

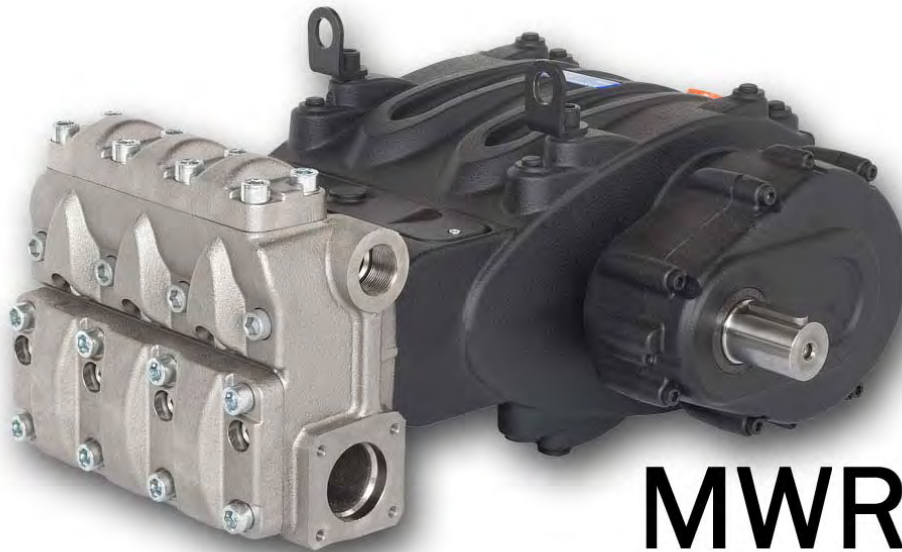


B-SERIES

PARTS COUNTERMAN'S CATALOG

Section 12

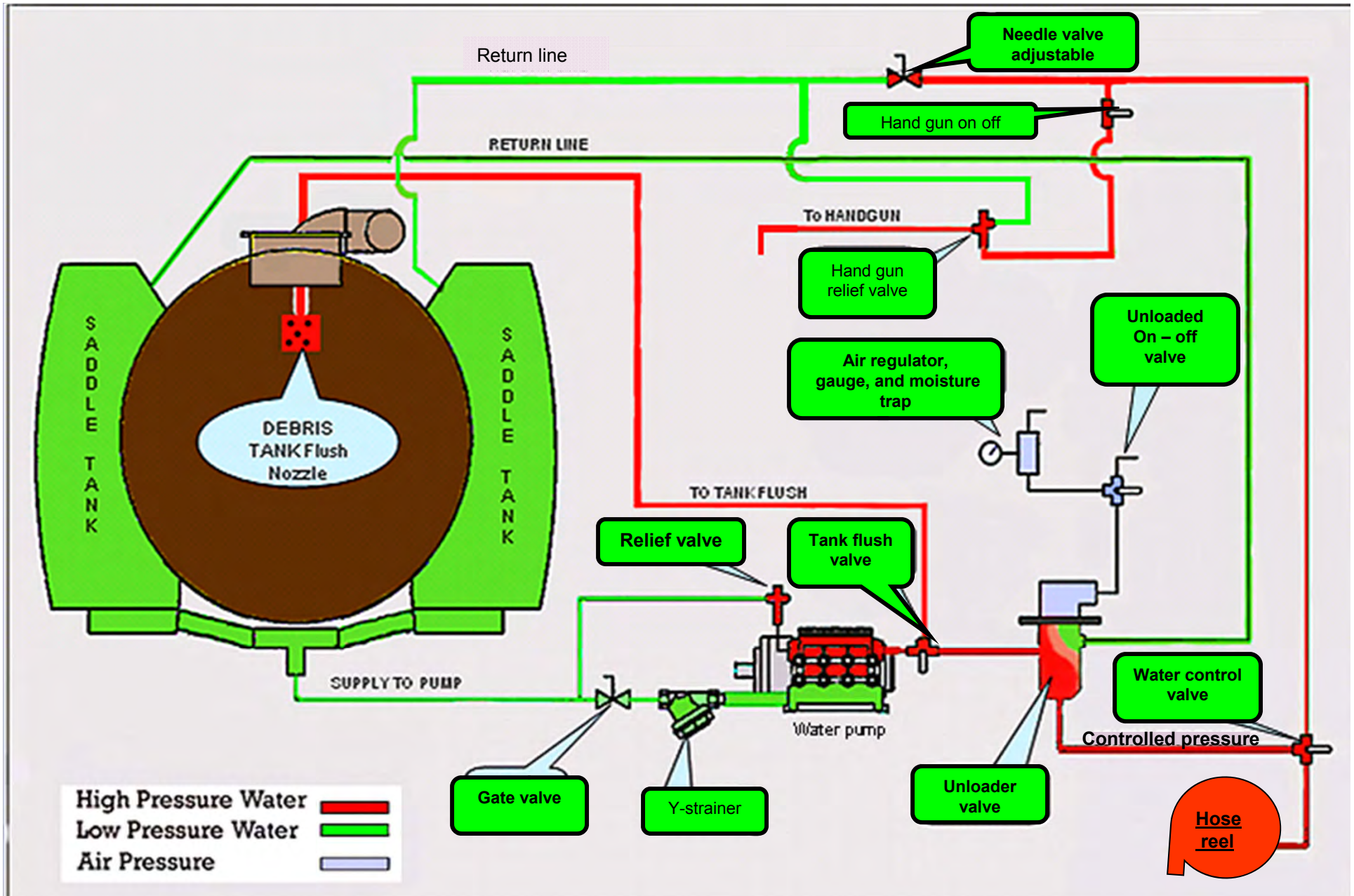
Water - High Pressure Side



MWR

STANDARD WATER SYSTEM

with Optional Internal Tank Flush & Remote Flow-Select Water Regulator System





GENERAL PUMP KIT QUICK REFERENCE

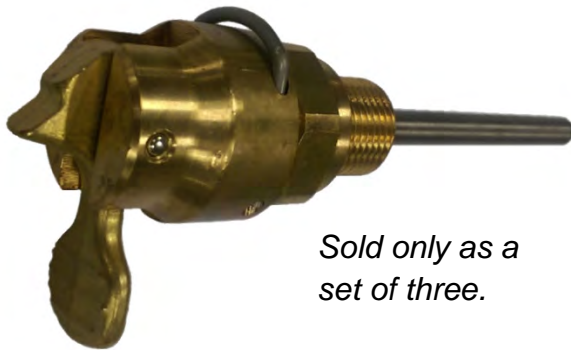
ONE OF EACH KIT REQUIRED EXCEPT WHERE NOTED

PUMP MODEL	GPM	PSI	SHAFT	WT.	MAJOR GASKET, PACKING & SEAL KIT	PLUNGER REPACKING KIT	SUCTION (INLET) VALVE KIT	DISCHARGE (OUTLET) VALVE KIT	SEAL KIT FOR VALVES
MH60 <i>Disc.</i>	80	2000	55mm	882 #	A215521-F1199	A215521-F1193	A215521-63 (3 Req.)		A215521-F1195
MK60A	90	2465	55mm	833 #	A383484-F2050	A383484-F2046	A383484-F2048		N/A
MSS40 <i>Disc.</i>	43.9	3500	55mm	616 #	<i>F381970-F1141</i>	<i>F381970-F1135</i>	A215519-91 (3 Req.)		A215519-F1139
MSS45 <i>Disc.</i>	55.5	2750	55mm	616 #	A215522-F1142	A215522-F1136	A215519-91 (3 Req.)		A215519-F1139
MSS50 <i>Disc.</i>	68.7	2250	55mm	616 #	A215511-F1143	A215511-F1137	A215519-91 (3 Req.)		A215519-F1139
MSS55 <i>Disc.</i>	83	2000	55mm	616 #	A215519-F1144	A215519-F1138	A215519-91 (3 Req.)		A215519-F1139
MWSR40	55.7	3050	55mm	540 #	A384199-F2166	A384199-F2162	A384024-F2142	A384024-30-KIT	N/A
MWSR45	71	2500	55mm	540 #	A383768-F2167	A383768-F2163	A384024-F2142	A384024-30-KIT	N/A
MWSR50	87.5	2000	55mm	540 #	A384024-F2168	A384024-F2164	A384024-F2142	A384024-30-KIT	N/A



WATER PUMP DRAIN VALVES

Allows water to be drained out of plunger area of the fluid manifold by pushing open the inlet valves, so the pump can be winterized.



