KIMBALL MIDWEST

K300
Hydraulic Hose Crimper

The K300 series hose crimper with Micrometer Style Adjustment and 62 tons of crimping force has the capability to crimp hoses up 1-¼" 1-2 wire, 1-¼" 4 wire, and 1" 6 wire.

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.

K300 SERIES HYDRAULIC HOSE CRIMPER OPERATORS MANUAL

SAFETY PRECAUTIONS

SAFETY PRECAUTIONS

- READ INSTRUCTIONS AND IDENTIFY ALL COMPONENT PARTS BEFORE USING THE CRIMPER.
- K300 SERIES CRIMPER CAN PRODUCE 62 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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KIMBALL MIDWEST

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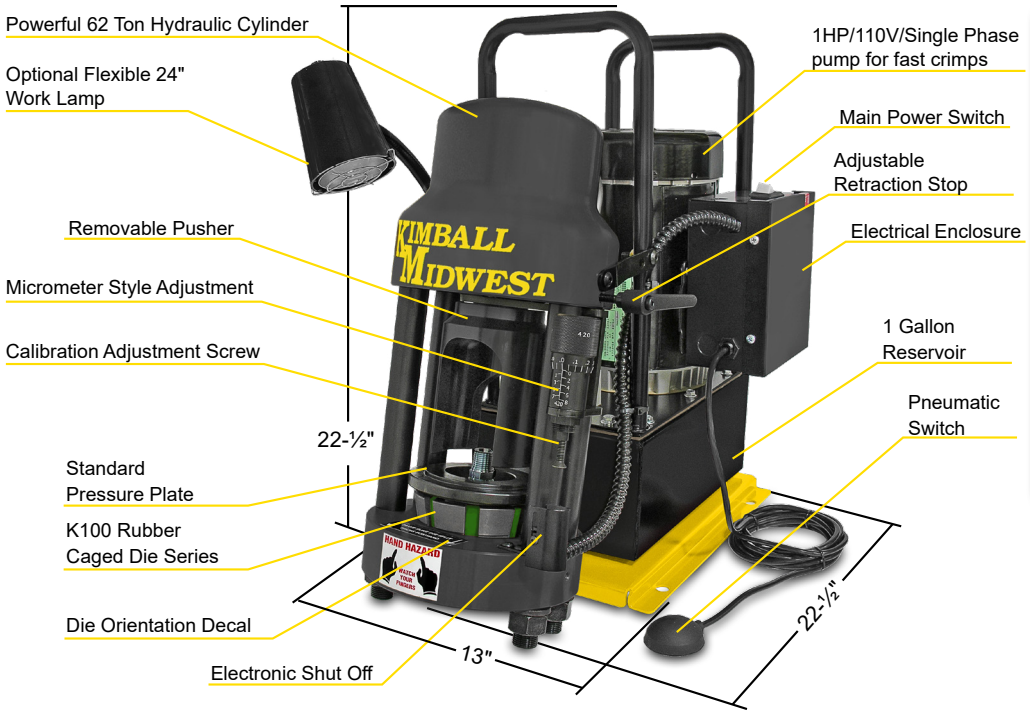
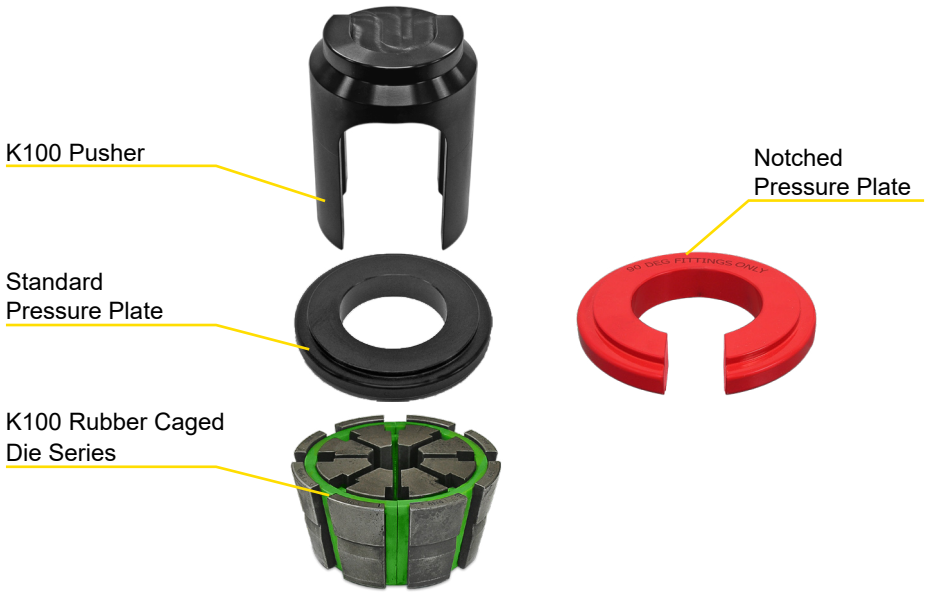
Hydraulic Hose Crimper

COMPONENT PARTS & TECHNICAL DATA



Small Footprint for minimum space requirements.

Technical Data
Crimping Force: 62 Ton
Crimping Capacity: 1-¼" - 1 - 2 Wire 1-¼" - 4 Wire 1" - 6 Wire
Dimensions: L: 22-½" x W: 13" x H: 22-½"
Weight: 154 lbs
Power: 1HP/110V/1Phase (Standard) 2HP/220V/1Phase (Optional)
Micrometer Style Adjustment
Die series: K100 Rubber Caged
Reservoir capacity: 1 US Gallon
Oil type: ISO 46 Hydraulic Oil



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

K300
Hydraulic Hose Crimper

FEATURES

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

Open design, two piece rubber caged die sets for heavy duty environments, 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.

