

HYPRO ROLLER PUMPS

- The rollers (4 to 8) revolve inside the pump housing to force the spray solution through the outlet to the nozzle.
- Operate at PTO speeds of 540 and 1000 rpm; pressure up to 300 psi; flow rates of 2 to 74 gpm. **Ideal to match your needs.**
- Roller pumps are self priming and easily adapt to PTO or gas engine drives.
- Seal, roller and casting materials can be selected for compatibility with certain herbicides, pesticides, fungicides and fertilizers.

	Part No.	Max GPM	Max PSI	Max RPM	Description
	1500 SERIES - 6 ROLLER PUMP				
	1502C	62	150	1000	Cast-iron 6 roller pump with Super Rollers, Buna-N seals, 1 1/2" ports & 1/4" solid shaft
	1502N	62	150	1000	Ni-Resist 6 roller pump with Super Rollers, Buna-N seals, 1 1/2" ports & 1/4" solid shaft
	1502XL	62	150	1000	Silver-cast 6 roller pump with Super Rollers, Viton seals, 1 1/2" ports & 1/4" solid shaft
	1700 SERIES - 5 ROLLER PUMP				
	1700C	45	200	1000	Cast-iron 5 roller pump with Super Rollers, Viton seals, 1" ports & 1/4" solid shaft
	1700XL	45	200	1000	Silver-cast 5 roller pump with Super Rollers, Viton seals, 1" ports & 1/4" solid shaft
	4001- SERIES - 4 ROLLER PUMP				
	4001C-A	9	150	1800	Cast-iron 4 roller pump with Super Rollers, Viton seals, 3/4" ports & 5/8" solid shaft
	4001C-AH	9	150	1800	4001C pump with 1/2" hollow shaft
	4001N-A	9	150	1800	Ni-Resist 4 roller pump with Super Rollers, Viton seals, 3/4" ports & 5/8" solid shaft
	4001N-AH	9	150	1800	4001N pump with 1/2" hollow shaft
	4001N-AEH	10.4	30	1900	12 Volt DC motor-driven, Ni-Resist, 4-roller pump with Super Rollers, Viton seals, 3/4" ports, 1/2" hollow shaft
	4001N-AE2H	9.9	50	1600	12 Volt DC motor-driven, Ni-Resist, 4-roller pump with Super Rollers, Viton seals, 3/4" ports, 1/2" hollow shaft. Designed for higher pressures.
	4001XL-A	9	150	1800	SilverCast 4 roller pump with Super Rollers, Viton seals, 3/4" ports & 5/8" hollow shaft
	4001XL-AH	9	150	1800	SilverCast 4001XL pump with 1/2" hollow shaft
	4001XL-AEH	10.4	30	1900	12 Volt DC motor-driven, Silver-Cast, 4 roller pump with Super Rollers, Viton seals, 3/4" ports, 1/2" hollow shaft
	4001XL-AE2H	9.9	50	1600	12 Volt DC motor-driven, Silver-Cast, 4 roller pump with Super Rollers, Viton seals, 3/4" ports, 1/2" hollow shaft. Designed for higher pressures.
	6500 SERIES - 6 ROLLER PUMP				
	6500C	21.8	300	1200	Cast-iron 6 roller pump with Super Rollers, Viton seals, 3/4" x 3/4" NPT ports & 5/8" solid shaft
	6500N	21.8	300	1200	Ni-Resist 6 roller pump with Super Rollers, Viton seals, 3/4" x 3/4" NPT ports & 5/8" solid shaft
	6500XL	21.8	300	1200	Silver-cast 6 roller pump with Super Rollers, Viton seals, 3/4" x 3/4" NPT ports & 5/8" solid shaft

All Hypro roller pumps need either an adapter or a quick coupler

Gasoline Engines require reverse rotation pumps. To order a reverse rotation pump of any of these models, add a R to the end of the part number

	Part No.	Max GPM	Max PSI	Max RPM	Description
	4100 SERIES - 4 ROLLER PUMP				
	4101C-A	7	150	2600	Cast-iron 4 roller pump with Super Rollers, Viton seals, 3/4" ports & 5/8" solid shaft
	4101C--AD	7	150	2600	4101C-A pump with 58" hollow shaft adapter 1320-0016 installed
	4101C-AH	7	150	2600	4101C-A pump with 1/2" hollow shaft
	4101N-A	7	150	2600	Ni-Resist 4 roller pump with Super Rollers, Viton seals, 3/4" ports & 5/8" solid shaft
	4101NH	7	150	2600	4101N pump with 1/2" hollow shaft
	4101N-AEH	7.5	50	1900	12 Volt DC motor-driven, Ni-Resist, 4-roller pump with Super Rollers, Viton seals, 3/4" ports & 1/2" hollow shaft
	4101N-AE2H	5.9	90	1600	12 Volt DC motor-driven, Ni-Resist, 4-roller pump with Super Rollers, Viton Seals, 3/4" ports, 1/2" hollow shaft. Designed for higher pressures.
	4101N-AD	7	150	2600	4101N pump with 5/8" hollow shaft adapter 1320-0016 installed
	4101XL-A	7	150	2600	SilverCast 4-roller pump with Super Rollers, Viton seals, 3/4" ports & 5/8" hollow shaft
	4101XL-AH	7	150	2600	SilverCast 4101XL pump with 1/2" hollow shaft
	4101XL-AEH	7.5	50	1900	SilverCast, 12 Volt DC motor-driven, 4-roller pump with Super Rollers, Viton Seals, 3/4" ports, 1/2" hollow shaft
	4101XL-AE2H	5.9	90	1600	SilverCast 12 Volt DC motor-driven, 4-roller pump with Super Rollers, Viton seals, 3/4" ports, 1/2" hollow shaft. Designed for higher pressures.
	4101XL-AD	7	150	2600	SilverCast 4101XL pump with 5/8" hollow shaft adapter 1320-0016 installed
	7560 SERIES - 8 ROLLER PUMP				
	7560C	22	300	1000	Cast-iron 8 roller pump with Super Rollers, Viton, 3/4" ports & 1 1/16" solid shaft
	7560N	22	300	1000	Ni-Resist 8 roller pump with Super Rollers, Viton, 3/4" ports & 1 1/16" solid shaft
	7560XL	22	300	1000	Silver-cast 8 roller pump with Super Rollers, Viton, 3/4" ports & 1 1/16" solid shaft
	7700 SERIES - 7 ROLLER PUMP				
	7700C	22.4	200	800	Cast-iron 7 roller pump with Super Rollers, Viton, 3/4" ports & 1 1/16" solid shaft
	7700N	22.4	200	800	Ni-Resist 7-roller pump with Super Rollers, Viton, 3/4" ports & 1 1/16" solid shaft
	7700XL	22.4	200	800	Silver-cast 7-roller pump with Super Rollers, Viton, 3/4" ports & 1 1/16" solid shaft
PUMP ADAPTERS					
	MS-1141500				5/8" Roller Pump Connector, 540 PTO
	MS-1141000				5/8" Roller Pump Connector, 1000 RPM

All Hypro roller pumps need either an adapter or a quick coupler

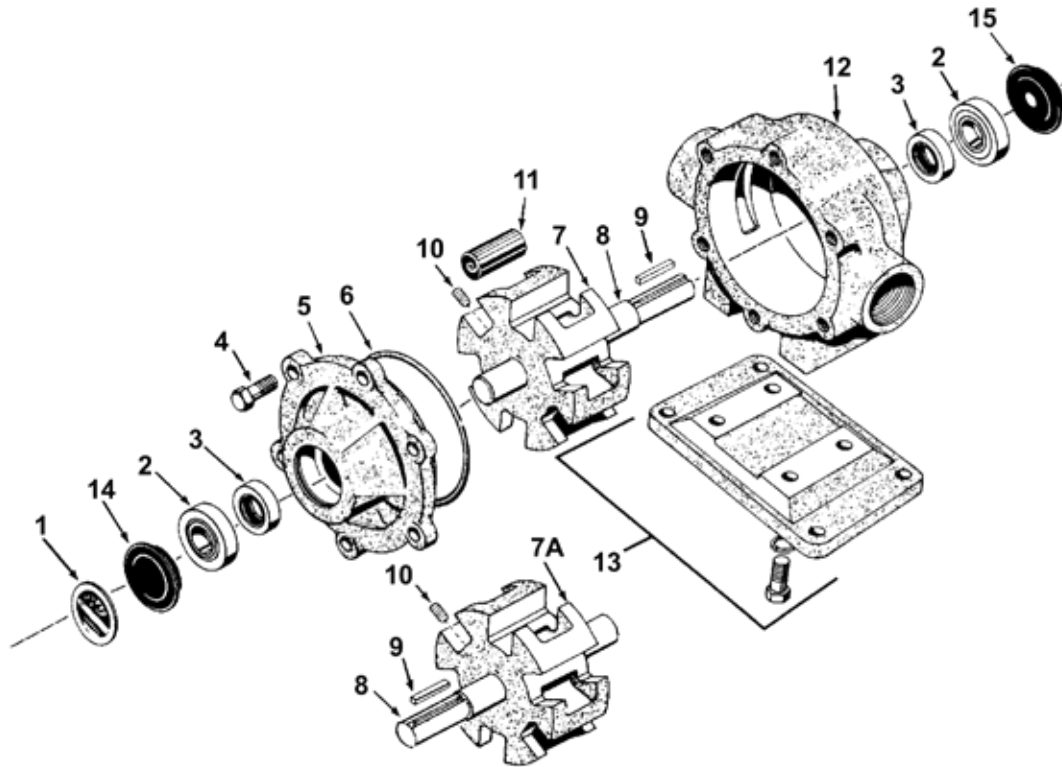


SEBRING - 1-877-605-0273

Gasoline Engines require reverse rotation pumps. To order a reverse rotation pump of any of these models, add a R to the end of the part number

GRIFFIN 1-800-241-1350

ALBANY - 1-800-624-7931

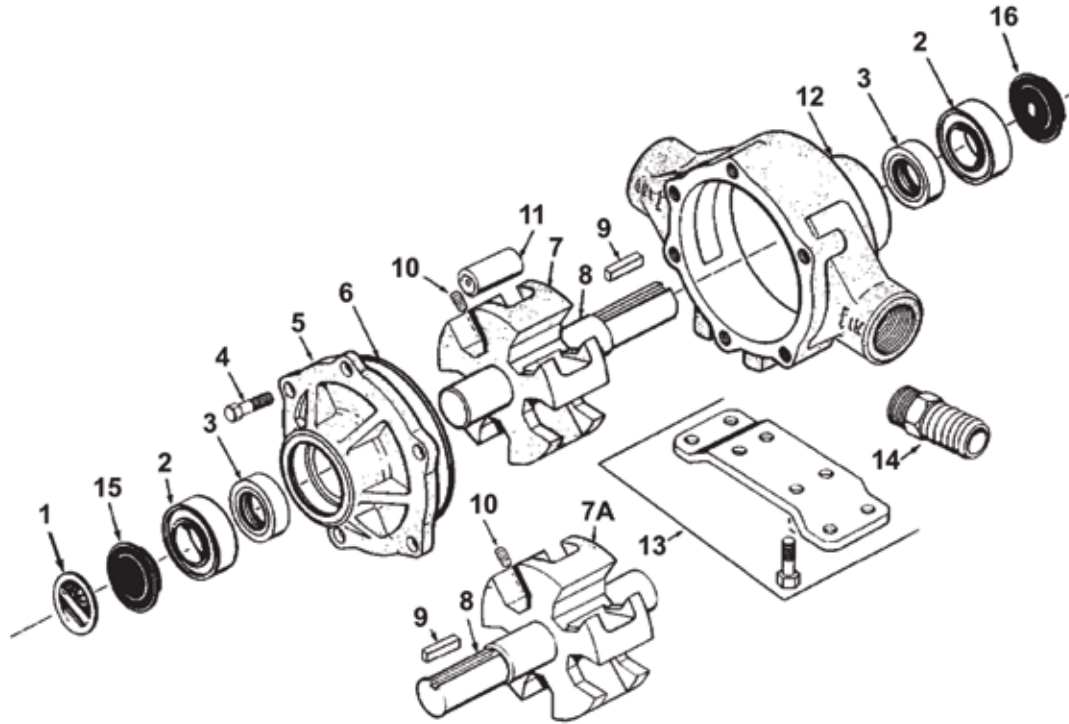


1500 SERIES PUMP SCHEMATIC

Ref. No.	Qty.	Part No.	Description	Ref. No.	Qty.	Part No.	Description
1	1	6031-0258	Name Plate (Specify Pump Model #)	8	1	0500-1502	Shaft Only
2	2	2008-0001	Sealed Ball Bearing	9	1	1610-0005	Key
3	2	2112-0003	Viton Seal (Optional)	10	1	2230-0018	Set Screw
3	2	2112-0001	Buna-N Seal (Standard)	10	1	2230-0034	Set Screw (SilverCast Only)
4	6	2210-0026	Bolt	11	5	1005-0005	Super Roller (Standard)
5	1	0200-1500C	Endplate (Cast Iron) with Seal	11	5	1002-0005	Polypropylene Roller (Optional)
5	1	0200-1500N	Endplate (Ni-Resist) with Seal	11	5	1055-0005	Teflon Roller (Optional)
5	1	0200-1500X	Endplate (SilverCast) with Seal	12	1	0100-1500C	Body (Cast Iron) with Seal
6	1	1720-0003	O-Ring Gasket for Endplate	12	1	0100-1500N	Body (Ni-Resist) with Seal
7	1	0300-1502C	Rotor (Cast Iron) w/ shaft (Std. Rotation)	12	1	0100-1500X	Body (SilverCast) with Seal
7	1	0300-1502N	Rotor (Ni-Resist) w/ shaft (Std. Rotation)	13	1 KIT	3420-0004	Base Kit - Sold Separately Includes: (1) Base, (4) Bolts, (4) Lock/Washers
7	1	0300-1502X	Rotor (SilverCast) w/ shaft (Std. Rotation)	14	1	2300-0020	Bearing Cover
7A	1	0301-1502C	Rotor (Cast Iron) w/ shaft (Reverse Rot)	15	1	2300-0022	Shaft Bearing Cover
7A	1	0301-1502N	Rotor (Ni-Resist) w/ shaft (Reverse Rot)	Kit Part No.			Description
7A	1	0301-1502X	Rotor (SilverCast) w/ shaft (Reverse Rot)	3430-0383	(6) Ref 12 Super Rollers, (2) Ref 7 O-Ring Gasket, (2) Ref 4 Viton Seals		
				3430-0388	(6) Ref 12 Super Rollers, (1) Ref 7 O-Ring Gasket		
				3430-0387	(6) Ref 12 Super Rollers, (1) Ref 7 O-Ring Gasket, (2) Ref 4 Buna-N Seals		

When ordering parts, give quantity, part no., description, and complete model number

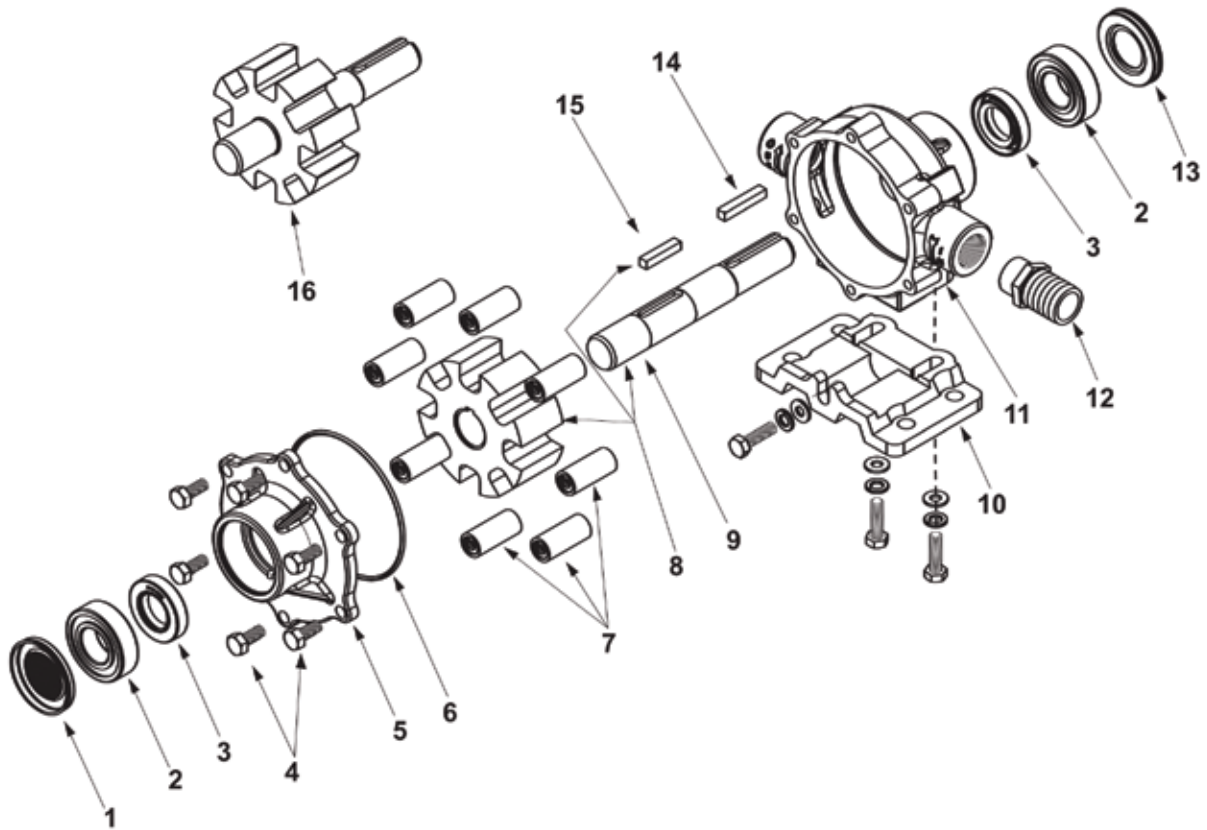
1700 SERIES PUMP SCHEMATIC



1700 SERIES PUMP SCHEMATIC

Ref. No.	Qty.	Part No.	Description	Ref. No.	Qty.	Part No.	Description
1	1	6031-0258	Name Plate (Specify Pump Model #)	8	1	0500-1502	Shaft Only
2	2	2008-0001	Sealed Ball Bearing	9	1	1610-0005	Key
3	2	2112-0003	Viton Seal (Standard)	10	1	2230-0018	Set Screw
3	2	2112-0001	Buna-N Seal (Optional)	10	1	2230-0034	Set Screw (SilverCast Only)
4	6	2210-0005	Bolt	11	5	1005-0005	Super Roller (Standard)
5	1	0200-1700C	Endplate (Cast Iron) with Seal	11	5	1002-0005	Polypropylene Roller (Optional)
5	1	0200-1700N	Endplate (Ni-Resist) with Seal	11	5	1055-0005	Teflon Roller (Optional)
5	1	0200-1700X	Endplate (SilverCast) with Seal	12	1	0100-1700C	Body (Cast Iron) with Seal
6	1	1720-0099	O-Ring Gasket for Endplate	12	1	0100-1700N	Body (Ni-Resist) with Seal
7	1	0300-1700C	Rotor (Cast Iron) w/ shaft (Std. Rotation)	12	1	0100-1700X	Body (SilverCast) with Seal
7	1	0300-1700N	Rotor (Ni-Resist) w/ shaft (Std. Rotation)	13	1 KIT	3420-0010	Base Kit - Sold Separately Includes: (1) Base and (4) Bolts
7	1	0300-1700X	Rotor (SilverCast) w/ shaft (Std. Rotation)	14	1	2404-0191	1-1/4" Hose Barb
7A	1	0301-1700C	Rotor (Cast Iron) w/ shaft (Reverse Rot)	15	1	2300-0020	Bearing Cover
7A	1	0301-1700N	Rotor (Ni-Resist) w/ shaft (Reverse Rot)	16	1	2300-0022	Shaft Bearing Cover
7A	1	0301-1700X	Rotor (SilverCast) w/ shaft (Reverse Rot)	Kit Part No.			Description
				3430-0437	(5) Ref 12 Super Rollers, (1) Ref 7 O-Ring Gasket, (2) Ref 4 Viton Seals		
				3430-0383	(6) Ref 12 Super Rollers, (2) Ref 7 O-Ring Gasket, (2) Ref 4 Viton Seals		

When ordering parts, give quantity, part no., description, and complete model number



7560 SERIES PUMP SCHEMATIC

Ref. No.	Qty.	Part No.	Description	Ref. No.	Qty.	Part No.	Description
1	1	2300-0020	Bearing Cover (Specify Pump Model #)	8	1	3430-0745	Rotor Assy (Std N & XL)
2	2	2008-0001	Sealed Ball Bearing	9	1	0510-7500	Shaft (416 Stainless)
3	2	2112-0003	Viton Seal (Standard)	10	1 Kit	3420-0003	Base Kit- Sold Separately (1) Base, (3) Bolts, (3) Washers
3	2	2112-0001	Buna-N Seal (Optional)	11	1	0104-7500C	Body (Cast Iron) with Seal
4	6	2210-0004	Bolt	11	1	0104-7500N	Body (Ni-Resist) with Seal
5	1	0204-7500C	Endplate (Cast Iron) with Seal	11	1	0104-7500X	Body (SilverCast) with Seal
5	1	0204-7500N	Endplate (Ni-Resist) with Seal	12	1	2404-0052	1" Hose Barb
5	1	0204-7500X	Endplate (SilverCast) with Seal	13	1	2300-0022	Shaft Bearing Cover
6	1	1720-0014	O-Ring Gasket for End plate	14	1	1610-0005	Key
7	8	1005-0004	Super Roller (Standard)	15	1	1610-0059	Key (Stainless)
7	8	1002-0004	Polypropylene Roller (Opt)	16	1	0308-7560C	Rotor Assy (Cast Iron Only)
7	8	1052-0004	Buna-N Roller (Optional)				
7	8	1055-0004	Teflon Roller (Optional)				

When ordering parts, give quantity, part no., description, and complete model number

HYPRO 9000 SERIES GEAR-DRIVEN CENTRIFUGAL PUMPS

- Hypro centrifugal pumps for chemical spraying and transfer applications.
- Stainless steel pumps are ideal for use with Roundup® or other acid applications. Polypropylene pumps are lightweight and provide excellent resistance to corrosive chemicals.
- Pump capabilities up to 370 gpm and 190 psi.
- Impellers: Nylon, polypropylene, or GTX on most models
- Viton mechanical seals standard on cast iron & polypropylene models
- Life Guard® silicon carbide mechanical seals standard on all stainless steel pumps and available in select cast iron and polypropylene models
- Standard shafts are stainless steel
- Stainless steel wear ring for extended life on cast iron models
- When ordering, match your GPM & PSI needs



9000 SERIES GEAR-DRIVEN CENTRIFUGAL PUMPS

Part No.	Max GPM	Max PSI	Max RPM	Description
9006C-O	117	78	600	Cast-iron pump w/ oil-lubricated gear drive and 1 3/8" 600 rpm female PTO hub with locking collar & mounting clip. Clips pump to PTO shield of most tractors. 1/2" Inlet, 1/4" outlet
9008C-O	110	75	1000	Cast-iron pump w/ oil-lubricated gear drive and 1 3/8" 1000 rpm female PTO hub with locking collar & mounting clip. Clips pump to PTO shield of most tractors. 1/2" Inlet, 1/4" outlet
9016C-O	117	78	600	Cast-iron pump w/ oil-lubricated gear drive & 1" solid shaft, ports (NPT): 1 1/2" Inlet, 1/4" outlet
9018C-O	110	75	1000	Cast-iron pump w/ oil-lubricated gear drive & 1" solid shaft, ports (NPT): 1 1/2" Inlet, 1/4" outlet
9028C-O	110	75	1000	Cast-iron pump w/ oil-lubricated gear drive and 1 3/4" 1000 rpm female PTO hub with locking collar & mounting clip. Clips pump to PTO shelf of most tractors. 1 1/2" Inlet, 1/4" outlet.
9006P-O	97	83	600	Corrosion-resistant & durable polypropylene pump with oil-bath-lubricated gear drive for PTO mounting. Viton seals & 1 3/8" 600 rpm female PTO hub w/ locking collar kit.
9008P-O	94	67	1000	Corrosion-resistant & durable polypropylene pump with oil-bath-lubricated gear drive for PTO mounting. Viton seals & 1 3/8" 1000 rpm female PTO hub w/ locking collar kit.
9016P-O	97	83	600	Corrosion-resistant & durable polypropylene pump with oil-bath-lubricated gear drive & 1" solid shaft. Viton seals.
9018P-O	97	67	1000	Corrosion-resistant & durable polypropylene pump with oil-bath-lubricated gear drive & 1" solid shaft. Viton seals.

Silicone carbide or Buna-N mechanical seal available by special order.

