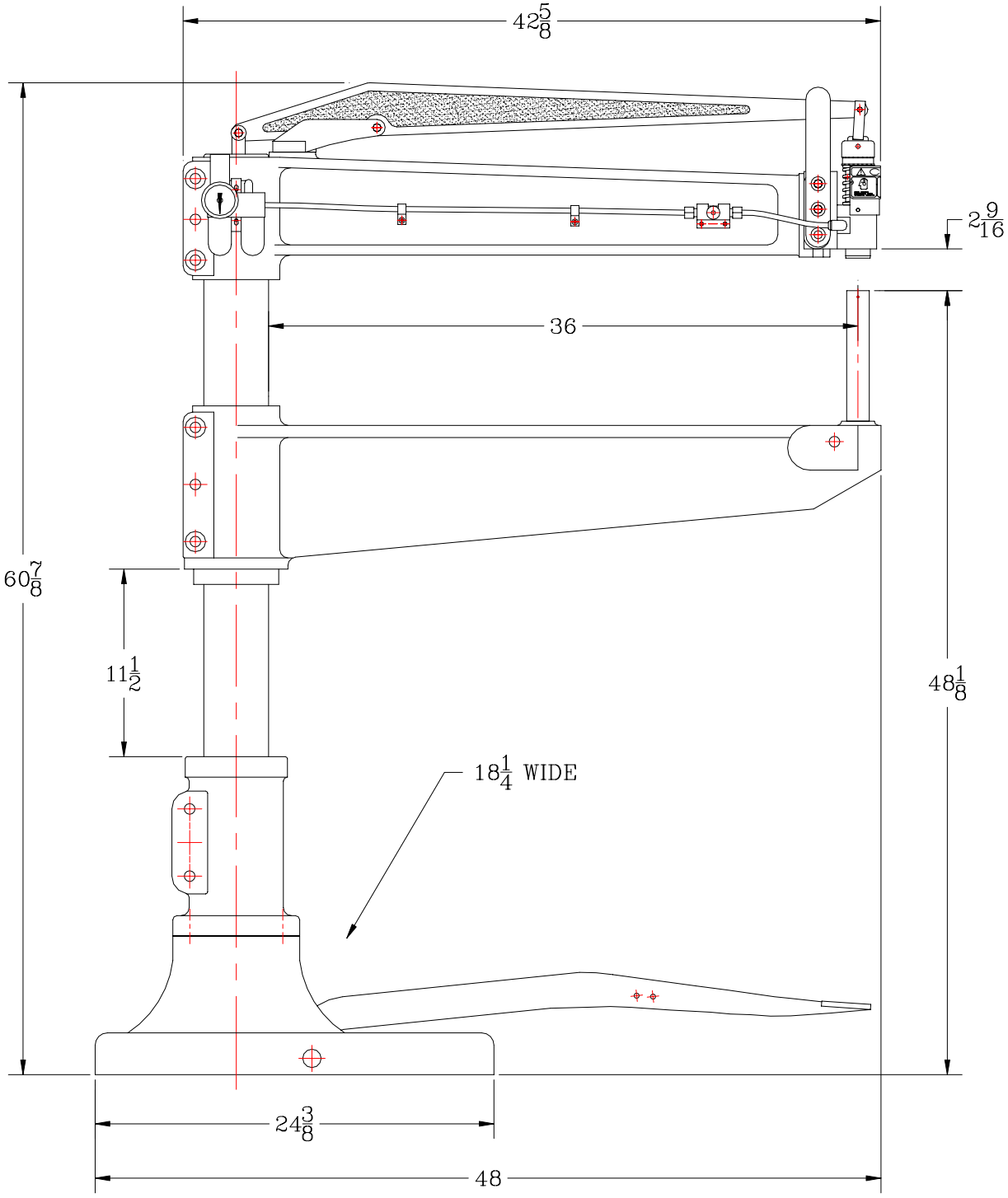
PROLINE

36" ProLine

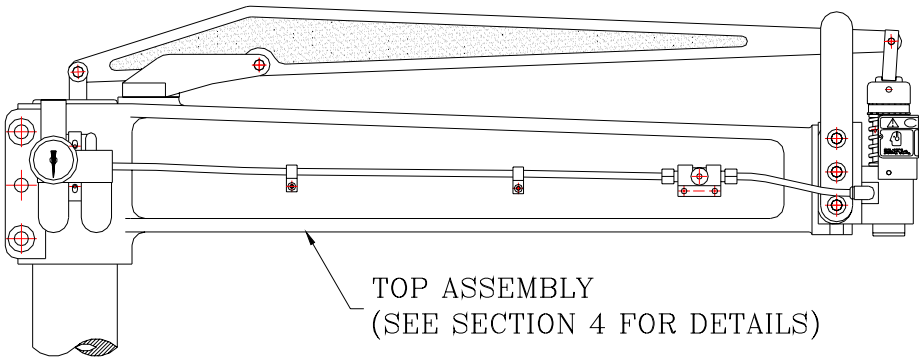
PLANISHING HAMMER

Van Sant Distributing, Inc. 75 Truman Rd Pella, IA 50219 800-828-2043

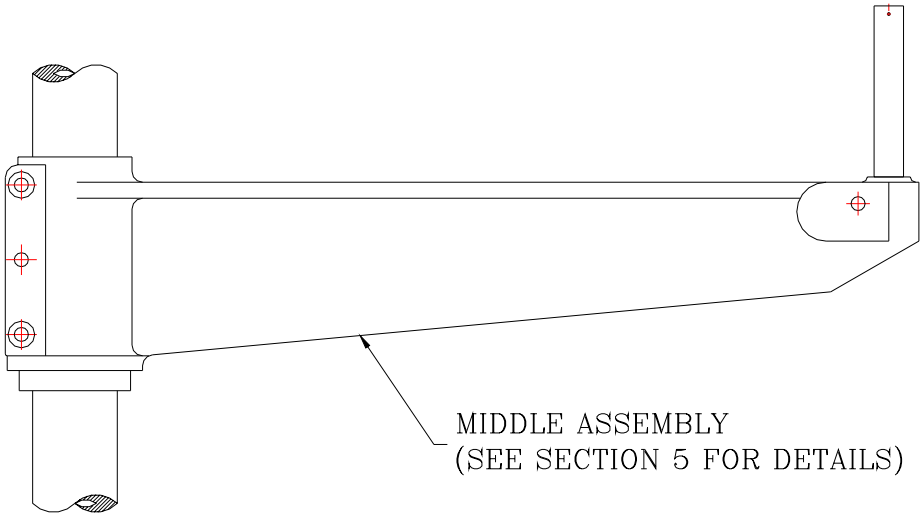
PROLINE PLANISHING HAMMER 36" FLOOR MODEL



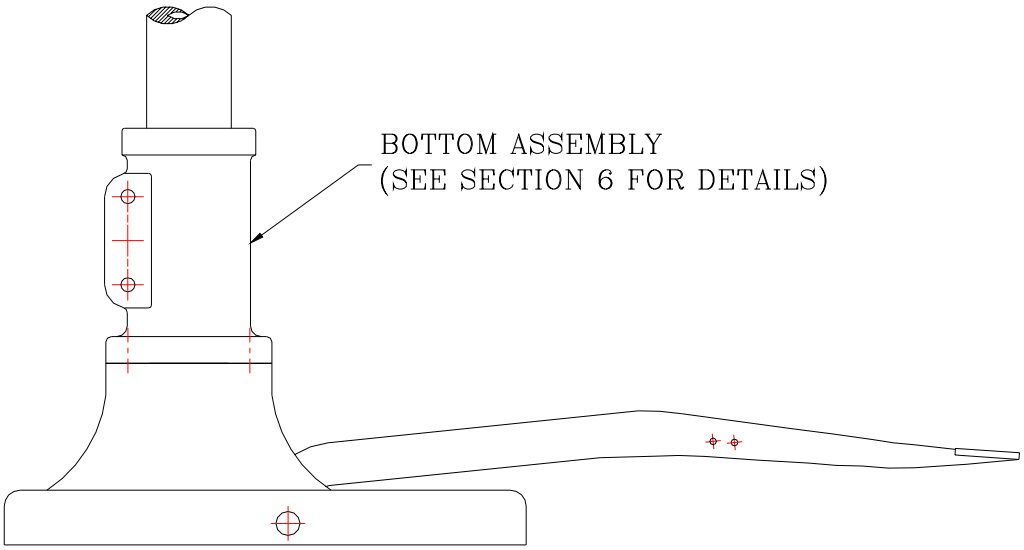
STANDARD PROLINE PLANISHING 36" HAMMER



TOP ASSEMBLY
(SEE SECTION 4 FOR DETAILS)

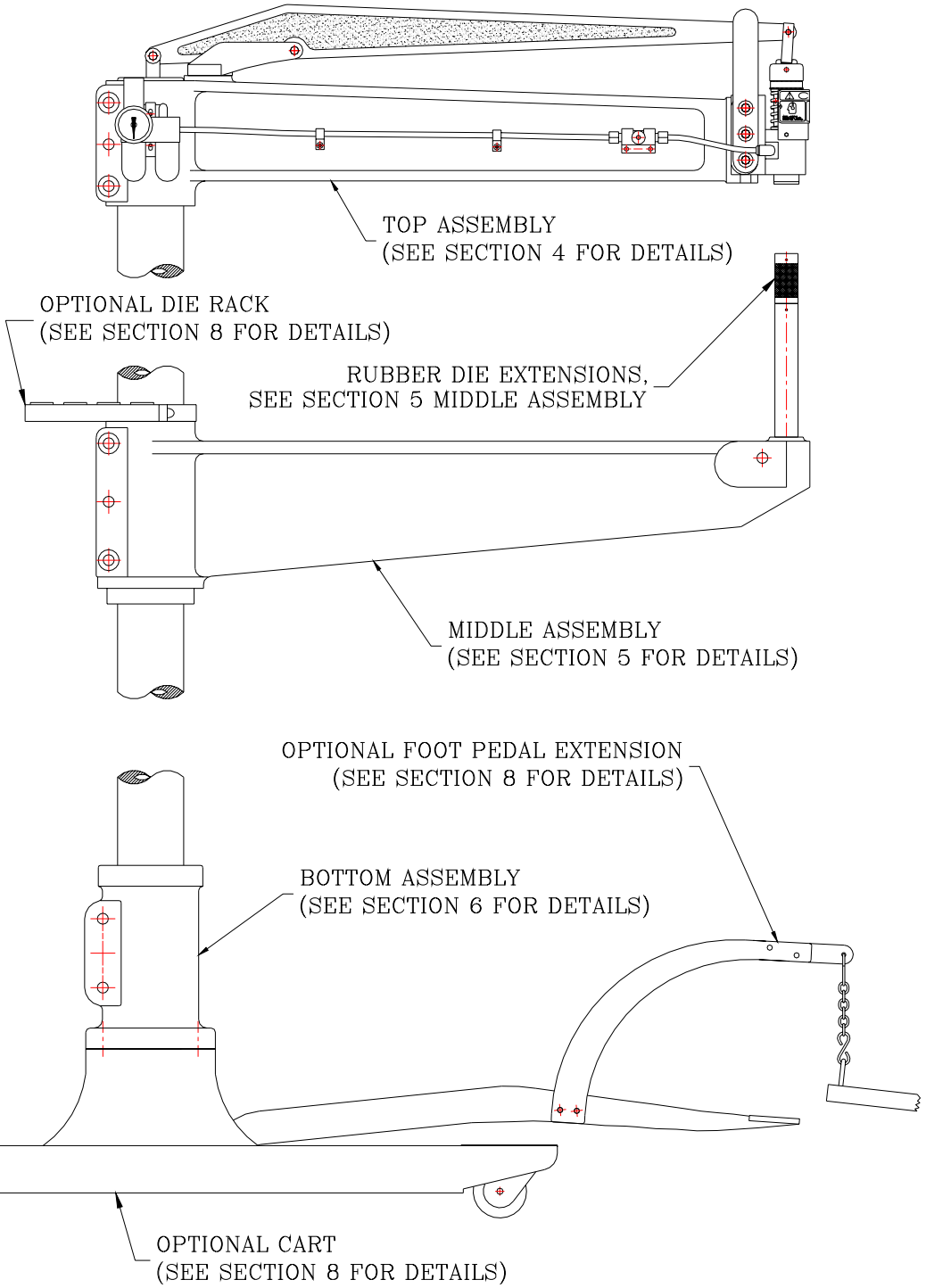


MIDDLE ASSEMBLY
(SEE SECTION 5 FOR DETAILS)