An easily removable Coupling Stop makes repetitive crimps faster by not having to visually align the fitting before each crimp.

Automatic stop switch shuts the pump off when the crimp cycle is complete.

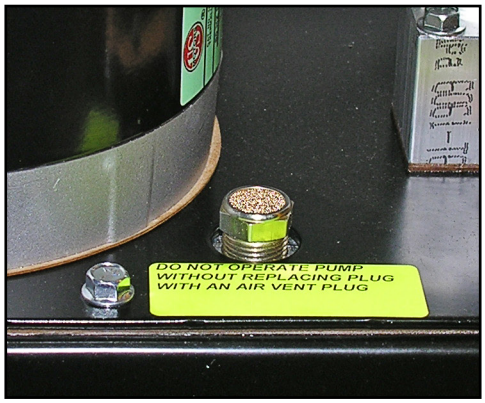
Easy calibration adjustment to increase or decrease the crimp OD.

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 K300 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 K300 crimper.

• Check the electrical circuit to be certain that it matches the crimper requirements shown on the voltage tag attached to the crimper cord.

• Plug the K300 crimper directly into a 110 volt, 15 amp wall outlet.

Note: The optional 220 volt / 2HP unit must be connected to a 220 volt 20 amp wall outlet.

Note: Do not use an extension cord.

LUBRICATION PROCEDURE

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

Photo # 1

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

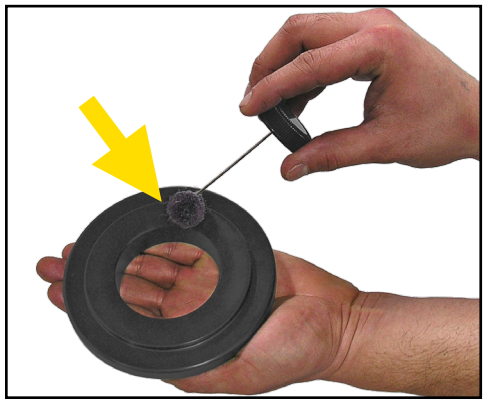
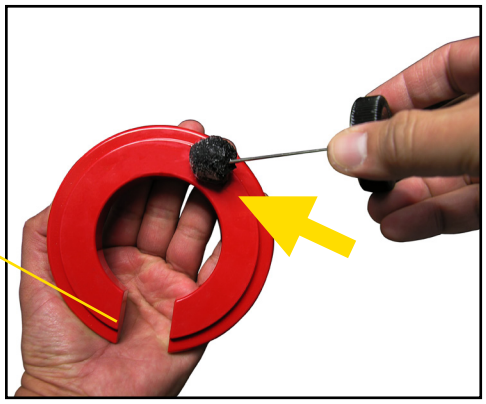


Photo # 2

Notched Pressure Plate:
For use with 90 degree fittings only.



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 # 3).

Note: The die fingers must be lubricated at both positions that come in contact with the pressure plate and the bottom flange.

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

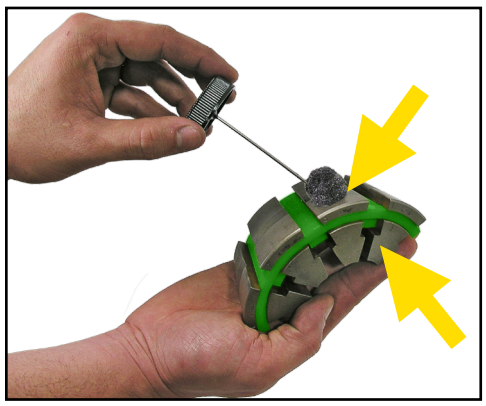


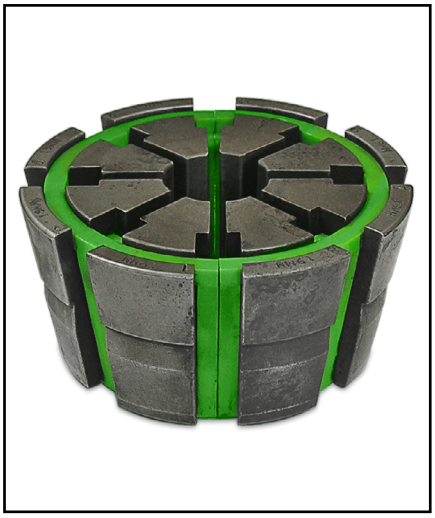
Photo # 3

CRIMPING WITH THE STANDARD PRESSURE PLATE

Note: Follow the lubrication procedure prior to crimping.

CAUTION: Failure to lubricate the die set and pressure plate could result in the die seizing in the cone base.

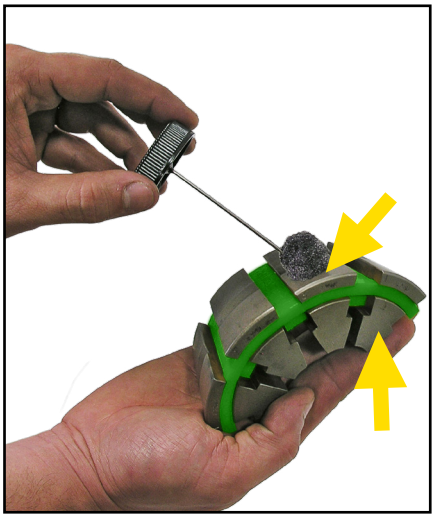
Step 1: Make certain that the **Cone Base** is clean and lubricated prior to inserting the die set.



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, rubber caged die sets are color-coded for easier identification.



