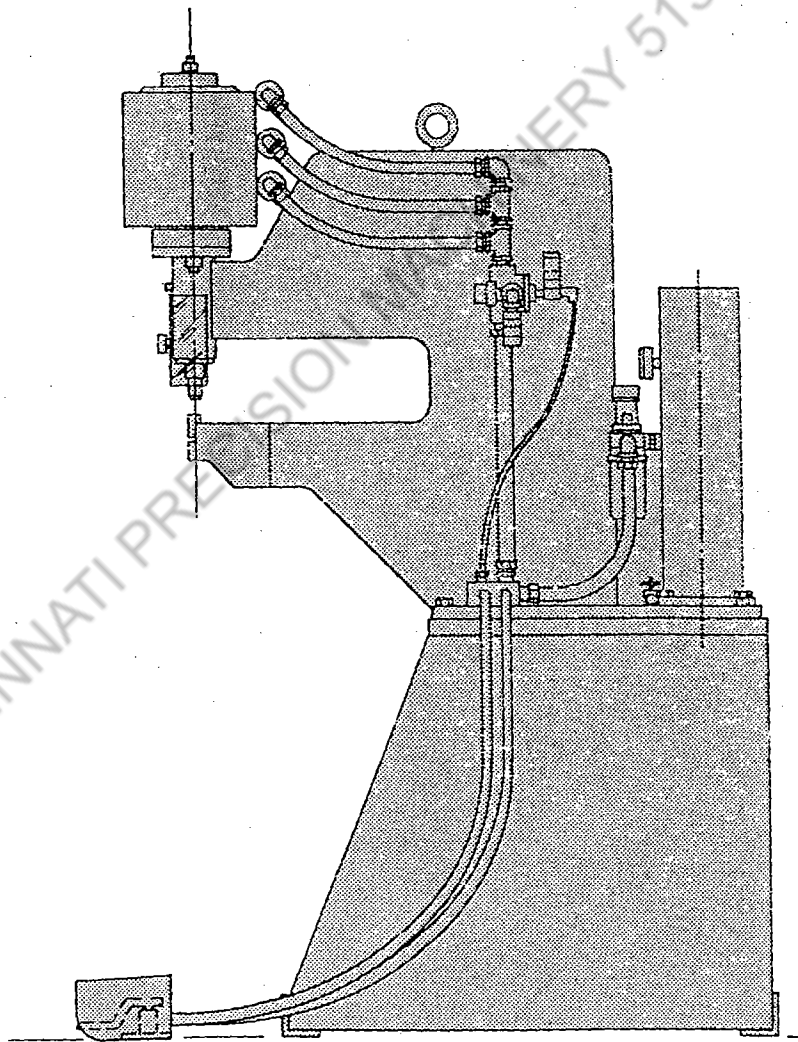


# QUICLOK

— LIGHT DUTY —

UPPER TOOLING REPAIR

DIE REPLACEMENT and ADJUSTMENTS



Made in America by LOCKFORMER

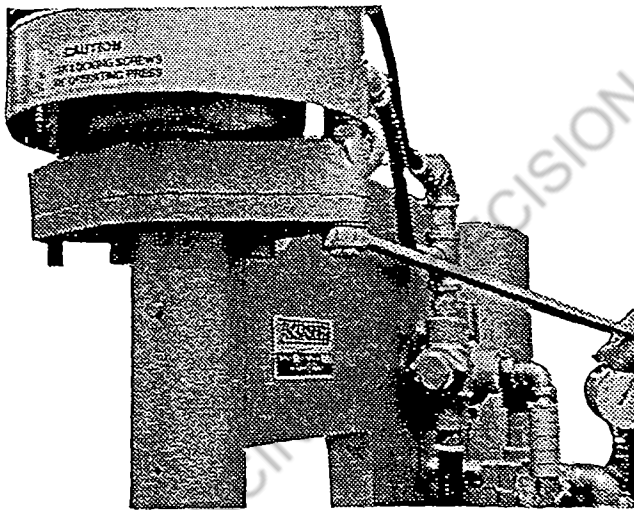
# DIE REPLACEMENT AND ADJUSTMENTS

PREPARING THE PRESS FOR DIE REMOVAL	SECTION 1
REMOVING THE DIE	SECTION 2
REPLACING THE DIE	SECTION 3
DIE ADJUSTMENTS	SECTION 4