BOTTOM ASSEMBLY
(SEE SECTION 6 FOR DETAILS)

PROLINE PLANISHING 36" HAMMER WITH OPTIONS



GENERAL SUGGESTED PROCEDURES FOR USING THE PROLINE PLANISHING HAMMER

It is impossible to cover every type of job that can be done with the ProLine Planishing hammer. It is designed for forming or planishing light gage sheet metal shapes, such as automobile and aircraft restoration, race car fabrication, sheetmetal stamping shops, etc. We have compiled the following suggestions for using the hammer:

1. The direction of movement of the machine is very important. Always avoid using a circular motion, since this tends to draw the metal to the center of the circle. Use only straight, long, even strokes in the direction best suited to the piece you are working. If you are working a damaged panel, extend the stroke into the undamaged part of the metal. If working near an edge, let the stroke go all the way to the edge. Any metal that has been dented is usually stretched a little. By working the metal as described above, you will distribute the stretch, in most jobs, so that it will not be noticeable. If too much stretch is still evident, shrink in the usual manner and then use the ProLine for the final finish. **Use the die with the largest contact area possible.**
2. Air pressure regulation is very important. Too much pressure is harmful to light gauge metal. Excellent results can be obtained on flat surfaces using low air pressure. **Start with lower pressure and work up. It is difficult to come back if you over-stretch the metal.** Apply a generous coating of oil under the sheetmetal and a light coat on the top. This will allow the tool to slide easily and the dolly to revolve freely. You can use a mixture of one part kerosene with three parts motor oil for this coating, or use whatever you are comfortable with. This is a personal preference. Also, when working an original piece of metal, be sure to remove tar and/or dirt from the underside.

SERVICE

Use a good air tool oil to lubricate the pneumatic for best results. Motor oil should never be used to lubricate the pneumatic. Motor oil is compounded to give best results when warm, and it will cause the piston to become sticky, since the pneumatic operates at a low temperature.

Too much oil will cause the unit to stick. Also, after cleaning, as described below, put a very light coat of air tool oil on a rag, and wipe the cylinder down lightly. This should be enough oil on the cylinder to give good results.

If the wrong oil has been used, flush the tool with kerosene or parts washer solvent to remove the sludge and re-oil with air tool oil. Flushing may be done by removing the ram and pouring clean kerosene or parts washer solvent into the opening at the bottom of the cylinder. The whole pneumatic may be dipped in kerosene or parts washer solvent and allowed to soak, if necessary. If, after careful flushing, the tool still sticks or lacks power, check the air lines for both pressure and volume. It is possible to show pressure and lack volume due to a partially closed valve or clogged line. This condition usually shows a sudden drop in pressure as soon as power is turned on. If another pneumatic is available, attach it to the line, and if the same lack of power occurs, you can be sure the trouble is in your air supply. However, if the second tool shows power, the first tool needs to be checked.

IMPORTANT ADVICE

Move machine rapidly over the rough surface. Force machine over bumps, it will not break. Work vigorously, don't linger. Don't waste the air pressure going slow, make the best of that valuable power. Study how to slide the machine.

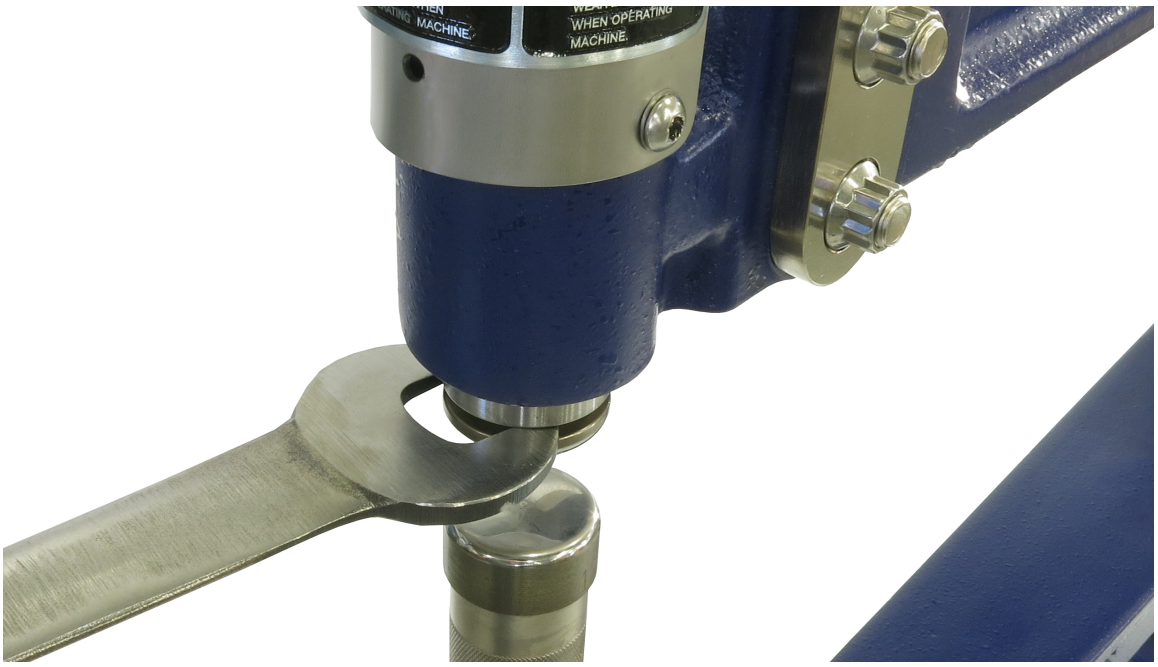
Remember - no "dinging" is necessary. If your machine pulls hard, it is due to one of the following:

- You didn't brush enough oil on the metal
- The machine is set up too tight
- Dirt or tar is on the metal
- Your air pressure is too low
- There is too much oil on the cylinder – too much oil will cause the unit to stick.

TOP DIE INSTALLATION & REMOVAL

INSTALLING UPPER DIE, HOLD PRESURE WITH FOOT PEDAL AND HIT TOP WITH SOFT FACE HAMMER TO SNAP DIE IN PLACE.

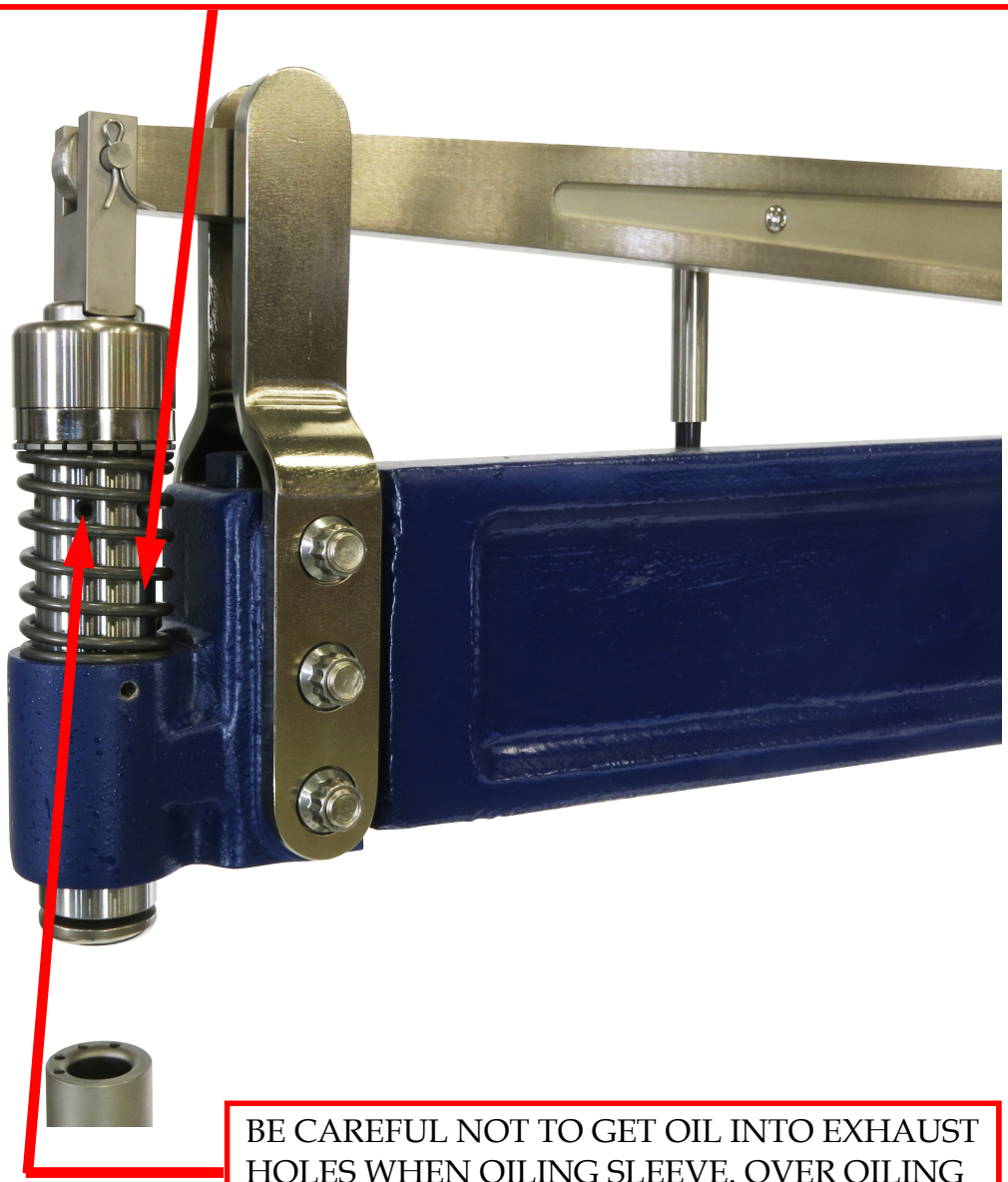
TO REMOVE TOP DIE INSERT FORK BETWEEN CYLINDER AND DIE WHILE WORKING TOOL UP AND DOWN.



