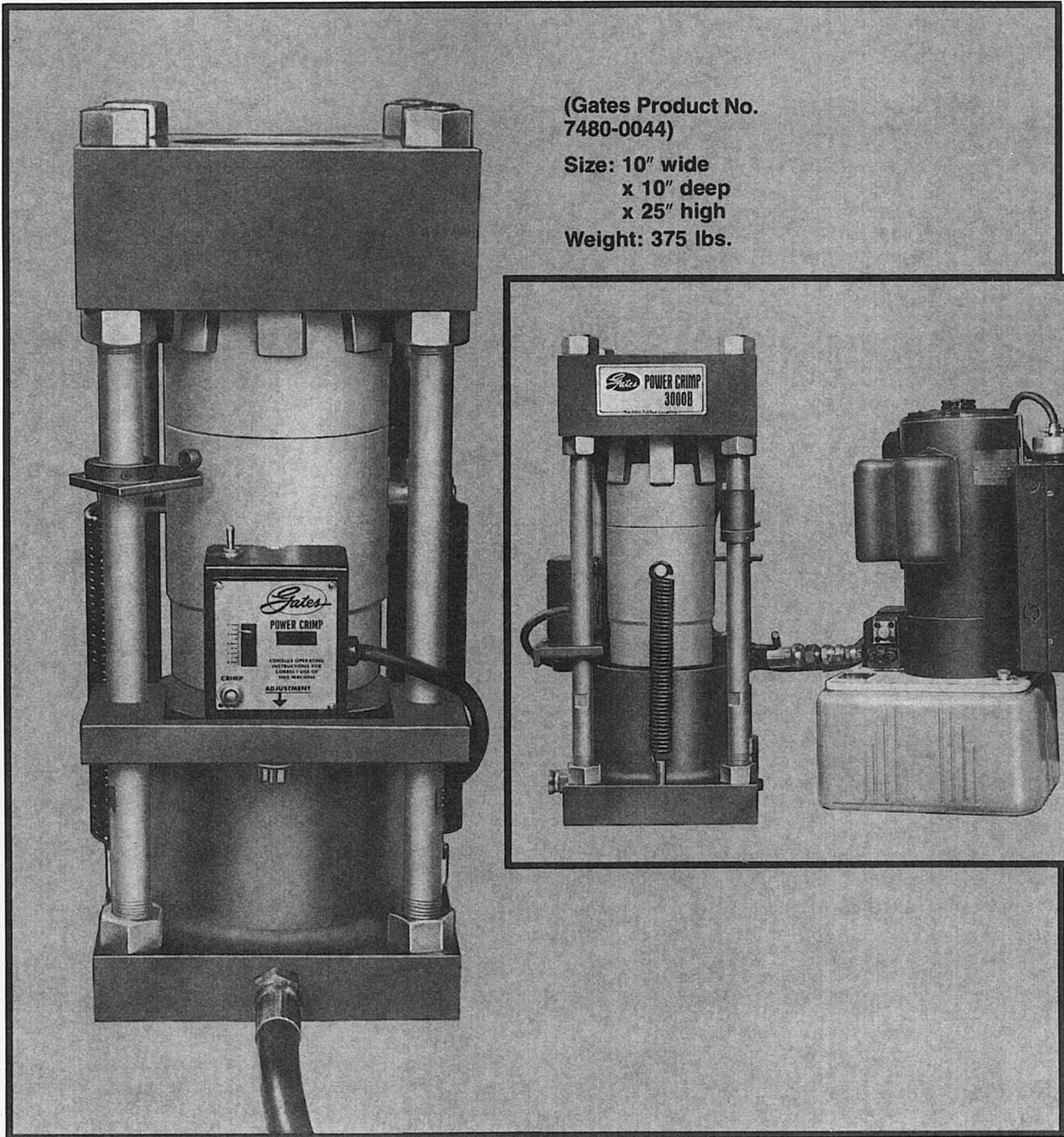


# GATES POWER CRIMP 3000B

(for coupling 3/16" through 2" Hydraulic  
Hose using Perfect Finger Dies)



(Gates Product No.  
7480-0044)

Size: 10" wide  
x 10" deep  
x 25" high

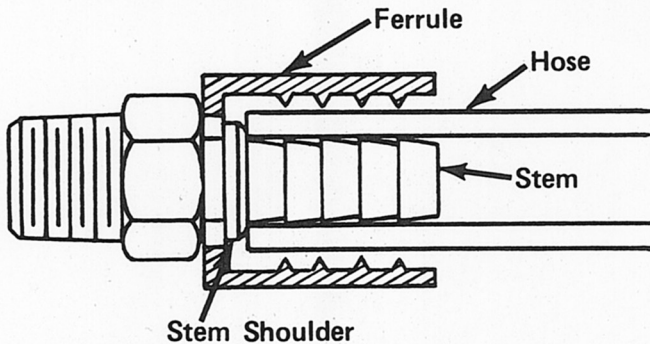
Weight: 375 lbs.