Sold only as a set of three.



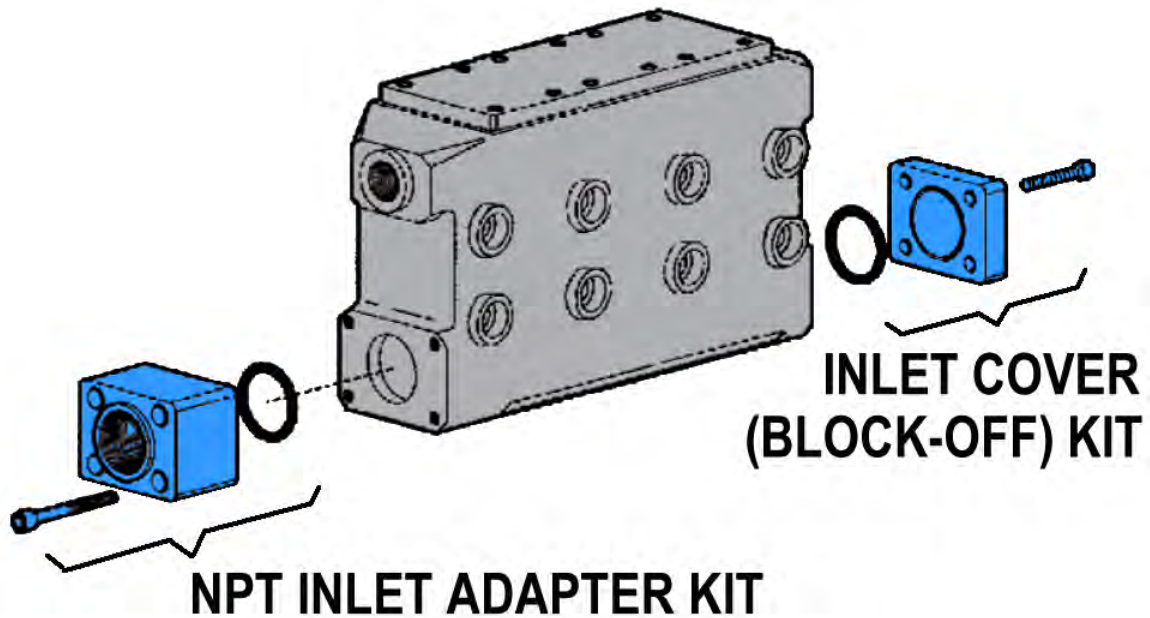
PUMP SERIES	DRAIN VALVE KIT P/N	REPLACEMENT SEAL
MSS, MWRS	A380341-1	A384024-2-SEAL
LH, MH & MK	A380357	TBA

Note: The lever style drain valves replace the earlier twist knob style drain valves.





WATER PUMP INLET ADAPTER AND BLOCK OFF PLATES



PUMP SERIES & PLUNGER DIA. (MM)	NPT ADAPTER PLATE KIT*	BLOCK-OFF PLATE KIT*	REPL. O-RING
MH 45/50/55/60/65	A383484-F1299 (3"FNPT)	A383484-F1201	A383484-OR
MK 55/60/65	A383484-F1299 (3"FNPT)	A383484-F1201	A383484-OR
MS 40/45/50/55	A215519-102 (2.5"FNPT)	A215519-F1153	A215519-101
MW 45/50/55	A215519-102 (2.5"FNPT)	A215519-F1153	A215519-101

* Kits include O-ring and mounting bolts.



MWR VERSUS MWSR WATER PUMPS



The General Pump™ MW series water pumps utilized by Hi-Vac Corp. are designated as MWSR which parts wise is exactly the same as the MWR series. The “R” indicates that the pump is equipped with packings best suited for accidental dry run forgiveness. The “S” is added as an indicator that the pump is being used for sewer cleaning (intermittent duty service). For those who recall when we used the MS series pumps that they were designated as MSS for the exact same reason. The MWSR water pump is not be confused with the MWS series water pumps. **SUMMARY:** The MWR parts list is the correct parts list for the MWSR water pumps.