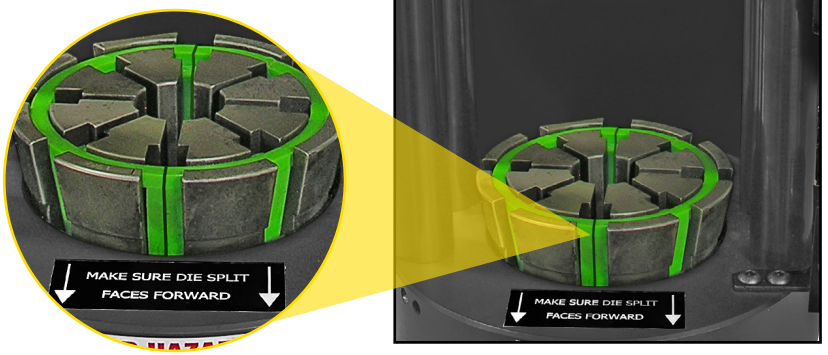
Step 3: Lubricate the contact surfaces, both the top and the outside edges of the die fingers, with CrimpX oil (supplied with the crimper), or a molybdenum disulfide high pressure grease.

Failure to lubricate the contact surfaces with the correct lubricant will cause the dies to seize in the cone base, causing damage to the die set as well as possibly damaging the crimper.

CRIMPING WITH THE STANDARD PRESSURE PLATE

Step 4: Place the **Lubricated Die Set** squarely in the cone base.

Note: Make sure the split of the die cages is facing the operator. (as shown).



Step 5: Align the fitting in the die set according to the hose and fitting manufacturer's recommendation.

Note: Compress the die set by hand to hold the hose and fitting in place.

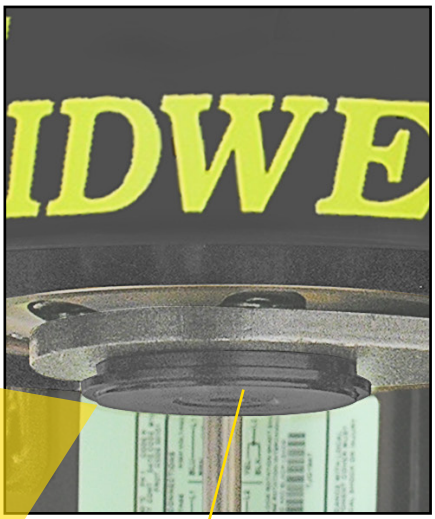
Step 6: Place the **Lubricated Standard Pressure Plate** over the die set.

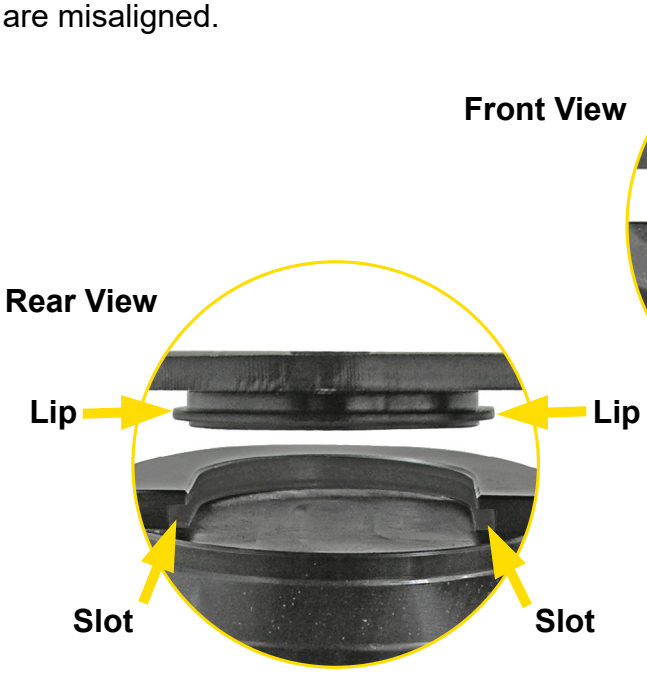
CRIMPING WITH THE STANDARD PRESSURE PLATE

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.





Note: Make sure the pusher is positioned correctly as shown.

CRIMPING WITH THE STANDARD PRESSURE PLATE

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.

For example: With a 23mm die set and the Micro-Crimp Adjuster set at 3.0, the finished crimp diameter would be 26.0 mm (23mm + 3.0mm).

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 9: Recheck the fitting for the correct alignment in the die set and depress the start/stop switch.

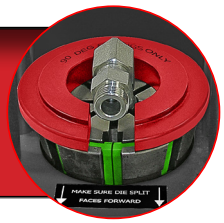
Depress and hold the Start/Stop switch, until the micrometer touches the electronic red button as shown, the automatic stop switch will then shut the pump off, and the ram will return to the retracted position.

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 NOTCHED PRESSURE PLATE

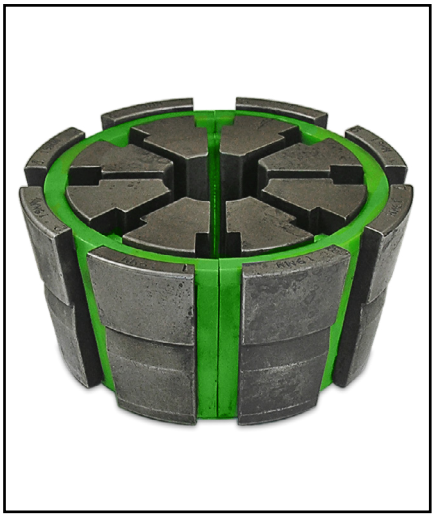
WHEN USING THE NOTCHED PRESSURE PLATE, FOR USE WITH 90 DEGREE FITTINGS ONLY, FOLLOW THESE PROCEDURES:



Note: Follow the lubrication procedure prior to crimping.