The Gates Rubber Company • Denver, Colorado 80217

# Hose Assembly Preparation

1. Cut the hose to the proper length.
2. Insert the ferrule over the end of the hose. (Fig. A).
3. Lubricate the first two or three serrations on the stem using a lightweight oil only.
4. Fasten the stem securely in a vise on the hex portion and push the hose onto the stem. (Fig. B). The hose should be solid against the stem shoulder. (See sketch below).



5. Push the ferrule so that it rests against the hex of the stem. (Fig. C). Your hose and couplings are now ready to be crimped.

All standard straight stems and straight exposed "O" Ring type stems, up through 2", can be coupled in the PowerCrimp 3000B machine, plus most types of bent tubes, 45° or 90° elbows, etc., up through 2". See Gates Hydraulic Hose Catalog for these stems.

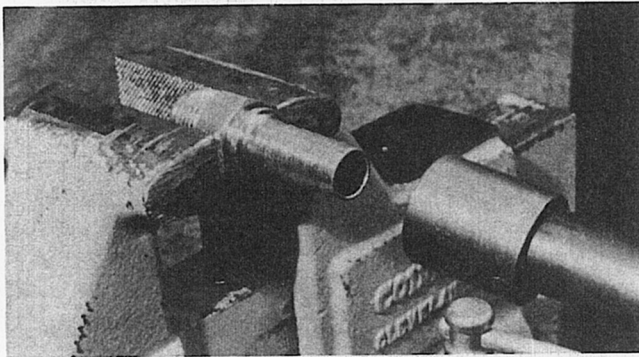


Fig. A

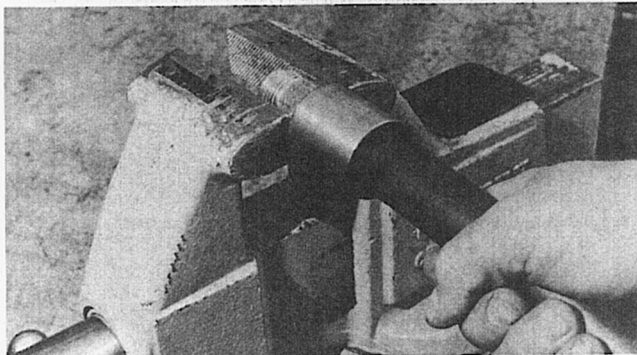


Fig. B

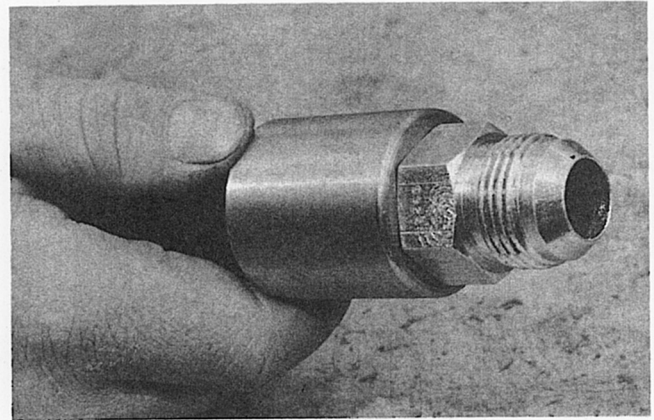


Fig. C

## Machine Preparation and Operation

1. Connect the hydraulic hose from the ram to the pump. Refer to Gates Electro Pump Manual 35019-AP.
2. Connect the switch cord from the power Crimp switch box to the pump (Fig. D). Now, connect the electric cord from the pump to the proper grounded electrical outlet.

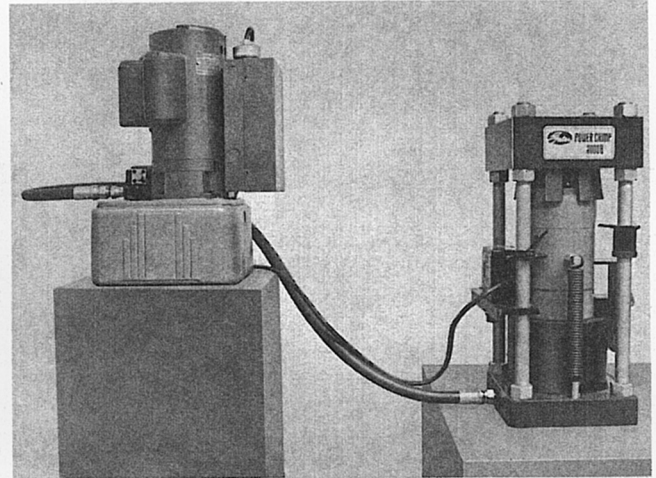


Fig. D.