LUBRICATION

CAUTION !!!!

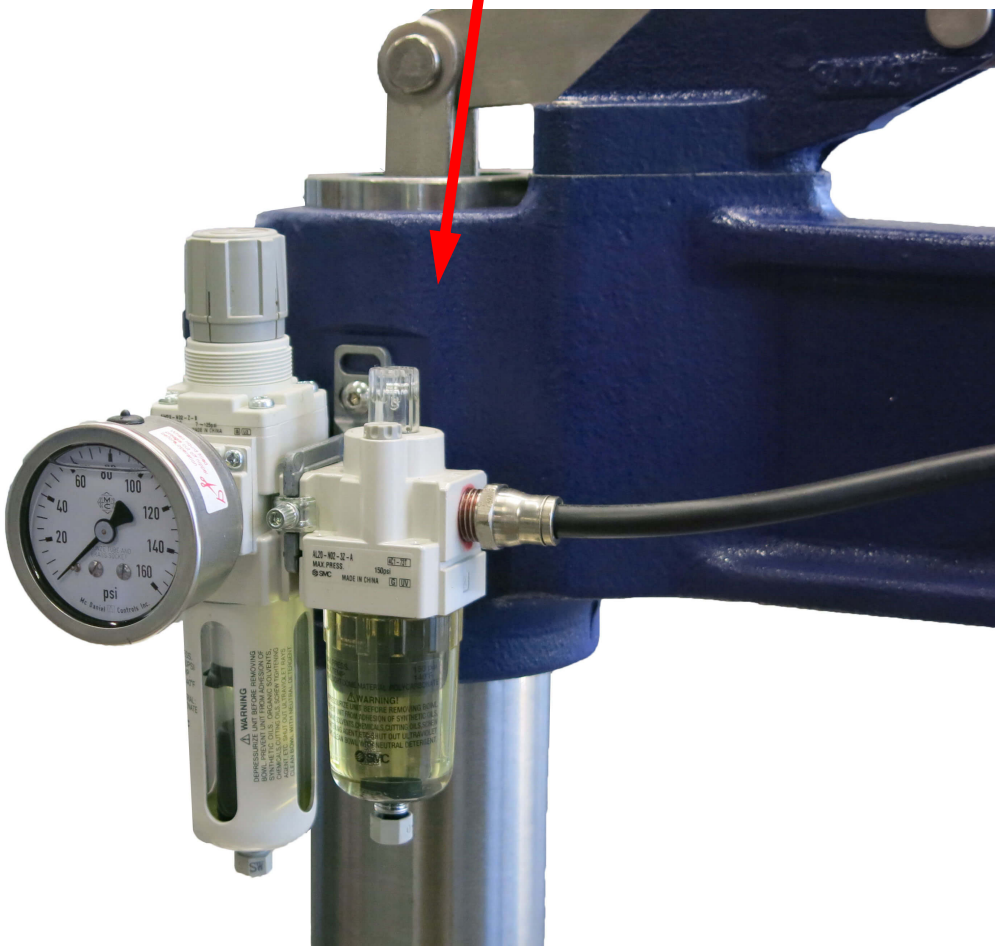
During break-in (100 hrs.) it is important to oil the sliding sleeve every 8 to 10 minutes to prevent galling. Always keep sliding sleeve oiled to prevent problems. This is very important because oiler does not supply oil to sliding sleeve.
If problems occur CONTACT FACTORY IMMEDIATLEY!



BE CAREFUL NOT TO GET OIL INTO EXHAUST HOLES WHEN OILING SLEEVE. OVER OILING CAN CAUSE PISTON TO HANG UP.

LUBRICATION

OILER IS ADJUSTED AT FACTORY. IF IT IS NOT WORKING PROPERLY IT CAN BE ADJUSTED AS FOLLOWS: ADJUST OILER BY TURNING ADJUSTING SCREW COUNTER CLOCKWISE UNTIL THE OIL IS FLOWING. THEN TURN THE SCREW CLOCKWISE UNTIL IT STOPS. BACK OUT APPROXIMATLEY 1/8 TO 1/4 TURN. LOOKING AT THE SIGHT GLASS, YOU SHOULD SEE A DRIP ABOUT 8 TO 10 MINUTES APART. OVER OILING OF THE PISTON CAN CAUSE STICKING AND DOES NOT PROVIDE ANY ADDITIONAL LUBRICATION TO THE SLIDING SLEEVE. THIS ADJUSTMENT IS DONE WITH MACHINE RUNNING.

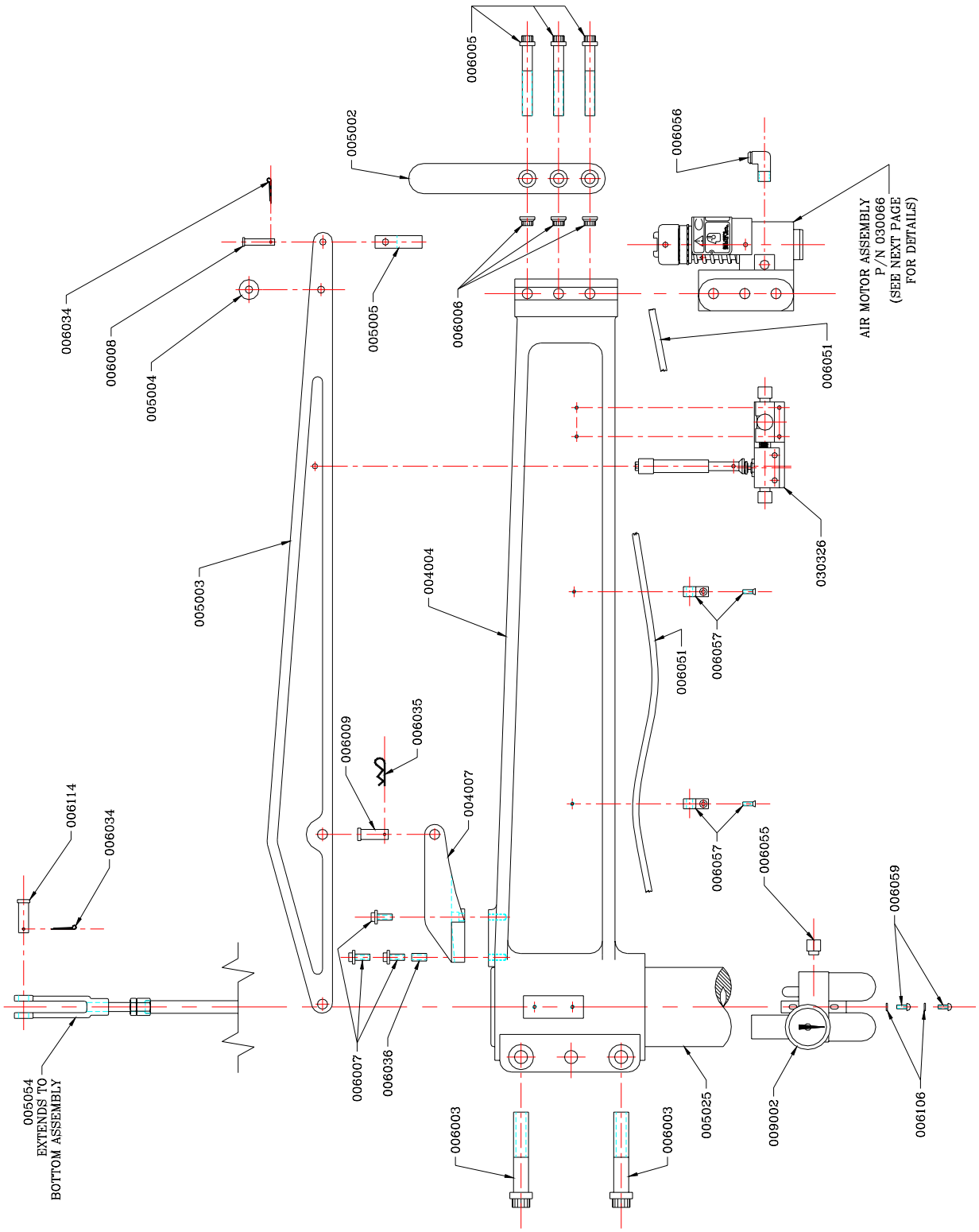


OIL ALL PIVOT POINTS ONCE A WEEK MINIMUM !

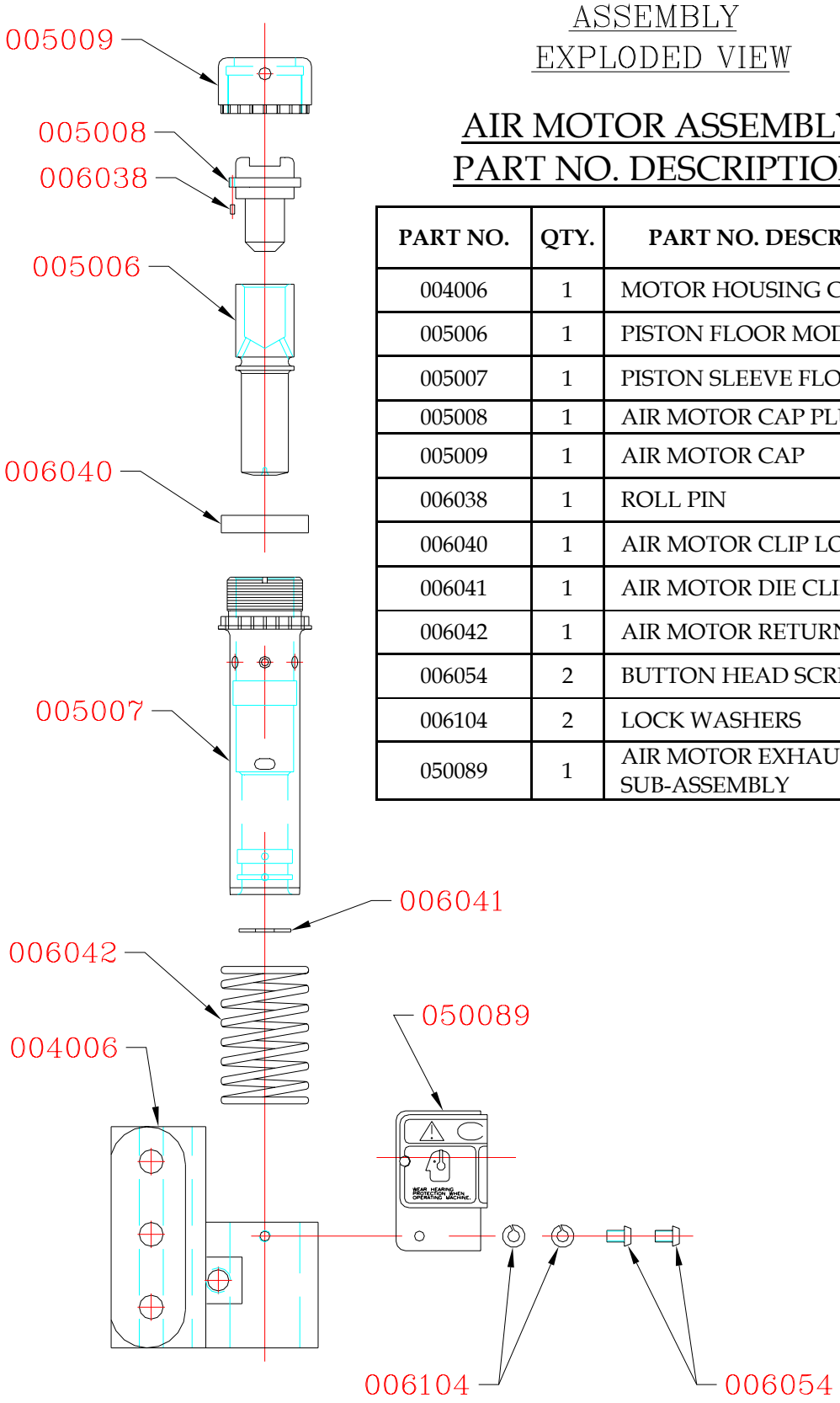
TOP ASSEMBLY PART NO. DESCRIPTION
(SEE DRAWING ON NEXT PAGE FOR PART NO. LOCATION)

