PORTABLE AIR HAMMER ASSEMBLY AND OPERATION MANUAL

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REV
01-20-2010

PORTABLE AIR HAMMER
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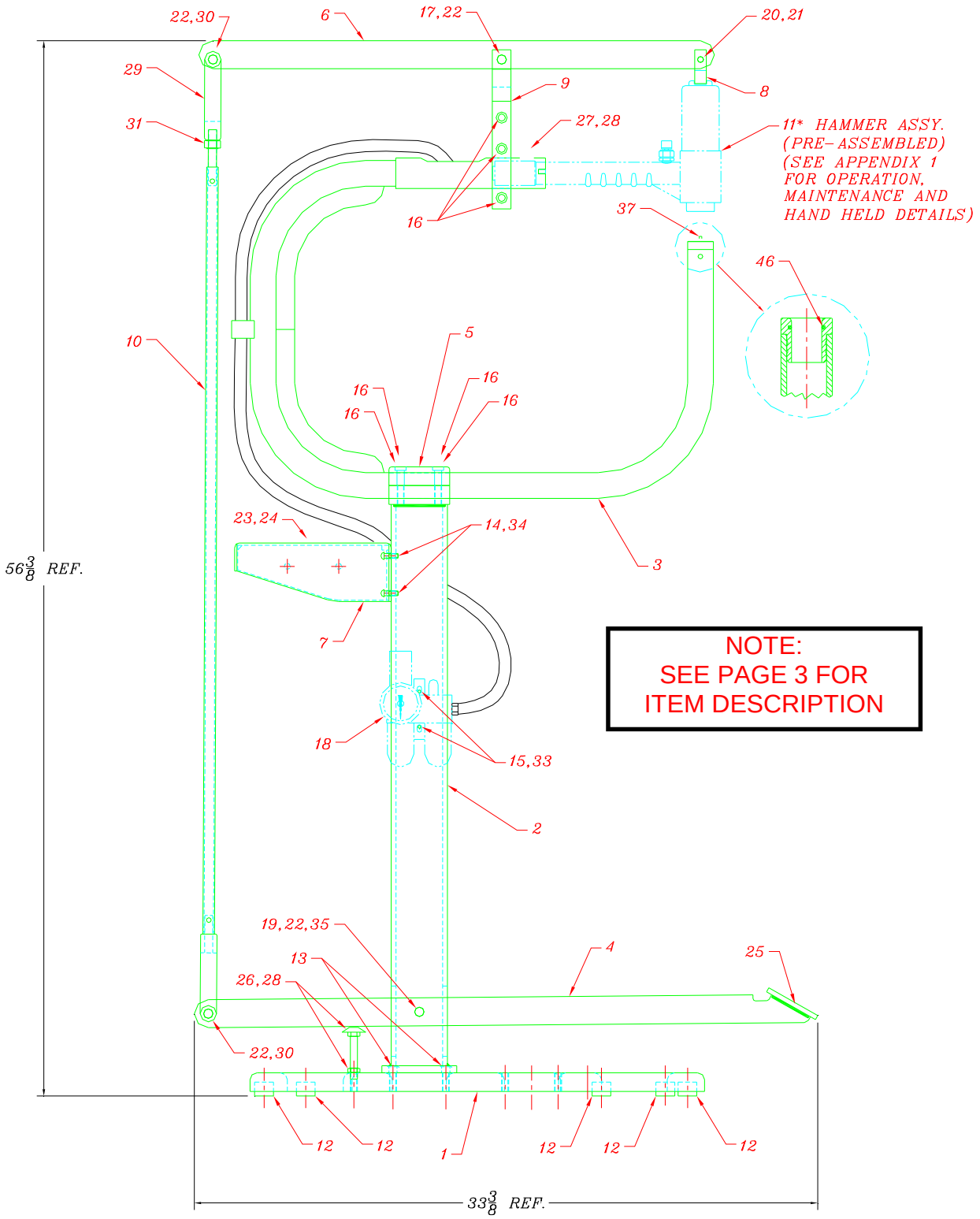
PARTS LIST

NOTE: CHECK ALL QUANTITIES (QTY.) BEFORE ASSEMBLING PORTABLE AIR HAMMER
SEE PAGE 4 FOR ASSEMBLY DRAWING WITH ITEM LOCATION

