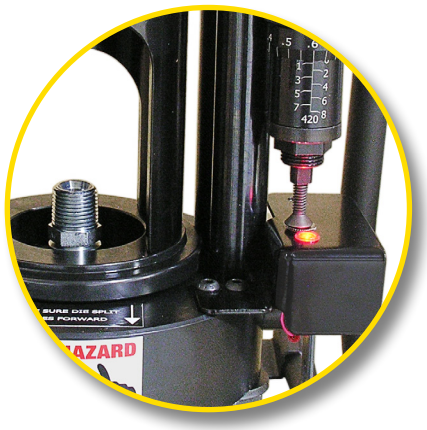
KIMBALL MIDWEST

K100 Portable
Hydraulic Hose Crimper

The K100 Portable series hose crimper with Micrometer Style Adjustment and 35 tons of crimping force has the capability to crimp hoses up to 1" 2 wire and 3/4" 4 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.



K100 PORTABLE SERIES HYDRAULIC HOSE CRIMPER
WITH LED INDICATOR LIGHT OPERATORS MANUAL

SAFETY PRECAUTIONS

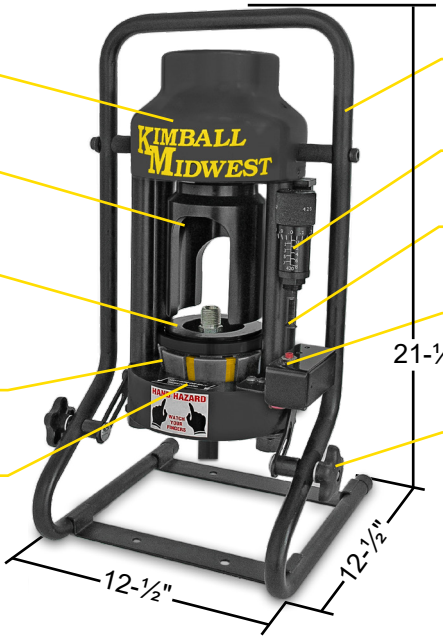
SAFETY PRECAUTIONS

- READ INSTRUCTIONS AND IDENTIFY ALL COMPONENT PARTS BEFORE USING THE CRIMPER.
- K100 PORTABLE SERIES CRIMPER CAN PRODUCE 35 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.

TABLE OF CONTENTS

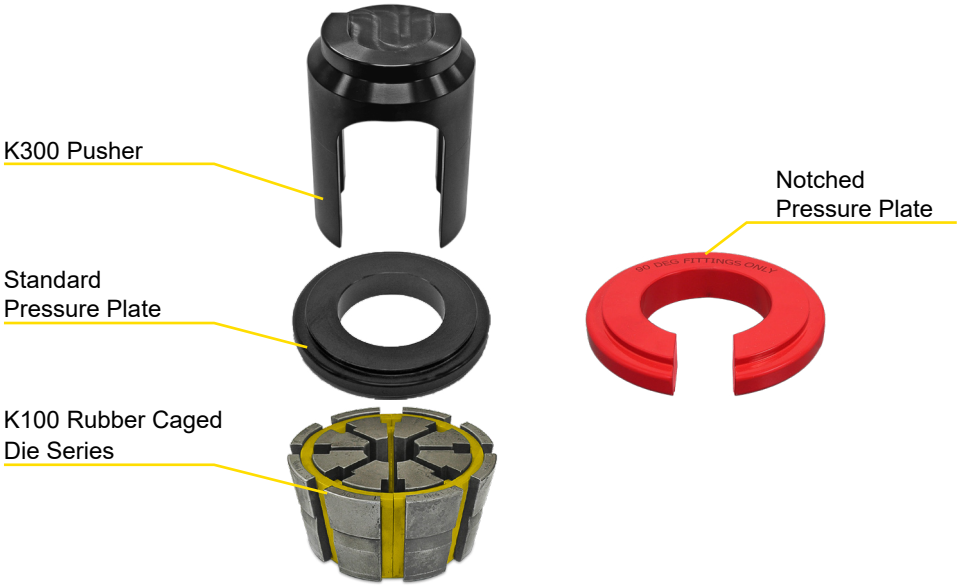
K100 Portable Hydraulic Hose Crimper

K100 COMPONENT PARTS & TECHNICAL DATA



Small Footprint for minimum space requirements.

Technical Data
Crimping Force: 35 Ton
Crimping Capacity: 1" - 2 Wire 3/4" - 4 Wire
Dimensions: L: 12-½" x W: 12-½" x H: 21-½"
Weight: 48 lbs
Micrometer Style Adjustment: Metric
Die series: K100 Rubber Caged
Available Pumps: Hand Pump Pneumatic Pump



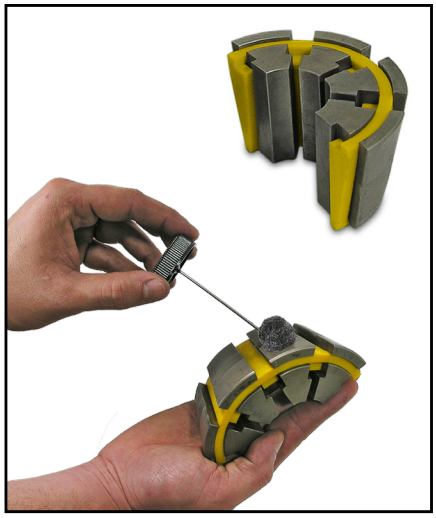
Note: Dies are supplied separately - not included with the crimper.

