

**PARTS LIST**

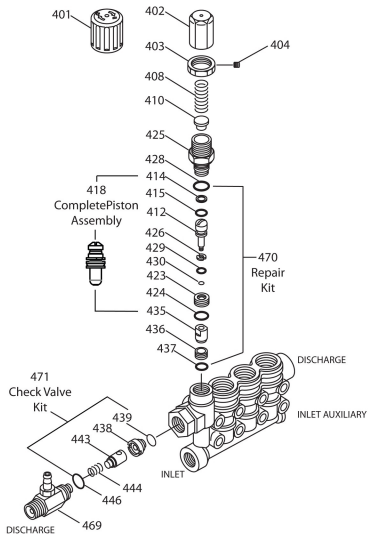
ITEM	PART NO.	DESCRIPTION	QTY
5	7103400	SCREW, HH, SEMS (M8 x 25)	4
8	7103401	COVER, ADAPTOR BEARING	1
10	7103402	O-RING, BEARING COVER - 70D	1
11	7102934	SEAL, OIL CRANKSHAFT - 70D	1
15	7103403	BEARING, BALL - INNER	1
20	7103404	ROD, CONNECTING	3
24	7103825	PLUG, OIL CAP	1
25	7103406	CRANKSHAFT (10.3MM)	1
27	7103407	BEARING, BALL - OUTER	1
32	7102604	CAP, OIL FILLER W/ O-RING	1
33	7102617	O-RING, FILLER CAP - 70D	1
37	7103056	GUAGE, OIL BUBBLE W/ GASKET - 80D	1
38	7102970	GASKET, FLAT, OIL GUAGE - 80D	1
48	7101762	PLUG, DRAIN	1
49	7102617	O-RING, DRAIN PLUG - 70D	1
53	7103408	CRANKCASE	1
64	7103409	PIN, CROSSHEAD	3
65	7103410	ROD, PLUNGER	3
70	7102804	SEAL, OIL CRANKCASE - 70D	3
75	7103411	SLINGER, BARRIER	3
90	7103412	PLUNGER (M14 x 28)	3
98	N/A	WASHER, SEAL - 90D	3
99	7103413	RETAINER, PLUNGER	3
100	7103414	RETAINER, SEAL	3

ITEM	PART NO.	DESCRIPTION	QTY
106	N/A	SEAL, LPS W/S-SPG	3
120	7103415	CASE, SEAL	3
121	N/A	O-RING, SEAL CASE - 70D	3
127	N/A	V-PACKING	3
128	N/A	ADAPTOR, MALE	3
160	N/A	O-RING, INLET VALVE SEAT - 70D	3
161	N/A	SEAT, INLET	3
162	N/A	BACK-UP RING, DISCHARGE SEAT	3
163	N/A	O-RING, DISCHARGE SEAT - 70D	3
164	N/A	SEAT DISCHARGE	3
166	N/A	VALVE	6
167	N/A	SPRING	6
168	N/A	RETAINER, SPRING, INLET	3
169	N/A	RETAINER, SPRING, DISCHARGE	3
172	N/A	O-RING, VALVE PLUG - 90D	3
174	7103416	PLUG, VALVE W/ O-RING	3
185	7103417	HEAD, MANIFOLD	1
188	7103418	SCREW, HSH (M8 x 65_	8
255	7103419	ASSY, BOLT MOUNT, GAS	1
300	7103420	KIT, SEAL	1
310	7103421	KIT VALVE	1
400	N/A	UNLOADER, INTEGRAL	1
469	7108808	INJECTOR, CHEMICAL FIXED	1

### INTEGRAL UNLOADER

#### SPECIFICATIONS

	U.S. Measure	Metric Measure
Flow .....	3.9 gpm	(14.8 l/m)
PSI Range.....	100-4000 psi	(7-275 bar)
Inlet Port .....	1/2" NPTF	(1/2" NPTF)
Discharge Port W/Chemical Injector.....	3/8" NPTM	3/8" NPTM



