



MOVE FORWARD. ALWAYS.™

D165DC DAYCO OPERATORS MANUAL





WARNING - SAFETY NOTE



IMPORTANT - DO NOT OPERATE THIS EQUIPMENT UNTIL YOU READ AND FULLY UNDERSTAND THIS MANUAL AND ITS ASSEMBLY INSTRUCTIONS

ALWAYS WEAR EYE PROTECTION

WARNING! USE ONLY THOSE HOSE AND COUPLING COMBINATIONS AND CRIMPING EQUIPMENT SPECIFIED IN DAYCO HYDRAULIC PUBLISHED LITERATURE. DAYCO RECOMMENDATIONS ARE BASED ON TESTING, AND USE OF HOSE AND COUPLING COMBINATIONS OTHER THAN THOSE RECOMMENDED BY DAYCO CAN RESULT IN SERIOUS INJURY, DEATH OR SUBSTANTIAL PROPERTY DAMAGE. DAYCO DISCLAIMS ALL LIABILITY FOR ANY HOSE AND COUPLING ASSEMBLY THAT IS NOT MADE ACCORDING TO DAYCO RECOMMENDATIONS. CONSULT YOUR LOCAL DAYCO REPRESENTATIVE OR DAYCO DISTRIBUTOR IF YOU HAVE ANY QUESTIONS.

Parts Identification -----	4
D165DC Quick Start Guide -----	5
Hose Preparation -----	6
Hose Crimping-Standard Dies -----	7
Calibration -----	10
Troubleshooting -----	11
Kwikrimp® Concept -----	12
Parts Breakdown -----	13
Limited Warranty -----	18



D165DC



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

CALIBRATION CHECK FOR THE D165DC

(See the following page for D160S-DC Calibration)

- PLUG THE CRIMPER DIRECTLY INTO A 110 VOLT 20 AMP SINGLE PHASE WALL OUTLET.

DO NOT USE AN EXTENSION CORD OR RUN FROM PORTABLE POWER SOURCES AS LOW VOLTAGE CAN DAMAGE THE MOTOR.

- THE OIL LEVEL IN THE PUMP SHOULD BE APPROX. 1 1/2 INCHES BELOW THE FILLER/VENT PLUG.

CALIBRATION CHECK PROCEDURE

- PLACE THE STANDARD PRESSURE PLATE, ANY STANDARD DIE SET AND THE STANDARD COMPRESSION RING IN THE BASE OF THE CRIMPER IN THE ORDER SHOWN.

- SLIDE THE PUSHER ONTO THE STUD OF THE HYDRAULIC RAM.

- SET THE MICRO-CRIMP ADJUSTER AT "95".

- PRESS AND HOLD THE START SWITCH.

- IF THE RAM EXTENDS AND SHUTS OFF THE MOTOR IN APPROXIMATELY ONE SECOND AFTER THE PUMP STARTS TO BUILD PRESSURE, (THE SOUND OF THE PUMP WILL CHANGE) AND THE DIE SET IS FULLY CLOSED, THE CRIMPER IS CORRECTLY CALIBRATED.

- IF THE TIME TO SHUT OFF IS NOT APPROXIMATELY 1 SECOND, THE CRIMPER MUST BE RECALIBRATED. SEE INSTRUCTIONS.

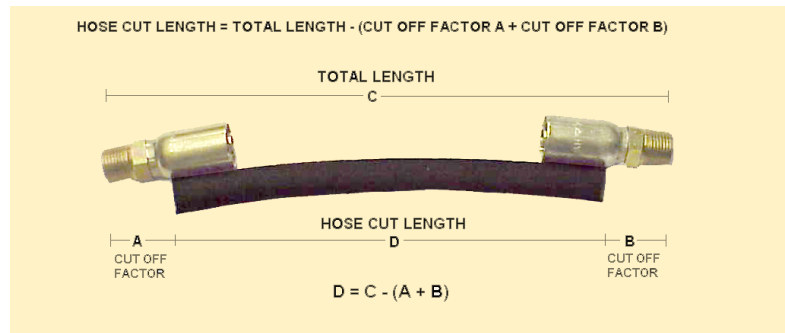


■ Dayco recommends that all users familiarize themselves with Dayco’s warning statements, SAE J1273, and the Kwikrimp® concept, found in this operator’s manual.

■ Select the Dayco hose and coupling to be assembled.

■ Determine the correct crimp setting from the crimp specifications sheet.