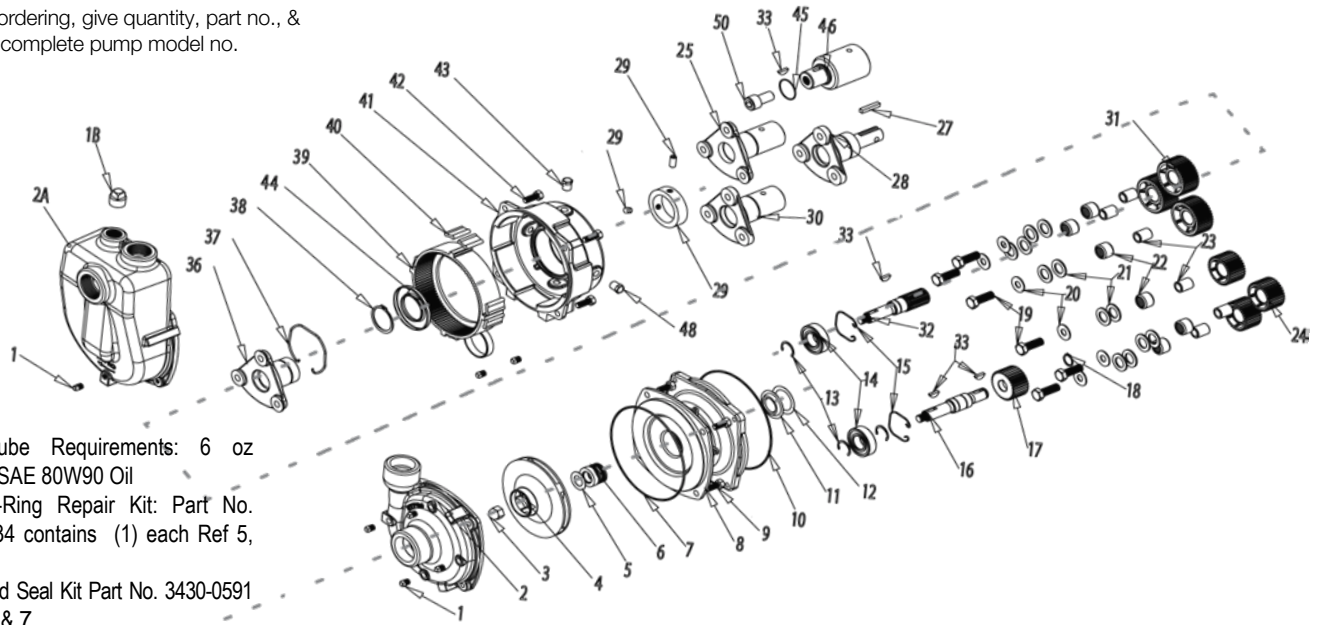
Rotation, CW or CCW, is determined when looking at the shaft end of the pump.

9000 SERIES SELF-PRIMING GEAR-DRIVEN CENTRIFUGAL PUMPS

Part No.	Max GPM	Max PSI	Max RPM	Description
9006C-O-SP	119	77	600	Cast-iron pump with oil-lubricated gear drive and 1 3/8" 600 rpm PTO hub with locking collar and mounting clip. Clips pump to PTO shield of most tractors. 1 1/2" Inlet, 1/4" outlet NPT ports.
9016C-O-SP	119	77	600	Cast-iron pump with oil-lubricated gear drive and 1" solid shaft, ports: 1 1/2" Inlet, 1/4" Outlet NPT Ports.
9028C-O-SP	117	69	1000	Cast-iron pump with oil-lubricated gear drive and 1 3/8" 1000 rpm PTO hub with locking collar and mounting clip. Clips pump to PTO shield of most tractors. 1 1/2" Inlet, 1/4" outlet NPT ports.



When ordering, give quantity, part no., & complete pump model no.



Note:

- Gear Lube Requirements: 6 oz
Phillube SAE 80W90 Oil
- Seal, O-Ring Repair Kit: Part No.
3430-0334 contains (1) each Ref 5,
6, & 7
- Life Guard Seal Kit Part No. 3430-0591
(1) Ref 6 & 7

9006C-O, 9006C-SP, 9016C-O, 9016C-O-SP, 9008C-O, 9018C-O, 9028C-O SCHEMATIC

Ref.	Qty.	Part No.	Description	Ref.	Qty.	Part No.	Description
1	4	2406-0007	Drain Plug	25	1	0562-9002D	Driver Hub (Model 9008C-O)
1B	1	2406-0001	Drain Plug	26	1	0501-9018D	Driver Hub (Model 9018C-O)
2	1	0150-9000C	Pump Casing (w / SS wear ring)	27	1	1610-0005	Key
2A	1	3430-0480SP	Pump Casing (Self-Priming Units)	28	1	0501-9016D	Driver Hub (Model 9016C-O)
3	1	2253-0001	Impeller Nut	29	1	3435-0058	Locking Collar Kit (hollow shaft)
4	1	0400-9000P	Impeller (Nylon)	30	1	0562-9000D	Driver Hub (Model 9006C-O)
5	1	1700-0101	Gasket	31	3	3900-0039	Driver Gear w/ Bearing (540 rpm) 39 teeth, Dia. 2.6"
6	1	2120-0010	Mechanical Seal (Opt Buna-N)	32	1	3900-0010	Impeller Shaft/Pinion Gear (540 rpm)
6	1	3430-0334	Mechanical Seal (Std Viton)	33	**	1610-0012	Woodruff Key *(1) req'd for 540 rpm, (2) req'd for 1000 rpm models.
7	1	1720-0083	O-Ring	34	1	2220-0035	Capscrew (Model 9028C)
8	1	0752-9000C	Mounting Flange Adapter	35	1	2403-0012	Bushing (Model 9028C)
9	4	2210-0020	Hex Head Capscrew	36	1	0501-9018D1	Driver Hub (Model 9028C)
10	1	1720-0139	O-Ring	37	1	1800-0014	Retaining Ring
11	1	2130-0018	Bearing Lip Seal	38	1	1810-0001	Retaining Ring
12	1	1700-0098	Gasket	39	1	3900-0009	Ring Gear
13	*	1810-0013	Retaining Ring* (1) req'd for 540 rpm, (2) req'd for 1-3/8" & (3) for 1-3/4" 1000 rpm	40	8	1450-0004	Cushion Bumper
14	1	2008-0001	Ball Bearing	41	1	0754-9000C	Gear Casing
15	1	1820-0025	Retaining Ring	42	4	2210-0026	Hex Head Capscrew
15	3	2210-0046	Capscrew	43	1	2404-0193	Breather Vent
16	1	0500-9002	Impeller Shaft (1000 rpm)	44	1	2101-0025	Oil Seal
17	1	3900-0013	Sun Gear (1000 rpm)	45	1	1720-0022	O-Ring
18	1	1810-0011	Retaining Ring (1000 rpm)	46	1	0550-1322F4	Driver Hub (9028C) 1-3/4" Hub 20 Teeth
19	3	2210-0046	Hex Head Capscrew	47	1	3430-0190	Locking Collar Kit (Model 9028C)
20	3	2270-0003	Washer	48	4	2406-0019	Oil Plug
21	6	2265-0003	Thrust Washer	49	1	1520-0034	Mounting Clip
22	3	2007-0052	Bearing (included with driver gear)	50	1	2220-0035	Capscrew
23	3	2007-0022	Bearing Inner Race				
24	3	3900-0040	Driver Gear w/Bearing (1000 rpm) 32 teeth, Dia. 2.13"				

When ordering parts, give quantity, part no., description, and complete model number

HYPRO 9200 SERIES PEDESTAL CENTRIFUGAL MOUNT PUMPS

	9200 SERIES POLY				
	Part No.	Max GPM	Max PSI	Max RPM	Description
	9203P-SR	100	82	4200	Pedestal mount, Polypropylene pump with a 7/8" shaft, clockwise rotation. Viton / ceramic shaft seal. 1-1/2" inlet, 1-1/4" outlet (Hypro Mfg.)
	9200 SERIES CAST-IRON				
	Part No.	Max GPM	Max PSI	Max RPM	Description
	9202C	103	170	6000	Pedestal-mount, cast-iron pump with 5/8" solid shaft & Viton shaft seal. 1/4" inlet, 1" outlet ports.
	9202S	103	170	6000	Pedestal-mount, cast-iron pump with 5/8" stainless steel shaft & Life Guard silicon carbide seal. 1 1/4" inlet, 1" outlet ports.
	9202S-R	103	170	6000	Pedestal-mount, clockwise rotation cast-iron pump with 5/8" stainless steel shaft & Life Guard silicon carbide seal. 1 1/4" inlet, 1" outlet ports.
	9203C	140	170	6000	Pedestal-mount, cast-iron pump w/ 5/8" solid shaft & Viton shaft seal. 1 1/2" inlet, 1 1/4" outlet NPT ports.
	9203C-R	140	170	6000	Pedestal-mount, clockwise rotation cast-iron pump w/ 5/8" solid keyed shaft & Viton shaft seal. 2" inlet, 1 1/2" outlet NPT ports.
	9203S	140	170	6000	Pedestal-mount, 316 stainless steel pump with 5/8" solid 416 stainless steel shaft and Life Guard silicon carbide seal. Ports (NPT): 1 1/2" inlet, 1 1/4" outlet.
	9203S-R	140	170	6000	Pedestal-mount, clockwise rotation, 316 stainless steel pump with 5/8" solid 416 stainless steel shaft and Life Guard silicon carbide seal. Ports (NPT): 1 1/2" inlet, 1 1/4" outlet.
	9200 SERIES SELF-PRIMING CAST-IRON				
	Part No.	Max GPM	Max PSI	Max RPM	Description
	9203C-SP	120	157	6000	5/8" solid shaft, Viton seal, 1 1/2" inlet, 1 1/4" outlet NPT ports
	9203CR-SP	140	155	6000	Clockwise rotation, 5/8" solid shaft, Viton seal and 2"x2" NPT ports
	9205C-SP	180	120	4200	7/8" solid keyed shaft, Viton seal, and 2"x2" NPT ports
	9205C-SBSP	180	120	4200	7/8" solid keyed shaft, Viton seal, and 2"x2" BSP ports

HYPRO 9300 SERIES HYDRAULIC, CENTRIFUGAL PUMPS

CAST IRON

- Housing: cast iron and 316 stainless steel
- Impeller: glass filled nylon
- Pump seals: Viton/ceramic standard (Life Guard silicon carbide and Buna-N ceramic available)
- Hydraulic motor seal: double-lip Teflon
- When ordering, match your GPM & PSI needs

POLYPROPYLENE

- Housing: glass-filled polypropylene
- Impeller: glass-filled polypropylene
- Pump seals: Viton/ceramic standard (Life Guard silicon carbide and Buna-N ceramic available)
- Hydraulic motor seal: double-lip Teflon
- Hydraulic oil must match pump requirement to letter

9300 SERIES HYDRAULIC, MOTOR-DRIVEN CENTRIFUGAL PUMPS IN CAST IRON OR POLYPROPYLENE



HYPRO 9300 SERIES CAST IRON

Part No.	Max GPM	Max PSI	Description
9302CT-GM1	63	105	3 gpm hydraulic motor, cast-iron pump for open/closed center systems, ports (NPT): 1 1/4" inlet, 1" outlet
9302C-HM1C	72	150	13 gpm hydraulic motor, cast-iron pump for open/closed center systems, ports (NPT): 1 1/2" inlet, 1 1/4" outlet
9302C-HM2C	65	96	6 gpm hydraulic motor cast-iron pump for closed center systems, ports (NPT): 1 1/4" inlet, 1" outlet
9302C-HM4C	72	120	7 gpm hydraulic motor, cast-iron pump for open/closed center systems, ports (NPT): 1 1/2" inlet, 1" outlet
9303C-HM1C	114	130	13 gpm hydraulic motor, cast-iron pump for open/closed center systems, ports (NPT): 1 1/2" inlet, 1 1/4" outlet - Best
9303C-HM2C	97	95	6 gpm hydraulic motor, cast-iron pump for closed center systems, ports (NPT): 1 1/2" inlet, 1 1/4" outlet
9303C-HM3C	125	98	24 gpm hydraulic motor, cast-iron pump, large open center systems, ports (NPT): 1 1/2" inlet, 1 1/4" outlet
9303C-HM4C	115	93	7 gpm hydraulic motor, cast-iron pump, open/closed center systems, ports (NPT): 1 1/2" inlet, 1 1/4" outlet
9303C-HM5C	147	145	16 gpm hydraulic motor, cast-iron pump, open/closed center systems, ports (NPT): 1 1/2" inlet, 1 1/4" outlet
9303C-HM1C-SP	122	130	13 gpm hydraulic motor, cast-iron self-priming pump for open/closed center systems, ports (NPT): 1 1/2" inlet, 1 1/4" outlet
9303C-HM2C-SP	104	80	6 gpm hydraulic motor, cast-iron self-priming pump for open/closed center systems, ports (NPT): 1 1/2" inlet, 1 1/4" outlet
9303C-HM3C-SP	120	95	24 gpm hydraulic motor, cast-iron self-priming pump, large open center systems, ports (NPT): 1 1/2" inlet, 1 1/4" outlet
9303C-HM4C-SP	99	97	7 gpm hydraulic motor, cast-iron self-priming pump, open/closed center systems, ports (NPT): 1 1/2" inlet, 1 1/4" outlet
9303C-HM5C-SP	140	140	16 gpm hydraulic motor, cast-iron self-priming pump, open/closed center systems, ports (NPT): 1 1/2" inlet, 1 1/4" outlet

HYPRO 9300 SERIES POLYPROPYLENE

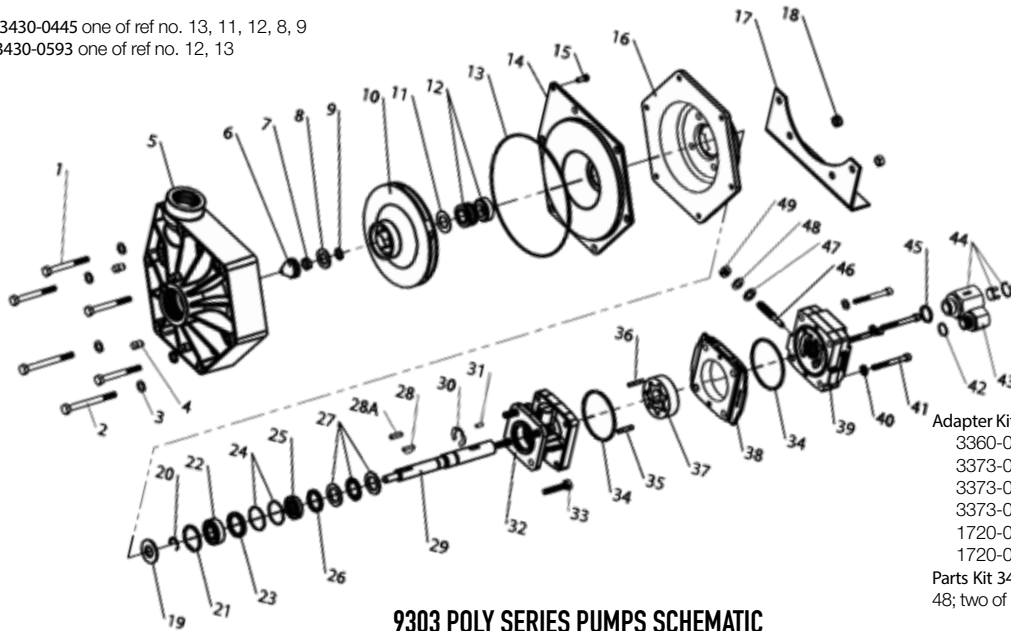
9303P-HM1C	110	130	13 gpm hydraulic motor, polypropylene pump, open/closed center systems, ports (NPT): 1 1/2" inlet, 1 1/4" outlet
9303P-HM2C	82	95	6 gpm hydraulic motor, polypropylene pump, closed center systems, ports (NPT): 1 1/2" inlet, 1 1/4" outlet
9303P-HM3C	110	93	24 gpm hydraulic motor, polypropylene pump, large open center systems, ports (NPT): 1 1/2" inlet, 1 1/4" outlet
9303P-HM4C	82	84	7 gpm hydraulic motor, polypropylene pump, open/closed center systems, ports (NPT): 1 1/2" inlet, 1 1/4" outlet
9303P-HM5C	113	120	16 gpm hydraulic motor, polypropylene pump, open/closed center systems, ports (NPT): 1 1/2" inlet, 1 1/4" outlet



9303P SERIES PUMP SCHEMATIC

Repair Parts Kit 3430-0445 one of ref no. 13, 11, 12, 8, 9
Silicon Seal Kit 3430-0593 one of ref no. 12, 13

Hydraulic Motor Part No.
2500-0081C (HM1C)
2500-0082C (HM2C)
2500-0083C (HM3C)
2500-0084C (HM4C)
2500-0085C (HM5C)



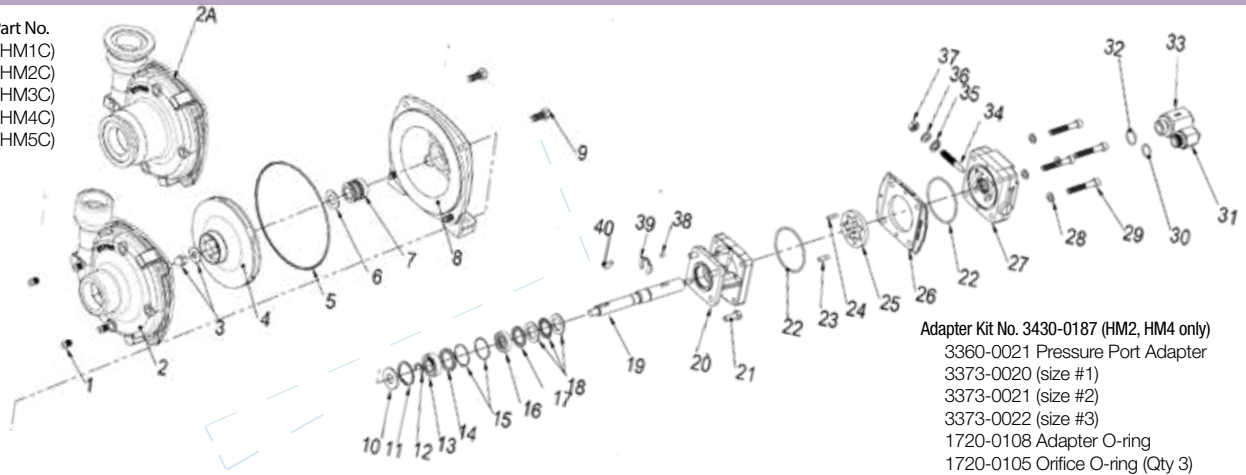
Adapter Kit No. 3430-0187 (HM2, HM4 only)
3360-0021 Pressure Port Adapter
3373-0020 (size #1)
3373-0021 (size #2)
3373-0022 (size #3)
1720-0108 Adapter O-ring
1720-0105 Orifice O-ring (Qty 3)
Parts Kit 3430-0748 one of ref no. 22, 25, 47,
48; two of ref no. 24, 34, 42, 45

9303 POLY SERIES PUMPS SCHEMATIC

Ref.	Qty.	Part No.	Description	Ref.	Qty.	Part No.	Description	Ref.	Qty.	Part No.	Description
1	4	2210-0087	Hex Head Cap Screw	27	1	2029-0014	Thrust Bearing Assy	37	1	3900-0024	Gerotor (HM3C)
2	2	2210-0016	Hex Head Cap Screw (Base Only)	28	1	1610-0042	Woodruff Key (all 9303P except HM3C)	37	1	3900-0025	Gerotor (HM4C)
3	6	2270-0041	Washer		1	1610-0053	Square Key (9303P-HM3C Only)	37	1	3900-0048	Gerotor (HM5C)
4	4	2406-0020	Pipe Plug	29	1	3430-0850	Shaft (HM2C/HM4C)	38	1	0701-2500C1	Gerotor Housing (HM2C) ¼" Wide
5	1	0700-9000P	Pump Casing	29	1	3430-0852	Shaft (HM1C/HM5C)	38	1	0700-2500C1	Gerotor Housing (HM1C) ½" Wide
6	1	2250-0052	Impeller Nut	29	1	3430-0855	Shaft (HM3C)	38	1	0703-2500C1	Gerotor Housing (HM4C) ⅝" Wide
7	1	2250-0051	Jam Nut	30	1	1810-0026	Snap Ring	38	1	0702-2500C1	Gerotor Housing (HM3C) 1" Wide
8	1	1700-0097	Gasket (Viton)	31	1	1610-0032	Roll Pin (HM2C/HM4C)	38	1	0704-2500C1	Gerotor Housing (HM2C) ⅝" Wide
9	1	2270-0057	Washer	31	1	1610-0031	Roll Pin (HM1C/HM5C)	39	1	0254-2500C2	Motor End Plate (w/ needle bearing)
10	1	0402-9100P	Impeller	31	1	1610-0055	Roll Pin (HM3C)	40	4	2270-0039	Washer
11	1	1700-0100	Rubber Gasket	32	1	0150-2500C	Motor Body (w/needle bearing)	41	4	2220-0045	Cap Screw (HM2C/HM4C)
12	1	2120-0009	Mechanical Seal (Viton/ Ceramic) 9303P Std	33	4	2210-0021	Hex Head Cap Screw	41	4	2220-0021	Cap Screw (HM1C)
12	1	3430-0593	Mechanical Seal (Silicon Carbide, Opt)	34	2	1720-0110	O-Ring	41	4	2220-0044	Cap Screw (HM3C)
13	1	1721-0083	O-Ring	35	1	1600-0045	Dowel Pin (HM2C/HM4C)	41	4	2220-0032	Cap Screw (HM5C)
14	1	0750-9300P	Cover	35	1	1600-0044	Dowel Pin (HM1C/HM5C)	42	1	1720-0108	O-Ring
15	1	2210-0088	Screw	35	1	1600-0052	Dowel Pin (HM3C)	43	1	3360-0021A	Pressure Port Adapter w/ O-Ring
16	1	0750-9006C	Intermediate Flange	36	1	1600-0042	Dowel Pin (HM2C/HM4C)	44	1	3320-0051A	Tank Port Adapter w/ O-Ring
17	1	1510-0063	Base Plate	36	1	1600-0037	Dowel Pin (HM1C/HM5C)	45	1	1720-0262	O-Ring
18	2	2250-0008	Hex Nut	36	1	1600-0068	Dowel Pin (HM3C)	46	1	3220-0029	Bypass Adjusting Screw
19	1	1410-0056	Slinger Ring	37	1	3900-0022	Gerotor (HM1C)	47	1	1700-0047	Gasket
20	1	1810-0014	Snap Ring	37	1	3900-0023	Gerotor (HM2C)	48	1	2270-0027	Washer
21	1	1820-0013	Retaining Ring					49	1	2250-0038	Lock Nut
22	1	2000-0010	Ball Bearing								
23	1	1410-0131	Cartridge, Front								
24	2	1720-0268	O-Ring								
25	1	2104-0010	Lip Ring								
26	1	1410-0130	Seal Spacer								

When ordering parts, give quantity, part no., description, and complete model number

Hydraulic Motor Part No.
2500-0081C (HM1C)
2500-0082C (HM2C)
2500-0083C (HM3C)
2500-0084C (HM4C)
2500-0085C (HM5C)



Adapter Kit No. 3430-0187 (HM2, HM4 only)

3360-0021 Pressure Port Adapter

3373-0020 (size #1)

3373-0021 (size #2)

3373-0022 (size #3)

1720-0108 Adapter O-ring

1720-0105 Orifice O-ring (Qty 3)

Parts Kit 3430-0748 one of ref no. 13, 16, 35, 36
and two of ref no. 15, 22, 30, 32

Repair Parts Kit 3430-0332 one of ref no. 5, 6, 7
Silicon Seal Kit 3430-0589 one of ref no. 5, 7

9303C SERIES PUMPS SCHEMATIC

Ref No.	Qty Req.	Part No.	Description
1	4	2406-0007	Drain/Vent Plug
2	1	0150-9000C	Pump Casing
2A	1	0153-9000C	Pump Casing (Universal Flange Model C-U)
3	1	3430-0825	Impeller Nut
4	1	0401-9100P	Impeller (Nylon Std)
5	1	1720-0083	O-Ring
6	1	1700-0100	Gasket
7	1	2120-0009	Mechanical Seal (Viton/Ceramic)
8	1	0750-9300C	Mounting Flange
9	4	2210-0020	Head Cap Screw
10	1	1410-0056	Slinger Ring
11	1	1810-0014	Snap Ring
12	1	1820-0013	Retaining Ring
13	1	2000-0010	Ball Bearing
14	1	1410-0131	Cartridge, Front
15	1	1720-0268	O-Ring
16	2	3430-0748	Lip Seal
17	1	1410-0130	Seal Spacer
18	1	2029-0014	Thrust Bearing Assembly
19	1	3430-0850	Shaft (HM2C/HM4C)
19	1	3430-0852	Shaft (HM1C/HM5C)
19	1	3430-0855	Shaft (HM3C)
20	1	0150-2500C	Motor Body (includes needle bearing)
21	4	2210-0005	Hex Head Cap Screw
22	2	1720-0110	O-Ring
23	1	1600-0045	Dowel Pin (HM2C/HM4C)
23	1	1600-0044	Dowel Pin (HM1C/HM5C)
23	1	1600-0052	Dowel Pin (HM3C)
24	1	1600-0042	Dowel Pin (HM2C/HM4C)
24	1	1600-0037	Dowel Pin (HM1C/HM5C)
24	1	1600-0068	Dowel Pin (HM3C)

Ref No.	Qty Req.	Part No.	Description
25	1	3900-0022	Gerotor (HM1C)
25	1	3900-0023	Gerotor (HM2C)
25	1	3900-0024	Gerotor (HM3C)
25	1	3900-0025	Gerotor (HM4C)
25	1	3900-0048	Gerotor (HM5C)
26	1	0701-2500C1	Gerotor Housing (HM2C Models) ¼" wide
26	1	0700-2500C1	Gerotor Housing (HM21C Models) ½" wide
26	1	0703-2500C1	Gerotor Housing (HM4C Models) ⅝" wide
26	1	0702-2500C1	Gerotor Housing (HM3C Models) 1" wide
26	1	0704-2500C1	Gerotor Housing (HM5C Models) ⅝" wide
27	1	0254-2500C2	Motor End Plate (includes needle bearing)
28	4	2270-0039	Washer
29	4	2220-0045	Cap Screw (HM2C/HM4C Models)
29	4	2220-0021	Cap Screw (HM1C Models)
29	4	2220-044	Cap Screw (HM3C Models)
29	4	2220-0032	Cap Screw (HM5C Models)
30	1	1720-0108	O-Ring
31	1	3360-0021A	Pressure Port Adapter (includes o-ring)
32	1	1720-0262	O-Ring
33	1	3320-0051A	Tank Port Adapter (includes o-ring)
34	1	3220-0029	Bypass Adjusting Screw
35	1	1700-0047	Gasket
36	1	2270-0027	Washer
37	1	2250-0038	Lock Nut
38	1	1610-0032	Roll Pin (HM2C/HM4C)
38	1	1610-0031	Roll Pin (HM1C/HM5C)
38	1	1610-0055	Roll Pin (HM3C)
39	1	1810-0026	Snap Ring
40	1	1610-0012	Woodruff Key

When ordering parts, give quantity, part no., description, and complete model number

HYPRO BIG TWIN® & SMALL TWIN® PISTON PUMPS

SERIES 5200 BIG TWIN® PISTON PUMPS



Part No.	Max GPM	Max PSI	Max RPM	Description
5206C	6	400	800	Cast-iron pump w/ leather cups & Ni-Resist sleeves, 1" solid shaft w/ base, ¾" ports, 140°F max temp.
5206C-H	6	400	800	Cast-iron pump w/ leather cups & Ni-Resist sleeves, 1 ⅜" solid shaft w/ base, ¾" ports, 140°F max temp.
5210C	10	400	600	Cast-iron pump w/ leather cups & Ni-Resist sleeves, 1" solid shaft w/ base, ¾" ports, 140°F max temp.
5210C-H	10	400	600	Cast-iron pump w/ leather cups & Ni-Resist sleeves, 1 ⅜" solid shaft w/ base, ¾" ports, 140°F max temp.