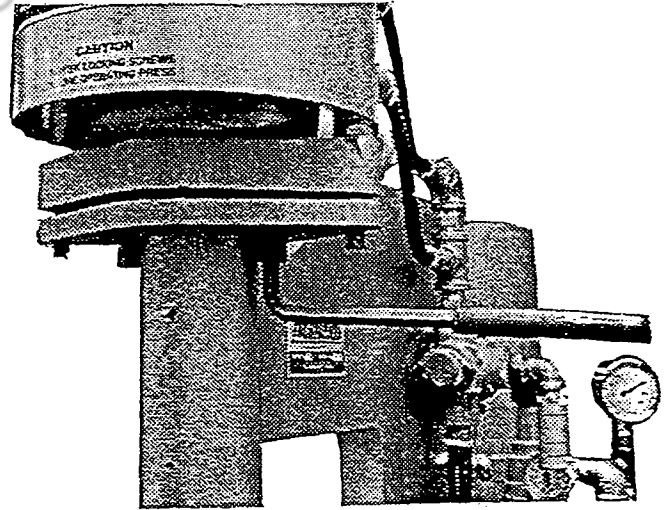
## PREPARING THE PRESS FOR DIE REMOVAL

### Section 1.

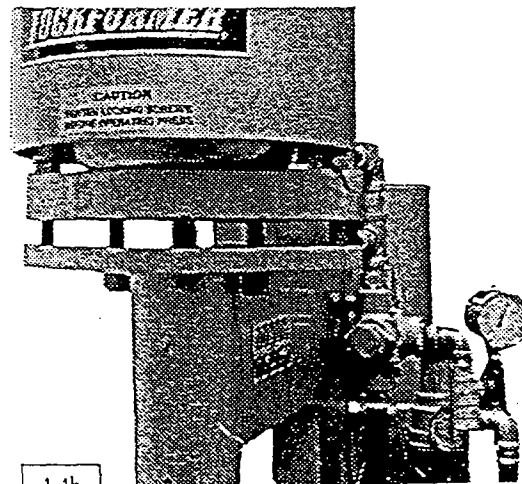
- 1.1 Remove the Air Supply and Drain the Air Tank.
- 1.2 Remove the Plastic Guard.
- 1.3 Using a 15/16" Box wrench, remove the two (2) 5/8" Lower Lock Nuts and washers. See Illustration 1.3.
- 1.4 With a 1/2" Allen Wrench, LOOSEN, but **DO NOT REMOVE** the two (2) 5/8" Socket Head Cap Screws that hold the power unit to the press. This will allow the power unit to lift upwards due to the slight spring tension of the unit itself. See Illustration 1.4a and 1.4b.



