



CUSTOM CRIMP™

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**D160S PORTABLE SERIES HYDRAULIC CRIMPERS WITH LED
INDICATOR LIGHT OPERATORS MANUAL**



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SAFETY PRECAUTIONS



- READ INSTRUCTIONS AND IDENTIFY ALL COMPONENT PARTS BEFORE USING CRIMPER.
- D160S SERIES CRIMPERS 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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BULLETIN: D160S series crimpers with Micro-Crimp Sight Indicator button have been upgraded with LED Indicator Light.



D160S SERIES CRIMPER WITH MICRO-CRIMP SIGHT INDICATOR BUTTON

STYLE: MICRO-CRIMP SIGHT INDICATOR BUTTON

CRIMPING PROCEDURE:

- Place the lubricated pressure plate into the bottom flange.
- Place the lubricated die set in the pressure plate.
- Align the fitting in the die set.
- Place the lubricated compression cone over the die set.
- Slide the pusher onto the pusher retaining ring on the hydraulic cylinder.
- Set the Micro-Crimp Adjuster to the setting desired.
- Apply pressure to the (Hand or Pneumatic Pump) **until the Micro-Crimp sight indicator button is just visible.**
- Release pressure so the pusher will retract.
- Check the final crimp diameter with calipers to confirm that it is within manufacturer's specifications.



UPGRADED WITH LED INDICATOR LIGHT

STYLE: LED INDICATOR LIGHT

CRIMPING PROCEDURE:

- Place the lubricated pressure plate into the bottom flange.
- Place the lubricated die set in the pressure plate.
- Align the fitting in the die set.
- Place the lubricated compression cone over the die set.
- Slide the pusher onto the pusher retaining ring on the hydraulic cylinder.
- Set the Micro-Crimp Adjuster to the setting desired.
- Apply pressure to the (Hand or Pneumatic Pump) **until the LED Indicator Light turns on.**
- Release pressure so the pusher will retract.
- Check the final crimp diameter with calipers to confirm that it is within manufacturer's specifications.

FEATURES:

- Visual RED LED Indicator Light turned on, to indicate the crimp is complete.
- No other adjustment than the Micrometer.
- Takes guesswork out of the crimping process.



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HOW TO REPLACE THE LED INDICATOR LIGHT BATTERIES



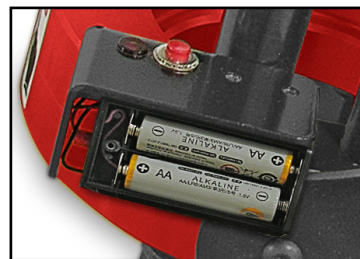
The LED Indicator Light beginning to diminish.



1



2



3



4

Note: If the LED Indicator Light becomes diminish/weak/and or if the LED indicator does not light up, replace the (2) AA batteries as needed.

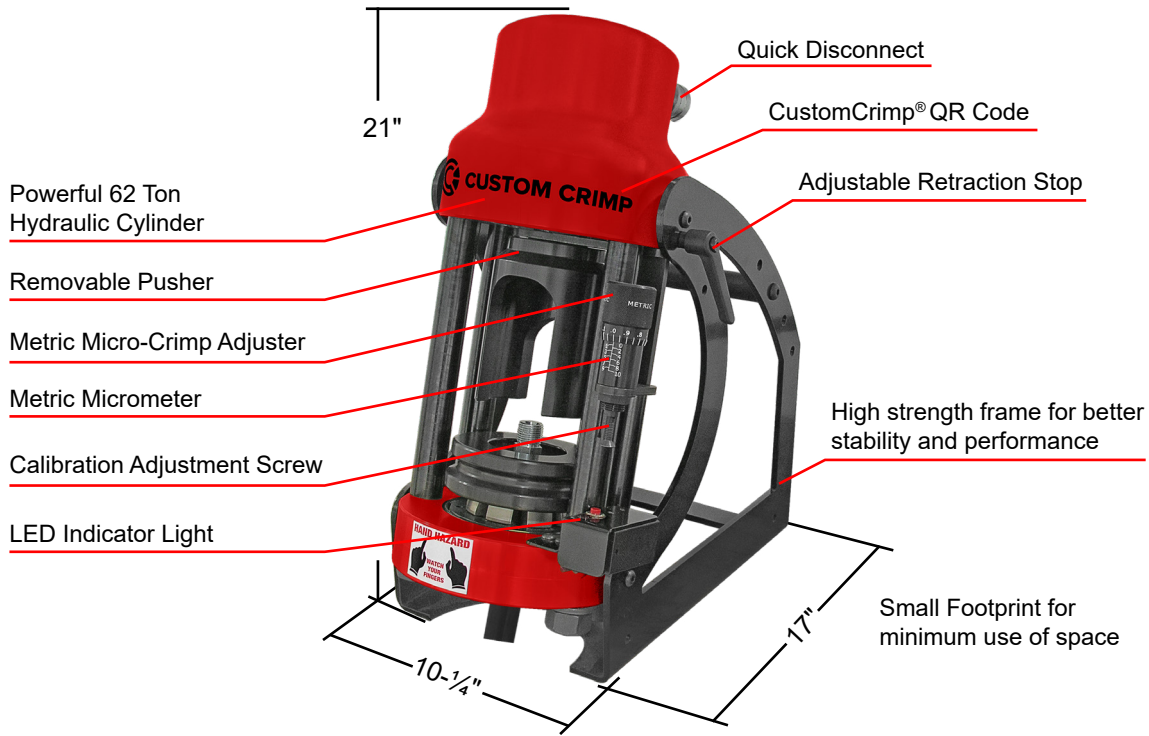
1. Use a # 0 Phillip-head screwdriver, to remove the screw.
2. Slide the cover towards the back to remove it.
3. Replace the (2) AA batteries.
4. Slide the cover towards the front until it locks into place, and secure it with the screw.



