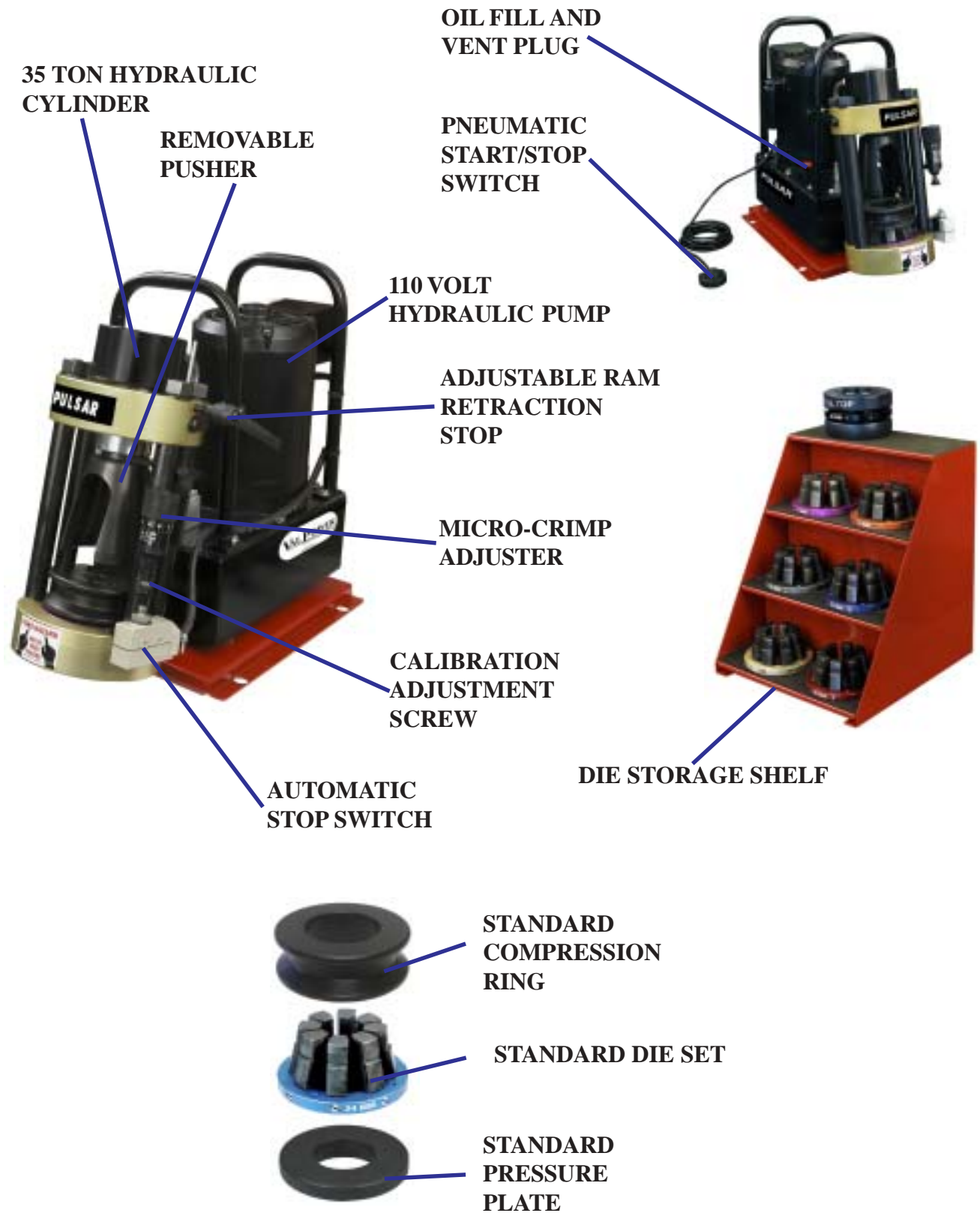




D105M SERIES HYDRAULIC HOSE CRIMPER OPERATORS MANUAL



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

- PLUG THE CRIMPER DIRECTLY INTO A 110 VOLT WALL OUTLET. **CAUTION: DO NOT RUN THE CRIMPER ON AN EXTENSION CORD AS DAMAGE TO THE CRIMPER MAY RESULT.**

COMPRESSION RING

- OIL LEVEL IN THE PUMP SHOULD BE 1-1/2 TO 2 INCHES BELOW THE FILL PLUG.

- PLACE THE PRESSURE PLATE, ANY DIE SET AND THE COMPRESSION RING IN THE CRIMPER BOTTOM FLANGE IN THE ORDER SHOWN.

PRESSURE PLATE

- SLIDE THE PUSHER ONTO THE HYDRAULIC CYLINDER STUD.

- SET THE MICRO-CRIMP MICROMETER AT 10⁻¹ AS SHOWN.

- DEPRESS AND HOLD THE START/STOP SWITCH UNTIL THE CRIMPER SHUTS OFF AUTOMATICALLY.

- NOTE THE TIME FROM WHICH THE DIE SET IS FULLY CLOSED (PUMP STARTS TO BUILD PRESSURE) TO THE POINT AT WHICH THE CRIMPER SHUTS OFF. WHEN THE PUMP STARTS TO BUILD PRESSURE THE SOUND OF THE MOTOR WILL CHANGE.

- IF THE TIME FROM WHICH THE PUMP STARTS TO BUILD PRESSURE AND THE UNIT SHUTS OFF IS APPROXIMATELY 1 SECOND, THE UNIT IS CORRECTLY CALIBRATED.

- IF THE TIME IS NOT APPROXIMATELY 1 SECOND, THE UNIT MUST BE RECALIBRATED. SEE INSTRUCTIONS IN THE MANUAL.

PUSHER



■ Insert the Pressure Plate in the bottom flange making sure that the pressure plate is seated 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 millimeters.