1.3



1.4a

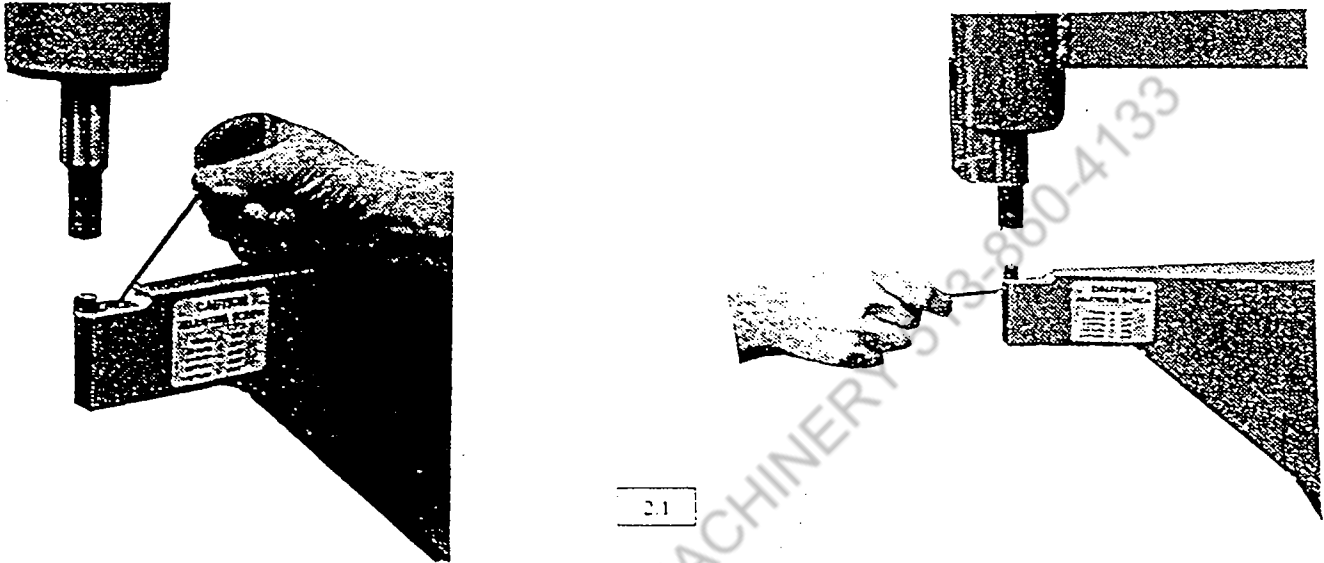


1.4b

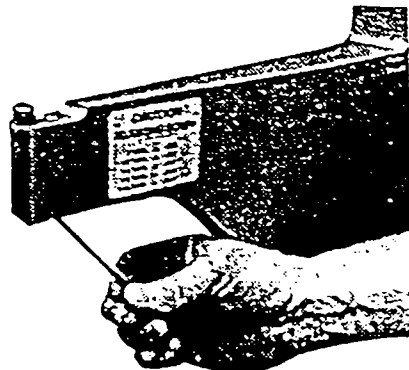
## REMOVING THE DIE

### Section 2.

2.1 Loosen the Die Retaining Screw. See Illustration 2.1.



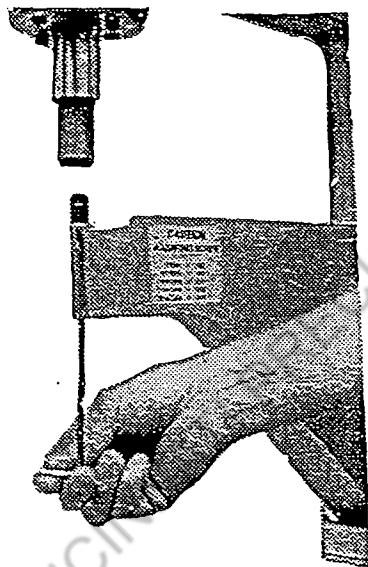
2.2 Loosen the Die Adjusting Retaining Set Screw.  
See Illustration 2.2.



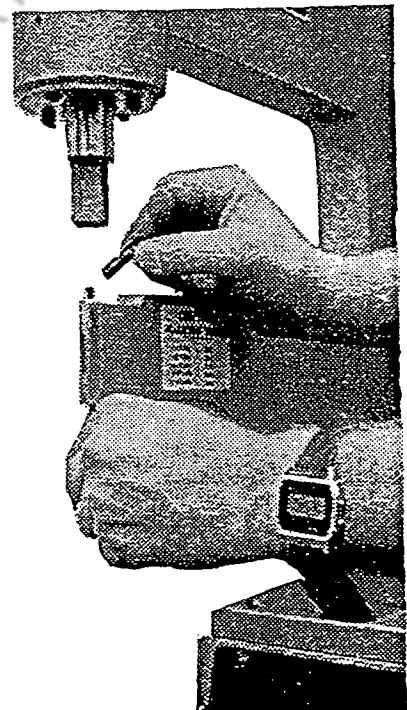
- 2.3 Raise the die by turning the Die Adjusting Screw clockwise, until the die is able to be lifted out of its slot and out of the press. See Illustration 2.3.

NOTE: It may be necessary to loosen the (2) 5/8" Socket Head Cap Screws (SHCS) that hold the Power Unit, as described in section 1.4, even further to allow for more die removal room.

- 2.4 Remove the die adjusting screw by continuing to turn it clockwise until it completely unscrews from its threads. See Illustration 2.4.



2.3

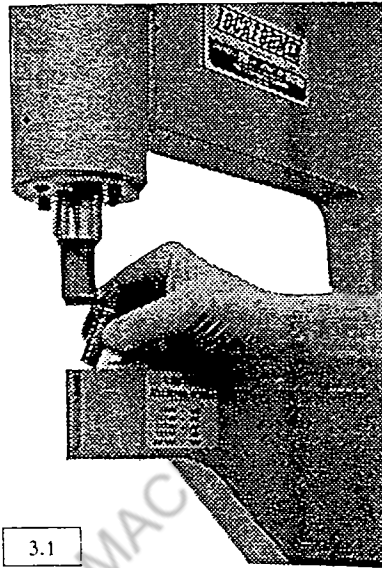


2.4

## REPLACING THE DIE

### Section 3.

- 3.1 Insert the die with its "flat" facing the rear of the press.  
(Towards the retaining set screw) See Illustration 3.1.



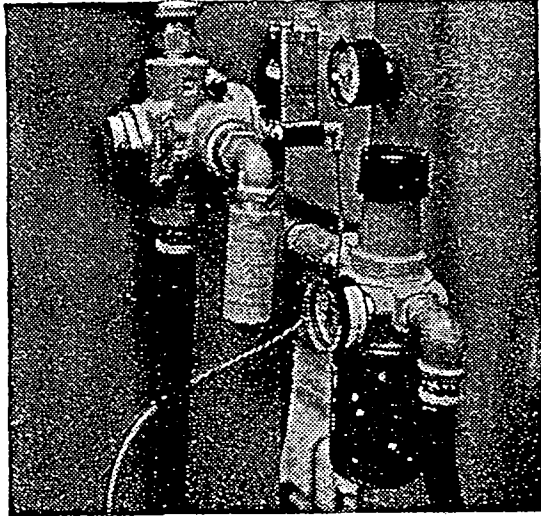
- 3.2 Push down on the die until it is fully seated in the press.
- 3.3 Replace the die adjusting screw at the underside of the press and screw it in clockwise until IT JUST MAKES CONTACT WITH AND SLIGHTLY RAISES THE DIE.
- 3.4 Tighten the two (2) 5/8" Socket Head Cap Screws (SHCS) that hold the Power Unit, down to a torque of 160 to 180 ft/lbs.
- 3.5 Install and Tighten the two (2) 5/8" Lock Nuts and washers to 85 ft/lbs.
- 3.6 Replace the Plastic Guard.
- 3.7 Re-Connect the Air Supply.