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COMPONENT PARTS & TECHNICAL DATA



D160S Technical Specifications	
Crimping Force:	62 Ton
Hydraulic Hose Capacity:	2 Wire = 1-1/4" 4 Spiral = 1-1/4" 6 Spiral = 1"
Crimper Size:	L: 17" x W: 10-1/4" x H: 21"
Crimper Weight:	72 lbs
Die Series:	D100
Available ValPower® Pumps:	Hand Pump (10,000 psi) Pneumatic Pump (10,000 psi) Multi-Electric Pump (1hp/110v)

*Crimper capacity is estimated based on typical 1-piece fitting. Actual results may vary depending on the fitting and hose manufacturer.



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D160S PORTABLE SERIES CRIMPERS

The D160S Portable Series hydraulic hose crimpers paired with either a ValPower® Hand Pump, Pneumatic Pump or Multi-Electric Pump make the perfect combination for portable crimping requirements.



D160-SH Portable Series Crimpers

with ValPower® Hand Pump 10,000 psi

PERFORMANCE SPECIFICATIONS	
Pump Model	VHP-10-43
Reservoir Capacity	43 in ³ (705cc)
Weight	9 Lb (4.1 Kg)
Max Hydraulic Pressure	10,000 psi (680 bar)
Low Pressure Flow	.35 in ³ per stroke
High Pressure Flow	.07 in ³ per stroke
Maximum Handle Effort	65 Lb (30 Kg)



D160-SP Portable Series Crimpers

with ValPower® Pneumatic Pump 10,000 psi

PERFORMANCE SPECIFICATIONS	
Pump Model	VAP-10-100
Reservoir Capacity	100 cu in (1,639 cc)
Weight	20 Lb (9 Kg)
Flow @ 0 psi	70 in ³ /min
Flow @ 5,000 psi	23 in ³ /min
Flow @ 10,000 psi	6 in ³ /min
Required air pressure @ 10,000 psi	85 psi



D161S Portable Series Crimpers

with ValPower® Electric Pump

PERFORMANCE SPECIFICATIONS	
Pump Model	1HP Pump
Power	110 Volts / Single Phase/15 Amp
Oil Type	ISO 46 Hydraulic Oil
Reservoir Capacity	1 Gallon



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FEATURES



D160S Series rugged steel frame and strain rods for strength, stability, performance, and durability for all service conditions of industrial use.



Open design, two piece “slide in” die set and removable pusher allows the operator to accurately position the fitting prior to crimping.



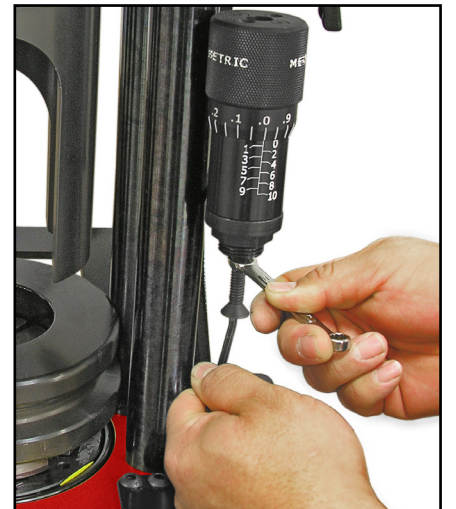
Metric Micrometer “Micro-Crimp Adjuster” is fully adjustable to make precise and repeatable crimps.



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



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



Easy calibration adjustment to increase or decrease crimp OD.



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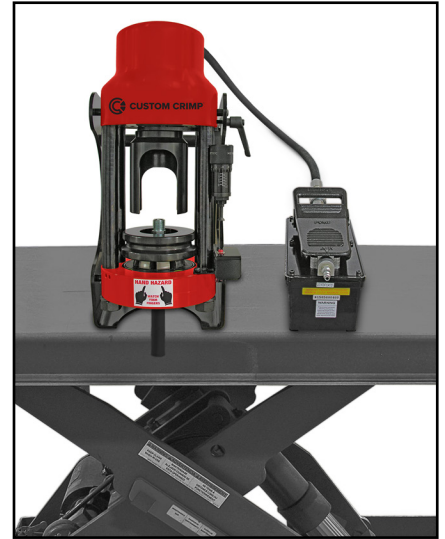
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INITIAL SET UP

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

The D160S Portable Series hydraulic hose crimper paired with either a ValPower® Hand Pump, Pneumatic Pump or Electric Pump make the perfect combination for portable crimping requirements. Weighing only 72 lbs and mounted on a convenient carrying frame, this 62 tons of crimping force can be carried to almost any location where service is required.

- If the D160S series crimper is going to be used in the shop is recommended to mount the crimper on a sturdy workbench in a well-lit area. Workbench should be able to support the crimper, pump, and components weight.
- The crimper should be mounted close enough to the edge of the work surface so that hose will not contact the bench or work surface while crimping. There must be enough clearance for the hose to align perpendicular with the cone base, or the dies will not seat properly and the crimps will not be accurate.
- Manual Pump 10,000 psi, Pneumatic Pump 10,000 psi or Electric Pump 1HP motor 110V single phase 15 AMP, ValPower® offers rugged industrial duty hydraulic power units that will meet the demanding requirements of industrial users. Both manual and air pumps have aluminum reservoirs and all electric models have steel reservoirs to withstand the temperature and service conditions of industrial use.
- A 10,000 psi hose and quick disconnect fitting has been included with the crimper to connect to any of the ValPower® optional power units to the D160S cylinder port.





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LUBRICATION PROCEDURE



Grease Point # 1

Insert the pressure plate into the bottom flange of the crimper, making sure that it is seated squarely into the bottom flange.

