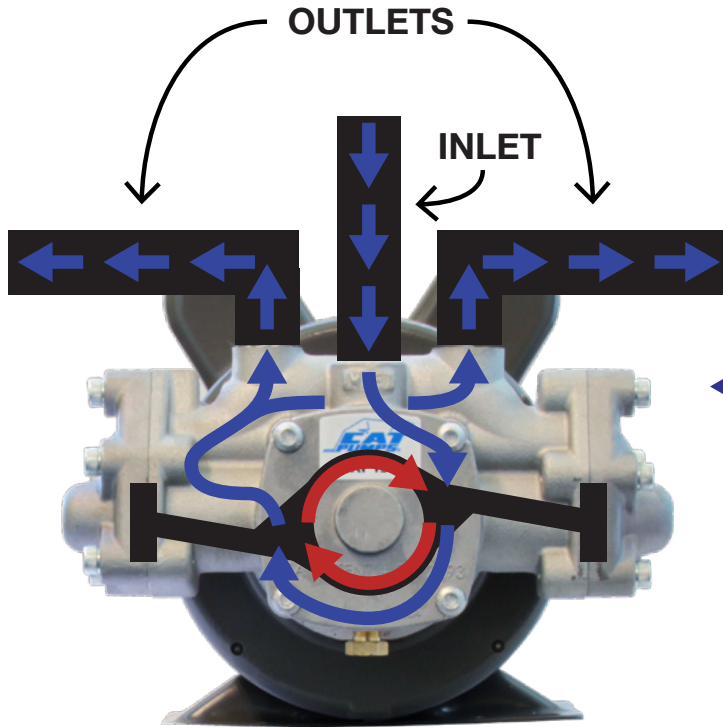


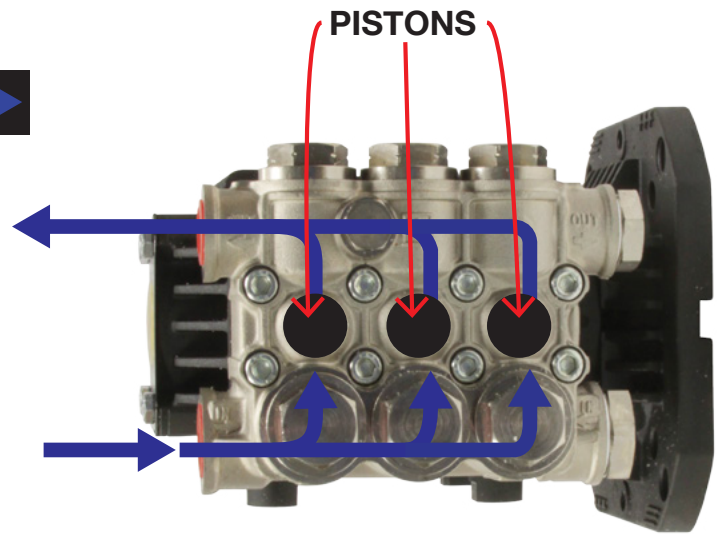
TECHNICAL SUPPORT

PISTON PUMPS

Basic Operation



Cat Pump



General Pump



Piston pumps use a piston or plunger to move liquid through a cylindrical chamber. The piston pumps in Mytee machines are powered by an electric motor.

Cat Pump Basic Operation

The electric motor powers a cam which spins the plungers in the pump head. The spinning motion draws water into the chamber and forces it out through the outlet ports.

General Pump Basic Operation

The General Pump works very similarly to a car's engine. The electric motor powers three pistons which draw water in and then force water out through the outlet.