■ Determine hose cut length by subtracting the cutoff factor for each coupling from the overall length of the assembly. For these cutoff factors, see Dayco’s published catalog data.

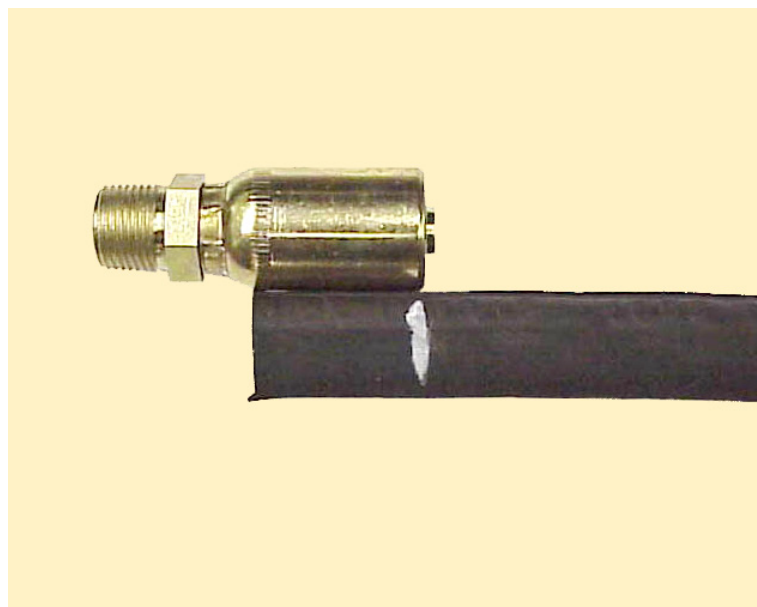


■ Cut the hose square and to the proper length with a suitable saw.

■ Coat the coupling stem with Dayco hose assembly lubricant (HAL16) to ease hose insertion. Insert the hose until it “bottoms” in the coupling shell.

To insure that the hose is bottomed in the collar, mark the insertion depth on the hose before inserting it into the coupling (see figure below).

Using a clockwise twisting motion or fixing the hex on the coupling in a vise may help when tolerances are tight.



CRIMPING PROCEDURE

■ Insert the Standard Pressure Plate in the bottom flange making certain that the Pressure Plate is seated squarely in the bottom flange. Make certain that the seating area of the bottom flange is clean and allows the Pressure Plate to seat squarely in the bottom flange

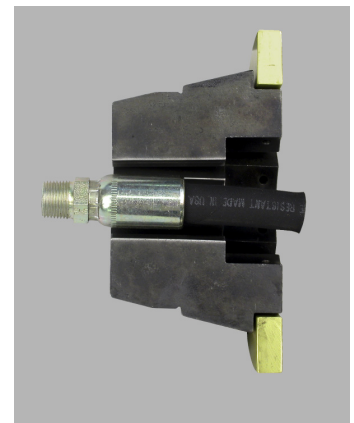
■ Select the correct die set for the combination of hose and fitting being crimped.

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.

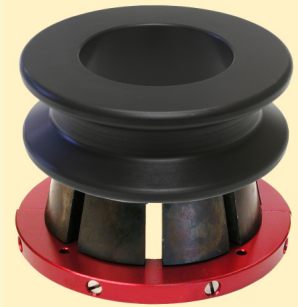
■ Lubricate the contact surfaces of the die fingers and the Compression Ring with the die lubricant furnished with the crimper.

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

■ Align the hose and fitting in the die set. If the fitting has knurl marks, align as shown. If there are no knurl marks on the fitting, obtain the correct crimp length from the crimp specification chart and mark the fitting at the proper point.



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 personal injury*



- Slide the Pusher into position on the hydraulic ram
- Recheck the fitting for correct alignment and depress the pneumatic Start/Stop switch bulb. Keep it depressed until the crimper shuts off automatically.
- Measure the finished fitting diameter to be certain that it is within the crimp specification tolerances.
- If multiple fittings are being crimped set the Coupling Stop to automatically position the fitting and set the Ram Retraction Stop to limit the ram retraction to the position where the hose and fitting can just be easily removed.

Magnets embedded in the Pusher will retract the Compression Cone with the Pusher while still permitting the Compression Cone to align correctly for the next crimping operation.



COUPLING STOP



RAM RETRACTION STOP



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 off 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 “95”
- 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.

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.