KIMBALL MIDWEST

K100 Portable
Hydraulic Hose Crimper

FEATURES

Lightweight Portable Unit. Truly “portable” crimper can be carried to almost any location where service is required.



Two piece rubber caged dies designed for heavy duty environments. The design facilitates lubrication on the critical surfaces, an important part of the crimping process.

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

Crimper orientation can be adjusted for optimum crimping position, or set to vertical position for better balance when the crimper is being carried.

LED indicator light will illuminate to indicate that the crimp is complete.

Easy calibration adjustment to increase or decrease the crimp OD.

KIMBALL MIDWEST

K100 Portable
Hydraulic Hose Crimper

The K100 Portable Series hydraulic hose crimper can be paired with either a Hand Pump or Pneumatic Pump to make the ideal combination for any portable crimping application.

PERFORMANCE SPECIFICATIONS	
Pump Model	K1HP
Reservoir Capacity	14 Fluid ounces (410cc)
Weight	8 Lb (3.6 Kg)
Max Hydraulic Pressure	10,000 psi (680 bar)
Low Pressure Flow	.2 ounce per stroke
High Pressure Flow	.04 ounce per stroke
Maximum Handle Effort	100 Lb (45 Kg)

PERFORMANCE SPECIFICATIONS	
Pump Model	K1AH
Reservoir Capacity	55 Fluid ounces (1,639 cc)
Weight	20 Lb (9 Kg)
Flow @ 0 psi	40 fl. oz. / min
Flow @ 5,000 psi	13 fl. oz. / min
Flow @ 10,000 psi	3.3 fl. oz. / min
Required air pressure @ 10,000 psi	85 psi dynamic
Air Inlet Port Size	1/4" NPT Industrial Interchange Nipple Provided

INITIAL SETUP

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

The K100 Portable Series hydraulic hose crimper can be paired with either a Hand Pump or Pneumatic Pump to make the ideal combination for any portable crimping application.

Lightweight portable unit, mounted on a convenient carrying frame, can be carried to almost any location where service is required.

• If the K100 series crimper is going to be used in the shop it is recommended to mount the crimper on a sturdy workbench in a well-lit area. The workbench should be able to support the crimper, pump, and all component weight.

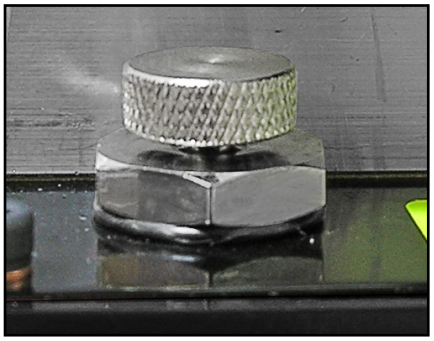
10,000 psi Hose Assembly
W/ 3/8 Quick Connect Male Tip

• The crimper should be mounted close enough to the edge of the work surface 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.

3/8 Quick Disconnect
Female Installed

• The Hand Pump or Pneumatic Pump offer rugged heavy duty hydraulic power that meet the demanding requirements of industrial users. Both manual and the pneumatic pump have aluminum reservoirs to withstand the temperature and service conditions of heavy duty use.

• A 10,000 psi hose, and quick disconnect fitting, have been included with the crimper to connect any of the optional power units to the K100 cylinder port.



Pneumatic Pump's Vent Plug

Note: The vent plug needs to be opened before actuating the hand pump or the pneumatic pump.

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

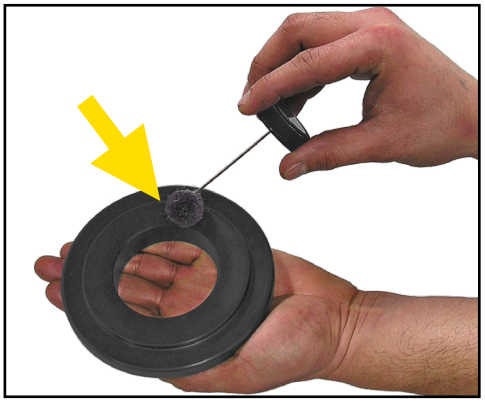
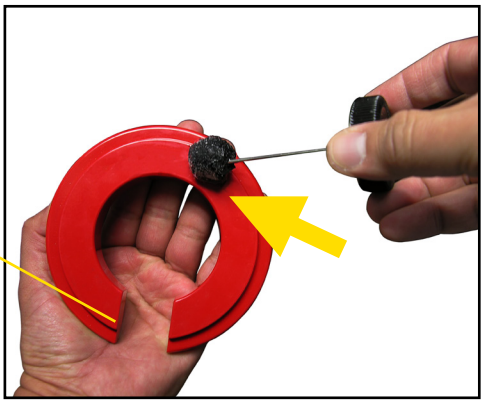


Photo # 2

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).

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.

