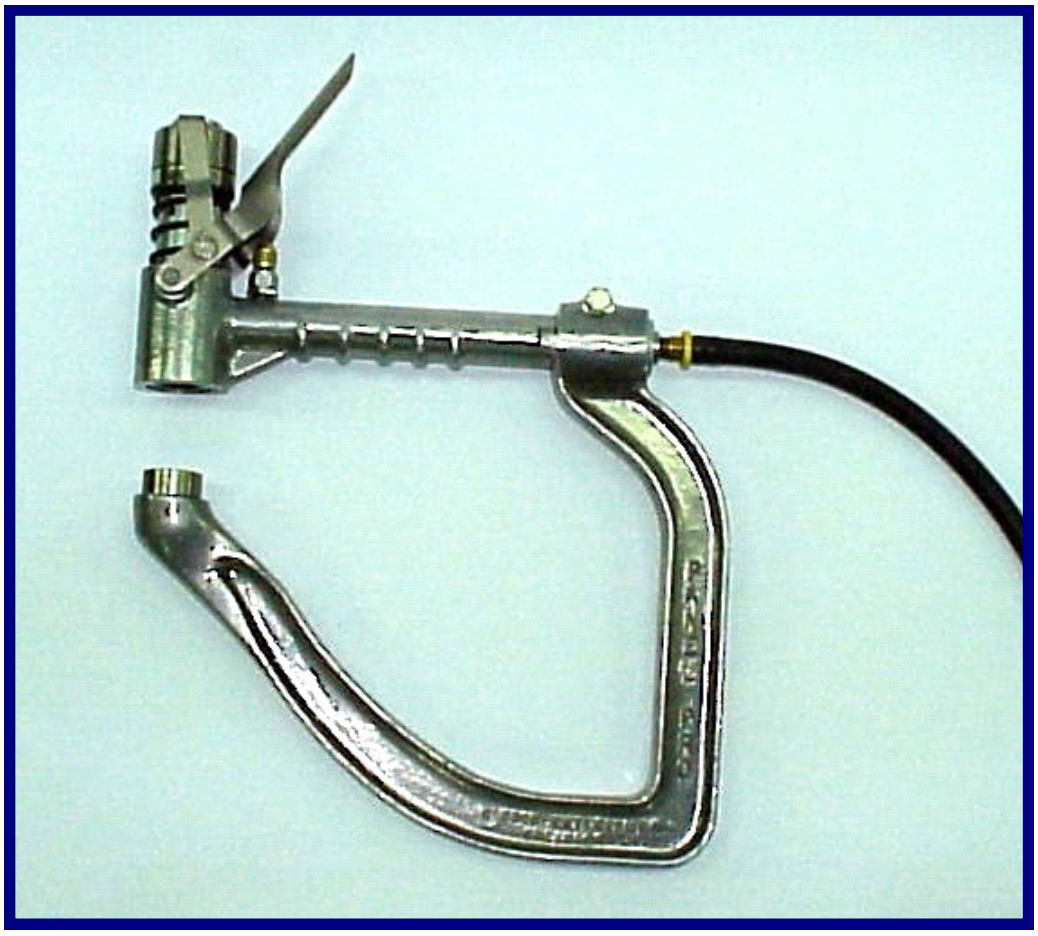
HAND HELD AIR HAMMER OPERATION AND MAINTENANCE MANUAL



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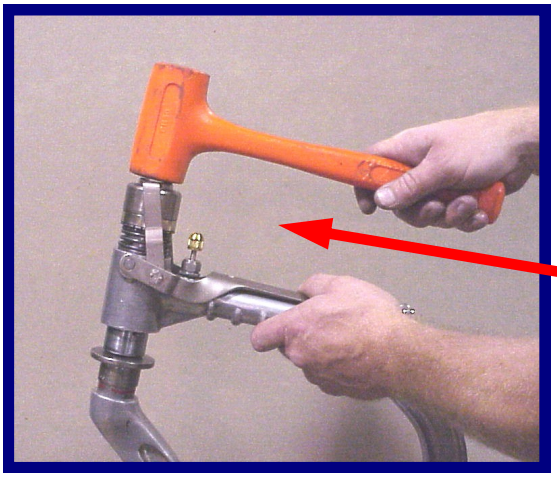
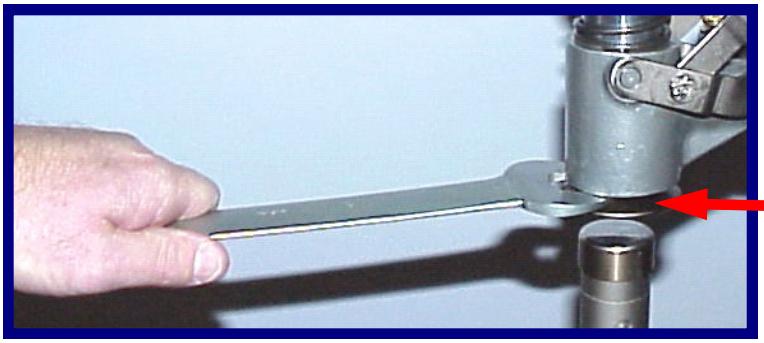
HAND-HELD AIR HAMMER
OPERATION INSTRUCTIONS AND PROCEDURES