General Pump Emperor Series

C329



Pump Motor

Pump Motor Specs

Motor Part Number	C329
Motor HP	1
Motor RPM	1,725
Motor Amp Draw	11.6 amps @ 115V 5.8 amps @ 230V
Used In	Escape ETM, LTD12

C332



Pump Head

Pump Head Specs

Part Number	C332
Max. GPM	2.1
Max. PSI	1,000

Regulators/Unloaders

C359C



Regulator
1,000 PSI
Used on LTD12

H306C



Unloader
1,200 PSI
Used on ETM

General Pump Oil Change

We recommend the first oil change after the first 50 hours, with the pump stopped and the oil still warm. This change is to eliminate the impurities that have gotten into the oil during the running-in phase. If these impurities are not removed, they may cause premature wear to the moving parts and the oil seals. After this initial change, the oil can then be changed *every three months or 300 hours of operation thereafter. Use GP Series 100 oil or any other 30 weight hydraulic oil.*

Please note: If the pump works in conditions with high humidity and with sharp temperature changes, it is possible that condensation will appear inside the crankcase, which can change the oil's properties when mixed in. This is easy to see because the oil changes to a white, milky color. If the pump does not have excessive water leaking from the packings, and the oil becomes milky, the oil has to be changed more frequently.

General Pump Manual

For more information on the Emperor Pump, including an exploded view, repair kits, and a parts list, please refer to the Emperor Pump manual which can be found here:

<http://www.generalpump.com/PDFs/HTC1509E175-EmperorPump.pdf>

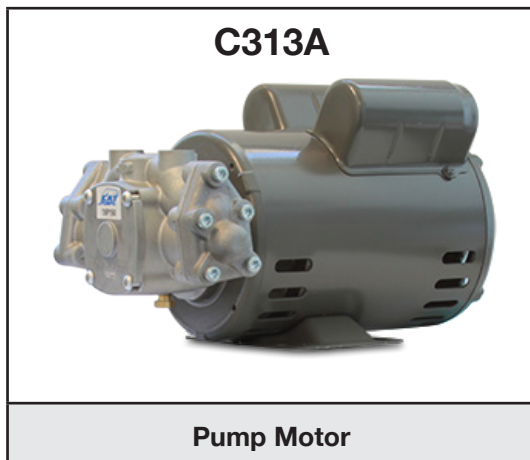


*Scan QR code to
see the Emperor
Pump manual.*

Repair kit information can be found on page 3 of the Emperor Pump manual. To order these parts, contact General Pump or nearest General Pump distributor.

Mytee does not stock these parts.

Cat Pump



Pump Motor Specs	
Part Number	C313A
GPM	1.5
Max. PSI	500
Voltage	115V
Motor HP	0.5
Motor RPM	1,750
Motor Amp Draw	8 amps @ 115V
Used in	1003DX, 1005LX, LTD3, LTD5 Speedsters, ETM-LX

Cat Pump Manual

For more information on this Cat Pump, including disassembly and assembly instructions, exploded view, and maintenance information, please refer to the Cat Pump manual which can be found here:

http://www.catpumps.com/products/pdfs/1XP_Series_D.pdf



Scan QR code to
see the Cat Pump
Manual.

This pump is model **1XP150.051** and uses cam number 6.

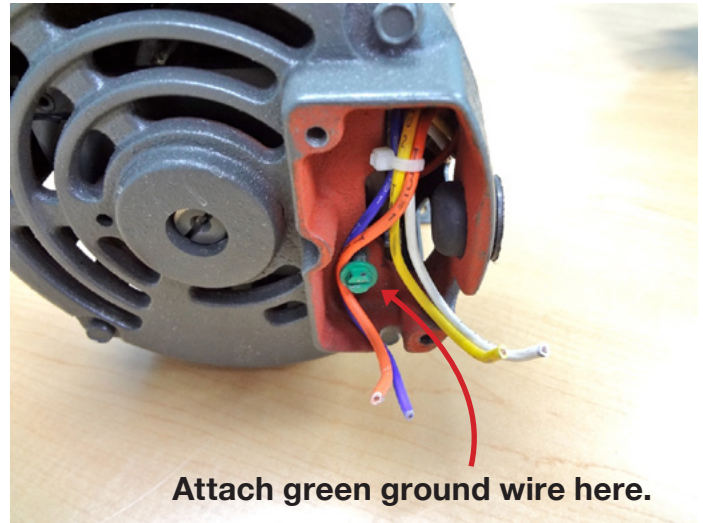
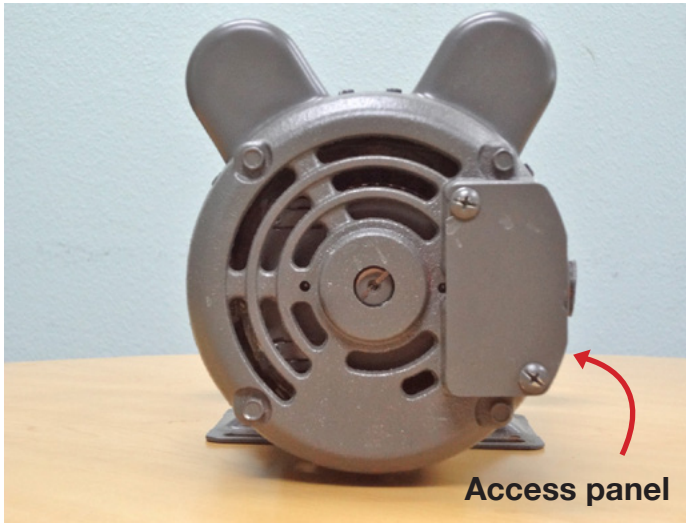
Repair kit information can be found on page 9 of the Cat Pump manual, item numbers 28-32. To order these parts, contact Cat Pumps or nearest Cat Pumps distributor.