-THE MACHINE IS NOW ASSEMBLED  
AND READY FOR DIE ADJUSTMENTS. SEE SECTION 4-

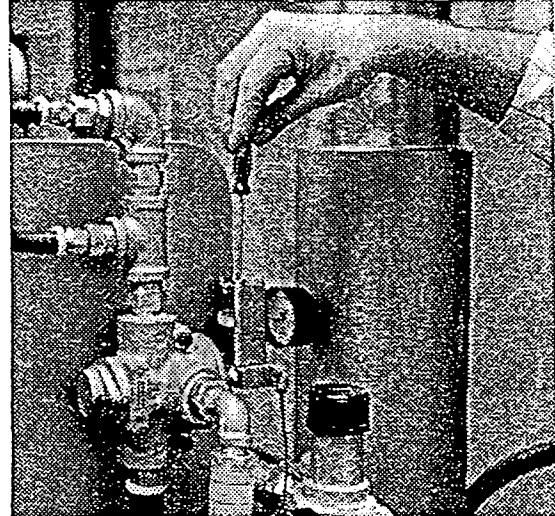
# DIE ADJUSTMENTS

## Section 4

NOTE: Before any die adjustments can be made, the Automatic Return Valve; mounted on the side of the machine, must be adjusted (adjust by turning the adjusting screw clockwise) so that the press will remain in the buttoning position for at least 3 seconds before automatically returning. See Illustrations 4a and 4b. (If you're not sure how to adjust the Automatic return valve, see Automatic Return valve section of the manual for further information.



4.a



4.b

It is also necessary to make sure the Pressure Regulator is set to 80 PSI and that at least 80 PSI is maintained in the Air Tank. (120 psi maximum).

\*If you have just replaced the die by following Sections 1-3, proceed directly to Section 4 - 4.4. If you are looking to Begin Die Adjustments, start with Section 4 - 4.1.

\*Note, The Die Must Be Adjusted to Suit The Material Thickness.

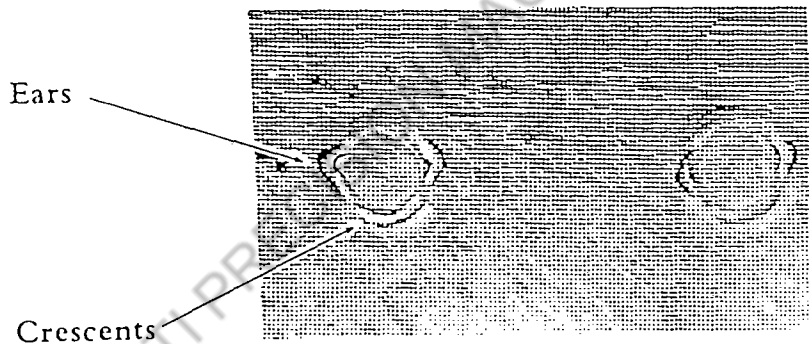
- 4.1 Loosen the Die Retaining Set Screw. See Illustration 2.1.
- 4.2 Loosen the Die Adjusting Retaining Screw. See Illustration 2.2.
- 4.3 Lower The Die. Do this by turning the Die Adjusting Screw Counter-clockwise until the die is as low as it will go. See Illustration 2.3.
- 4.4 With a sample of the material to be joined, try to button lock the two pieces together.

Because the die is at the bottom position, Very Little, if any buttoning, should be visible.

REMEMBER: To get the die to its Optimum setting, adjustments are made, AT FIRST, IN 1/4 TURNS AND THEN IN 1/8 TURNS, TESTING THE BUTTON LOCK AFTER EACH ADJUSTMENT HAS BEEN MADE.

- 4.5 Turn the Adjusting screw clockwise 1/4 of a turn, then make a test button lock, Carefully Noting The Button Depth.

As soon as the machine starts to form a button which seems to have some strength, Start adjusting the die by 1/8 of a turn until a good button is formed. A good button will have what we call "ears" and symmetric "crescents". There will be two ears and two crescents at right angles to the ears. These characteristics of the button will be plainly visible. See Illustration 4.5.



Once a good button seems to have been formed, test it by trying to pull and twist the button loose. It's important to remember the amount of force used to pull and twist the button apart. Your feel for the strength of the button will determine the final setting for the press.

After the button has been pulled apart, turn the Adjusting screw counter-clockwise (lowering the die) 1/16 of a turn and form another buttonlock.

Test the strength of the newly formed button.

Compare the strength needed to separate the first button to the strength needed to pull apart the second button.

From this point, You now have two options to follow.

OPTION #1 If the button pulls apart easier, your original setting was correct. Re-adjust the die UP 1/16 of a turn (turning the die adjusting screw clockwise) and test the button.