1. BEFORE CONNECTING HOSE TO AIR HAMMER, POUR 2-3 DROPS OF NONSYNTHETIC AIR TOOL OIL INTO AIR CONNECTION ON HAMMER.
2. AIR HAMMER SHOULD BE CONNECTED TO AN AIRLINE NOT EXCEEDING 125 PSI.
3. TO CONTROL AIR VOLUME AND CONSEQUENTLY THE POWER OF THE TOOL, USE THE HAMMER VALVE ADJUSTMENT KNOB, PART NUMBER 005055. SET REGULATOR VALVE TO THROTTLE DOWN POWER OF TOOL SO IT IS SUFFICIENT TO STRAIGHTEN THE METAL.
4. BE SURE TO USE DIES TO CONFORM TO DESIRED RADIUS. FACE OF UPPER DIE SHOULD BE KEPT PARALLEL TO STRAIGHT SURFACE AT ALL TIMES. WHERE METAL IS STRETCHED, SHRINK THE STRETCHED PORTION BEFORE USING TOOL.
5. TO SMOOTH OUT METAL, DO NOT GRIP AIR HAMMER TIGHTLY-BUT HOLD LOOSELY IN BOTH HANDS. KEEP DIES FIRMLY TOGETHER, YET NOT SO TIGHT THAT THEY CANNOT BE MOVED FREELY OVER DAMAGED SURFACE. THEN MOVE AIR HAMMER WITH LONG EVEN STROKES OVER SURFACE TO LEVEL METAL.
6. BEST RESULTS ARE OBTAINED BY WORKING AROUND DAMAGED SURFACE, WORKING IT GRADUALLY SMALLER UNTIL ALL WRINKLES ARE REMOVED. LINE UP EDGE OF FENDER AND FENDER BEAD WITH HAND TOOLS.
7. CLEAN AIR HAMMER IN PARTS WASHER SOLVENT OCCASSIONALLY AND RE-OIL FREQUENTLY USING NONSYSTHETIC AIR TOOL OIL AVAILABLE FROM C. COOK ENTERPRISES, INC.

TOP DIE INSTALLATION & REMOVAL



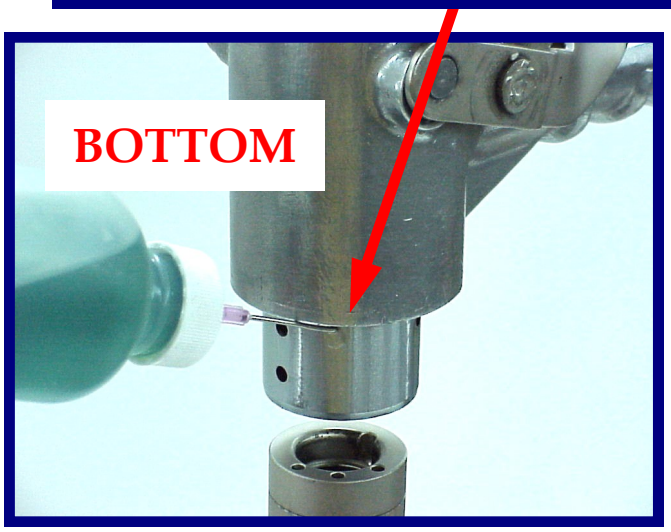
TO INSTALL TOP DIE, HOLD PRESSURE WITH HANDLE AND HIT TOP WITH SOFT FACE HAMMER TO SNAP DIE IN PLACE.

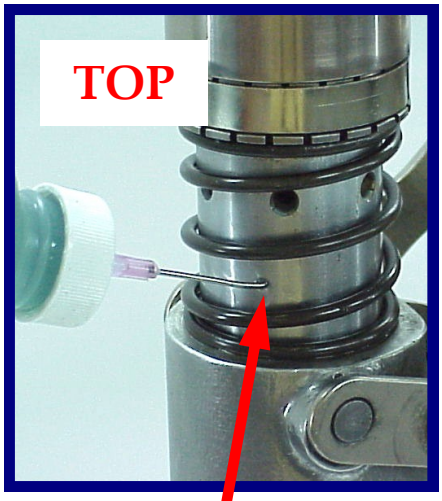


TO REMOVE TOP DIE, INSERT WRENCH BETWEEN CYLINDER AND DIE WHILE WORKING TOOL UP AND DOWN.

GENERAL LUBRICATION

OIL TOP AND BOTTOM OF HAMMER SLEEVE AFTER EVERY 8 TO 10 MINUTES OPERATION (SEE PHOTOS).

