



D205M SERIES HYDRAULIC CRIMPERS
OPERATORS MANUAL



### **SAFETY PRECAUTIONS**



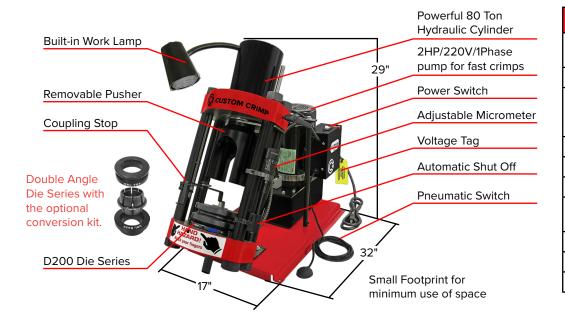
- READ INSTRUCTIONS AND IDENTIFY ALL COMPONENT PARTS BEFORE USING CRIMPER.
- D205M SERIES CRIMPERS CAN PRODUCE 80 TONS OF CRIMPING FORCE.
- KEEP BOTH HANDS AWAY FROM PINCH POINTS.
- CONSULT HOSE AND FITTING MANUFACTURER FOR CORRECT MACHINE SETTINGS AND CRIMP MEASUREMENTS.
- ALWAYS WEAR EYE PROTECTION.

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#### **COMPONENT PARTS & TECHNICAL DATA**



D205M Technic	al Specifications		
80 Ton with D200 Dies	160 Ton with DA Dies		
Hydraulic Ho	se Capability:		
2 Wire = 1 1/4" 4 SP = 1 1/4" 6 SP = 1 1/4"	2 Wire = 2" 4 SP = 2" 6 SP = 2"		
Control System: Metric Micrometer			
Crimper Size: L: 32" x W: 17" x H: 29"			
Crimper Weight: 305 Lbs.			
Power: 2HP / 220V / 1Phase (Standard) 1HP / 110V / 1Phase ( Optional)			
Die Series: D200 / D200DA			
Reservoir capacity: 1 US Gallon			
Oil Type: ISO 46 Hy	draulic Oil		

#### **D200 TOOLING**



#### **D200 DOUBLE ANGLE TOOLING**



#### **FEATURES**

- The D205M Series Crimper comes with standard features which increase accuracy and improve productivity for jobs which require repeat crimps of similar or identical assemblies.
- Fully adjustable micrometer for a precise crimp and electric shutoff switch makes crimping process fast.



• The Adjustable Retraction Stop allows the operator to limit the retraction of the hydraulic ram at the point where the die set is open only enough to remove the hose and fitting. This feature can greatly speed up crimping on production jobs since the ram does not have to fully advance and retract on every cycle.



• The easily removable Coupling Stop provides an automatic stop for straight fittings without the need to sight the alignment of the fitting on every crimp. A coupling stop is supplied with each crimper to accommodate a wide range of fitting configurations.



• Easily removable pusher and split dies accommodate difficult crimps (Bent Tube & Special Fittings). "Feature" Show with Optional Spacer Kit for more clearance. Adds exactly 1 inch between the pusher and DBL Top Compressing Ring to allow extra fitting clearance.





#### **INITIAL SET UP**

## FOLLOW THESE STEPS <u>BEFORE</u> 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 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.

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

- Plug the D20M crimper directly into a 110 volt, 15 amp wall outlet.
   Note: The optional 220 volts / 2HP unit must be connected to a 220 volts 20 amp wall outlet.
- Always check oil level in the D205M pump, should be 1-1/2 to 2 inches below the vent plug when the cylinder is in the retracted position and 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 D205 crimper.









#### CRIMPING WITH STANDARD DIES

• Insert the Standard Pressure Plate in the bottom flange making certain that the Pressure Plate is seated squarely in the bottom flange.

Note that the bottom Pressure Plate is held in place by a set screw. This screw can be loosened through the access hole in the front of the machine through the "Hand Hazard" decal.