Mytee does not stock these parts.

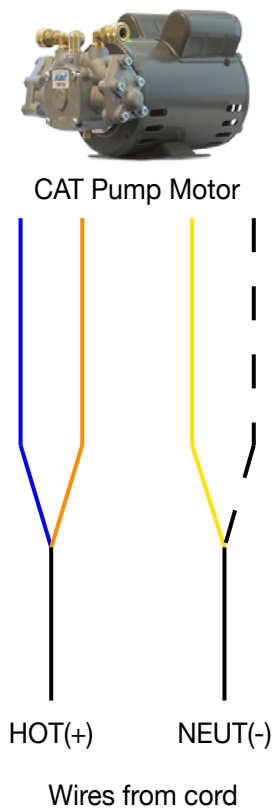
Wiring Cat Pump into Your Machine

The Cat Pump motor will have four wires located in the access panel that you will need to attach: **blue**, **orange**, **yellow**, and **white**. The motor will need to be wired differently depending on if your machine is wired for 115V or 230V.

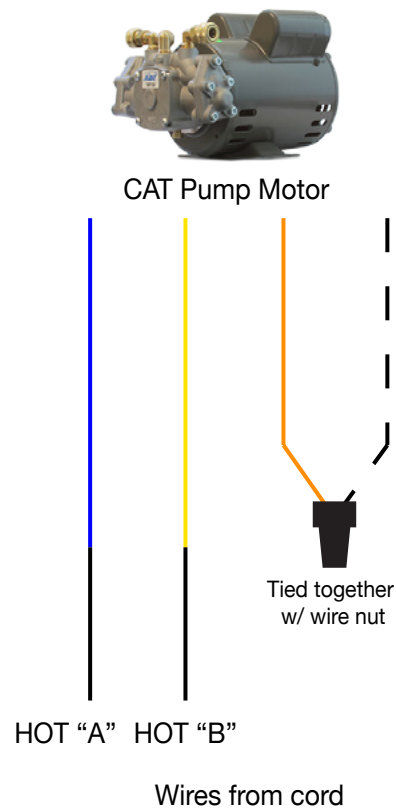
Refer to wiring schematic for your machine to identify “hot” and “neutral” wires.



115V Machines



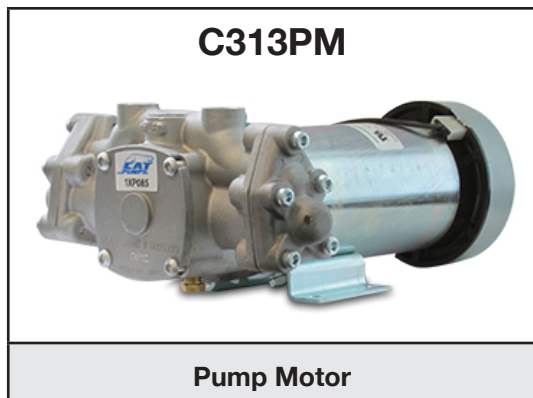
230V Machines



— — — = white wire

The green wire inside your machine is the ground.

