KH-80 HYDRAULIC CRIMPER
OPERATORS MANUAL

SAFETY PRECAUTIONS

READ AND IDENTIFY ALL COMPONENT PARTS BEFORE USING CRIMPER.

CRIMPER CAN PRODUCE 80 TONS OF FORCE. KEEP BOTH HANDS AWAY FROM PINCH POINTS.

CONSULT HOSE AND FITTING MANUFACTURERS SPECIFICATIONS FOR CORRECT MACHINE SETTINGS AND CRIMP MEASUREMENTS.

ALWAYS WEAR EYE PROTECTION.

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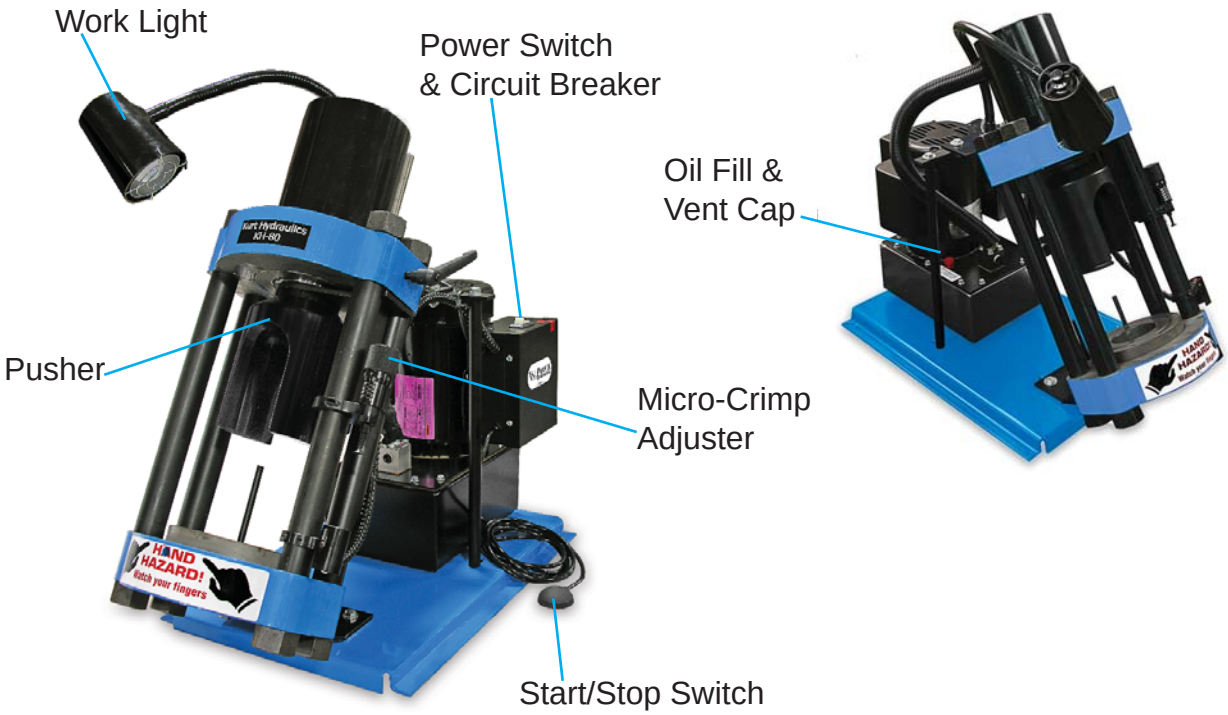
KH-80 COMPONENT IDENTIFICATION



Bent Tube Pusher Plate

Standard Pusher Plate

Small Die Series
(Not included)

Cone Insert

Die Stack with
Small Die Series

Large Pusher Plate

Large Die Series
(Not included)

Die Stack with Large Die
Series

QUICK START GUIDE AND CALIBRATION CHECK

FOLLOW THESE STEPS BEFORE USING THE CRIMPER FOR THE FIRST TIME

■ Remove reservoir plug and replace with Oil Fill and Vent Cap. The Oil Fill and Vent cap and the work light bulb are found in the accessories box.

■ Place the crimper on a sturdy bench in a well lit area, and plug the crimper directly into a 220 V single phase wall outlet. *Do not run the crimper on an extension cord as low voltage can damage the motor.*

■ The oil level in the pump should be approximately 1-1/2 inches below the fill plug. If necessary, replenish with ISO Viscosity Grade 46 hydraulic oil.