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 110 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 bulb on the end of the hose going into the box

PROBLEM: CRIMP DIAMETER TOO LARGE

- Check crimper calibration and re-calibrate if required.
- 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.
- Incorrect setting of the Micro-Crimp Adjuster. Check hose manufacturer's specifications.
- 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.
- 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

- Check crimp diameter and re-calibrate if necessary
- Incorrect die being used (See die range under Crimp Diameter too Large)
- Incorrect setting of the Micro-Crimp Adjuster. Check hose manufacturer's specifications.

PROBLEM: DIES STICKING IN COMPRESSION RING

- Inadequate lubrication of the compression ring and die surfaces.

THE KWIKRIMP® CONCEPT IS AN ENGINEERED PROGRAM, DESIGNED TO INCORPORATE DAYCO HOSE, FITTINGS AND CRIMPERS INTO ONE EFFECTIVE AND RELIABLE HOSE ASSEMBLY SYSTEM.

The Kwikrimp® Concept is an affirmation to all Dayco Distributors, OEMs and users of the Kwikrimp® system that Dayco will support only those who use Dayco hose and couplings in the Kwikrimp® assembly system. However, the Kwikrimp® Concept is also a statement that serves to warn that Dayco will not be responsible when interchanging a Dayco hose and/or couplings with hose and/or couplings of any other manufacturer. Dayco products are part of an engineered system, which must be assembled and used in accordance with Dayco instructions and limitations.

Dayco hose, couplings and crimping machines are designed into an effective and reliable assembly system and the use of other than Dayco products may produce hose assemblies that will not meet rated performance. Failure to follow Dayco instructions and limitations could lead to premature hose failures resulting in property damage, serious injury or death.

Dayco's limited warranty shall apply only if the customer uses hose, fittings, hose fitting components and crimp equipment specifically engineered, designed and produced to Dayco process specifications.

DAYCO DISCLAIMS ANY RESPONSIBILITY OR LIABILITY FOR ANY CRIMPED HOSE ASSEMBLIES NOT PRODUCED FROM GENUINE DAYCO HOSE FITTINGS, HOSE AND EQUIPMENT, IN CONFORMANCE WITH DAYCO PROCESS SPECIFICATIONS FOR EACH SPECIFIC HOSE ASSEMBLY.

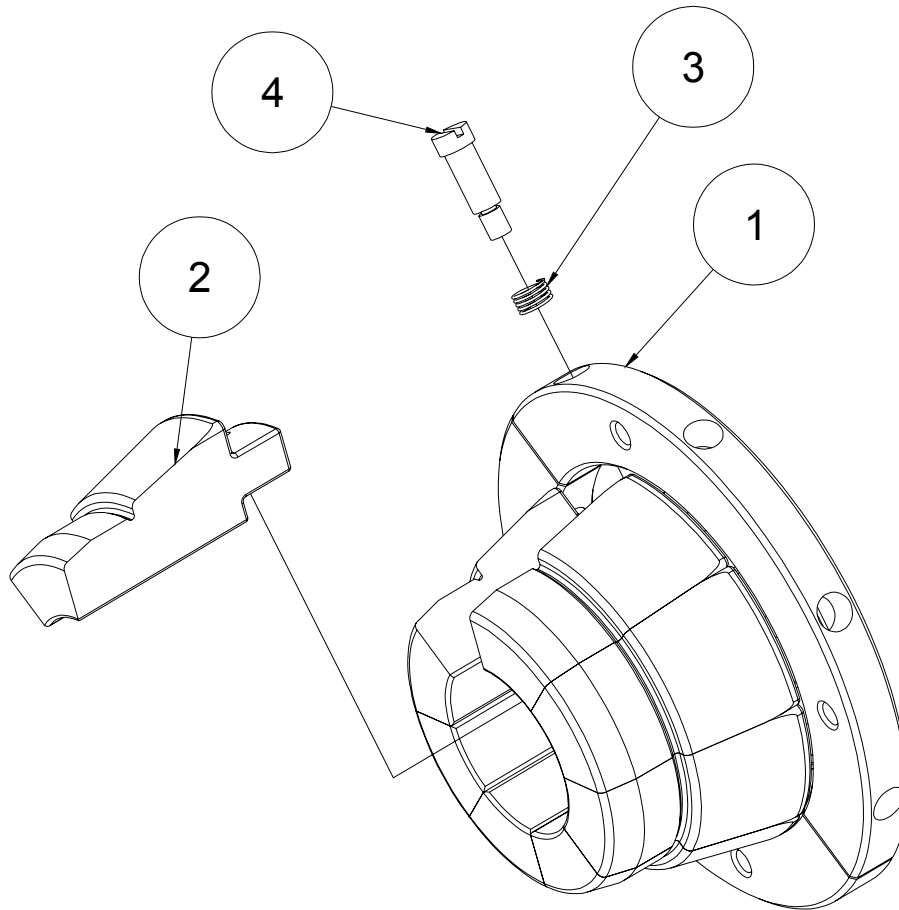
The argument that hoses branded with identical SAE numbers are the same and can be interchanged with Dayco couplings is not true! Hose with identical brand can be expected to perform only to the requirements of SAE when assembled with compatible couplings. SAE recognizes this fact as shown by the following statement taken from the 1998 SAE Handbook, J1273, Volume 2, and page 22.198.