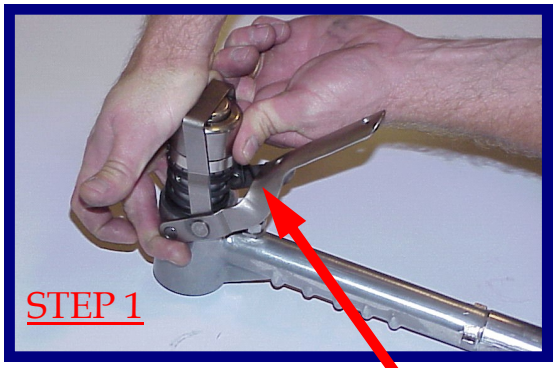


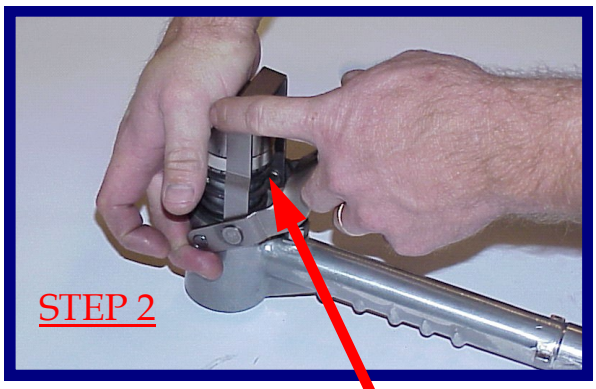


BE CAREFUL NOT TO GET OIL INTO EXHAUST HOLES WHEN OILING SLEEVE. OVER OILING CAN CAUSE PISTON TO HANG UP OR GET SLUGGISH AT LOW SPEEDS.

HAMMER MAINTENANCE

DISASSEMBLY FOR FURTHER LUBRICATION

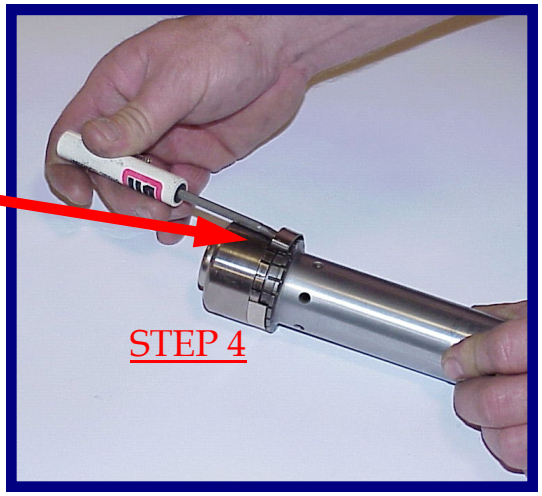


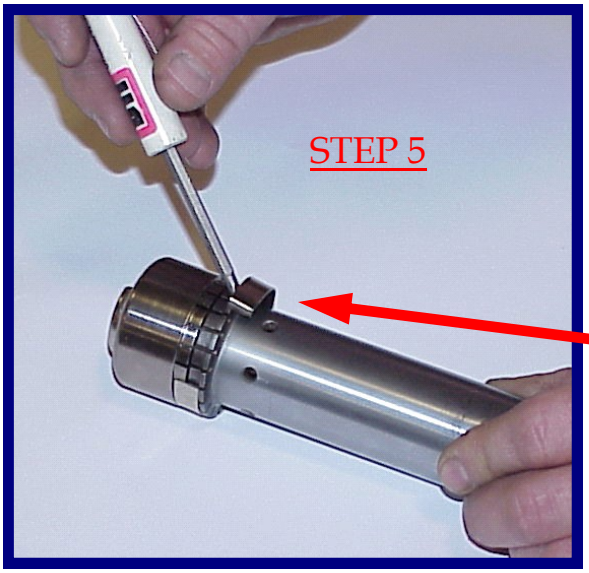


STEP 1 & 2: TO REMOVE AIR MOTOR ASSEMBLY – PUSH DOWN ON ASSEMBLY TO FREE HANDLE BAIL FROM THE SLOT IN CAP PLUG.

STEP 3: REMOVE AIR MOTOR ASSEMBLY.

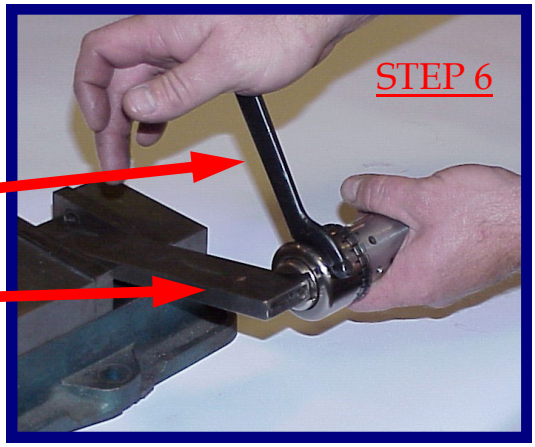
STEP 4: TO DISASSEMBLE AIR MOTOR, REMOVE CLIP LOCK RING.