CAUTION: Failure to lubricate the die set and pressure plate could result in the die seizing in the cone base.

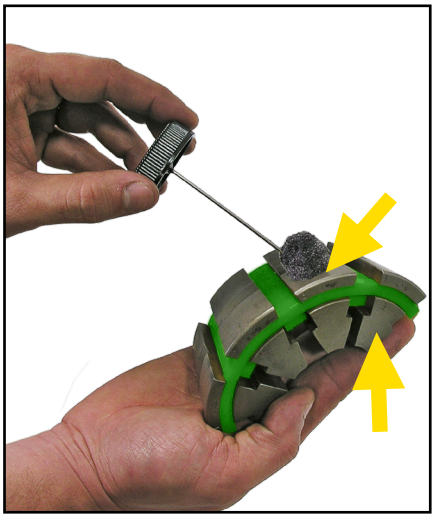
Step 1: Make certain that the **Cone Base** is clean and lubricated prior to inserting the die set.



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, the rubber caged die sets are color-coded for easier identification.



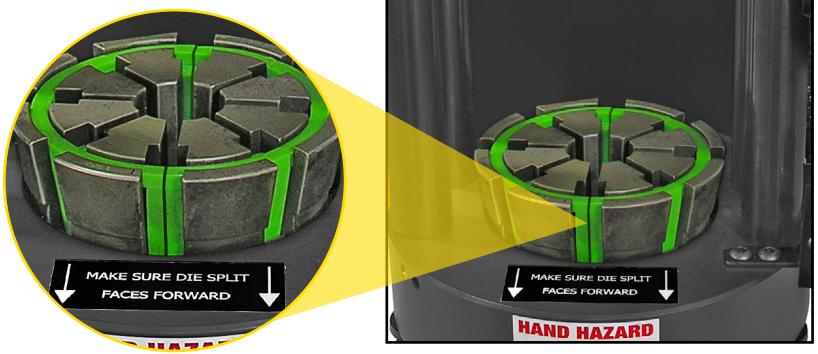
Step 3: Lubricate the contact surfaces, both the top and the outside edges of the die fingers, with CrimpX oil (supplied with the crimper), or a molybdenum disulfide high pressure grease.

Failure to lubricate the contact surfaces with the correct lubricant will cause the dies to seize in the cone base, causing damage to the die set as well as possibly damaging the crimper.

CRIMPING WITH THE NOTCHED PRESSURE PLATE

Step 2: Place the **Lubricated Die Set** squarely in the cone base.

Note: Make sure the split of the die cages is facing the operator. (as shown).

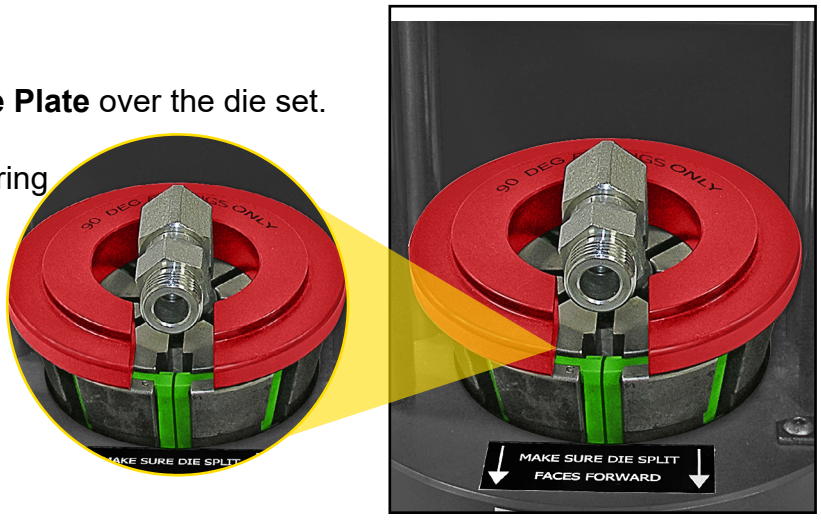


Step 5: Align the **90 degree fitting** in the die set according to the hose and fitting manufacturer's recommendation.

Note: Compress the die set by hand to hold the hose and fitting in place.

Step 6: Place the **Lubricated Notched Pressure Plate** over the die set.

Note: The notched pressure plate MUST be covering all 8 die fingers as shown.



CRIMPING WITH THE NOTCHED PRESSURE PLATE

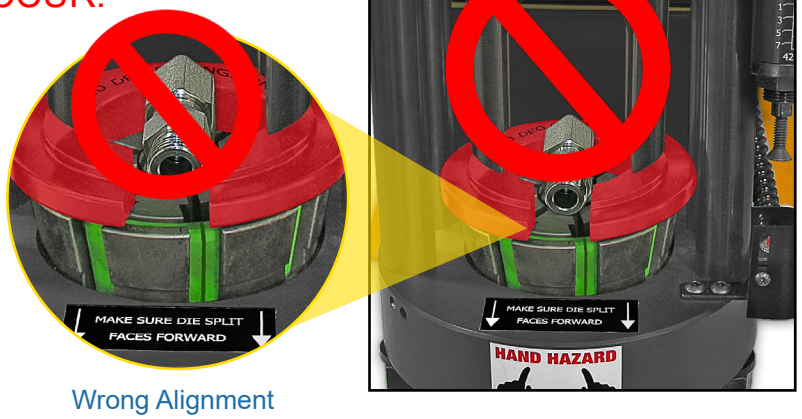
Step 7: CAUTION: DO NOT MISALIGN THE NOTCHED PRESSURE PLATE OR DAMAGE WILL OCCUR.

Note: You MUST follow these steps when crimping with the notched pressure plate.