PART NO.	QTY.	DESCRIPTION
004004	1	UPPER ARM CASTING
004007	1	REAR PIVOT CASTING
005002	2	CONTROL ARM GUIDES
005003	1	CONTROL ARM
005004	2	TEFLON BUTTONS FOR CONTROL ARM
005005	1	FRONT PIVOT BLOCK
005025	1	TUBE
005054	1	CONTROL ROD ASSEMBLY
006003	2	WASHER HEAD BOLTS
006005	3	WASHER HEAD BOLTS
006006	3	WASHER HEAD NUTS
006007	3	WASHER HEAD BOLTS
006008	1	PIVOT BLOCK CLEVIS PIN
006009	1	LARGE CLEVIS PIN
006020	1	MOUNTING BRACKET
006021	1	LUBRICATOR
006022	1	REGULATOR
006034	2	COTTER PINS
006035	1	REAR PIVOT HAIRPIN COTTER PIN
006036	1	SET SCREW
006050	1	160 PSI GAUGE
006051	1 EA.	AIR LINE
006056	1	90 ELBOW FITTINGS, PRES-LOC
006057	2	LINE CLIPS W/SCREWS
006106	4	LOCK WASHERS
006114	1	1/2 X 1-3/8 CLEVIS PIN
009002	1	AIR REGULATOR AND LUBRICATOR SUB-ASSEMBLY
030066	1	AIR MOTOR SUB-ASSEMBLY
030326	1	AIR CONTROL SYSTEM SUB-ASSEMBLY

TOP ASSEMBLY EXPLODED VIEW



AIR MOTOR ASSEMBLY EXPLODED VIEW



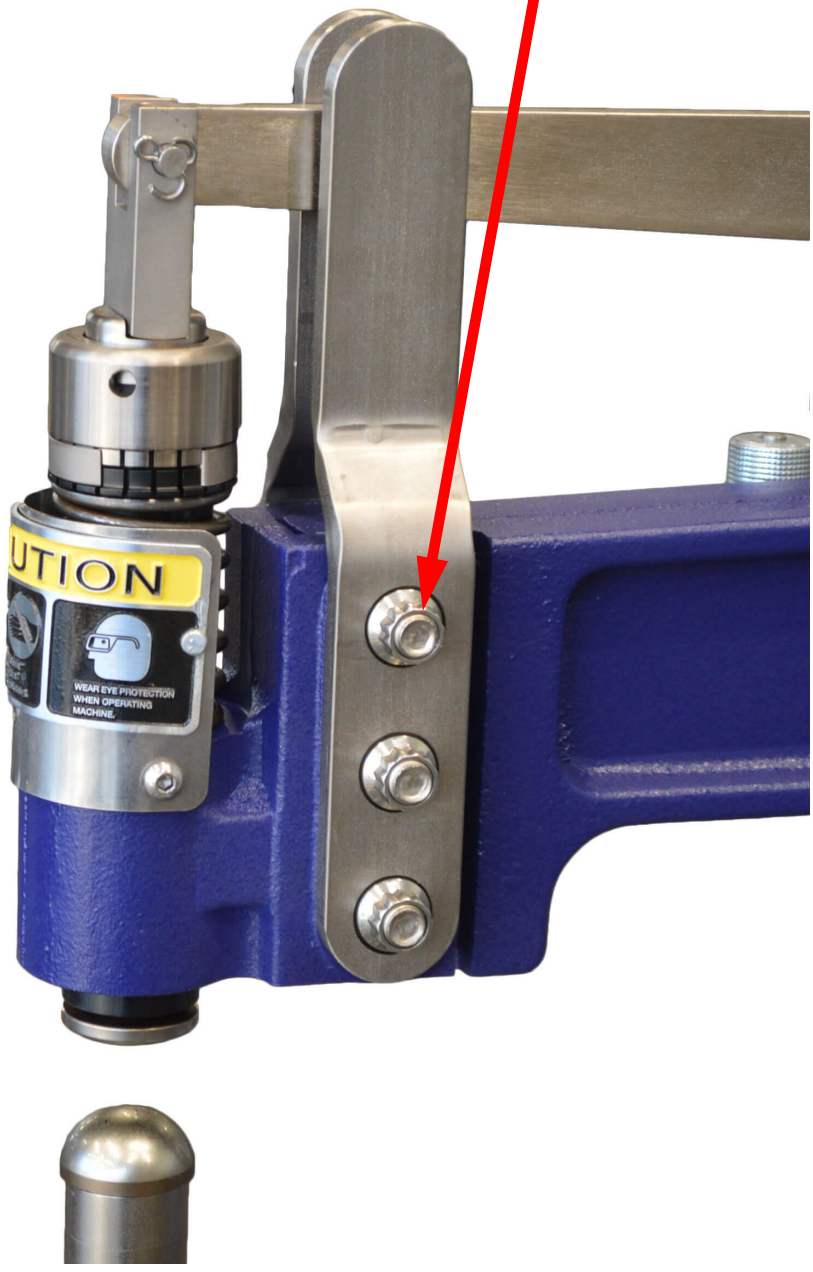
AIR MOTOR ASSEMBLY PART NO. DESCRIPTION

PART NO.	QTY.	PART NO. DESCRIPTION
004006	1	MOTOR HOUSING CASTING
005006	1	PISTON FLOOR MODEL
005007	1	PISTON SLEEVE FLOOR MODEL
005008	1	AIR MOTOR CAP PLUG
005009	1	AIR MOTOR CAP
006038	1	ROLL PIN
006040	1	AIR MOTOR CLIP LOCK RING
006041	1	AIR MOTOR DIE CLIP SPRING
006042	1	AIR MOTOR RETURN SPRING
006054	2	BUTTON HEAD SCREWS
006104	2	LOCK WASHERS
050089	1	AIR MOTOR EXHAUST GUARD SUB-ASSEMBLY

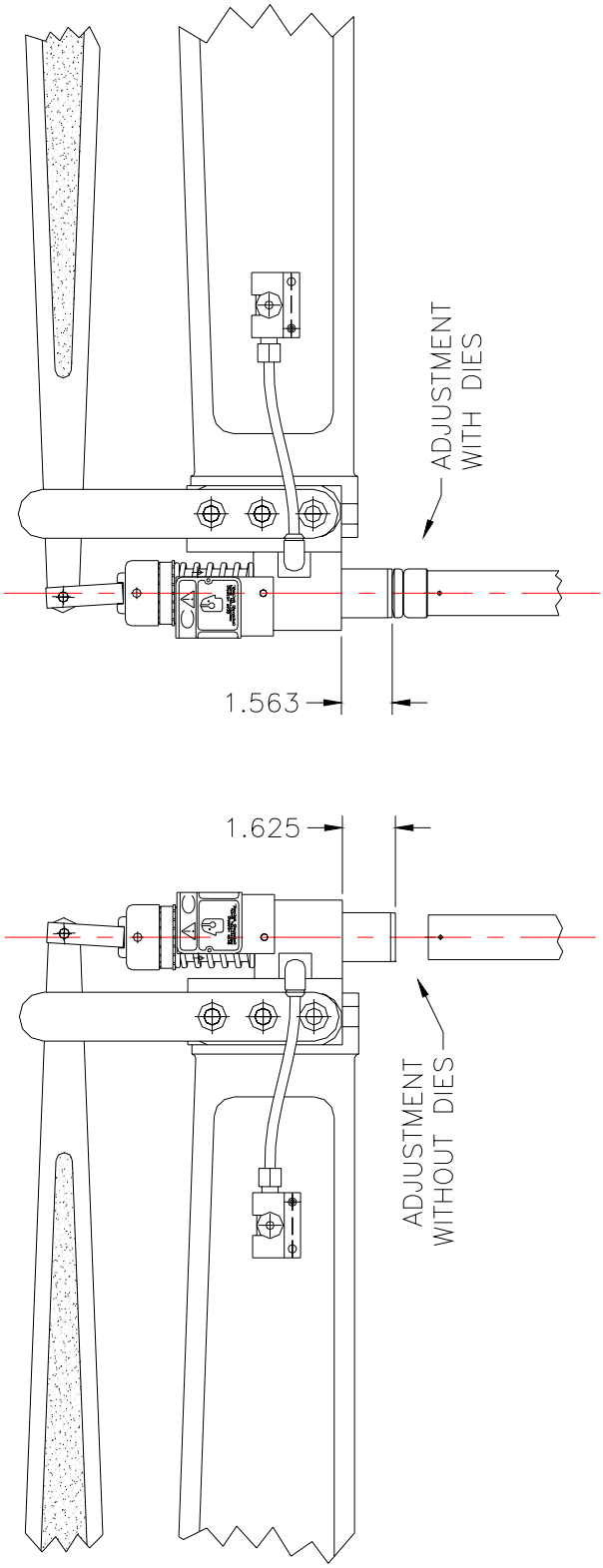
MOTOR HOUSING

CAUTION !!!!

DO NOT LOOSEN OR TIGHTEN BOLTS. THESE ARE SET AT FACTORY FOR PROPER TORQUE.