ONE PUMP SERIES, 168 DIFFERENT POSSIBLE CONFIGURATIONS

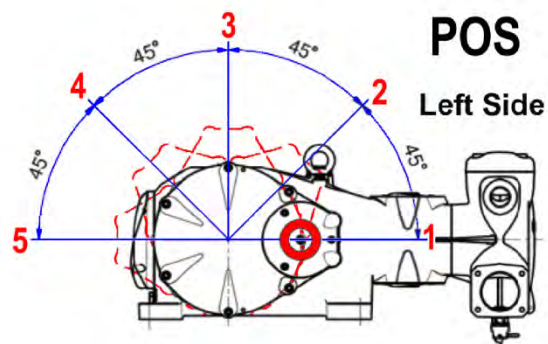
MWR series pumps are available in four plunger diameter and each can be configured 42 different ways. This is why it is important that you supply us with the unit serial number.

- 40, 45, 50 or 55 mm plunger diameter – the majority of ours are 50mm (MWSR50).
- Left Hand or Right Hand – B-series uses LH, SJ & SJR typically uses RH.
- With or without a gear reduction – we used gear reductions.
- Four different possible gear reduction ratios: 1500 RPM (1.876:1), 1800 RPM (2.238:1), 2200 RPM (2.722:1) and 2600 RPM (3.25:1) – we typically use the 1500 RPM gear reduction.
- Gear reductions can be oriented in five positions – we mostly use position 5.