3.10 Proper End Fitting – Care must be taken to insure proper compatibility exists between the hose and coupling selected based on the manufacturer's recommendations substantiated by testing to industry standards such as SAE J517.

All Dayco distributors, OEMs and Kwikrimp® users must recognize that the following points are critical when considering any and all aspects of the Kwikrimp® program.

1. The data supplied with each Crimper was developed after extensive impulse testing with Dayco hose and couplings. All Dayco hose styles are tested with the proper Kwikrimp® couplings before they are added to the Dayco Approved List. Dayco is constantly checking and upgrading hose quality.
2. Dayco Kwikrimp® data does not apply to all hose and couplings, only those products bearing the Dayco identification with the proper Dayco catalog number.

Dayco couplings used with other than Dayco branded hose will not necessarily produce a good assembly. Identical hose styles, made by different suppliers, are not the same when it comes to performance with Dayco couplings.

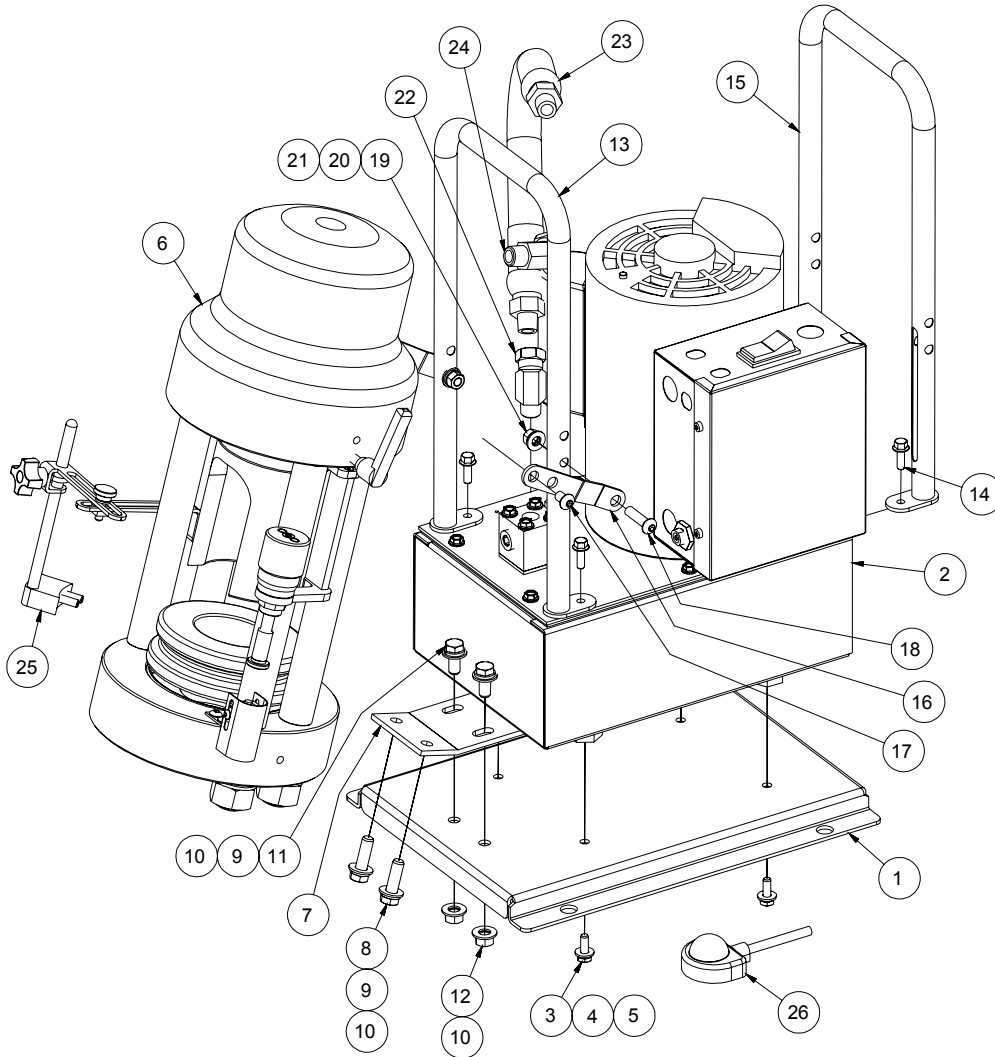


D100 Standard Series Dies

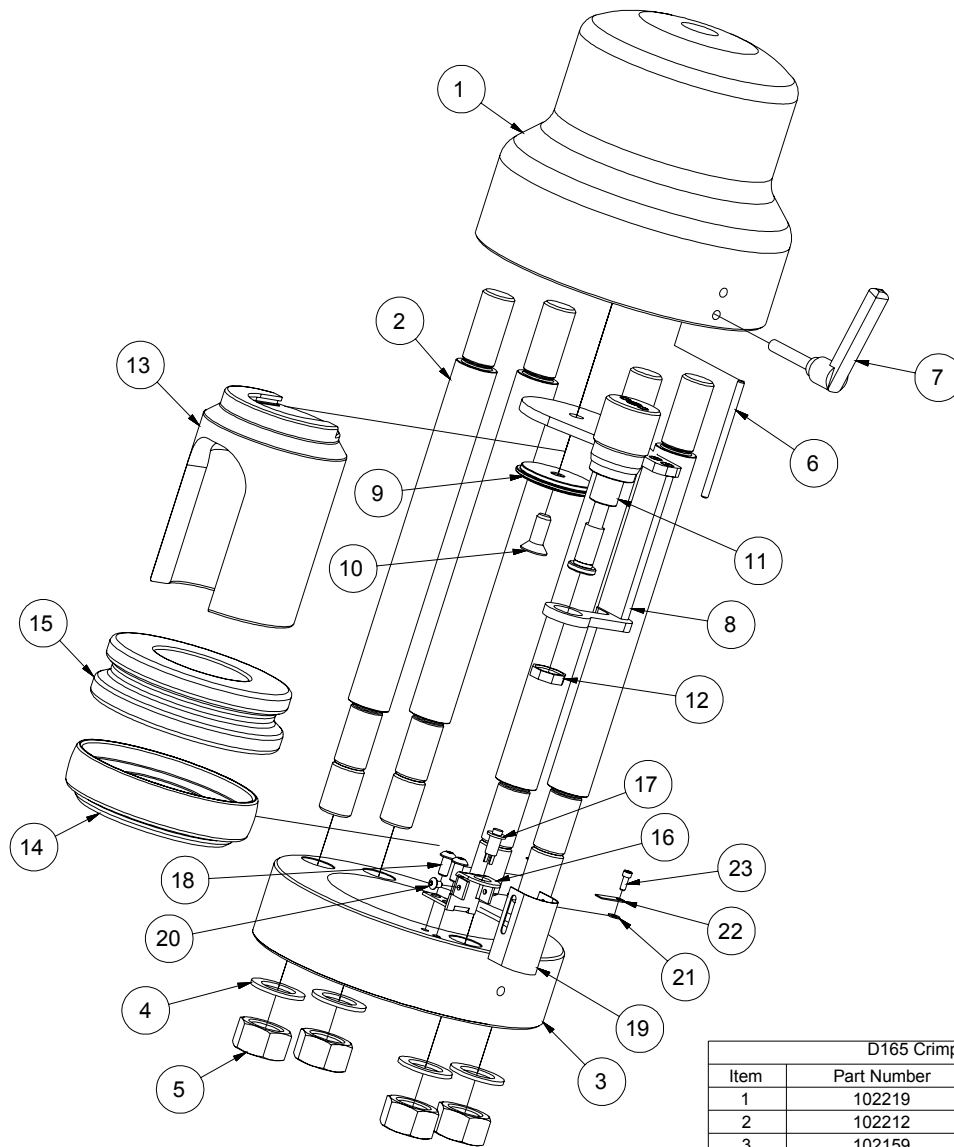
- | | |
|---------------|---------------------|
| 1) Die Ring | 101065-COLOR |
| 2) Die Finger | Varies with die set |
| 3) Die Spring | LC 022D 01 M NF |
| 4) Die Screw | EN84-115 |