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

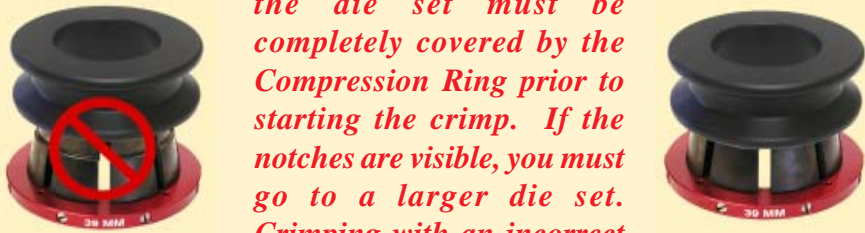
Failure to lubricate the contact surfaces with the correct lubricant will cause the dies to seize in the compression ring.

■ Place the Compression Ring loosely over the die set.

■ Insert the hose and fitting and align the fitting with the die set according to Pulsar Hydraulic's Recommendations. Manually depress the Compression Ring closing the die set until the hose and 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*



The diagram shows two views of the die set and compression ring. On the left, the compression ring is not fully seated over the die set, and a red 'X' is drawn over it, indicating an incorrect setup. On the right, the compression ring is fully seated over the die set, covering the notches, indicating the correct setup.

- Slide the Pusher in place above the hose assembly.



- Set the Micro-Crimp Adjuster to the setting recommended for the combination of hose and fitting being crimped. The Micro-Crimp Adjuster is shown set at 101 or die set fully closed, in the illustration. The Metric micrometer setting represents the Manufacturer's recommended crimped diameter in millimeters minus the closed diameter of the die set in millimeters.

Example: Crimp diameter (35.4) - Die diameter (34mm) = 1.4 setting on Micrometer.



- Recheck the fitting for correct alignment in the die set and depress the Start/Stop switch. Hold the Start/Stop switch depressed until the Automatic Stop Switch shuts the pump off. Release the Start/Stop switch and allow the pusher to return to the retracted position. Powerful magnets in the Pusher will retract the Compression Ring with the Pusher.



- Check the diameter of the finished assembly to be certain that it is within Pulsar's specifications.



The Crimper comes with standard features which increase accuracy and improve productivity for jobs which require repeat crimps of similar or identical assemblies

■ 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.



■ 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.



■ Powerful magnets in the Pusher retract the Compression Ring with the ram on each cycle. This permits the operator to operate the crimper essentially "hands free".



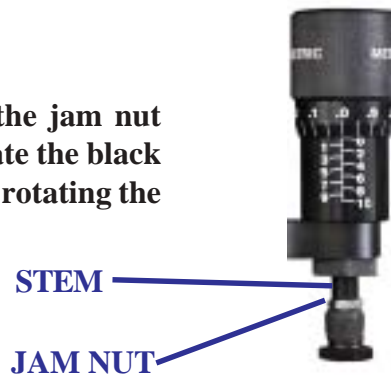
■ When the crimper is correctly calibrated, the hydraulic pump will be at approximately 10,000 psi, and the die set will be fully closed at the diameter etched on the O.D. of the die ring.

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

■ Insert the Pressure Plate, any die set, and the compression ring in the order illustrated. Set the Micro-Crimp Adjuster at 10 and follow the instructions in the Quick Start Guide at the front of this manual.



■ If the crimper requires re-calibration, loosen the jam nut under the barrel of the Micro-Crimp Adjuster and rotate the black knob slightly in or out. Hold the stem by the flats while rotating the black knob and tightening the jam nut.



■ Rotating the black knob out of the barrel will decrease the time required for the pump to shut off after the knob contacts the automatic stop switch. Rotating the black knob into the barrel will increase the time for the pump to shut off.

■ Retighten the jam nut and recheck calibration.



PROBLEM: CRIMPER WILL NOT RUN AT ALL

- Check the switch on the electrical box mounted on the motor

- Check the wall outlet. The crimper comes from the factory wired for a 110 volt circuit. Use of extension cords or outlets with inadequate power can damage the motor or crimper controls. 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 it must close to complete the circuit and allow the crimper to 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

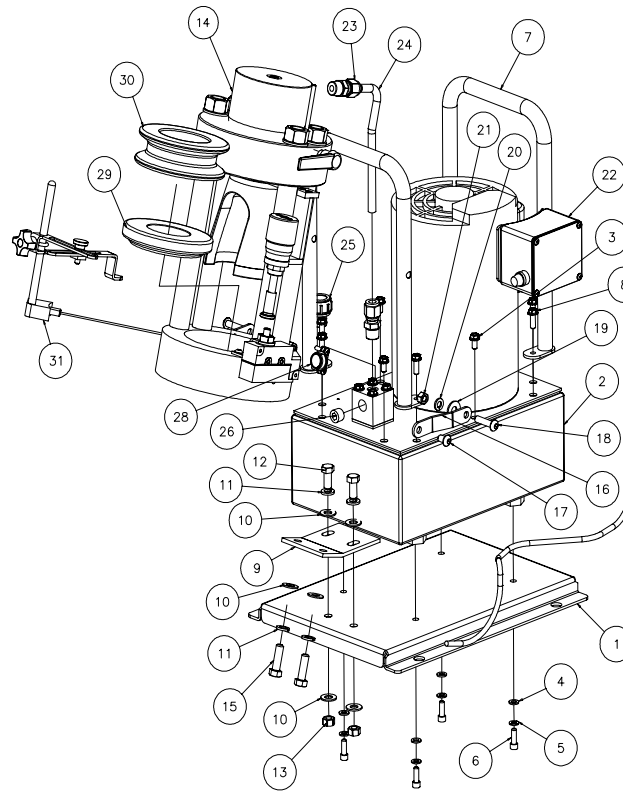
- Check crimper calibration and recalibrate if required.
- Incorrect die being used. The closed diameter is the die size stamped on the die ring.
- Incorrect setting of the Micro-Crimp Adjuster. Check Pulsarís specifications.
- Inadequate pump pressure. Check oil level in the pump. It should be 1-1/2 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