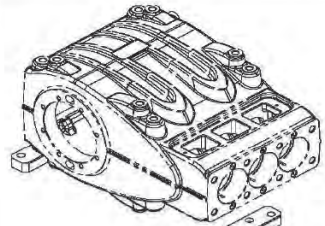
Pictured at top is a RH Position 1



This is a RH Position 2

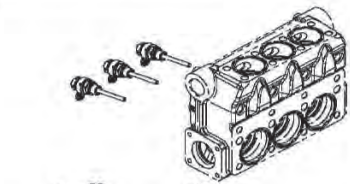


AQUATECH®



OPTIONAL

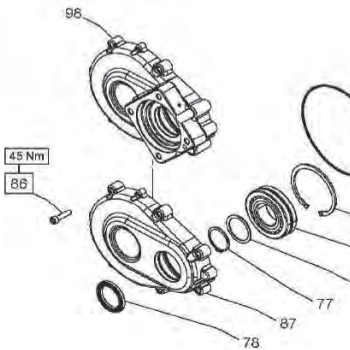
200 Nm
56



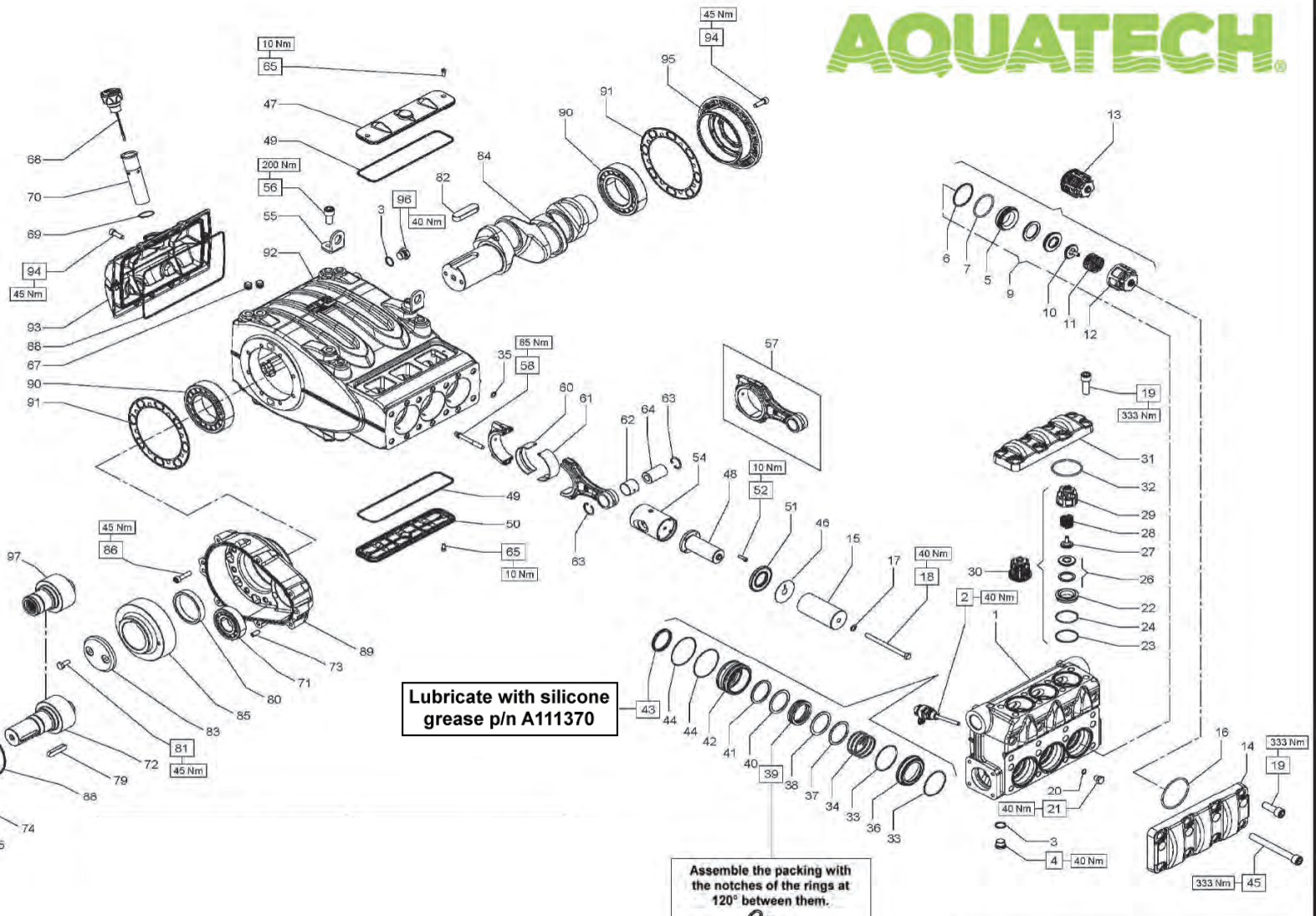
OPTIONAL

107
20 Nm
106

105



45 Nm
86



Lubricate with silicone grease p/n A111370

Assemble the packing with the notches of the rings at 120° between them.

MWSR

DIS. COD. 73.9505.00

MWSR SERIES WATER PUMP

ITEM	MWRS45	MWRS50 P/N	QTY	DESCRIPTION	KITS
1	A384024-1		1	Fluid Manifold	
2	A380341-1		1	Drain Valve Kit (Set of 3)	
	A384024-2-SEAL		AR	Replacement Seal, Drain Valve	
3	A384024-3		5	Washer, 21.5 x 27 x 1.5	
4	A384024-4		3	Steel Plug, 1/2"	
5	A384024-5		3	Inlet Valve Housing	
6	A384024-6		3	Intake Anti-Extrusion Ring (in F2167 & F2168 kits)	✓
7	A384024-7		3	O-Ring, 59.62 x 3.53 (in F2167 & F2168 kits)	✓
9	A384024-9		3	Ball Valve Assy.	
10	A384024-10		3	Internal Valve Guide, Inlet	
11	A384024-11		3	Spring, 41.5 x 37.9	
12	A384024-12		3	Valve Guide, Inlet	
13	A384024-13		3	Inlet Valve Assy	
	A384024-F2142		1	Inlet Valve Kit (Set of 3)	
14	A384024-14		1	Inlet Valve Cover	
15	A383768-15	A384024-15	3	Plunger 50 x 117	
16	A384024-16		3	Inlet Cover O-Ring (in F2167 & F2168 kits)	✓
17	A384024-17		3	Washer, 10 x 18 x .9, SS, PTFE	
18	A384024-18		3	Screw M10 x 140	