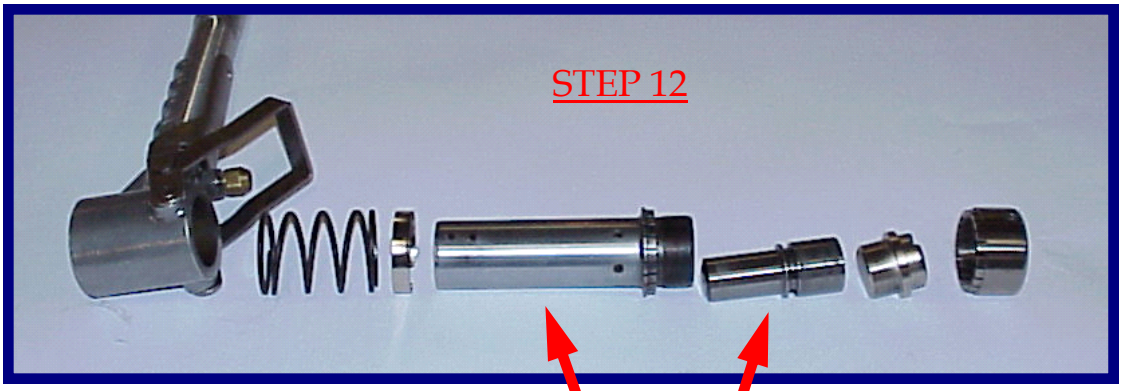




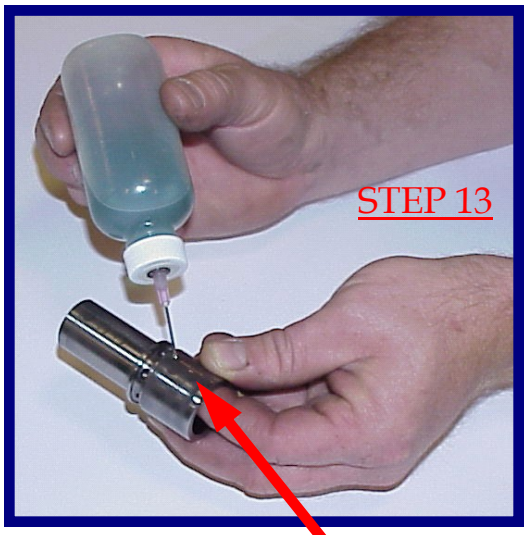
STEP 5: USE CAUTION NOT TO BREAK TAB THAT LOCKS INTO CAP AND SLEEVE.

STEP 6: PUT A FLAT BAR INTO A VISE. PUT SLOT IN PLUG ON BAR, LOOSEN CAP USING A SPANNER WRENCH.



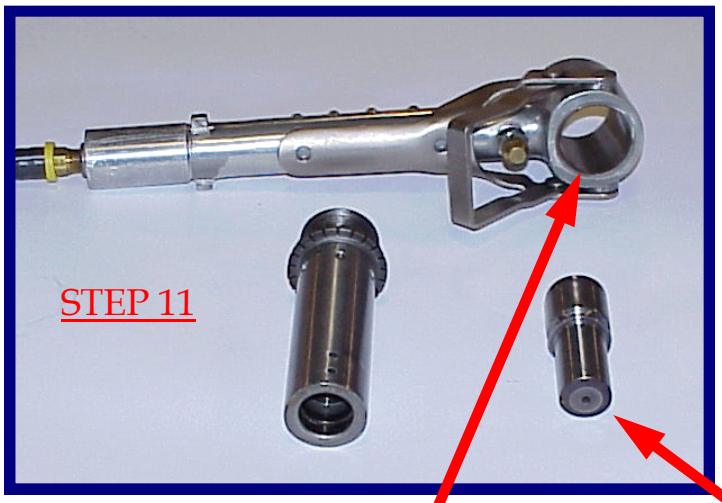


STEP 12: LAY OUT OF PARTS FOR REASSEMBLY.



STEPS 13 & 14: PUT ONE TO TWO DROPS OF AIR TOOL OIL ON PISTON AND RUB AROUND EVENLY.

STEPS 7,8,9 & 10: REMOVE CAP AND CAP PLUG IN TOP OF SLEEVE. SEE PHOTO SEQUENCES ABOVE.

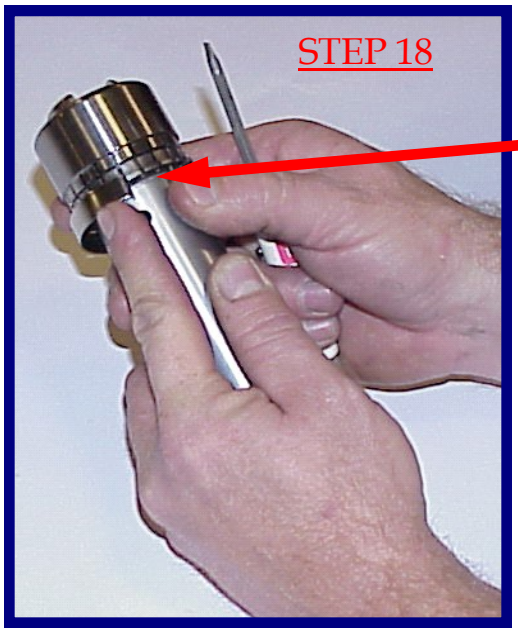


STEP 11: CLEAN INSIDE OF HOUSING SLEEVE AND PISTON THOROUGHLY.

STEP 15: PLACE PISTON INTO SLEEVE.