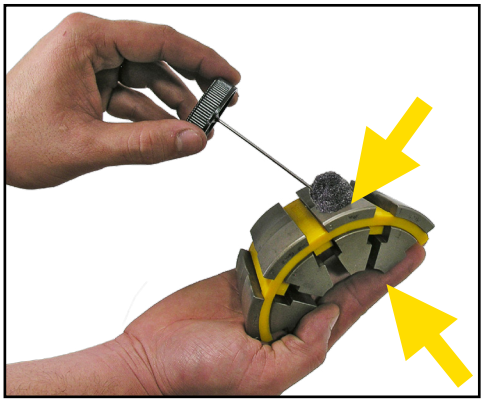


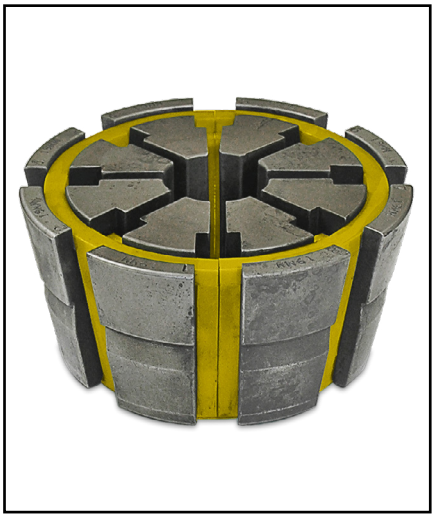
Photo # 3

CRIMPING WITH THE STANDARD K100 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.

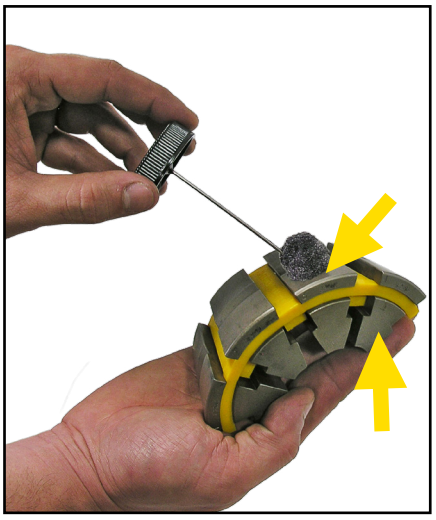
Step 1: Make certain that the **Cone Base** is clean and lubricated prior to inserting the die set.



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 K100 PRESSURE PLATE

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

Note: Make sure the split of the die cage 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.

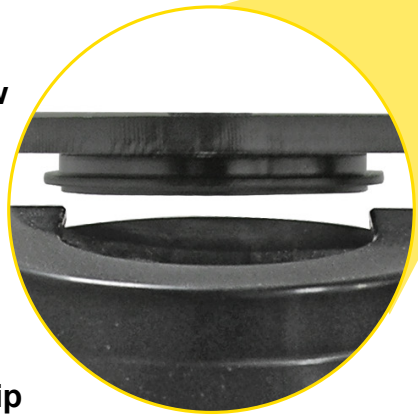
Step 6: Place the **Lubricated Standard Pressure Plate** over the die set.

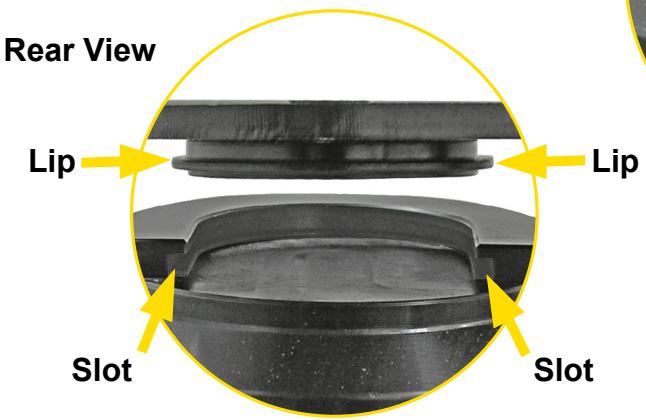
CRIMPING WITH THE STANDARD K100 PRESSURE PLATE

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.

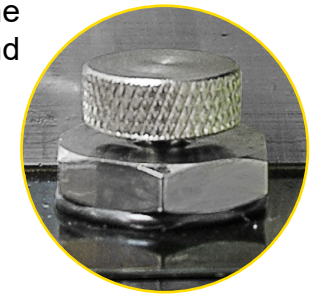
CRIMPING WITH THE STANDARD K100 PRESSURE PLATE

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.

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: Actuate the Hand or Pneumatic Pump to bring the pusher in contact with the pressure plate until the hose and fitting are held in position with very light pressure.

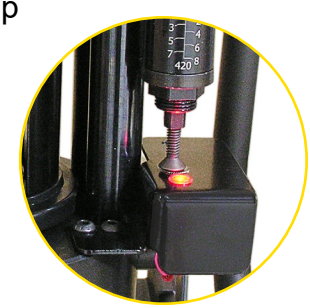


Note: The vent plug needs to be opened before actuating the hand or pneumatic pump.

- Check to make sure the pressure plate is evenly placed on the die set and the die set is correctly aligned.

- Recheck the fitting for alignment.

Step 10: Continue to supply pressure so the pusher travels downward, compressing the pressure plate onto the die set to crimp the coupling.