• Select the correct die set for the combination of hose and fitting being crimped. Note: This information is available from the hose and fitting manufacturer.

The number etched on the die ring represents the fully closed diameter of the die set in either inches or millimeters depending upon the die set.

• Lubricate the contact surfaces of the die fingers and the Compression Ring with the die lubricant supplied with the crimper.

Failure to lubricate the contact surfaces with the correct lubricant will cause the dies to seize in the compression ring.

• Align the hose and fitting in the die set and place the Compression Ring loosely over the die set. Manually depress the compression ring until the fitting is held loosely in 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 visible, you must go to a larger die set. Crimping with an incorrect die size could result in damage to the die set and/or personal injury.







#### CRIMPING WITH STANDARD DIES

- Set the Micro-Crimp Adjuster to the setting recommended by the hose and fitting manufacturer for the hose and fitting being crimped. Both the standard and the metric micrometers are shown.
- The standard micrometer (Readings of 0 to 100) and the "DC" micrometer (Readings of 20 to 100) are adjusted to the position recommended by the hose and fitting manufacturer. The metric micrometer (Readings of 0 to 10) is a direct reading micrometer. The setting on the micrometer is added to the number in mm etched on the die ring to obtain the final crimp diameter.

For example: With a 39mm die and the METRIC micrometer set at 3.0 the finished crimp diameter would be 42.0 mm (39mm + 3.0mm).

Note: Each die set has a limited range of diameters for which a satisfactory crimp can be obtained. As a "rule of thumb" a standard die set can crimp 3 mm (.120 inches) above the closed diameter etched on the die ring. Always consult the hose and fitting manufacturer's recommendation for the correct die set to use.

CAUTION: THE FINISHED CRIMP DIAMETER SHOULD NOT BE MORE THAN 4 MM (0.16 INCHES) ABOVE THE CLOSED DIAMETER OF THE DIE SET.

DO NOT ATTEMPT TO CRIMP A FITTING IF THE COMPRESSION CONE DOES NOT COMPLETELY COVER THE NOTCHES ON THE DIE FINGERS.

FAILURE TO HEED THESE WARNINGS COULD RESULT IN DAMAGE TO THE DIE SET AND/OR PERSONAL INJURY.

- Recheck the fitting for correct alignment and depress the pneumatic Start/
   Stop switch bulb and keep it depressed until the crimper shuts off automatically.
- Check the diameter of the finished crimp to be certain that it is within the hose and fitting manufacturer's specifications.





#### CRIMPING WITH DOUBLE ANGLE DIES

Double Angle dies double the radial crimping force of the die set allowing heavier fittings to be crimped. Due to the doubling of the radial crimp force, they are effective for a smaller range of diameters than a standard die set. Also, the fitting must be approximately centered axially along the crimping face to avoid taper in the final crimp.

• Remove the standard flat Pressure Plate and replace it with the DBL BASE bottom compression ring.

The bottom Pressure Plate may be held in place with a set screw. Access to this set screw is through the hole in the hand hazard decal.

Note: The angles are not the same on standard and double angle dies and the standard compression rings are not interchangeable with double angle compression rings.

- Lubricate the contact surfaces of both the upper and lower compression rings and the outer surfaces of the double angle dies with the CRIMPX Die Lubricant Grease supplied with the crimper.
- Seat the appropriate size double angle die in the conical recess of the DBL BASE lower compression ring.



#### **CRIMPING WITH DOUBLE ANGLE DIES**

• Insert the fitting as specified by the hose manufacturer.

• Place the DBL TOP compression ring on top of the die set and manually compress the die set until it contacts the fitting.

• Slide the Pusher onto the cylinder stud and set the Micro-Crimp Adjuster at the appropriate setting.

- Press and hold the Start/Stop switch until the crimper shuts off.
- When the crimp cycle is complete, check the fitting diameter to make certain that it is within the hose manufacturer's specifications.