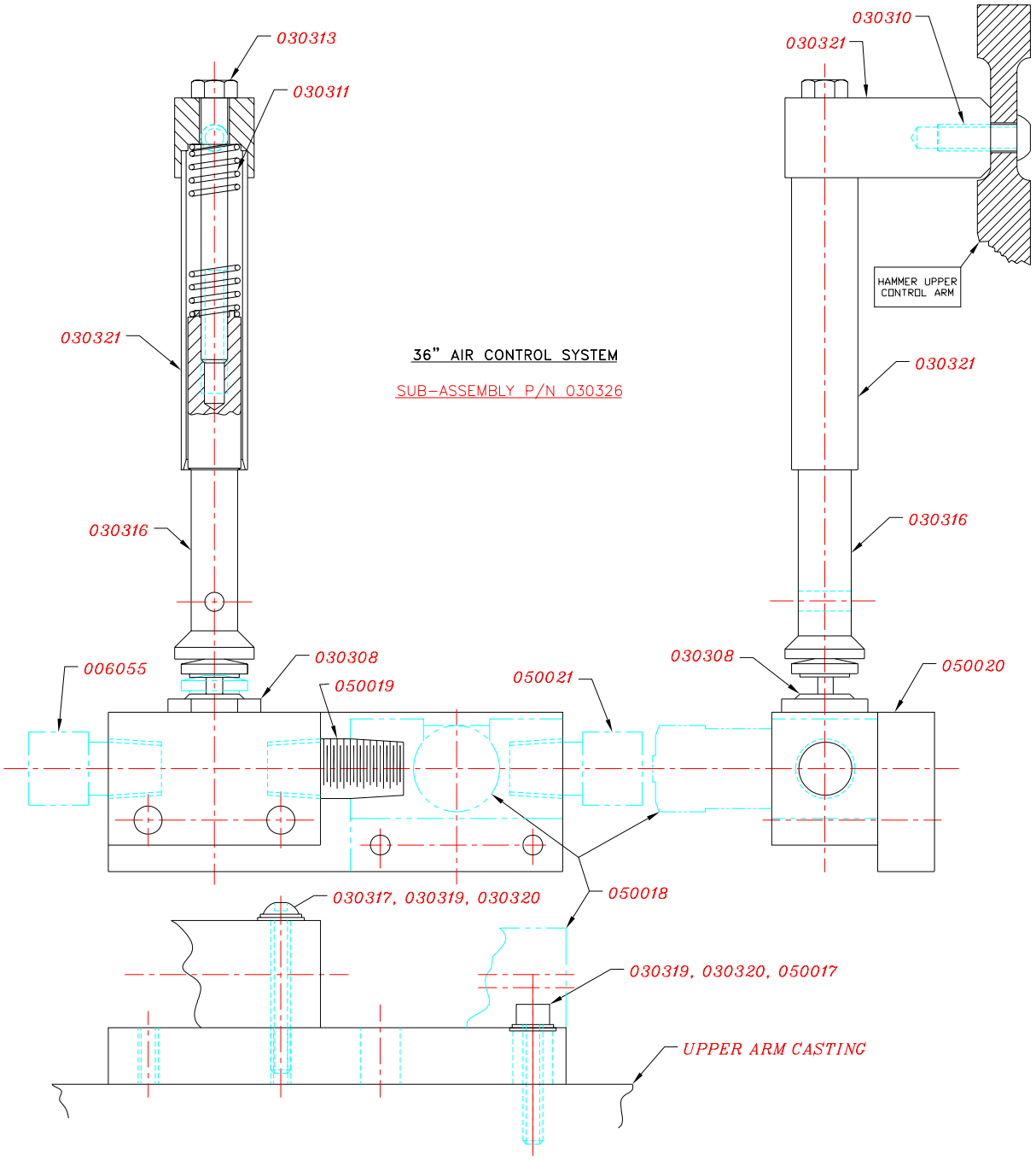
MOTOR HOUSING ADJUSTMENT



AIR CONTROL SYSTEM SUB-ASSEMBLY

PART NO.	QTY.	DESCRIPTION
006055	2	STRAIGHT FITTINGS
030308	1	SHUT-OFF VALVE
030310	1	CAP SCREW
030311	1	SPRING
030313	1	ADJUSTING BOLT
030316	1	PISTON
030317	2	SHUT-OFF VALVE SCREW
030319	4	FLAT WASHER
030320	4	INTERNAL TOOTH LOCKWASHER
030321	1	AIR CONTROL SYSTEM MOUNTING BRACKET AND TUBE SUB-ASSEMBLY
050017	2	SOCKET HEAD CAP SCREW
050018	1	NEEDLE VALVE
050019	1	HIGH PRESSURE HEX NIPPLE PIPE FITTING
050020	1	SPACER BASE
050021	1	STRAIGHT FITTINGS

SEE PAGE 4-7 FOR PART LOCATION

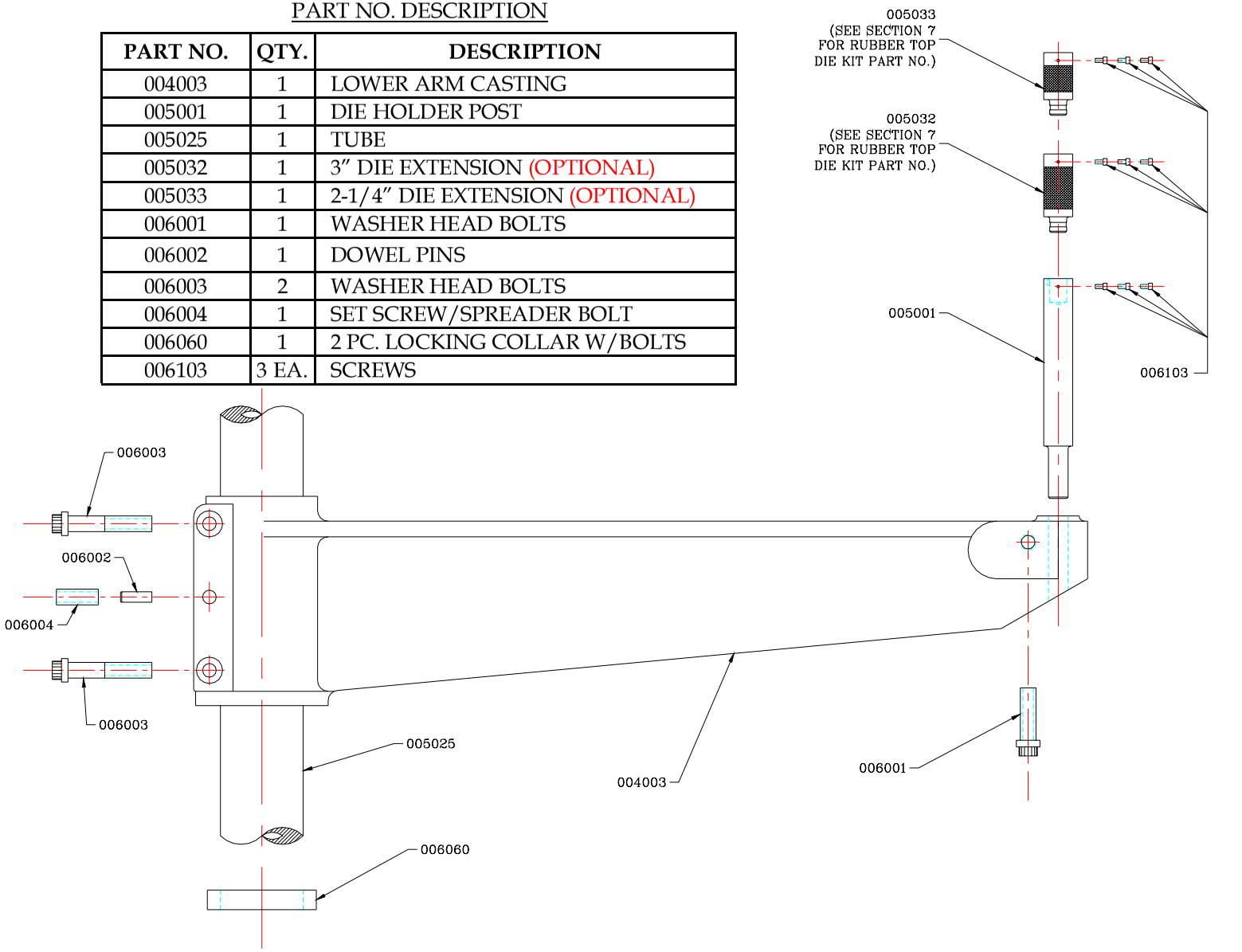


36" AIR CONTROL SYSTEM

SUB-ASSEMBLY P/N 030326

MIDDLE ASSEMBLY
PART NO. DESCRIPTION

PART NO.	QTY.	DESCRIPTION
004003	1	LOWER ARM CASTING
005001	1	DIE HOLDER POST
005025	1	TUBE
005032	1	3″ DIE EXTENSION (OPTIONAL)
005033	1	2-1/4″ DIE EXTENSION (OPTIONAL)
006001	1	WASHER HEAD BOLTS
006002	1	DOWEL PINS
006003	2	WASHER HEAD BOLTS
006004	1	SET SCREW/SPREADER BOLT
006060	1	2 PC. LOCKING COLLAR W/BOLTS
006103	3 EA.	SCREWS



MIDDLE ASSEMBLY EXPLODED VIEW

PROLINE

RUBBER DIE INSTALLATION

STEP 1

MAKE A MARK 3 INCHES BELOW THE LOWER ARM.
IT IS IMPORTANT TO GO ONLY 3 INCHES - NO MORE, NO LESS. FAILURE TO DO THES WILL NOT ALLOW HAMMER TO WORK PROPERLY.
USE THE 3" LONG EXT. FOR A REFERENCE (SEE LOWER PHOTO).

STEP 2

BACK LOWER ARM ALLEN BOLT OUT UNTIL THERE IS NO PRESSURE AGAINST IT.
LOOSEN THE 12 PT. BOLTS ON LOWER ARM.
CAREFULLY TIGHTEN THE ALLEN HEAD. THIS WILL SPREAD THE LOWER ARM AND LET IT DROP. USE CAUTION AS THE ARM IS HEAVY. ONCE IN POSITION, BACK ALLEN BOLT OUT AND TIGHTEN 12 PT. BOLTS

STEP 3

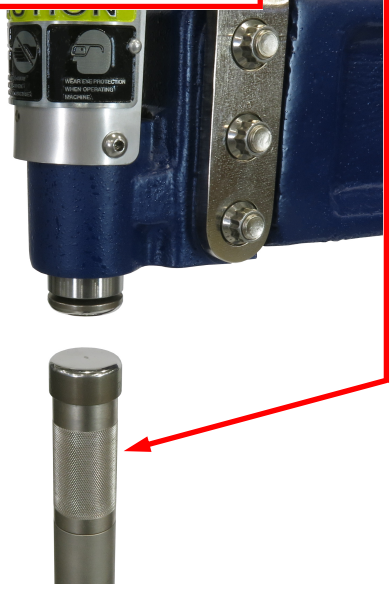
INSERT EITHER EXTENTION INTO DIE POST.
USE THE 3" LONG EXT. FOR STANDARD DIES AND 2-1/4"SHORT EXT. FOR THE RUBBER DIE.