SERIES 5300 SMALL TWIN® PISTON PUMPS



Part No.	Max GPM	Max PSI	Max RPM	Description
5315C-HX 5315C-HRX 5315C-CHX	1.5	500	1800	Cast-iron pumps with torque arm, ⅝" ID hollow shaft ½" NPT ports, 140°F maximum temp. Cup material: HX (leather), HRX (Buna-N), CHX (Teflon)
5320C-HX 5320C-HRX 5320C-CHX	2	500	1800	Cast-iron pumps with torque arm, ⅝" ID hollow shaft ½" NPT ports, 140°F maximum temp. Cup material: HX (leather), HRX (Buna-N), CHX (Teflon)
5325C-HX 5325C-HRX 5325C-CHX	2.5	500	1800	Cast-iron pumps with torque arm, ⅝" ID hollow shaft ½" NPT ports, 140°F maximum temp. Cup material: HX (leather), HRX (Buna-N), CHX (Teflon)
5330C-HX 5330C-HRX 5330C-CHX	3	500	1800	Cast-iron pumps with torque arm, ⅝" ID hollow shaft ½" NPT ports, 140°F maximum temp. Cup material: HX (leather), HRX (Buna-N), CHX (Teflon)
5315C-X 5315C-RX 5315C-CX	1.5	500	1800	Cast-iron pumps with torque arm, ⅝" ID hollow shaft ½" NPT ports, 140°F maximum temp. Cup material: X (leather), RX (Buna-N), CX (Teflon)
5320C-X 5320C-RX 5320C-CX	2	500	1800	Cast-iron pumps with torque arm, ⅝" ID hollow shaft ½" NPT ports, 140°F maximum temp. Cup material: X (leather), RX (Buna-N), CX (Teflon)
5325C-X 5325C-RX 5325C-CX	2.5	500	1800	Cast-iron pumps with torque arm, ⅝" ID hollow shaft ½" NPT ports, 140°F maximum temp. Cup material: X (leather), RX (Buna-N), CX (Teflon)
5330C-X 5330C-RX 5330C-CX	3	500	1800	Cast-iron pumps with torque arm, ⅝" ID hollow shaft ½" NPT ports, 140°F maximum temp. Cup material: X (leather), RX (Buna-N), CX (Teflon)
5321C-H 5322C-H	2.2	1000	1800	Cast-iron pumps with torque arm, Buna-N seals, ⅝" ID hollow shaft ½"NPT ports, 180°F maximum temp. Plunger material: 5321 stainless steel; 5322 ceramic
5324C-H	2.9	800	1800	Cast-iron pumps with torque arm and Buna-N seals, ⅝" ID hollow shaft, ½" NPT ports, 140°F maximum temp. Plunger material: stainless steel
5321C 5322C	2.2	1000	1800	Cast-iron pumps with base and Buna-N seals, ⅝" ID hollow shaft, ½" NPT ports, 180°F maximum temp. Plunger material: 5321 stainless steel; 5322 ceramic
5324C	2.9	800	1800	Cast-iron pumps with base and Buna-N seals, ⅝" ID hollow shaft, ½" NPT ports, 140°F maximum temp. Plunger material: 5321 stainless steel
53702 5370*	2.2 2.3	1000 1000	2450 3100	Cast-iron pumps with torque arm and Buna-N seals and ceramic plungers. ⅝" ID hollow shaft, ½" NPT ports, 180°F maximum temp.

HYPRO MEDIUM PRESSURE DIAPHRAGM PUMP

	Part No.	Max GPM	Max PSI	Max RPM	Description
	9910-D252	6.1	290	650	2 diaphragm, semi-hydraulic pump, 3/4" HB inlet, 5/8" HB outlet
	9910-D30	9	580	550	2 diaphragm pump, 1" HB inlet, 1/2" HB outlet
	9910-D50	14	580	550	2 diaphragm pump, 1 1/4" HB inlet, 1/2" HB outlet

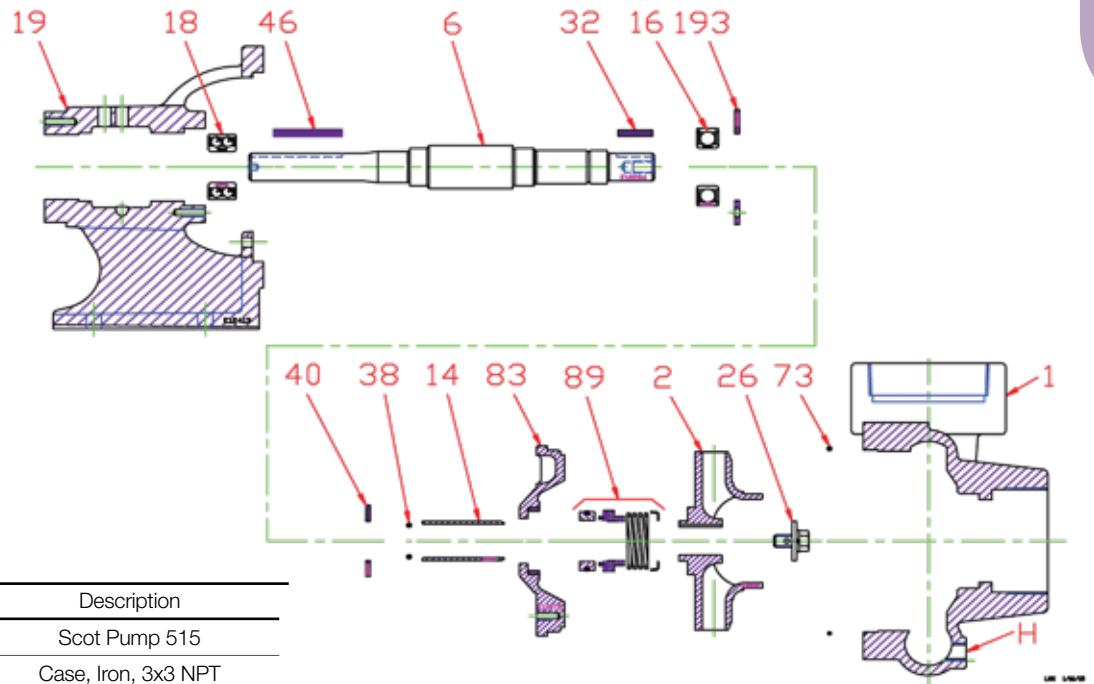


45 500 GALLON NEXUS SPRAYER WITH HYPRO ROLLER PUMP

SCOT FRAME PUMP 515

SCOT 515 FRAME PUMP

- Part Number SC-FPD515LD
- 7/8" Shaft
- 3x3x5.63 NPT
- Cast Iron Bearing Frame
- Sealed Bearings



Ref	Part No.	Description
	SC-FPD515LD	Scot Pump 515
1	130.000.224X1	Case, Iron, 3x3 NPT
2	131.000.286	Impeller, 7/8" Keyed, Enclosed, 5.63" Diameter
6+	135.000.186X	Shaft Assembly
14*	135.000.187	Shaft Sleeve, Stainless
16	103.000.146	Bearing
18	103.000.150	Bearing
19	132.000.237	Frame
26*	118.000.111A	Impeller Retainer, Stainless
32*+	102.000.102	Key
38*	116.000.193	O-Ring, Shaft Viton
40*	104.000.107	Flinger
46+	102.000.130	Key
73*	116.000.146	Gasket, Case
83	132.000.183	Backplate, Iron
89*	101.000.194	1 1/4" Mechanical Seal, Type 21 VN-CARB/CM
193	110.000.244	Retainer

* Components included in repair kit

+ Components included in shaft assembly

AUTOMATIC DEMAND PUMPS

2088 SERIES AUTOMATIC DEMAND PUMPS

- Heavy duty spraying, spot spraying, mini bulk transfer, and fertilizer applications
- Self priming up to 12 feet
- Built in check valve rated up to 200 PSI

5000 SERIES AUTOMATIC DEMAND PUMP

- Field-proven pump head design
- Self priming up to 8 feet
- Available in the same footprint as other SHURflo pumps to allow for upgrade to higher performance on existing installations

8000 SERIES AUTOMATIC DEMAND PUMPS

- Heavy duty spraying & foam marking
- Self priming up to 8 feet
- Bypass options available with or without switch

SHURFLO AUTOMATIC DEMAND PUMPS



SHURFLO 2088 SERIES AUTOMATIC DEMAND PUMPS

Part No.	GPM	PSI	Port Size	Description
SF-2088343135	3.0 open flow	45	½" 14 NA Straight PT*	Standard pump, Viton valves, Santoprene® diaphragm w/ demand switch

SHURFLO 5000 SERIES AUTOMATIC DEMAND PUMP



Part No.	GPM	PSI	Port Size	Description
5059-1311-D011	5.3	60	½" npsm*	Premium pump, Viton valves, Santoprene® diaphragms, sealed motor. Available with demand switch of by-pass version which is set at 90 PSI.
5059-1310-D011	5.3	60	½" NPTF	
5059-3611-D011	5.3	90	½" npsm*	
5059-3610-D011	5.3	90	½" NPTF	

SHURFLO 8000 SERIES AUTOMATIC DEMAND PUMPS



Part No.	GPM	PSI	Port Size	Description
SF-8000541236	1.0 open flow	60	¾" NPT	Lawn & Garden Pump, for 25 gallon tank or less, Viton valves, Santoprene® diaphragm w/ demand switch. 12 VDC
SF-8000543236	1.8 open flow	50	¾" NPT	Standard Pump, Viton valves, Santoprene® diaphragm w/ demand switch. 12 VDC

JOHN BLUE AUTOMATIC DEMAND PUMPS

- 12 Volt Agri-Pump
- Weatherproof tested: The only 12-Volt Pump to be totally protected against weather, dust and overspray.
- Dependable Metering Piston Pump
- 4 Piston Diaphragm: For a smoother flow.
- Quick Connect Ports System: The quick connect port systems means it's faster to install, requires fewer parts and connections while reducing the number of potential leak points.

- Integral Pressure Switch: The integral pressure switch is fully sealed.
- Chemical Resistant: Construction suitable for most fertilizers and chemicals

The John Blue Flow Monitor Calculator is used to calculate your flow rate in equivalent gallons per minute per row (based on your fertilizer weight).



JOHN BLUE AUTOMATIC DEMAND PUMPS



Part No.	GPM	PSI	Port Size	Description
AP0819W	2.2 open flow	45	½" NPT, Male	Agri pump, Santoprene® valve & diaphragm w/ viton seals

EXACTO-FLOW LIQUID FERTILIZER MANIFOLD

- Exacto-Flow divider in conjunction with John Blue metering pump accurately divides liquid products across a wide variety of applications
- Unsurpassed accuracy with application rates as low as 2.5 GPA and as high as 80 GPA on 30 inch row spacings at 5 MPH
- 302 Stainless steel balanced spring offers superior performance & corrosion resistance
- Viton lip seal yields longer life than conventional diaphragms

- 316 Stainless steel sleeve can be easily removed for cleaning in the field plus the alignment indicator ensures that the sleeve can be replaced in exactly the same position
- Field repairable without removing distribution lines
- Upper needle of the piston is 316 stainless steel and glass-filled Teflon lower needle offers smooth operation with minimum friction
- Viton O-rings allow for positive sealing with even the hardest to handle products

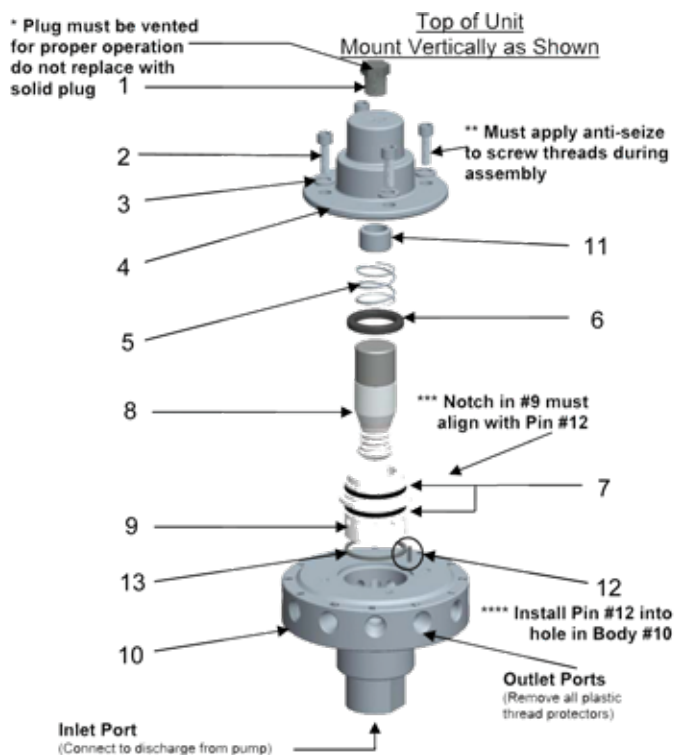
HOW TO SELECT YOUR JOHN BLUE FLOW DIVIDER:

1. How many outlets do you need?
2. For 12 outlets or less select the FD-1200.
3. For 20 outlets or less select the FD-2000.
4. Multiple flow dividers can be used with DR series pumps.
5. Check valves are available for any application.

Part No.	Description	No. Outlets	Inlet	Outlet	Max GPM
FD1210	Stainless Steel Flow Divider	12	¾" FPT	¼" FPT	2.25
FD2010	Stainless Steel Flow Divider	20	1" FPT	¼" FPT	2.25



PUMPS



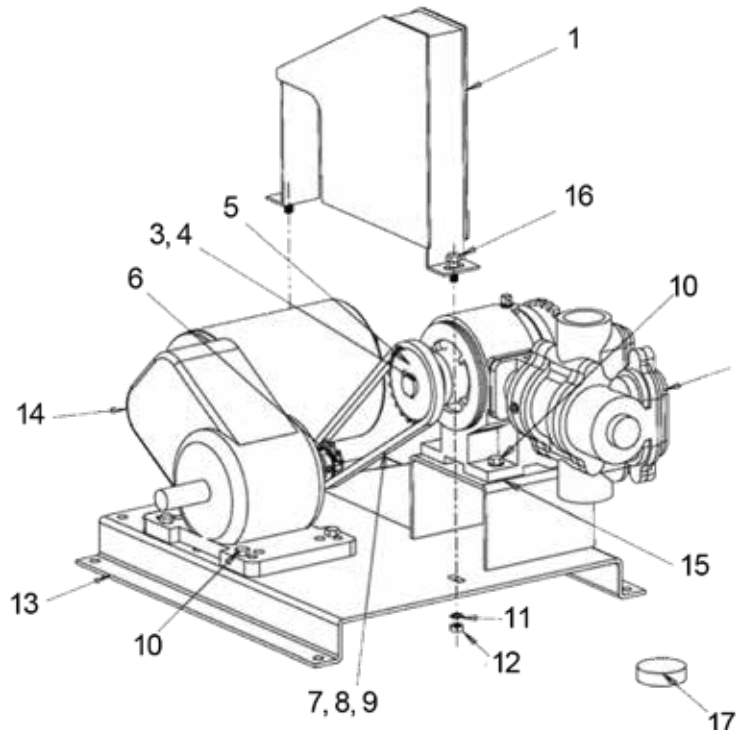
Item	Description	FD-1210 Part No	Qty	FD-2010 Part No	Qty
1	Vented Cap Plug (* see note)	116024-01	1	116024-01	1
2	Socket Head Screw (** see note)	90514	4	90514	4
3	Lock Washer	93022	4	93022	4
4	Cap	115146-01	1	115401-01	1
5	Spring	115152-01	1	115399-01	1
6	Needle Seal	115151-01	1	115398-01	1
7	O-Ring	115025-01	2	115403-01	2
8	Needle	115106-91	1	115109-91	1
9	Sleeve (***)see note)	115387-A	1	115402-A	1
10	Body	115102-01	1	115103-01	1
11	Spacer	115435-01	1	115438-01	1
12	¾ x ¾ Roll Pin (****see note)	115495-01	1	115495-01	1
13	Sleeve Seal	116019-01	1	116020-01	1
Needle & Seal Kit Includes 1 each of #5, 6, 8, 13, and two of #7		115406-A	1	115433-A	1
Seal Kit Includes 1 each of #5, 6, 13, and two of #7		115407-A	1	115434-A	1



1. All working parts are totally enclosed for maintenance free service.
2. All wetted parts are constructed with corrosion resistant stainless steel to ensure optimum performance over many years of service.
3. Rates are easily adjusted with the dial pointer located on the side of the pump, which changes the length of the stroke.
4. Depending on the pump model, units are available with 3/4 or 1 1/2 HP motor and gearbox.
5. Pump models have a range of application from 1.6 to 114 GPH all the way up to 6 to 470 GPH.

Model Number	Phase	Model Type	Low Range GPH	High Range GPH	Max PSI	Motor Size	GPH Range
IN-23530-NGP	Three	Simplex Duplex	3-32 6-64	12-119 24-235	120 120	¾ ¾	3-235

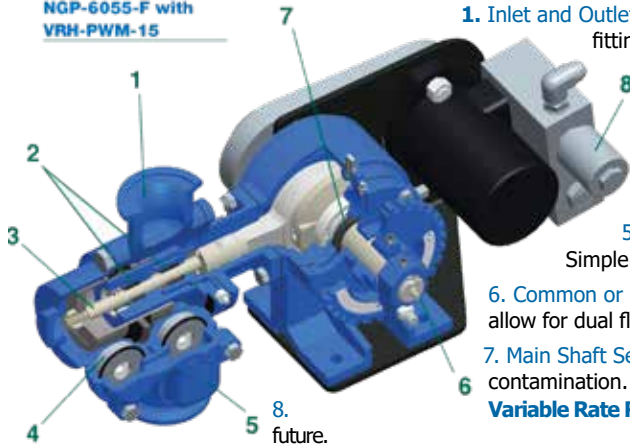
IN-23530 NGP PUMP BREAKDOWN



Ref No.	Pump	Description
1	114360-01	Chain Guard
2	NGP-6055K*	Pump (check ID tag for model no.)
3	L-102	Sprocket Key
4	90532	Sprocket Set Screw
5	114517-01 (23 tooth)	Large Sprocket
6	114516-01 (12 tooth)	Small Sprocket
7	A5727	Chain - RC40
8	S-2943	Connector Link
9	S-2944	Offset Link
10	90655	Bolt ¾ x 1 ½ lg
11	93024	¾ Lock Washer
12	92024	¾ Nut
13	114354-91	Base
14	114514-01 (40:1)	3 Ph Motor and Gearbox Assembly
15	A-147	Mounting Pad
16	90651	Bolt ¾ x 1 lg
17	114532-01	Black Pump Valve

Three Phase Parts List

NGP-6055-F with VRH-PWM-15



- 1. Inlet and Outlet Flanges** make it easier to plumb your system and eliminates leaks with flange fittings. (Add -F after model number)
 - 2. Double piston rod seals** work in unison to offer multiple stage protection between the wet end and crankcase.
 - 3. Outboard cylinder plunger packing** can be inspected or replaced in the field without removing the hoses.
 - 4. Check valves** are designed for positive seal, easy priming, and long life.
 - 5. Single Valve cap** makes easy access to check valves without removing the hoses. Simple to service in the field.
 - 6. Common or Independent Manifolds** are available on the double pumps. Independent manifolds allow for dual flow divider usage or half width application.
 - 7. Main Shaft Seals** incorporate a dual wiper that is enclosed in a grease cavity to flush out contamination. This helps to extend the life of the pump.
 - 8. future.**
- Variable Rate Ready** - modular design means you can expand the basic NGP to variable rate applications in the

HOW TO SELECT YOUR PUMP:

- How many rows do you have?
- What is your swath width? (row spacing distance) X (# of rows)
- What application rate do you want to achieve?
- Now simply select the John Blue Piston Pump that best fits your needs (see colored chart next to pump series description).