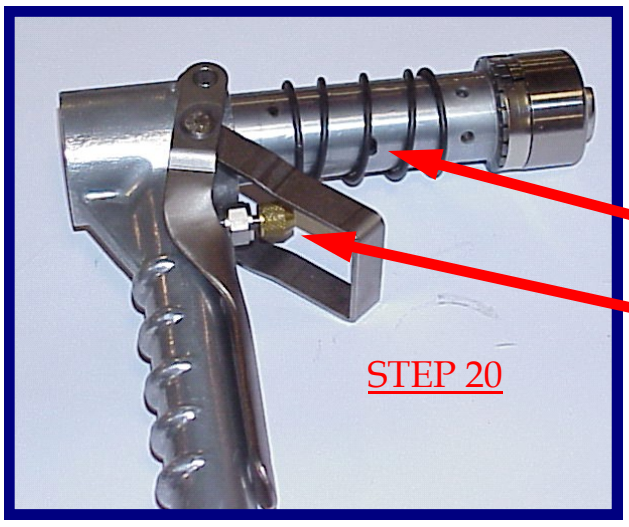
STEP 16: BE SURE TO LINE UP PIN IN CAP PLUG WITH CUT OUT ON SLEEVE WHEN INSTALLING SLEEVE.

STEP 17: SCREW CAP ONTO SLEEVE AND TIGHTEN USING TECHNIQUE USED IN STEP 6.

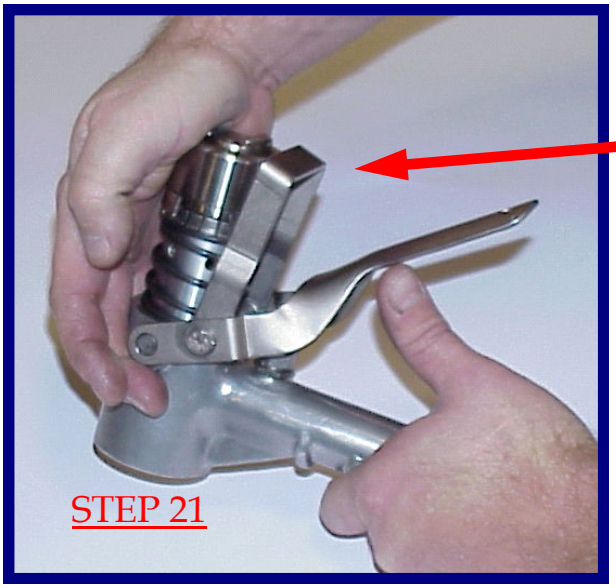


STEP 18: LOOK AROUND SLEEVE AND FIND THE TWO GROOVES THAT LINE UP THE BEST AND INSTALL CLIP LOCK RING.

STEP 19: OIL OUTSIDE OF SLEEVE LIBERALLY, USING CARE NOT TO GET OIL IN-TO EXHAUST HOLES. ALSO, RUB OIL AROUND INSIDE BORE ON THE HEAD OF THE HAMMER.

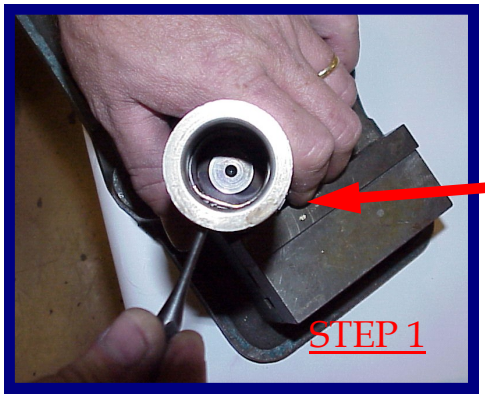


STEP 20: REASSEMBLE, MAKING SURE AIR INLET PORT IS LINED UP TOWARD THE AIR ADJUSTING VALVE.

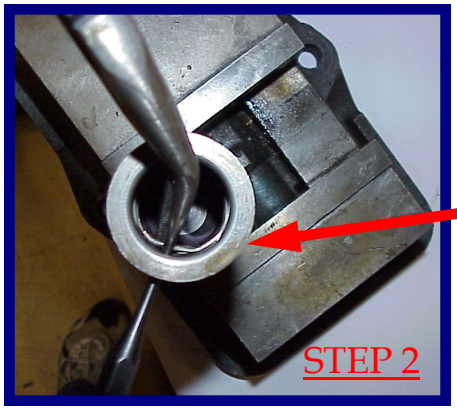

STEP 21

STEP 21: PUSH SLEEVE DOWN AND INSTALL HANDLE INTO GROOVE OF CAP. (NOTE: SOME TIMES THE SLEEVE STICKS IN TOP OF THE MOTOR HOUSING WHEN REINSTALLING SLEEVE. SHOULD THIS OCCUR, TRY AGAIN.)