3. Bleed the system. To remove air from the oil system, turn the Power Crimp machine upside-down. NOTE: PLACE THE PUMP ON A LEVEL HIGHER THAN THE POWER CRIMP MACHINE. (Fig. E on Page 3). The pump should not be lower than the machine for any length of time because air will seep into the oil system. Be sure that the hydraulic hose descends gradually to the crimper, with no sharp bends or sags. Otherwise air will collect in high spots in the hose and remain in the system. Activate the microswitch and run the machine through several cycles in this position; then turn the machine right side up and reactivate the microswitch. If the ram moves up as soon as the switch is pushed, the system is free of air.

- Select the correct die fingers for the hose size to be crimped and insert the die fingers into the die cage. See Crimp Data charts for proper die selection.
- Die fingers can be installed by removing the top plate. The top plate is removed by using the two knobs and giving the plate a slight twist counterclockwise and lifting up. Place the fingers in the die cage slots from the top, then replace the top plate.

**NOTE:** When crimping 2" assemblies do **not** use the top plate.

- Adjust the needle setting on the switch box to the correct reading for the hose type and ferrule to be crimped. The needle is adjusted by turning the black knob on the bottom of the control box. (Fig. F).

For microswitch needle setting, see data charts supplied with this machine. **NOTE:** Only the approximate setting is given; a slightly different setting may be necessary to obtain the proper crimp diameter: Record actual setting on the data card.

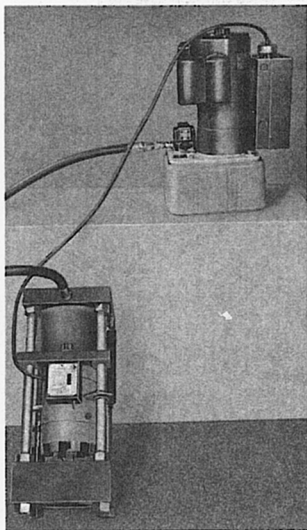


Fig. E



Fig. F

an 8C2AT assembly, with either a steel or aluminum ferrule, using #33 Die Fingers, and checking the O.D. of the crimped ferrule. If the crimped ferrule measures  $1.000 \pm .005$ , the control is calibrated. If not, you must loosen the two clamps and move the control box up or down on the tie rods until the correct ferrule O.D. is reached. Moving the control box up  $1/8$ " results in the ferrule being crimped  $.033$ " smaller in diameter. The ferrule will be crimped in a larger diameter by moving the control box down. At the correct position, tighten the holding clamps securely and the machine will be recalibrated to crimp all hose sizes. (Fig. G). With the machine calibrated, the approximate gauge reading on the Crimp Data Card may now be used to obtain the crimp diameter.

The Control box (Fig. H) is provided with an adjustment for positioning the microswitch and actuator horizontally as well as vertically. By loosening the adjustment screws, the microswitch and actuator can be moved in or out to correspond with your particular Power Crimp machine.

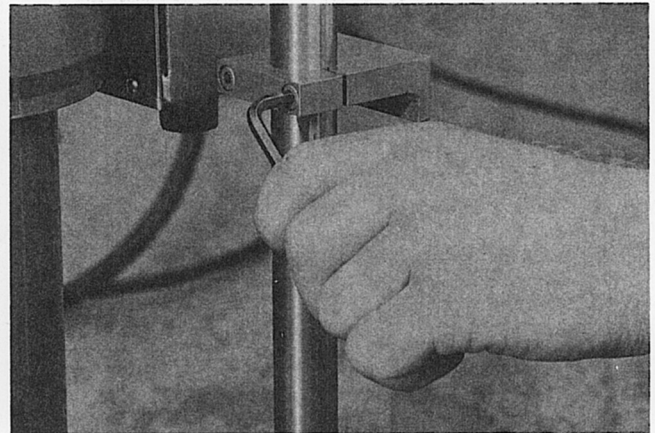


Fig. G

**NOTE:** Before you use the machine for the first time, apply a thin layer of Molykote G paste (7482-3010) to the inside working area of the die cone. This layer of paste must be applied again whenever the area becomes shiny from the rubbing of the die fingers.

Molykote G paste exposed to air for more than a short period of time becomes thick. The addition of a small amount of oil (motor or hydraulic) will thin the paste.