#### **CALIBRATION CHECK PROCEDURE**

When the crimper is correctly calibrated, the ram will extend and fully close the die set. After the die set is fully closed, the time from which the pump starts to build pressure and the point at which the motor shuts of automatically will be approximately 1 second.

Many problems associated with incorrect crimp diameters are caused by incorrect calibration.

#### **CALIBRATION**

- Insert the Standard Pressure Plate, any die set, and the Compression Ring in the order illustrated.
- Set the Micro-Crimp adjuster at:
- "100" For the Standard D205 (0-100)
- "95" For the D205-DC (20-100)
- "0" for metric units(0-10)
- · Press and hold the start Switch.
- If the ram extends closing the dies to their fully closed position and the motor shuts off approximately 1 second after the pump starts to build pressure (the sound of the pump will change), then the crimper is correctly calibrated.
- If the crimper requires re-calibration, 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 time from which the pump starts to build pressure is greater than approximately 1 second, rotate the stem out slightly.

If the time is less than approximately 1 second, rotate the stem in slightly.

Recheck calibration.







#### **D200 SERIES DIE OPTIONS**

DIE SIZE CODES: D200-XX-XX-COLOR

#### D200 STANDARD, SERIES DIES

#### INCH SERIES DIES

D200-0.520-2.000-RED

D200-0.670-2.000-YELLOW

D200-0.830-2.000-BLUE

D200-1.100-2.500-GREEN

D200-1.320-2.500-BLACK

D200-1.500-2.500-BROWN

D200-1.730-3.000-SILVER

D200-1.920-3.000-PURPLE

#### METRIC SERIES DIES

D200-07-51-BLUE

D200-09-51-RED

D200-10-51-PURPLE

D200-11-51-GREEN

D200-12-51-BLACK

D200-14-51-YELLOW

D200-16-51-ORANGE

D200-17-51-RED

D200-18-51-BLACK

D200-19-51-GREEN

D200-20-51-GREEN

D200-22-51-BLUE

D200-24-51-BLUE

D200-26-64-BROWN

D200-27-64-BROWN

D200-28-64-PURPLE

D200-30-64-RED

D200-31-64-YELLOW

D200-34-64-RED

D200-35-64-ORANGE

D200-39-76-RED

D200-41-76-YELLOW

D200-43-76-YELLOW

D200-48-76-SILVER

D200-51-76-GREEN

D200-52-76-BLACK

D200-56-76-SILVER

D200-60-76-PURPLE

# DIE RING COLOR (1) CRIMP FACE LENGTH (MM/IN) DIE CLOSED DIAMETER (MM/IN) DIE SERIES (D200/D200 DOUBLE ANGLE (DA))

D200 DOUBLE ANGLE DIES

METRIC SERIES DIES

BORE SIZE RANGE:

50 MM-78 MM

STANDARD CRIMP LENGTHS:

65 MM

75 MM

85 MM

95 MM

105 MM

115 MM

125 MM

STANDARD RING COLOR

BLACK

OPTIONAL COLORS AVAILABLE

#### D200 STANADARD SERIES DIE



#### D200 DOUBLE ANGLE (DA) SERIES DIE



#### (1) DIE RING COLOR OPTIONS:

RED

**ORANGE** 

**YELLOW** 

**PURPLE** 

**GREEN** 

BLUE

BLACK

**SILVER** 

**BROWN** 



# **CUSTOM CRIMP**

Innovating SMART Hose Assembly Solutions Since 1979

#### REPLACEMENT ACCESSORIES



Metric Micrometer P/N:101587



Standard Micrometer P/N:100628



DC Micrometer P/N:101489



D205/D206 Coupling Stop P/N:101631



P/N:101349



Pneumatic Pendent Switch CRIMPX Lubricant Grease P/N:101349 4 oz can with brush P/N:104162



**CRIMPX Lubricant Grease** 16 oz can with brush P/N:104111



Vent Plug P/N:9847K13



80 Tons Pusher P/N:100818



D200 Spacer Kit P/N:D200-1-SPACER-KIT



D200 STD Compression Ring P/N: 100712 D200 STD Pressure Plate P/N: 100713



D200 Double Angle Top P/N: 100871 D200 Double Angle Base P/N: 100870



Die Removal Magnet P/N:104679



Flexible 24" Work Lamp P/N:1668-02



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

#### 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 115 volt single phase circuit. (Available in 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 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. 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 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.