Place a thin layer of CrimpX oil (supplied with crimper) or a high pressure molybdenum high pressure grease on the surface the dies sit on (as shown in photo # 1).

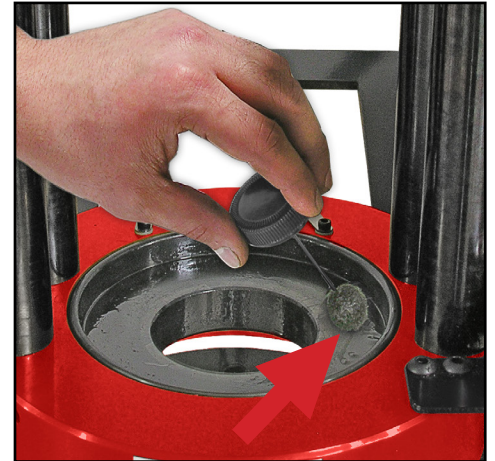


Photo # 1

Grease Point # 2

Before sliding the compression ring over the correct die set, place a thin layer of CrimpX oil (supplied with crimper) or a high pressure molybdenum high pressure grease on the entire area that dies come in contact with on the inner diameter (as shown in photo # 2).



Photo # 2

If Breaking Die Screws Often: Continue to lubricate / grease as explained above in addition to lubricating each die finger individually (as shown in photo # 3A).

If Compression Ring Sticks: The die fingers must be lubricated on each segment that comes in contact with the compression ring (as shown in photo # 3B).

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

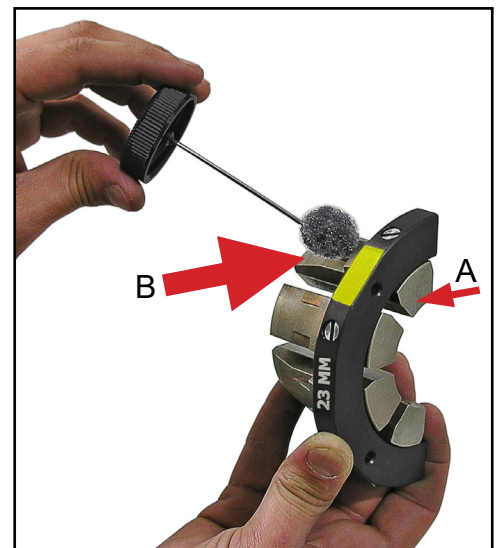


Photo # 3



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CRIMPING PROCEDURE

Note: Follow the lubrication procedure prior to crimping procedure.

NOTE: FAILURE TO LUBRICATE THE DIE SET AND COMPRESSION RING COULD RESULT IN THE DIE SET SEIZING IN THE BASE FLANGE.

Step 1: Insert the pressure plate into the bottom flange of the crimper, making sure that it is seated squarely into the bottom flange. Make sure is lubricated prior to inserting the die set.



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

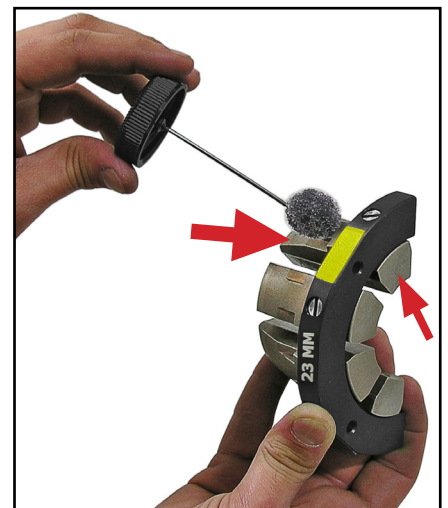
Note: Consult your hose and fitting manufacturer for the correct die size for the combination of hose and fitting being crimped.

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



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

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





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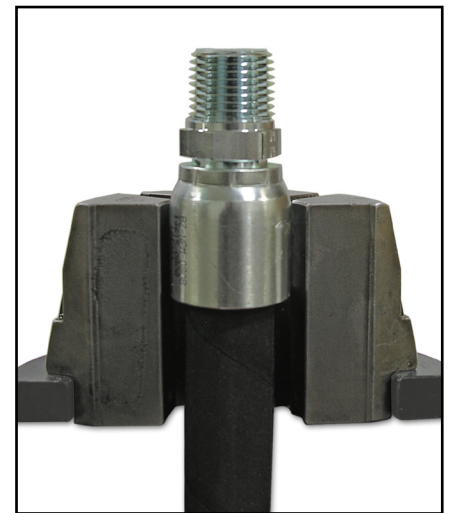
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CRIMPING PROCEDURE

Step 4: Place the lubricated die set squarely in the pressure plate.



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



Step 6: Place the lubricated compression ring over the die set and compress the die set by hand to hold the hose and fitting in place.





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CRIMPING PROCEDURE

Note: Make sure the compression ring is seated evenly on the die set.



CAUTION: The notches on the die set must be completely covered by the compression ring prior to starting the crimp.

- If the notches are showing, you must go to a larger die set.
- Crimping with an incorrect die size could result in personal injury.