A. The die split must face the operator.

B. Notched Pressure Plate MUST cover all 8 die fingers.

Damage can occur to the die fingers if the parts aren't aligned properly.



Wrong Alignment

Broken Die Finger

Step 8: After placing the notched pressure plate so it is covering all 8 die fingers as shown, 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.
Refer to page 10 for details if needed.

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

Note: Recheck that the notched pressure plate is covering all 8 die fingers.

CRIMPING WITH THE NOTCHED PRESSURE PLATE

Step 9: 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.

For example: With a 23mm die set and the Micro-Crimp Adjuster set at 3.0, the finished crimp diameter would be 26.0 mm (23mm + 3.0mm).

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 10: Recheck the fitting for the correct alignment in the die set and depress the start/stop switch.

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 11: 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.

CAUTION: Failure to lubricate the die set and pressure plate could result in the die seizing in the cone base.

Step 1: Make certain that the **Cone Base** is clean and lubricated prior to inserting the die set.

Step 2: Place **Any Lubricated Die Set** squarely in the cone base.

Note: Make sure the split of the die cages is facing the operator. (as shown).

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

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

CALIBRATION CHECK PROCEDURE

Step 4: 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. Refer to page 10 for details if needed.

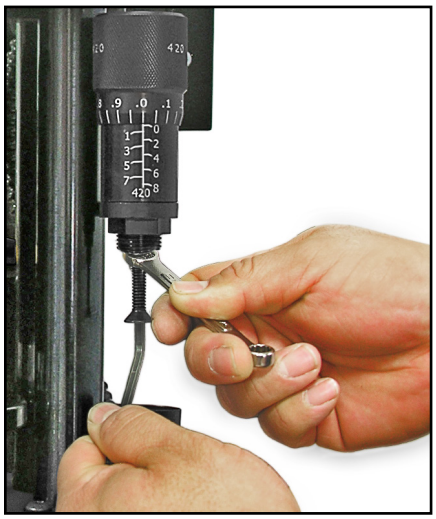
CAUTION: Damage to the pusher and retaining ring can occur if they are misaligned.

Step 5: Set the **Micro-Crimp Adjuster** to “0”.

Step 6: Depress and hold the Start/Stop switch until the ram is fully extended and 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 that 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

Micrometer
P/N:K300MICRO

Pusher
P/N:K300PUSHER

Standard Pressure Plate
P/N:K300PLATE

Notched Pressure Plate
P/N:K30090PLT

Die Removal Magnet
P/N:KKMAGNET

K300 Coupling Stop
P/N:100954*

CrimpX Die Lubricant Oil:
4 oz bottle with dauber cap
P/N:KKLUBEOIL

Pneumatic Pendent Switch
P/N:KKSWITCH

Vent Plug
P/N:K300PLUG

*** Available through SPS/XPS.**

AVAILABLE ACCESSORIES

Flexible 24" Work Lamp
P/N:KWL

Die Storage Shelf
P/N:K100DS

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

K100 Rubber Caged
Die Series

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 115 volt single phase circuit. 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 3mm (.120 in) above the closed diameter of the die. The closed diameter is the size stamped on the die.
- 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 and 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

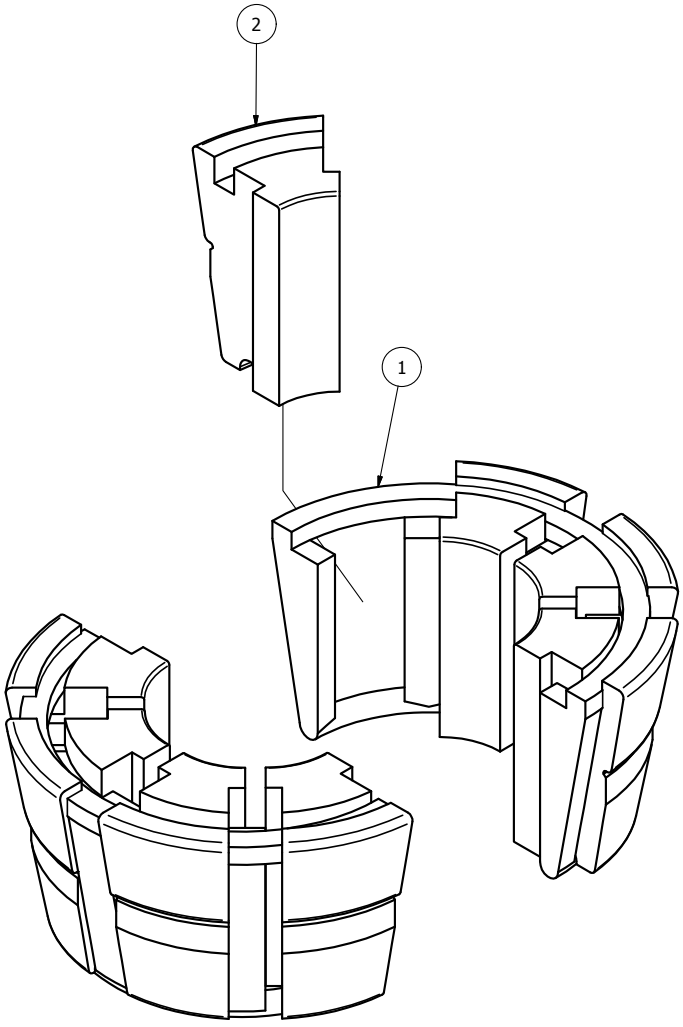
- Incorrect setting of the Micro-Crimp Adjuster. Check crimp specifications.
  (NOTE: All published machine settings are approximate. To correct for slight variances, the gauge settings may be adjusted for the specific hose, fitting and size combination).
- Incorrect die being used (See die range under 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 oil / grease shipped with the machine or a molybdenum disulfide high pressure grease.
- Refer to Lubrication Procedure for more details.