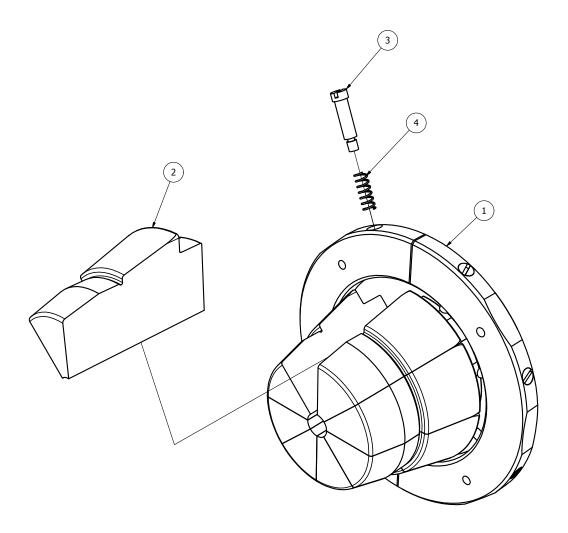
  ( NOTE: All published machine settings are approximate. To correct for slight variances, the gauge settings may be adjusted for the specific hose, fitting and size combination).
- Incorrect die being used (See die range under Crimp Diameter Too Large).
- Check crimp diameter and re-calibrate if necessary.

#### 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).

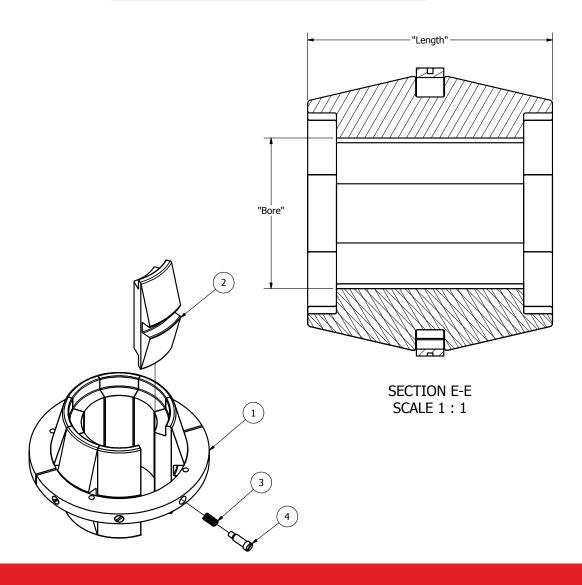
	D200 SERIES DIE PARTS (AI-100717)			
ITEM PART NUMBER DESCRIPTION			QTY	
1	100753-XX	D200 Die Ring (Half)	2	
2	Varies With Die Size	8 PC Die Finger Set	8	
3	EN82-004	D200 Screw	8	
4	LC 022D 05	D200 Spring	8	

DIE RING	HALF D200 SERIES
PART NUMBER	DESCRIPTION
100753-00	DIE RING HALF SILVER
100753-01	DIE RING HALF ORANGE
100753-02	DIE RING HALF GREEN
100753-03	DIE RING HALF BLUE
100753-04	DIE RING HALF BROWN
100753-05	DIE RING HALF YELLOW
100753-06	DIE RING HALF RED
100753-07	DIE RING HALF BLACK
100753-08	DIE RING HALF PURPLE