LOWER ARM CASTING MIDDLE ASSEMBLY

LOWER ARM CASTING MIDDLE ASSEMBLY

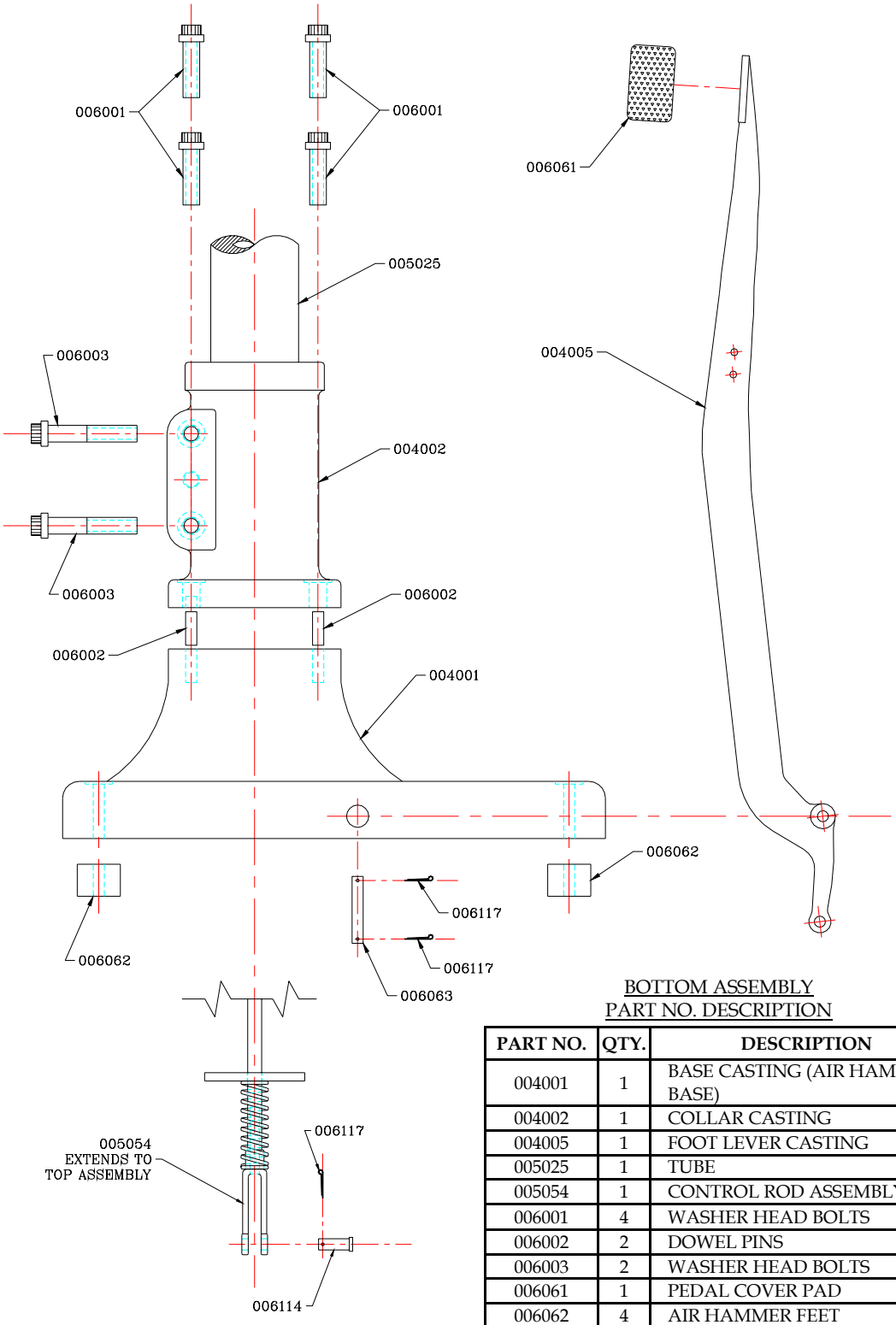
USE 3 INCH EXT. FOR PROPER SPACING BEFORE LOWERING ARM (NOTE: THIS IS A ONE TIME INSTALLATION FOR BOTH RUBBER AND STANDARD DIES)

3" DIE EXTENSION (STANDARD DIES)



2-1/4" DIE EXTENSION (RUBBER DIES)

BOTTOM ASSEMBLY EXPLODED VIEW



BOTTOM ASSEMBLY
PART NO. DESCRIPTION

PART NO.	QTY.	DESCRIPTION
004001	1	BASE CASTING (AIR HAMMER BASE)
004002	1	COLLAR CASTING
004005	1	FOOT LEVER CASTING
005025	1	TUBE
005054	1	CONTROL ROD ASSEMBLY
006001	4	WASHER HEAD BOLTS
006002	2	DOWEL PINS
006003	2	WASHER HEAD BOLTS
006061	1	PEDAL COVER PAD
006062	4	AIR HAMMER FEET
006063	1	HEADLESS CLEVIS PIN DRILLED BOTH ENDS
006114	1	1/2 X 1-3/8 CLEVIS PIN
006117	3	COTTER PINS

PROLINE PLANISHING DIES
PART NO. DESCRIPTION

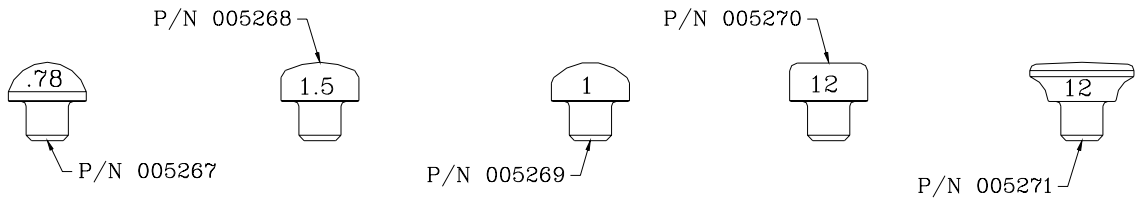
PART NO.	STAMP	DIA.	RAD.	DESCRIPTION
STANDARD DIES				
007100	------	-----	------	COMPLETE STD. DIE SET, ALL 22 PCS.
005267	0.78	1.5	------	BOTTOM DIE
005268	1.5	1.5	------	BOTTOM DIE
005269	1	1.5	------	BOTTOM DIE
005270	12	1.5	------	BOTTOM DIE
005271	12	2	------	BOTTOM DIE
005272	2	1.5	------	BOTTOM DIE
005273	24	1.5	------	BOTTOM DIE
005274	24	2	------	BOTTOM DIE
005275	3	1.5	------	BOTTOM DIE
005276	36	1.5	------	BOTTOM DIE
005277	36	2	------	BOTTOM DIE
005278	4	1.5	------	BOTTOM DIE
005279	5	1.5	------	BOTTOM DIE
005280	6	1.5	------	BOTTOM DIE
005281	9	1.5	------	BOTTOM DIE
005282	0	1.5	------	BOTTOM DIE
005283	F	------	------	LINEAR STRETCH - SMALL FLAT ON TOP - BOTTOM DIE
005284	NONE	------	------	RECTANGULAR - 7/8 X 2-1/2", 24 R X 4 R - BOTTOM DIE
005285	NONE	------	------	SQUARE - 1-1/2", ONE EDGE 5/16 R - BOTTOM DIE
005286	NONE	------	------	1-1/2 FLAT FACE, ROUND DIE -TOP DIE
005287	NONE	------	------	1-1/2 REVERSE CURVE - TOP DIE
005288	NONE	------	------	2-3/8 FLAT FACE, ROUND DIE - TOP DIE
SPECIAL DIES				
008019	NF	------	1/2	LINEAR STRETCH - 1/2" R - BOTTOM DIE
SPECIAL RUBBER DIE KIT				
008020	NONE	------	------	RUBBER TOP DIE KIT, ALL 5 PCS.
030095	NONE	------	------	RUBBER DIE, TOP
005032	NONE	------	------	3" DIE EXTENSION*
005033	NONE	------	------	2-1/4" DIE EXTENSION*
006103	NONE	------	------	SCREWS*
040195	NONE	------	------	T-HANDLE HEX KEY

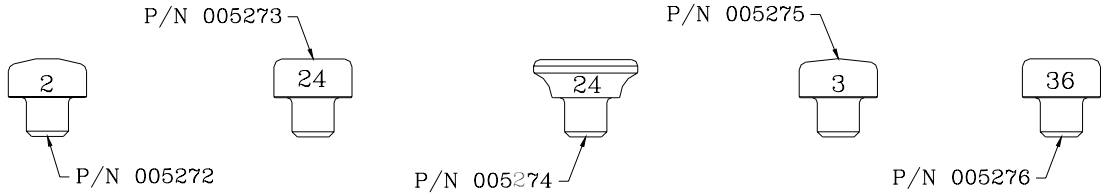
*NOTE: FOR DETAILS ON DIE EXTEN-
SIONS AND SCREWS FOR RUBBER TOP DIE
KIT, SEE SECTION 5 MIDDLE ASSEMBLY