- To crimp the hose and coupling assembly, push the button marked "CRIMP" on the control box (Fig. F) and release after the pump has started. The ram will stop automatically and return after a crimp has been achieved. The cycle can be interrupted at any time by pushing sideways on the toggle switch located on top of the switch box.

**NOTE:** The Power Crimp machine control box is calibrated and set at the factory to assure the user a properly crimped assembly. If for some reason the calibration is disturbed, then the control box can be recalibrated by setting the indicator needle on the number 2-1/4 and crimping

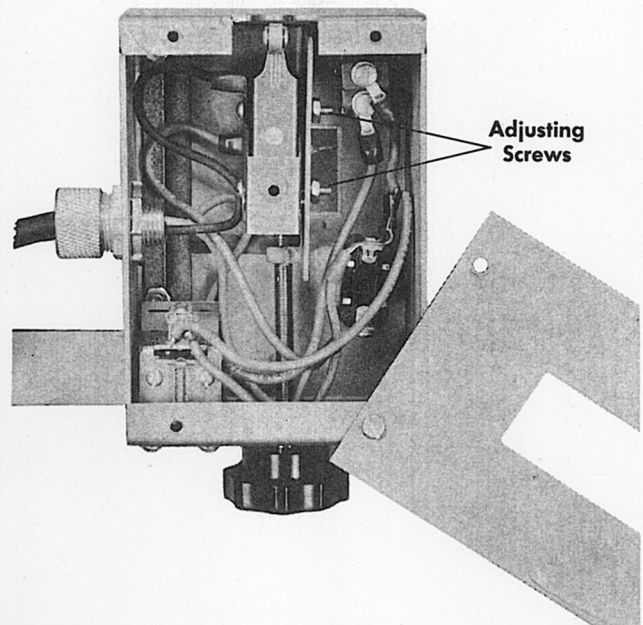


Fig. H

### IMPORTANT

To assure a quality assembly, check the first assembly of each run. Measure the crimped O.D. and compare it to the information contained in the Crimp Data Chart. If actual crimped O.D. is within  $\pm .005$  of the figure on the data sheets, a good assembly has been made. If crimped O.D. is out of tolerance, see NOTE on Page 3.

8. Bent tube assemblies can be crimped by removing the entire Depth Stop assembly.
9. To crimp 90° bend 2-inch size split flange couplings, it is necessary to remove the die fingers and run the ram to the top to insert the coupling into the machine. Replace the die fingers and crimp, then remove the die fingers and run the ram to the top again to remove the assembly.

### EXTERNAL DEPTH STOP LOCATER

There are two external depth stop locaters that can be used to position the stem for proper crimping. Either locater may be used for a two-piece or a one-piece coupling. The spring-loaded portion of the depth stop and the depth stop bracket have been preset and should not be changed. (Fig. I). The die cage must be completely down when setting the depth stops.

### MegaCrimp™ COUPLING

(Stem and Ferrule have been fastened together.)

1. Set the coupling (thread end down) on the angular depth stop. (Fig. L on Page 5).
2. Raise or lower angular depth stop until the center of the staked area of the coupling is in line with the center of the groove on the die cage. (Fig. L).

OR

Swing depth stop bracket so that it is over the angular depth stop. Align the center of the staked area on the coupling with the sharp edge of the bracket. (Fig. M on Page 5).

3. Remove coupling from the angular depth stop before crimping.

After crimping the first assembly, check for proper crimp length. The ferrule on the MegaCrimp and two-piece couplings should be crimped for the full length of the ferrule and the die fingers should not have touched the points of the hex.

You may have to make a small adjustment to the height of the angular depth stop to compensate for elongation of the assembly.

### TWO-PIECE COUPLING (Stem and Ferrule are separate pieces.)

1. Set stem (thread end down) on top of angular depth stop. (Fig. J).
2. Raise or lower angular depth stop until the top of the hex (on the stem) is in line with the center of the groove on the die cage. (Fig. J).

OR

Swing depth stop bracket so that it is over the angular depth stop. Align top of hex with the sharp edge of the bracket. (Fig. K on Page 5).