As the micrometer moves down, it will touch the red button and the LED indicator light will turn on to indicate that the crimp is complete.
Release pressure so the pusher will retract.

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.

CRIMPING WITH THE NOTCHED K100 PRESSURE PLATE

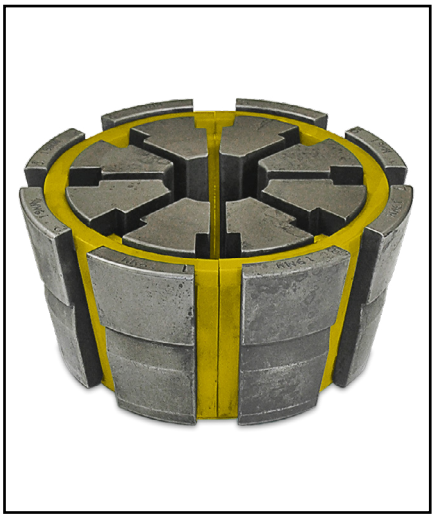
WHEN USING THE NOTCHED PRESSURE PLATE, FOR USE WITH 90 DEGREE FITTINGS ONLY, FOLLOW THESE PROCEDURES:

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.

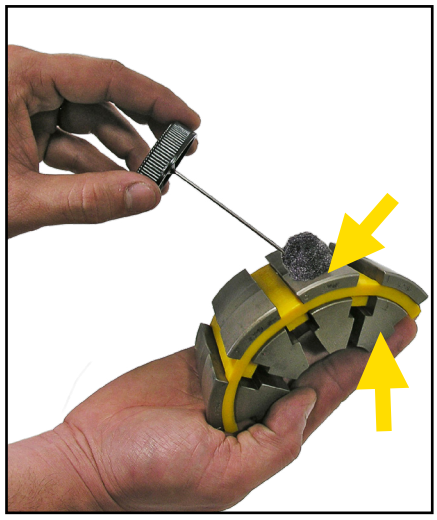


Note: Consult your hose and fitting manufacturer for the correct die size for the combination of hose and fitting being crimped.

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 K100 PRESSURE PLATE

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

Note: Make sure the split of the die cage 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 K100 PRESSURE PLATE

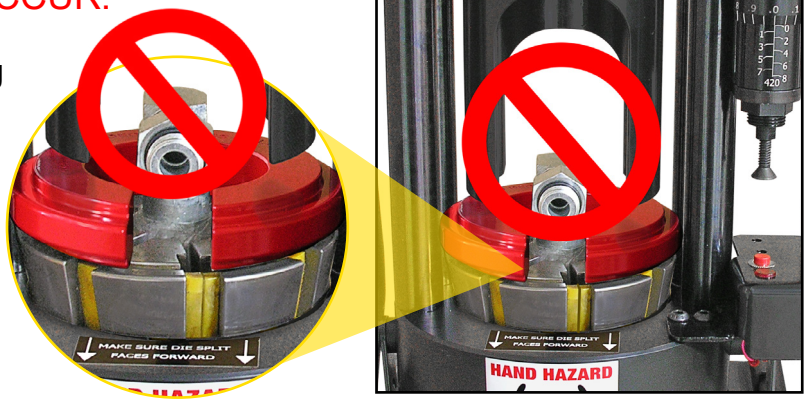
Step 7: CAUTION: DO NOT MISALIGN THE NOTCHED PRESSURE PLATE OR DAMAGE WILL OCCUR.

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

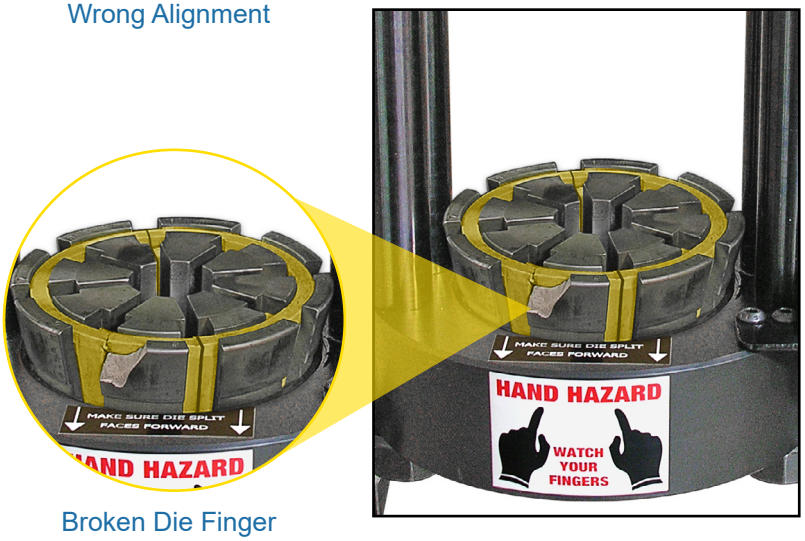
A. The die split must face the operator.

B. The 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, 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 11 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.

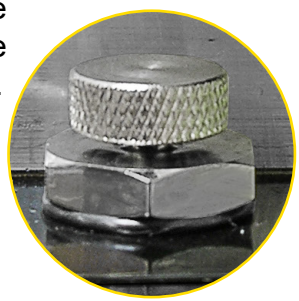
CRIMPING WITH THE NOTCHED K100 PRESSURE PLATE

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.