19	A384024-19		16	Screw, M16 x 45	
20	A384024-20		3	O-Ring (In F2167 & F2168 kits)	✓
21	A384024-21		3	Plug, G 1/4" x 13, SS	
22	A384024-22		3	Outlet Valve Housing	
23	A384024-23		3	Outlet Anti-Extrusion Ring (in F2167 & F2168 kits)	✓
24	A384024-24		3	O-Ring (in F2167 & F2168 kits)	✓
26	A384024-26		3	Ball Valve Assy.	
27	A384024-27		3	Internal Valve Guide	
28	A384024-28		3	Spring, 28.5 x 32	
29	A384024-29		3	Outlet Valve Guide	
30	A384024-30		3	Outlet Valve Assy	
	A384024-30-KIT		1	Outlet Valve Kit (Set of 3)	
31	A384024-31		1	Outlet Valve Cover	
32	A384024-32		3	Outlet Cover O-Ring (in F2167 & F2168 kits)	✓
33	A383768-33	A384024-33	3	O-Ring (in repacking & major kits)	✓ ✓
34	A384024-34		3	Spring, 54 x 38.5, SS	
35	A384024-35		6	O-Ring 10.78 x 2.62 (in with F2163, 2164, 2167 & 2168 kits)	✓ ✓
36	A383768-36+B78	A384024-36	3	Head Packing Ring	
37	A383768-37	A384024-37	3	Spring Ring	
38	A383768-38	A384024-38*	3	O-Ring (in repacking & major kits)	✓ ✓
39	A383768-39	A384024-39	3	O-Ring (in repacking & major kits)	✓ ✓
40	A383768-40	A384024-40	3	O-Ring (in repacking & major kits)	✓ ✓
41	A383768-41	A384024-41	3	Support Ring	
42	A383768-42	A384024-42	3	Support, Packing	
43	A383768-43	A384024-43	3	Washer, 50X58x5.5 (in repacking & major kits)	✓ ✓
44	A384024-44		6	O-Ring, 81 X 2 (in F2163, 2164, 2167 & 2168 kits)	✓ ✓
45	A384024-45		8	Screw, M16 X 150	

