

The K500 series hose crimper with Micrometer Style Adjustment and 80 ton cylinder has the capacity to crimp hoses up to 1-1/4" 4 wire (with standard dies) and up to 1-1/4" 6 wire and 2" 4 wire (with larger dies).

### UNIQUE USER FRIENDLY MICROMETER STYLE ADJUSTMENT

- Easy to use and read.
- Ideal for repetitive crimps.
- Fully adjustable micrometer for a precise crimp.
- Simple to calibrate and minimum maintenance.
- Micrometer style adjustment permits crimping a wide variety of hose and fittings.



## K500 SERIES HYDRAULIC HOSE CRIMPER OPERATORS MANUAL

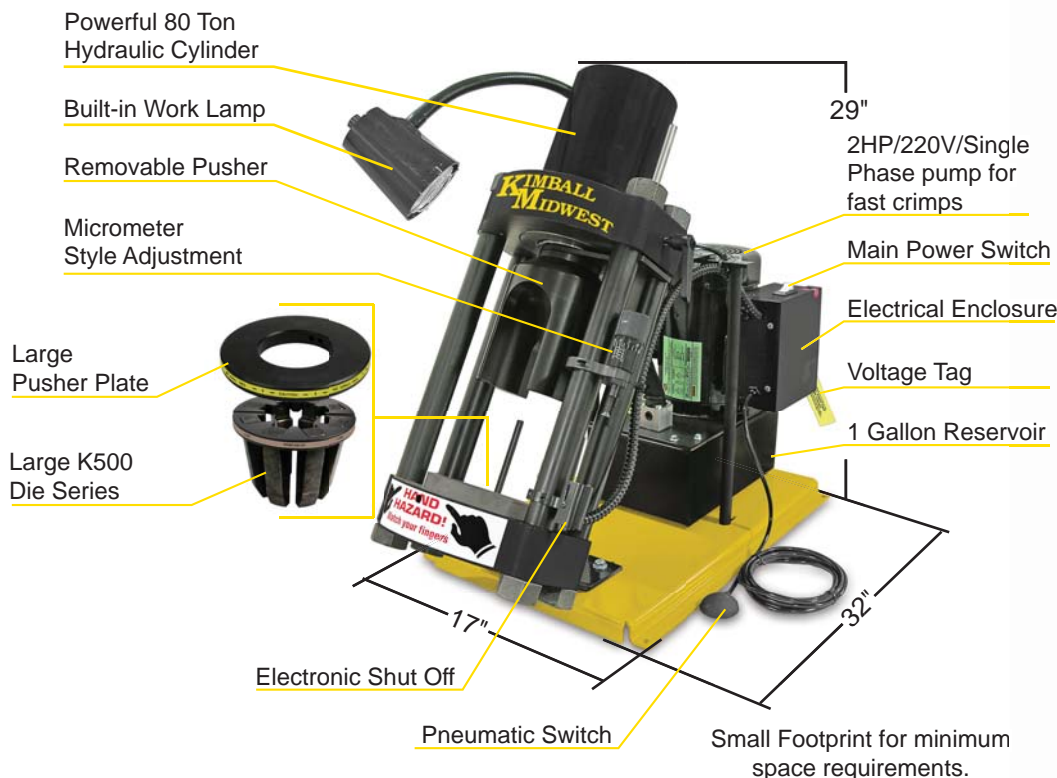
**SAFETY PRECAUTIONS****SAFETY PRECAUTIONS**

- READ INSTRUCTIONS AND IDENTIFY ALL COMPONENT PARTS BEFORE USING THE CRIMPER.
- K500 SERIES CRIMPER CAN PRODUCE 80 TONS OF CRIMPING FORCE.
- KEEP BOTH HANDS AWAY FROM PINCH POINTS.
- CONSULT HOSE AND FITTING MANUFACTURER FOR CORRECT MACHINE SETTINGS AND CRIMP MEASUREMENTS.
- ALWAYS WEAR EYE PROTECTION.