COMPONENT PARTS BREAKDOWN

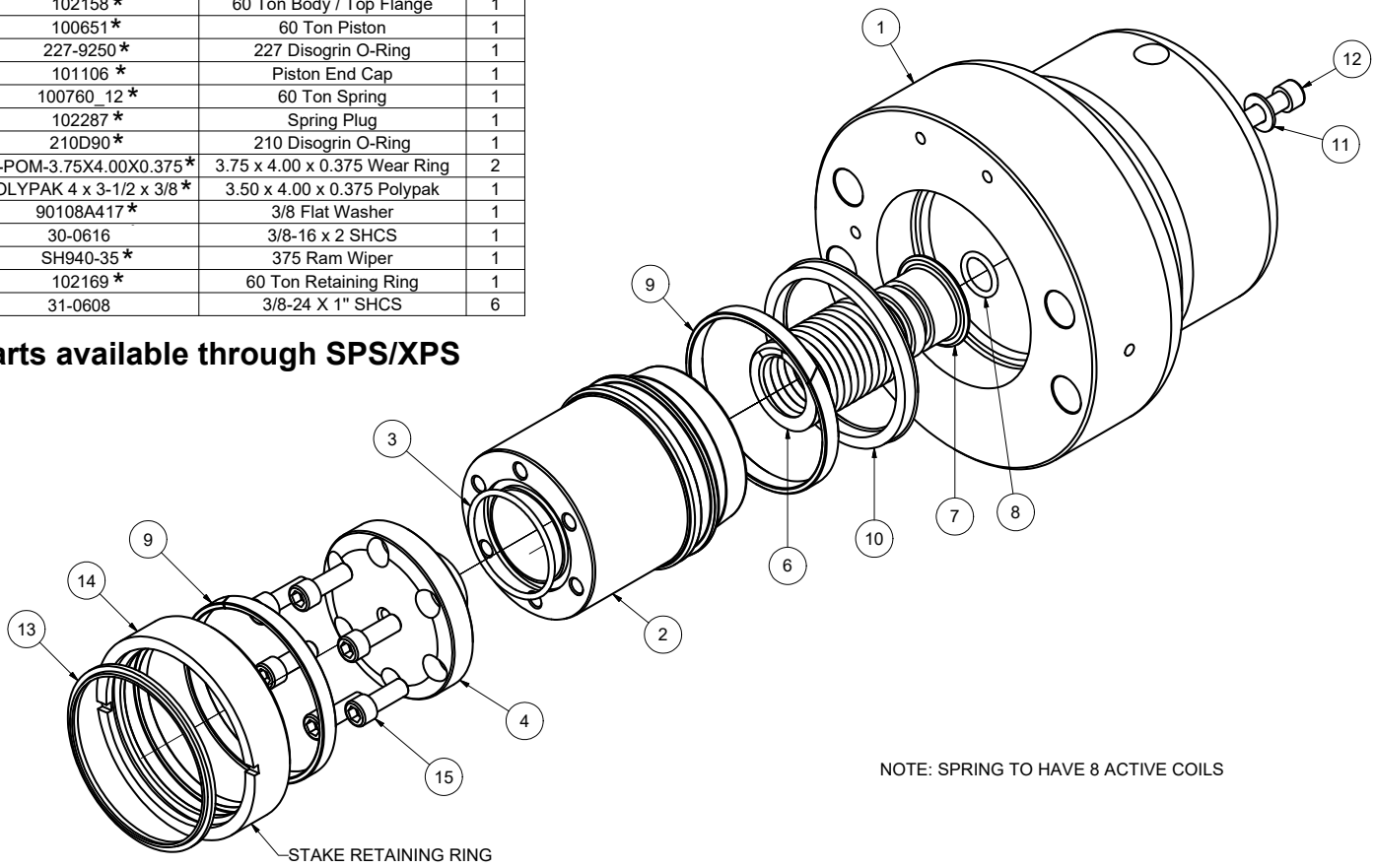
K-M No.	Description	Color
K100-09	9mm Die	Red
K100-12	12mm Die	Purple
K100-14	14mm Die	Silver
K100-16	16mm Die	Orange
K100-19	19mm Die	Green
K100-23	23mm Die	Blue
K100-27	27mm Die	Brown
K100-31	31mm Die	Yellow
K100-35	35mm Die	Black
K100-39	39mm Die	Red
K100-41	41mm Die	Purple
K100-45	45mm Die	Orange
K100-50	50mm Die	Green



COMPONENT PARTS BREAKDOWN

60 Ton Cylinder / Top Flange Assembly			
Item	Part Number	Description	Qty
1	102158*	60 Ton Body / Top Flange	1
2	100651*	60 Ton Piston	1
3	227-9250*	227 Disogrin O-Ring	1
4	101106*	Piston End Cap	1
6	100760_12*	60 Ton Spring	1
7	102287*	Spring Plug	1
8	210D90*	210 Disogrin O-Ring	1
9	F1-POM-3.75X4.00X0.375*	3.75 x 4.00 x 0.375 Wear Ring	2
10	POLYPAK 4 x 3-1/2 x 3/8*	3.50 x 4.00 x 0.375 Polypak	1
11	90108A417*	3/8 Flat Washer	1
12	30-0616	3/8-16 x 2 SHCS	1
13	SH940-35*	375 Ram Wiper	1
14	102169*	60 Ton Retaining Ring	1
15	31-0608	3/8-24 X 1" SHCS	6