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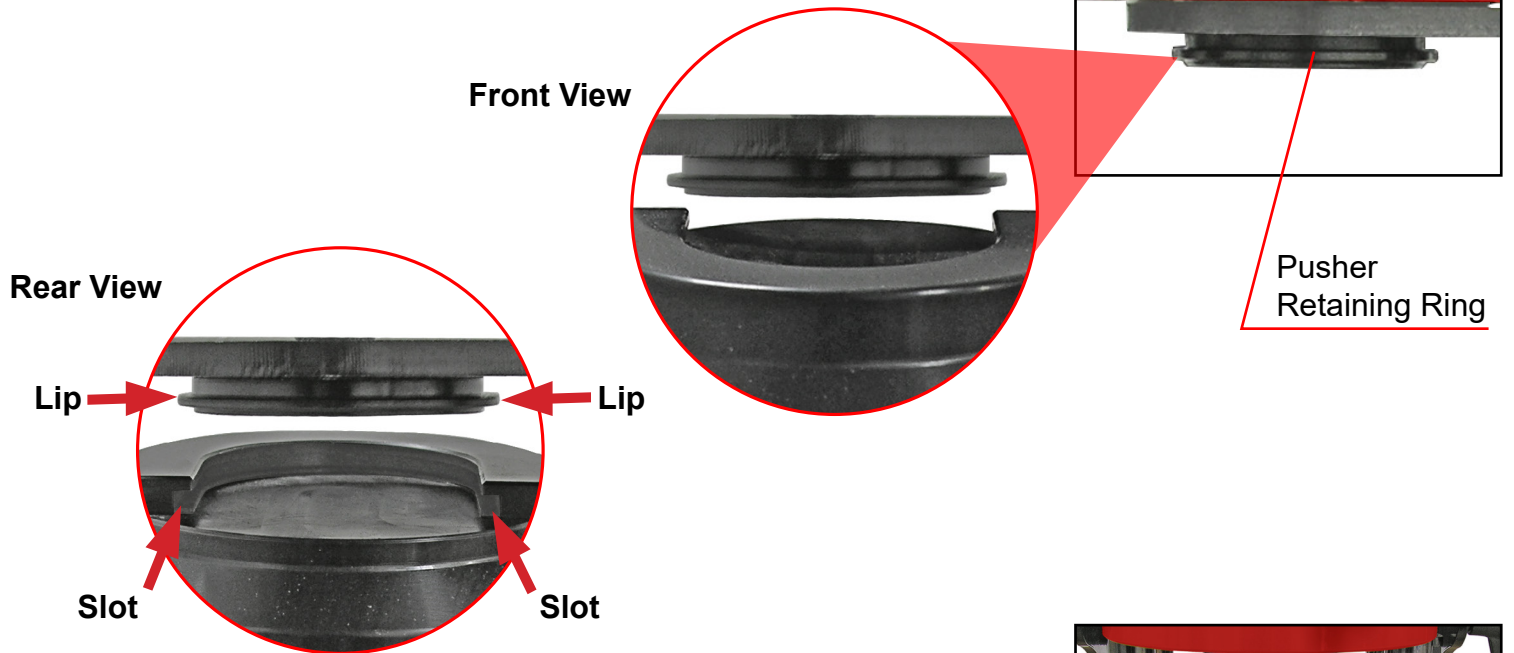
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CRIMPING PROCEDURE

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

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

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



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





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CRIMPING PROCEDURE

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 Metric 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.

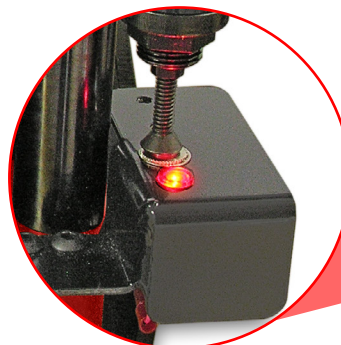
Step 9: Apply pressure to the (Hand or Pneumatic Pump), to bring the pusher in contact with the compression ring until the hose and fitting are held in position with very light pressure.

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

Step 10: Continue to apply pressure as pusher travels downward, compressing the compression ring 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.





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CRIMPING PROCEDURE

Step 11: Check the final crimp diameter with calipers to confirm that it is within manufacturer's specifications.

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





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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 calibration check.

NOTE: FAILURE TO LUBRICATE THE DIE SET AND COMPRESSION RING COULD RESULT IN THE DIE SET SEIZING IN THE BASE FLANGE.

Step 1: Place the **Lubricated Pressure Plate**, into the bottom flange of the crimper, making sure that it is seated squarely into the bottom flange.



Step 2: Place **Any Lubricated Die Set** squarely in the pressure plate.



Step 3: Place the **Lubricated Compression Ring** over the die set.

Note: Make sure the compression ring is seated evenly on the die set.

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





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CALIBRATION CHECK PROCEDURE

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

Note: Make sure slot in pusher goes over lip on pusher retaining ring. Refer to page 12 for details if needed.

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



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

Note: Set the Micro-Crimp Adjuster at “100” for the Standard Micrometer. Set the Micro-Crimp Adjuster at “95” for the DC Micrometer.



Step 6: Apply pressure to the (Hand or Pneumatic Pump), to bring the pusher in contact with the compression ring.





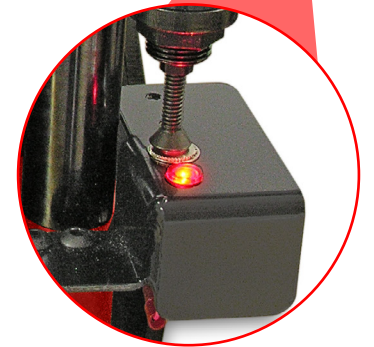
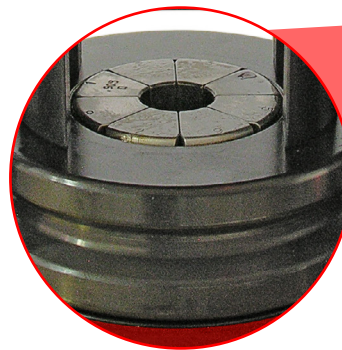
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CALIBRATION CHECK PROCEDURE

Step 7: Continue to apply pressure, If the ram extends, the dies are completely closed, the micrometer touched the red button, and 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 as needed.



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 screw will change crimp diameter approximately 0.008".