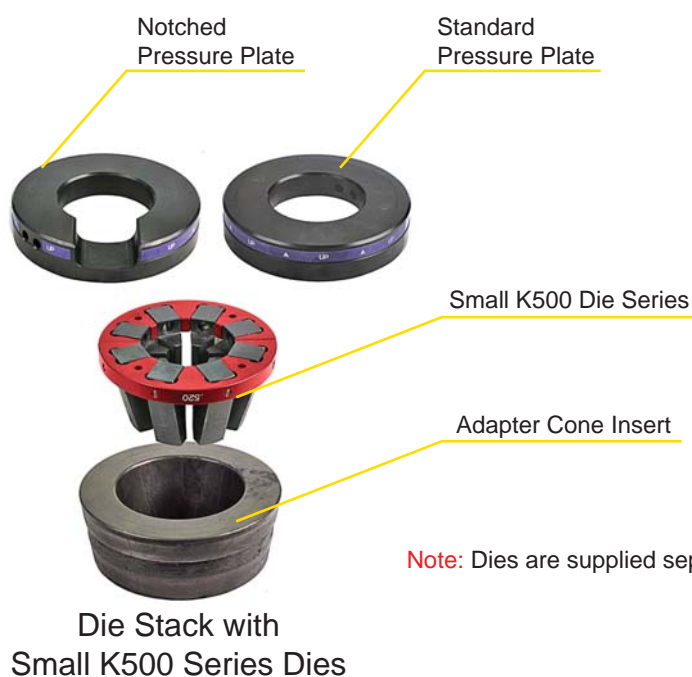
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## COMPONENT PARTS & TECHNICAL DATA



Technical Data	
80 Ton Small K500 Dies	80 Ton Large K500 Dies
1-1/4" - 1 - 2 Wire	2" - 1 - 2 Wire
1-1/4" - 4 Wire	1-1/4" - 6 Wire
	2" - 4 Wire
Dimensions: L: 32" x W: 17" x H: 29"	
Weight: 305 lbs	
Power: 2HP / 220V / 1Phase (Standard) 1HP / 110V / 1Phase (Optional)	
Die series: K500	
Micrometer Style Adjustment: Standard	
Reservoir capacity: 1 Gallon	
Oil type: ISO 46 Hydraulic Oil	



**Note:** Dies are supplied separately - not included with the crimper.



### FEATURES



Micrometer with "Micro-Crimp Adjuster" is fully adjustable to make precise and repeatable crimps.



Open design, two piece die sets and removable pusher allow the operator to accurately position the fitting prior to crimping.



Built-in adjustable retraction stop limits ram retraction for quick repetitive crimps.



Easy calibration adjustment to increase or decrease the crimp OD.



With the small K500 series dies can crimp up to 1 or 2 wire hose and 1-1/4" 4 spiral hose.



With the large K500 series dies can crimp up 1-1/4" 6 spiral hose and 2" 4 spiral hose.



### INITIAL SETUP

FOLLOW THESE STEPS BEFORE YOU USE THE CRIMPER FOR THE FIRST TIME.

- Mount the crimper on a sturdy workbench in a well-lit area. Workbench should be able to support the crimper and component weight.
- The crimper should be mounted close enough to the edge of the work surface so that the hose being crimped will not contact the bench or work surface. There must be enough clearance for the hose to align perpendicular with the cone base, or the dies will not seat properly and the crimp will not be accurate.
- Always check the oil level in the K500 pump, it should be 1-1/2 to 2" inches below the vent plug when the cylinder is in the retracted position and it should be visible in the sight glass window of the pump reservoir.
- If oil needs to be added use ISO 46 weight hydraulic oil.
- Oil can be drained from the rear oil port of the reservoir.
- Check to be certain that the shipping plug in the pump reservoir has been replaced with the vent plug shipped with the K500 crimper.
- Check the electrical circuit to be certain that it matches the crimper requirements shown on the voltage tag attached to the crimper cord.
- 220 volt / 2HP unit must be connected to a 220 volt 20 amp wall outlet.

**Note:** Do not use an extension cord.



## SMALL DIE LUBRICATION PROCEDURE

### Grease Point # 1

Apply a thin layer of CrimpX grease (supplied with the crimper), or a molybdenum disulfide high pressure grease, on the surface of the adapter cone insert. (as shown in photo # 1).