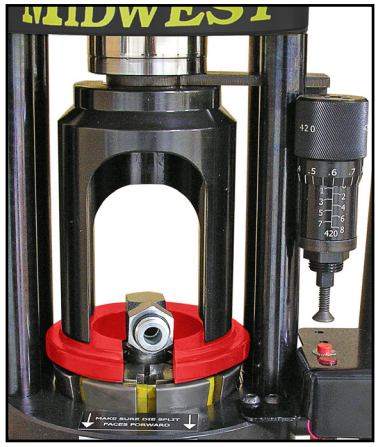
For example: With a 23mm die set and the Micro-Crimp Adjuster set at 3.0, the finished crimp diameter would be 26.0 mm (23mm + 3.0mm).

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: Actuate the Hand or Pneumatic Pump to bring the pusher in contact with the notched pressure plate until the hose and fitting are held in position with very light pressure.

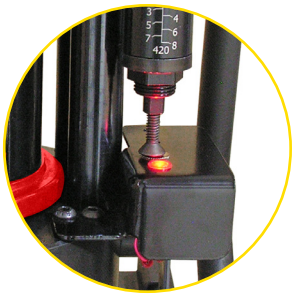


Note: The vent plug needs to be opened before actuating the hand or pneumatic pump.

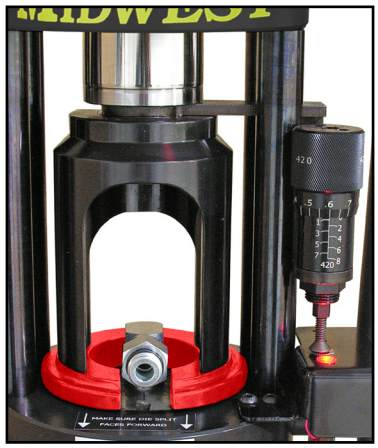


- Check to make sure the notched pressure plate is evenly placed on the die set and the die set is correctly aligned.
- Recheck the fitting for alignment.

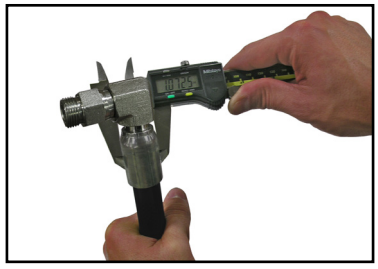
Step 11: Continue to supply pressure so the pusher travels downward, compressing the notched pressure plate onto the die set to crimp the coupling.



As the micrometer moves down, it will touch the red button and the LED indicator light will turn on to indicate that the crimp is complete.
Release pressure so the pusher will retract.



Step 12: 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 cage 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.

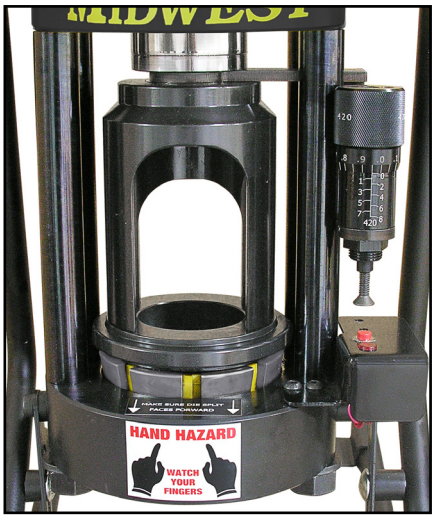
CALIBRATION CHECK PROCEDURE

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 11 for details if needed.

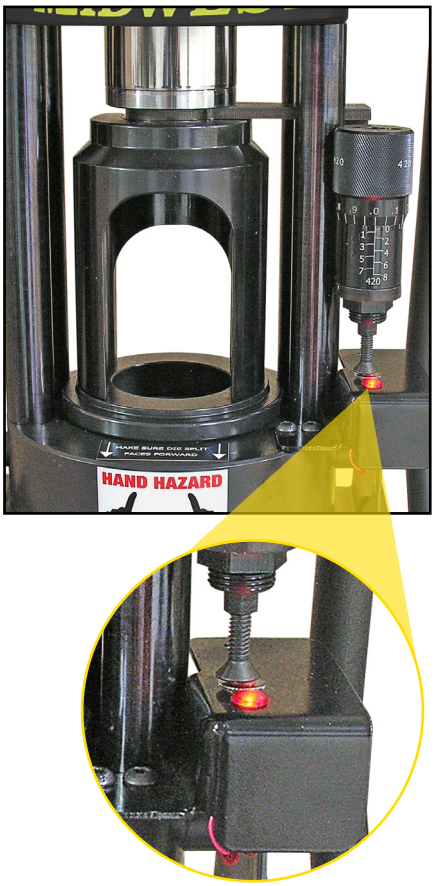
CAUTION: Damage to the pusher and retaining ring can occur if they are misaligned.