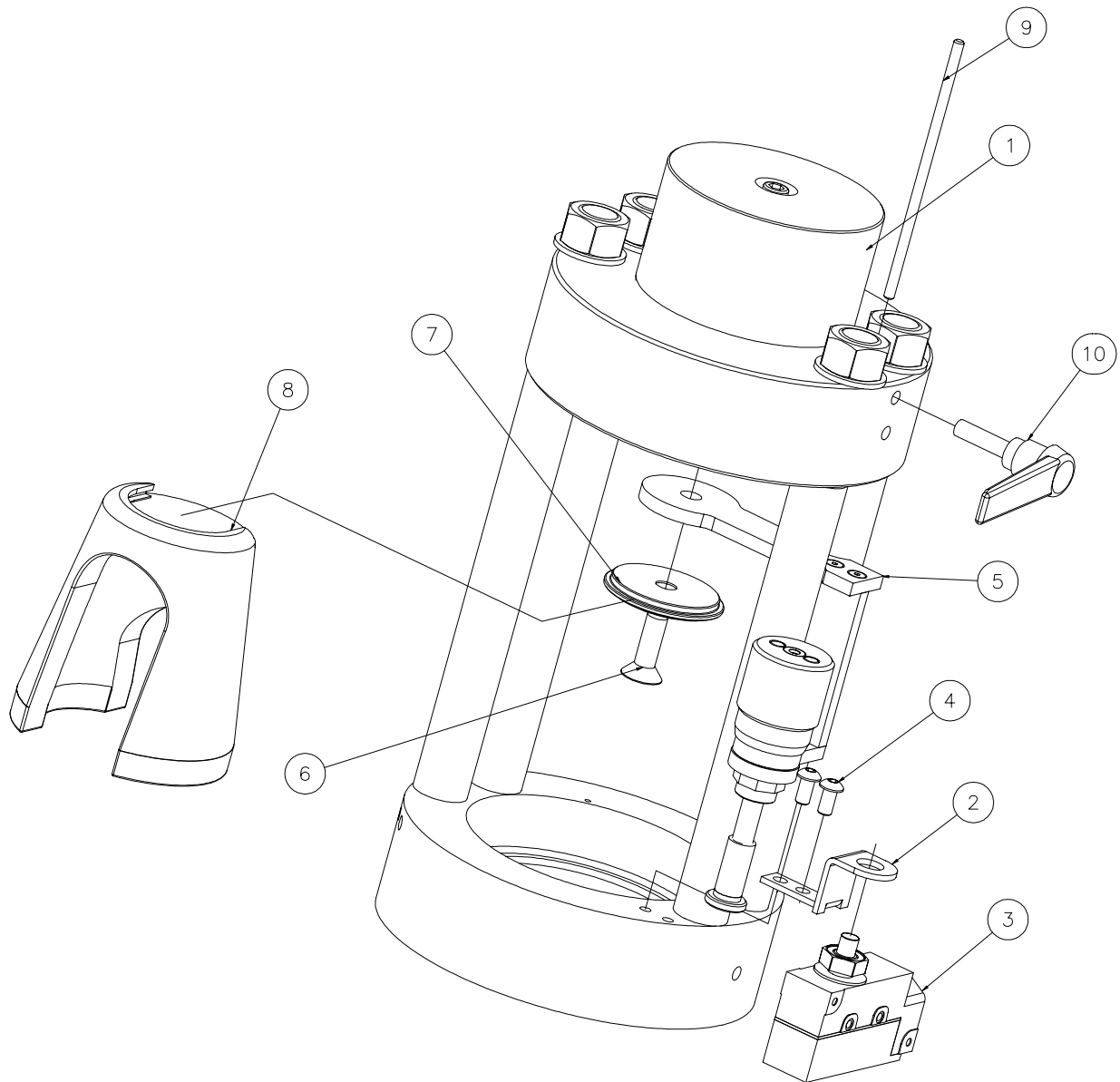
- Check crimp diameter and recalibrate if necessary
- Incorrect die being used
- Incorrect setting of the Micro-Crimp Adjuster. Check Pulsarís specifications.

PROBLEM: DIES STICKING IN COMPRESSION RING

- Inadequate lubrication of the compression ring and die surfaces.