***Parts available through SPS/XPS**

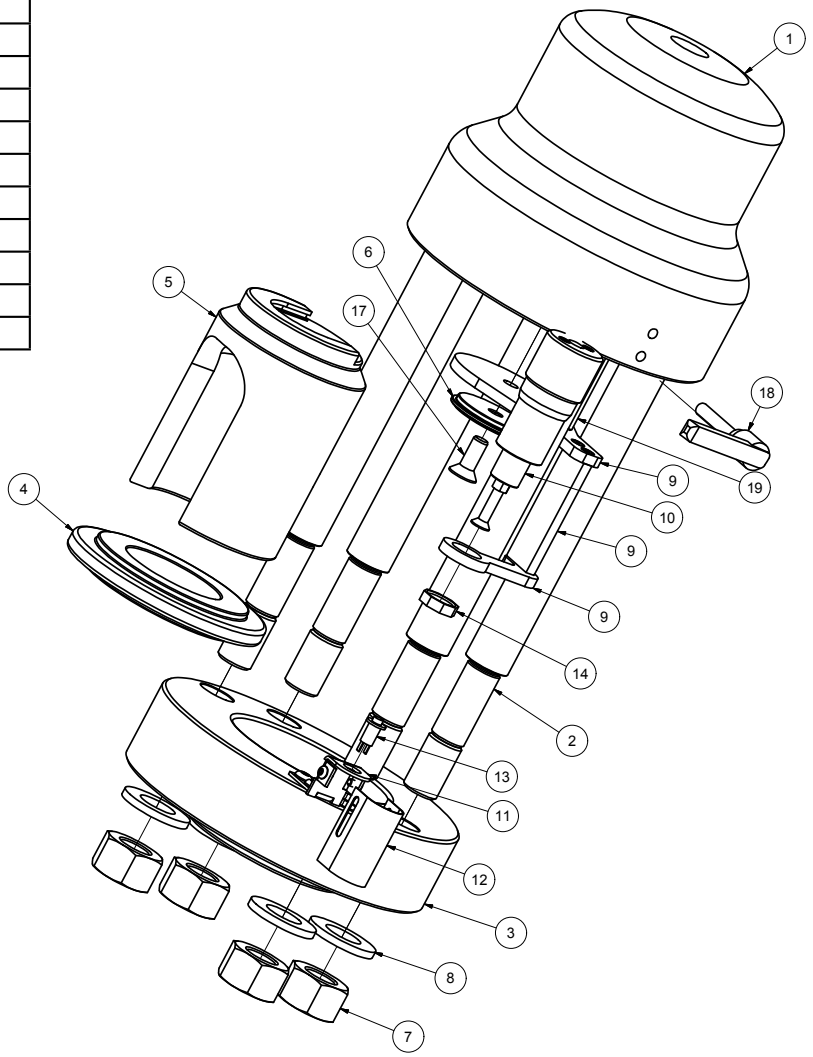


NOTE: SPRING TO HAVE 8 ACTIVE COILS

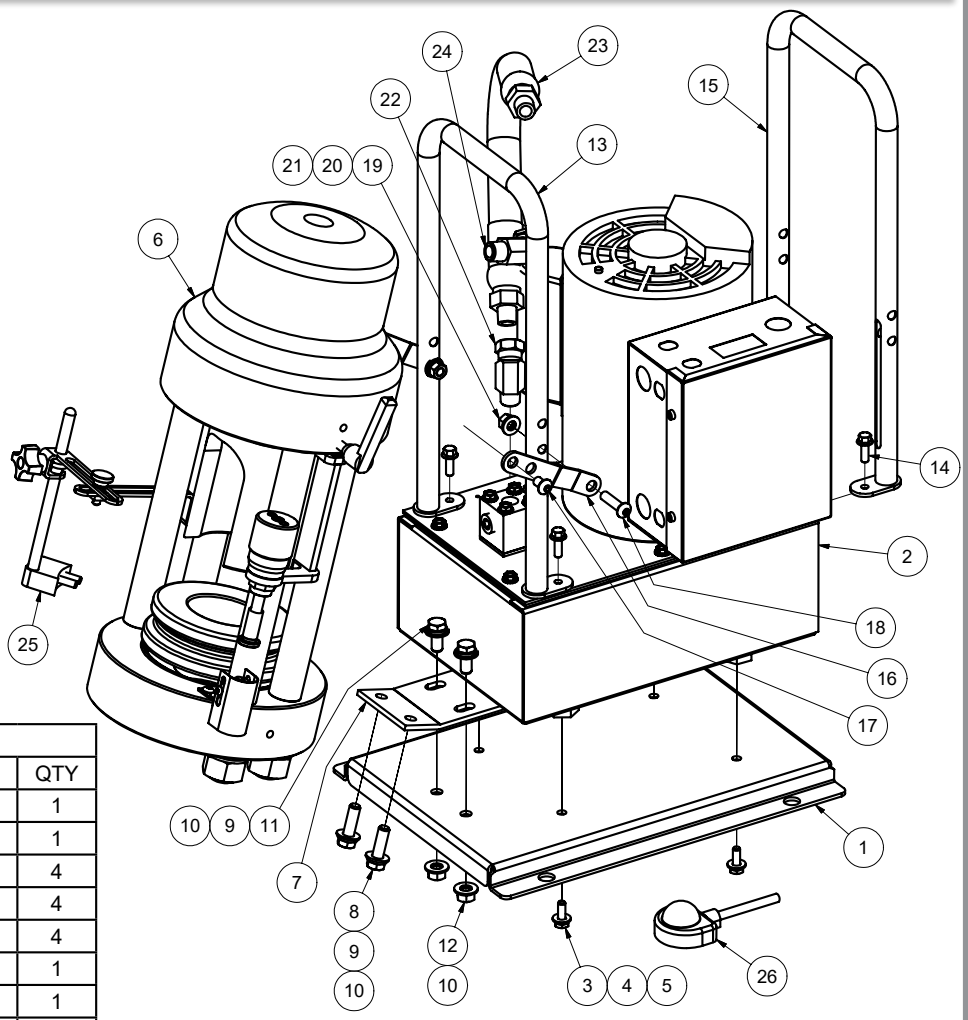
COMPONENT PARTS BREAKDOWN

K300 CRIMPER SUB ASSEMBLY			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	102219*	60 Ton Cylinder Assembly	1
2	102270*	8 1/4" Strain Rod	4
3	104727*	Base Flange	1
4	K300PLATE	Press Plate	1
5	K300PUSHER	60 Ton Pusher	1
6	100812*	Pusher Retaining Pin	1
7	34-5014	7/8-14 Hex Nut	4
8	11038*	7/8 Narrow Rim Washer	4
9	102220-T420*	Micrometer Holding Assembly	1
10	K300MICRO	Micrometer Assembly	1
11	101092*	Limit Switch Bracket	1
12	100692*	Limit Switch Guard	1
13	903 Switch*	Red Limit Switch	1
14	100727*	Micrometer Nut	1
18	KHA-126*	Stop Rod Locking Handle	1
19	102224*	Retraction Stop Rod	1

***Parts available through SPS/XPS**



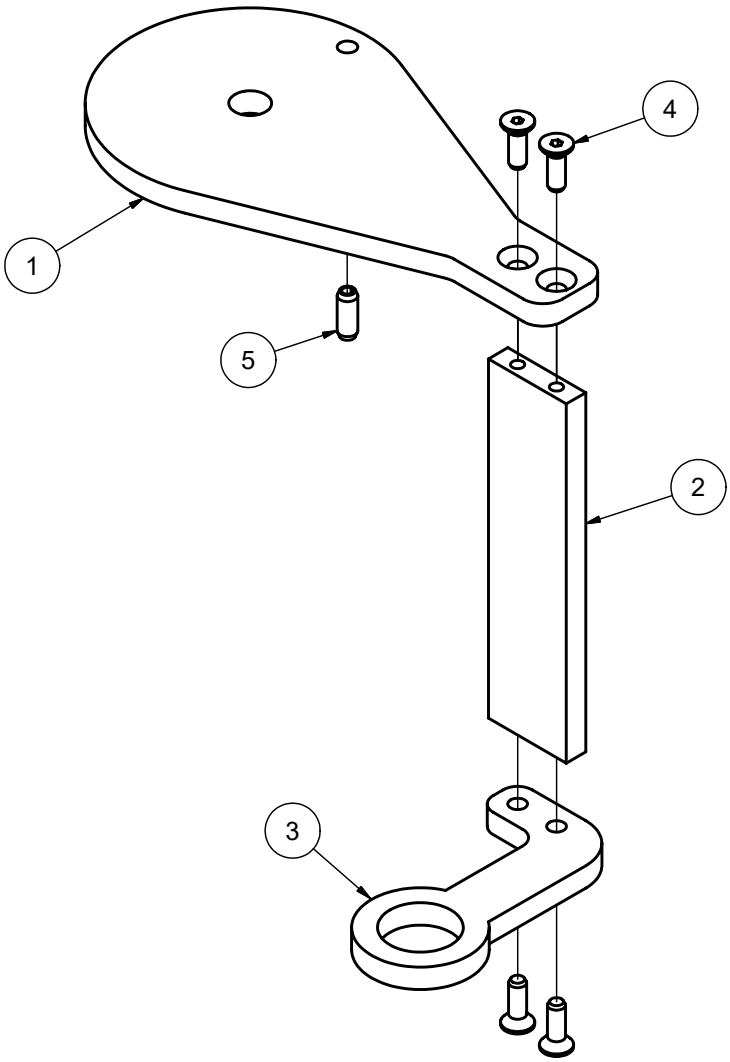
COMPONENT PARTS BREAKDOWN



***Parts available through SPS/XPS**

K300 CRIMPER ASSEMBLY			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	101430*	Base Plate	1
2	101633*	Pump Assembly	1
3	35-0406	1/4-20 x 3/4 HHCS	4