ITEM/ LOC.	QTY.	PART NO.	PART DESCRIPTION
1	1	040246	BASE
2	1	005050	POST
3	1	005120	TUBING YOKE
4	1	005051	FOOT PEDAL
5	1	005040	TOP MOUNTING BLOCK
6	1	005041	CONTROL ARM
7	1	006012	DIE RACK
8	1	005044	FRONT PIVOT BLOCK
9	1	005042, 005043	REAR PIVOT BLOCKS (005042 C-BORE SIDE, 005043 THREADED SIDE)
10	1	005052	CONTROL ROD
11*	1	050083	HAMMER ASSEMBLY, SEE APPENDIX 1 FOR DETAILS (* INCLUDES ALL WORKING PARTS)
12	9	040247	RUBBER FEET
13	4	050008	3/8-16 X 1" 12 POINT FLANGE HEAD CAP SCREWS
14	4	006028	1/4-20 X 3/4" SHCS (BUTTON HEAD)
15	2	006059	10-24 X 1/2" SOCKET HEAD CAP SCREWS (BUTTON HEAD)
16	7	006029	3/8-16 X 1-1/2" 12 POINT FLANGE HEAD CAP SCREWS
17	1	006305	1/2 X 1-3/4" CONTROL ARM CLEVIS PIN
18	1	009002	AIR REGULATOR AND LUBRICATOR ASSEMBLY
19	1	006039	FOOT PEDAL CLEVIS PIN (1/2 X 2-1/2")
20	1	006034	1/8" x 3/4"- Cotter Pins
21	1	006008	5/16 X 1-1/2" FRONT PIVOT BLOCK CLEVIS PIN
22	4	006035	HITCH PIN CLIPS
23	26	006045	RUBBER GROMMETS (SMALL) FOR BOTTOM DIES
24	5	006046	RUBBER GROMMETS (LARGE) FOR TOP DIES AND WRENCH
25	1	006061	RUBBER, Pedal Cover Pad
26	1	006048	3/8-16 X 3" CARRIAGE BOLT
27	2	006043	3/8-16 X 2" BOLT (1 EXTRA FOR ALUMINUM YOKE)
28	3	006049	3/8-16 NUT (1EXTRA FOR ALUMINUM YOKE)
29	1	006016	CONTROL ROD YOKE
30	2	006114	1/2 X 1-3/8" CLEVIS PINS
31	1	006105	1/2-20 JAM NUT
32	1	004021	CAST ALUMINUM HAND HELD YOKE (NOT SHOWN ON DRAWING)
33	2	006106	#10 LOCK WASHERS
34	4	006104	1/4" LOCK WASHERS
35	1	006107	1/2" FLAT WASHER
36	1	006108	LOCTITE (NOT SHOWN ON DRAWING)
37	2	006109	1/8 X 3/8" DOWEL PINS (USED IN DIE HOLDER)
38	1	006115	OIL (NOT SHOWN ON DRAWING)
39	1	006116	OIL BOTTLE (NOT SHOWN ON DRAWING)
40	1	005061	DIE WRENCH (NOT SHOWN ON DRAWING)
41	1	005270	12.0-1.50 DIA - Standard Shape Die - Bottom (NOT SHOWN ON DRAWING)
42	1	005275	3.0 - 1.50 DIA - Standard Shape Die - Bottom (NOT SHOWN ON DRAWING)
43	1	005276	36.0-1.50 DIA - Standard Shape Die - Bottom (NOT SHOWN ON DRAWING)
44	1	005286	1-1/2 Flat Face, Round Die -Top (NOT SHOWN ON DRAWING)
45	2	006041	AIR MOTOR DIE CLIP SPRING (EXTRA) (SEE APPENDIX 1 FOR INSTALLATION AND REMOVAL) (NOT SHOWN ON DRAWING)
46	2	006302	YOKE DIE CLIP SPRING (1 EXTRA)



PORTABLE HAMMER FULL ASSEMBLY

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 designer for forming or planishing light gauge 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 are 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 in to the opening at the bottom of the cylinder. The whole pneumatic may be dipped in kerosene of 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 back 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 the machine rapidly over the rough surface. Force the machine over bumps, it will not break. Work vigorously, don't linger. Don't waste the air pressure going slowly, make the best of that valuable power. Study how to slide the machine.