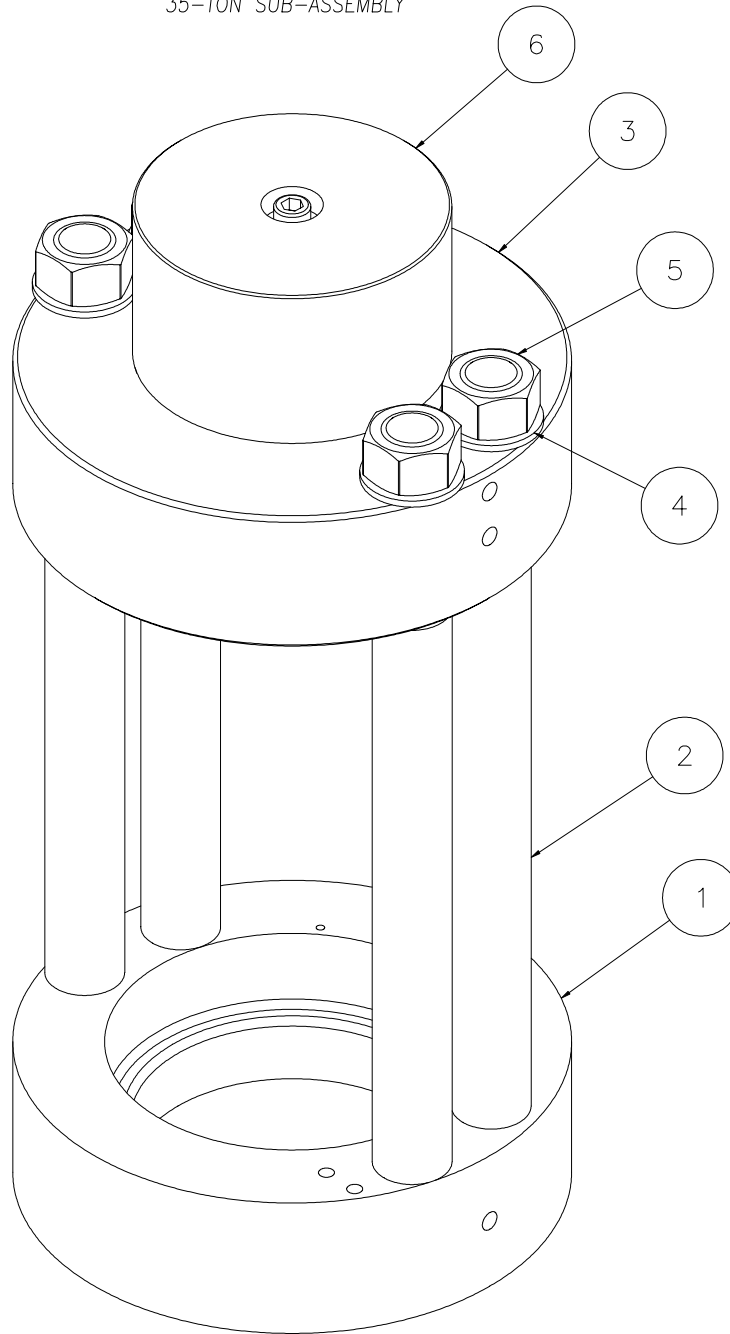


D-105 Crimper Assembly (101428)					
Item	Part Number	Description	Qty	VENDOR	NOT
1	101430	D-105 Base Plate	1		
2	101436	Pump Assembly	1		
3	92323A512	1/4-20 X 1/2 SHFCS	6	McMaster	
4	90126A029	1/4 Flat Washer	4	McMaster	
5	91102A029	1/4 Lock Washer	4	McMaster	
6	91251A540	1/4-20 X 3/4 SHCS	4	McMaster	
7	101433	D-105 Handle	2		
8	92323A516	1/4-20 X 3/4 SHFCS	4	McMaster	
9	101429	Mounting Bracket	1		
10	90126A031	3/8 Flat Washer	6	McMaster	
11	91102A031	3/8 Lock Washer	4	McMaster	
12	92865A623	3/8-16 X 7/8 Hex Bolt	2	McMaster	
13	95462A031	3/8-16 Hex Nut	2	McMaster	
14	101505	D105DC Head Assembly	1		
15	92865A626	3/8-16 X 1 1/4 Hex Bolt	2	McMaster	
16	101434	Handle Brace	2		
17	91255A578	5/16-18 X 1/2 BHCS	2	McMaster	
18	91255A585	5/16-18 X 1 1/4 BHCS	2	McMaster	
19	90126A030	5/16 Flat Washer	2	McMaster	
20	91102A030	5/16 Lock Washer	2	McMaster	
21	95462A030	5/16-18 Hex Nut	2	McMaster	
22	101486	Electrical Box Assembly	1		
23	3/8 NPT Straight Ftg.	3/8 NPT Compression Fitting	2		
24	101436-01	D-105 Hydraulic Tube	1		
25	101341	Vented Filler Cap	1		
26	3/8 NPT Pipe Plug	3/8 NPT Hex Socket Pipe Plug	1		
27		Limit Switch Cable	1		
28	8180K21	Screw Connector	1	McMaster	
29	100869	Pressure Plate	1		
30	100849	Compression Cone	1		
31	100954	Coupling Stop Assembly	1		
32	100431	D-105 Shelf Unit	1		(Option
33	101488	Pneumatic Pendant Switch	1		(Not Sh

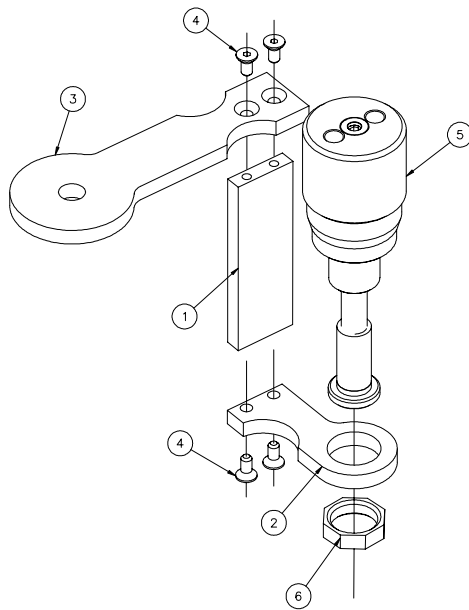


D-105M Head Assembly (101480METRIC)				
Item	Part Number	Description	Qty	Vendor
1	101209	Head Sub-Assembly	1	
2	101479	Limit Switch Bracket	1	
3	7778K13	ZE-Q-2S Limit Switch	1	McMaster
4	91255A537	1/4-20 X 1/2 BHCS	2	McMaster
5	101594	Micrometer Mount Assembly	1	
6	91253A624	3/8-16 X 1 HSFHS	1	McMaster
7	100812	Pusher Retaining Pin	1	CMS, INC
8	100813-01	Pusher W/Magnets	1	
9	101499	D105 Stop Rod	1	
10	KHA-122	Stop Rod Locking Lever	1	Reid