NGP 6050 SERIES: SINGLE PISTON - DOUBLE ACTING - EQUIVALENT TO LM 2450

	Part No.	Clutch	Description	Rows		Swath (in)		30 in Spacing		36 in Spacing	
						30	36	Min	Max	Min	Max
	NGP-6050	Rope Control Clutch	Variable Stroke; 21 Max GPM; 120 Max PSI; 1 1/2" FPT Ports	4	120	144	9.2	207.9	7.7	173.3	
	NGP-6055	Without Clutch		8	240	288	4.6	104.0	3.9	86.6	
	NGP-6058	Electric Control		12	360	432	3.1	69.3	2.6	57.8	
	NGP-6059	Hydraulic Control		16	480	576	2.3	52.0	1.9	43.3	
				24	720	864	1.5	34.7	1.3	28.9	
				36	1080	1296	1.0	23.1	0.9	19.3	

NGP 7050 SERIES: SINGLE PISTON - DOUBLE ACTING - EQUIVALENT TO LM 4450

	Part No.	Clutch	Description	Rows		Swath (in)		30 in Spacing		36 in Spacing	
						30	36	Min	Max	Min	Max
	NGP-7050	Rope Control Clutch	Variable Stroke; 34.2 Max GPM; 120 Max PSI; 1 1/2" FPT Ports	4	120	144	15	338.6	12.5	282.2	
	NGP-7055	Without Clutch		8	240	288	7.3	169.3	6.3	141.1	
	NGP-7058	Electric Control		12	360	432	5.0	112.9	4.2	94.1	
	NGP-7059	Hydraulic Control		16	480	576	3.8	84.6	3.1	70.5	
				24	720	864	2.3	56.4	2.1	47.0	
				36	1030	1296	1.7	37.6	1.4	31.4	

NGP 8050 SERIES: DOUBLE PISTON - DOUBLE ACTING

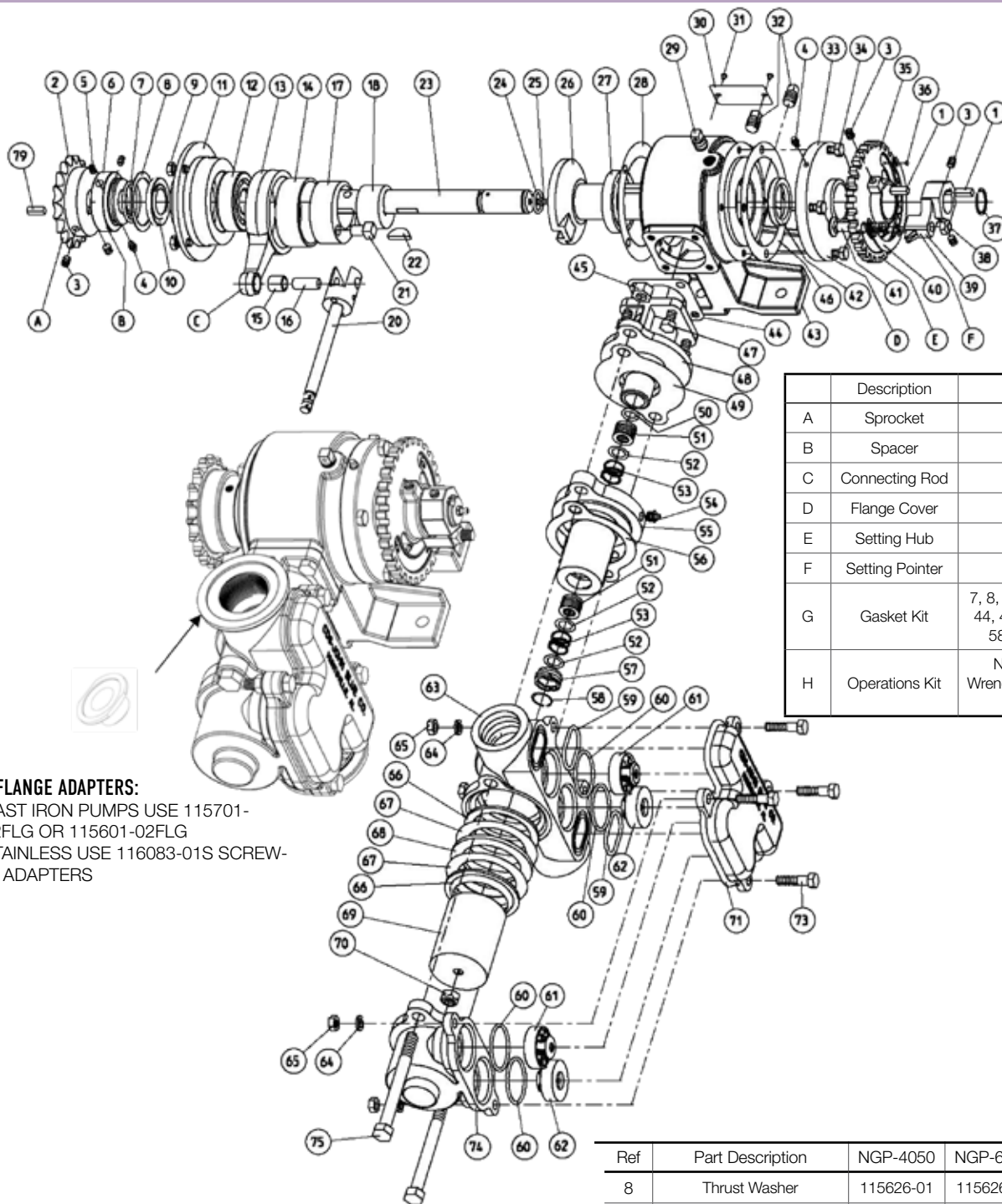
	Part No.	Clutch	Description	Rows		Swath (in)		30 in Spacing		36 in Spacing	
						30	36	Min	Max	Min	Max
	NGP-8050	Rope Control Clutch	Variable Stroke; 42 Max GPM; 120 Max PSI; 1 1/2" FPT Ports	4	120	144	30.1	677.2	25.1	564.3	
	NGP-8055	Without Clutch		8	240	288	15.0	338.6	12.5	282.2	
	NGP-8058	Electric Control		12	360	432	10.0	225.7	8.4	188.1	
	NGP-8059	Hydraulic Control		16	480	576	7.5	169.3	6.3	141.1	
				24	720	864	5.0	112.9	4.2	94.1	
				36	1080	1296	3.3	75.2	2.8	62.7	

NGP 9050 SERIES: DOUBLE PISTON - DOUBLE ACTING - EQUIVALENT TO LM 4950

	Part No.	Clutch	Description	Rows		Swath (in)		30 in Spacing		36 in Spacing	
						30	36	Min	Max	Min	Max
	NGP-9050	Rope Control Clutch	Variable Stroke; 68.4 Max GPM; 120 Max PSI; 1 1/2" FPT Ports	4	120	144	30.1	667.2	25.1	564.3	
	NGP-9055	Without Clutch		8	240	288	15.0	338.6	12.5	282.2	
	NGP-9058	Electric Control		12	360	432	10.0	225.7	8.4	188.1	
	NGP-9059	Hydraulic Control		16	480	576	7.5	169.3	6.3	141.1	
				24	720	864	5.0	112.9	4.2	94.1	
				36	1080	1296	3.3	75.2	2.8	62.7	



NEWTON CROUCH All calculations based on ground speed of 5 mph
Important: Pumps should never be operated below 2 or above 9 on the pump scale.



	Description	Includes Item #s
A	Sprocket	2, 3
B	Spacer	4, 5, 6, 7, 8
C	Connecting Rod	13, 14, 15
D	Flange Cover	4, 33
E	Setting Hub	3, 35, 36, 40
F	Setting Pointer	3, 39
G	Gasket Kit	7, 8, 10, 15, 24, 28, 37, 42, 44, 49, 50, 51, 52, 53, 56, 58, 59, 60, 66, 67, 68
H	Operations Kit	Not Shown: Manual, Wrench, Slide Chart, Mounting Hardware

220 FLANGE ADAPTERS:

- CAST IRON PUMPS USE 115701-02FLG OR 115601-02FLG
- STAINLESS USE 116083-01S SCREW-IN ADAPTERS

Ref	Part Description	NGP-4050	NGP-6050	NGP-7050
1	Key	L-1020	L-1020	L-1020
2	Sprocket RC50-18T	112661-01	112661-01	112661-01
2R	Sprocket RC40-18T	113905-01	113905-01	113905-01
3	5/16 x 3/8 Set Screw	90532	90532	90532
4	Grease Fitting	H-28	H-28	H-28
5	5/16 x 3/8 Set Screw	90532	90532	90532
6	Sprocket Spacer	115625-01	115625-01	115625-01
7	O-Ring	S-316	S-316	S-316

Ref	Part Description	NGP-4050	NGP-6050	NGP-7050
8	Thrust Washer	115626-01	115626-01	115626-01
9	5/16 x 1 Hex Bolt	90637	90637	90637
10	Oil Seal	115621-01	115621-01	115621-01
11	Cover Plate	115723-01	115723-01	115623-01
12	Bearing	L-3019	L-3019	L-3019
13	Connecting Rod	L-1008-A	L-1008-A	L-1008-A
14	Journal Bearing	L-928	L-928	L-928
15	Rod Bushing	113588-01	113588-01	113588-01
16	Rod Pin	105895-01	105895-01	105895-01
17	Eccentric - Outer	L-1013-A	L-1013-A	113633-01
18	Eccentric - Inner	L-1015	L-1015	L-1015

When ordering parts, give quantity, part no., description, and complete model number

Ref	Part Description	NGP-4050	NGP-6050	NGP-7050
20	Piston Rod ASM	116078-91	115712-91	105900-91
21	Eccentric Pin	L-3004	L-3004	L-3004
22	Woodruff Key	108093-01	108093-01	A-4333
23	Crankshaft	115614-01	115614-01	115614-01
24	O-Ring	L-1022	L-1022	L-1022
25	Grease Zerk	115647-01	115647-01	115647-01
26	Setting Sleeve	115718-01	115718-01	115618-01
27	Bearing	L-1007-A	L-1007-A	L-1007-A
28	Gasket - Drive Side	L-1006	L-1006	L-3002
29	Vent Plug	S-350	S-350	S-350
30	Name Plate	111958-01	111958-01	111958-01
31	Drive Screw	A-3557	A-3557	A--3557
32	Oil Plug	C-431-B	C-431-B	C-431-B
33	Flange Cover	115724-01	115724-01	115724-01
34	3/8 x 1 Hex Bolt	90637	90637	90637
35	Setting Hub	115627-01	115627-01	115627-01
36	Screw	A-368	A-368	A-368
37	Snap Ring	115791-01	115791-01	115791-01
38	3/8 Self-Lock Nut	A-3097	A-3097	A-3097
39	Setting Pointer	115628-01	115628-01	115628-01
40	Setting Scale	115645-01	115645-01	115645-01
41	3/8 x 2 1/4 Carriage Bolt	115646-01	115646-01	115646-01
42	Oil Seal	115622-01	115622-01	115622-01
43	Crankcase	115720-01	115720-01	115620-01
44	Crosshead Gask	115711-01	115711-01	115611-01
45	1/2 Hex Nut	92029	92029	92029
S	Stainless	N/A	92030	92030
46	Gasket - FLG Cover	L-1006	L-1006	L-1006
47	Hex Bolt	90637	90637	90860
48	Crosshead Guide	116069-01	115700-01	115600-01
49	Stuff, Box Gask	116075-01	115610-01	115610-01
U	Fumigant	N/A	104828-02	104828-02
50	O-Ring	11674-01	111943-01	111943-01
51	Packing "V" Set	L-1113	L-1109	L-1109
	at Crosshead Guide	Use 4 "V"s	N/A	N/A
U	Fumigant	N/A	L-1109-U	L-1109-U
52	Packing Washer	112694-01	L-1041	L-1041
53	Packing Spring	112697-01	L-1063	L-1063
54	Grease Zerk	H-30	H-30	H-30
55	Stuffing Box	116070-01	115790-01	115690-01
S	Stainless	N/A	115790-01S	115690-01S
56	Inboard Cyl. Gasket	116076-01	115710-01	115710-01
U	Fumigant	N/A	104826-02	104826-02
57	Stuff. Box Insert	116068-01	L-1031-2	L-1031-2
S	Stainless	Not Used	Not Used	Not Used
58	Packing - Snap Ring	112698-01	L-1042	L-1042
S	Stainless and Fum.	N/A	116210-01	116210-01

Ref	Part Description	NGP-4050	NGP-6050	NGP-7050
59	O-Ring	S-316	S-316	115604-01
S	Stainless	N/A	104824-01	115612-01
U	Fumigant	N/A	104824-01	115612-01
60	O-Ring	S-316	L-3031	A-2848
S	Stainless	N/A	114768-01	114870-01
U	Fumigant	N/A	114768-01	114870-01
61	Discharge Valve	116127-91	115707-91	115607-91
62	Suction Valve	116126-91	115706-91	115606-91
63	Inboard Cylinder	N/A	115701-02	115601-02
F	Flanged	116071-01	115701-02FLG	115601-02FLG
S	Stainless	N/A	115701-02S	115601-02S
64	3/8 Lock Washer	93024	93024	93024
S	Stainless	N/A	93025	93025
65	3/8 Hex Nut	92024	92024	92024
66	Plunger - Packing	112696-01	L-1045-V	L-1045-V
B	Buna Packing	N/A	L-1045-A	L-1045-A
67	Plunger - Gasket	112712-01	L-1098	L-1098
U	Fumigant	N/A	114769-01	114769-01
68	Plunger - Washer	112695-01	L-1044-A	L-1044-A
69	Plunger	112700-91	103290-91	112816-91
70	Plunger - Locknut	92125	L-1047	L-1047
71	Valve Cover	116073-01	115703-01	115603-01
S	Stainless	N/A	115703-01S	115603-01S
73	3/8 X 1-1/2 Hex Bolt	90911	90911	90911
S	Stainless	N/A	90654	90654
74	Outboard Cylinder	116072-01	115702-01	115602-01
S	Stainless	N/A	115703-01S	115603-01S
73	3/8 X 1-1/2 Hex Bolt	90911	90911	90911
S	Stainless	N/A	90654	90654
74	Outboard Cylinder	116072-01	115702-01	115602-01
S	Stainless	N/A	115702-01S	115602-01S
75	1/2 Hex Bolt	90704	90704	90705
S	Stainless (2 Bolts)	N/A	90693/90687	90693/90687
79	Sprocket Key	106493-01	106493-01	106493-01
A	RC50-18T Sprkt Asm	106532-01	106532-01	106532-01
R	RC40-18T Sprkt Asm	113907-01	113907-01	113907-01
B	Sprkt, Spacer Asm	115624-91	115624-91	115624-91
C	Conn. Rod Asm	L-1008-B	L-1008-B	113645-91
D	Flange, Cover Asm	115725-91	115725-91	115725-91
E	Set Hub Asm	1156629-91	115629-91	115629-91
F	Set Pointer Asm	115630-91	115630-91	115630-91
G	Gasket Kit	116134	115788	115688
S	Gasket Kit - SS	N/A	115788-S	115688-S
U	Gasket Kit - Fum	N/A	115787-U	115688-U
H	Operators Kit	115787	115787	115787
N/S	Slide Chart	115698-91	115698-91	115698-91
N/S	Setting Wrench	115631-01	115631-01	115631-01

When ordering parts, give quantity, part no., description, and complete model number

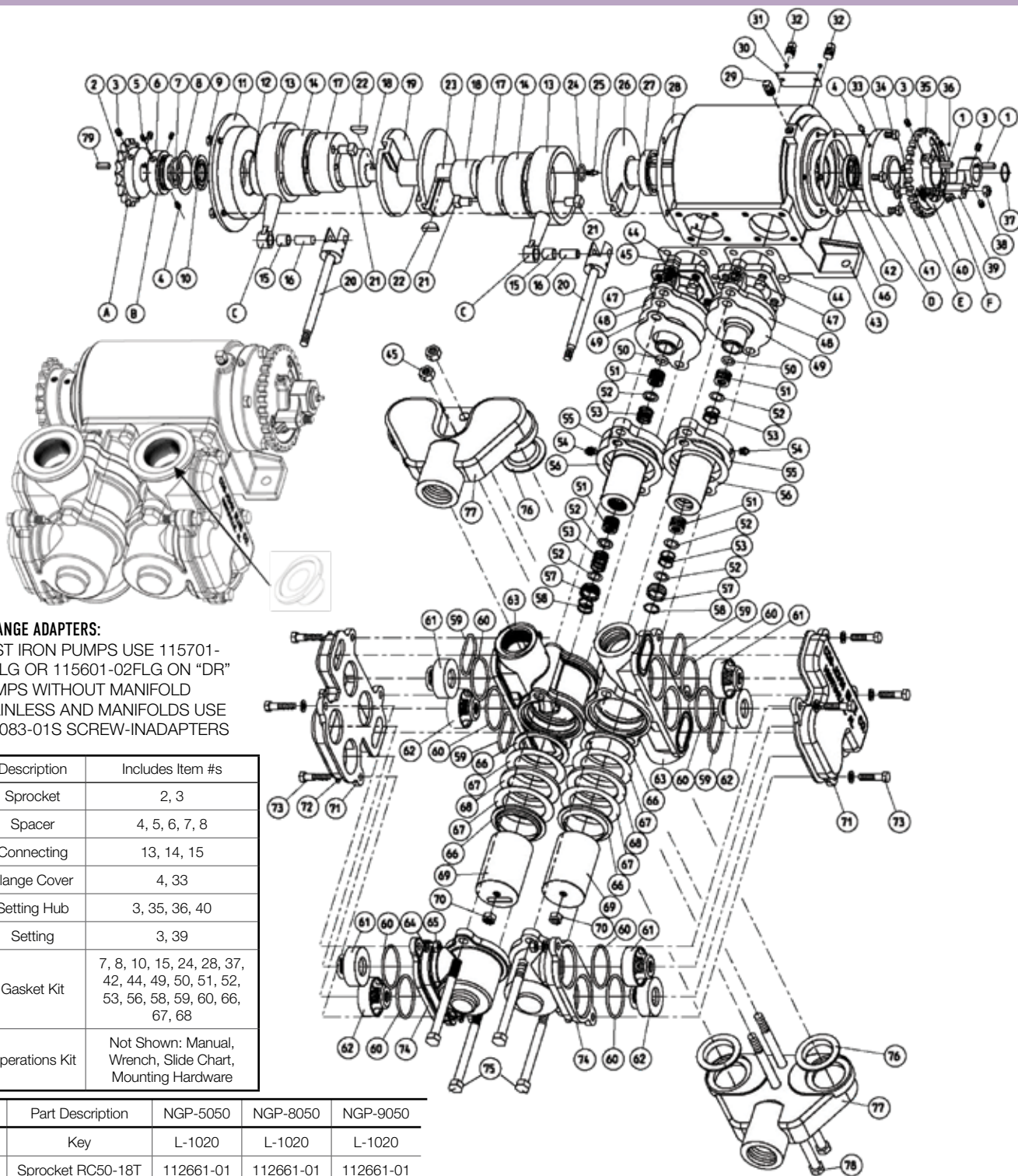


SEBRING - 1-877-605-0273

ALBANY - 1-800-624-7931

GRIFFIN 1-800-241-1350

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220 FLANGE ADAPTERS:

- CAST IRON PUMPS USE 115701-02FLG OR 115601-02FLG ON "DR" PUMPS WITHOUT MANIFOLD
- STAINLESS AND MANIFOLDS USE 116083-01S SCREW-INADAPTERS

	Description	Includes Item #s
A	Sprocket	2, 3
B	Spacer	4, 5, 6, 7, 8
C	Connecting	13, 14, 15
D	Flange Cover	4, 33
E	Setting Hub	3, 35, 36, 40
F	Setting	3, 39
G	Gasket Kit	7, 8, 10, 15, 24, 28, 37, 42, 44, 49, 50, 51, 52, 53, 56, 58, 59, 60, 66, 67, 68
H	Operations Kit	Not Shown: Manual, Wrench, Slide Chart, Mounting Hardware

Item	Part Description	NGP-5050	NGP-8050	NGP-9050
1	Key	L-1020	L-1020	L-1020
2	Sprocket RC50-18T	112661-01	112661-01	112661-01
2R	Sprocket RC40-18T	113905-01	113905-01	113905-01
3	5/16 x 3/8 Set Screw	90532	90532	90532
4	Grease Fitting	H-28	H-28	H-28
5	5/16 x 3/8 Set Screw	90532	90532	90532
6	Sprocket Spacer	115625-01	115625-01	115625-01
7	O-Ring	S-316	S-316	S-316
8	Thrust Washer	115626-01	115626-01	115626-01
9	5/16 x 1 Hex Bolt	90637	90637	90637

Item	Part Description	NGP-5050	NGP-8050	NGP-9050
10	Oil Seal	115621-01	115621-01	115621-01
11	Cover Plate	115723-01	115723-01	115623-01
12	Bearing	L-3019	L-3019	L-3019
13	Connecting Rod	L-1008-A	L-1008-A	L-1008-A
14	Journal Bearing	L-928	L-928	L-928
15	Rod Bushing	113588-01	113588-01	113588-01
16	Rod Pin	105895-01	105895-01	105895-01

When ordering parts, give quantity, part no., description, and complete model number



Item	Part Description	NGP-5050	NGP-8050	NGP-9050
17	Eccentric - Outer	L-1013-A	L-1013-A	113633-01
18	Eccentric - Inner	L-1015	L-1015	L-1015
19	Transfer Sleeve	115783-01	115783-01	115683-01
20	Piston Rod ASM	116078-91	115712-91	105900-91
21	Eccentric Pin	L-3004	L-3004	L-3004
22	Woodruff Key	108093-01	108093-01	A-4333
23	Crankshaft	115681-01	115681-01	115681-01
24	O-Ring	L-1022	L-1022	L-1022
25	Grease Zerk	115647-01	115647-01	115647-01
26	Setting Sleeve	115718-01	115718-01	115618-01
27	Bearing	L-1007-A	L-1007-A	L-1007-A
28	Gasket - Drive Side	L-1006	L-1006	L-3002
29	Vent Plug	S-350	S-350	S-350
30	Name Plate	111958-01	111958-01	111958-01
31	Drive Screw	A-3557	A-3557	A--3557
32	Oil Plug	C-431-B	C-431-B	C-431-B
33	Flange Cover	115724-01	115724-01	115724-01
34	3/8 x 1 Hex Bolt	90637	90637	90637
35	Setting Hub	115627-01	115627-01	115627-01
36	Screw	A-368	A-368	A-368
37	Snap Ring	115791-01	115791-01	115791-01
38	3/8 Self-Lock Nut	A-3097	A-3097	A-3097
39	Setting Pointer	115628-01	115628-01	115628-01
40	Setting Scale	115645-01	115645-01	115645-01
41	3/8 x 2 1/4 Carriage Bolt	115646-01	115646-01	115646-01
42	Oil Seal	115622-01	115622-01	115622-01
43	Crankcase	115780-01	115780-01	115680-01
44	Crosshead Gask	115711-01	115711-01	115611-01
45	1/2 Hex Nut	92029	92029	92029
S	Stainless	N/A	92030	92030
46	Gasket - FLG Cover	L-1006	L-1006	L-1006
47	Hex Bolt	90637	90637	90860
48	Crosshead Guide	116069-01	115700-01	115600-01
49	Stuff, Box Gask	116075-01	115610-01	115610-01
U	Fumigant	N/A	104828-02	104828-02
50	O-Ring	11674-01	111943-01	111943-01
51	Packing "V" Set	L-1113	L-1109	L-1109
	at Crosshead Guide	Use 4 "V"s	N/A	N/A
U	Fumigant	N/A	L-1109-U	L-1109-U
52	Packing Washer	112694-01	L-1041	L-1041
53	Packing Spring	112697-01	L-1063	L-1063
54	Grease Zerk	H-30	H-30	H-30
55	Stuffing Box	116070-01	115790-01	115690-01
S	Stainless	N/A	115790-01S	115690-01S
56	Inboard Cyl. Gasket	116076-01	115710-01	115710-01
U	Fumigant	N/A	104826-02	104826-02
57	Stuff. Box Insert	116068-01	L-1031-2	L-1031-2
S	Stainless	Not Used	Not Used	Not Used
58	Packing - Snap Ring	112698-01	L-1042	L-1042

Item	Part Description	NGP-5050	NGP-8050	NGP-9050
S	Stainless and Fum.	N/A	116210-01	116210-01
59	O-Ring	S-316	S-316	115604-01
S	Stainless	N/A	104824-01	115612-01
U	Fumigant	N/A	104824-01	115612-01
60	O-Ring	S-316	L-3031	A-2848
S	Stainless	N/A	114768-01	114870-01
U	Fumigant	N/A	114768-01	114870-01
61	Discharge Valve	116127-91	115707-91	115607-91
62	Suction Valve	116126-91	115706-91	115606-91
63	Inboard Cylinder	N/A	115701-02	115601-02
F	Flanged	116071-01	115701-02FLG	115601-02FLG
S	Stainless	N/A	115701-02S	115601-02S
64	3/8 Lock Washer	93024	93024	93024
S	Stainless	N/A	93025	93025
65	3/8 Hex Nut	92024	92024	92024
66	Plunger - Packing	112696-01	L-1045-V	L-1045-V
B	Buna Packing	N/A	L-1045-A	L-1045-A
67	Plunger - Gasket	112712-01	L-1098	L-1098
U	Fumigant	N/A	114769-01	114769-01
68	Plunger - Washer	112695-01	L-1044-A	L-1044-A
69	Plunger	112700-91	103290-91	112816-91
70	Plunger - Locknut	92125	L-1047	L-1047
71	Valve Cover	116073-01	115703-01	115603-01
S	Stainless	N/A	115703-01S	115603-01S
73	3/8 X 1-1/2 Hex Bolt	90911	90911	90911
S	Stainless	N/A	90654	90654
74	Outboard Cylinder	116072-01	115702-01	115602-01
S	Stainless	N/A	115702-01S	115602-01S
75	1/2 Hex Bolt	90704	90704	90705
S	Stainless (2 Bolts)	N/A	90693 / 90687	90693 / 90687
76	Manifold Gasket	N/A	112696-01	112696-01
77	Manifold	N/A	115796-01	115696-01
S	Stainless	N/A	115796-01S	115696-01S
78	1/2 Hex Bolt	N/A	115793-01	115693-01
DR	Dual Rate (Cyls)	N/A	Not Used	Not Used
79	Sprocket Key	106493-01	106493-01	106493-01
A	RC50-18T Sprkt Asm	106532-01	106532-01	106532-01
R	RC40-18T Sprkt Asm	113907-01	113907-01	113907-01
B	Sprkt, Spacer Asm	115624-91	115624-91	115624-91
C	Conn. Rod Asm	L-1008-B	L-1008-B	113645-91
D	Flange, Cover Asm	115725-91	115725-91	115725-91
E	Set Hub Asm	1156629-91	115629-91	115629-91
F	Set Pointer Asm	115630-91	115630-91	115630-91
G	Gasket Kit	116135	115789	115689
S	Gasket Kit - SS	N/A	115789-S	115689-S
U	Gasket Kit - Fum	N/A	115789-U	115689-U
H	Operators Kit	115787	115787	115787
N/S	Slide Chart	115698-91	115698-91	115698-91
N/S	Setting Wrench	115631-01	115631-01	115631-01