Remember—no "dinging" is necessary. If you 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.

Lubrication and care

1. Check lubricator oil periodically and fill as needed. (see photo 21-1).
2. Oil top and bottom of hammer sleeve after every 8 to 10 minutes operation (see photos 21-2 & 21-3).

OPERATION OF LUBRICATOR

Lubricator is not adjusted at factory. If it is not working properly it can be adjusted as follows. Adjust lubricator by turning adjusting screw (opposite of fill hole) counter clockwise until the oil is flowing.

Then turn the screw clockwise until it stops. Back out approximately 1/2 to 3/4 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.

Note: do not use synthetic oil anywhere on or in hammer.

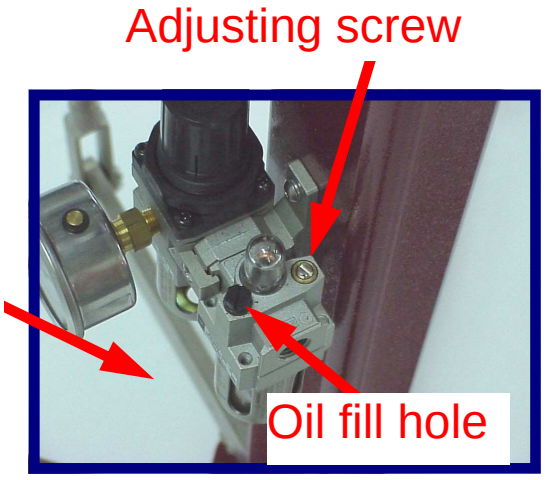


Photo 21-1

Photo 21-2

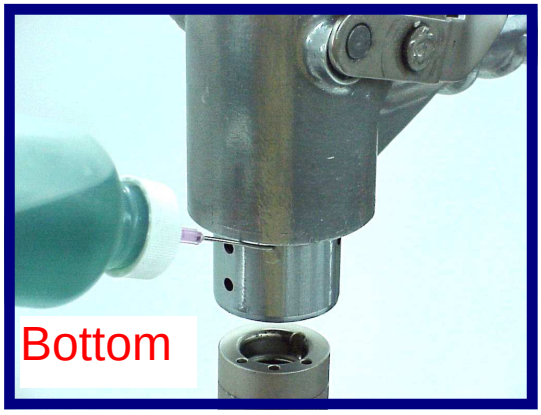


Photo 21-3

TOP DIE INSTALLATION & REMOVAL

INSTALLING UPPER DIE

HOLD PRESURE WITH FOOT PEDAL AND HIT TOP WITH SOFT FACE HAMMER TO SNAP DIE IN PLACE (SEE PHOTO 23-1)

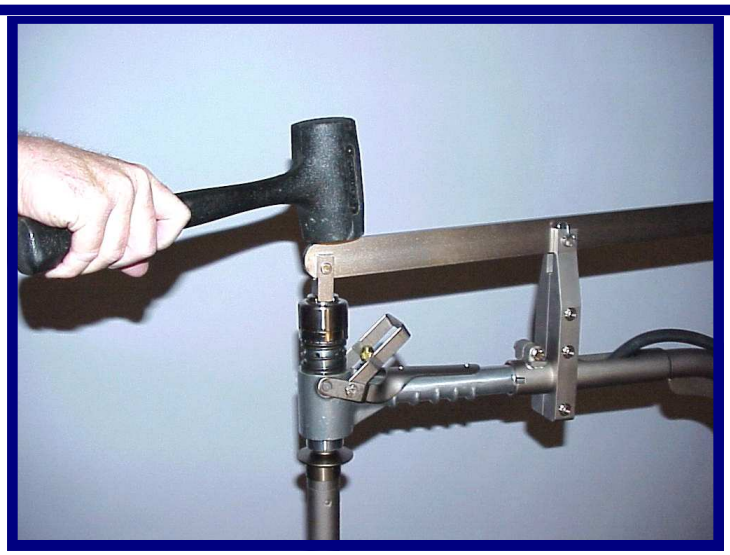


Photo 23-1

TO REMOVE TOP DIE
INSERT WRENCH BETWEEN CYLINDER AND DIE WHILE WORKING TOOL UP AND DOWN (SEE PHOTO 23-2)