**Note:** The large cone base should be lubricated before inserting the adapter cone into the crimper.

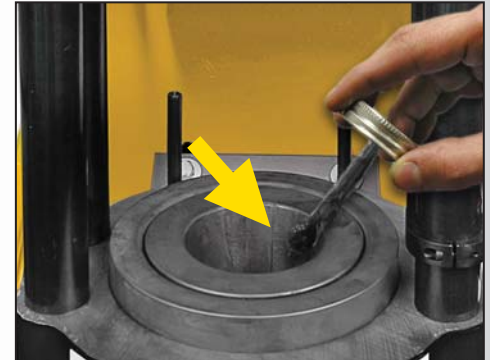


Photo # 1

### Grease Point # 2

Before sliding the standard pressure plate (or the notched pressure plate) (as shown in photo # 2 and # 3) over the correct dies, apply a thin layer of CrimpX grease (supplied with the crimper), or a molybdenum disulfide high pressure grease, on the entire surface area that the dies come in contact with.



Photo # 2

### If dies are sticking on the surface of the cone base:

Continue to lubricate / grease as explained above in, addition to lubricating each die finger individually. (as shown in photo # 4).

**Note:** The die fingers must be lubricated at the positions that come in contact with the pressure plate and the adapter cone insert.

**Note:** Lubrication is not required before each crimp. Typical lubrication is after 100 crimp cycles.



Photo # 3

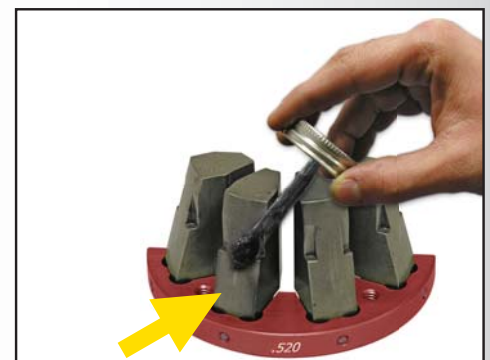


Photo # 4

### LARGE DIE LUBRICATION PROCEDURE

#### Grease Point # 1

Apply a thin layer of CrimpX grease (supplied with the crimper), or a molybdenum disulfide high pressure grease on the surface of the large cone base.  
(as shown in photo # 1).

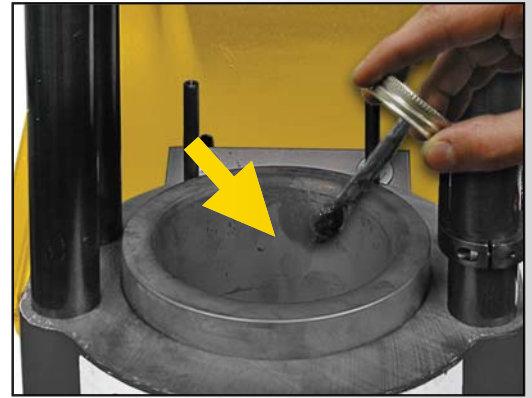


Photo # 1

#### Grease Point # 2

Before sliding the large pressure plate over the correct dies, apply a thin layer of CrimpX grease (supplied with the crimper), or a molybdenum disulfide high pressure grease, on the entire surface area that dies come in contact with (as shown in photo # 2).



Photo # 2

#### If dies are sticking on the surface of the large cone base:

Continue to lubricate / grease as explained above, in addition to lubricating each die finger individually.  
(as shown in photo # 3).

**Note:** The die fingers must be lubricated at the positions that come in contact with the pressure plate and the large cone base.

**Note:** Lubrication is not required before each crimp.  
Typical lubrication is after 100 crimp cycles.



Photo # 3



### CRIMPING WITH THE SMALL K500 DIE SERIES

**Note:** Follow the lubrication procedure prior to crimping.



**WARNING:** Failure to lubricate will cause damage to the die sets and crimper.

**Step 1:** Insert the adapter cone insert into the larger cone of the crimper, making sure that it is seated squarely inside.

**Step 2:** Select the correct die set for the combination of hose and fitting being crimped.

**Note:** Consult your hose and fitting manufacturer for the correct die size for the combination of hose and fitting being crimped.

**Note:** The number etched on the OD of the die ring represents the fully closed diameter of the die set in millimeters. In addition, die sets are color-coded for easier identification.