- Rotating the stem out of the barrel decreases the ram to retract.
- Recheck calibration.

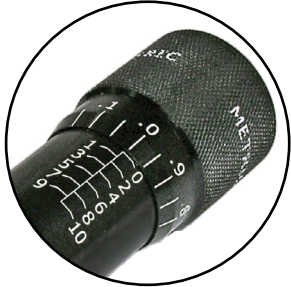




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INCLUDED ACCESSORIES



Metric Micrometer
P/N:101587



Pusher P/N:100825



Compression Ring
P/N:102213



Pressure Plate
P/N:102211



(5) D100 Screws
P/N:EN84-115 (Sold individually)



(5) D100 Spring
P/N:LC 022D 01 (Sold individually)



3/8 Quick Disconnect
Female Installed



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



CRIMPX Die Lubricant Oil:
4 oz bottle with dauber cap
P/N:103886



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AVAILABLE ACCESSORIES



Standard Micrometer
P/N:100628



DC Micrometer
P/N:101489



ValPower®
Hand Pump 10,000 psi
P/N:VHP-10-43



ValPower®
Pneumatic Pump 10,000 psi
P/N:VAP-10-100



ValPower®
Multi-Electric Pump



Notched Compression Ring
(ideal for 90 deg. fittings)
P/N:103072



D165 Coupling Stop
P/N:100954



Die Storage Shelf
P/N:101431



Die Removal Magnet
P/N:104679



CRIMPX Die Lubricant:
Grease 4 oz can with brush
P/N:104162



CustomCrimp® Notched Digital
Caliper IN/MM P/N:CC-Caliper



D100 Series Die Rings
[Refer to page 21 for more details](#)



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TROUBLESHOOTING

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 need to be adjusted for the specific hose, fitting and size combination).
- Incorrect die being used. Each die has a useable 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.
- 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 crimpx oil / grease shipped with the machine or a high pressure molybdenum high pressure grease (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 RING

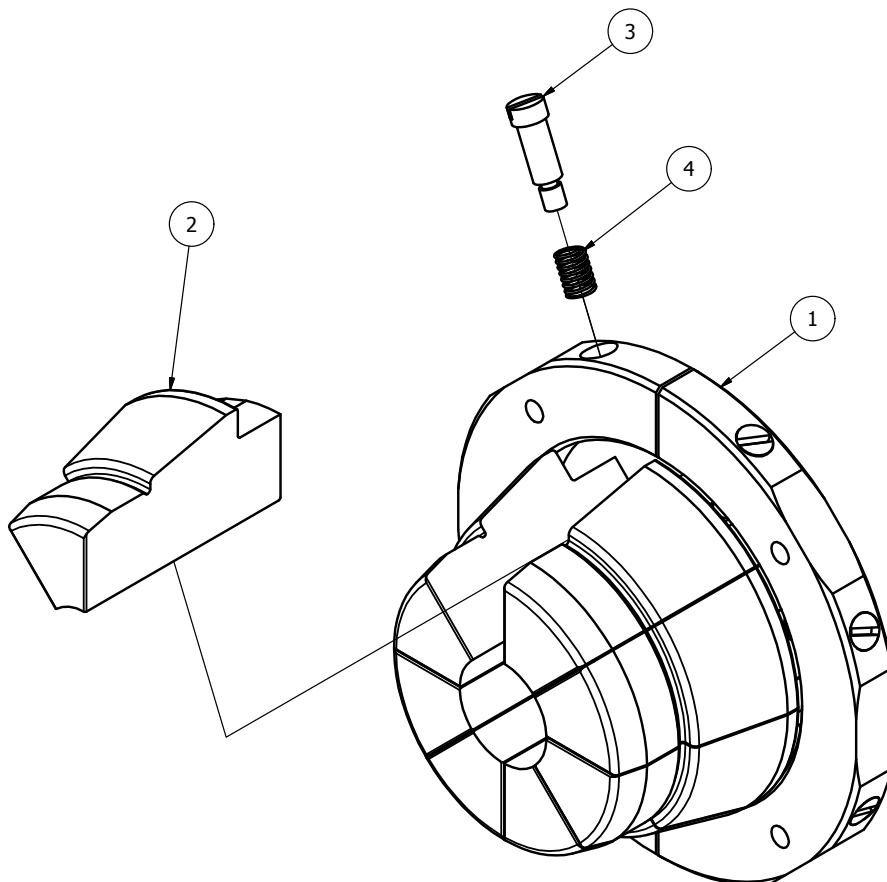
- Inadequate lubrication of the compression ring and die surfaces. Use only the crimpx oil / grease shipped with the machine or a high pressure molybdenum high pressure grease (equivalent).
- Refer to D160S Lubrication Procedure for more details.



COMPONENT PARTS BREAKDOWN

D100 SERIES DIE PARTS (AI-100724)			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	101065-COLOR	DIE RING HALF D100 SERIES	2
2	VARIES WITH THE DIE SIZE	8 PC DIE FINGER SET	8
3	EN84-115	D100 SCREW	8
4	LC 022D 01	D100 SPRING	8

DIE RING HALF D100 SERIES	
PART NUMBER	DESCRIPTION
101065-BLACK	DIE RING HALF BLACK
101065-BLUE	DIE RING HALF BLUE
101065-BROWN	DIE RING HALF BROWN
101065-GREEN	DIE RING HALF GREEN
101065-ORANGE	DIE RING HALF ORANGE
101065-PURPLE	DIE RING HALF PURPLE
101065-RED	DIE RING HALF RED
101035-SILVER	DIE RING HALF SILVER
101065-YELLOW	DIE RING HALF YELLOW