3. Remove stem from angular depth stop before crimping.

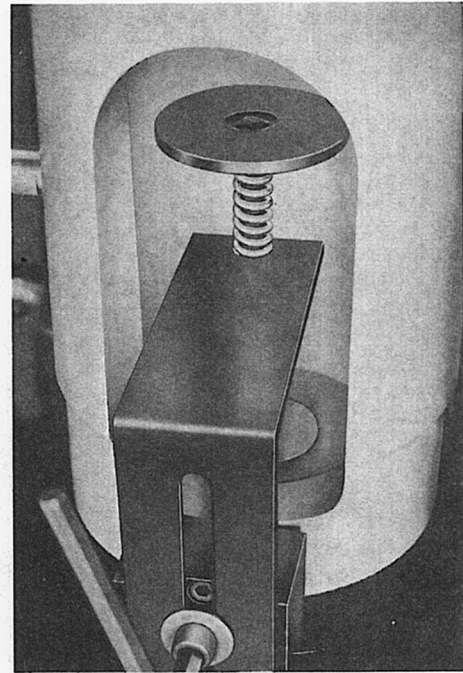


Fig. I

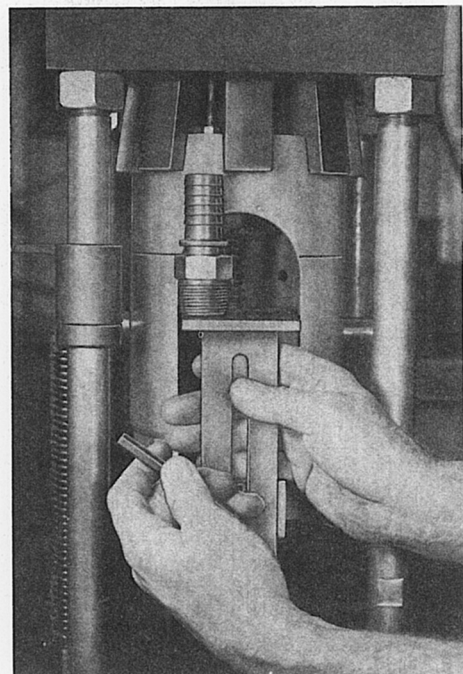


Fig. J

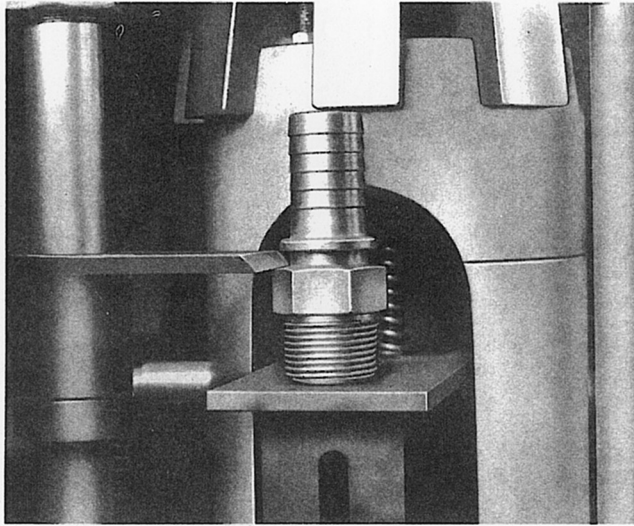


Fig. K

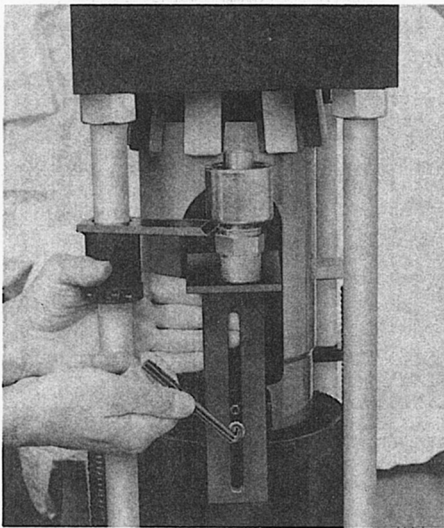


Fig. L

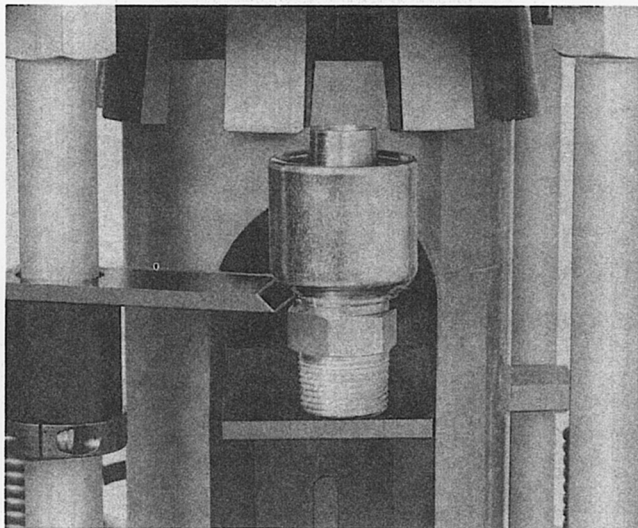
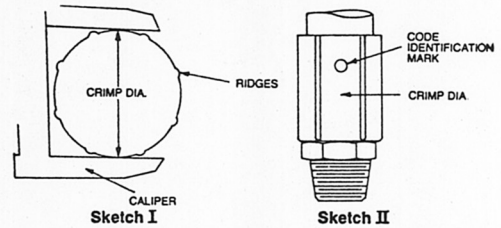