**Step 3:** Align the **Fitting** in the die set according to the hose and fitting manufacturer's recommendation.

**Step 4:** Compress the die set by hand to hold the hose and fitting in place.



### CRIMPING WITH THE SMALL K500 DIE SERIES



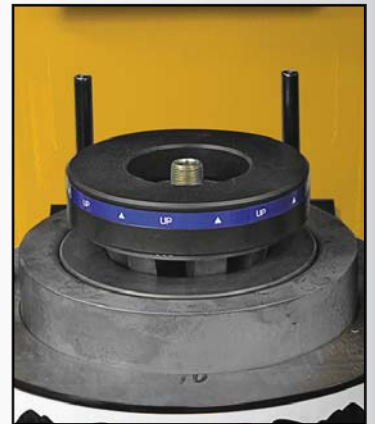
#### WARNING

**Step 5:** Use care to be certain that the die halves do not overlap.



**Step 6:** Place the **Lubricated Standard Pressure Plate** over the die set and compress the die set by hand to hold the hose and fitting in place.

**Note:** If you are going to crimp 90 degree fittings we recommend to use the notched pressure plate.



**Step 7:** Slide the **Pusher** onto the pusher retaining ring on the hydraulic cylinder.

**Note:** Make sure the slot in the pusher goes over the lip on the pusher retaining ring.

**CAUTION:** Damage to the pusher and retaining ring can occur if they are misaligned.

**Step 8:** Set the **Micro-Crimp Adjuster** to the setting recommended by the hose and fitting manufacturer for the combination of hose and fitting being crimped.

**NOTE:** The Micro-Crimp Adjuster is a direct reading micrometer. Add the setting on the micrometer to the closed diameter of the die set to obtain the finished crimp diameter.



**Note:** Each die set has a limited range of diameters for which a satisfactory crimp can be obtained. Always consult your hose and fitting manufacturer for the correct die set for the hose and fitting being crimped.



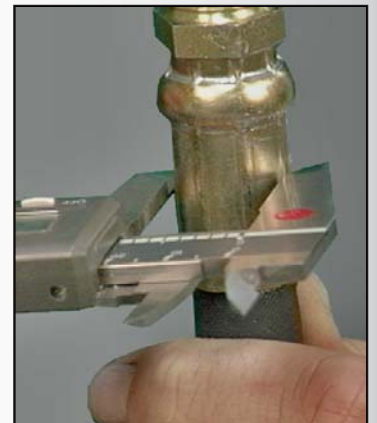
### CRIMPING WITH THE SMALL K500 DIE SERIES

**Step 9:** Depress and hold the Start/Stop switch until the micrometer touches the electronic red button as shown, the automatic stop switch will then shut the pump off, and the ram will return to the retracted position.



**Step 10:** Check the final crimp diameter with calipers to confirm that it is within the manufacturer's specifications.

**Note:** Always consult with your hose and fitting manufacturer to obtain the most current crimp specifications.



### CRIMPING WITH THE LARGE K500 DIE SERIES

**Note:** Crimping with large die series is essentially identical to crimping with the standard die series except that the **Adapter Cone Insert** is removed from the larger cone of crimper base.

**Note:** Follow the lubrication procedure prior to crimping.



**WARNING:** Failure to lubricate will cause damage to the die sets and crimper.

**Step 1:** Make sure that the large cone is cleaned and lubricated.

**Step 2:** Select the correct die set for the combination of hose and fitting being crimped.

**Note:** Consult your hose and fitting manufacturer for the correct die size for the combination of hose and fitting being crimped.

**Step 3:** Align the **Fitting** in the die set according to the hose and fitting manufacturer's recommendation.

**Step 4:** Place the **Large Pressure Plate** over the die set and compress the die set by hand to hold the hose and fitting in place.

**Step 5:** Slide the **Pusher** onto the pusher retaining ring on the hydraulic cylinder.

**Note:** Make sure the slot in the pusher goes over the lip on the pusher retaining ring.

**CAUTION:** Damage to the pusher and retaining ring can occur if they are misaligned.





### CRIMPING WITH THE LARGE K500 DIE SERIES

**Step 6:** Set the **Micro-Crimp Adjuster** to the setting recommended by the hose and fitting manufacturer for the combination of hose and fitting being crimped.

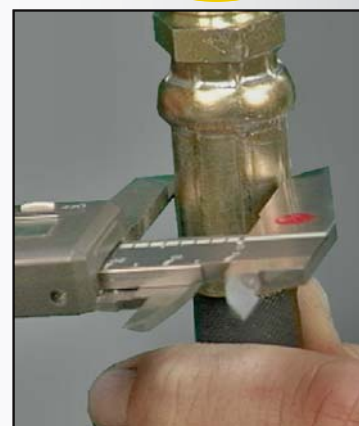
**NOTE:** The Micro-Crimp Adjuster is a direct reading micrometer. Add the setting on the micrometer to the closed diameter of the die set to obtain the finished crimp diameter.

