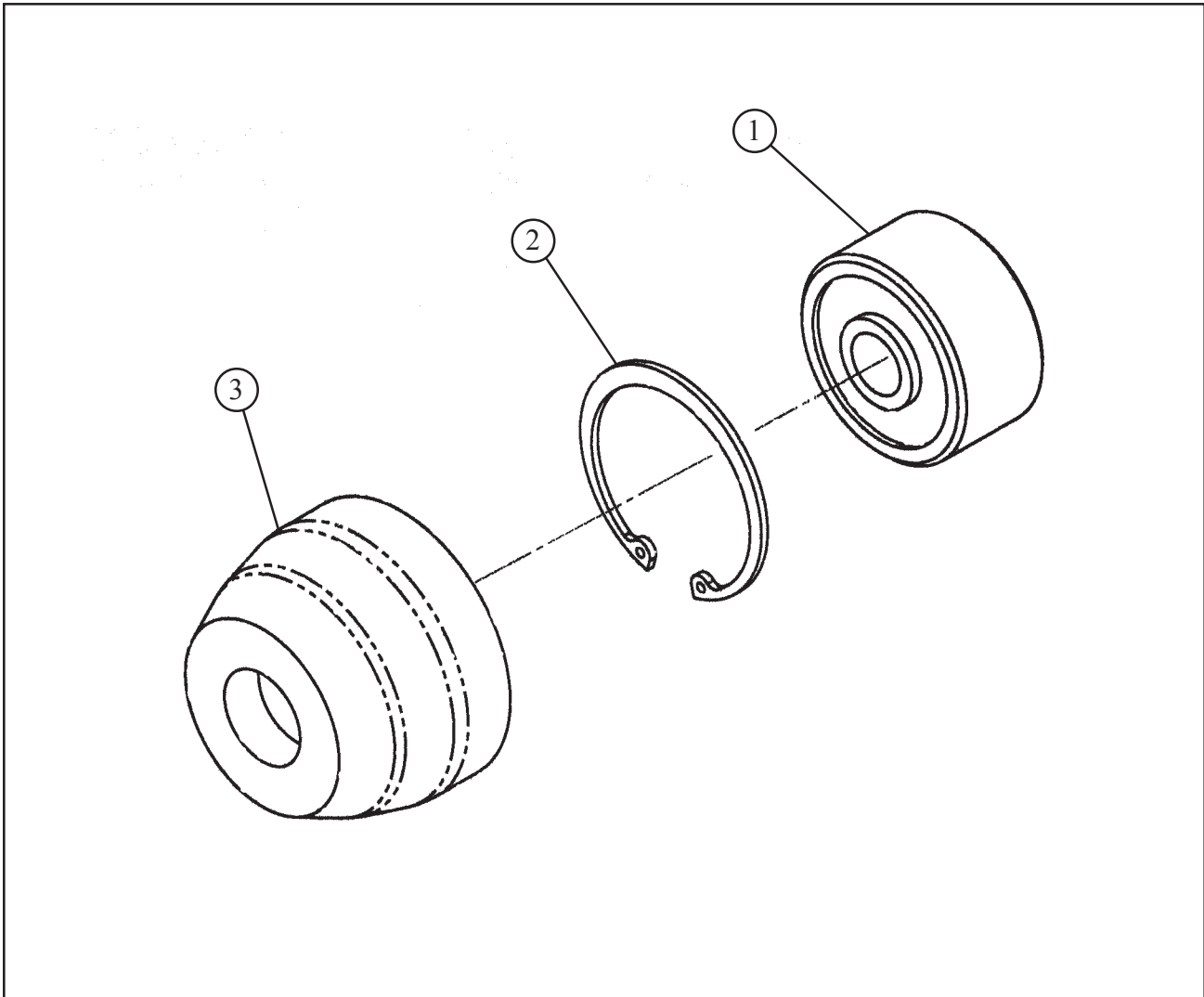
ADAPTER PLATE ASSEMBLY (P/N 24-1722)



Parts List, Plate Assembly, Adapter (P/N 24-1722)

Item No.	Part No.	Description	Qty
1.	24-1720	PLATE, ADAPTER	1
2.	34-0382	WASHER, NYLON	4
3.	32-0160	PIN, DOWEL, 1/2" DIA X 2"	2
4.	33-0037	SCREW, CAP, 1/4-20 X 3/8"	1
5.	33-0115	SCREW, CAP, 1/2-13 X 3 1/2"	4