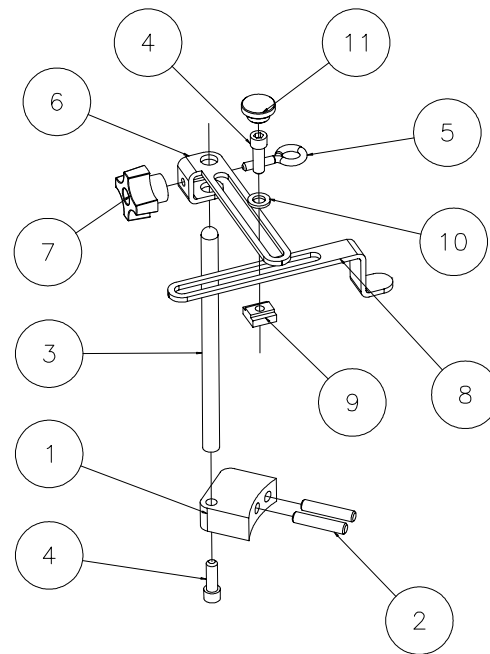
YELLOW FLANGE/LONG STRAIN ROD
35-TON SUB-ASSEMBLY



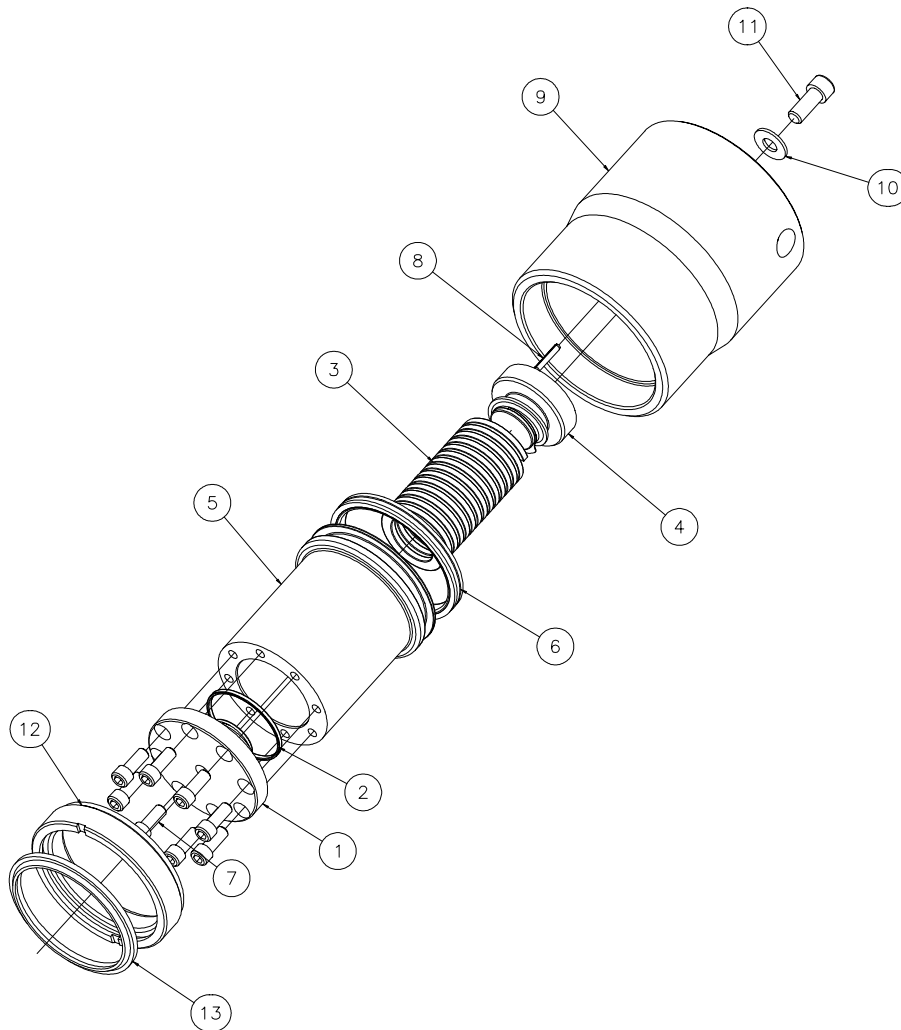
35-Ton Head Sub-Assembly (101209)				
Item	Part Number	Description	Qty	Vendor
1	100325 (Yellow)	Bottom Flange	1	
2	100329	Strain Rod - 8 1/2"	4	
3	100326 (Yellow)	Top Flange	1	
4	3/4 Special	3/4 Flat Washer - Special	4	Sanders
5	95462A538	3/4-10 Hex. Nut	4	MCMaster
6	100685	35-Ton Cylinder Assembly	1	



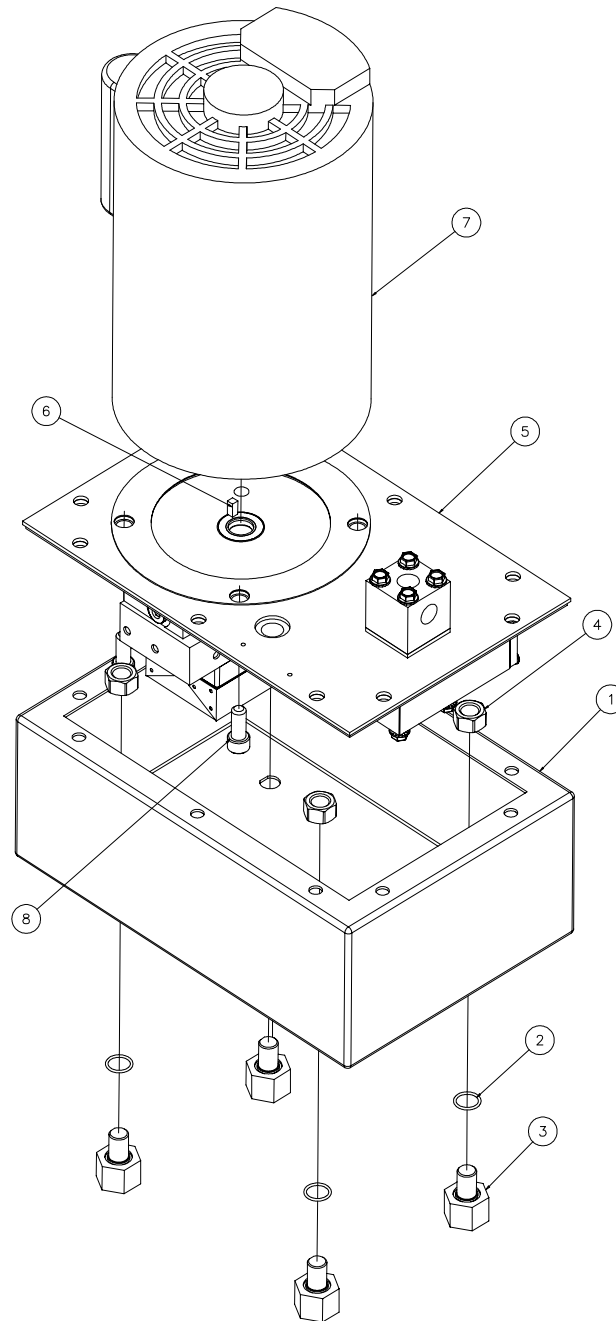
Metric Micro Mount Assy (101594)				
Item	Part Number	Description	Vendor	Qty
1	100898-01	Micrometer Arm		1
2	100898-02	Micrometer Base		1
3	100898-03	Micro Suspension Flange		1
4	91253A189	#8-32 X 1/4 HSFHS	McMaster	4
5	101587	Metric Micrometer Assy		1
6	100727	Micro Nut		1