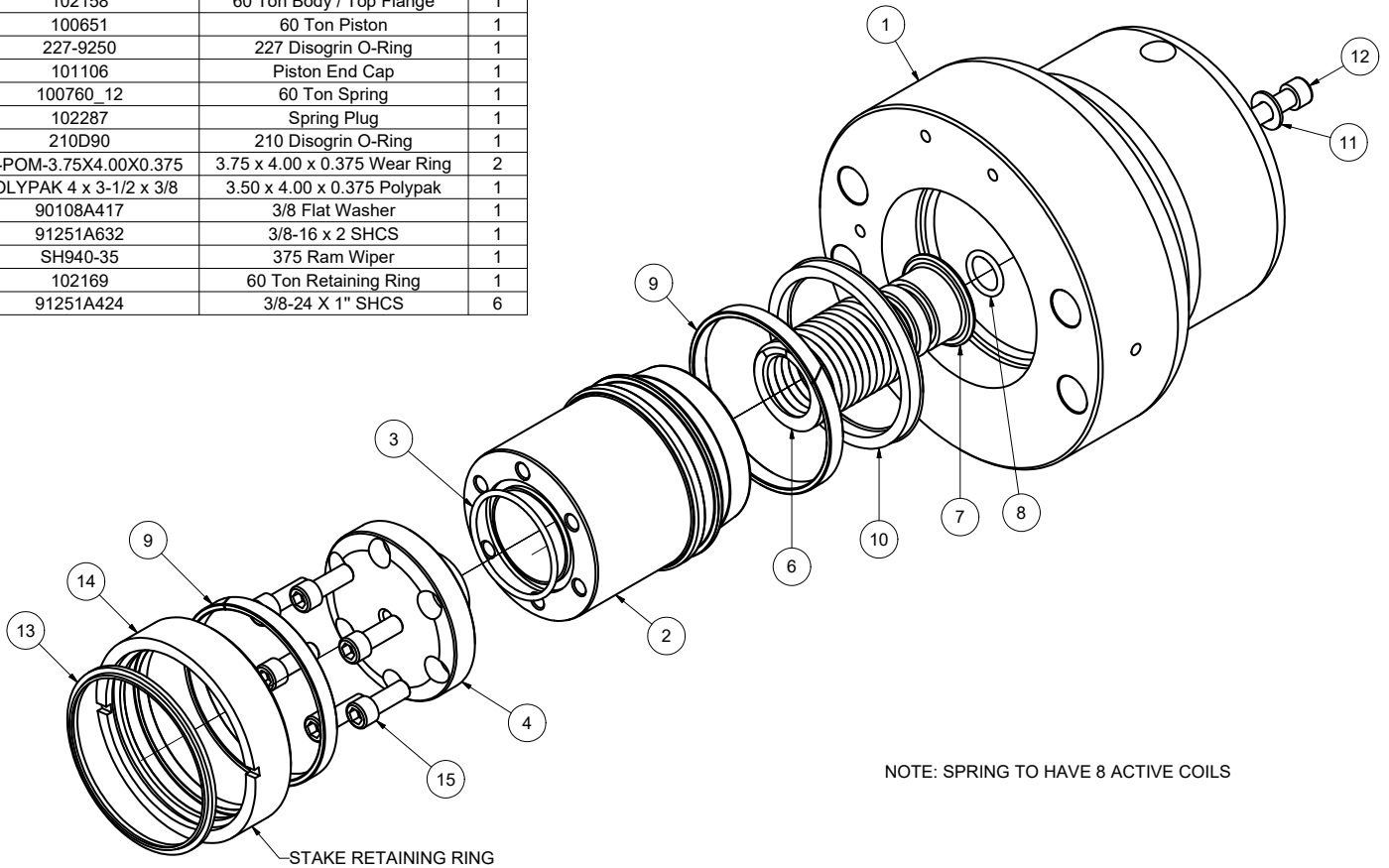


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COMPONENT PARTS BREAKDOWN

60 Ton Cylinder / Top Flange Assembly (102219)			
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	91251A632	3/8-16 x 2 SHCS	1
13	SH940-35	375 Ram Wiper	1
14	102169	60 Ton Retaining Ring	1
15	91251A424	3/8-24 X 1" SHCS	6