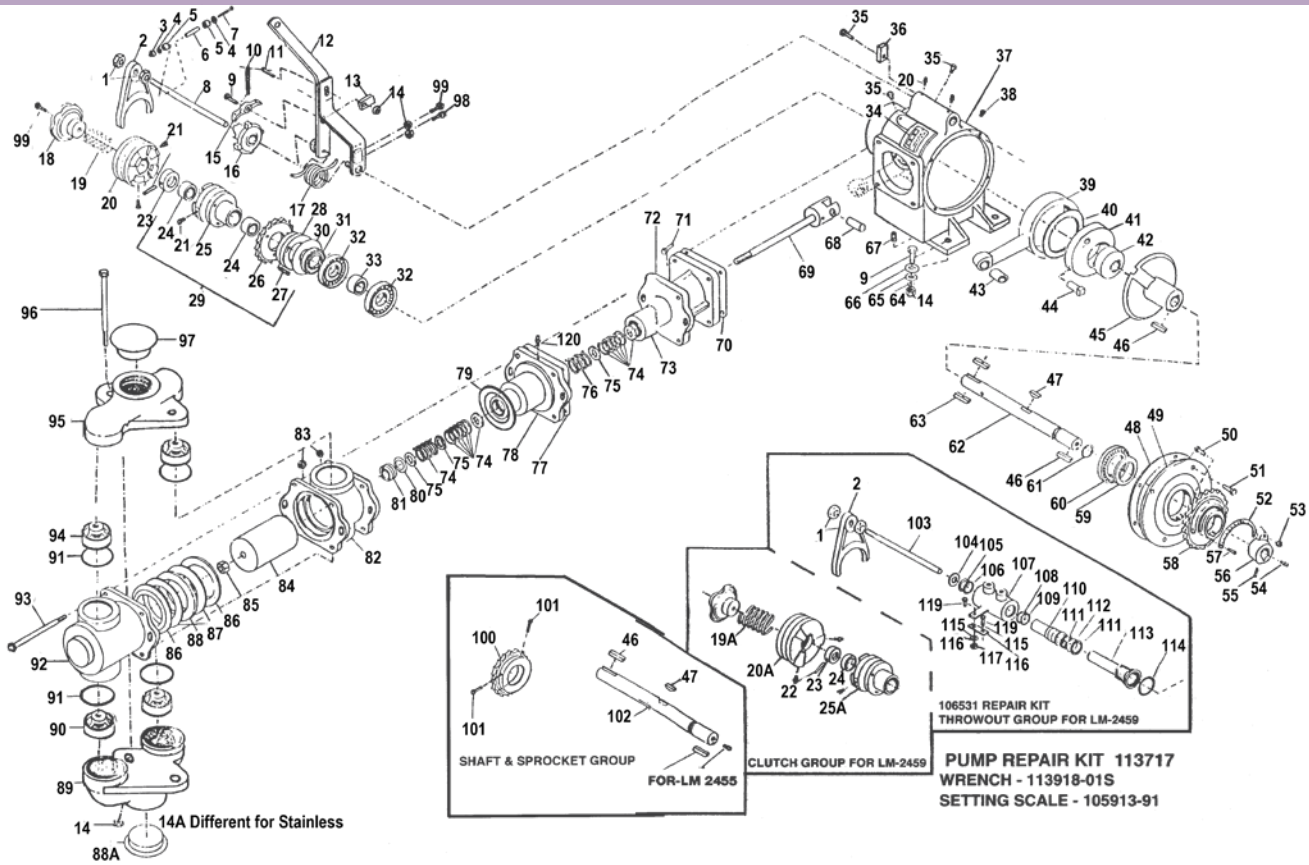
When ordering parts, give quantity, part no., description, and complete model number

ALBANY - 1-800-624-7931

 **NEWTON CROUCH**
SEBRING - 1-877-605-0273

GRIFFIN 1-800-241-1350

167



Ref	2450	2455	2459	Part No.	Description	Ref	2450	2455	2459	Part No.	Description
1	2	0	2	92037	¾" Jam Nut	22	1	0	1	L-4249	Drive Pin
2	1	0	1	A-70	Shifter Yoke	23	1	0	1	105373-01	Clutch Collar
3	1	0	0	92014	#10 Square Nut	24	2	0	2	A-116	Oilite Bushing
4	2	0	0	A-697	Washer	25	1	0	0	L-4008-A	Carrier
5	2	0	0	A-2762	Cam Roller	25A	0	0	1	108906-01	Carrier
6	1	0	1	A-2763	Roll Pin	26	1	0	1	L-4006	16T Sprocket
7	1	0	0	90953	2 ¼ Round HD Screw	27	3	0	3	90993	¼ x 1 ½ Socket HD Bolt
8	1	0	0	A-2761	Shifter Road	27A	4	4	4	90637	¾ x 1 Hex Bolt
9	5	4	4	90655	¾ x 1 ½ Hex Bolt	28	1	0	1	L-4009	Retaining
10	1	0	0	F-48	Throw-Out Lever Spring	29	1	0	1	L-4004	16T Sprocket Assembly
11	1	0	0	94010	½ x 1 Cotter Pin	*30	1	0	1	110155-01	Washer
12	1	0	0	A-2756	Throw-Out Lever	*31	1	1	1	L-1018	Oil Seal
13	1	0	0	A-2760	Spring Clip	32	2	2	2	L-1017	Crankshaft Bearing
14	11	6	6	92024	¾ Hex Nut	33	1	1	1	L-1016	Bearing Spacer
**14	2	2	2	T-2010	¾ Nut, SS	34	1	1	1	111958-01	Name Plate
15	1	0	0	A-2758-A	Pawl	35	3	3	3	90634	¾ x 12/ Hex Bolt
16	1	0	0	A-2757-A	Throw-Out Cam	36	1	0	0	A-2759	Spring Clip (lower)
17	1	0	0	A-37-R	Torsion Spring (R.H.)	37	1	1	1	L-1001-A	Crankcase
18	1	0	1	A-50	Handwheel	38	1	1	1	S-350	Vent Plug
19	1	0	0	HA-57	Safety Clutch Spring	39	1	1	1	L-1008-B	Connecting Rod
19A	0	0	1	108907-01	Safety Clutch Spring	40	1	1	1	L-928	Bearing
20	1	0	0	A-260	Clutch	41	1	1	1	L-1013-A	Large Eccentric
20A	0	0	1	108905-91	Clutch	42	1	1	1	L-1015	Small Eccentric
21	5	1	4	H-28	Grease Fitting (Dr. Typ)						

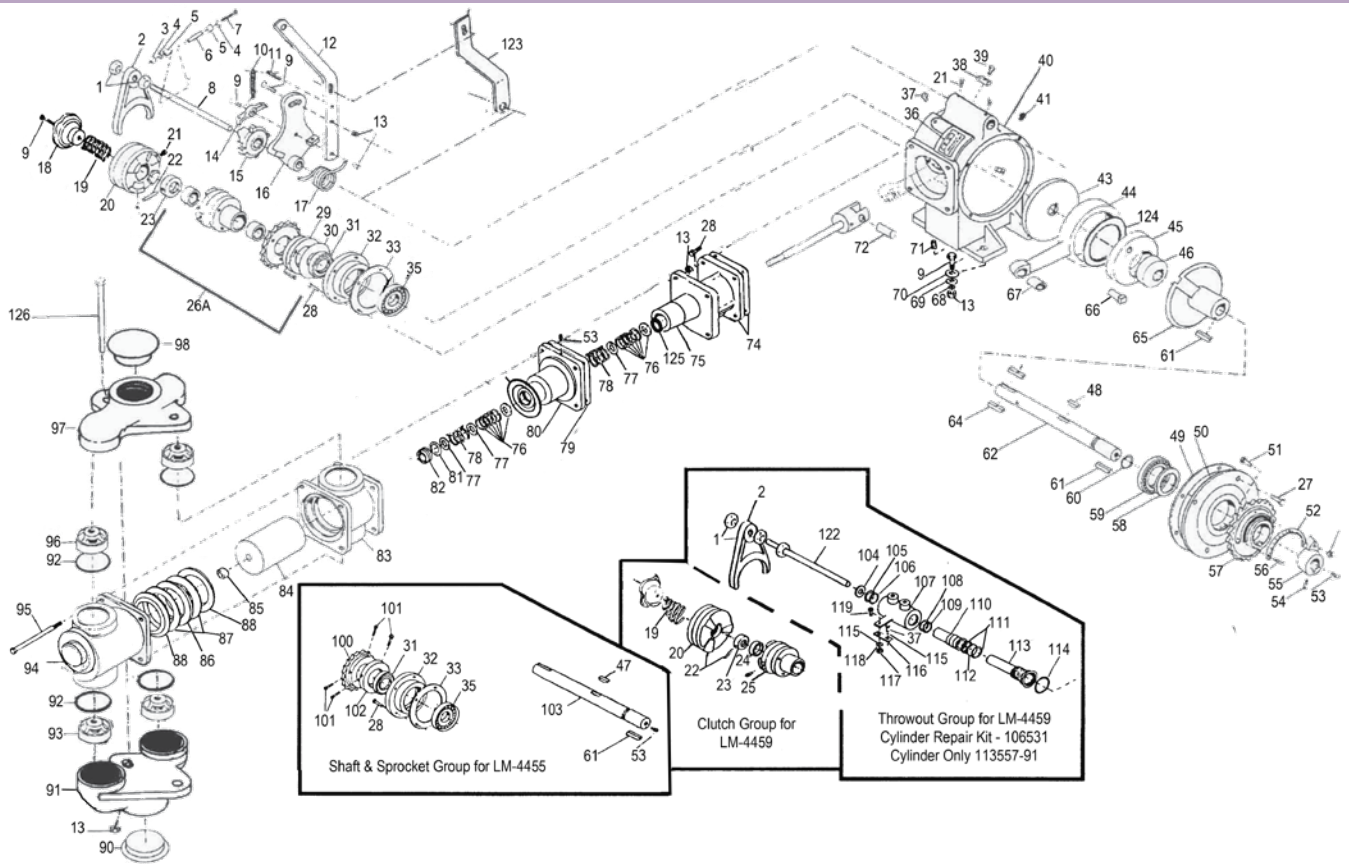
When ordering parts, give quantity, part no., description, and complete model number

LM-2400 SERIES SCHEMATIC



PUMPS

Ref	2450	2455	2459	Part No.	Description	Ref	2450	2455	2459	Part No.	Description
*43	1	1	1	113588-01	Bearing	84	1	1	1	103290-91	Piston Plunger Assembly
44	1	1	1	L-3004	Eccentric Pin	85	1	2	1	L-1047	Self-Locking Nut
45	1	1	1	L-1089	Stroke Locating Sleeve	*86	2	2	2	L-1045-V	Packing Plunger
46	2	2	2	L-1020	Setting Arm Key	*87	2	2	2	L-1098	Gasket, Flange Packing
47	1	1	1	108093-01	Key - Woodruff	88	1	1	1	L-1044-A	Washer, Flange Packing
*48	1	1	1	L-1006	Gasket Cover Plate	88A	1	1	1	L-3115	1-½ Plastic Plug
49	1	1	1	L-1004-A	Cover Plate	89	1	1	1	113649-01	Suction Manifold
50	1	1	1	91017	3.8 x 1 34/ Sq. Head Bolt	**89	1	1	1	113649-01S	Suction Manifold, SS
51	4	4	4	90636	¾ x ¾ Hex Bolt	90	2	2	2	1063489-92	Valve, Suction
52	1	1	1	L-1002	Pump Setting Scale	91	4	4	4	L-3031	Ring' Valve
53	1	1	1	A-3097	¾ Self Locking Nut	92	1	1	1	113651-01	Outboard Cylinder
54	1	1	1	H-30	Grease Fitting (Thread)	**92	1	1	1	113651-01S	Outboard Cylinder, SS
55	3	3	3	90532	¾ x ¾ Set Screw	93	2	2	2	90689	½ x 1- ½ Hex Head Bolt
56	1	1	1	115630-91	Setting Pointer Assembly	**93	2	2	2	90687	½ x 1- ½ Bolt, SS
57	3	3	3	A-368	Setting Scale Screw	94	2	2	2	106490-92	Discharge Valve
58	1	1	1	105932-91	Stroke Setting Flange	95	1	1	1	113648-01	Discharge Manifold
*59	1	1	1	L-1021	Oil Seal	**95	1	1	1	113648-01S	Discharge Manifold, SS
60	1	1	1	L-1007-A	Crankshaft Bearing	96	2	2	2	90672	¾ x ½ HHMB
*61	1	1	1	L-1022	Crankshaft O-Ring	**96	2	2	2	91071	¾ x 6 Bolt, SS
62	1	0	1	L-1019	Crankshaft	97	1	1	1	C-3518	1" Thread Protector
63	2	0	2	A-261	Square Key	98	2	0	1	90653	¾ x 1-¼ HHMB
64	4	4	4	93024	¾ Lock Washer	99	1	0	0	90657	¾ x 2 HHMB
65	4	4	4	93011	¾ Flat Washer	100	1	0	0	113685-01	16T Sprocket
66	4	4	4	A-147	Pump Mounting Pad	101	0	2	0	90986	¾ x ¾ Screw
67	3	3	3	C-431-B	¼" Plug	102	0	1	0	L-1019-A	Crankshaft
68	1	1	1	105895-01	Crosshead Pin	103	0	0	1	114706-91	Throw Out Rod Assembly
69	1	1	1	105926-91	Piston Rod Assembly	104	0	0	1	93016	SAE Flat Washer
*70	1	1	1	L-1038	Crosshead Guide Gasket	105	0	0	1	105448-01	Back-Up Ring
71	4	4	4	90637	¾ x 1 Hex Bolt	106	0	0	1	A-3776	O-Ring
72	2	2	2	90692	½ x 2 Hex Bolt	107	0	0	1	105447-01	Body
**72	2	2	2	90693	½ x 2 Bolt, SS	108	0	0	1	105452-01	Back-Up Ring
73	1	1	1	L-1000	Crosshead Guide	109	0	0	1	105461-01	O-Ring, Piston Rod
*74	2	3	2	L-1109	Rod Vee Packing Set	110	0	0	1	105449-01	Piston
75	3	2	3	L-1041	Washer, Packing	111	0	0	2	105462-01	Back-Up Ring
76	2	1	2	L-1063	Spring, Packing	112	0	0	1	A-2849	O-Ring
*77	1	1	1	L-1030	Gasket Stuffing Box	113	0	0	1	105463-01	Cylinder
78	1	1	1	L-1031-1	Outboard Stuffing Box	114	0	0	1	105500-01	Body, O-Ring
**78	1	1	1	L-1031-1S	Outboard Stuffing Box-SS	115	0	0	2	93010	¾ Flat Washer
*79	1	1	1	L-1023	Gasket	116	0	0	2	113646-01	Strap
80	1	1	1	L-1042	Retaining Ring	117	0	0	2	92020	¾ Hex Nut
81	1	1	1	L-1031-2	Stuffing Box Insert	118	0	0	2	93023	¾ Lock Washer
82	1	1	1	113650-01	Inboard Cylinder	119	0	0	2	90636	¾ x ¾ Hex Bolt Head
**82	1	1	1	113650-01S	Inboard Cylinder-SS	120	1	1	1	114652-01	45 Degree Grease Fitting
83	4	4	4	92029	½ Hex Nut	121	0	1	0	110147-01	Spacer
**83	4	4	4	92030	½ Nut SS	When ordering parts, give quantity, part no., description, and complete model number					

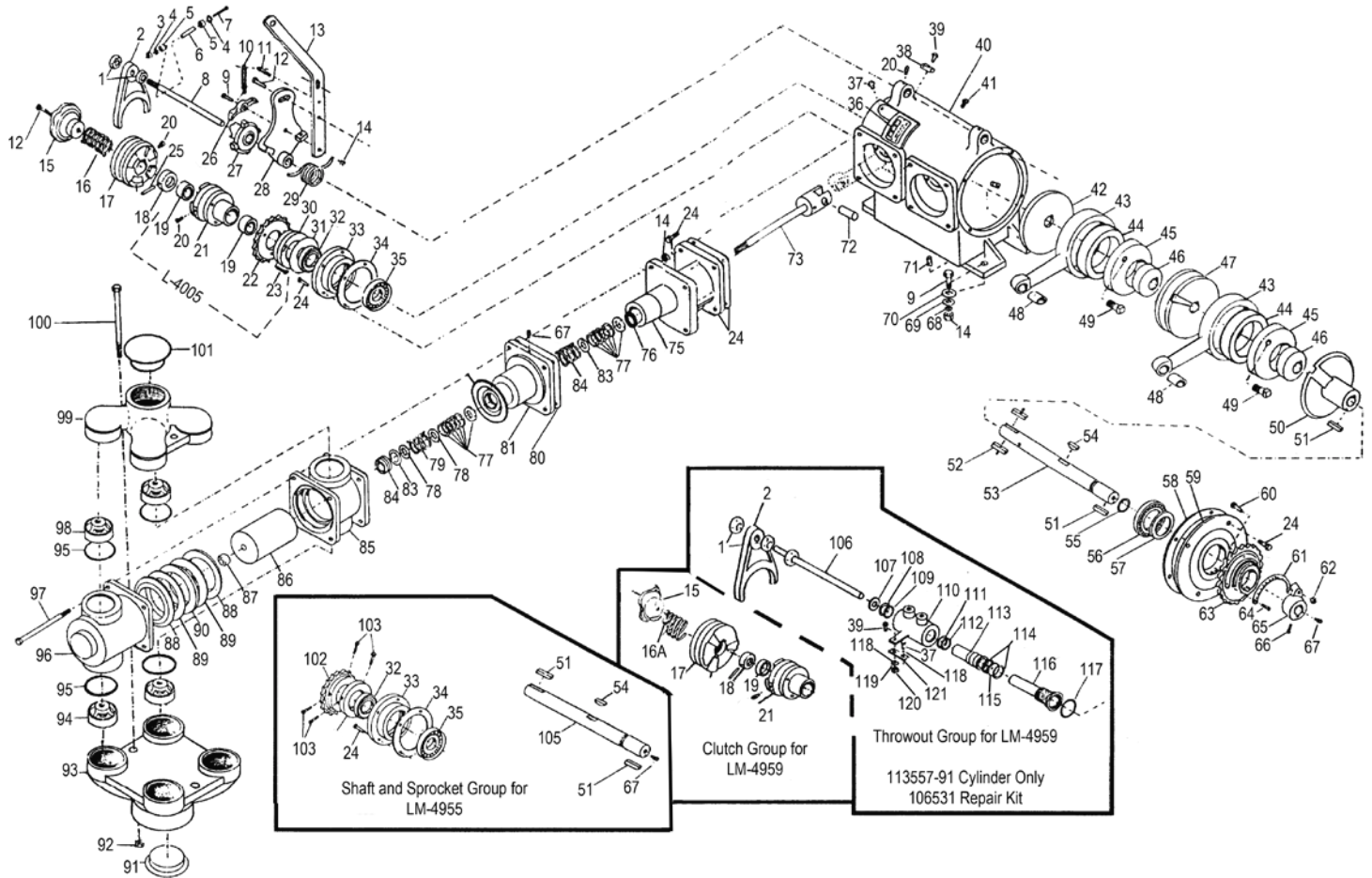


Ref	4450	4455	4459	Part No.	Description	Ref	4450	4455	4459	Part No.	Description
1	2	0	2	92037	5/8" Jam Nut	21	5	2	5	H-28	Grease Fitting
2	1	0	1	113628-01	Throw Out Yoke	22	1	0	1	L-4249	Drive Pin
3	1	0	0	92014	#10 Square Nut	23	1	0	1	105373-01	Clutch Collar
4	2	0	0	A-697	Washer	24	2	0	2	A-116	Oilite Bushing
5	2	0	0	A-2762	Cam Roller	25	1	0	0	L-4008-A	Carrier
6	1	0	0	A-2763	Roll Pin	25A	0	0	1	108906-01	Carrier
7	1	0	0	90953	2-1/4 Rd HD Screw	26	1	0	1	L-4006 L-4007	16T Sprocket or 18T Sprocket
8	1	0	1	L-4011	Throw Out Rod	26A	1	0	0	L-4004 L-4005	16T Sprocket Assembly or 18T Sprocket Assembly
9	6	4	5	90655	3/8 X 1 1/2 Hex Bolt	27	3	0	3	90993	1/4 X 1 1/2 Bolt
10	1	0	0	F-48	Throw Out Lever Spring	28	12	12	12	90637	5/16 X 1 HEX Bolt
11	1	0	0	94010	5/32 X 1 Cotter Pin	29	1	0	1	L-4009	Taining Collar
12	1	0	0	L-3064	Throw Out Lever	*30	1	1	1	110155-01	Washer
13	10	8	8	92024	3/8 Hex Nut	*31	1	1	1	L-1018	Oil Seal
**13	6	6	6	T-2010	3/8 Hex Nut - Stainless	32	1	1	1	L-3023	Bearing Housing
14	1	0	0	A-2758-A	Pawl	*33	1	1	1	L-3021	Bearing Housing Gasket
15	1	0	0	A-2757-A	Throw-Out Cam	35	1	1	1	L-3019	Crankshaft Bearing
16	1	0	0	L-3007	Throw-Out Bracket	36	1	1	1	111958-01	Name Plate
17	1	0	1	114165-01	R H Torsion Spring	37	1	2	1	90634	5/16 X 1/2 Hex Bolt
18	1	0	1	A-50	Handwheel	38	1	0	0	L-4014	Spring Anchor
19	1	0	0	HA-57	Safety Clutch Spring	39	1	0	1	90636	5/16 X 3/4 Hex Bolt
19A	0	0	1	108907-01	Safety Clutch Spring	40	1	1	1	113632-01	Crankcase Assembly
20	1	0	0	A-260	Clutch						
20A	0	0	1	108905-91	Clutch						

LM-4450 SERIES SCHEMATIC

Ref	4450	4455	4459	Part No.	Description	Ref	4450	4455	4459	Part No.	Description
41	1	1	1	S-350	Vent Plug	86	1	1	1	L-1044-A	Flange Packing Washer
43	1	1	1	L-3020	Crankshaft Disc	*87	2	2	2	L-1098	Packing ADJ Gasket
44	1	1	1	113645-91	Connecting Rod	*88	2	2	2	L-1045-V	Flange Plunger Packing
45	1	1	1	113633-01	Large Eccentric	90	1	1	1	L-3115	½ Plastic Plug
46	1	1	1	L-3017	Small Eccentric	91	1	1	1	111945-01	Suction Manifold
48	1	1	1	A-4333	#808 Woodruff Key	**91	1	1	1	111945-01S	Suction Manifold-S
*49	1	1	1	L-3002	Cover Plate Gasket	*92	4	4	4	A-2848	Valve O-Ring
50	1	1	1	L-3001	Cover Plate	93	2	2	2	109112-92	Suction Valve Assembly
51	1	1	1	91017	¾ X 1 ¾ SQ Head Bolt	94	1	1	1	111940-01	Outboard Cylinder
52	1	1	1	114763-01	Pump Setting Scale	**94	1	1	1	111940-01S	Outboard Cylinder
53	2	2	2	H-30	Grease Fitting	95	4	4	4	91051	¾ X 8 Hex Bolt
54	3	3	3	90532	⅝ X ¾ Set Screw	**95	4	4	4	91072	¾ X 5 ½ Hex Bolt SS
55	1	1	1	115630-91	Setting Pointer Assembly	96	2	2	2	109113-92	Discharge Valve Assembly
56	3	3	3	A-368	Setting Scale Screw	97	1	1	1	111944-01	Discharge Manifold
57	1	1	1	105932-91	Stroke Setting Flange	**97	1	1	1	111944-01S	Discharge Manifold-S
*58	1	1	1	L-1021	Oil Seal	98	1	1	1	C-3517	Plastic Plug
59	1	1	1	L-1007-A	Crankshaft Bearing	100	0	1	0	106532-01	Sprocket
*60	1	1	1	L-1022	Crankshaft O-Ring	101	0	4	0	90986	3.8 X ⅝ Screw
61	2	3	2	L-1020	Setting Arm Key	102	0	1	0	110147-01	Spacer
62	1	0	1	L-4012	Crankshaft	103	0	1	0	103453-02	Crankshaft
64	2	0	2	A-261	Square Key	104	0	0	1	93016	Sae Flat Washer
65	1	1	1	L-3056	Stroke Locating Sleeve	105	0	0	1	105448-01	Back-Up-Ring
66	1	1	1	L-3004	Eccentric Pin	106	0	0	1	A-3776	O-Ring
*67	1	1	1	113588-01	Connector Rod Bushing	107	0	0	1	105447-01	Body O-Ring
68	4	4	4	93024	¾ Lock Washer	108	0	0	1	105452-01	Back-Up-Ring
69	4	4	4	93011	¾ Flat Washer	109	0	0	1	105461-01	Piston Rod O-Ring
70	4	4	4	A-147	Leg Mounting Pad	110	0	0	1	105449-01	Piston
71	3	3	3	C-431-B	Plug	111	0	0	2	105462-01	Back-Up-Ring
72	1	1	1	105895-01	Crosshead Pin	112	0	0	1	A-2849	O-Ring
73	1	1	1	105900-91	Piston Rod Assembly	113	0	0	1	105463-01	Cylinder
*74	1	1	1	L03052	Crosshead Guide Gasket	114	0	0	1	105500-01	Body O-Ring
75	1	1	1	111935-01	Crosshead Guide	115	0	0	2	93010	⅝ Flat Washer
*76	2	2	2	L-1109	Rod Vee Packing Set	116	0	0	2	105501-01	Strap
77	3	3	3	L-1041	Washer	117	0	0	2	92020	⅝ Hex Nut
78	1	2	2	L-1063	Packing Spring	118	0	0	4	93023	⅝ Lock Washer
*79	1	1	1	L-3074	Stuffing Box Gasket	119	1	0	1	90636	Hex Head Bolt
80	1	1	1	111937-01	Outboard Stuffing	*120	1	1	1	L-3035	Gasket
**80	1	1	1	111937-01S	Outboard Stuffing Box-S	121	1	1	1	A-3097	¾ Lock Nut
81	1	1	1	L-1042	Retaining Ring	122	0	0	1	114705-91	Rod Throw-Out Assembly
82	1	1	1	L-1031-2	Stuffing Box Insert	123	1	0	0	L-4025	Support Handle
83	1	1	1	111938-01	Inboard Cylinder	124	1	1	1	113629-01	Bearing, Crank Pin
**83	1	1	1	111938-01S	Inboard Cylinder-S	*125	1	1	1	111943-01	O-Ring
84	1	1	1	112816-91	Piston Plunger Assembly	126	2	2	2	91063	Bolt ¾ X 8 ½
85	1	1	1	L-1047	Self-Locking Nut	**126	2	2	2	91073	¾ X 7 Hex Bolt SS