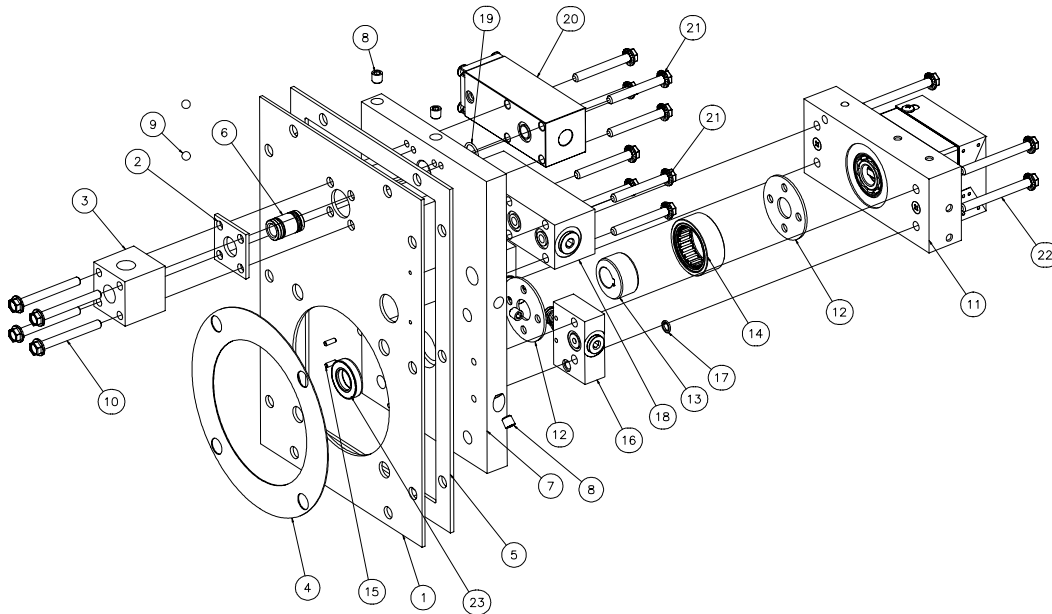
Coupling Stop Assy (CMS # 100954)				
Item	CMS Part No.	Description	Qty	Vendor
1	100950	Coupling Stop Block	1	
2	98381A544	Stop Block Pin	2	
3	100951	Stop Block Rod	1	
4	91251A540	1/4-20 X 3/4 SHCS	2	McMaster
5	9489T47	Eye Bolt	1	McMaster
6	100952	Adjustable Stop Arm	1	
7	DK-655	Knob	1	Reid
8	100953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



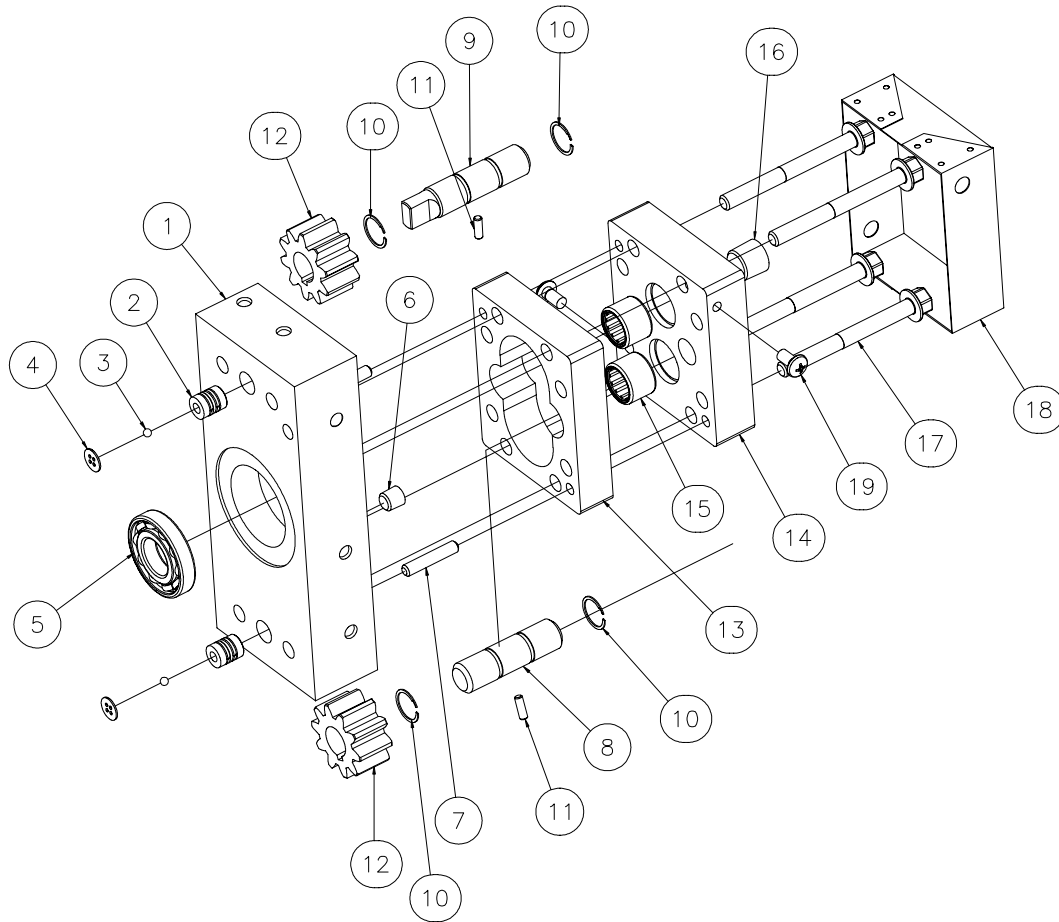
35 Ton Cylinder Assembly (100685)				
Item	Part Number	Description	Qty	Vendor
1	100689	Ram End Cap	1	
2	AS568-030	030 Disogrin O-Ring	1	Gallagher
3	101282	Retraction Spring	1	Mid-West Spring
4	101516	Spring Retainer	1	
5	101515	Ram	1	
6	102-33400-173-0450	Ram Guide Ring/Seal	1	Lutz
7	91251A539	1/4-20 X 5/8 SHCS Gd 8	8	McMaster
8	98296A181	1/8 X 3/4 SLOTTED SPRING PIN	1	McMaster
9	101517	Cylinder Body	1	
10	93744A030	5/16 Washer - Copper	1	McMaster
11	91251A581	5/16-18 X 3/4 SHCS	1	
12	101514	Ram Guide	1	
13	SH940-26	Wiper	1	Gallagher