Color Options

Red
Orange
Yellow
Purple
Green
Blue
Black
Silver
Brown

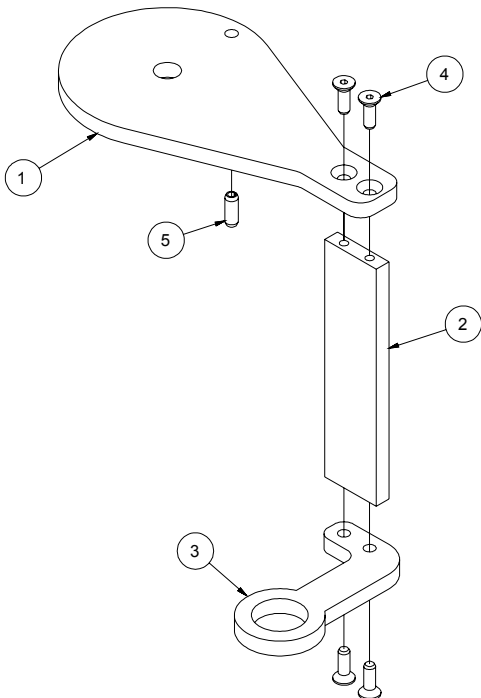
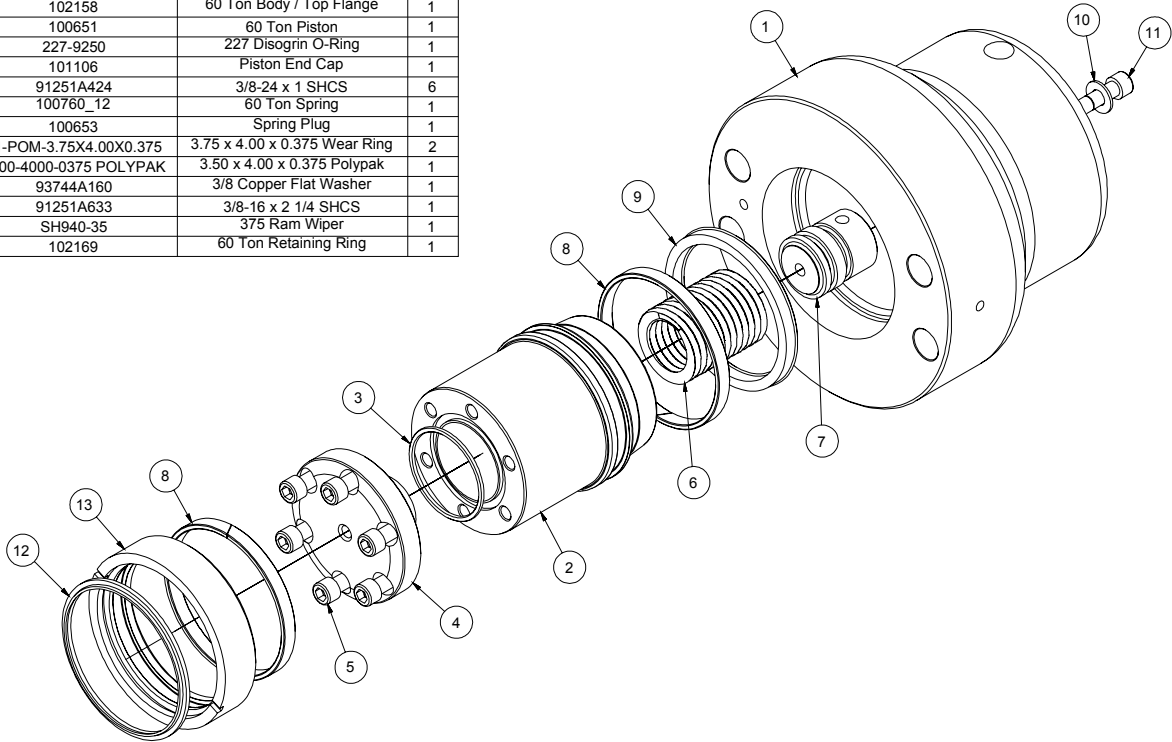