When ordering parts, give quantity, part no., description, and complete model number



Ref	4950	4955	4959	Part No.	Item Description
1	2	0	2	92037	5/8" Jam Nut
2	1	0	1	113628-01	Throw Out Yoke
3	1	0	0	92014	#10 Square Nut
4	2	0	0	A-697	Washer
5	2	0	0	A-2762	Cam Roller
6	1	0	0	A-2763	Roll Pin
7	1	0	0	90953	2-1/2 RD HD Screw
8	1	0	0	L-3006	Throw Out Rod
9	5	4	4	90655	3/8 X 1-1/2 Hex Bolt
10	1	0	0	F-48	Throw Out Lever Spring
11	1	0	0	94010	5/32 X 1 Cotter Pin
12	2	0	1	90653	3/8 X 1-1/4 Hex Bolt
13	1	0	0	L-3064	Throw Out Lever
14	14	12	12	92024	3/8 Hex Nut
***14	14	12	12	T-2010	3/8 Nut-SS
15	1	0	1	A-50	Handwheel
16	1	0	0	HA-57	Safety Clutch Spring
16A	0	0	1	108907-01	Safety Clutch Spring
17	1	0	0	A-260	Clutch
17A	0	0	1	108905-91	Clutch Hydraulic
18	2	0	2	105373-01	Clutch Collar

Ref	4950	4955	4959	Part No.	Item Description
19	6	2	5	A-116	Olite Bushing
20	1	0	0	H-28	Grease Fitting
21	0	0	1	L-4008-A	Sprocket Carrier
21A	1	0	1	108906-01	Sprocket Carrier
22	3	0	3	L-4007	18T Sprocket
23	16	16	16	90993	1/4 X 1-1/2 Socket HD Bolt
24	1	0	1	90637	5/16 X 1 Hex Bolt
25	1	0	0	L-4249	Drive Pin
26	1	0	0	A-2758-A	Pawl
27	1	0	0	A-2757-A	Throw Out Cam
28	1	0	0	L-3007	Throw Out Bracket
29	1	0	1	114165-01	Right Hand Torsion Spring
30	1	1	1	L-4009	Retaining Collar
31	1	1	1	110155-01	Washer Nylon
32	1	1	1	L-1018	Oil Seal
33	1	1	1	L-3023	Bearing Housing
34	1	1	1	L-3021	Bearing Housing Gasket
35	1	1	1	L-3019	Crankshaft Bearing
36	1	2	2	111958-01	Name Plate
37	1	0	0	90634	5/16 X 1/2 Bolt
38	1	0	2	L-4014	Spring Anchor

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Ref	4950	4955	4959	Part No.	Item Description
39	1	1	1	90636	5/16 X 3/4 Bolt
40	1	1	1	113634-01	Crankcase
41	1	1	1	S-350	Vent Plug
42	2	2	2	L-3020	Crankshaft Disc
43	2	2	2	113645-91	Connection Rod
44	2	2	2	113629-01	Bearing Crank Pin
45	2	2	2	113633-01	Large Eccentric
46	1	1	1	L-3017	Small Eccentric
47	2	2	2	L-3018	Stroke Transfer Sleeve
48	3	3	3	113588-01	Connection Rod Bushing
49	1	1	1	L-3004	Eccentric Pin
50	2	2	2	L-3056	Stroke Locating Sleeve
51	2	0	2	L-1020	Setting Arm Key
52	1	0	1	A-261	Clutch Key
53	1	0	1	L-3013	Crank Shaft
54	1	1	1	A-4333	Key, Woodruff
55	1	1	1	L-1022	Crankshaft O-Ring
56	1	1	1	L-1007-A	Bearing Locating Sleeve
57	1	1	1	L-1021	Oil Seal
58	1	1	1	L-3002	Cover Plate Gasket
59	1	1	1	L-3001	Cover Plate
60	1	1	1	91017	3/8 Square Head Bolt
61	1	1	1	114763-01	Pump Setting Scale
62	0	1	0	A-3097	3/8 Self-Locking Nut
***	1	1	1	115159-91	Electric Clutch Kit
63	1	1	1	105932-91	Stroke Setting Flange
64	3	3	3	A-368	Setting Scale Screw
65	1	1	1	115630-91	Stroke Setting Arm
66	3	3	3	90532	5/16 X 3/8 Set Screw
67	3	3	3	H-30	Grease Fitting
68	4	4	4	93024	3/8 Lock Washer
69	4	4	4	93011	3/8 Flat Washer
70	4	4	4	A-147	Leg Mounting Pad
71	3	3	3	C-431-B	Plug
72	2	2	2	105895-01	Crosshead Pin
73	2	2	2	105900-91	Piston Rod Assembly
74	2	2	2	L-3052	Crosshead Guide Gasket
75	2	2	2	111935-01	Crosshead Guide
76	2	2	2	111943-01	O-Ring
77	4	4	4	L-1109	Rod Vee Packing Set
78	6	6	6	L-1041	Washer
79	4	4	4	L-1063	Packing Spring
80	2	2	2	L-3074	Stuffing Bos Gasket
81	2	2	2	111937-01	Outboard Stuffing Box
***81	2	2	2	111937-01S	Outboard Stuffing Box-SS
82	2	2	2	115134-01	Gasket

Ref	4950	4955	4959	Part No.	Item Description
83	2	2	2	L-1042	Retaining Ring
84	2	2	2	L-1031-2	Stuffing Box Insert
85	2	2	2	111938-01	Inboard Cylinder
***85	2	2	2	111938-01S	Inboard Cylinder - SS
86	2	2	2	112816-01	Piston Plunger Assembly
87	2	2	2	L-1047	Self-Locking Nut
88	4	4	4	L-1045-V	Flange Plunger Packing
89	4	4	4	L-1098	Packing Adjustment Gasket
90	2	2	2	L-1044-A	Flange Packing Washer
91	1	1	1	C-3519	2" Thread Protector
92	2	2	2	92029	1/2 Hex Nut
93	1	1	1	111939-01	Suction Manifold
***93	1	1	1	111939-01S	Suction Manifold-SS
94	4	4	4	109112-92	Suction Valve
95	8	8	8	A-2848	Value O-Ring
96	2	2	2	111940-01	Outboard Cylinder
***96	2	2	2	111940-01S	Outboard Cylinder-SS
97	8	8	8	91051	3.8 X 8 Hex Head Bolt
***97	8	8	8	91072	3.8-16 X 5- 1/2 Bolt, SS
98	4	4	4	109113-92	Discharge Valve
99	1	1	1	111936-01	Discharge Manifold
***99	1	1	1	111936-01S	Discharge Manifold-SS
100	2	2	2	90711	1/2-13 X 9-1/2 Bolt
	2	2	2	90710	1/2-13 X 8-1/2 Bolt
101	1	1	1	L-3115	1 1/2 Thread Protector
102	0	1	0	106532-01	18T Sprocket
103	0	4	0	90986	3/8 X 3/8 Set Screw
104	0	1	0	110147-01	Spacer
105	0	1	0	115031-01	Crankshaft
	0	1	0	115122-01	Spacer-Elec. Clutch Shoulder
	0	1	0	115125-01	1/4" BY 1-1/2" Dowel Pin
106	0	0	1	114708-91	Throw-Out Rod Assembly
107	0	0	1	93016	Flat Washer
108	0	0	1	105448-01	Back-Up Ring
109	0	0	1	A-3776	O-Ring
110	0	0	1	105447-01	Body
111	0	0	1	105452-01	Back-Up-Ring
112	0	0	1	105461-01	O-Ring
113	0	0	1	105449-01	Piston
114	0	0	2	105465-01	Back-Up-Ring
115	0	0	1	A-2849	O-Ring
116	0	0	1	105463-01	Cylinder
117	0	0	1	105500-01	Body O-Ring
118	0	0	4	93010	5/16 Flat Washer
119	0	0	2	93023	5/16 Lock Washer
120	0	0	2	92020	5/16 Hex Nut
121			2	105501-01	Strap

When ordering parts, give quantity, part no., description, and complete model number

VISAGAGE II - LIQUID FLOW RATE MONITOR

- Flow monitors for fertilizer applications in single columns or in sets of four flow monitor assemblies. Interchangeable with other brands already on the market today.
- Chemical resistant poly adapters and clear PVC body with an additive for UV protection. Viton o-rings standard. No electronic parts.
- Banking single columns to get exact columns.
- Match flow rate to ball color
- The set of 4 flow monitor assemblies (SMSS4 or SMFD4) can also be connected for additional columns divisible by four. Clasp them together with the stainless steel clips and o-rings and go. Limit 8 per side.
- The John Blue VisaGage II allows the use of common stainless steel orifice plates.
- So easy – See the balls in line and know your rate is uniform.



Part No.	Description
VISAGAGE II FOR USE WITH SPRAYERS	
SMSS1	Single Flow Monitor Assembly - Spray Type includes single body, 3/8" NPT female inlet and outlet, (5) 1/2" diameter balls, end cap, Viton o-rings and stainless steel retainer clips.
SMSS4	Set of 4 Flow Monitor Assembly - Spray Type includes 4 bodies, 1/2" NPT female inlet, 3/8" NPT female outlet, (20) 1/2" diameter balls, end cap, Viton o-rings and stainless steel retainer clips.
VISAGAGE II FOR USE WITH FLOW DIVIDERS OR SQUEEZE TUBE PUMPS	
SMFD1	Single Flow Monitor Assembly - Flow Divider Type includes single flow divider monitor body, 3/8" NPT female inlet and outlet, (5) 1/2" diameter balls, end cap, Viton o-rings and stainless steel retainer clips.
SMFD4	Set of 4 Flow Monitor Assembly - Flow Divider Type includes 4 bodies, 3/8" NPT female inlet and outlet, (20) 1/2" diameter balls, end cap, Viton o-rings and stainless steel retainer clips.
SMPT-0009	Ball storage unit - optional - holds up to 40 balls (use one per set of 8 bodies). Lid can be locked.
SMPT-0014	Tee - optional - for spray type use with typically 8 total bodies, 1" NPT female inlet port and 1/4" female NPT port for gauge.
SMPT-0021	3/16" Stainless Steel Ball - optional - for use with extra high flow rates.
SMPT-0034	#112 Viton O-ring - optional - used to seal orifice plates, install plate in recess of the 3/8" NPT port adapters and then install the o-ring to retain and seal orifice plate



The John Blue Flow Monitor Calculator is used to calculate your flow rate in equivalent gallons per minute per row (based on your fertilizer weight) and helps you determine the most appropriate ball to use in your VisaGage II or Liquid Blockage Monitor System (LBMS) flow monitor device.



VISAGAGE ORIFICE SELECTOR

- Turn your John Blue VisaGage II into a self contained orifice changing system.
- This patent-pending system is the first of its kind on the market today.
- Simply select from one of the four orifice settings on the two discs provided.
- No more getting wet from fertilizers or chemicals when changing orifices.
- Adjustment is quick, no need to travel to each row unit and work with plumbing near the ground.

Part No.	Description
SMPT-OSA1	Single orifice selector kit.
SMPT-OSA4	Set of 4 orifice selector kit.



POLY DIAPHRAGM PUMPS

- Polypropylene and 316 stainless steel components offer chemical compatibility with even the most aggressive chemicals
- Self-lubricating cast iron piston sleeves provide unique “oil-thrust” pad design
- Economical and trouble free service with bronze connecting rods and resistant elastomer diaphragms held with 316 stainless steel washer and diaphragm bolt
- Aluminum die-cast core inside poly structure offers superior strength
- Long life with reduced piston stroke
- Heads, diaphragms, and other associated components are interchangeable across poly pump line



DP193

JOHN BLUE POLY DIAPHRAGM PUMPS

Model Part No.	Max Flow	No. Diaphragms	Max PSI	Max RPM
DP-193-PP	19.8	3	218	550
DP-282-P	28.2	3	218	550
DP-332-P	33.3	3	218	550
DP-448-P	44.9	4	218	550
DP-555-P	55.5	4	218	550
DP-602.5-P	67.1	4	218	550



DP282

MEDIUM & HIGH PRESSURE DIAPHRAGM PUMPS

- Medium pressure diaphragm pumps from 4.3 to 18.5 GPM and 0 to 580 PSI
- High pressure diaphragm pumps from 23 to 39.2 GPM and 0 to 725 PSI
- Improved piston seal with two piston rings per piston to keep film and oil between piston and diaphragm
- Check valve, 316 stainless steel and polypropylene construction, ensures spherical shaped poppet and conical seat
- Internal pulsation dam on high pressure diaphragm absorb pressure on all circuits resulting in a smoother flow of product
- Two piston diaphragm pump is ideal for gardening, smaller sprayers, and liquid transfer
- Three piston diaphragm pumps ensures smoother, quieter operation



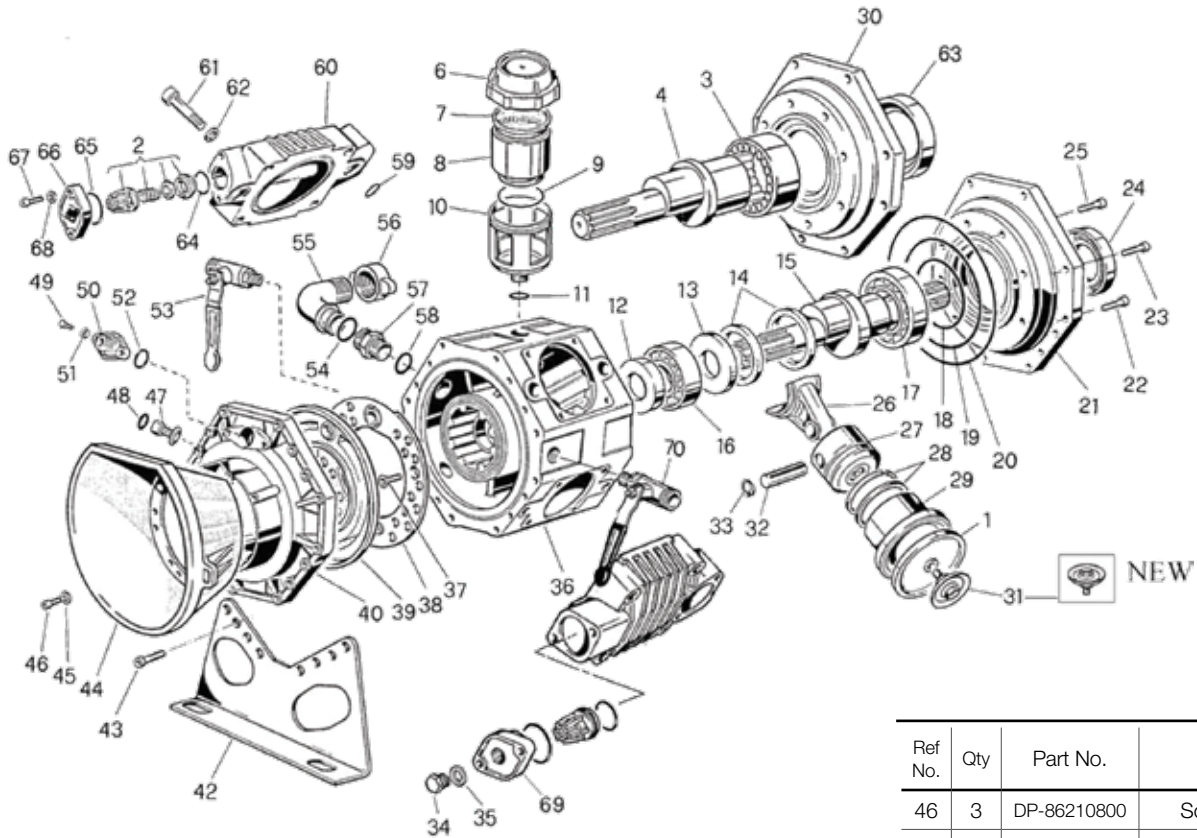
DP43

JOHN BLUE DIAPHRAGM PUMPS**MEDIUM-PRESSURE PUMPS**

Model	Max Flow	No. Diaphragms	Max PSI	Max RPM	Unit Weight (lbs)	Power HP	Suction Hose	Discharge Hose
DP-43	4.3	2	290	550	12.32	1.2	¾"	½" NPT
DP-74.1+	7.4	3	580	550	16	2.5	1"	½" NPT
DP-139	13.9	3	580	550	5.6	30.8	1 ¼"	½" NPT
DP-185.1	18.5	3	580	550	7.4	33	1 ¼"	¾" NPT

HIGH-PRESSURE PUMPS

Model	Max Flow	No. Diaphragms	Max PSI	Max RPM	Unit Weight (lbs)	Power HP	Suction Hose	Discharge Hose
DP-230.1	23	3	580	550	55.6	11.6	1 ¼"	¾" NPT
DP-392.1	39.2	4	725	550	105	20.1	1 ½"	¾" NPT



DIAPHRAGM PUMP 392 SCHEMATIC

Ref No.	Qty	Part No.	Description
1	4	DP-95004031	Piston Diaphragm
1	4	DP-95004033	Piston Diaphragm, Viton
1	4	DP-95004000	Piston Diaphragm, Desmopan
2	8	DP-35980297	Valve Assembly
6	1	DP-280114432	Oil Filler Cap
7	1	DP-41001731	Diaphragm Cushion
8	1	DP-41001632	Oil Filler Cap
9	1	DP-80230940	O-Ring 2, 62x44, 12
10	1	DP-41001509	Oil Filler Bowl
11	1	DP-82419100	Gasket
12	1	DP-80214210	O-Ring
13	1	DP-41002361	Spacer Ring
14	2	DP-14001576	Connecting Rod Ring
15	1	DP-41003326	Crankshaft
16	1	DP-81286800	Bearing
17	1	DP-81291300	Bearing
18	1	DP-80329100	O-Ring 3, 53x88, 5
19	1	DP-80321070	O-Ring 2, 62x126, 67
20	1	DP-80329150	O-Ring 3, 53x177, 39
21	1	DP-41001909	Crankcase Cover (Suction Side)
22	16	DP-86275200	Bolt 8x35MM

Ref No.	Qty	Part No.	Description
23	4	DP-86273000	Bolt 8x30MM
24	1	DP80219000	Oil Seal
25	16	DP-86275200	Bolt 8x35MM
26	1	DP-41004711	Connecting Rod, Bronze
27	4	DP-37001609	Piston
28	8	DP-81852700	Piston Ring
29	4	DP-43001501	Piston Sleeve
31	4	DP-41983597	SS Diaphragm Washer & Bolt Kit
32	4	DP-85200700	Piston Pin
33	8	DP-80002100	Retaining Ring
34	2	DP-85257900	Plug G. 3/8
35	2	SC-82410700	Washer
36	1	DP-41000109	Pump Crankcase
37	3	DP-86201000	Bolt 6x10MM
38	1	DP-35000308	Dampener Plate
39	1	DP-35004034	Diaphragm Dampener
40	1	DP-41000409	Cover*
42	2	DP-41001461	Mounting Brackets
43	8	DP-86279600	Screw 8x40MM
44	1	DP-31146832	Shield (Optional)
45	3	SC-84361800	Washer (Optional)

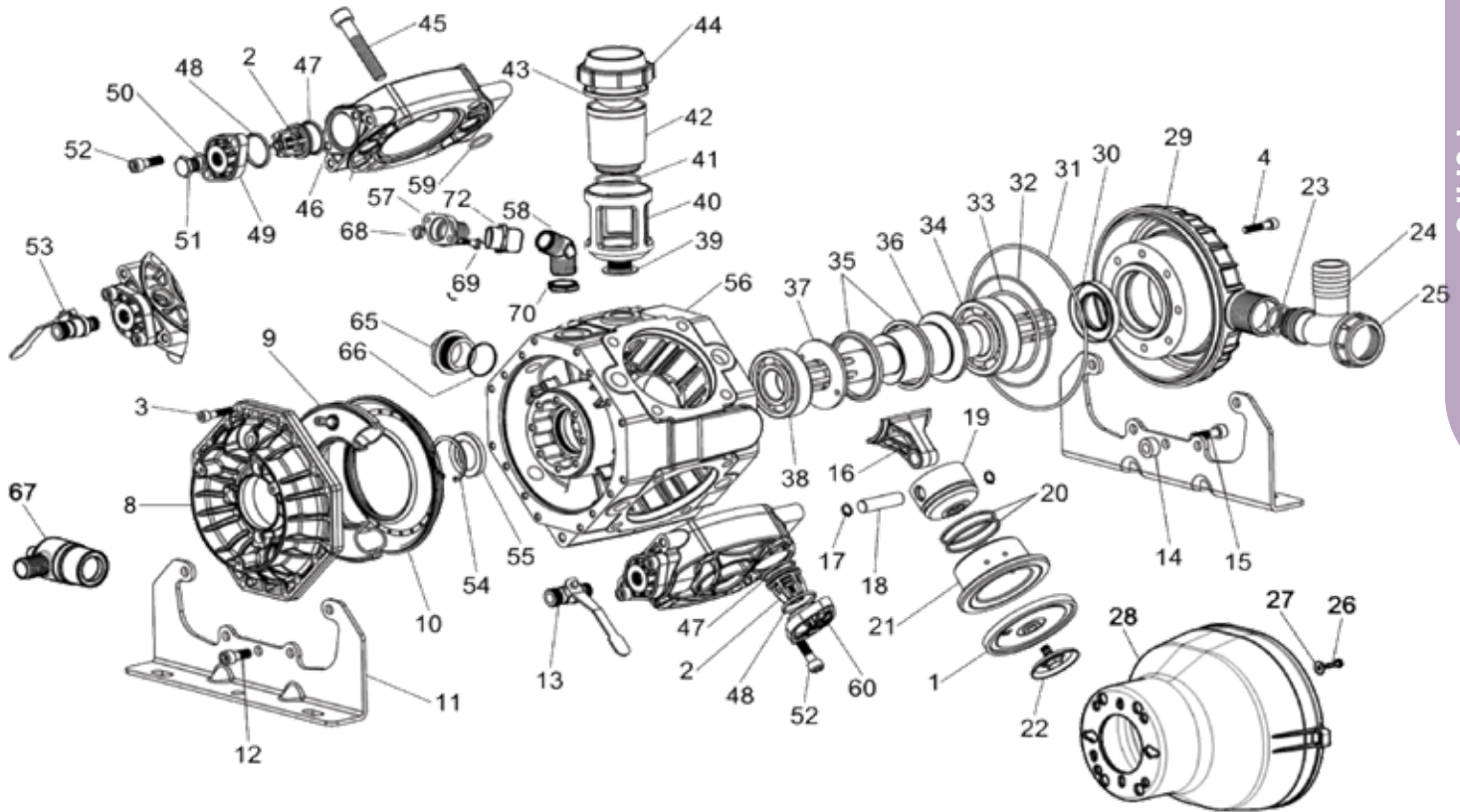
Ref No.	Qty	Part No.	Description
46	3	DP-86210800	Screw (Optional)
47	1	DP-86160900	Air Valve
48	1	DP-80321300	O-Ring 3, 0x6
49	2	DP-86219000	Bolt 6x22MM
50	1	DP-31891797	Discharge Fitting
51	2	DP-84358500	Washer
52	1	DP-80321800	O-Ring 3, 0x22
53	2	DP-84554410	1/4 Turn Valve
54	1	DP-80321910	O-Ring
55	1	DP-84059100	90-Degree Hose Barb
56	1	DP-82001000	Nut
57	1	DP-91009512	Fitting Seat
58	1	DP-80320810	O-Ring
59	8	DP-80320000	O-Ring 2, 62x22, 22
60	4	DP-35000209	Head
61	16	DP-86399000	Bolt 12x60MM
62	16	DP-84389600	Washer
64	8	DP-80325100	O-Ring 3, 53x32, 93
65	8	DP-80326200	O-Ring 3, 53x41, 28
66	8	DP-35000809	End Cover
67	16	DP-86326500	Bolt 10x25MM
68	16	DP-84387000	Washer
69	1	DP-37002509	Valve Cover
70	1	DP-84554400	1/4 Turn Valve
NA	1	DP-41989097	Pump Repair Kit
NA	1	DP-41989197	Valve Kit

When ordering parts, give quantity, part no., description, and complete model number

*When ordering #40, Part No. DP-41000409, also order #47, Part No. DP-86160900 and #48, Part No. DP-80321300