Cat Pump DC Motor



Pump Motor Specs	
Part Number	C313PM
GPM	0.85
Max. PSI	400
Voltage	120V DC
Motor HP	1/3
Motor RPM	1,750
Motor Amp Draw	3.5

Cat Pump Manual

For more information on this Cat Pump, including disassembly and assembly instructions, exploded view, and maintenance information, please refer to the Cat Pump manual which can be found here:

http://www.catpumps.com/products/pdfs/1XP_Series_D.pdf



Scan QR code to
see the Cat Pump
Manual.

This pump is model **1XP085.03DC** and uses cam number 3.

Repair kit information can be found on page 9 of the Cat Pump manual, item numbers 28-32. To order these parts, contact Cat Pumps or nearest Cat Pumps distributor.

Mytee does not stock these parts.

General Emperor Pump Troubleshooting

Problem:	Possible Causes:	Solutions:
Pulsation.	Valve stuck open.	Check all valves. Remove foreign matter.
Low pressure.	Worn nozzle. See " How to Check Your Jets for Signs of Wear " on next page.	Replace nozzle. Use proper size.
	Relief valve stuck, partially plugged, or improperly adjusted. Valve seat worn.	Clean and adjust relief valve; check for worn and dirty valve seats.
	Inlet suction strainer clogged or improperly sized.	Clean. Use adequate size. Check more frequently.
	Worn packing. Abrasives in pumped fluid or severe cavitation. Inadequate water.	Install proper filter. Suction at inlet manifold must be limited to lifting less than 20 feet of water or -8.5 PSI vacuum.
	Fouled or dirty inlet or discharge valves.	Clean inlet and discharge valve assemblies.
	Worn inlet. Discharge valve blocked or dirty.	Replace worn valves, valve seals, and/or discharge hose.
	Leaky discharge hose.	
Pump runs rough, very low pressure.	Restricted inlet or air entering the inlet plumbing.	Use proper size inlet plumbing, check for airtight seal.
	Stuck inlet or discharge valve.	Clean out foreign material, replace worn valves.
Water leakage from under manifold.	Worn packing.	Install new packing.
	Cracked plunger.	Replace plunger(s).
Oil leak between crankcase and pumping section.	Worn crankcase piston rod seals. O-rings on plunger retainer worn.	Replace crankcase piston rod seals. Replace O-rings.
Oil leaking around crankshaft.	Worn crankshaft seal or improperly installed oil seal O-ring.	Remove oil seal retainer and replace damaged O-ring and/or seals.
	Bad bearing.	Replace bearing and any spacer or cover damaged by heat.
Water in crankcase.	Condensation inside crankcase.	Change oil intervals. Use SAE 30 nondetergent oil.
	Worn packing and/or piston rod sleeve; O-rings on plunger retainer worn.	Replace packing. Replace O-rings.
	Cracked plunger.	Replace plunger(s).
Oil leaking from underside of crankcase.	Worn crankcase piston rod seals.	Replace seals.
	Scored piston rod.	Replace piston rod.
	Damaged crankcase, rear cover O-ring, drain plug O-ring, or sight glass O-ring.	Replace cover O-ring, drain plug O-ring, or sight glass O-ring.
Loud knocking noise in pump.	Broken or worn bearing or rod(s).	Replace bearing or rod(s).
	Valve stuck open or shut, or not opening enough.	Replace bad valve.

Frequent or premature failure of the packing.	Scored, damaged, or worn plunger.	Replace plungers.
	Overpressure to inlet manifold.	Reduce inlet pressure.
	Abrasive material in the fluid being pumped.	Install proper filtration on pump inlet plumbing.
	Excessive pressure and/or temperature of fluid being pumped.	Check pressures and fluid inlet temperature; be sure they are in specified range.
	Overpressure of pumps.	Reduce pressure.
	Running pump dry.	Do not run pump without water.