Fig. M

## RETURN STROKE LIMITING ARM

The part encircled in Fig. N is the return stroke limiting arm. When properly located it will prevent the die cage from returning to its "full down" position, therefore having a shorter stroke or shorter crimp cycle. To obtain the shortest stroke possible, adjust the limiting arm so that the stop (bolt head) on the die cage stops the die cage, on the downward movement, at a height that will just allow an assembly to be inserted into the die fingers.



## TO PROPERLY MEASURE A CRIMP DIAMETER:

1. Measure halfway between ridges. See Sketch I above - When using dial calipers, be sure the caliper fingers do not touch the ridges.
2. Measure halfway down the crimped portion of the ferrule. See Sketch II.
3. When measuring small crimp diameters ( $3/16$ " and  $1/4$ " ), a set of jaw type micrometers is recommended.

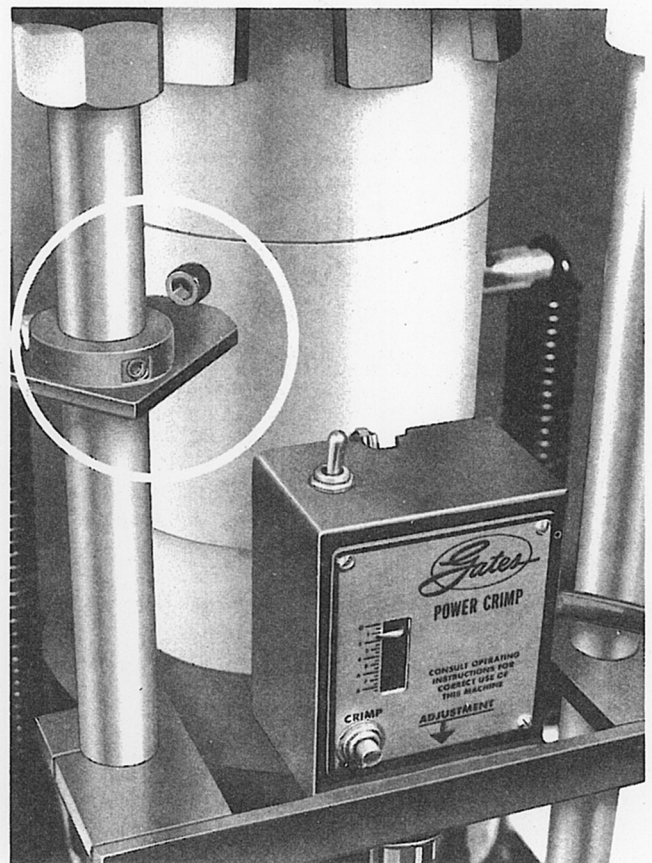
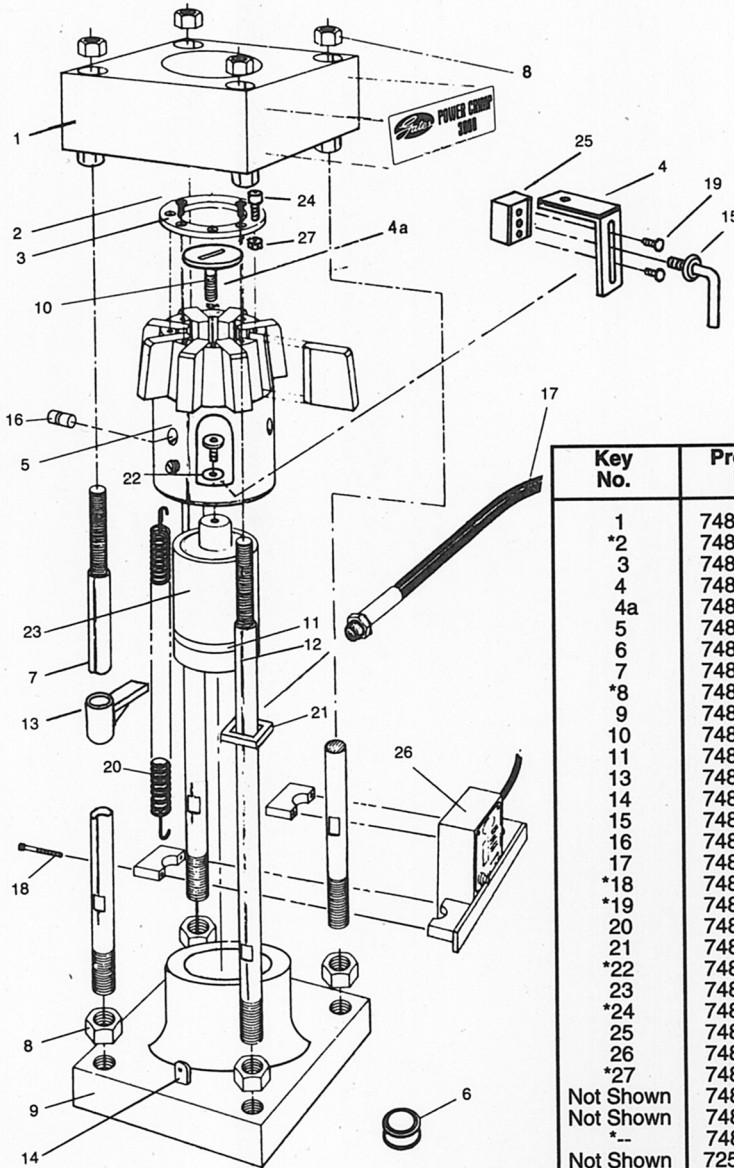