DIAPHRAGM PUMP 392.1 SCHEMATIC



Ref	Part No	Qty	Description
* 1	DP-95004031	4	Buna-N Piston Diaphragm
1	DP-95004033	4	Viton Piston Diaphragm
1	DP-95004000	4	Desmopan Piston Diaphragm (Opt)
1	DP-95004036	4	HPS Piston Diaphragm (Opt)
**2	DP-35980297	8	Valve Assembly
3	DP-86273000	20	Screw M8X30
4	DP-86275200	8	Screw M8X35
8	DP-41040509	1	Ballaster Cover
*9	DP-41012097	1	Buna-N Ballaster Diaphragm
10	DP-41010409	1	Lower Ballaster
11	DP-41011361	2	Mountain Rail
12	DP-86326500	9	Screw M10X25
13	DP-84554410	1	Left Tap G.3/8"-G.1/2"
14	DP-41011575	1	Mountain Rail Spacer
15	DP-86334700	1	Screw M10X35
16	DP-41004711	4	Bronze Conrod
17	DP-80002100	8	Ring Dia. 15
18	DP-85200700	4	Piston Pin, Dia. 15X24
19	DP-37001609	4	Piston
20	DP-81852700	8	Piston Ring
21	DP-43001501	4	Piston Sleeve
22	DP-41983597	4	Kit Disk + Screw Indx
*23	DP-80321910	1	O-Ring, Dia. 3.0X30

Ref	Part No	Qty	Description
24	DP-84059100	1	90 Degree Elbow Conn., Dia. 40
25	DP-82007000	1	Wing Nut, G.1-1/2"
26	DP-86184600	4	Screw M5, 5X16 (Opt)
27	DP-84356000	4	Washer, Dia. 5.5X15X1, 6 (Opt)
28	DP-31148232	1	Plain Safety Cone L.180 (Opt)
28	DP-31146832	1	Plain Safety Cone L.135 (Opt)
29	DP-41011209	1	Inlet Cover "VD"
*30	DP-80219000	1	Oil Seal, Dia. 40X72X10 "VD"
*31	DP-80329500	1	O-Ring, Dia. 3.53X190,1
*32	DP-80321070	1	O-Ring, Dia. 2.62X126,6
*33	DP-80329100	1	O-Ring, Dia.3.53X88.5
34	DP-81291300	1	Ball Bearing 6308 "VD"
35	DP-14001576	2	Conrod Holding Ring
36	DP-41003326	1	Crankshaft "VD"
37	DP-41002361	1	Circlip
38	DP-81286700	1	Ball Bearing
39	DP-82419100	1	Gasket
40	DP-41001509	1	Oil Filler Body
*41	DP-80320940	1	O-Ring, Dia. 2.62X44,12
42	DP-41001632	1	Oil Filler
*43	DP-41001731	1	Oil Filler Diaphragm
44	DP-28014432	1	Oil Filler Cover
45	DP-86425000	16	Screw, M14X70

Ref	Part No	Qty	Description
46	DP-41011109	4	Pump Head
*47	DP-80325100	8	O-Ring, Dia. 3.53X32,93
*48	DP-80326200	8	O-Ring, Dia. 3.53X41,28
49	DP-41011009	4	Valve Cover, G.3/8"
*50	DP-82410700	2	Gasket
51	DP-85257900	2	Cap, G.3/8"
52	DP-86330000	16	Screw, M10X30
53	DP-84554400	1	Right Tap, G.3/8" - G.1/2"
54	DP-80136900	1	Ring, Dia. 52
*55	DP-80214310	1	Oil Seal, Dia. 35X52X7
56	DP-41010809	1	Crankcase
57	DP-31135228	1	Flange for Valve Coupling G.3/4"
58	DP-83506328	1	60 Degree Elbow Conn. G.3/4"
*59	DP-80320000	8	O-Ring, Dia. 2.62X22,22
60	DP-41010909	4	Valve Cover
65	DP-85352000	1	Nylon Cap, M40X1,5
*66	DP-80308010	1	O-Ring, Dia. 1.78X35,65
67	DP-24305097	1	Safety Valve 50Bar (Opt)
68	DP-81454200	2	Nut M6
69	DP-86216000	2	Screw, M6X20
70	DP-81490900	1	Brass Nut, G.3/4"
72	DP-83504000	1	Sleeve, G.3/4"

BLUE WHITE PUMP AND FLOWMETERS

SULFURIC ACID METERING PUMP



- Economical and versatile.
- All ball bearing, permanently lubricated gear motor for smooth, quiet, powerful operation.
- Turndown Ratio is 27:1
- Stroke adjustment from 4-100% permits accurate small injections at a high rate per minute.
- Double-ball inlet and outlet cartridge type check valves
- Diaphragm material = PTFE
- Durable metal epoxy coated construction
- Wetted Parts: PTFE coated EP diaphragm
- Double-ball inlet and outlet cartridge type ceramic check valves.
- Chemical resistant PVDF pump head, valve body and fittings, ceramic balls, FKM static seals and TFE/P ball seat o-rings. No metal springs are used.
- Motor: All ball bearing, permanently lubricated gear motor for smooth, quiet, powerful operation.

Part No.	Max Feed	Max PSI	Pipe	Description
C660P-12V	6.2 GPH	60	3/8" Tubing	Diaphragm metering pump for injecting Sulfuric Acid. Mechanical output rate adjustment. Teflon coated diaphragm. 12 volt electric motor



F410N

BLUE WHITE ACRYLIC LIQUID FLOWMETER

- Durable, highly polished, one piece meter body.
- Annealed for added strength and chemical resistance.
- Acceptable for outdoor installations (acceptable in direct sunlight)
- Direct reading permanent scale.
- White back reflector for easy reading.
- Standard 316 stainless floats and guide rods, optional Hastelloy-C for more corrosive environments.

Part No.	Flow Ranges	Max PSI	Pipe Sizes	Description
F400N	0.025 –5 GPM	150	1/4", 3/8" & 1/2" F/NPT	Acrylic Meter, Max. Fluid Temperature: 150°F; FKM O-ring Seal Material; Polypropylene Adapter Material
F410N	1 to 20 GPM	150	3/4" and 1" F/NPT	Acrylic Meter, Max. Fluid Temperature: 150°F; FKM O-ring Seal Material; Polypropylene Adapter Material

UDOR DIAPHRAGM PUMP



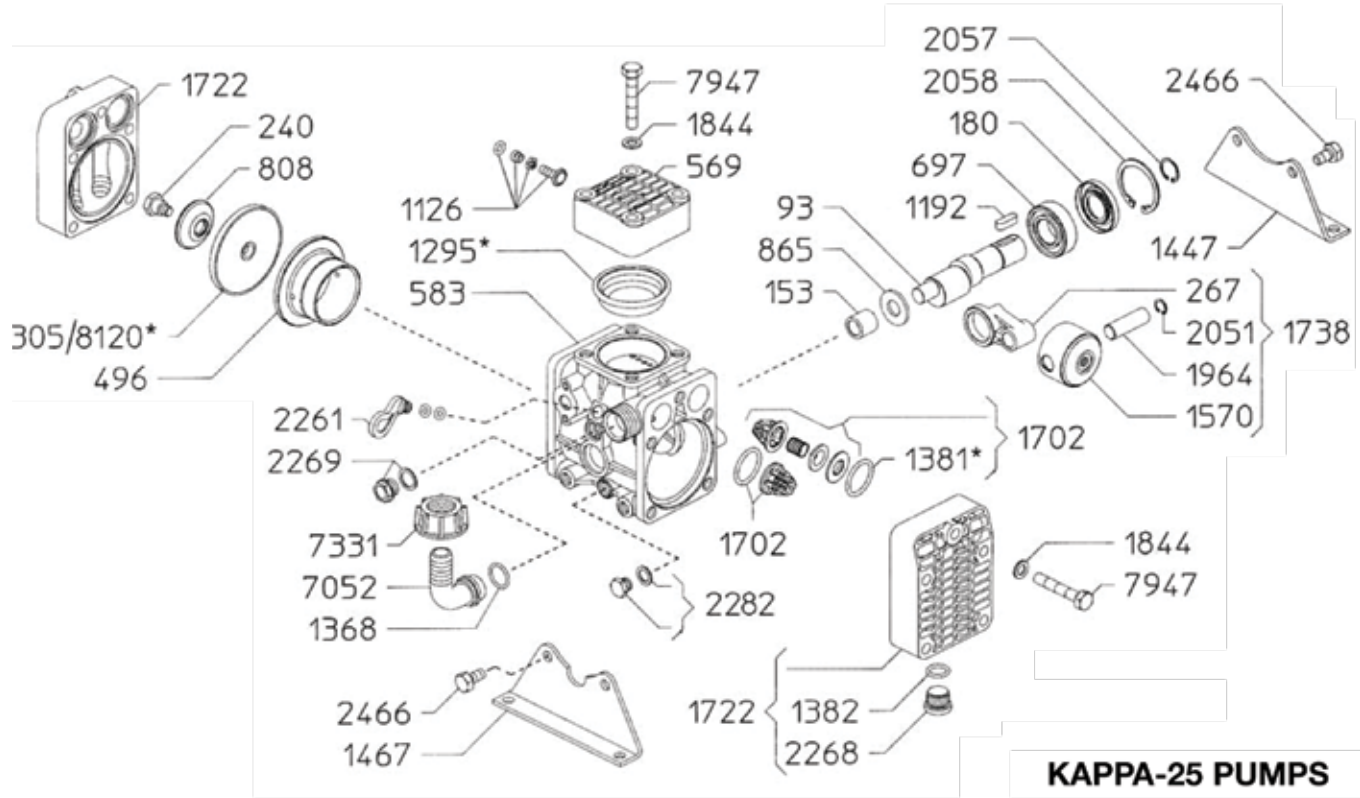
UDOR KAPPA-SERIES DIAPHRAGM PUMP

- KAPPA Series Diaphragm Pumps are internally manifolded with anodized aluminum construction
- Max pump speed of 540 RPM

UDOR ZETA-SERIES DIAPHRAGM PUMP

- UDOR ZETA- Series Diaphragm Pumps have plasticized aluminum heads and glass filled nylon manifolds.
- Control Unit is not included.
- Max pump speed of 540 RPM

	Part No.	Description	Max GPM	Max PSI	Hose Barb		Weight (lbs)
					In	Out	
KAPPA SERIES PUMPS							
	UD-PUKAPPA25GR	Two diaphragm pump with pulsation dampener & control unit with adjustable pressure regulator, manual dump lever, dual ball valve outlets & pressure gauge. Equipped with a gearbox for 3-5.5 HP gasoline engines with ¾" shafts.	7	350	1	(2) ½"	28
	UD-PUKAPPA43GR	Three diaphragm pump with control unit with adjustable pressure regulator, manual dump lever, dual ball valve outlets & pressure gauge. Fitted with gearbox for 4-6.5 HP gasoline engines with ¾" shafts.	10	560	1	(2) ½"	39
	UD-PUKAPPA55GR	Three diaphragm pump with universal drive face, pulsation dampener & control unit with adjustable pressure regulator, manual dump lever, dual ball valve outlets & pressure gauge. Gear reduction for 5-6.5 HP gasoline engines with ¾" shafts.	15	350	1 ¼"	(2) ½"	47
ZETA SERIES							
	UD-PUZETA120C	Zeta 120C is a low pressure, three diaphragm pump with pulsation dampener, mounting rails, & 1-⅝" six spline male PTO shaft. PTO safety shield is included.	31	300	1 ½"	¾"	45
	UD-PUZETA170C	Zeta 170C is a low pressure, four diaphragm pump with mounting rails & a single 1-⅝" spline male PTO shaft.	45	300	1 ½"	1"	58
	UD-PUZETA170HYD	ZETA-170/HYD is a low pressure, hydraulic driven diaphragm pump with a 1" female keyed shaft and a 2 bolt "A" mount flange. A control unit is not included with the ZETA-170/HYD.	45	300	1 ½"	1"	56



KAPPA-25 PUMPS

Require 12 oz.

UDOR LUBE,

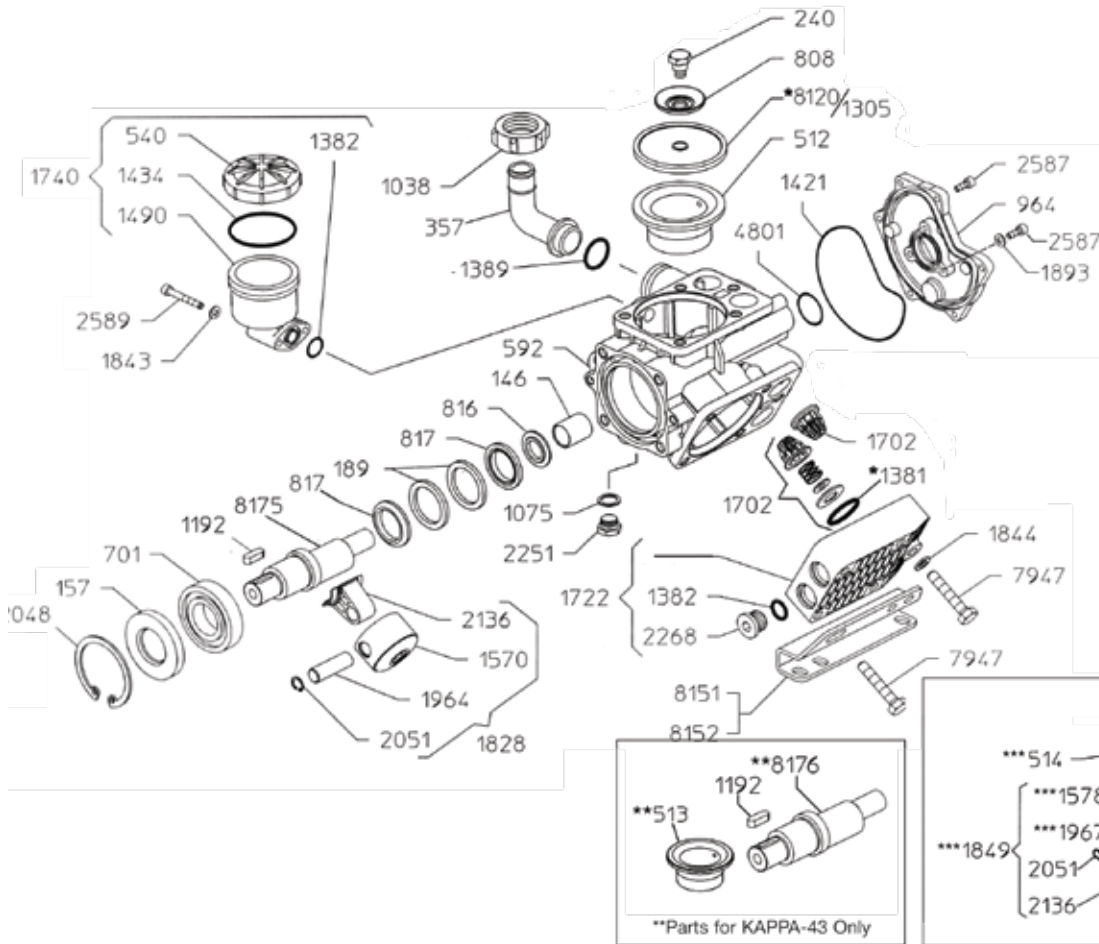
or SAE 30W

Non-detergent Oil

Ref	Qty	Part No.	Description	Ref	Qty	Part No.	Description	Ref	Qty	Part No.	Description
93	1	0002.D3	Crankshaft	1305	2	0903.43	Piston Diaphragm BUNA-N Optional	2051	2	1506.15	Snap Ring
153	1	0006.15	Needle Bearing	1368	1	1101.04	O-Ring	2057	1	1506.18	Snap Ring
180	1	0007.40	Shaft Seal	*1381	4	1101.27	O-Ring	2058	1	1506.09	Snap Ring
240	2	0102.04	Diaphragm Bolt	1382	4	1101.29	O-Ring	2261	1	1603.23	Oil Plug
267	2	0103.54	Connecting Rod	1447	1	1202.02	Pump Rail	2268	4	1603.32	Head Plug
496	2	0206.46	Piston Sleeve	1467	1	1202.47	Pump Rail w/ Notch	2269	1	1603.33	Oil Sight Gauge
569	1	0208.46	Accumulator Head	1570	2	1205.07	Piston	2282	1	1603.50	Oil Drain Plug
583	1	0209.83	Pump Body	1702	4	6006.01	Valve Assembly	2466	4	1804.06	Rail Bolts
697	1	0214.18	Bearing	1722	2	6017.13	Pump Head	7052	1	0202.75	Suction Elbow
808	2	0301.43	Diaphragm Washer	1738	2	6015.50	Piston/Rod Assembly	7331	1	0604.36	Suction Nut
865	1	0301.57	Spacer	1844	14	1403.09	Washer	7947	14	1804.21	Head Bolt
1126	1	0608.16	Air Valve Assembly	1964	2	1502.03	Wrist Pin	*8120	2	0903.50	DESMOPAN Diaphragm Standard
1192	1	0801.02	Key								
*1295	1	0903.08	Accumulator Diaphragm								

* Parts in Diaphragm Repair Kit - #8700.65.

DIAPHRAGM PUMP KAPPA-33/43/53 SCHEMATIC

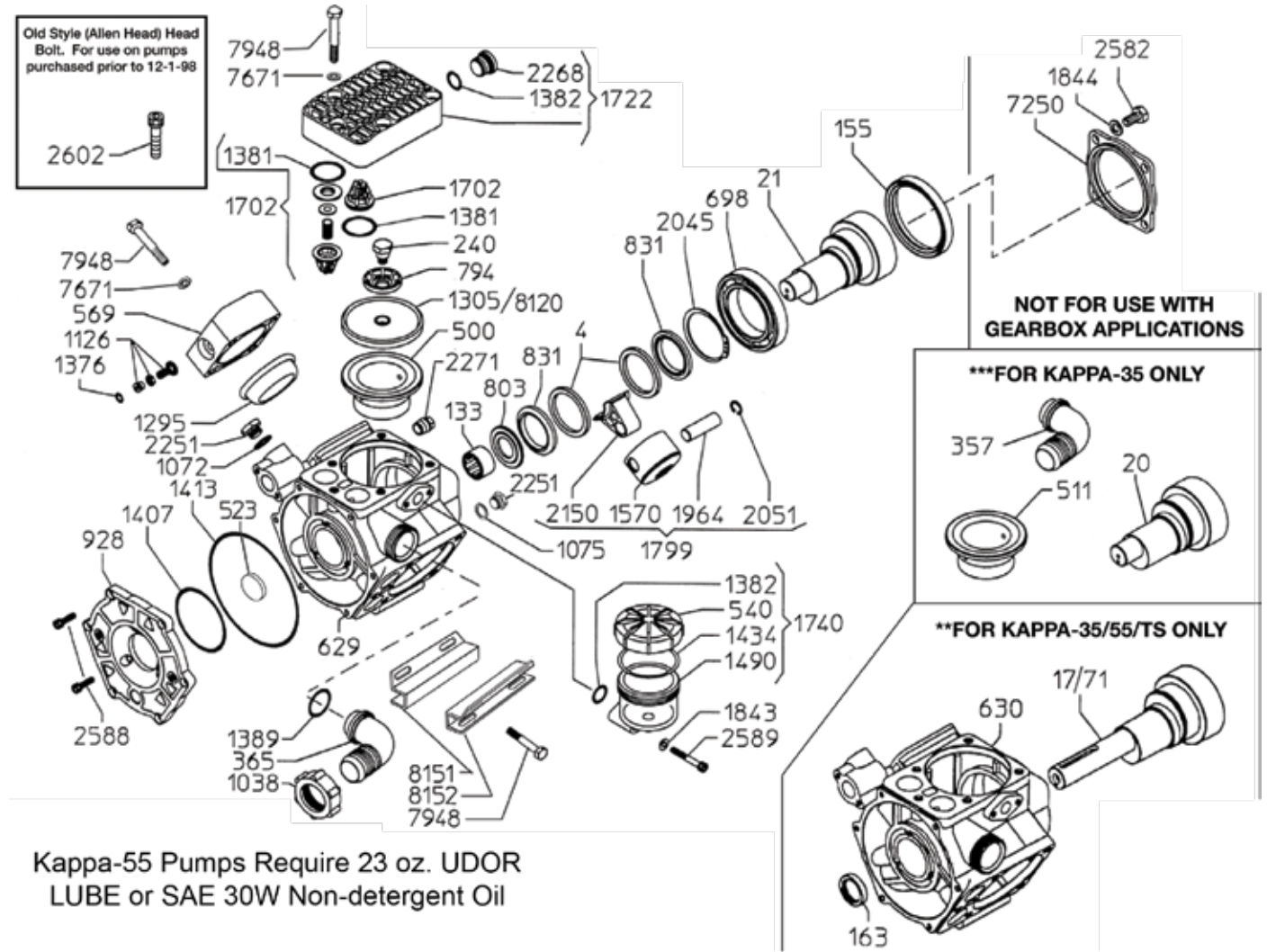


KAPPA-33/43/53 PUMPS
Require 20 oz.
UDOR LUBE
or SAE 30W
Non-detergent Oil

Ref	Qty	Part No.	Description	Ref	Qty	Part No.	Description	Ref	Qty	Part No.	Description
146	1	02-0006.14	Bearing	1305	3	02-0903.43	Piston Diaphragm (BUNA-N) optional	1964	3	02-1502.03	Connecting Rod Pin (KAPPA-33/ 43)
157	1	02-0007.05	Seal	*1381	6	02-1101.27	O-Ring	1967	3	02-1502.07	Connecting Rod Pin (KAPPA-53)
189	2	02-0001.11	Retaining Ring	1382	7	02-1101.29	O-Ring	2048	1	02-1506.07	Snap Ring
240	3	02-0102.04	Diaphragm Bolt	1389	1	02-1101.41	O-Ring	2051	6	02-1506.15	Snap Ring
357	1	02-0202.18	Suction Elbow	1421	1	02-1101.88	O-Ring	2136	3	02-1519.28	Connecting Rod (KAPPA-33/ 43 /53)
365	1	02-0202.52	Suction Elbow (KAPPA-53)	1434	1	02-1101.D1	O-Ring	2251	1	02-1603.02	Plug
512	3	02-0206.42	Piston Sleeve (KAPPA-33)	1490	1	02-1203.27	Oil Reservoir	2268	6	02-1603.32	Head Plug
513	3	02-0206.41	Piston Sleeve (KAPPA-43)	1570	3	02-1205.07	Piston (KAPPA-33/ 43)	2587	9	02-1805.20	Bolt
514	3	02-0206.43	Piston Sleeve (KAPPA-53)	1578	3	02-1205.18	Piston (KAPPA-53)	2589	2	02-1805.31	Bolt
540	1	02-0208.98	Oil Reservoir Cap	1702	6	02-6006.01	Valve Assembly	4801	1	02-1101.C3	O-Ring
592	1	02-0209.73	Crankcase	1722	3	02-6017.13	Head Assembly	7947	15	02-1804.21	Head Bolt
701	1	02-0214.05	Bearing	1740	1	02-6033.01	Oil Reservoir Assembly	*8120	3	02-0903.50	Piston Diaphragm (DESMOPAN)
808	3	02-0301.43	Retaining Washer	1828	3	02-6015.45	Piston & Rod Assembly (KAPPA-33/ 43)	8151	1	2-1202.63	Mounting Rail - Right Side
816	1	02-0301.54	Spacer	1843	2	02-1403.07	Washer	8152	1	02-1202.64	Mounting Rail - Left Side
817	2	02-0302.66	Spacer	1844	11	02-1403.09	Washer	8175	1	02-0002.B8	Crankshaft (KAPPA-33)
964	1	02-0501.E2	Body Flange	1849	3	02-6015.46	Piston & Rod Assembly (KAPPA-53)	8176	1	02-0002.B7	Crankshaft (KAPPA-43 /53)
1038	1	02-0604.18	Barb Nut	1893	3	02-1412.03	Washer	*Parts in Diaphragm Repair Kit - Part #8700.45 Diaphragm Repair Kit in BUNA-N - Part #8700.46			
1075	1	02-0605.43	Gasket								
1192	1	02-0801.02	Shaft Key								