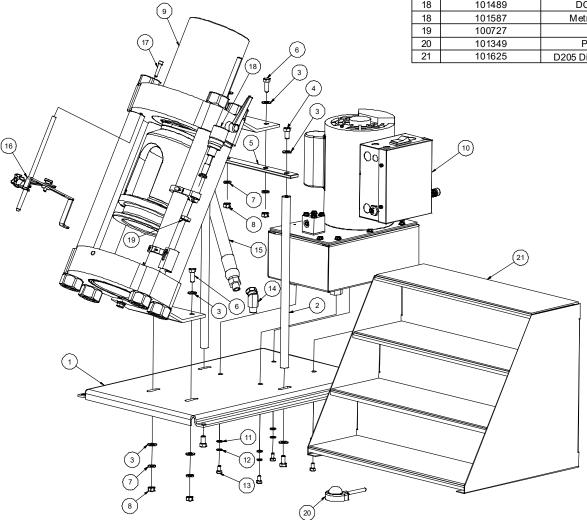
	D200 DOUBLE ANGLE SERIES DIE PARTS (AI-100872)				
ITEM PART NUMBER DESCRIPTION (					
1	100873-XX	DOUBLE ANGLE DIE RING SET	2		
2	VARIES WITH THE DIE SIZE	8 PC DIE FINGER SET	8		
3	LC 022D 05 M	DOUBLE ANGLE DIE SPRING	8		
4	EN83-034	DOUBLE ANGLE DIE SCREW	8		

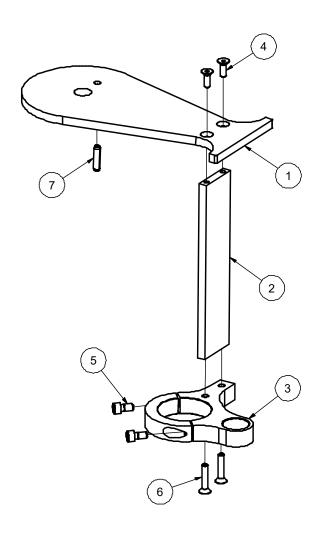
DOUBLE ANGLE DIE RING D200 SERIES			
PART NUMBER	DESCRIPTION		
100873-BLACK	D200 DOUBLE ANGLE DIE RING SET-BLACK		
100873-BROWN	D200 DOUBLE ANGLE DIE RING SET-BROWN		
100873-CLEAR	D200 DOUBLE ANGLE DIE RING SET-SILVER		
100873-BLUE	D200 DOUBLE ANGLE DIE RING SET-BLUE		
100873-GREEN	D200 DOUBLE ANGLE DIE RING SET-GREEN		
100873-ORANGE	D200 DOUBLE ANGLE DIE RING SET-ORANGE		
100873-PURPLE	D200 DOUBLE ANGLE DIE RING SET-PURPLE		
100873-RED	D200 DOUBLE ANGLE DIE RING SET-RED		
100873-YELLOW	D200 DOUBLE ANGLE DIE RING SET-YELLOW		



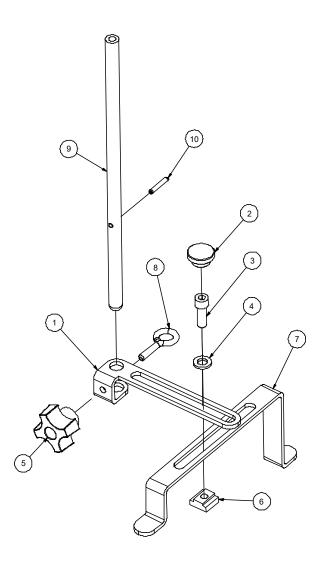


	D205/D206	6 Crimper Assembly (101626)	
Item	Part Number	Description	Qty
1	101585	D205 Base	1
2	101624	D205 Support Rod	2
3	90126A031	3/8 Flat Washer	10
4	92865A622	3/8-16 X 3/4 Hex Bolt	4
5	101621	D205 Support Rod Brace	1
6	92865A624	3/8-16 X 1 Hex Bolt	4
7	91102A031	3/8 Lock Washer	4
8	95462A031	3/8-16 Nut	4
9	101634	D205 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° Hydraulic Fitting	1
15	101645	D205 Hydraulic Hose	1
16	101631	D205 Coupling Stop Assembly	1
17	91251A544	1/4-20 X 1 1/4 SHCS	1
18	100628	Standard Micrometer Assembly	1
18	101489	DC Micrometer Assembly	1
18	101587	Metric Micrometer Assembly	1
19	100727	Micrometer Nut	1
20	101349	Pendant Switch & Plug	1
21	101625	D205 Die Shelf Assembly (Optional)	1