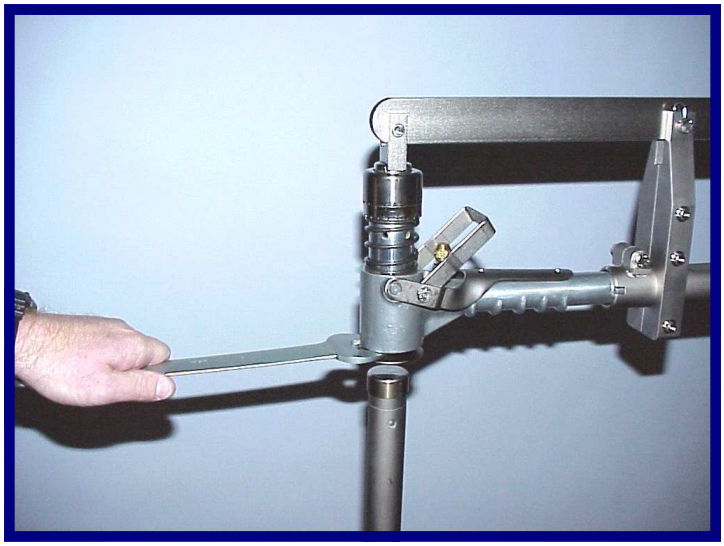


Photo 23-2

PROLINE PLANISHING DIES
PART NO. DESCRIPTION

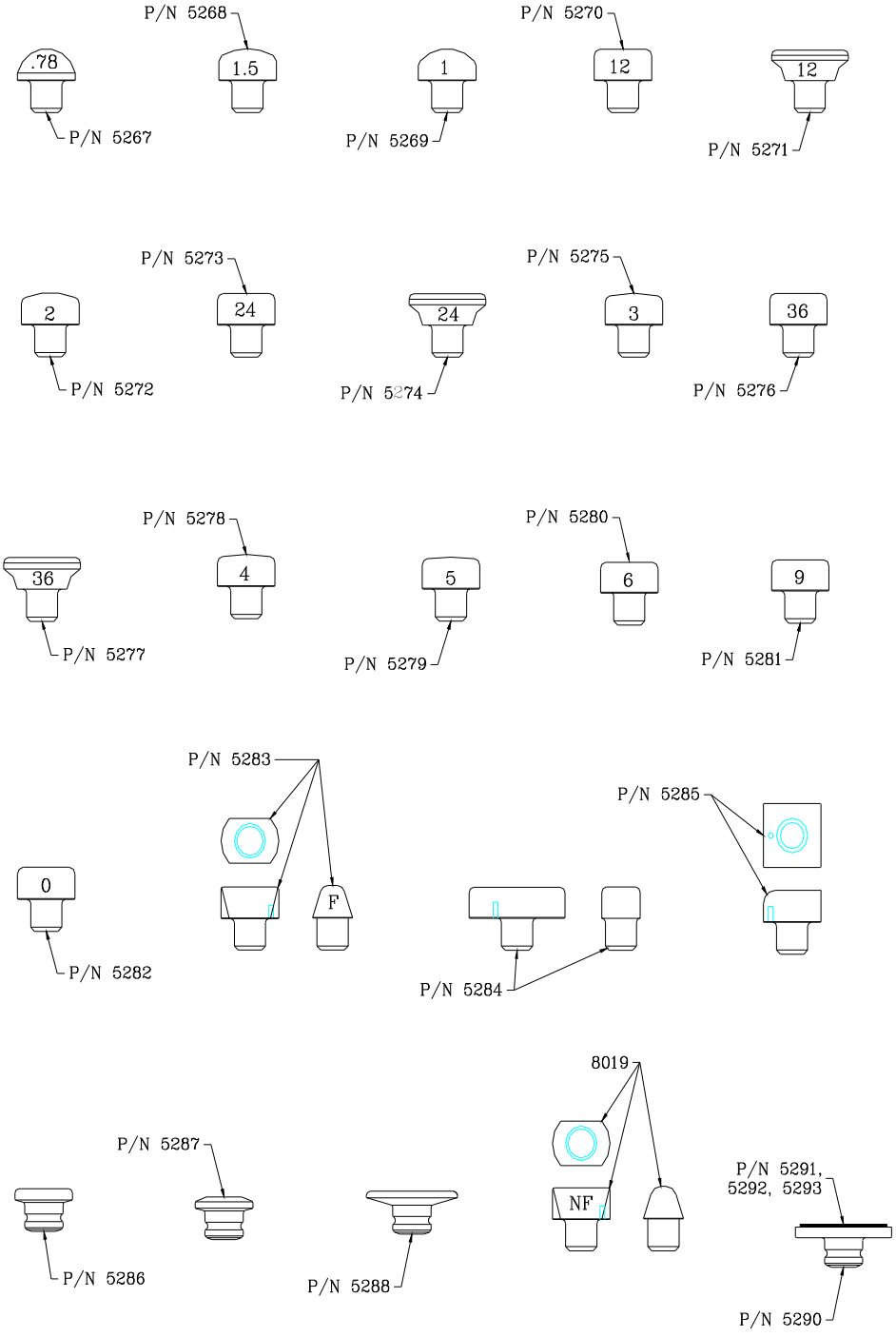
PART NO.	STAMP	DIA.	RAD.	DESCRIPTION
STANDARD DIES				
7100	------	-----	------	COMPLETE STD. DIE SET, ALL 22 PCS.
5267	0.78	1.5	------	BOTTOM DIE
5268	1.5	1.5	------	BOTTOM DIE
5269	1	1.5	------	BOTTOM DIE
5270	12	1.5	------	BOTTOM DIE
5271	12	2	------	BOTTOM DIE
5272	2	1.5	------	BOTTOM DIE
5273	24	1.5	------	BOTTOM DIE
5274	24	2	------	BOTTOM DIE
5275	3	1.5	------	BOTTOM DIE
5276	36	1.5	------	BOTTOM DIE
5277	36	2	------	BOTTOM DIE
5278	4	1.5	------	BOTTOM DIE
5279	5	1.5	------	BOTTOM DIE
5280	6	1.5	------	BOTTOM DIE
5281	9	1.5	------	BOTTOM DIE
5282	0	1.5	------	BOTTOM DIE
5283	F	------	------	LINEAR STRETCH - SMALL FLAT ON TOP - BOTTOM DIE
5284	NONE	------	------	RECTANGULAR - 7/8 X 2-1/2", 24 R X 4 R - BOTTOM DIE
5285	NONE	------	------	SQUARE - 1-1/2", ONE EDGE 5/16 R - BOTTOM DIE
5286	NONE	------	------	1-1/2 FLAT FACE, ROUND DIE -TOP DIE
5287	NONE	------	------	1-1/2 REVERSE CURVE - TOP DIE
5288	NONE	------	------	2-3/8 FLAT FACE, ROUND DIE - TOP DIE
SPECIAL DIES				
8019	NF	------	1/2	LINEAR STRETCH - 1/2" R - BOTTOM DIE
SPECIAL RUBBER DIE KIT				
8020	NONE	------	------	RUBBER TOP DIE KIT, ALL 4 PCS.
7001	NONE	------	------	RUBBER DIE, TOP
5032	NONE	------	------	3" DIE EXTENSION*
5033	NONE	------	------	2-1/4" DIE EXTENSION*
6103	NONE	------	------	SCREWS*