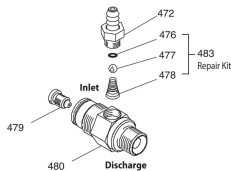
ITEM	PART NO.	DESCRIPTION	QTY
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401	7103423	HANDLE, ADJUSTING	1
402	7103424	CAP, ADJUSTING	1
403	7103425	NUT, LOCKING (M25 x 1)	1
404	7103426	SCREW, SET (M4 x 4)	1
408	7103427	SPRING, PRESSURE	1
410	7103428	RETAINER, SPRING	1
412	N/A	STEM, PISTON	1
414	N/A	BACK-UP RING, PISTON STEP	1
415	N/A	O-RING, PISTON STEM - 90D	1
418	N/A	ASSY, PISTON INCLUDED IN REPAIR KIT	1
423	N/A	O-RING, VALVE RETAINER - 70D	1
424	N/A	RETAINER, PISTON	1
425	N/A	RETAINER, PISTON	1
426	N/A	WASHER	1
428	N/A	O-RING, PISTON RETAINER - 80D	1
429	N/A	O-RING, VALVE RETAINER - 70D	1
430	N/A	BACK-UP RING, VALVE RETAINER	1
435	N/A	VALVE/BALL ASSEMBLY	1
436	N/A	SEAT	1
437	N/A	O-RING, SEAT - 70D	1
438	7103429	SEAT, CHECK VALVE	1
439	N/A	O-RING, CHECK VALVE SEAT - 70D	1
443	7103430	VALVE, CHECK W/NBR O-RING	1
444	7103431	SPRING, CHECK VALVE	1
446	N/A	O-RING, BODY - 80D	1
460	7103432	FITTING, DISCHARGE (3/8" NPTM)	1
468	7103432	KIT, O-RING	1
469	7108808	INJECTOR, CHEMICAL FIXED	1
470	7103433	REPAIR KIT	1
471	7107574	KIT, CHECK VALVE	1

### 997200 FIXED CHEMICAL INJECTOR

#### SPECIFICATIONS

	U.S. Measure	Metric Measure
GPM .....	3.9 gpm	(14.8 l/m)
Nozzle Orifice .....	2.0 mm	(2.0 mm)
Hose Barb .....	1/4"	(1/4")
Tapped Barb .....	8/32" UNF	(8/32" UNF)
Inlet Port .....	M20x1.0	(M20x1.0)
Discharge Port .....	3/8" NPTM	(3/8" NPTM)
Weight .....	5.3 oz.	(0.15 kg)
Dimensions.....	2 x 1 x 1.75"	(51 x 25 x 45 mm)



ITEM	PART NO.	DESCRIPTION	QTY
472	N/A	BARB	1
476	N/A	O-RING, BARB - 70D	1
477	N/A	BALL	1
478	N/A	SPRING	1
479	7107530	ORIFICE	1
480	N/A	BODY	1
483	7107575	KIT, REPAIR	1

#### CHEMICAL INJECTOR PERFORMANCE CHART

Orifice Size	Maximum Injecting Pressure	Maximum Chemical Draw	Pressure Drop Across Injector At System Pressure (4000 psi)
2.0 mm	358 psi	76.8 oz/min	288 psi

Optimum performance of chemical injector occurs with 35 ft. high pressure hose and a minimum 3/8" I.D. The type of hose, extended lengths, reduced I.D. and fittings may create back pressure in excess of the low pressure nozzle rating and prevent the injector from drawing chemical.

**Deduct hose friction loss from above low psi nozzle. Contact Cat Pumps for assistance with other options.**

**CAUTION:** Deduct the pressure drop shown in the performance chart from your desired system pressure to arrive at the maximum high pressure nozzle rating. This is essential to avoid over-pressurizing the pump.

#### UNLOADER TYPE

An integral unloader with built-in by-pass is part of the discharge manifold to provide system pressure regulation and pump protection. This pump also includes a fixed chemical injector for chemical application.

#### OPERATION:

Pump should be purged of air before commencing with operation. Liquid must flow through the pump without discharge restriction to assure full system pressure is reached.

Install a pressure gauge close to the manifold head of the pump to assist in setting system pressure and to periodically monitor system pressure.

Setting and adjusting the unloader pressure must be done with the system turned on. Start the system with the unloader backed off to the lowest pressure setting (counterclockwise direction). Squeeze the trigger and read the pressure on the gauge at the pump. Do not read pressure at the gun or nozzle. If more pressure is desired, release the trigger, turn adjusting cap one quarter turn in a clockwise direction. Squeeze the trigger and read the pressure. Repeat this process until the desired system pressure is reached. Thread locking nut up to adjusting cap and tighten set screw. All high pressure systems should have a secondary relief valve. Set secondary relief valve 200-300 psi above the unloader setting.

**NOTE:** Pressure is not set at the factory.

#### SERVICE:

The unloader should be serviced on the same schedule as the seals in the pump. Refer to 67DX Service Manual for servicing of seals and valves, torque requirements and diagnosis and maintenance chart.