DIAPHRAGM PUMP KAPPA-55 SCHEMATIC

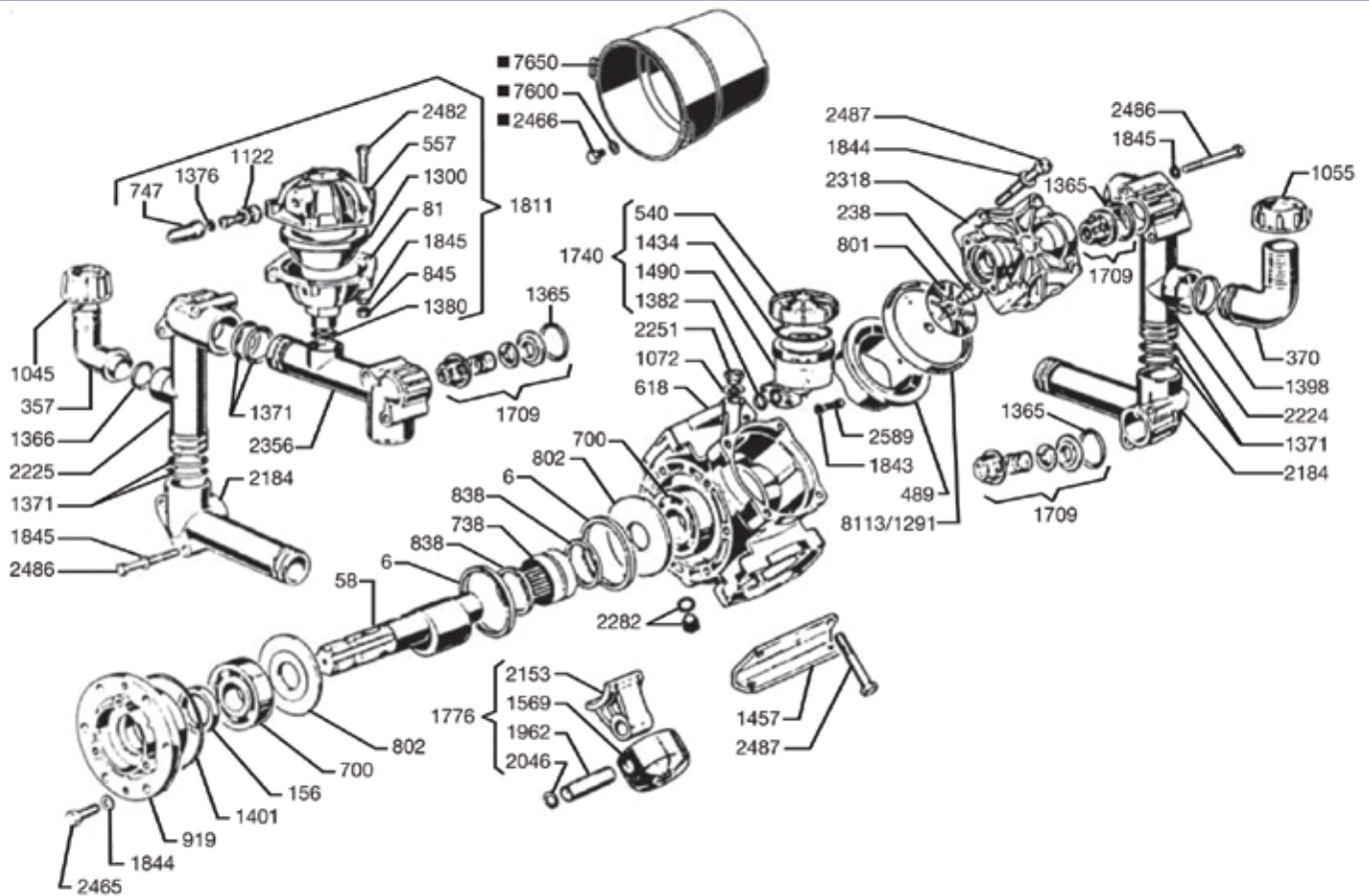
PUMPS



Kappa-55 Pumps Require 23 oz. UDOR LUBE or SAE 30W Non-detergent Oil

Ref	Qty	Part No.	Description	Ref	Qty	Part No.	Description	Ref	Qty	Part No.	Description	Ref	Qty	Part No.	Description
4	2	0001.06	Retaining Ring	629	1	0209.44	Pump Body	1407	1	1101.62	O-Ring	2271	1	1603.44	¾" Plug
17	1	0002.72	Crankshaft (KAPPA-55/TS)	630	1	0209.46	Pump Body (T.S.)	1413	1	1101.87	O-Ring	2582	4	1805.04	Bolt
20	1	0002.70	Crankshaft (KAPPA-35)	698	1	0214.01	Ball Bearing	1434	1	1101.D1	O-Ring	2588	9	1805.21	Bolt
21	1	0002.71	Crankshaft (KAPPA-55)	794	3	0301.14	Retainer Washer	1490	1	1203.27	Oil Reservoir	2589	2	1805.31	Bolt
71	1	0002.A3	Crankshaft (KAPPA-35/TS)**	803	1	0301.30	Spacer	1570	3	1205.07	Piston	2602	19	1805.25	Head Bolt (Allen Head - Old Style)
133	1	0006.02	Bearing	831	2	0302.50	Spacer	1702	6	6006.01	Valve Assembly	7250	1	0501.02	Seal Retainer
155	1	0007.01	Seal	928	1	0501.85	Body Flange	1722	3	6017.13	Head Assembly	7671	15	1403.09	Washer (Use with Ref #7948 Only)
163	1	0007.19	Seal (T.S.)	1038	1	0604.18	Barb Nut	1740	1	6033.01	Oil Reservoir As- sembly	7948	19	1804.45	Head Bolt (Hex Head - New Style)
240	3	0102.04	Diaphragm Bolt	1072	1	0605.09	Aluminum Gasket	1799	3	6015.27	Piston/Rod Assembly	8120	3	0903.50	Piston Diaphragm (DESMOPAN)*
357	1	0202.18	Suction Elbow (KAPPA-35)	1075	1	0605.43	Gasket	1843	2	1403.07	Washer	8151	1	1202.63	Mounting Rail - Right Side
365	1	0202.52	Suction Elbow	1126	1	0608.16	Air Valve Assembly	1844	4	1403.09	Washer	8152	1	1202.64	Mounting Rail - Left Side
500	3	0206.31	Piston Sleeve (KAPPA-55)	1295	1	0903.08	Accumulator Diaphragm*	1964	3	1502.03	Connecting Rod Pin	* Parts included in Diaphragm Repair Kit - Part #8700.26 Diaphragm Repair Kit also available in BUNA-N - Part #8700.25			
511	3	0206.39	Piston Sleeve (KAPPA-35)	1305	3	0903.43	Piston Diaphragm (BUNA-N) Opt	2045	1	1506.01	Snap Ring				
523	1	0218.06	Body Plug	1376	1	1101.16	O-Ring	2051	6	1506.15	Snap Ring				
540	1	0208.98	Oil Reservoir Cap	1381	6	1101.27	O-Ring*	2150	3	1519.18	Connecting Rod				
569	1	0208.46	Accumulator Head	1382	7	1101.29	O-Ring	2251	2	1603.02	Plug				
				1386	1	1101.33	O-Ring	2268	6	1603.32	Head Plug				
				1389	1	1101.41	O-Ring								

DIAPHRAGM PUMP RO-110 SCHEMATIC



Ref	Qty	Part No.	Description
2	2	0001.02	Retainer Ring
11	1	0002.60	Crank Shaft
81	1	0003.15	Accumulator
136	1	0006.07	Bearing
157	1	0007.05	Seal
238	3	0102.03	Diaphragm Bolt
345	1	0202-78	Suction Elbow
489	3	0206.14	Piston Sleeve
540	1	0208.98	Oil Cap
557	1	0208.20	Accumulator Head
626	1	0209.34	Crank Case
647	1	0257.07	Discharge Manifold
701	1	0214.05	Bearing
747	1	0218.01	Air Valve Cap
792	1	0301.12	Washer
799	1	0301.24	Washer
801	3	0301.07	Retainer Washer
833	2	0302.52	Rod Spacer
845	6	0303.01	Nut
871	3	0304.04	Lock Nut
916	1	0501.62	Crank Shaft Flange
927	1	0501.79	Flange
1055			

Ref	Qty	Part No.	Description
1122	1	0608.16	Air Valve Assembly
1199	1	0801.11	Key
1291	3	0903.02	Diaphragm (Buna-N)
1300	1	0903.14	Accumulator Diaphragm
1365	6	1101.01	O-Ring
1368	1	1101.04	O-Ring
1371	6	1101.07	O-Ring
1376	1	1101.16	O-Ring
1380	7	1101.25	O-Ring
1382	1	1101.29	O-Ring
1391	1	1101.43	O-Ring
1398	1	1101.42	O-Ring
1401	1	1101.58	O-Ring
1412	1	1101.79	O-Ring
1434	1	1101.D1	O-Ring
1490	1	1203.27	Oil Reservoir
1497	3	1203.36	Manifold Elbow
1569	3	1205.06	Piston
1607	3	1206.22	Stud
1709	6	6006.08	Valve Assembly
1740	1	6033.01	Oil Reservoir Assembly
1798	3	6015.24	Piston Rod Assembly
1811	1	6031.09	Accumulator Assembly

Ref	Qty	Part No.	Description
1843	2	1403.07	Washer
1744	9	1403.09	Washer
1845	18	1403.10	Washer
1962	3	1502.01	Connecting Rod Pin
2046	6	1506.05	Snap Ring
2149	3	1519.16	Connecting Rod
2185	2	1601.13	Suction Manifold
2226	1	1602.22	Suction Manifold
2282	1	1603.50	Drain Plug
2318	3	1604.36	Head
2471	12	1804.29	Bolt
2481	1	1804.07	Bolt
2482	6	1804.09	Bolt
2486	6	1804.79	Bolt
2581	9	1805.03	Bolt
2589	2	1805.31	Bolt
5949	6	1804.72	Bolt
7124	1	0253.05	Discharge Elbow
7331	1	0604.36	Discharge Nut
8113	3	0903.34	Diaphragm (Desmopan, Std)
8151	1	1202.63	Mounting Rail, Right Side
8152	1	1202.64	Mounting Rail, Left Side

When ordering parts, give quantity, part no., description, and complete model number

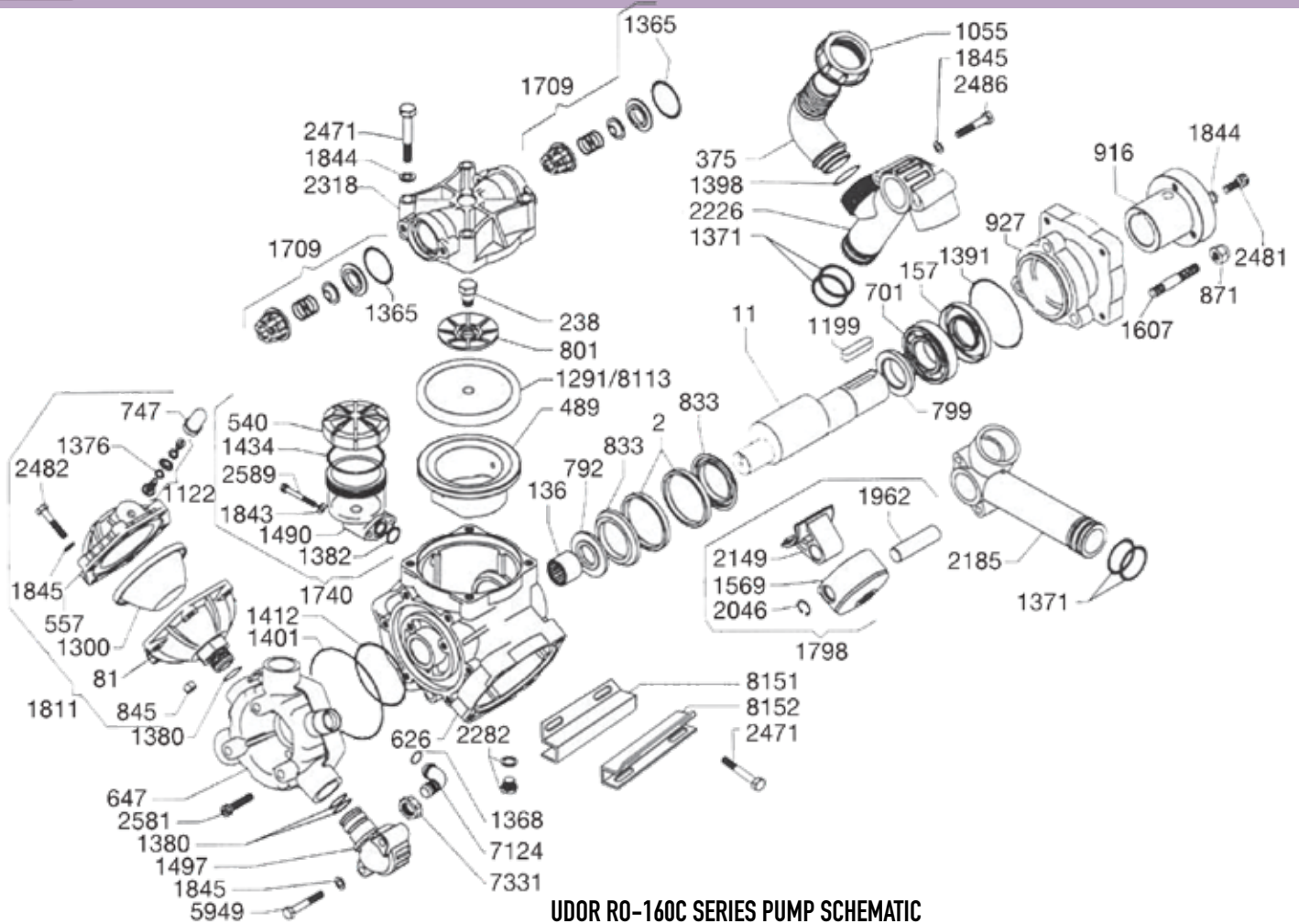


SEBRING - 1-877-605-0273

This pump is unavailable to be purchased new. Replaced by Udor Zeta 120. See "Udor Zeta-Series Diaphragm Pump" on page 179

ALBANY - 1-800-624-7931

GRIFFIN 1-800-241-1350

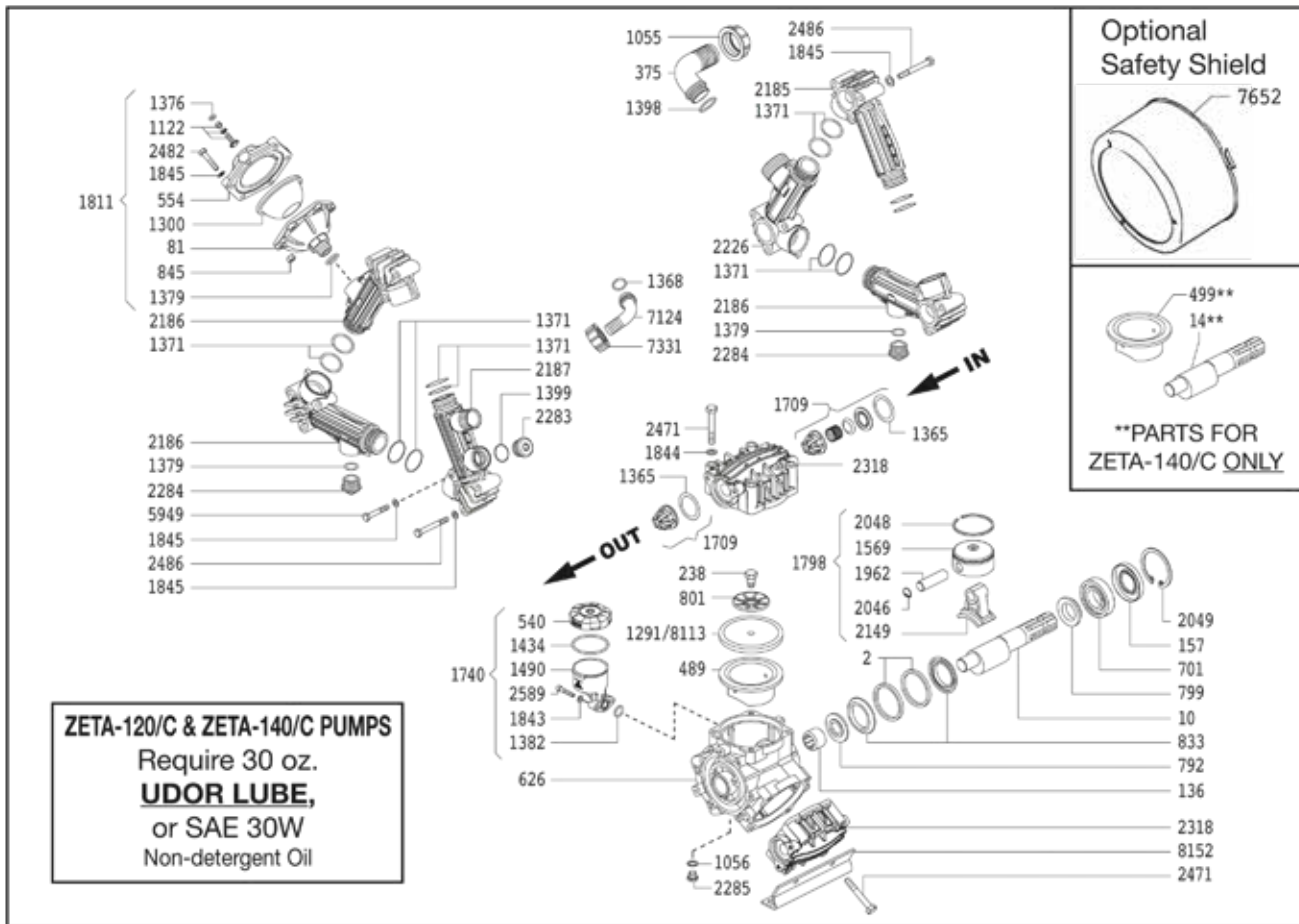


UDOR RO-160C SERIES PUMP SCHEMATIC

Ref	Qty.	Part No.	Description	Ref	Qty.	Part No.	Description	Ref	Qty.	Part No.	Description
6	2	0001.08	Retainer Ring	1072	1	0605.09	Aluminum Gasket	1844	18	1403.09	Washer
58	1	0002.46	Crankshaft	1122	1	0608.15	Air Valve Assembly	1845	22	1403.10	Washer
81	1	0003.15	Pressure Accumulator	1291	4	0903.02	Piston Diaphragm	1962	4	1502.01	Connecting Rod Pin
156	2	0007.02	Seal	1300	1	0903.14	Accumulator Dia-	2046	8	1506.02	Snap Ring
238	4	0102.03	Diaphragm Bolt	1365	8	1101.01	O-Ring	2153	4	1519.20	Connecting Rod
357	1	0202.18	Discharge Elbow	1366	1	1101.02	O-Ring	2184	5	1601.12	Manifold
370	1	0202.72	Suction Elbow	1371	16	1101.07	O-Ring	2224	1	1602.20	Suction Manifold
489	4	0206.14	Piston Sleeve	1376	1	1101.16	O-Ring	2225	1	1602.21	Discharge Manifold
552	1	0208.07	Oil Reservoir Cap	1380	1	1101.25	O-Ring	2251	1	1603.02	Oil Plug
557	1	0208.20	Accumulator Head	1382	1	1101.29	O-Ring	2282	1	1603.50	Drain Plug
618	1	0209.25	Pump Body	1386	1	1101.33	O-Ring	2318	4	1604.36	Head
700	2	0214.04	Ball Bearing	1398	1	1101.42	O-Ring	2356	1	1605.15	Discharge Manifold
738	1	0216.07	Roller Bearing	1401	1	1101.58	O-Ring	2465	6	1804.03	Bolt
747	1	0218.01	Air Valve Cap	1457	2	1202.29	Base Plate	2466	3	1804.06	Bolt
801	4	0301.07	Retainer Washer	1790	1	1203.27	Oil Reservoir	2482	6	1804.09	Bolt
802	2	0301.28	Washer	1569	4	1205.06	Aluminum Piston	2486	16	1804.79	Bolt
838	2	0302.59	Spacer Ring	1709	8	6006.08	Valve Assembly	2487	16	1804.25	Bolt
845	6	0303.01	Hex Nut	1740	1	6033.01	Oil Reservoir As-	2589	2	1805.26	bolt
919	1	0501.67	Bearing Flange	1776	4	6015.30	Piston & Rod As-	7600	3	1403.36	Washer
1042	1	0604.25	Barb Nut	1811	1	6031.09	Accumulator As-	7650	1	1219.02	PTO Safety Shield
1045	1	0604.32	Barb Nut	1843	2	1403.07	Washer	8113	4	0903.34	Piston Diaphragm,

When ordering parts, give quantity, part no., description, and complete model number

DIAPHRAGM PUMP ZETA 120/C & 140/C



Ref		Part No	Description
2	2	0001.02	Retainer Ring
10	1	0002.59	Crank Shaft
**14	1	0002.63	Crank Shaft (ZETA-
81	1	0003.15	Accumulator
136	1	0006.07	Bearing
157	1	0007.05	Seal
238	3	0102.03	Diaphragm Bolt
375	1	0202.78	Suction Elbow
489	3	0206.14	Piston Sleeve
**499	3	0206.26	Piston Sleeve (ZETA-
540	1	0208.98	Oil Cap
557	1	0208.20	Accumulator Head
626	1	0209.A6	Crank Case
701	1	0214.05	Bearing
792	1	0301.12	Washer
799	1	0301.24	Washer
801	3	0301.07	Retainer Washer
833	2	0302.52	Rod Spacer
845	6	0303.01	Nut
1055	1	0604.50	Barb Nut
1056	1	0605.49	Gasket
1122	1	0608.16	Air Valve Assembly

Ref		Part No	Description
1291	3	0903.02	Diaphragm
	1	0903.14	Accumulator Dia-
	6	1101.01	O-Ring
1368	1	1101.04	O-Ring
1371	12	1101.L5	O-Ring
1376	1	1101.16	O-Ring
1379	1	1101.04	O-Ring
1382	1	1101.29	O-Ring
1398	1	1101.42	O-Ring
1399	1	1101.51	O-Ring
1434	1	1101.D1	O-Ring
1490	1	1203.27	Oil Reservoir
1569	3	1205.08	Piston
1709	6	6006.08	Valve Assembly
1740	1	6033.01	Oil Reservoir Assembly
1798	3	6015.62	Piston Rod Assembly
1811	1	6031.09	Accumulator Assembly
1843	2	1403.07	Washer
1844	8	1403.09	Washer
1845	24	1403.10	Washer
1962	3	1502.01	Connecting Rod Pin
2046	6	1506.02	Snap Ring

Ref		Part No	Description
2048	3	1509.05	Piston Ring
2049	1	1506.07	Snap Ring
2149	3	1519.16	Connecting Rod Pin
2185	1	1601.36	Suction Manifold
2186	3	1605.40	Manifold 3/4" Female
2187	1	1605.39	Discharge Manifold
2226	1	1601.35	Suction Manifold
2283	1	1603.87	Plug
2284	2	1603.36	Plug
2285	1	1603.67	Plug
2318	3	1604.E3	Head
2471	12	1804.25	Bolt
2482	6	1804.09	Bolt
2486	12	1804.79	Bolt
2589	2	1805.31	Bolt
5949	6	1804.72	Bolt
7124	1	0253.05	Discharge Elbow
7331	1	0604.36	Discharge Nut
7652	1	1219.25	Safety Shield Optional
*8113	3	0903.34	Diaphragm (Desmopan, std)
8152	2	1202.96	Mounting Rails

*Parts Included in Diaphragm Repair Kit - #8700.04. (available in Buna-N- #8700.11.)

**Parts for ZETA-140/C only

ALBANY - 1-800-624-7931

NC NEWTON CROUCH
SEBRING - 1-877-605-0273

GRIFFIN 1-800-241-1350

TRANSFER & SELF PRIMING PUMPS



Part No.	Description	Features	Pump Size	HP
BANJO TRANSFER PUMP WITH HONDA ENGINE				
TP-PU200PH5	Banjo pump	- Transfer Pump with Honda Engine - Carbon ceramic seal - All 316 stainless wettable internal components & housing - Dynamically balanced impeller	2"x2"	5.5
TP-PU200PH6			2"x2"	6



JOHN BLUE TRANSFER PUMPS				
BL-PUP-SP3240	2" Self-Priming, 3/4" Shaft	- Max GPM 200 - Capacity @ 25 PSI - 112 - All John Blue Centrifugal Pumps can run dry without damaging the seal. Two-year factory-backed warranty on cast-iron models	2"x2"	5



HYPRO POLY TRANSFER PUMPS				
1542P65SP	Gasoline Driven Pump	- Lightweight & ideal for chemical transfers & tank filling - Max GPM 200 - Self priming; max suction lift of 25 ft - Nylon impellers constructed for improved strength can handle solid particles suspension up to 3/8" diameter	2"x2"	Hypro PowerPro™ 6.5



PACER SERIES S PORTABLE SELF PRIMING CENTRIFUGAL PUMP				
SEB2PLE3C	Standard Pump	- Series S Portable Self Priming Centrifugal Pump - Lightweight, chemically resistant for general service on water, salt water, waste water, mild acids and bases - Flow rates: 280 gpm - Suction lift 25 ft vertical	2"x2"	3.5
SEB2ULE5IC	Standard Pump		2"x2"	3.5
SEB2PLE5.5	LCT Pump		2"x2"	5.5"
SE2ULE5HCP	Honda Driven		2"x2"	



MP PUMPS, INC SELF PRIMING CENTRIFUGAL PEDESTAL PUMP				
Part No.	Description	- Self Priming Centrifugal Pedestal Pump - Lightweight, chemically resistant for general service on water, salt water, waste water, mild acids and bases - Closed couple with electric motor - Flow rates: 280 gpm - Suction lift 25 ft vertical	Pump Size	GPM
MP-PU21381	Flomax 15 Pedestal Pump		3x3	265
MP-PU21339	Flomax 8 Pedestal Pump		2x2	140
MP-PU30347	Flomax 8 Hydraulic Ped-estal Pump		2x2	140
MP-CP26142	Flomax Pedestal Assembly			