Cat Pump Troubleshooting

Problem:	Possible Causes:	Solutions:
Pump doesn't seem to work. No pressure reading on gauge.	Pump dump valve is open (on ETM units).	Turn the valve lever to the closed position.
Low pressure.	Worn nozzle. See "How to Check Your Jets for Signs of Wear" below.	Replace with proper size nozzle.
	Worn seals.	Install new seal kit. Increase frequency of service.
	Air leak in inlet plumbing.	Tighten fittings and hoses. Use PTFE liquid or tape.
	Worn or dirty inlet/discharge valve.	Clean inlet/discharge valves or install new valve kit.
Water leak at head cover.	Worn or pinched o-ring on head cover.	Install new seal kit. Increase frequency of service.
Water leak at bearing cover.	Worn or pinched o-ring on bearing cover.	Install new seal kit. Increase frequency of service.
Premature seal failure.	Running dry, scored plungers, abrasives, contamination.	Replace seals.
Scored plunger.	Abrasives, contamination.	Replace plunger.
Motor stalls or will not start.	Brushes worn.	Replace with brush repair kit.

How to Check Your Jets for Signs of Wear

NOTE: If you do not have enough PSI coming out of the pump, check to see that the jet is in good condition.

To check the jet nozzle for signs of wear, monitor the line pressure for decreases using a pressure gauge.

Exploded Views

General Pump Emperor Series

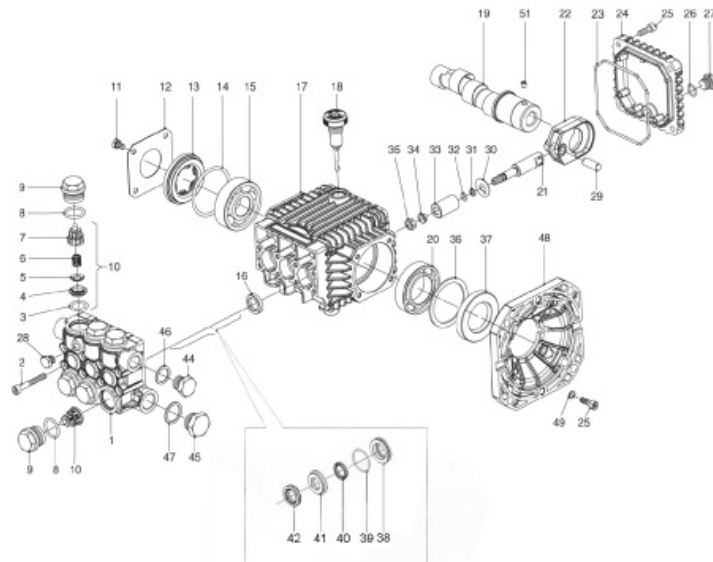
Parts listed below can be purchased through General Pump or one of their distributors.

Mytee does not stock these parts.