4	37-4504	1/4 Lock Washer	4
5	37-3604	1/4 Flat Washer	4
6	102161*	Crimper Head Assembly	1
7	101429*	Crimper Head Mounting Bracket	1
8	35-0610	3/8-16 x 1-1/4 HHCS	2
9	37-4506	3/8 Lock Washer	4
10	37-3606	3/8 Flat Washer	6
11	35-0607	3/8-16 x 7/8 HHCS	2
12	34-5006	3/8-16 Hex Nut	2
13	102160*	Front Handle Assembly	1
14	92323A516*	1/4-20 x 3/4 HHFCS	4
15	102222*	Rear Handle Assembly	1
16	102052*	Crimper Head Brace	2
17	3055051*	5/16-18 x 1/2 BHCS	2
18	91255A585*	5/16-18 x 1-1/4 BHCS	2
19	34-5005	5/16-18 Hex Nut	2
20	37-4505	5/16 Lock Washer	2
21	37-3605	5/16 Flat Washer	2
22	60TA-06X08*	45 Deg Swivel Fitting	1
23	102225*	High Pressure 1/2" Hose	1
24	60TA-08X08*	45 Deg Swivel Fitting	1
25	K300CSTOP	Coupling Stop Assembly	1
26	KKSWITCH	Pneumatic Pendant Switch	1

COMPONENT PARTS BREAKDOWN



K300 MICROMETER MOUNT ASSEMBLY			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	102214*	Micrometer Suspension Flange	1
2	102217*	Micrometer Brace	1
3	102215*	Micrometer Base Bracket	1
4	305121	8-32 x 1/2 HSFHCS	4
5	41-7864	3/16 Dia. x 1/2 Spring Pin	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.