**Note:** Each die set has a limited range of diameters for which a satisfactory crimp can be obtained. Always consult your hose and fitting manufacturer for the correct die set for the hose and fitting being crimped.

**Step 7:** Depress and hold the Start/Stop switch until the micrometer touches the electronic red button as shown, the automatic stop switch will then shut the pump off, and the ram will return to the retracted position.

**Step 8:** Check the final crimp diameter with calipers to confirm that it is within the manufacturer's specifications.

**Note:** Always consult with your hose and fitting manufacturer to obtain the most current crimp specifications.





### CALIBRATION CHECK PROCEDURE

THE CRIMPER IS CALIBRATED PRIOR TO SHIPMENT, BUT A CALIBRATION CHECK IS RECOMMENDED PRIOR TO USING THE CRIMPER FOR THE FIRST TIME.

**Note:** Follow the lubrication procedure prior to the calibration check.

**Step 1:** Insert the adapter cone into the larger cone.

**Step 2:** Place **Any Lubricated Die Set** squarely into the adapter cone.

**Step 3:** Place the **Lubricated Standard Pressure Plate** over the die set.

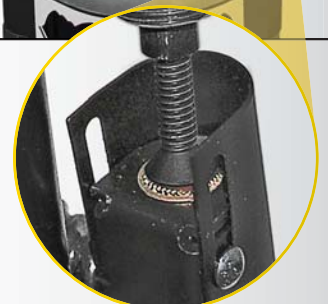
**Note:** A hose and fitting are not required for a calibration check.

**Step 4:** Slide the **Pusher** onto the pusher retaining ring on the hydraulic cylinder.

**Step 5:** Set the **Micro-Crimp Adjuster** to "100".

**Step 6:** Depress and hold the Start/Stop switch until the die set is completely closed and oil pressure has built up in the hydraulic cylinder.

If the ram extends fully, the dies will completely close and the pump will build pressure (the sound of the pump will change). At this point the micrometer should touch the electronic red button as shown, the automatic stop switch will shut the pump off, and the ram will return to the retracted position. If this happens the crimper is correctly calibrated.



**CALIBRATION CHECK PROCEDURE**

**Step 7:** If the above conditions are not met, the crimper requires recalibration. Hold the micrometer barrel with a 5/16 inch open end wrench and rotate the stem either in or out with a 5/32 inch hex key wrench.

**Note:** 1/4 turn of the screw will change the crimp diameter approximately 0.008".

- Recheck calibration.
- Continue to make adjustments until the pump shuts off one second after the sound of the pump changes after building pressure.

## INCLUDED ACCESSORIES



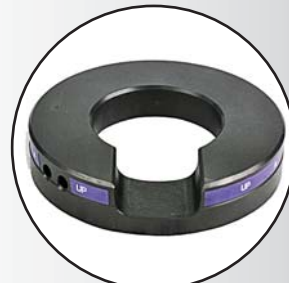
Removable Pusher  
P/N:K500PUSHER



Large Pressure Plate  
P/N:K500LGPLT



Standard Small Pressure  
Plate P/N:K500SMPLT



Notched Pressure Plate  
P/N:K50090PLT



Adapter cone  
P/N:K500INSERT



Pneumatic Pendant Switch  
P/N:KKSWITCH



Work Lamp Installed  
P/N:KWL



K500 Coupling Stop  
P/N:101631\*



CrimpX Lubricant Grease  
4 oz can with brush  
P/N:KKGREASE



Vent Plug  
P/N:K500PLUG

## AVAILABLE ACCESSORIES



K500 Die Storage Shelf  
P/N:K500-DS



Die Removal Magnet  
P/N:KKMAG



Screw for small K500 die series P/N:EN84-115\*  
Spring for small K500 die series P/N:LC 022D 01\*

\*Available through SPS/XPS

## TROUBLESHOOTING

### **PROBLEM: THE CRIMPER WILL NOT RUN AT ALL**

- The white rocker switch is also a circuit breaker. Check to see that the circuit breaker has not been tripped.
- Check the wall outlet. The crimper comes from the factory wired for a 220 volt single phase (K500220) or a 110 volt single phase (K500110). Use of extension cords, or outlets with inadequate power can damage the motor. Do not run the crimper from a portable power source.
- Check the stop switch mounted to the switch bracket under the Micro-Crimp Adjuster. This is a normally closed switch and if it does not close the crimper will not operate.  
**CAUTION: Do not operate the crimper with this switch jumpered as the pump will not shut off and the brackets can be damaged.**
- Check the pneumatically actuated switch in the electrical box mounted on the motor. This switch controls power to the motor and is actuated with air pressure from the pendent switch bulb.