GENERAL PUMP *A member of the Interpump Group*

Emperor
Pumps That Rule Any Environment

HTC Series
Hollow Shaft



PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1.	60121241	Manifold, Nickel plated, 15mm	1	19.	60021765	Crankshaft, 5mm	1	37.	90167500	Crankshaft Oil Seal	1
2.	99195000	Screw, M6	8	20.	60023465	Crankshaft, 9mm	1	38.	60080270	L.P. Seal Retainer, 15mm	3
3.	90384100	O-ring	6	21.	91846500	Bearing, Ball	1	39.	90380400	O-ring	3
4.	36200366	Valve Seat	6	22.	60050066	Plunger Guide	3	40.	90215000	L.P. Seal, 15mm	3
5.	36200176	Valve Poppet	6	23.	60030022	Connecting Rod	3	41.	60216270	Int. Ring, 15mm	3
6.	94737600	Valve	6	24.	90391800	O-ring	1	42.	90216200	H.P. Seal, 15mm	3
7.	36202551	Valve Guide	6	25.	60160022	Crankcase Cover	1	43.	98209900	Plug, G 3/8", Nickel-plated	1
8.	90384700	O-ring	6	26.	99186700	Screw, M6	8	44.	98217900	Plug, G 1/2", Nickel-plated	1
9.	98221300	Valve Cap, Nickel-plated	6	27.	90358500	O-ring	1	45.	96738000	Washer, M17.5	1
10.	36711501	Valve, Complete	6	28.	98204100	Plug, G 1/4"	1	46.	96751400	Washer, M21.5	1
11.	99180700	Screw, M6	4	29.	98196700	Plug, G 1/8" Nickel-plated	1	47.	10034422	Flange	1
12.	50150074	Side Cover	1	30.	97733300	Wrist Pin	3	48.	96693800	Washer	1
13.	44211801	Oil Level Indicator	1	31.	96707000	Flinger Washer	3	49.	99179000	Screw, M6	1
14.	90409700	O-ring	1	32.	90502200	Anti-ext. Ring	3				
15.	91833100	Bearing, Ball	1	33.	90357300	O-ring	3				
16.	710002	Oil Seal	3	34.	60040009	Ceramic Plunger, 15mm	3				
17.	60010022	Crankcase	1	35.	44211570	Collared Washer	3				
18.	98210300	Dipstick, Vented	1	36.	92221600	Nut, M8, S.S.	3				
					60210189	Spacer	1				

REPAIR KITS

KIT NO.	K83	K123	K243	K244
ITEM NO'S INCLUDED IN KIT	16	3, 4, 5, 6, 7 (10)	39, 40, 42	38, 39, 40, 41, 42
NUMBER OF ASSY'S IN KIT	3	6	3	1
NO. OF CYLINDERS KIT SERVICES	3	3	3	1

TORQUE SPECS*

Position	Ft.-Lbs.	Nm.
2	8.8	12
9	59.0	80
11	7.4	10
25	7.4	10
27	14.7	20
28	9.6	13
35**	11.1	15
44	29.5	40
45	29.5	40