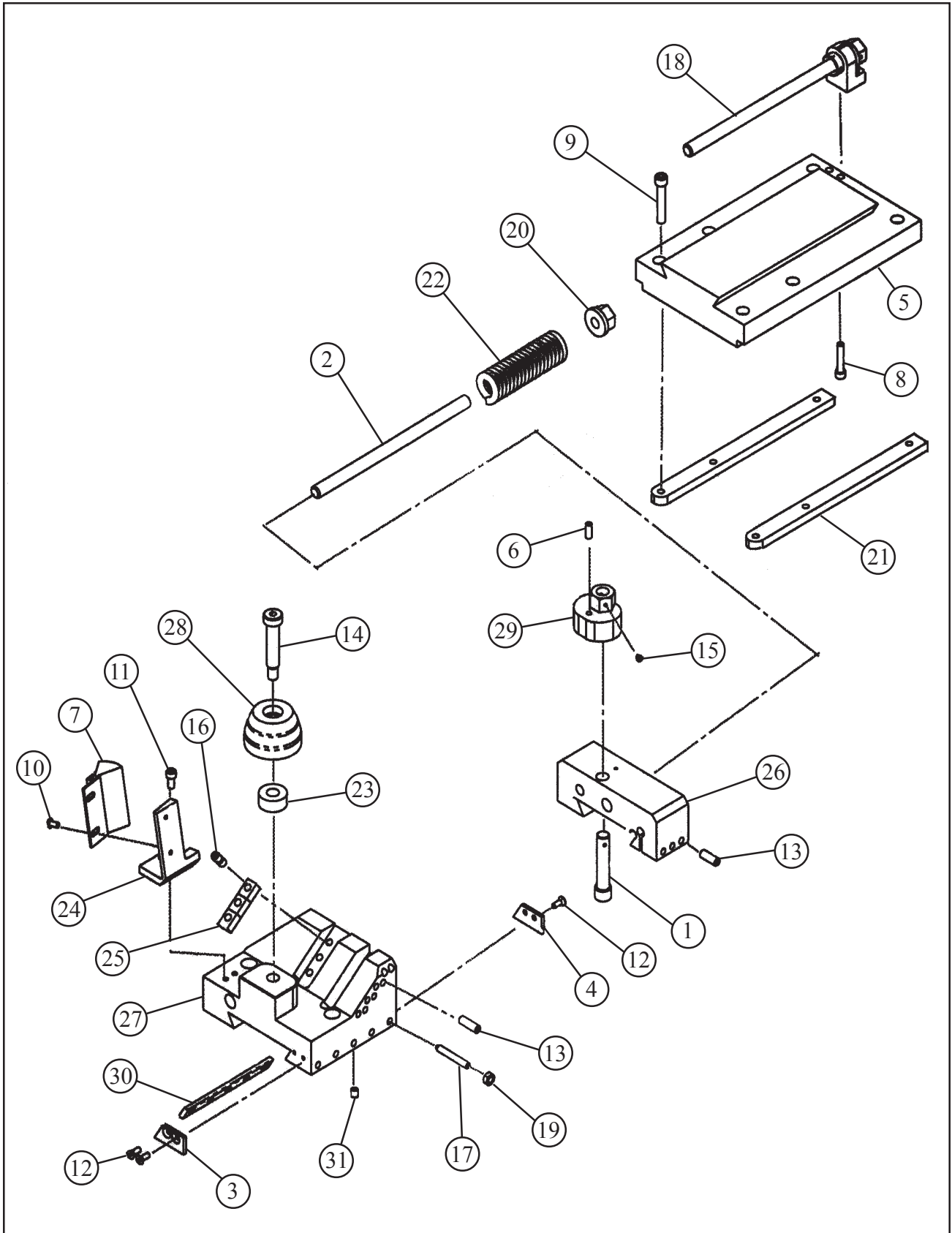
WHEEL ASSEMBLY (P/N 61-0110)



Parts List, Wheel Assembly (P/N 61-0110)

Item No.	Part No.	Description	Qty
1.	29-0375	BEARING	1
2.	30-2763	RING, RETAINING, INTERNAL	1
3.	61-0109	WHEEL	1

224B IDTM ASSEMBLY (P/N 82-0140)



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Parts List, IDTM Assembly, 224B (P/N 82-0140)

Item No.	Part No.	Description	Qty
1.	20-0767	SHAFT, RELEASE	1
2.	23-0345	ROD, THD, 1/2-13 X 8 1/2"	1
3.	24-1489	PLATE, RETAIN, RH	1
4.	24-1618	PLATE, RETAIN, LH	1
5.	24-1718	PLATE, BASE	1
6.	30-0125	PLUNGER, BALL	1
7.	30-2762	BRUSH ASSEMBLY, STRIP, SS	1
8.	33-0057	SCREW, CAP, 5/16-18 X 1 1/4"	2
9.	33-0058	SCREW, CAP, 5/16-18 X 1 1/2"	6
10.	33-0278	SCREW, BUTTON, #10-24 X 3/8"	2
11.	33-0286	SCREW, BUTTON, 1/4-20 X 5/8"	2
12.	33-0352	SCREW, FLAT, #10-24 X 1/2"	4
13.	33-0519	SCREW, SET, 5/16-18 X 7/8", CUP PT	11
14.	33-1289	SCREW, SHOULDER, 1/2" DIA X 2"	1
15.	33-1527	SCREW, SET, 1/4-20 X 1/4", HDOG	2
16.	33-1958	SCREW, WEDGE	3
17.	33-2128	SCREW, SET, 1/4-20 X 1 3/4", HDOG	5
18.	33-2186	SCREW, ASSEMBLY, DIA, ADJUST	1
19.	35-0006	NUT, HEX, 1/4-20 X 3/16"	5
20.	35-0062	NUT, FLANGE, 1/2-13 X 11/16"	1
21.	35-0569	NUT, T-SLOT PLATE	2
22.	40-0266	SPRING	1
23.	44-0511	SPACER, WHEEL	1
24.	47-1278	BRACKET, BRUSH	1
25.	48-0947	BLOCK, WEDGE	3
26.	48-1026	BLOCK, LOCK	1
27.	49-0397	HOLDER, TOOL	1
28.	61-0110	WHEEL, ASSEMBLY	1
29.	62-0124	CAM, RELEASE	1
30.	66-0188	GIB	1
31.	33-0514	SCREW, SET, 5/16-18 X 3/8", CUP PT	1

Parts List, IDTM Assembly, 224B, Continued (P/N 82-0140)

Item No.	Part No.	Description	Qty
NOT SHOWN:			
	36-0005	WRENCH, L, 1/8", HEX	1
	36-0007	WRENCH, L, 5/32", HEX	1
	36-0010	WRENCH, L, 1/4", HEX	1
	36-0012	WRENCH, L, 3/8", HEX	1
	36-0020	WRENCH, T, 5/32", HEX	1
	36-0042	WRENCH, COMBINATION, 7/8"	1
	36-0098	WRENCH, COMBINATION, 7/16"	1
	86-0227	CASE, 224B IDTM	1