STOP. The setting process is now complete.

OPTION #2 If the button-locked material is stronger or as strong as the previous button, turn the Adjusting Screw down another 1/16 of a turn. Again, test the material after each new setting. Continue this fine tuning until it appears that the latest die setting is not as strong as the die setting previous to it. Once this has been determined, turn the adjusting screw UP 1/16 of a turn. Form another button. Test it. This, along with your visual confirmation, should be the best Button Lock setting for the die and the material being used.



## REMEMBER

The Key To Long Die Life Is To Set The Die To The Lowest Position That Will Still Produce A Strong Button.

4.4 Tighten the Die Retaining Set Screw.

4.5 Tighten the Die Adjusting Retaining Set Screw.

Whenever the die, punch or material thickness is changed  
The die has to be reset.

4.6 Reset the Automatic return valve for normal cycle speed and re-check the button. If the button is not as strong as before, the return cycle has been set too fast and must be slowed down.

-PRODUCTION CAN NOW BE RUN-

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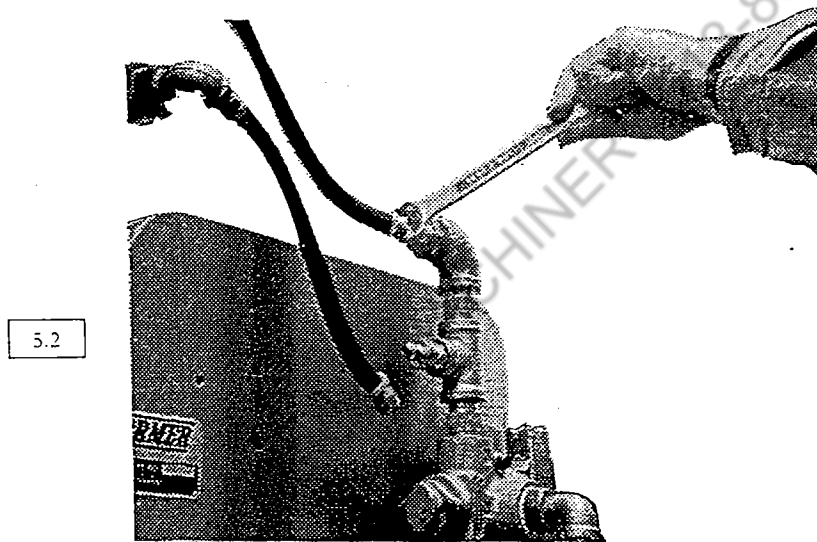
## UPPER TOOLING REPAIR

Removing the Power Unit	Section 5
Removing the Upper Tooling	Section 6
Replacing the Upper Tooling	Section 7
Replacing the Power Unit	Section 8

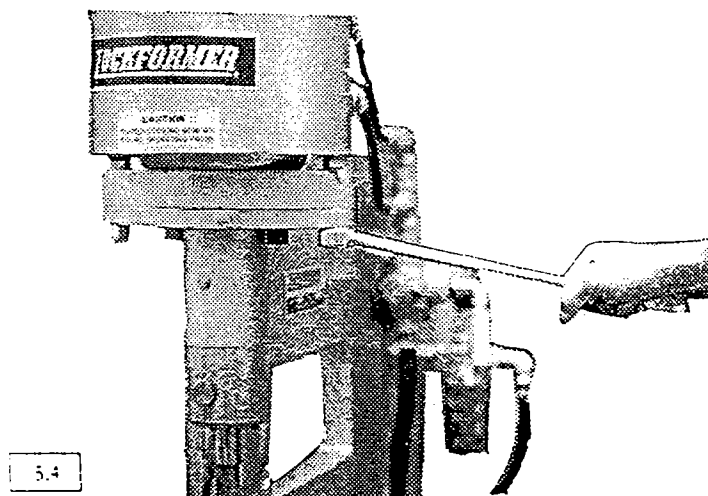
### Section 5.

### REMOVING THE POWER UNIT

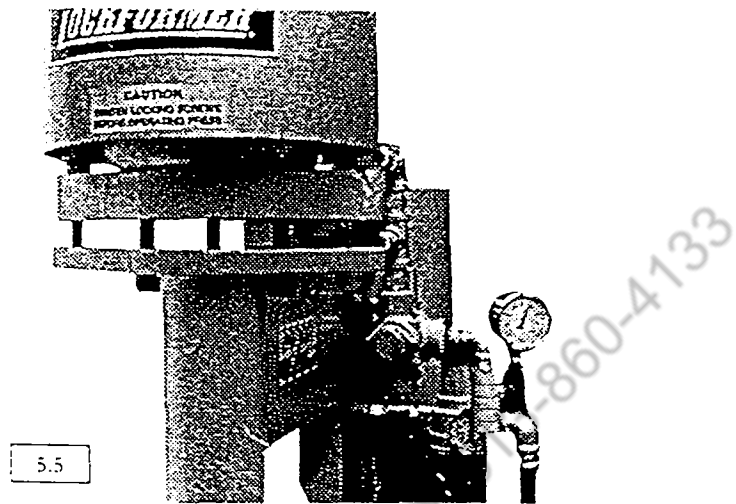
- 5.1 Remove the air supply and drain the air tank.
- 5.2 Using an 11/16" open ended wrench, remove the two (2) hoses that connect the power unit to the valve at The Valve End, by unscrewing them at the hose end swivels. See Illustration 5.2.