MWSR SERIES WATER PUMP

ITEM	MWRS45	MWRS50 P/N	QTY	DESCRIPTION	KITS
46		A384024-46	3	Washer, 16 x 65 x 1	
47		A384024-47	1	Inspection Cover	
48		A384024-48	3	Plunger Guide Rod	
49		A384024-49	2	O-Ring, Inspection Cover (in F2167 & F2168 kits)	✓
50		A384024-50	1	Open Inspection Cover	
51		A384024-51	3	Rad. Ring, 40 X 72 X 7/8.5	✓
52		A384024-52	3	Screw, M6x20	
53		A384024-53	3	Screw, M8x107	
54		A384024-54	3	Plunger Guide (Piston)	
		A384024-54-10	3	Plunger Guide (Piston) +0.10	
55		A384024-55	2	Lifting Bracket	
56		A384024-56	4	Screw, M16x30, UNI 5931	
57		A384024-57	3	Connecting Rod Assy.	
58		A384024-58	6	Connecting Rod Screw, M10X1.5X80	
60		A384024-60	3	Lower Semi-Bushing for Connecting Rod - Std	
		A384024-60-25	3	Lower Semi-Bushing for Connecting Rod +0.25	
		A384024-60-50	3	Lower Semi-Bushing for Connecting Rod +0.50	
61		A384024-61	3	Upper Semi-Bushing for Connecting Rod - Std	
		A384024-61-25	3	Upper Semi-Bushing for Connecting Rod +.025	
		A384024-61-50	3	Upper Semi-Bushing for Connecting Rod +.050	
62		A384024-62	3	Connecting Rod Bushing	
63		A384024-63	6	Internal Snap Ring, Ø 32 UNI 7437	
64		A384024-64	3	Connecting Rod Pin	
65		A384024-65	4	Screws, Inspection Cover	
66		A384024-66	2	Foot, Pump Mounting	
67		A384024-67	6	Plug, 15mm	
68		A384024-68	1	Oil Dipstick	
69		A384024-69	1	O-Ring 34.65 x 1.78 (In with F2167 & F2168 kits)	✓
70		A384024-70	1	Tube for Oil Fill Plug, G1	
71		A384024-71	1	Cylinder Roller Bearing	
72		A384024-72	1	Pinion, 1500 RPM (1.876:1)	
73		A384024-73	2	Cylindrical Pin Ø10 X 24	
74		A384024-74	1	Internal Snap Ring, Ø 120	
75		A384024-75	1	Roller Bearing	
76		A384024-76	1	Bearing Support Ring	
77		A384024-77	1	External Snap Ring, Ø 55	
78		A384024-78	1	Rad. Ring, Ø 55X75X8, Viton	
79		A384024-79	1	Tab, 14X9X60, UNI 6604	
80		A384024-80	1	Ring Gear Support Ring	
81		A384024-81	2	Screw, M10X25, UNI 5739	
82		A384024-82	1	Tab, 22X14X80, UNI 6604	
83		A384024-83	1	Ring Gear Stop	
84		A384024-84	1	Crankshaft C. 70	
85		A384024-85	1	Ring Gear, 1500 RPM (1.876:1)	
86		A384024-86	15	Screw, M10X40, UNI 5931	
87		A384024-87	1	Reduction Gear Cover	