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

CUSTOM DIES AVAILABLE

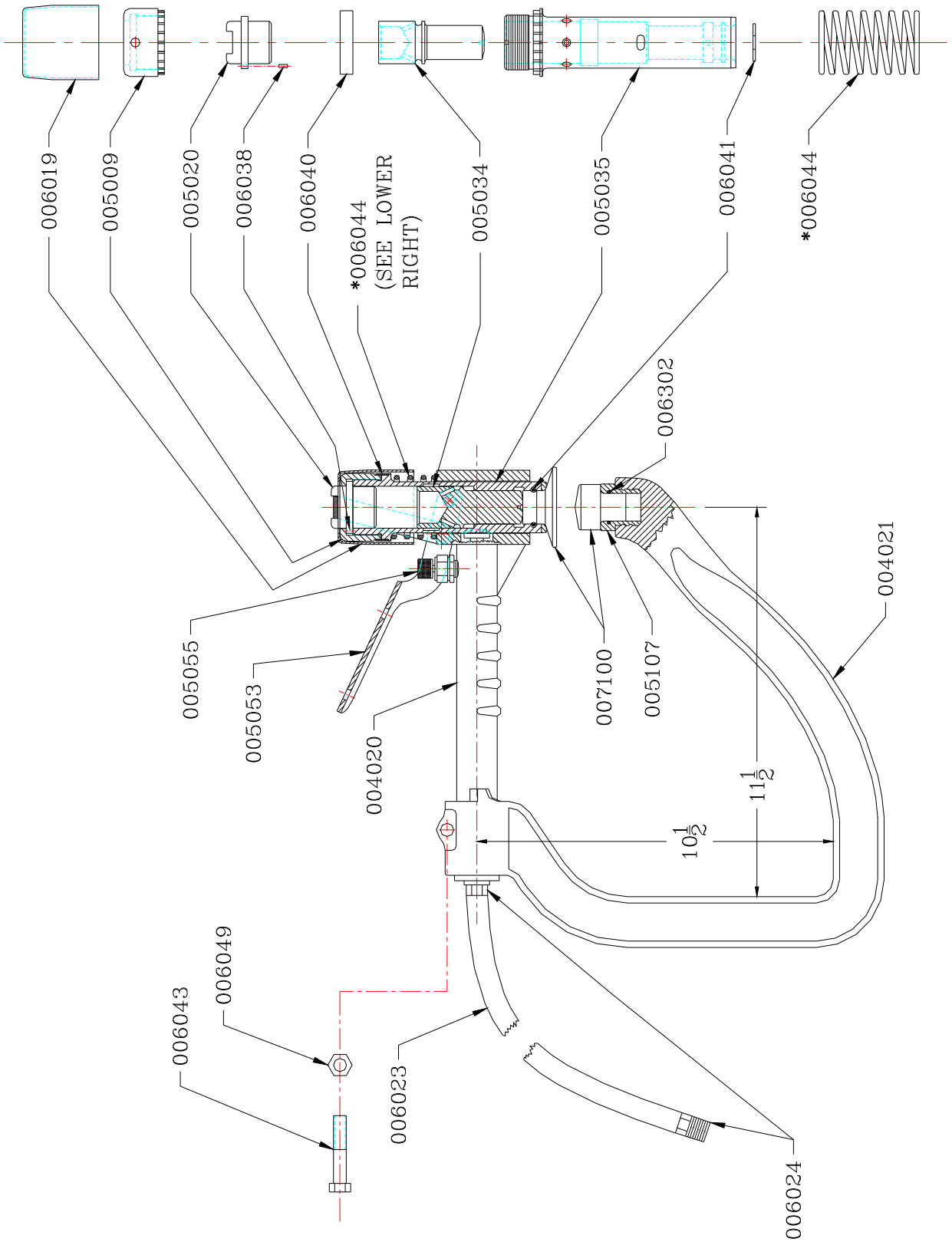
SEE NEXT PAGE FOR ASSEMBLY DRAWING

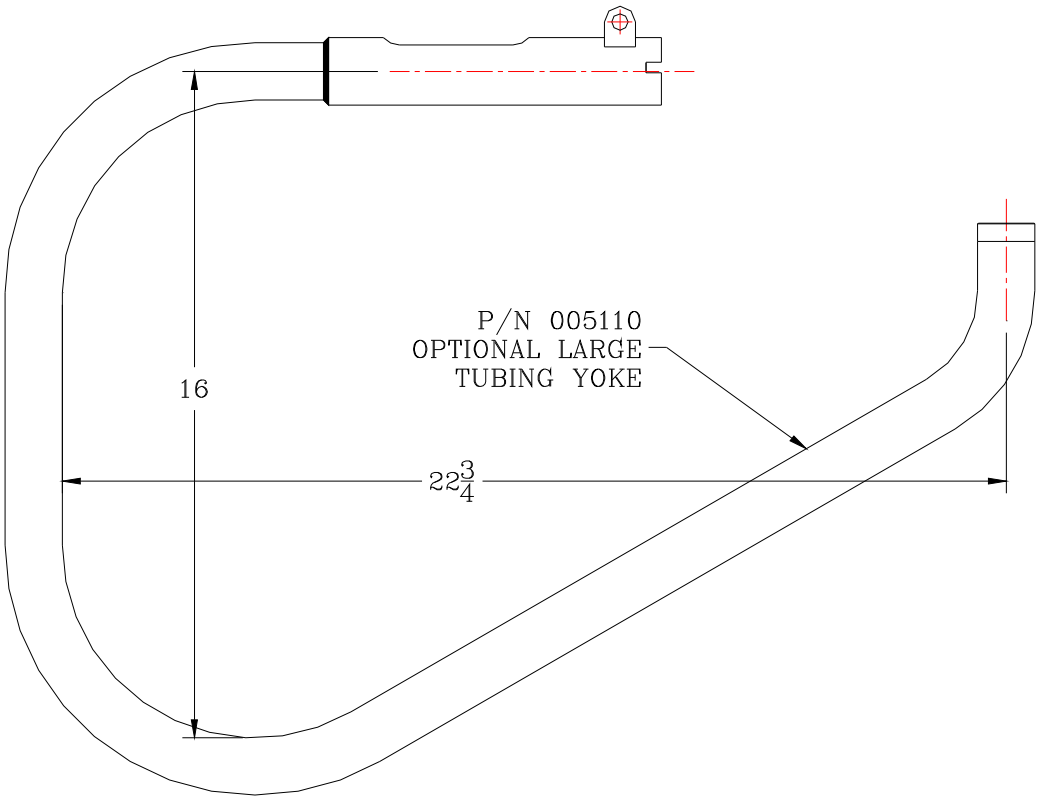
AIR HAMMER DIE ASSEMBLY
NUMBER ON DIE INDICATES RADIUS IN INCHES



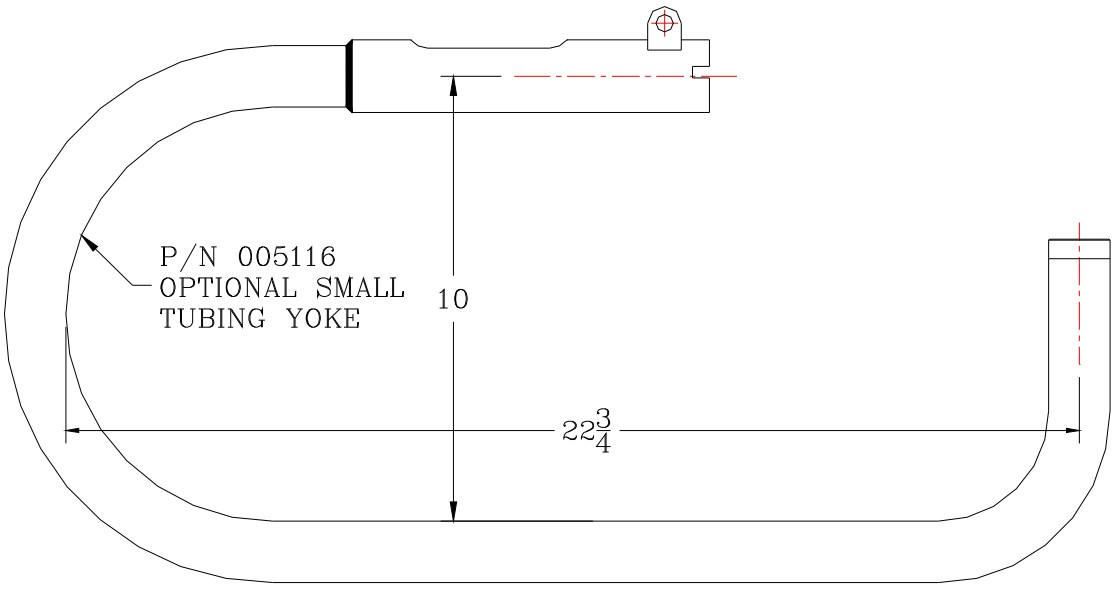
APPENDIX 1
HAND HELD AIR HAMMER OPERATION AND MAINTENANCE MANUAL

NOTE: HAND HELD AIR HAMMER YOKES ARE OPTIONAL


006019
005009
005020
006038
006040
*006044
(SEE LOWER
RIGHT)
005034
005035
006041
*006044
006302
004021
005055
005053
004020
007100
005107
11½
10½
006043
006049
006023
006024