Note: The crimper is calibrated prior to shipment, but a calibration check is recommended prior to using the crimper for the first time.

■ Lubricate all contact surfaces and place the Cone Insert, any Small Series die set and the Standard Pusher in the crimper in the order shown. Note that a hose and fitting are not required for an initial calibration check. *Note: failure to lubricate <u>all</u> contact surfaces can cause the Cone Insert and/or the dies to seize in the cone base.*

■ Slide the Pusher onto the stud on the hydraulic ram.

■ Set the Micro-Crimp adjuster at “95”

■ Press and hold the start switch bulb.

■ If the ram extends and the crimper shuts off approximately 1 second after the dies are completely closed and the pump starts to build pressure, the crimper is correctly calibrated.

■ If the time to shut off is not approximately 1 second, the crimper must be recalibrated. Recalibrate as follows:

CALIBRATION INSTRUCTIONS

■ 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.

■ If the motor shuts off too quickly or before the dies are completely closed, rotate the stem in.

■ If the motor does not shut off or shuts off in substantially more than 1 second, rotate the stem out.

■ Recheck calibration.

CRIMPING WITH SMALL DIE SERIES

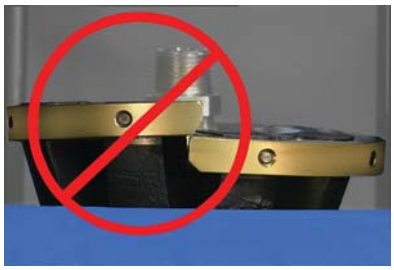
Mark insertion depth on hose and push all the way into fitting. Reference crimp specifications for insertion depths.

Lubricate die fingers, all contact surfaces and die cones.
WARNING: Failure to lubricate will cause damage to die sets and crimper.

Place the cone insert squarely in the base of the crimper.

Place the die set and hose and fitting loosely in the cone insert.

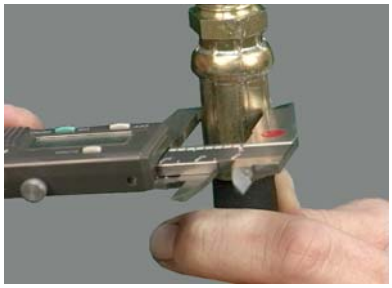
Correct alignment of the hose and fitting in the die set is shown. Reference crimp specifications for fitting locations.



Use care to be certain that the die halves do not overlap.

Place the Pusher Plate on top of the die set.

Slide the Pusher onto the stud on the hydraulic ram and press and hold the start switch until the motor shuts off.



Check the finished crimp diameter to be certain that it is within the crimp specification limits.

CRIMPING WITH LARGE DIE SERIES

Crimping with large dies is essentially identical to crimping with the small dies except that the Cone Insert is removed from the crimper base.

Remove the Cone Insert from the crimper base and lubricate all contact surfaces of the die set. WARNING: Failure to lubricate will cause damage to die sets and crimper.

Insert the die set and Pusher Plate in the order illustrated.

Align the hose and coupling as recommended. Load the Pusher Plate and Pusher and press and hold the start/stop switch until the crimper shuts off. Check the final crimp diameter to be certain that it is within specifications.

KH-80 CRIMPER FEATURES

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

The adjustable retraction stop limits the retraction of the ram to only the amount required to easily remove the hose and fitting. This feature saves time when doing multiple crimps.

TROUBLESHOOTING

PROBLEM: 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 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 pendant switch bulb.

PROBLEM: CRIMP DIAMETER 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 be adjusted for the specific hose, fitting and size combination).
- Incorrect die being used. Each die has a range of approximately 3mm (.120 in) above the closed diameter of the die. The closed diameter is the die 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 and compression ring causing the pump to work harder than normal to reach the required diameter. Use only the grease shipped with the machine or equivalent.
- 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 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.