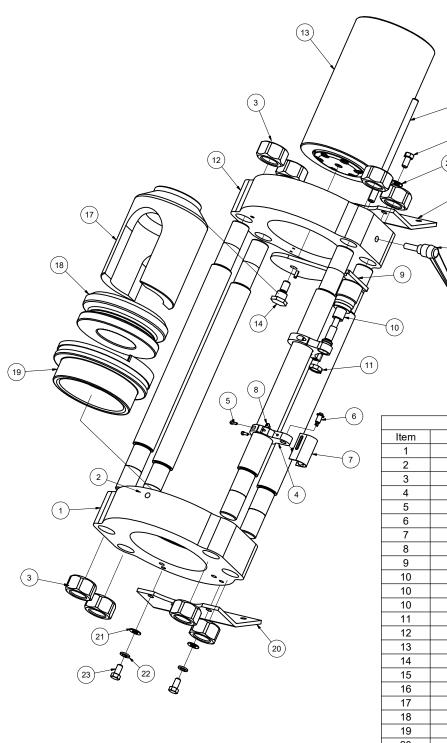


	Micro Mount Assy (100641)			
Item	Part Number	Description	Qty	
1	100641-01	Micro Plate	1	
2	100641-02	Micro Brace	1	
3	100672	Micrometer Bracket	1	
4	91253A194	8-32 x 1/2 HSFHS	2	
5	91251A240	10-24 x 3/8 SHCS	2	
6	91253A197	8-32 x 3/4 HSFHS	2	
7	98296A249	3/16 x 3/4 Slotted Spring Pin	1	



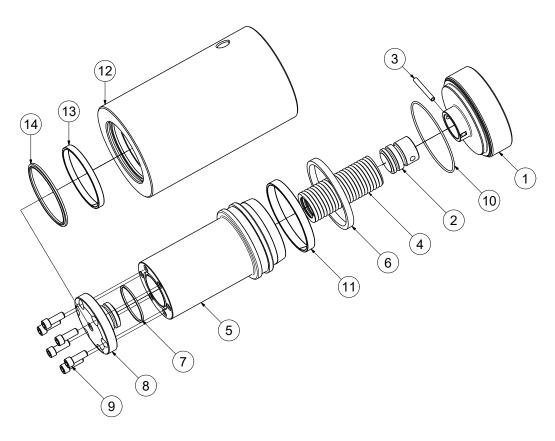
D205 Coupling Stop Assembly (101631)			
Item	Part Number	Description	Qty
1	100952	Adjustable Stop Arm	1
2	94052A133	Push-on Cap	1
3	91251A540	1/4-20 x 3/4 SHCS	1
4	90126A029	1/4 Flat Washer	1
5	DK-655	10-24 Knob	1
6	94750A588	1/4-20 T-Nut	1
7	101525	Fixed Stop Arm	1
8	9489T47	10-24 Eye Bolt	1
9	101632	D205 Coupling Stop Rod	1
10	92383A256	1/8 x 3/4 Long Spring Pin	1