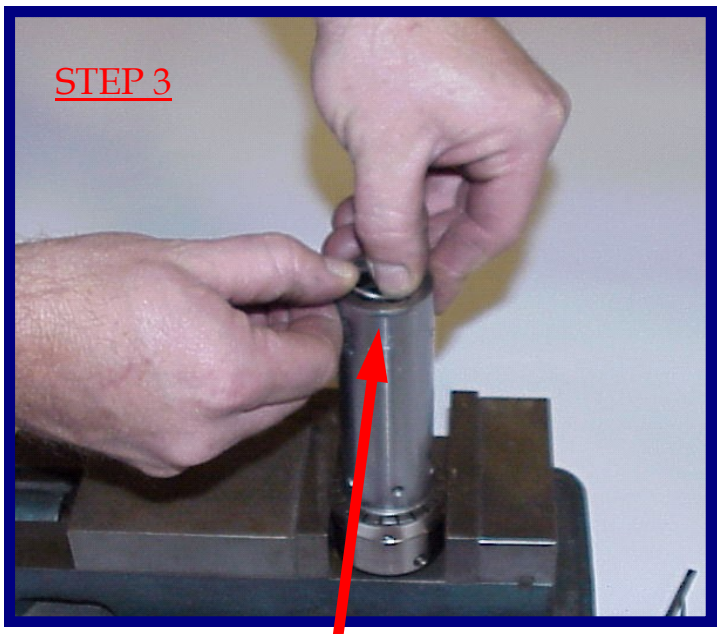
AIR MOTOR DIE CLIP SPRING REMOVAL AND REPLACEMENT


STEP 1

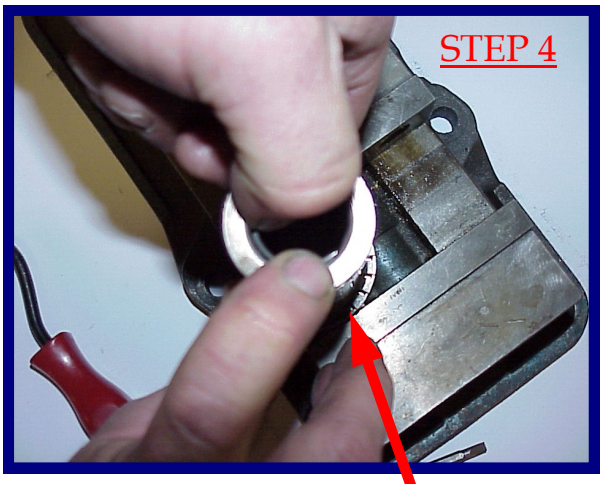
STEP 1: PUSH PUNCH THROUGH DIE CLIP SPRING REMOVAL HOLE. (HOLE THAT IS IN LINE WITH DIE CLIP SPRING)


STEP 2

STEP 2: WHILE PUSHING INWARD ON PUNCH, USE NEEDLE NOSE PLIERS TO PULL DIE CLIP SPRING OUT.



STEP 3: PRESS DIE CLIP SPRING INTO SLEEVE. START WITH ONE SIDE IN SLEEVE AND WORK YOUR WAY AROUND.



STEP 4: PUSH DIE CLIP SPRING DOWN INTO GROOVE.

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

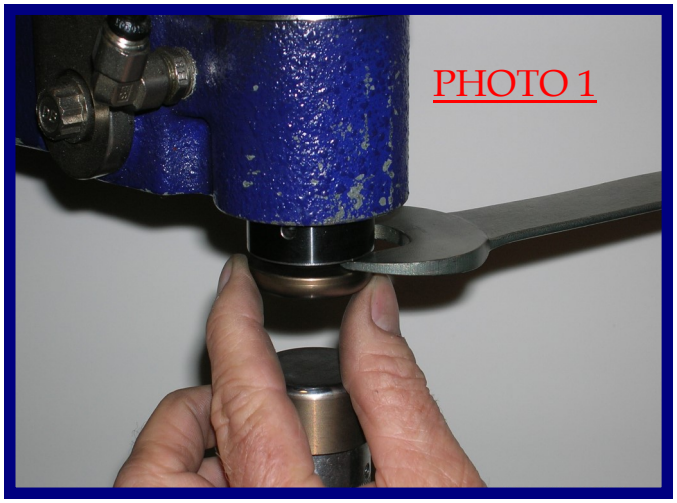
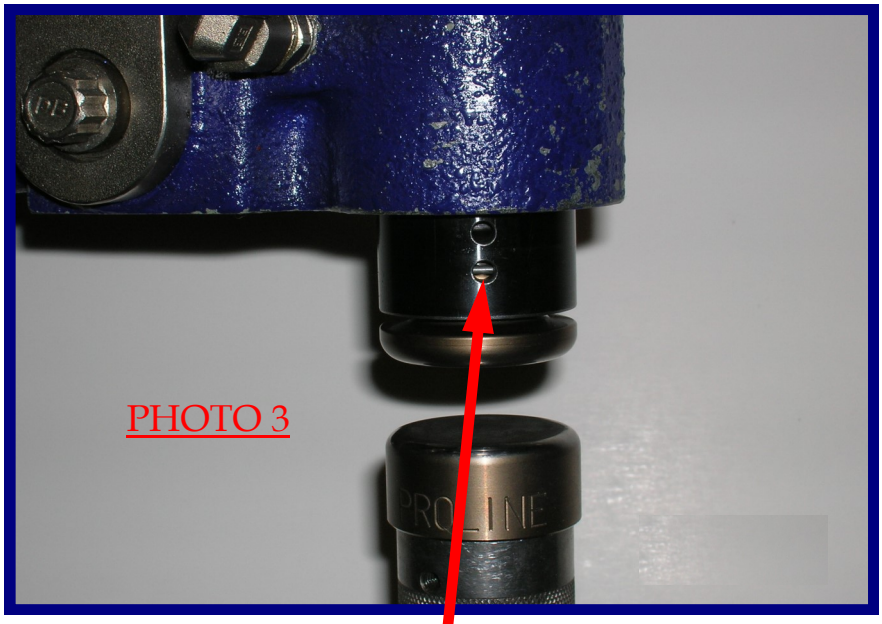