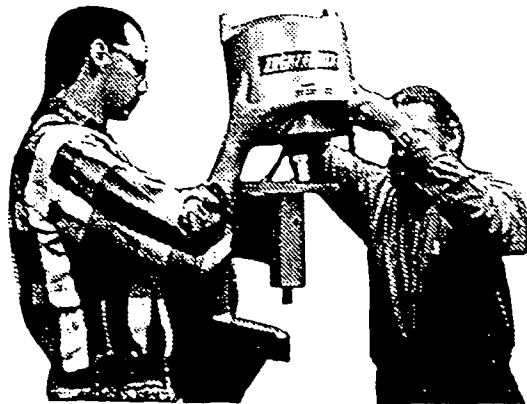
- 5.3 Remove the plastic guard.
- 5.4 Using a 15/16" Box wrench, remove the two (2) 5/8" Lower Lock nuts and washers. See Illustration 5.4.



- 5.5 Remove the two (2) 5/8" SHCS. The power unit will lift up slightly due to the slight spring tension in the barrel. See Illustration 5.5.



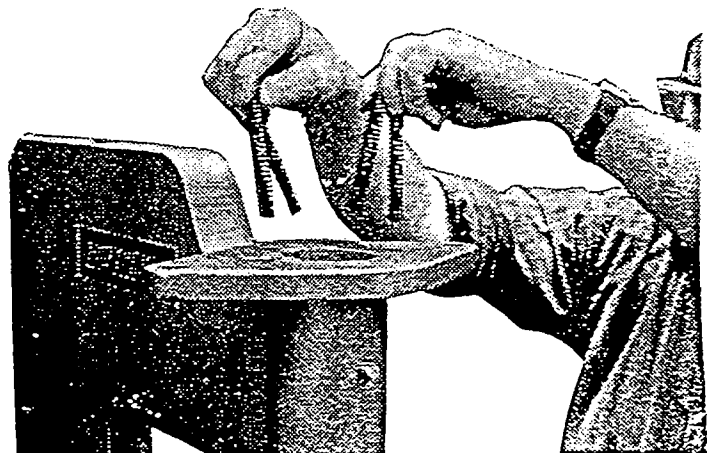
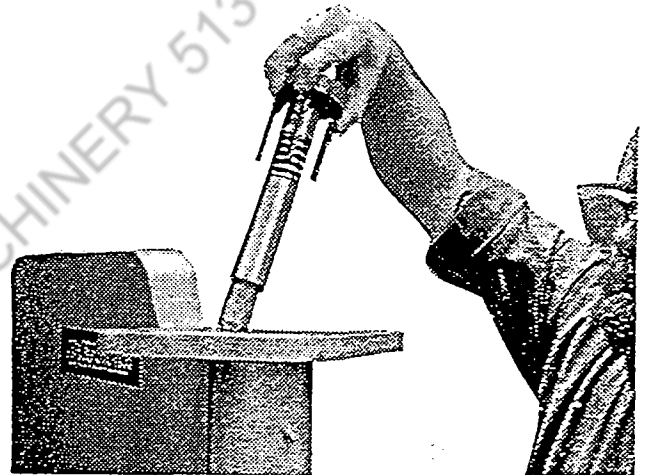
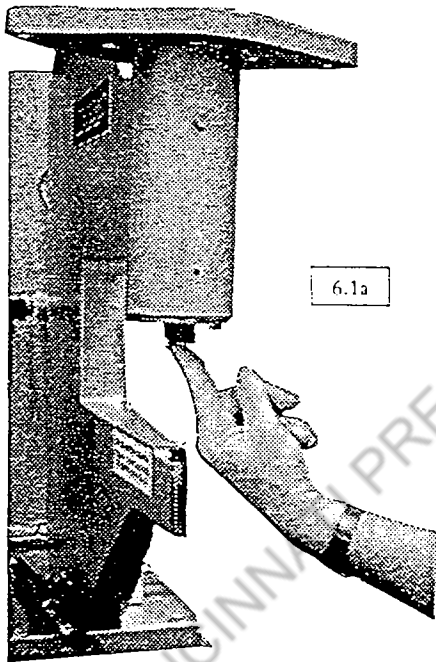
**WARNING!** Be careful the 30 pound Power Unit doesn't fall off the press. Once the two (2) SHCS have been removed, the Unit should remain tilted on top of the press, tilted to the rear, until two people can lift it off the machine and carefully set it in a safe place. See Illustration 5.5a.