MWSR SERIES WATER PUMP

ITEM	MWRS45	MWRS50 P/N	QTY	DESCRIPTION	KITS
88	A384024-88		2	O-Ring, Casing Cover (In with F2167 & F2168 kits)	✓
89	A384024-89		1	Reduction Gear Box	
90	A384024-90		2	Roller Bearing	
91	A384024-91		2	Side Seal (In with F2167 & F2168 kits)	
92	A384024-92		1	Pump Case	
93	A384024-93		1	Casing Cover	
94	A384024-94		14	Screw, M10X30, UNI 5931	
95	A384024-95		1	Bearing Cover	
96	A384024-96		2	Plug, G1/2"X10, Nickel Plated	
105	A384024-F2189 (kit)		1	Valve Union Bracket	
106			2	Screw, M8X10	
107			2	Nut, M8X1.25X5X13	
KIT	A384024-F2150		1	Connecting Rod Bearing Kit (std.size)	
KIT	A383768-F2163	A384024-F2164	1	Plunger Packing Kit (1 Kit Required)	
KIT	A383768-F2167	A384024-F2168	1	Complete Gasket, Packing & Seal Kit	
KIT		A384024-F2189	1	Valve Union Bracket Kit	
NI		A215519-102	1	Inlet Manifold Adapter Kit	

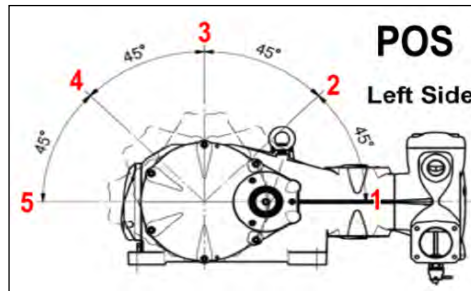
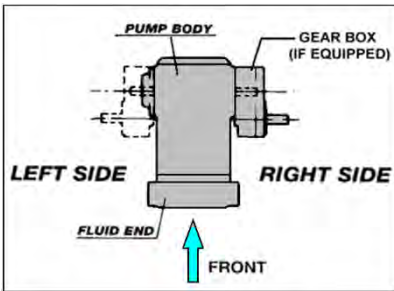
MS SERIES WATER PUMP REPLACEMENT

The MS series water pump was discontinued by the manufacturer in 2010. There is no direct bolt up replacement for it. Any MS series pump that needs replaced must be retrofitted with a newer style pump. The MW series is the recommended pump for this, but the installer must keep these differences in mind.

- The base mounting pattern (bolt hole footprint) is different. There is a rail kit available (p/n A384025) to make the adaptation easier.
- The Inlet and discharge port alignments are different. The piping will have to be replumbed.
- There are no ports on the top of the fluid head on the MW series for a bleeder or blow-off valve. Therefore, the bleeder/blowoff parts will also have to be ordered (see list below).