D165 Crimper Assembly (102221)			
Item	Part Number	Description	Qty
1	101430	D165 Base Plate	1
2	101633	Pump Assembly	1
3	92865A540	1/4-20 x 3/4 HHCS	4
4	91102A029	1/4 Lock Washer	4
5	90126A029	1/4 Flat Washer	4
6	102161	D165 Crimper Head Assembly	1
7	101429	Crimper Head Mounting Bracket	1
8	92865A626	3/8-16 x 1 1/4 HHCS	2
9	91102A031	3/8 Lock Washer	4
10	90126A031	3/8 Flat Washer	6
11	92865A623	3/8-16 x 7/8 HHCS	2
12	95462A031	3/8-16 Hex Nut	2
13	102160	Front Handle Assembly	1
14	92323A516	1/4-20 x 3/4 HHCS	4
15	102222	Rear Handle Assembly	1
16	102052	Crimper Head Brace	2
17	91255A578	5/16-18 x 1/2 BHCS	2
18	91255A585	5/16-18 x 1 1/4 BHCS	2
19	95462A030	5/16-18 Hex Nut	2
20	91102A030	5/16 Lock Washer	2
21	90126A030	5/16 Flat Washer	2
22	60TA-06X08	45 Deg Swivel Fitting	1
23	102225	D165 High Pressure 1/2" Hose	1
24	60TA-08X08	45 Deg Swivel Fitting	1
25	100954	Coupling Stop Assembly	1
26	101349	Pneumatic Pendant Switch	1

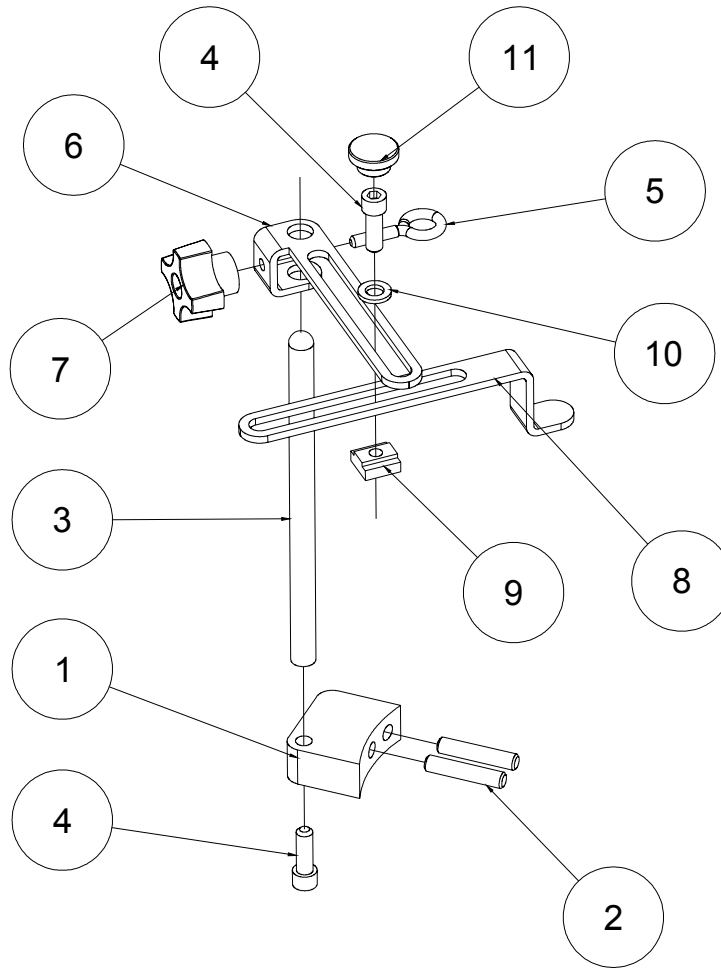


D165 Crimper Head Assembly (102161)			
Item	Part Number	Description	Qty
1	102219	60 Ton Cylinder / Top Flange	1
2	102212	Strain Rod	4
3	102159	Bottom Flange	1
4	7/8 Special	7/8 Narrow Rim Washer	4
5	90499A845	7/8 - 14 Hex Nut	4
6	102224	Retraction Stop Rod	1
7	KHA-126	Stop Rod Locking Handle	1
8	102220	Micrometer Mount Assembly	1
9	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 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