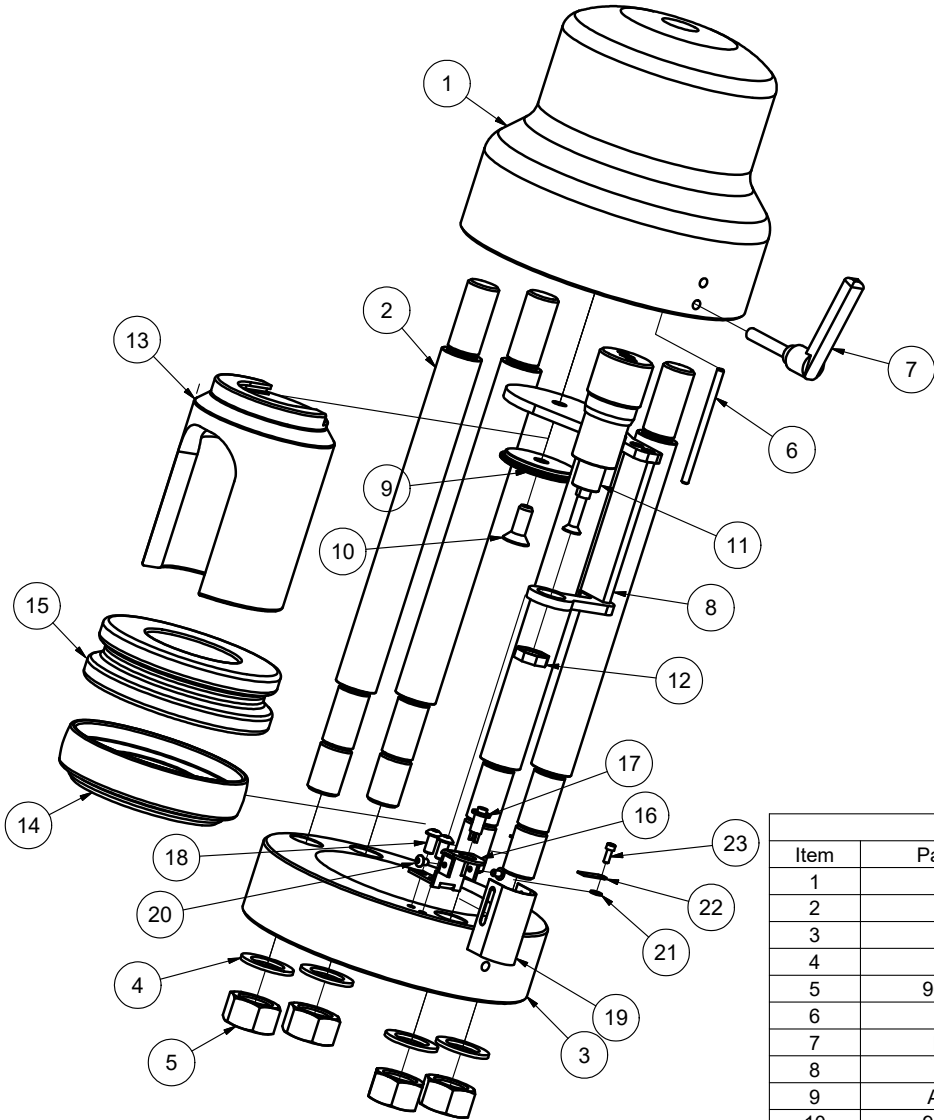
NOTE: SPRING TO HAVE 8 ACTIVE COILS



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COMPONENT PARTS BREAKDOWN



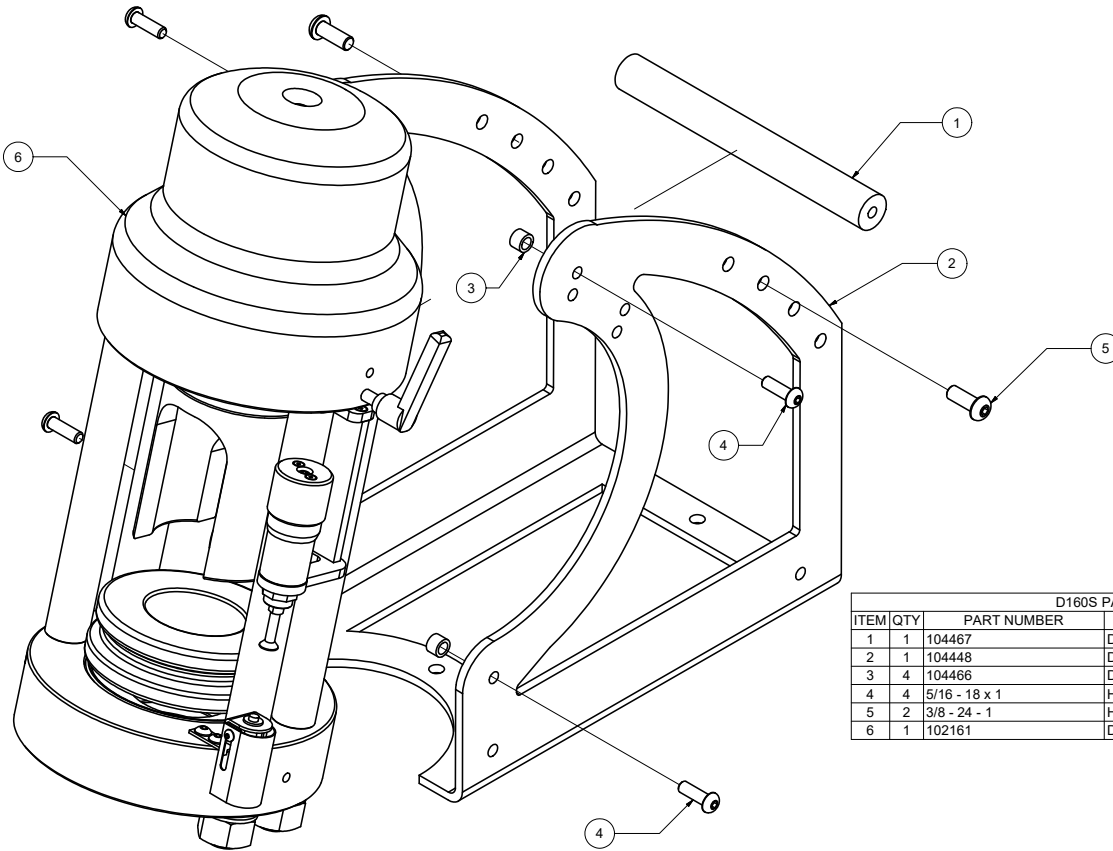
D165 Crimper Head Assembly (102161)			
Item	Part Number	Description	Qty
1	102219	60 Ton Cylinder / Top Flange	1
2	102212	Strain Rod	4
3	102159	Bottom Flange	1
4	11038	7/8 Narrow Rim Washer	4
5	90499A845	7/8 - 14 Hex Nut	4
6	102224	Retraction Stop Rod	1
7	KHA-126	Stop Rod Locking Handle	1
8	102220	Micrometer Mount Assembly	1
9	AI-100812	Pusher Retaining Disc	1
10	91253A624	3/8-16 x 1 HSFHCS	1
11	100628	Standard Micrometer Assembly	1
11	101489	DC Micrometer Assembly	1
11	101587	Metric Micrometer Assembly	1
12	100727	Micrometer Nut	1
13	100825	Pusher Less Magnets	1
13	100825-01	Pusher With Magnets	1
14	102211	Pressure Plate	1
15	102213	Compression Cone	1
16	101092	Limit Switch Bracket	1
17	903 Switch	Limit Switch	1
18	91255A537	1/4-20 x 1/2 BHCS	2
19	100692	Limit Switch Guard	1
20	91255A190	8-32 x 1/4 BHCS	2
21	95630A237	#6 Teflon Washer	2
22	102218	Die Retaining Clip	2
23	91251A146	6-32 x 3/8 SHCS	2