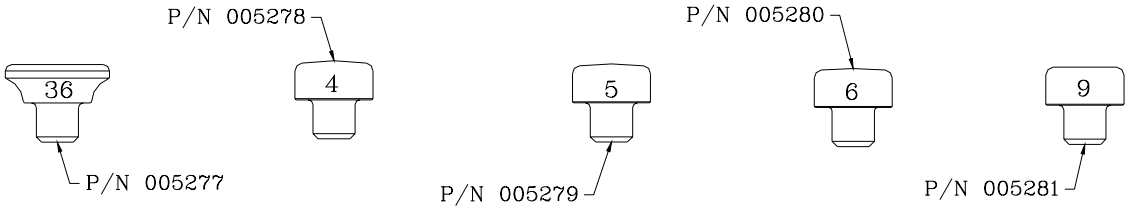
CUSTOM DIES AVAILABLE

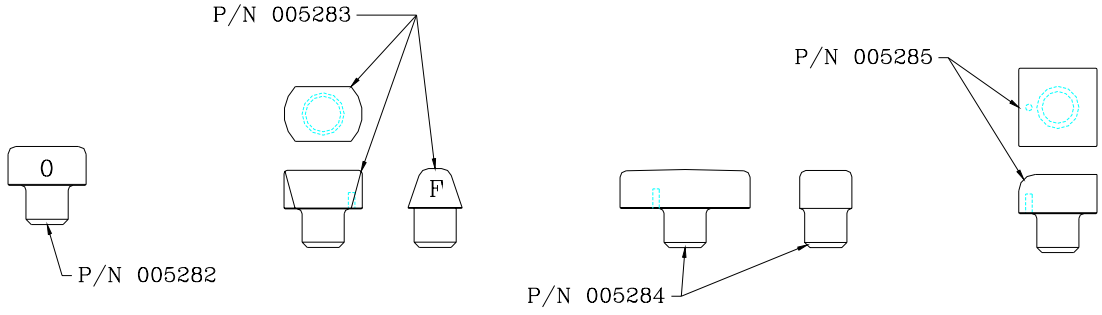
SEE NEXT PAGE FOR ASSEMBLY DRAWING

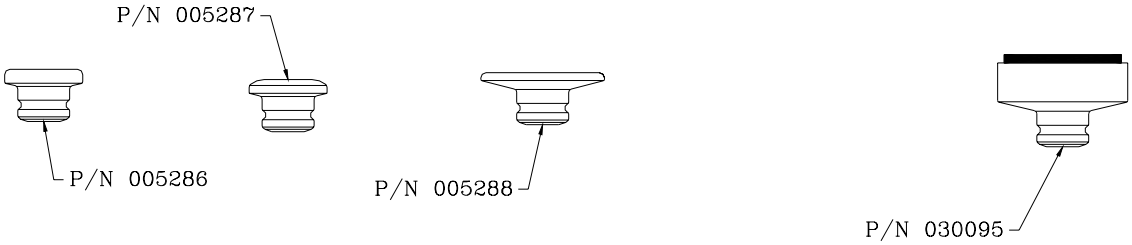
AIR HAMMER DIE ASSEMBLY











OPTIONAL FOOT PEDAL EXTENSION

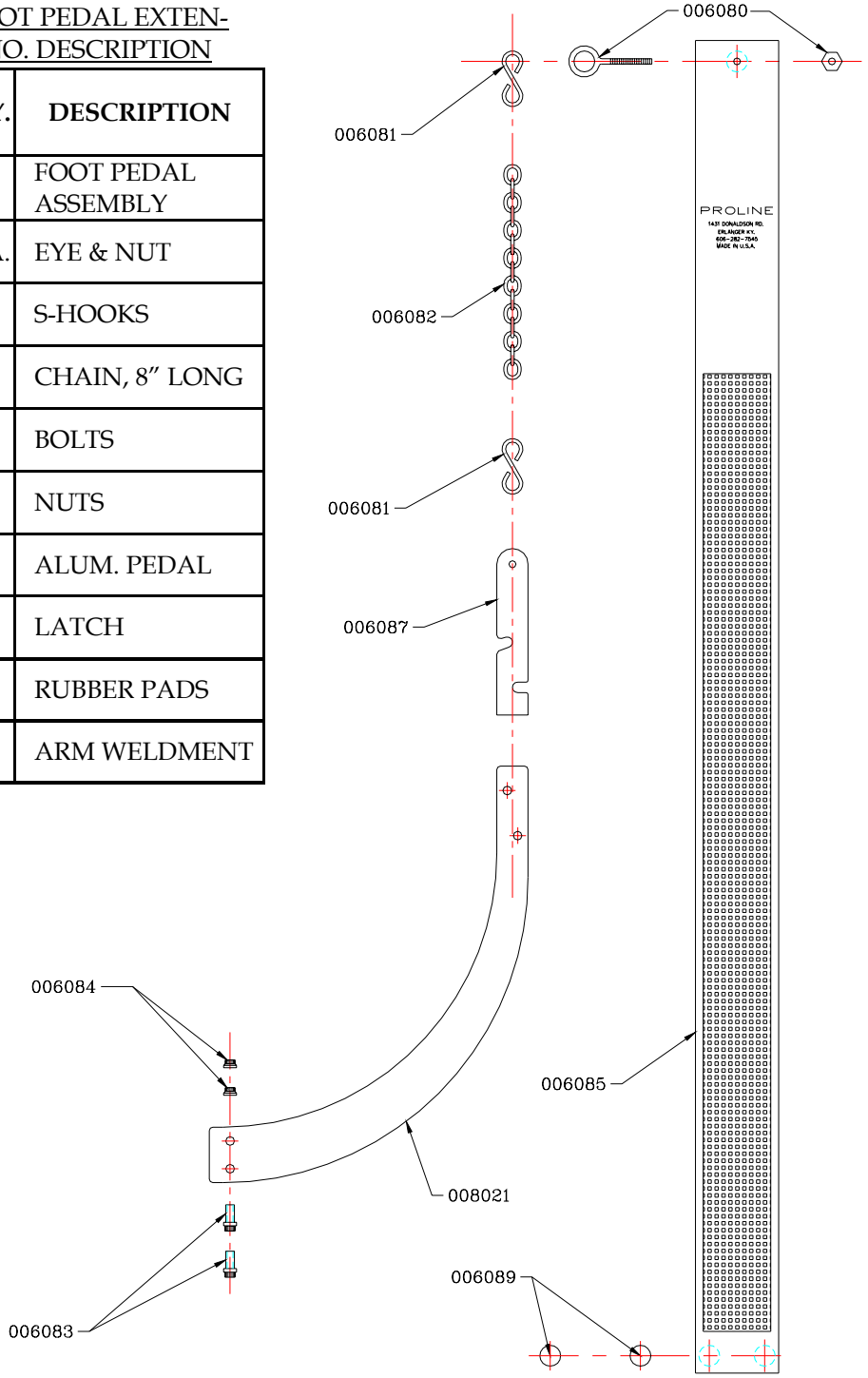
- 4 FOOT BILLET ALUMINUM PEDAL
- PEDAL TOP MILLED FOR NON SLIP
- NICKEL PLATED AND ANODIZED FOR CORROSION PROTECTION
- INSTALL AND REMOVE IN SECONDS

INSTALLING FOOT PEDAL EXTENSION

OPTIONAL FOOT PEDAL EXTENSION EXPLODED VIEW

OPTIONAL FOOT PEDAL EXTENSION PART NO. DESCRIPTION

PART NO.	QTY.	DESCRIPTION
008100	1	FOOT PEDAL ASSEMBLY
006080	1 EA.	EYE & NUT
006081	2	S-HOOKS
006082	1	CHAIN, 8" LONG
006083	2	BOLTS
006084	2	NUTS
006085	1	ALUM. PEDAL
006087	1	LATCH
006089	2	RUBBER PADS
008021	1	ARM WELDMENT



OPTIONAL DIE RACK

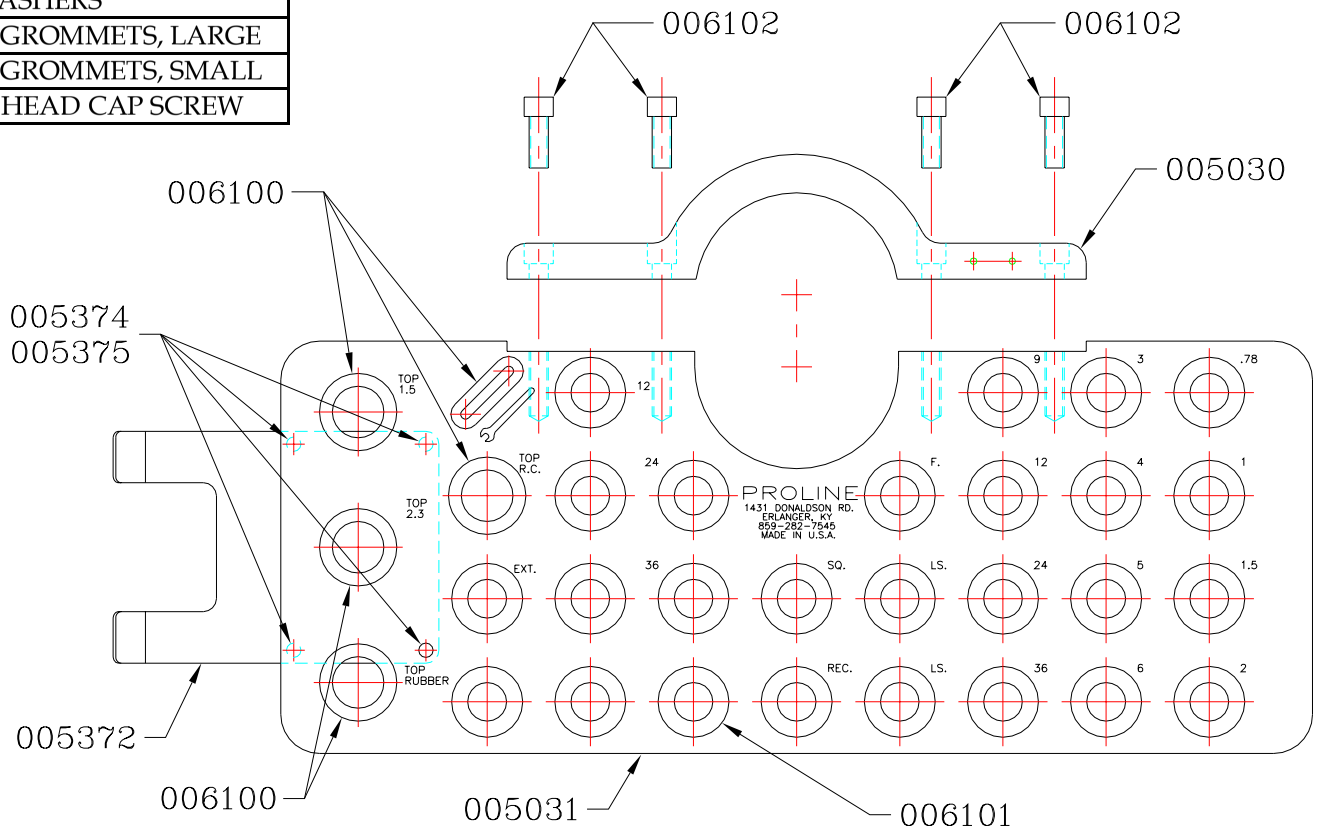
- 6061-T6 BILLET ALUMINUM
- RUBBER GROMMET INSERTS TO SECURE DIES
- DIE RACK MARKED FOR DIE INSERT LOCATION
- KEEPS DIES AND DIE WRENCH TOOL FROM BEING MISPLACED

OPTIONAL DIE RACK ASSEMBLY
PART NO. DESCRIPTION

PART NO.	QTY.	DESCRIPTION
008003	1	DIE RACK ASSEMBLY
005030	1	DIE RACK, CLAMP
005031	1	DIE RACK, RACK
005372	1	RUBBER HAMMER BRACKET
005374	4	SOCKET HEAD CAP SCREW
005375	4	LOCK WASHERS
006100	5	RUBBER GROMMETS, LARGE
006101	26	RUBBER GROMMETS, SMALL
006102	4	SOCKET HEAD CAP SCREW