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
5	91251A424	3/8-24 x 1 SHCS	6
6	100760_12	60 Ton Spring	1
7	100653	Spring Plug	1
8	F1-POM-3.75X4.00X0.375	3.75 x 4.00 x 0.375 Wear Ring	2
9	3500-4000-0375 POLYPAK	3.50 x 4.00 x 0.375 Polypak	1
10	93744A160	3/8 Copper Flat Washer	1
11	91251A633	3/8-16 x 2 1/4 SHCS	1
12	SH940-35	375 Ram Wiper	1
13	102169	60 Ton Retaining Ring	1



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



Coupling Stop Assy (100954)			
Item	Part No.	Description	Qty
1	100950	Coupling Stop Block	1
2	98381A544	Stop Block Pin	2
3	100951	Stop Block Rod	1
4	91251A540	1/4-20 X 3/4 SHCS	2
5	9489T47	Eye Bolt	1
6	100952	Adjustable Stop Arm	1
7	DK-655	Knob	1
8	100953	Fixed Stop Arm	1
9	94750A588	T-Nut (1/4-20)	1
10	90126A029	1/4 Flat Washer	1
11	94052A133	Push-On Cap	1

D165 SERIES is warranted to be free from defects in material and workmanship under normal operating conditions and recommended usage for a period of ninety (90) days from date of delivery. Any product which is shown to be defective shall be replaced or repaired free of charge or extended a credited refund of the original acquisition cost to purchaser. This limited warranty is contingent upon the conditions that prompt receipt of notice of any defect, that purchaser establish the product has been property installed, maintained, and operated within the limits of related and normal usage as specified, and that upon request purchaser will return the defective product.

The terms of this limited warranty do not in any way extend to any product or part which have a life, under normal usage, inherently shorter than ninety (90) days.

THESE LIMITED WARRANTIES TO REPAIR OR REPLACE DEFECTIVE PRODUCTS AS SET FORTH ABOVE AND ANY ADDITIONAL WARRANTY EXPRESSLY STATED TO BE A WARRANTY AND SET FORTH IN WRITING ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE.

PURCHASER'S SOLE AND EXCLUSIVE REMEDY PURSUANT TO ANY CLAIM OF ANY KIND, INCLUDING BUT NOT LIMITED TO, A CLAIM IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY, SHALL BE (a) THE REPAIR OR REPLACEMENT AT THE OPTION OF THE MANUFACTURER OF DEFECTIVE PRODUCTS OR (b) A CREDITED REFUND OF THE PRICE OF THE DEFECTIVE PRODUCT OR PART IF THE PRODUCT OR PART IS UNABLE TO BE EFFECTIVELY REPAIRED, REPLACED OR CORRECTED IN A REASONABLE TIME AFTER USING BEST EFFORTS. CLAIMS OF ANY KIND INCLUDE BUT ARE NOT LIMITED TO THOSE FOR ANY LOSS OR DAMAGE ARISING OUT OF, CONNECTING WITH, OR RESULTING FROM THE DESIGN, MANUFACTURE, SALE, DELIVERY, RESALE, INSTALLATION, TECHNICAL DIRECTION OF INSTALLATION, INSPECTION, REPAIR, OPERATION OR USE OF ANY PRODUCT OR PART. IF, HOWEVER, ANY WARRANTIES ARE EXPRESSLY SET FORTH IN WRITING IN ADDITION TO THOSE SET FORTH HEREIN, THE LIABILITY UNDER SUCH ADDITIONAL WARRANTY SHALL TERMINATE NINETY (90) DAYS FROM THE DATE OF SHIPMENT TO PURCHASER.

UNDER NO CIRCUMSTANCES SHALL ANY LIABILITY WHATSOEVER BE IMPOSED FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, SUCH AS, BUT NOT LIMITED TO, LOSS OF PROFIT OR REVENUE, LOSS OF USE OF THE PRODUCT, COST OF CAPITAL, COST OF REPLACEMENT EQUIPMENT, OR CLAIMS RESULTING FROM CONTRACTS WITH THIRD PARTIES, UNLESS EXPRESSLY PROVIDED IN WRITING, IN NO EVENT SHALL ANY LIABILITY OR RESPONSIBILITY BE ASSUMED FOR PENALTIES, PENALTY CLAUSES OR LIQUIDATED DAMAGES OF ANY DESCRIPTION, CERTIFICATIONS OR INDEMNIFICATIONS OF PURCHASERS OR OTHERS OR COSTS, DAMAGES OR EXPENSES ARISING OUT OF OR RELATED TO THE PRODUCTS.