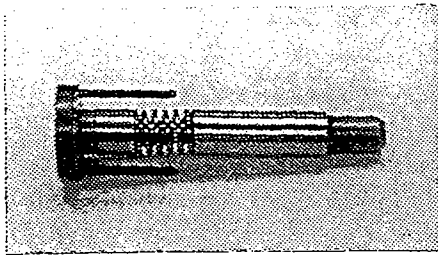
## REMOVING THE UPPER TOOLING

### Section 6

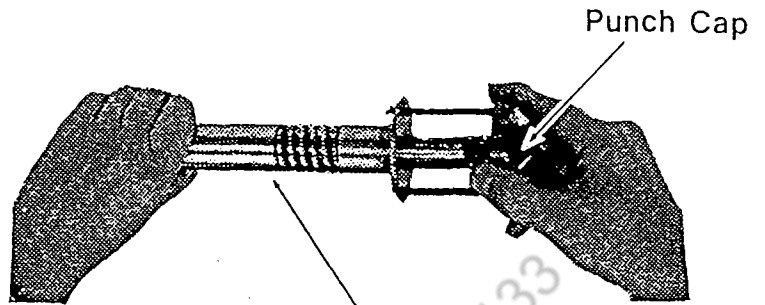
- 6.1 Take the Upper Tooling out of the barrel. Do this by pushing UP on the bottom of the Upper Tooling and lifting it up and out from the top of the barrel.  
See Illustrations 6.1a and 6.1b.
- 6.2 Remove the four (4) Upper Lifter Springs. There are eight (8) springs in the barrel. Four (4) deep pocket springs and four (4) Upper Lifter Springs. The four Upper Lifter springs will be plainly visible once the Upper Tooling has been removed. Take out the four Upper Lifter Springs ONLY.  
See Illustration 6.2.



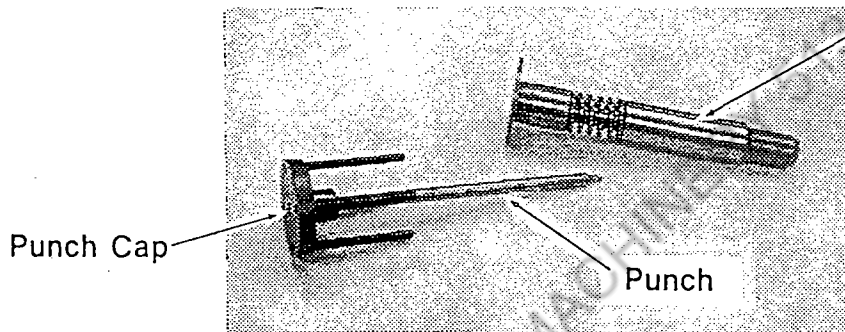
- 6.3 Remove the Punch from the Upper Tooling. To do this, the Upper Tooling has to be separated. Simply grab the punch cap and pull it apart and away from the Upper Punch Guide. See Illustrations 6.3a, 6.3b and 6.3c.



6.3a

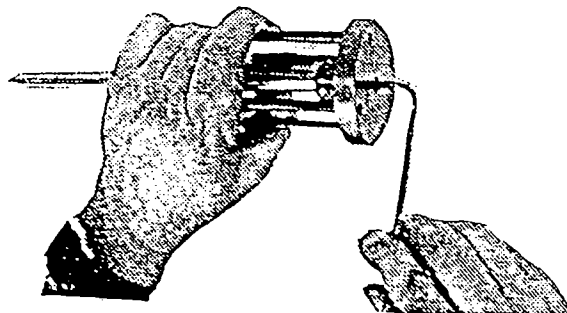


6.3b



6.3c

- 6.4 The Punch is removed from the Punch Cap by removing the 10/32" SHCS that holds the Punch in place. It may be necessary to put the Punch in a vise to remove the 10/32" SHCS. See Illustration 6.4.



6.4

- 6.5 Put in a new Punch and tighten down the 10/32" SHCS to 20 ft/lbs. Again, it may be necessary to put the punch in a vise while tightening the SHCS down.

- 6.5 Liberally grease the punch and re-assemble the two pieces of the Upper Tooling.

## REPLACING THE UPPER TOOLING

### Section 7

- 7.1 Before the Upper Tooling can be replaced with the four (4) Upper Lifter Springs, the Upper Tooling Barrel Clearance has to be checked. This clearance is checked by inserting the Upper Tooling WITHOUT the four (4) Upper Lifter Springs.

Line up the four Upper Tooling Spring Guides with the four springs still in the pockets of the barrel.

The Upper Tooling should easily push down to the bottom of the barrel. If the tooling is too tight in the barrel, you'll have to remove it, loosen the 10/32" SHCS, then retighten it. This should correct the problem.

IMPORTANT The Upper Tooling has to slide down easily to the bottom of the barrel before proceeding with the next step.