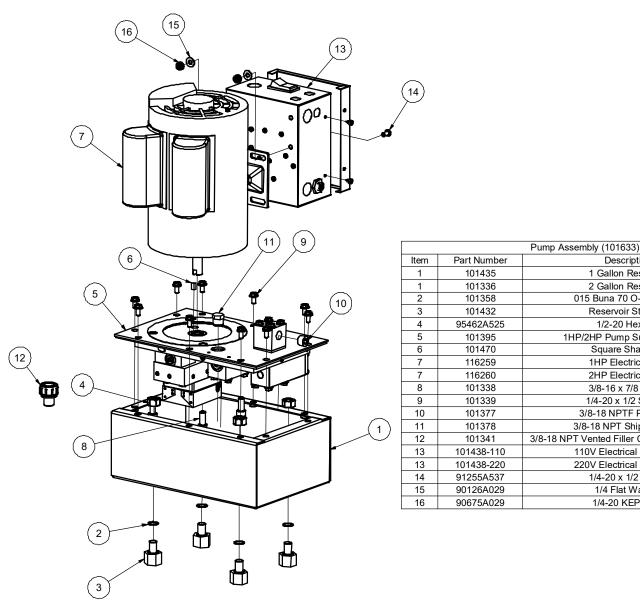


	D205 Head Assembly (101634)				
Item					
1	100679	80 Ton Cone Base	1		
2	100642	Strain Rod	4		
3	90500A040	1 1/4-12 Grade 8 Hex Nut	8		
4	100661	Limit Switch Bracket	1		
5	91251A146	6-32 x 3/8 SHCS	2		
6	903	Limit Switch	1		
7	100692	Limit Switch Guard	1		
8	91255A190	8-32 x 1/4 BHCS	2		
9	100641	Micrometer Mount Assembly	1		
10	101587	Metric Micrometer Assembly	1		
10	101489	DC Micrometer Assembly	1		
10	100628	Standard Micrometer Assembly	1		
11	100727	Micrometer Nut	1		
12	100640	80 Ton Top Flange	1		
13	100663	80-Ton Cylinder Assembly	1		
14	100648	Pusher Suspension Pin	1		
15	100711	Stop Rod	1		
16	100710	Stop Rod Locking Handle	1		
17	100818	Pusher, 100 Ton	1		
18	100712	Compression Ring	1		
19	100713	Pressure Plate	1		
20	100680	80 Ton Angle Bracket	2		
21	90126A031	3/8 Flat Washer	4		
22	91102A031	3/8 Lock Washer	2		
23	92865A622	3/8-16 x 3/4 Hex Bolt	4		

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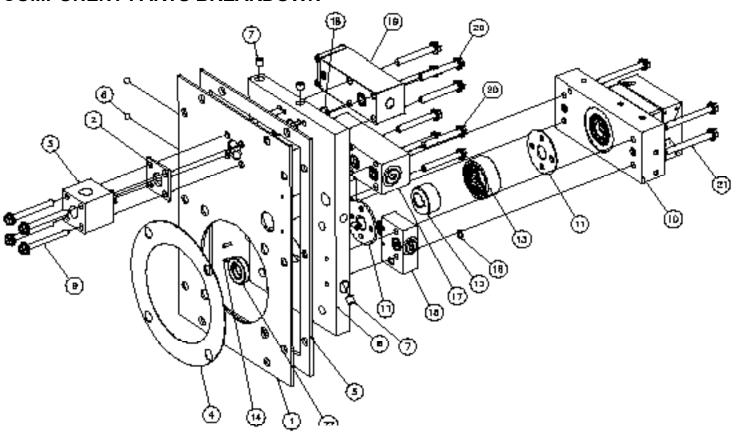


	80 Ton Cylinder Assy (100663)			
ITEM	PART NUMBER	DESCRIPTION	QTY	
1	100636	Top Cap	1	
2	100653	Retaining Plug	1	
3	90962A357	1/4 X 2 Roll Pin	1	
4	100760	Spring (21 Coils)	1	
5	100637	Cylinder Ram - 80 Ton	1	
6	450 Polypak	4-1/2 X 4 X 3/8 Polypak	1	
7	227 O-Ring	227 Disogrin O-Ring	1	
8	100635	End Cap	1	
9	91251A424	3/8-24 X 1 SHCS (Gd. 8)	6	
10	157 O-Ring	157 Disogrin O-Ring	1	
11	GP2C04500-T47	Ram Wear Ring	1	
12	100639	Cylinder Body - 80 Ton	1	
13	GR2B03750-T47	Ram Guide Wear Ring	1	
14	375 Wiper	Wiper (SH940-35)	1	
15	100663-REPAIR	Seal Repair Kit (Not Shown)	1	