### **PROBLEM: THE CRIMP DIAMETER IS TOO LARGE**

- Incorrect setting of the Micro-Crimp Adjuster. Check crimp specifications.  
(NOTE: All published machine settings are approximate. To correct for slight variances, the gauge settings may need to be adjusted for the specific hose, fitting and size combination).
- Incorrect die being used. Each die has a usable range of approximately (.120 in) above the closed diameter of the die. The closed diameter is the size stamped on the die ring.
- Check crimper calibration and re-calibrate if required.
- Inadequate pump pressure. Check oil level in the pump. It should be 1-1/2 to 2 inches below the fill plug.
- Replenish with ISO Viscosity Grade 46 hydraulic oil.
- Inadequate lubrication of the dies, large cone base, adapter cone insert, standard small pressure plate and large pressure plate causing the pump to work harder than normal to reach the required diameter. Use only the CrimpX oil / grease shipped with the machine or a molybdenum disulfide high pressure grease.
- Inadequate pressure being generated by the pump. This is most likely if the crimper can crimp the smaller size hoses and not the larger hoses. When correctly adjusted, the pump should generate approximately 10,000 psi.  
**Do Not adjust the pump to produce in excess of 10,000 psi as damage to components or personal injury may result.**
- No pressure being generated by the pump. There should be a definite change in pitch of the pump as it cycles into high pressure mode and begins to "work" harder.