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



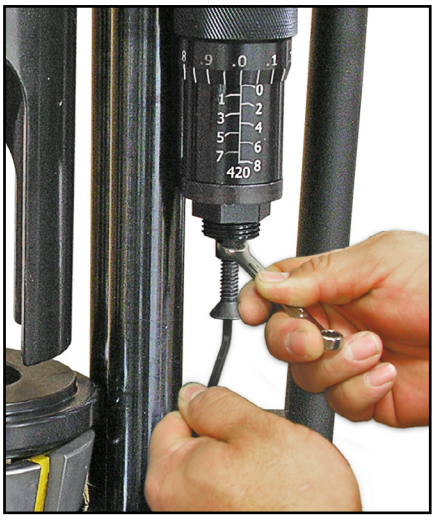
Step 6: Actuate the Hand or Pneumatic Pump to bring the pusher in contact with the pressure plate.

CALIBRATION CHECK PROCEDURE



Step 7: Continue to supply pressure. As the ram extends fully, the die will completely close, and the micrometer will touch the red button. At this point the LED indicator light is turned on as shown, the crimper is correctly calibrated. Release pressure so the pusher will retract.

Note: If the LED Indicator Light becomes faint, replace the (2) AA batteries. (Refer to instructions on page 20).

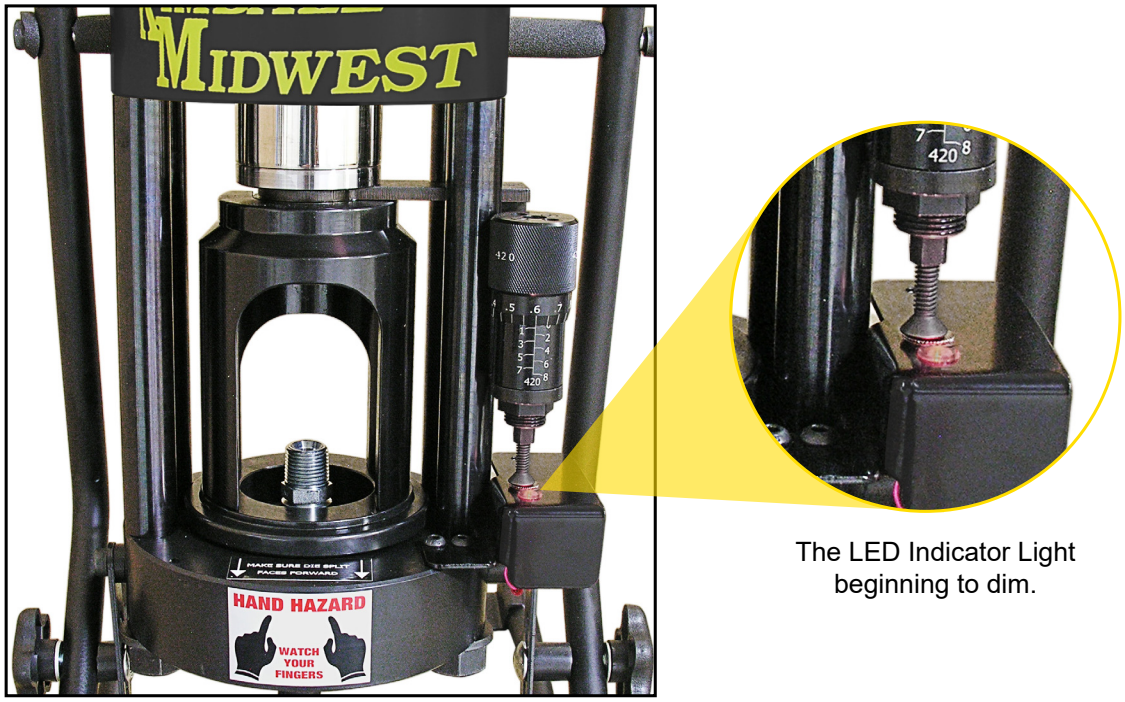


Step 8: If the above conditions are not met, the crimper requires recalibration. Hold the micrometer barrel with a 5/16 inch open end wrench and rotate the stem either in or out with a 5/32 inch hex key wrench.

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

- Recheck calibration. Repeat until the LED light does not illuminate until the ram is fully extended.

HOW TO REPLACE THE LED INDICATOR LIGHT BATTERIES

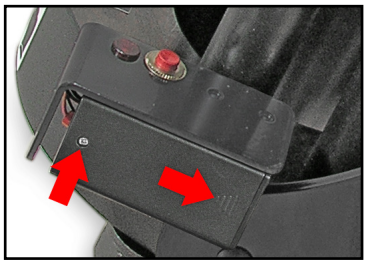


The LED Indicator Light beginning to dim.

2

3

4



Note: If the LED Indicator Light becomes dim, weak and / or if the LED indicator does not illuminate, replace the (2) AA batteries.

1. Use a # 0 Phillips-head screwdriver to remove the screw.
2. Slide the cover back to remove it.
3. Replace the (2) AA batteries.
4. Slide the cover toward the front until it locks into place, and secure it with the screw.