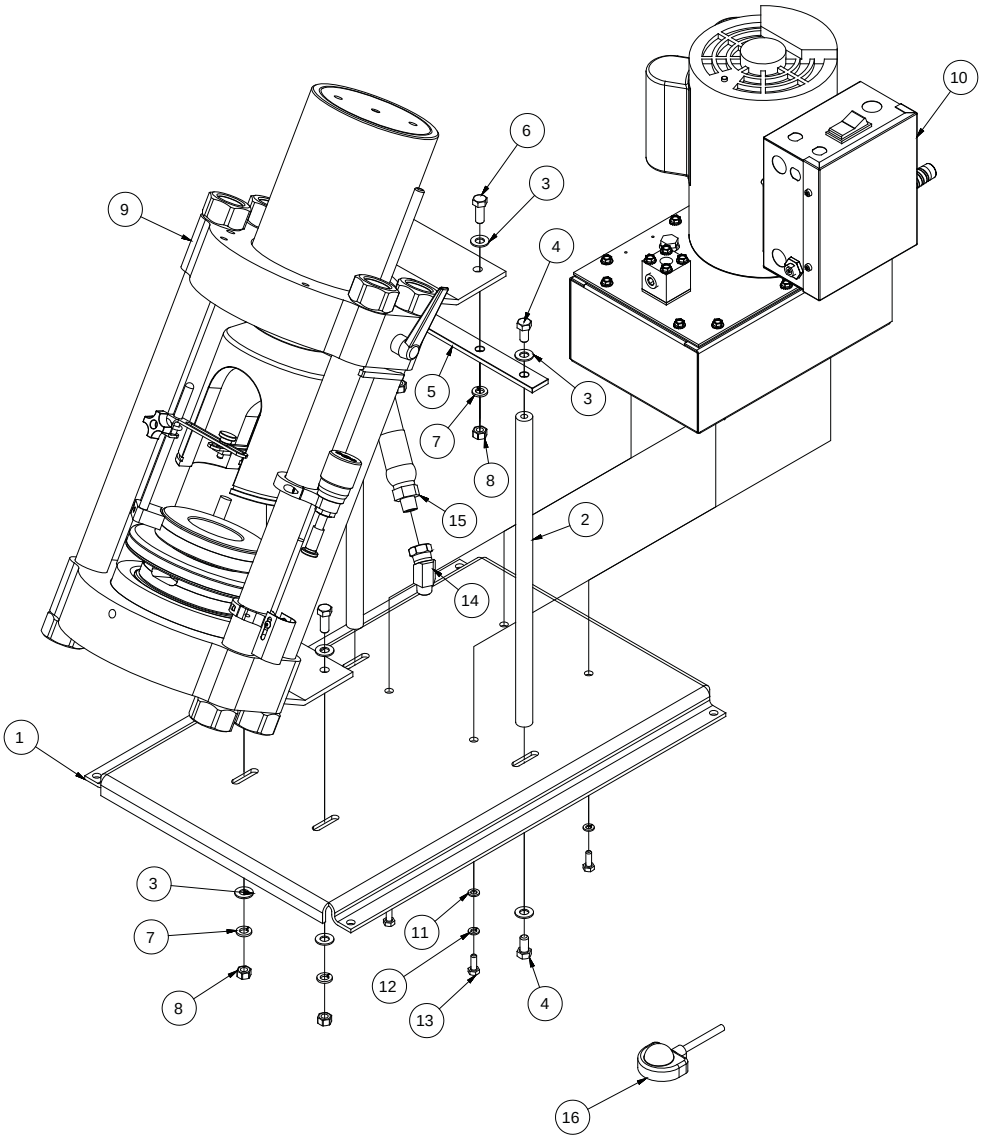
PROBLEM: CRIMP DIAMETER TOO SMALL

- 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: DIES STICKING IN COMPRESSION CONE