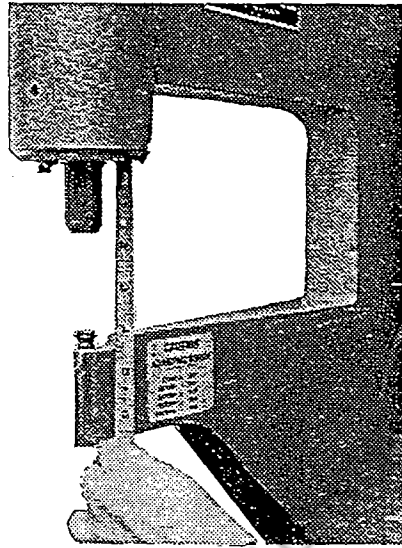
- 7.2 Once the Upper Tooling slides down easily to the bottom of the barrel, remove it. Put the four (4) Upper Lifter Springs on the Spring Guides. A good coat of heavy grease will help hold the springs to the Upper Tooling Spring Guides.
- 7.3 After greasing the Upper Tooling, replace it in the barrel. Make Sure the four (4) Lifter Springs, attached to the Upper Tooling line up with the Spring Pockets in the barrel. Lining the Springs up with the Spring Pockets IS CRITICAL.

Much of the positioning for the Quiclok will depend on the feel the operator has for the machine. You'll know when the Upper Tooling is positioned correctly. The Upper Tooling will drop into the pockets of the barrel. This is done by wiggling and turning the Upper Tooling until you can feel and hear the tooling drop into place.

When the Upper Tooling does drop into place, measure how much of the tooling is sticking out of the bottom of the barrel. If 1-1/2" - 2" is sticking out, the tooling has been installed correctly. If less than 1-1/2" is sticking out from the bottom of the barrel, continue to turn the tooling from the TOP until it drops into place.

REMEMBER, this is a critical stage of reassembly. If the upper tooling is not positioned correctly, severe damage to the machine will occur.

Once the Upper Tooling has been positioned correctly and at least 1-1/2" - 2" is sticking out from the bottom of the barrel, you are now ready to replace the Power Unit. See Illustration 7.3.



7.3

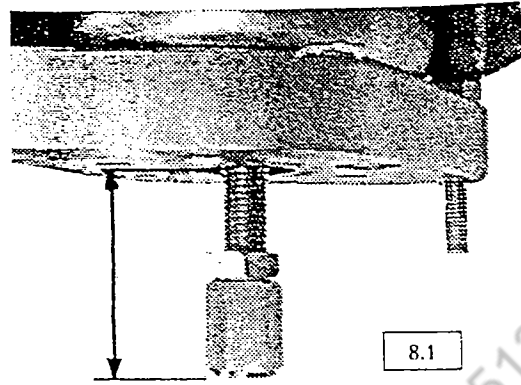
## REPLACING THE POWER UNIT

### Section 8

- 8.1 Before the Power Unit can be replaced, the Pressure Nut and Jam Nut setting and tightness have to be checked.

Check the Pressure and Jam Nut tightness by grabbing ahold of them and trying to turn them. If they turn and the Power Unit shaft Does Not turn, then they are loose. If the nuts and shaft turn as one, then they are tight.

If the pressure and jam nuts are loose, First MEASURE the distance of the shaft from the underside of the base plate of the Power Unit, to the end of the Pressure Nut.  
See Illustration 8.1.



If your Quiclok has a 1/2" stroke, the distance from the base plate to the end of the Pressure Nut should be 3-5/8".

If your Quiclok has a 1" stroke, the distance from the base plate to the end of the Pressure Nut should be 3-1/8".

Make the necessary adjustments to the Pressure and Jam nuts, if needed, to get them to the proper setting. After applying Blue Loctite, or its equivalent, to the shaft, tighten the two nuts down to a torque of 80 ft/lbs.

8.2 Replace the Power Unit, with its mufflers to the rear of the press.

8.3 Replace the two (2) 5/8" SHCS. Tighten them down to a torque of 160 to 180 ft/lbs.

8.4 Replace the two (2) 5/8" Locknuts and Washers. Tighten them down to a torque of 85 ft/lbs.

8.5 Replace the Plastic Guard.

8.6 Reconnect the air hoses from the Power Unit to the Valve being careful not to overtighten the hose end swivels.

8.7 Reconnect the Air Supply and check that the regulator is set to 80 psi.

THE QUICLOK IS NOW REASSEMBLED.



## REQUIRED TOOLS

for DIE REPLACEMENT:

15/16" Box Wrench  
1/2" Allen Wrench  
3/16" Allen Wrench  
1/8" Allen Wrench

for UPPER PUNCH REPLACEMENT

15/16" Box Wrench  
11/16" Open Ended Wrench  
1/2" Allen Wrench  
3/16" Allen Wrench  
1/8" Allen Wrench  
5/32" Allen Wrench  
Heavy Grease  
Blue Loctite or an Equivalent Removable Type Fluid

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