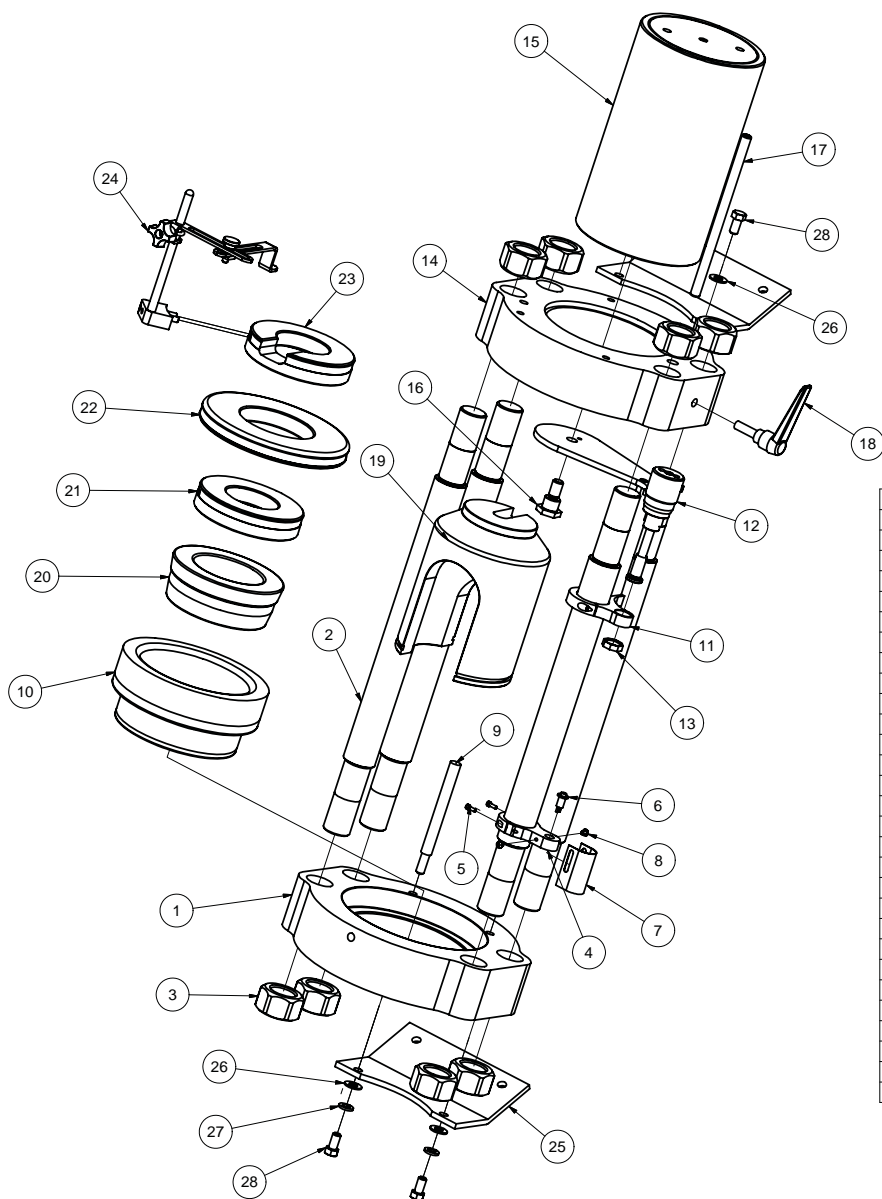
### **PROBLEM: THE CRIMP DIAMETER IS TOO SMALL**

- Incorrect setting of the Micro-Crimp Adjuster. Check crimp specifications.  
(NOTE: All published machine settings are approximate. To correct for slight variances, the gauge settings may be adjusted for the specific hose, fitting and size combination).
- Incorrect die being used (See die range under Crimp Diameter Too Large).
- Check crimp diameter and re-calibrate if necessary.

### **PROBLEM: THE DIES ARE STICKING IN THE CONE BASE**

- Inadequate lubrication of the cone base and die surfaces. Use only the CrimpX grease shipped with the machine or a molybdenum disulfide high pressure grease.
- Refer to Lubrication Procedure for more details.