Ref 300611 Rev.A
05-13

*Decrease torque by 20% if threads are lubricated.
**Use Loctite 542

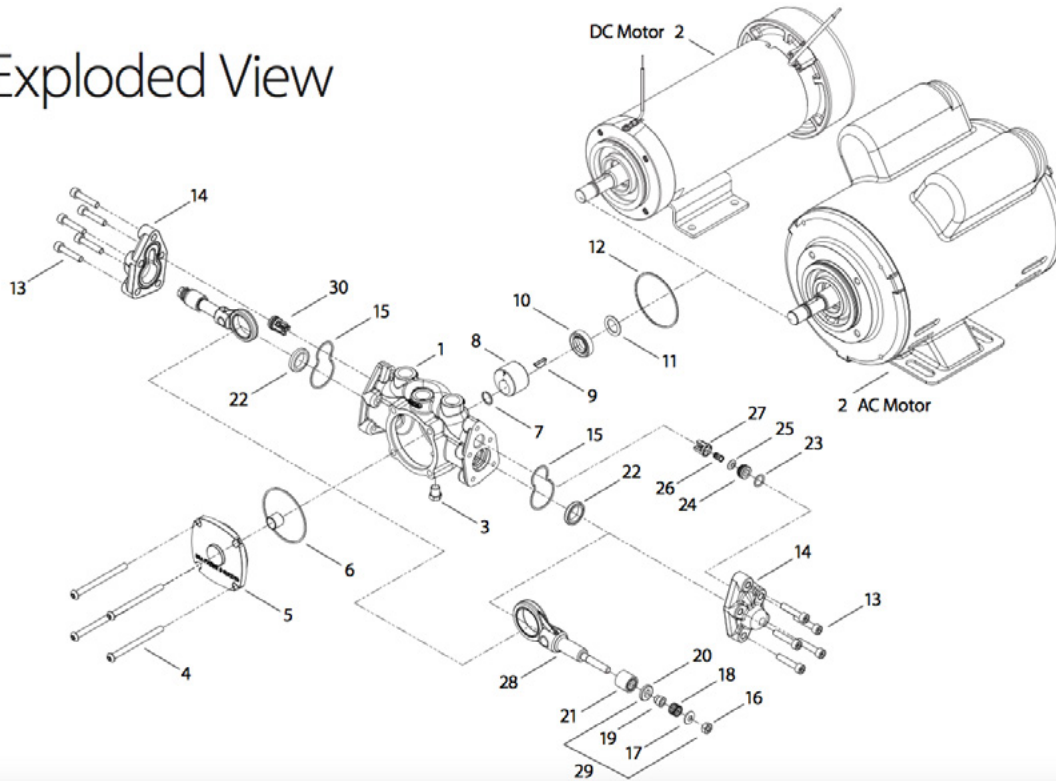
Exploded Views

Cat Pumps

Parts listed below can be purchased through Cat Pump or one of their distributors.

Mytee does not stock these parts.

Exploded View



Item No.	Part Number	Material	Description	Qty
1	76801	AL	Crankcase	1
2	8133	—	Motor, 1/3 HP (AC)	1
	8135	—	Motor, 1/2 HP (AC)	1
	8137	—	Motor, 3/4 HP (AC)	1
	8136	—	Motor, 1/3 HP (DC)	1
3	31527	BB	Plug (1/8"- 27NPT)	1
4	76928	STZP	Screw, Button Head (M6 X 75)	4
5	76346	AL	Cover, Bearing	1
6	31552	FPM	O-ring, Bearing Cover - 70D	1
7	76701	S	Ring, External Retaining	1
8	76520.050	SFSS	#1 Cam (0.50 gpm, 1750 rpm)	1
	76520.075	SFSS	#2 Cam (0.75 gpm, 1750 rpm)	1
	76520.085	SFSS	#3 Cam (0.85 gpm, 1750 rpm)	1
	76520.100	SFSS	#4 Cam (1.00 gpm, 1750 rpm)	1
	76520.125	SFSS	#5 Cam (1.25 gpm, 1750 rpm)	1
	76520.150	SFSS	#6 Cam (1.50 gpm, 1750 rpm)	1
	76520.200	SFSS	#7 Cam (2.00 gpm, 1750 rpm)	1
9	76025	SFSS	Key, Woodruff (#405)	1
10	76133	FPM	Seal, Shaft	1
11	31596	FPM	O-ring, Slinger - 70D	1
12	31552	FPM	O-Ring, Motor Flange	1
13	76909	STZP	Screw, (HSH) (M6 X 30) [01/14]	10
14	76420	AL	Cover, Head	2

Item No.	Part Number	Material	Description	Qty
15	31592	FPM	O-ring, Head Gasket - 70D	2
16	31577	S	Nut (M6)	2
17	31584	S	Washer, Conical (M6)	2
18	44872	S	Spring	2
19	31595	S	Spacer	2
20	76226	NY	Valve, Inlet	2
21	45429	CC	Plunger (M18 X 16)	2
22	43245	SNG	Seal, High Pressure W/Spring	2
23	35426	FPM	O-ring, Valve Seat - 90D	2
24	76576	D	Seat, Discharge Valve [01/14]	2
25	76206	S	Valve, Discharge	2
26	76865	S	Spring, Valve [06/13]	2
27	76069	PVDF	Retainer, Valve	2
28	76555	AL	Assembly, Plunger/Connecting Rod (Includes: plunger rod, connecting rod & wrist pin)	1
29	76227	NY	Kit, Inlet Valve (Includes: items 16, 17, 18, 19, 20)	1
30	76218	FPM	Assembly, Valve (Includes: items 23, 24, 25, 26, 27)	1
31	76219	FPM	Kit, Seal and O-ring (Includes: items 6, 10, 11, 12, 15, 22)	1
32	76127	—	Kit, Brush Replacement (8136)	1

AL = Aluminum, BB = Brass, CC = Ceramic, D = Acetal, FPM = Fluorocarbon, NY = Nylon, PVDF = Polyvinylidene Fluoride, S = 304 Stainless Steel, SFSS = 17-4 Stainless Steel, SNG = Special Blend (Buna), STZP = Steel/Zinc Plated, [xx/xx] = Date of Latest Production Change.