SPECIAL TUBING YOKES
AVAILABLE ON REQUEST



Hand held aluminum casting instructions

1. Remove hammer assembly (11) from portable air hammer and Insert into aluminum casting yoke (33) (see photo 24-1).
2. Use the same 3/8-16 x 2” bolt (28) and 3/8-16 nut (29) that were used in the tubing yoke (3) (not in photo) to clamp the hammer in the aluminum casting yoke (33). Note: the procedure for inserting the bolt (28) and nut (29) in the aluminum casting yoke are the same used on the tubing yoke (3) (see photo 24-1).
3. Note: top die installation and removal are the same as portable air hammer.
4. To operate hand held hammer, push down on handle assembly until it contacts the back of the hammer assembly (11) and hold. Also refer to appendix 1 page 3 for general suggested procedures.

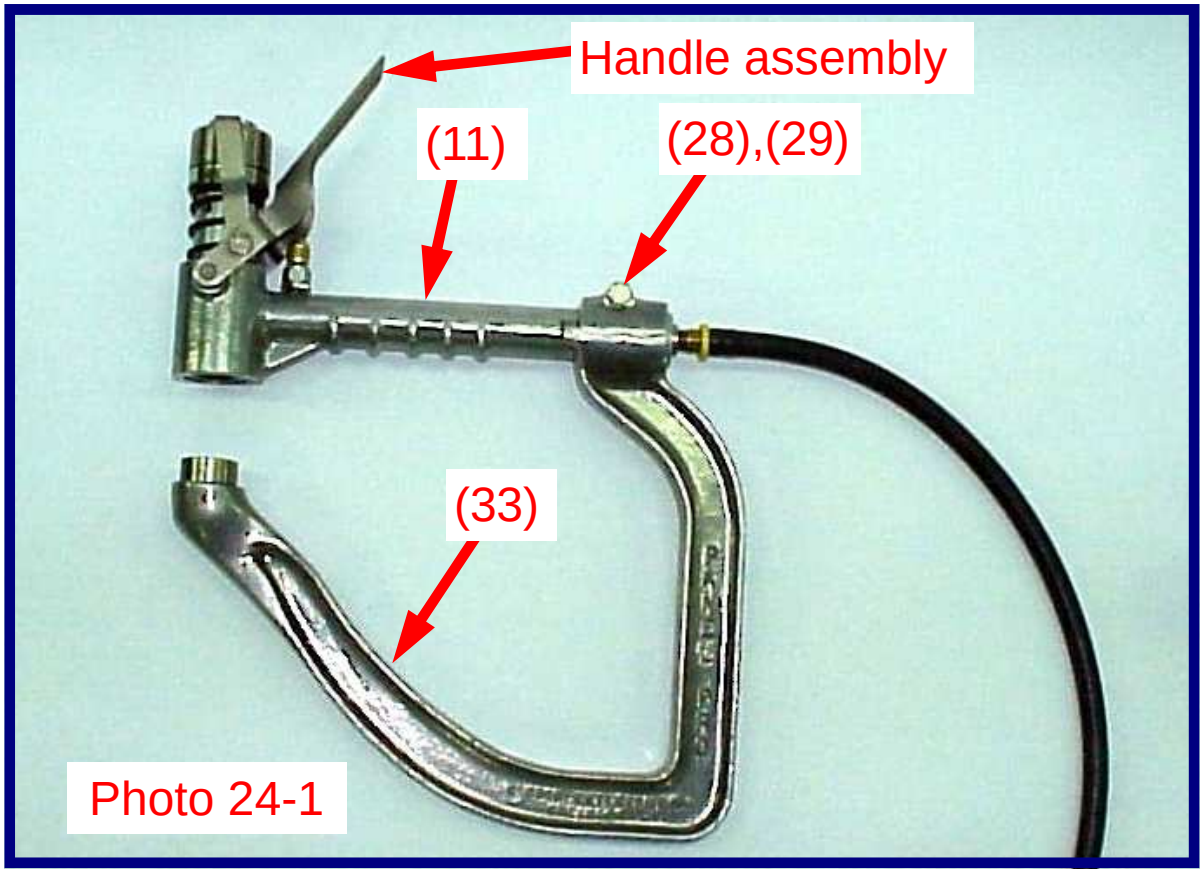


Photo 24-1