Fig. N

# Power Crimp 3000B Machine

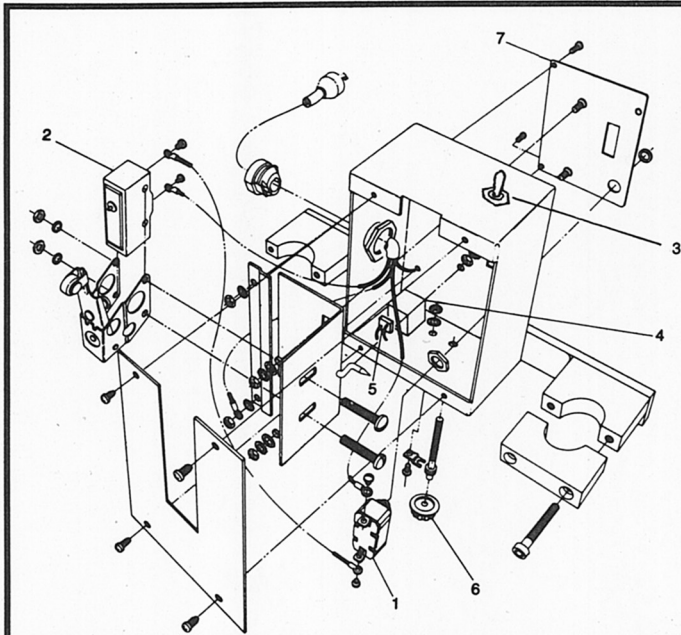


Key No.	Product No.	Description	No. Req'd
1	7482-6967	Die Cone	1
*2	7482-6305	5/16 x 3/8 Stripper Bolt	2
3	7482-4357	Die Plate	1
4	7482-6964	Depth Stop (Angular)	1
4a	7482-6955	Stop Adjustment Screw	1
5	7482-6966	Die Cage	1
6	7482-3010	Molykote G Paste	1
7	7482-6961	Tie Rod	4
*8	7482-4361	1-1/8" Hex Nuts	12
9	7482-6968	Cylinder Base	1
10	7482-6274	Spring (Depth Stop)	1
11	7482-6950	Seal and Back Up Ring	1
13	7482-0008	Depth Stop Locator	1
14	7482-6965	Spring Anchor Bottom	2
15	7482-6315	Stop Adjustment Screw	1
16	7482-6963	Spring Anchor Top	2
17	7482-6983	1/2" Hose Assembly	1
*18	7482-6972	5/16-18 x 2" Socket Hd. Cap Screw	2
*19	7482-2197	1/4-20 x 1-1/4 Socket Hd. Cap Screw	2
20	7482-6959	Piston Return Spring	2
21	7482-6960	Ram Stop	1
*22	7482-6548	Washer (Die cage)	1
23	7482-6954	Piston	1
*24	7482-6546	1/4-20 x 2-3/4 Allen Hd. Cap Screw	2
25	7482-6958	Spacer (Angular Depth Stop)	1
26	7482-6969	Switch Box Assembly	1
*27	7482-6553	1/4-20 Hex Nut	2
Not Shown	7482-0004	Depth Stop (Angular)	1
Not Shown	7482-0007	Collar	1
*--	7482-1402	3/8" Nut	1
Not Shown	7253-86308	8MP-8FPX Adapter	1
Not Shown	7253-86307	6MP-8FPX Adapter	1
**--	7482-5009	Die Fingers #301	1 Set
**--	7482-6514	Die Fingers #30	1 Set
**--	7482-6515	Die Fingers #31	1 Set
**--	7482-6516	Die Fingers #32	1 Set
**--	7482-6517	Die Fingers #33	1 Set
**--	7482-6518	Die Fingers #34	1 Set
**--	7482-6519	Die Fingers #35	1 Set
**--	7482-6520	Die Fingers #36	1Set
**--	7482-6521	Die Fingers #38	1 Set
**--	7482-6522	Die Fingers #310	1 Set
**--	7482-6523	Die Fingers #313	1 Set
**--	7482-6582	Die Fingers #37	1 Set
**--	7482-6583	Die Fingers #24C4	1 Set
**--	7482-6584	Die Fingers #32C4	1 Set
**--	7482-6833	Die Fingers #302	1 Set
--	7482-7011	Die Fingers #39	1 Set
--	7482-7023	Die Fingers #311	1 Set