NOTE: DIE RACK SUB-ASSEMBLY DOES NOT INCLUDE PART NO. 005372, 005374 AND 005375 THEY ARE A SEPARATE OPTION

OPTINAL DIE RACK EXPLODED VIEW

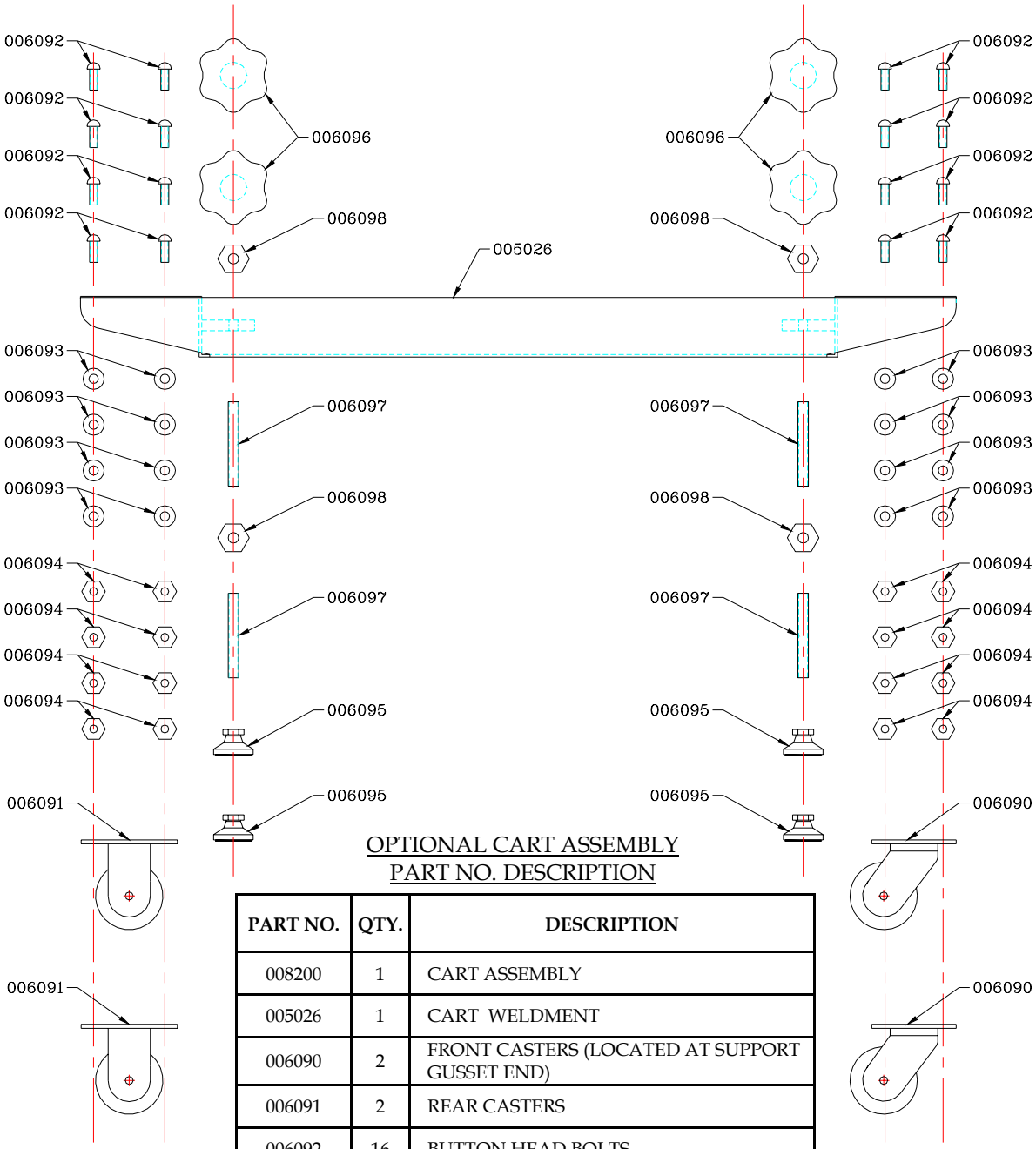


OPTIONAL CART

CART MAKES MOVING HAMMER AROUND SHOP EASY!

- STAINLESS STEEL CONSTRUCTION
- NON-MARKING CASTERS
- FRONTS SWIVEL CASTERS FOR EASY TURNING
- ADJUSTABLE VIBRATION MOUNTS TO KEEP CART FROM MOVING

OPTIONAL CART
EXPLODED VIEW



OPTIONAL CART ASSEMBLY
PART NO. DESCRIPTION

PART NO.	QTY.	DESCRIPTION
008200	1	CART ASSEMBLY
005026	1	CART WELDMENT
006090	2	FRONT CASTERS (LOCATED AT SUPPORT GUSSET END)
006091	2	REAR CASTERS
006092	16	BUTTON HEAD BOLTS
006093	16	FLAT WASHERS
006094	16	SELF LOCKING NUTS
006095	4	SWIVEL LEVELING MOUNT PADS
006096	4	PALM GRIP KNOBS
006097	4	THREADED RODS
006098	4	JAM NUTS

APPENDIX 1

IF AIR MOTOR DIE CLIP SPRING BREAKS AND DIE CANNOT BE REMOVED

IF THE DIE CLIP SPRING BREAKS AND YOU CANNOT GET THE DIE OUT IN THE NORMAL FASHION, THER ARE SEVERAL WAYS TO REMOVE THEM.

FIRST METHOD IS TO PLACE THE WRENCH IN AS IN PHOTO 1 AND GENTLY MOVE THE WRENCH UP AND DOWN AS YOU SPIN THE DIE. THIS SOMETIMES ENABLES THE BROKEN PIECES TO GO INTO THE GROOVE AND WILL RELEASE THE DIE.

SECOND METHOD IS TO PUT THE WRENCH IN AS IN PHOTO 2 AND TAP THE END WITH A SOFT FACE HAMMER. REMOVE THE WRENCH AND SPIN DIE AROUND AND REPEAT.

PHOTO 3 ON NEXT PAGE SHOWS THE DIE CLIP SPRING IN THE GROOVE OF THE DIE. SOMETIMES THE BROKEN PIECE OVERLAPS THE REMAINING PIECE AND LOCKS THE DIE IN. TAKE A PUNCH AND HOLD THE DIE CLIP SPRING TIGHTLY THROUGH THE HOLE AND THEN SPIN THE DIE TO TRY TO UNWEDGE THE PIECES OF THE DIE CLIP SPRING. GO BACK AND TRY ANYONE OF THESE THREE METHODS.

THE FOURTH METHOD, ONLY TO BE USED AS A LAST RESORT, WOULD BE TO REMOVE THE CLIP LOCK RING AS IN PHOTO 4 AND UNSCREW THE TOP CAP, REMOVING THE CAP PLUG AND PISTON (SEE HAMMER MAINTENANCE STARTING ON PAGE HH4). THEN TAKE A BRASS PUNCH AND TRY TO DRIVE THE DIE OUT FROM THE TOP. AS YOU ARE DOING THIS ALSO HAVE SOMEONE USE THE WRENCH TO TRY TO WIGGLE THE DIE OUT AS IN PHOTO 1.
(NOTE: 36" LARGE AIR HAMMER SHOWN. HOWEVER, THESE REMOVAL METHODS APPLY TO ALL PROLINE AIR HAMMERS.)

PHOTO 1

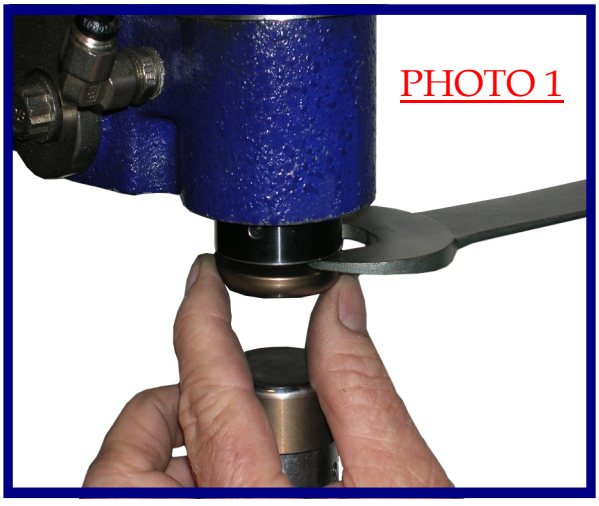


PHOTO 2

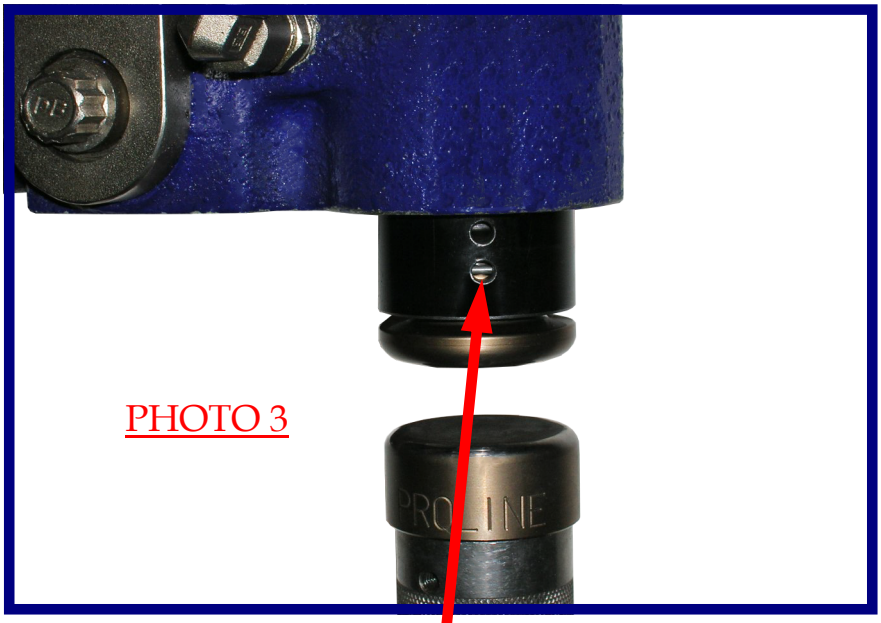
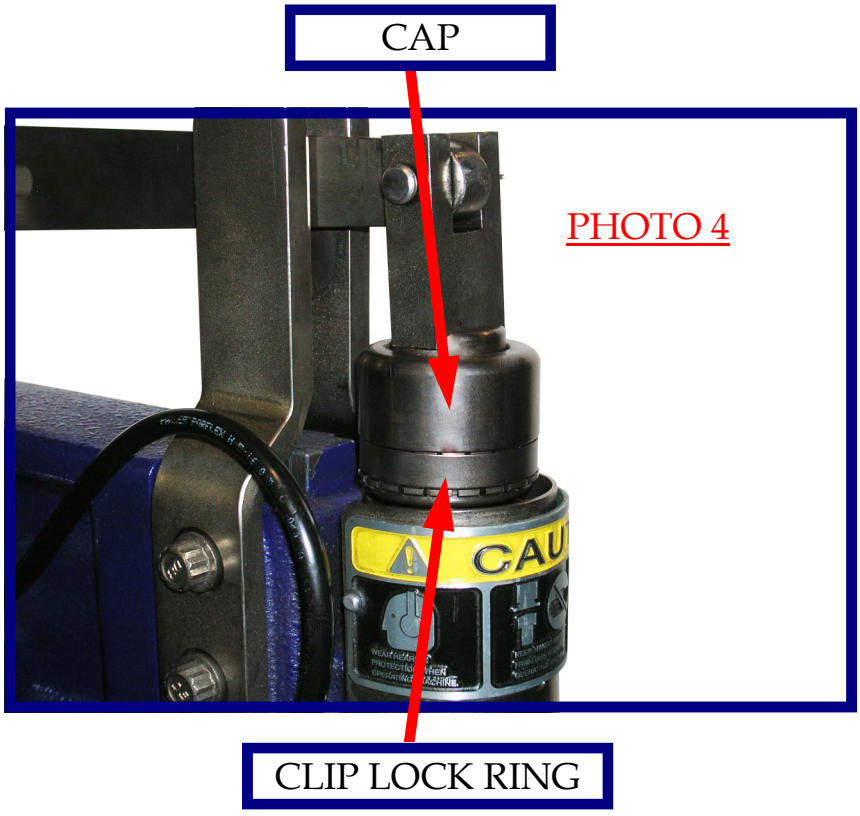


PHOTO 3
PROLINE
DIE CLIP SPRING


CAP
PHOTO 4
CAU
CLIP LOCK RING