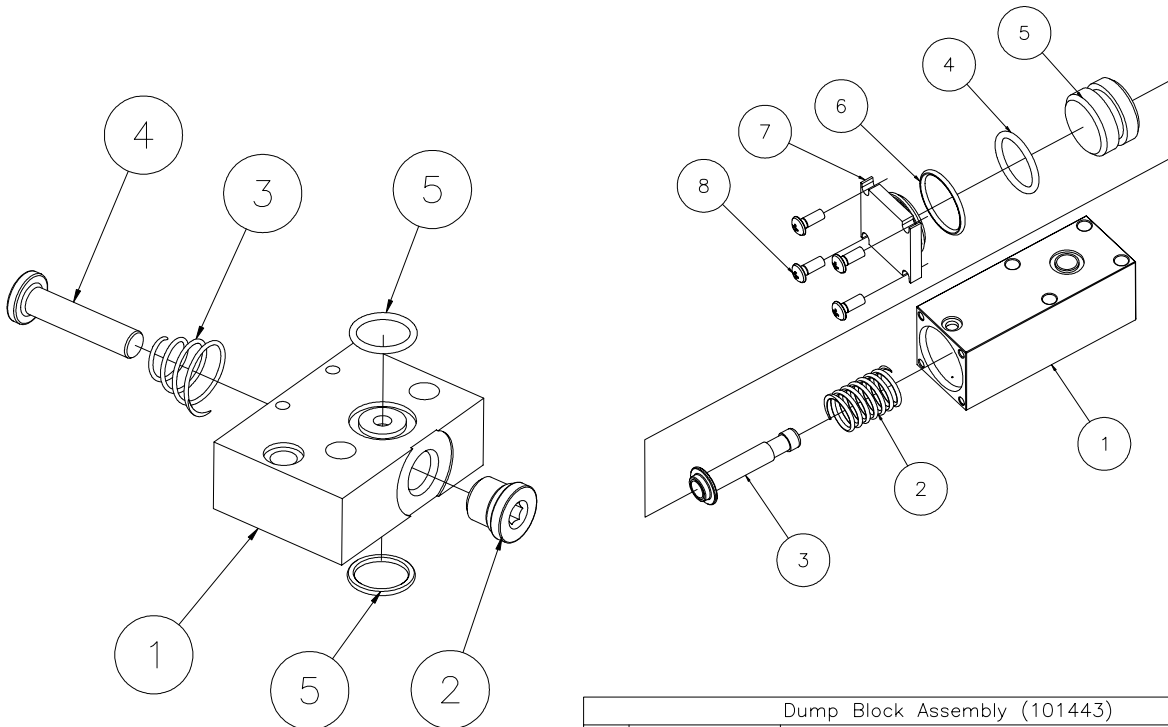
D-105 Pump Assembly (101436)				
Item	Part Number	Description	Qty	Vendor
1	101435	1 Gallon Reservoir	1	
2	101358	O-Ring Seal	4	
3	101432	Reservoir Standoff	4	
4	95462A525	1/2-20 Hex Nut	4	McMaster
5	101395	Upper Pump Assembly	1	
6	101470	Square Shaft Key	1	
7	101346	1 HP Electric Motor	1	
8	101338	3/8-16 X 7/8 SHCS	4	



1 HP/2 HP Pump Sub-Assembly (101395)					
Item	Part Number	Description	Qty	Vendor	Ref. Part No.
1	101335	Reservoir Cover	1		132301
2	101337	Port Block Gasket	1		121304
3	101334	Port Block	1		150306
4	101330	Motor Gasket	1		121300
5	101329	Reservoir Gasket	1		121305
6	101394	5/8" Adaptor Assembly	1		331200
7	101400	Upper Plate	1		151300
8	101375	1/16-27 NPTF Pipe Plug	5		
9	9528K15	Ø1/4" Precision Ball	2	McMaster	350301
10	101340	1/4-20 X 2 1/4 Serrated Hex FLHCS	4		345307
11	101477	Lower Plate & Gear Pump Ass'y.	1		200467
12	101406	Wear Washer	2		364300
13	101425	Eccentric - 5/8" Shaft	1		190300
14	101473	Bearing Sleeve Assembly	1		349200
15	101382	1/8 X 3/8 Dowel Pin	4		342301
16	101478	Piston Block Assembly	2		200215
17	101352	Ø10 O-Ring	4		354313
18	101476	Unloading Block Assembly	1		200346
19	101355	Ø14 Disogrin O-Ring	3		354302
20	101443	Dump Block Assembly	1		200203
21	92323A525	1/4-20 X 2" Serrated Hex FLHCS	8	McMaster	345306
22	101385	1/4-20 X 2 1/2 Serrated Hex FLHCS	4		345308
23	101328	CR-6247 Shaft Seal	1		355303