INCLUDED ACCESSORIES

Micrometer
P/N:K100MICRO


Pusher
P/N:K300PUSHER


Standard Pressure Plate
P/N:K100 PLT

Notched Pressure Plate
P/N:K10090PLT

3/8 Quick Disconnect
Female Installed*


10,000 psi Hose Assembly
W/ 3/8 Quick Connect
Male Tip*


Die Removal Magnet
P/N:KKMAG

*** Available through SPS/XPS for replacement.**

AVAILABLE ACCESSORIES

Hand Pump 10,000 psi
P/N:K1HP

Pneumatic Pump 10,000 psi
P/N:K1AH

Die Storage Shelf
P/N:K100DS

K100 Rubber Caged
Die Series

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

Pusher Retaining Ring
w/ Screw P/N:100812

TROUBLESHOOTING

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. H 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

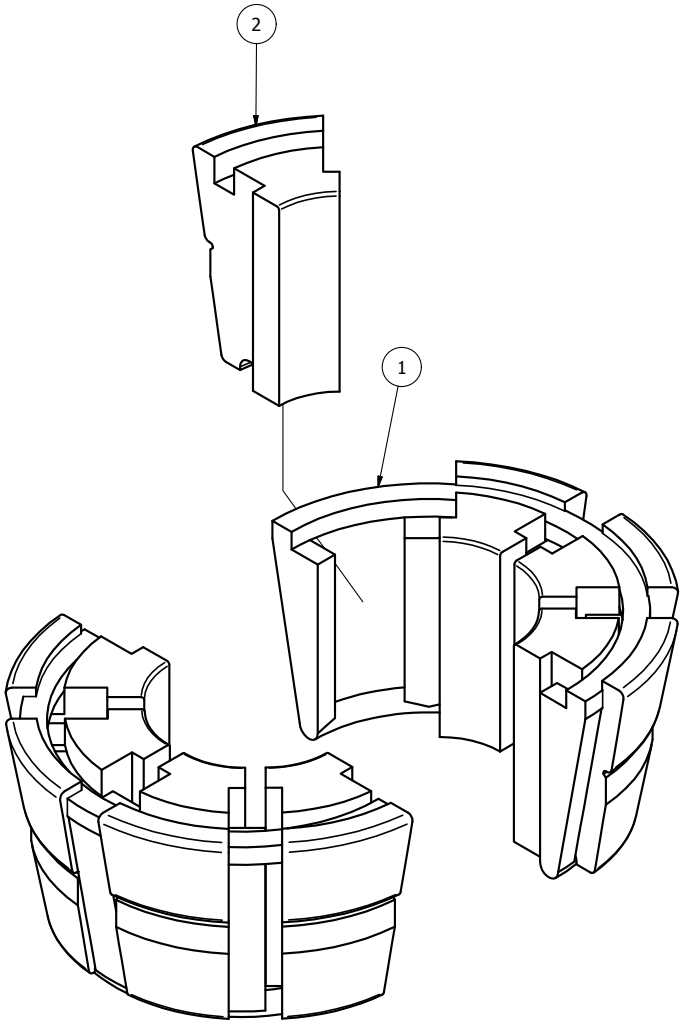
- Incorrect setting of the Micro-Crimp Adjuster. Check crimp specifications.
  (NOTE: All published machine settings are approximate. To correct for slight variances, the gauge settings may be adjusted for the specific hose, fitting and size combination).
- Incorrect die being used (See die range under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

PROBLEM: THE DIES ARE STICKING IN THE CONE BASE

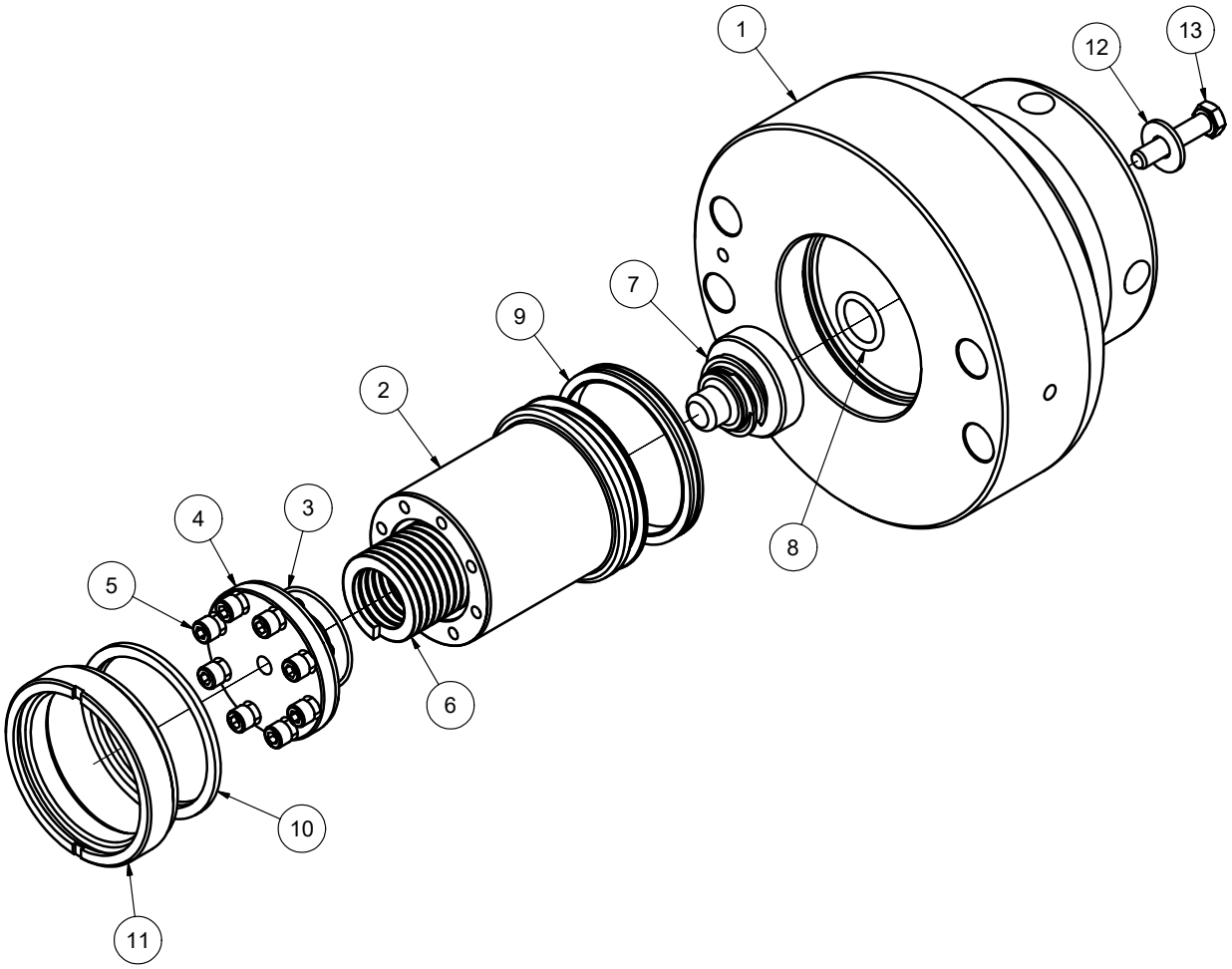
- Inadequate lubrication of the cone base and die surfaces. Use only the CrimpX oil / grease shipped with the machine or a molybdenum disulfide high pressure grease.
- Refer to Lubrication Procedure for more details.