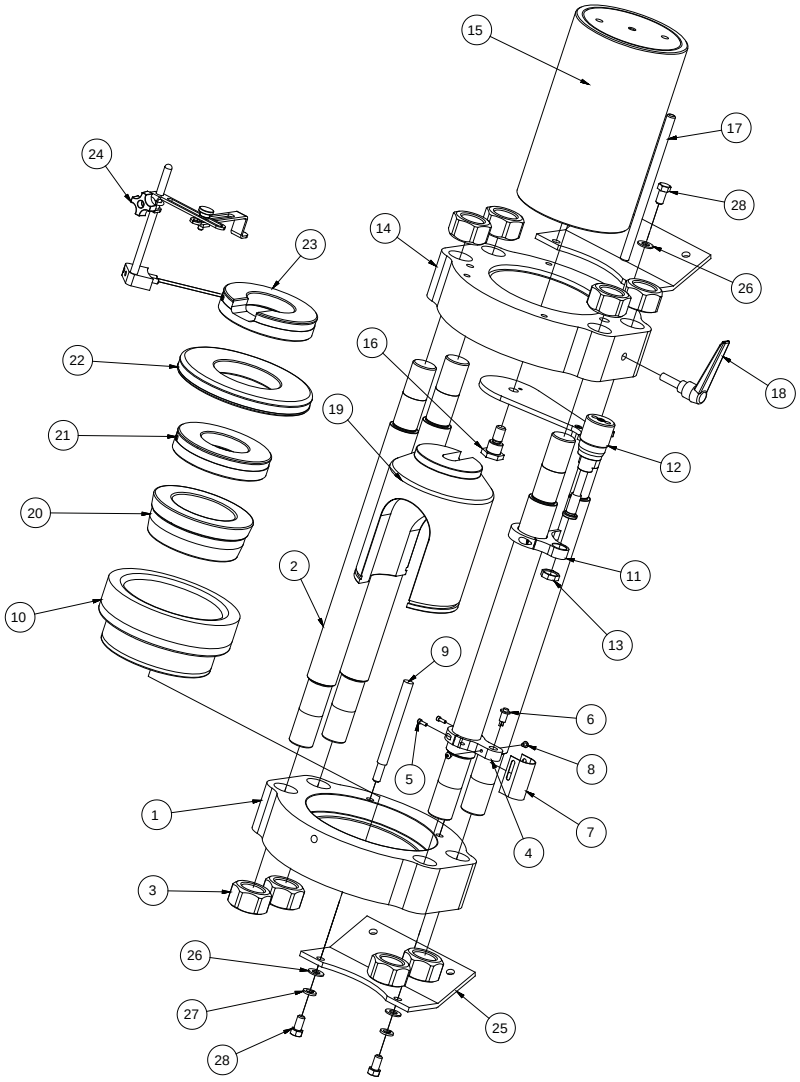
- Inadequate lubrication of the compression cone and die surfaces. Use only the grease shipped with the machine or equivalent.

KH-80 COMPONENT PARTS BREAKDOWN



COS-K2 Crimper Assembly (101996)			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	101585	COS-K2 Base	1
2	101624	COS-K2 Support Rod	2
3	90126A031	3/8 Flat Washer	10
4	92865A622	3/8-16 X 3/4 Hex Bolt	4
5	101621	COS-K2 Support Rod Brace	1
6	92865A624	3/8-16 X 1 Hex Bolt	4
7	91102A031	3/8 Lock Washer	4
8	95462A031	3/8-16 Nut	4
9	101987	COS-K2 Head Assembly	1
10	101633	Pump Assembly	1
11	90126A029	1/4 Flat Washer	4
12	91102A029	1/4 Lock Washer	4
13	92865A540	1/4-20 x 3/4 Hex Bolt	4
14	60TA06X08	45 Deg. Hydraulic Fitting	1
15	101645	COS-K2 Hydraulic Hose	1
16	101349	Pendant Switch & Plug	1

KH-80 COMPONENT PARTS BREAKDOWN



COS-K2 Crimper Head Assembly (101987)			
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	91251A146	6-32 X 3/8 SHCS	2
6	903 Switch	Limit Switch	1
7	100692	Limit Switch Guard	1
8	91255A190	8-32 X 1/4 BHCS	2
9	101995	3/8 Dia. X 5 1/2 Pin	2
10	EN00-228	Compression Cone	1
11	100641	Micrometer Mount Assembly	1
12	100628	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	100818	Pusher	1
20	EN94-027	Cone Reducer	1
21	EN94-029	NP Pusher Plate	1
22	EN94-030	WB Pusher Plate	1
23	EN96-027	NP Bent Tube Pusher Plate	1
24	EN00-120	Coupling Stop Assembly	1
25	100680	Mounting Bracket	2
26	90126A031	3/8 Flat Washer	4
27	91102A031	3/8 Lock Washer	2
28	92865A622	3/8-16 X 3/4 Hex Bolt	4