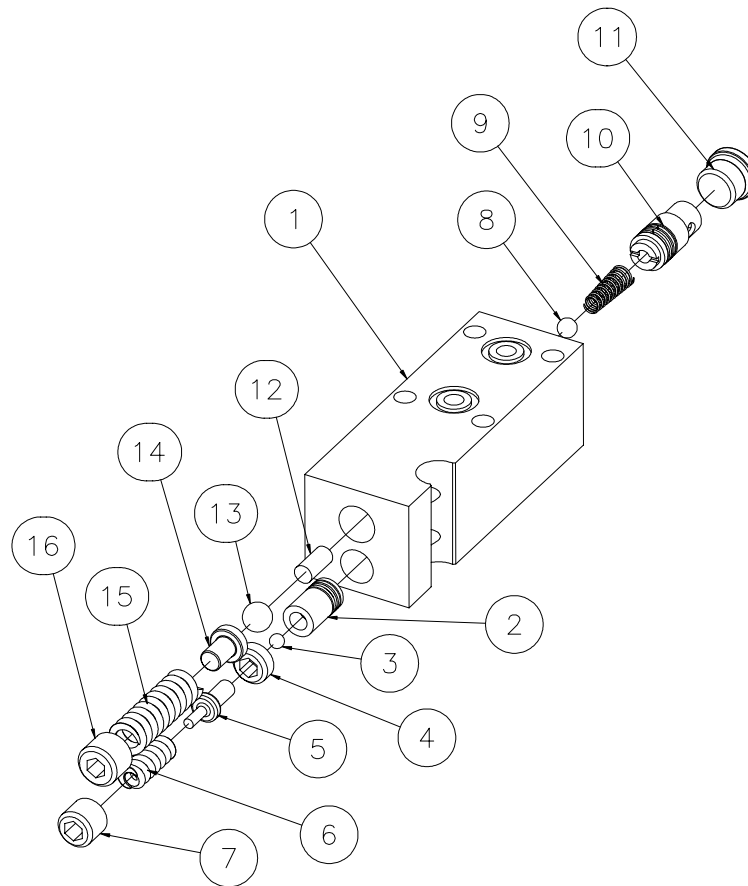


Lower Plate & Gear Pump Assembly (101477)				
Item	Part Number	Description	Qty	Vendor
1	101401	Lower Plate – 2 Piston	1	
2	101466	Intake Seat Assembly	2	
3	9528K11	∅ 1/8 Precision Ball	2	McMaster
4	101447	Ball Retainer	2	
5	R10 – Open	5/8 Ball Bearing	1	IKS Bearing
6	4534K39	1/16–27 NPTF Pipe Plug	1	McMaster
7	98381A510	3/16 X 1 Dowel Pin	2	McMaster
8	101446	Idler Shaft – 5/8	1	
9	101426	Driver Shaft – 5/8	1	
10	101379	Retaining Ring	4	
11	98381A470	1/8 X 3/8 Dowel Pin	2	McMaster
12	101361	Gear – 5/8	2	
13	101410	Center Gear Plate – 5/8	1	
14	101409	Lower Gear Plate	1	
15	BA88ZOHX	Needle Roller Bearing	2	IKU Bearing
16	4534K42	1/4–18 NPTF Pipe Plug	1	McMaster
17	92316A552	1/4–20 X 2 1/2 Hex Flg. Hd. Screw	4	McMaster
18	101419	Screen	1	
19	90272A827	10–32 X 3/8 Phillips Pan Hd. Mach. Screw	2	McMaster



Piston Block Assembly (101478)			
Item	Part Number	Description	Qty
1	101408	Piston Block	1
2	101381	Port Plug - 7/16-20	1
3	101372	Piston Spring	1
4	101445	Piston	1
5	101355	014 Disogrin O-Ring	2

Dump Block Assembly (101443)				
Item	Part Number	Description	Qty	Vendor
1	101412	Dump Block	1	
2	101374	Dump Valve Spring	1	
3	101417	Dump Valve Plunger	1	
4	101353	Plunger Piston O-Ring	1	McMaster
5	101427	Plunger Piston	1	
6	101444	Block Cap O-Ring	1	McMaster
7	101407	Dump Block Cap	1	
8	101391	10-24 X 1/2 Pan Hd Mach Screw	4	McMaster



Unloading Block Assembly (101476)				
Item	Part Number	Description	Qty	Vendor
1	101399	Unloading Block	1	
2	101467	High PSI Seat Assembly	1	
3	9528K13	ø3/16 Precision Ball	1	McMaster
4	91301A180	1/4-20 X 1/4 Hollow Swt Screw	1	McMaster
5	101462	Relief Ball Retainer	1	
6	101373	High Pressure Spring	1	
7	101471	High Pressure Adjust. Screw	1	
8	9528K15	ø 1/4 Precision Ball	1	McMaster
9	101371	Stick Valve Spring	1	
10	101474	Stick Valve Assembly	1	
11	50925K435	9/16-18 Port Plug	1	McMaster
12	101464	Pin	1	
13	9528K19	ø 3/8 Precision Ball	1	McMaster
14	101423	Ball Retainer	1	
15	101370	Low Pressure Spring	1	
16	101472	Low Pressure Adjust. Screw	1	