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



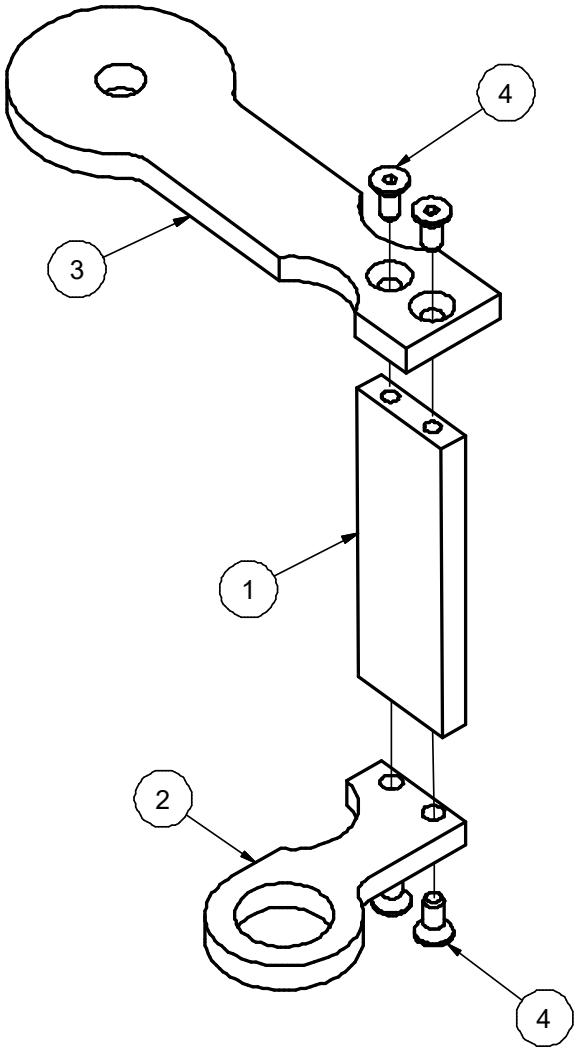
COMPONENT PARTS BREAKDOWN



35 Ton Cylinder / Flange Assembly (103122)			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	102511 *	Cylinder Body	1
2	101515 *	Cylinder Piston	1
3	030D90 *	030 Disogrin O-Ring	1
4	100689 *	Cylinder Piston Cap	1
5	91251A539 *	1/4-20 X 5/8 SHCS	8
6	101282 *	Cylinder Spring	1
7	101516 *	Spring Plug	1
8	210D90 *	210 Disogrin O-Ring	1
9	TP032 *	T-Seal	1
10	SH959-26 *	Ram Wiper	1
11	101514 *	Cylinder Retaining Ring	1
12	90108A415 *	5/16 Flat Washer	1
13	92865A587 *	5/16-18 x 1.50 HHCS	1

***Parts available through SPS/XPS**

COMPONENT PARTS BREAKDOWN



D105 Micrometer Mount Assembly (101788)			
Item	Part Number	Description	Qty
1	100898-01*	Micrometer Arm	1
2	100898-02*	Micrometer Base	1
3	100898-03*	Micrometer Suspension Flange	1
4	30-5119	8-32 x 1/4 HSFHS	4

***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.