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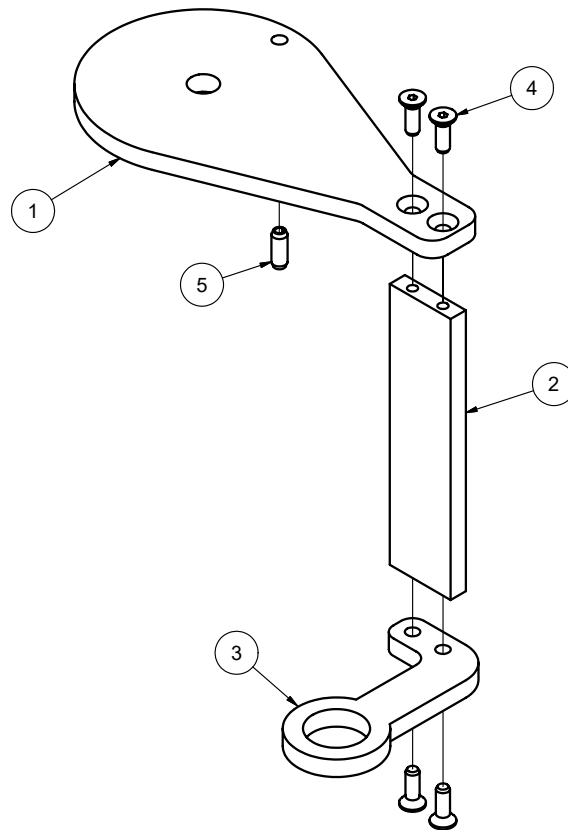
COMPONENT PARTS BREAKDOWN



D160S PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	104467	D160 FRAME HANDLE
2	1	104448	D160S FRAME
3	4	104466	D160S SPACER
4	4	5/16 - 18 x 1	Hexagon Socket Button Head Cap Screw
5	2	3/8 - 24 - 1	Hexagon Socket Button Head Cap Screw
6	1	102161	D165 Crimper Head Assembly



COMPONENT PARTS BREAKDOWN



D165 Micrometer Mount Assembly (102220)			
Item	Part Number	Description	Qty
1	102214	Micrometer Suspension Flange	1
2	102217	Micrometer Brace	1
3	102215	Micrometer Base Bracket	1
4	91253A194	8-32 x 1/2 HSFHCS	4
5	98296A245	3/16 Dia. x 1/2 Spring Pin	1



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Custom Crimp® “No-Nonsense” Warranty Statement

All Custom Crimp® Products are warranted to be free of defects in workmanship and materials for one year from the date of installation. This warranty ends when the product becomes unusable for reasons other than defects in workmanship or material.

Any Custom Crimp® Product proven to be defective in workmanship or material will be repaired or replaced at no charge. To obtain benefits of this warranty, first, contact Warranty Repair Department at Custom Machining Services at **(219) 462-6128** and then deliver via prepaid transportation the complete hydraulic product to:

**ATTN: WARRANTY REPAIR DEPT.
Custom Machining Services, Inc.
318 North Co. Rd 400 East
Valparaiso IN 46383**

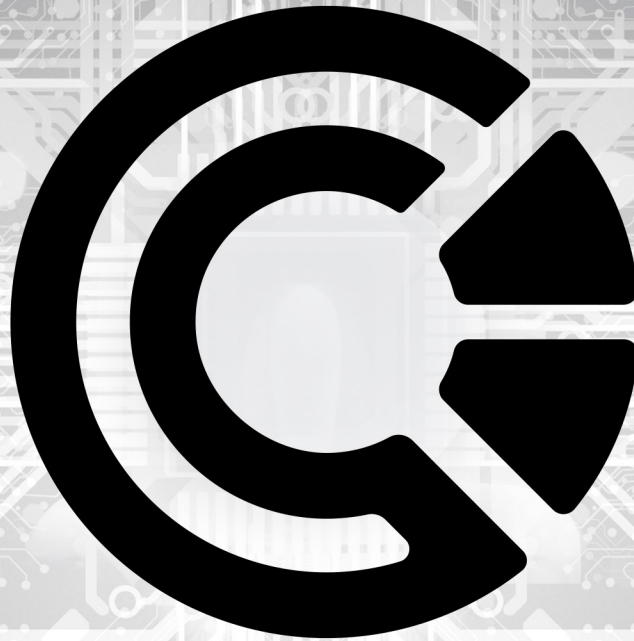
If any product or part manufactured by Custom Crimp® is found to be defective by Custom Crimp®, at its option, Custom Crimp® will either repair or replace the defective part or product and return via ground transportation, freight prepaid.

Custom Crimp® will not cover any incoming or outgoing freight charges for machines sold outside The United States.

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.

Electric motors are separately warranted by their manufacturer under the conditions stated in their separate warranty.

CRIMP



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CUSTOM CRIMP®, YOUR SINGLE SOURCE FOR HOSE ASSEMBLY PRODUCTS.

CUSTOM CRIMP® | Custom Machining Services, Inc.
326 North 400 East Valparaiso, IN 46383



Visit us at: www.customcrimp.com



For sales: ccsales@customcrimp.us



For support: ccsupport@customcrimp.us



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