	Pump Assembly (101633)				
Item	Part Number	Description	Qty		
1	101435	1 Gallon Reservoir	1		
1	101336	2 Gallon Reservoir	1		
2	101358	015 Buna 70 O-Ring Seal	4		
3	101432	Reservoir Standoff	4		
4	95462A525	1/2-20 Hex Nut	4		
5	101395	1HP/2HP Pump Sub-Assembly	1		
6	101470	Square Shaft Key	1		
7	116259	1HP Electric Motor	1		
7	116260	2HP Electric Motor	1		
8	101338	3/8-16 x 7/8 SHCS	4		
9	101339	1/4-20 x 1/2 SHFCS	10		
10	101377	3/8-18 NPTF Pipe Plug	1		
11	101378	3/8-18 NPT Shipping Plug	1		
12	101341	3/8-18 NPT Vented Filler Cap (Shipped Loose)	1		
13	101438-110	110V Electrical Enclosure	1		
13	101438-220	220V Electrical Enclosure	1		
14	91255A537	1/4-20 x 1/2 BHCS	2		
15	90126A029	1/4 Flat Washer	2		
16	90675A029	1/4-20 KEPS Nut	2		





1 HP/2 HP Pump Sub-Assembly (101395)				
ltem	Part Number	Description	Qty	Ref. Part No.
1	101335	Reservoir Cover	1	132301
2	101337	Port Block Gasket	1	121304
3	101584	Port Block Assembly	1	
4	101330	Motor Gasket	1	121300
5	101329	Reservoir Casket	1	121305
6	101400	Upper Plate	1	151300
7	101375	1/16-27 NPTF Pipe Plug	5	
В	9526K15	d1/4" Precision Boll	2	350301
9	101340	1/4-2D X 2 1/4 Serrated Hex FLHGS	4	345307
10	101477	Lower Plote & Geor Pump Ass'y.	1	200467
11	101406	Wear Washer	2	364300
12	101425	Eccentric — 5/8" Shoft	1	190300
13	101473	Bearing Sleeve Assembly	1	349200
14	1013 <b>6</b> 2	1/8 X 3/8 Dowel Pin	4	342301
15	101478	Piston Block Assembly	2	200215
16	101352	010 O—Ring	4	354313
17	101476	Unloading Block Assembly	1	200346
18	1D1355	014 Disogrin O-Ring	3	354302
19	101443	Dump Block Assembly	1	200203
2D	92323A525	1/4-20 X 2" Serroted Hex FLHCS	В	345306
21	101385	1/4-2D X 2 1/2 Serrated Hex FLHGS	4	345308
22	1D132B	CR-6247 Shaft Seal	1	365303

#### **CUSTOMCRIMP® "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

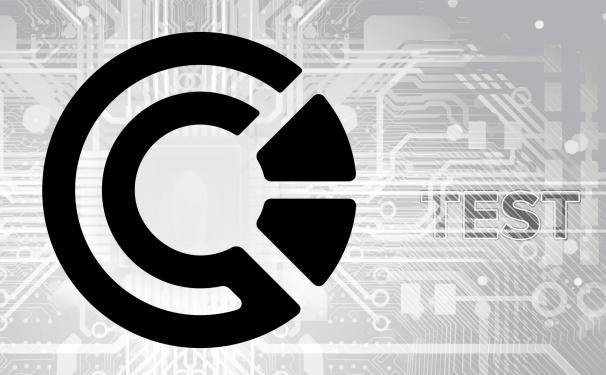
If any product or part manufactured by Custom Crimp® is found to be defective by Custom Crimp®, at its option, Custom Crimp® will either repair or replace the defective part or product and return via ground transportation, freight prepaid.

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.





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

**CUSTOM CRIMP®** I 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