\* Item can be purchased at any hardware store. Not stocked by Gates.

\*\* Special order.

# Parts List: Switch Box Assembly



Key No.	Product No.	Description	Req'd No.
1	7482-2758	Crimp Switch	1
2	7482-2765	Microswitch	1
3	7482-4368	Toggle Switch	1
4	7482-4375	Relay	1
5	7482-6327	Coil	1
6	7482-3179	Adjusting Knob	1
7	7482-6962	Instruction Plate	1

NOTE: Parts listed above must be ordered from The Gates Rubber Company.

## TROUBLE SHOOTING SUPPLEMENT

All equipment is tested for proper performance before it is shipped from the factory. However, if you should experience any difficulties, we suggest you check the list below to help restore the equipment to proper operating standards.

### Performance

- I. Jerky upward motion of Die Cage.
- II. Die Cage will not return to DOWN position.
- III. Ferrule crimp too long or too short.
- IV. Hydraulic cylinder leaks externally.
- V. Die Cage will not rise when crimp switch is pushed.
- VI. Crimp diameter incorrect.

### Probable Cause

- I. Possible air in the oil circuit. Bleed the system. See Page 2 of this manual.
- II.
  1. Die Cone may need to be greased. NOTE: Use Gates Die Lube grease only.
  2. Check ram stop.
  3. Shuttle valve on pump may be sticking. Return to Gates Denver for repair. See Page 8 of this manual.
- III. Check height of Depth Stop.
- IV. Replace "O" Ring. See Parts List on Page 8 of this manual.
- V.
  1. Check oil level in pump.
  2. Check all electrical connections.
- VI.
  1. Check microswitch setting.
  2. Check calibration. See Page 3 in this manual.
  3. Change setting on appropriate Power Crimp data card.

NOTE: If pump does not operate, refer to the proper Pump Manual.

## **One-Year Limited Warranty on Equipment**

For one year from the date of shipment of the equipment to the first user of the equipment, The Gates Rubber Company will, at its option, replace or repair any unit which proves to be defective in material or workmanship, or both, at no cost to the first user of the equipment. This is the exclusive remedy. For warranty service, contact the Service Department, The Gates Rubber Company, 1-303-744-5291, Denver, Colorado. THERE IS NO OTHER EXPRESS WARRANTY, IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO ONE YEAR FROM DATE OF SHIPMENT OF THE EQUIPMENT TO THE FIRST USER OF THE EQUIPMENT. LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES UNDER ANY AND ALL WARRANTIES ARE EXCLUDED TO THE EXTENT EXCLUSION IS PERMITTED BY LAW. Some states do not allow the exclusion or limitation of incidental or consequential damages, and some states do not allow limitations on how long an implied warranty lasts, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

**IMPORTANT:** Be sure to fill out the crimper registration card included with your equipment. Also include the serial number of the crimper. Completing the registration card will assure that you receive crimp data updates and full warranty coverage.

### **HOW TO ORDER REPAIR PARTS**

All parts for the Power Crimp machine listed in current replacement parts price sheets can be ordered directly from The Gates Rubber Company, 999 Michigan Ave., Iola KS 66749.

When ordering, be sure to include the following information:

- (1) The name of the unit shown on the front cover.
- (2) Product number of parts needed.
- (3) Part name of parts needed.
- (4) Serial number of machine.

For selling prices on inventoried parts, refer to Hydraulic Power Crimp Equipment and Parts List Price Schedule. Selling prices for parts not shown in these lists will be furnished upon request, or parts will be shipped at prevailing prices and you will be billed accordingly. For information regarding prices, contact your local Gates representative or The Gates Rubber Company, 990 South Broadway, P.O. Box 5887, Denver, Colorado 80217.

When returning inoperable equipment, contact your local Gates representative for information on where to ship the unit(s).

**The Gates Rubber Company • Denver, Colorado 80217**