## COMPONENT PARTS BREAKDOWN

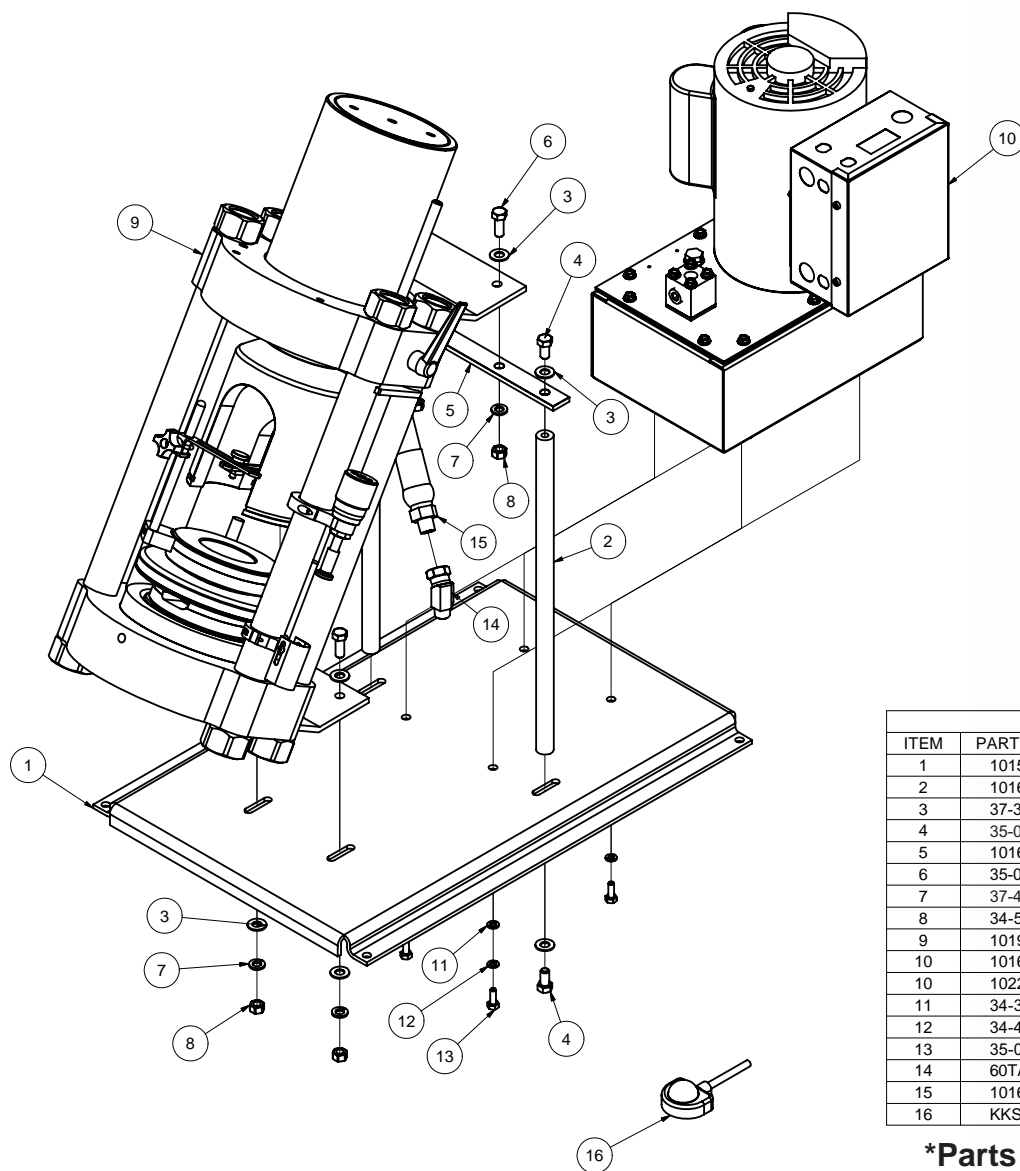


K500 Crimper Head Assembly			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	100679*	80-Ton Cone Base	1
2	100642*	Strain Rod	4
3	90500A040*	Heavy Hex Nut 1 1/4-12 Gd.8	8
4	100661*	Limit Switch Bracket	1
5	30-D103	6-32 X 3/8 SHCS	2
6	903 Switch*	Limit Switch	1
7	100692*	Limit Switch Guard	1
8	30-5011	8-32 X 1/4 BHCS	2
9	101995*	3/8 Dia. X 5 1/2 Pin	2
10	100643*	Large Cone Base	1
11	100641*	Micrometer Mount Assembly	1
12	K500MICRO	Standard Micrometer Assembly	1
13	100727*	Micrometer Nut	1
14	100640*	80-Ton Top Flange	1
15	100663*	80-Ton Cylinder Assembly	1
16	100648*	Pusher Suspension Pin	1
17	100711*	Stop Rod	1
18	100710*	Stop Rod Locking Handle	1
19	K500PUSHER	Pusher	1
20	K500INSERT	Adapter Cone Insert	1
21	K500SMLPT	Small Pressure Plate	1
22	K500LGPLT	Large Pressure Plate	1
23	K50090PLT	Notched Pressure Plate	1
24	100954*	Coupling Stop Assembly	1
25	100680*	Mounting Bracket	2
26	37-3606	3/8 Flat Washer	4
27	37-4506	3/8 Lock Washer	2
28	35-0606	3/8-16 X 3/4 Hex Bolt	4

**\*Parts available through SPS/XPS**



## COMPONENT PARTS BREAKDOWN



K500 Crimper Assembly			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	101585*	Crimper Base	1
2	101624*	Support Rod	2
3	37-3606	3/8 Flat Washer	10
4	35-0606	3/8-16 X 3/4 Hex Bolt	4
5	101621*	Support Rod Brace	1
6	35-0608	3/8-16 X 1 Hex Bolt	4
7	37-4506	3/8 Lock Washer	4
8	34-5006	3/8-16 Nut	4
9	101987*	Crimper Head Assembly	1
10	101633*	1HP Pump Assembly	1
10	102264*	2HP Pump Assembly	1
11	34-3604	1/4 Flat Washer	4
12	34-4504	1/4 Lock Washer	4
13	35-0406	1/4-20 x 3/4 Hex Bolt	4
14	60TA06X08*	45 Deg. Hydraulic Fitting	1
15	101645*	Hydraulic Hose	1
16	KKSWITCH	Pendant Switch & Plug	1

**\*Parts available through SPS/XPS**

**WARRANTY STATEMENT**

Kimball Midwest's "K" Series Hydraulic Crimpers are warranted to be free of defects in workmanship and materials for one year from the date of purchase. This warranty terminates if the product becomes unusable for reasons other than defects in workmanship and material.

A "K" Series Crimper proven to be defective in workmanship or material will be repaired or replaced at no charge. To obtain benefits of this warranty, first, contact your Kimball Midwest sales representative or the Quality Assurance Department at (800) 233-1294.

This warranty does not cover any product or part which is worn out, abused, altered, used for a purpose other than for which it was intended, or used in a manner which was inconsistent with any instructions regarding its use.