PHOTO 2



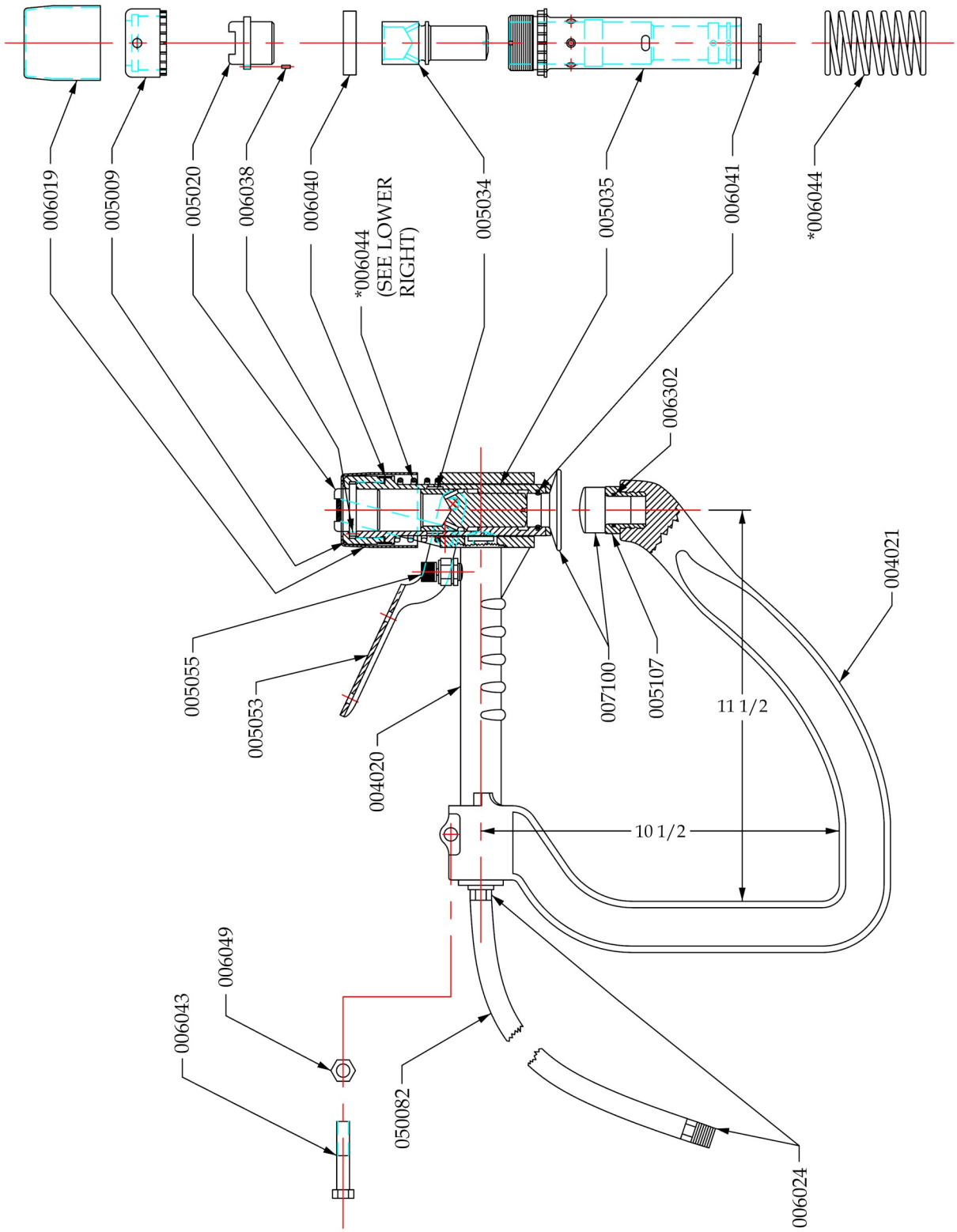
DIE CLIP SPRING

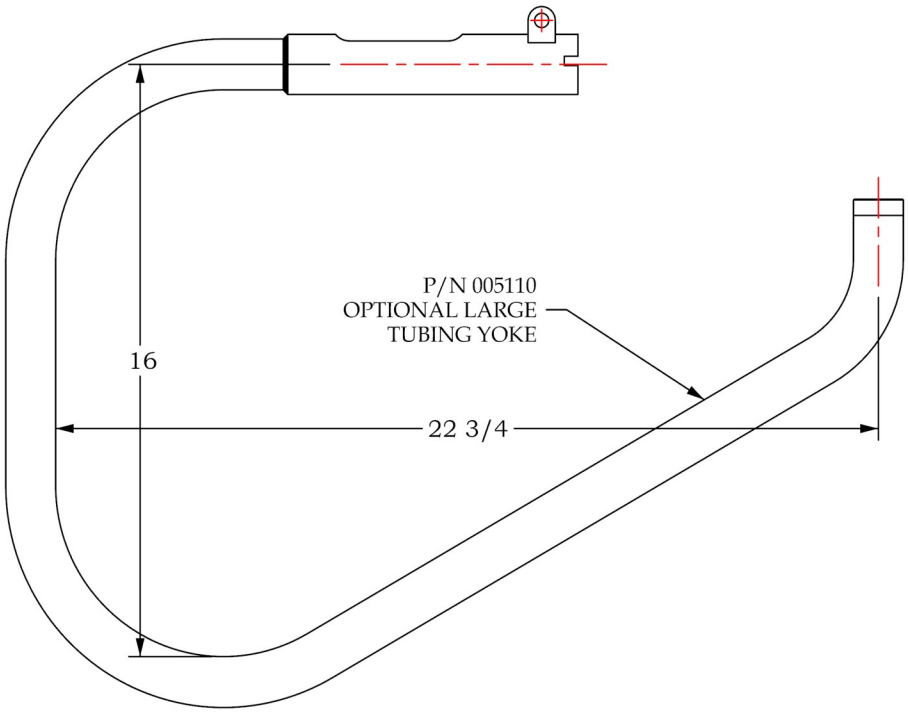
CAP

CLIP LOCK RING

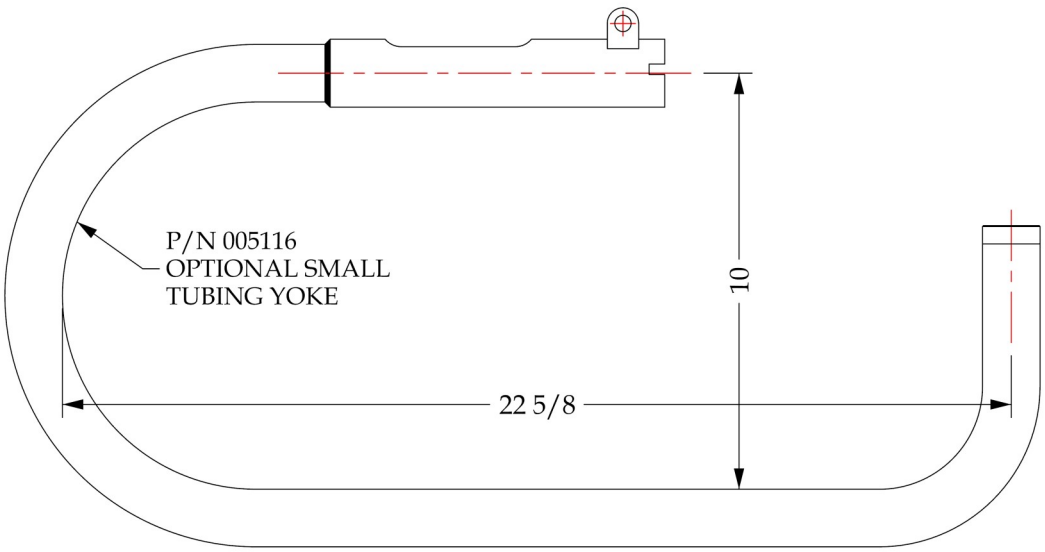
HAND HELD AIR HAMMER PART NO. DESCRIPTION (SEE DRAWINGS ON FOLLOWING PAGES FOR PART NO. LOCATION)

PART NO.	QTY.	DESCRIPTION
004020	1	HAMMER
004021	1	YOKE (CAST ALUMINUM)
005009	1	AIR MOTOR CAP
005020	1	CAP PLUG
005034	1	PISTON
005035	1	PISTON SLEEVE
005053	1	HANDLE ASSEMBLY
005055	1	HAMMER VALVE ADJUSTMENT KNOB (SMALLER FRONT)
005107	1	YOKE DIE HOLDER
005110	1	TUBING YOKE, LARGE
005116	1	TUBING YOKE, MEDIUM
006019	1	AIR MOTOR EXHAUST GUARD
006023	1	AIR HOSE
006024	2	30182 MALE NPTF PIPE
006038	1	ROLL PIN
006040	1	AIR MOTOR CLIP LOCK RING
006041	1	AIR MOTOR DIE CLIP SPRING
006043	1	BOLT
006044	1	AIR MOTOR RETURN SPRING
006049	1	HEX NUT
006302	3	YOKE DIE CLIP SPRING (2 EXTRA)
007100	22	COMPLETE DIE SET, 22 PIECES (SEE PAGES 15 AND 16)


006019
005009
005020
006038
006040
*006044
(SEE LOWER
RIGHT)
005034
005035
006041
*006044
006302
004021
005055
005053
004020
007100
005107
11 1/2
10 1/2
006049
006043
050082
006024



SPECIAL TUBING YOKES
AVAILABLE ON REQUEST



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 URETHANE DIE				
030092	NONE	------	------	RUBBER TOP DIE KIT, ALL 4 PCS.

CUSTOM DIES AVAILABLE

SEE NEXT PAGE FOR ASSEMBLY DRAWING

AIR HAMMER DIE ASSEMBLY
NUMBER ON DIE INDICATES RADIUS IN INCHES