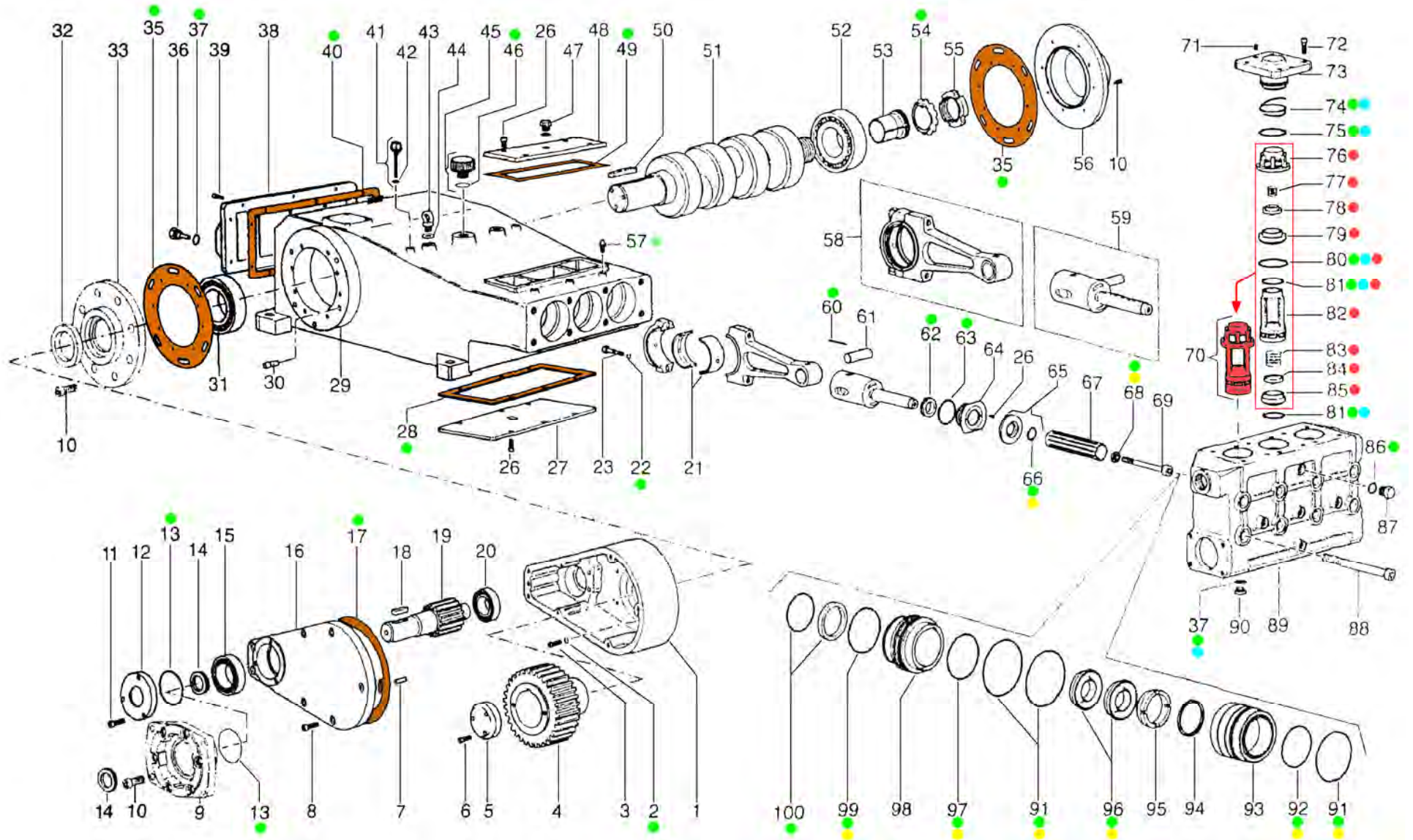


ORIGINAL PUMP						SUGGESTED REPLACEMENT		
MODEL	IN	POS	RPM	PART NO.	MAX GPM @ PSI	MODEL	HI-VAC PART NO.	DESCRIPTION
MSS40	LH	5	1800	A381970	43.9 @ 3900	MWS36	TBA	45.2 @ 3900, LH
MSS45	LH	1	1800	A215522-1	55.5 @ 3050	MWSR40	TBA	55.7 @ 3050, LH
MSS45	LH	5	1800	A215522	55.5 @ 3050	MWSR40	TBA	55.7 @ 3050, LH
MSS45	RH	5	1800	A381656	55.5 @ 3050	MWSR40	TBA	55.7 @ 3050, RH
MSS50	LH	?	?	A215511	68.7 @ 3050	<i>Pre-Hi-Vac - not enough data - call with missing info</i>		
MSS50	RH	?	?	A215512	68.7 @ 3050	<i>Pre-Hi-Vac - not enough data - call with missing info</i>		
MSS55	LH	1	1500	A381158	83 @ 2000	MWSR50	121002407	87.5gpm @ 2000psi, LH
MSS55	LH	5	1500	A215519	83 @ 2000	MWSR50	A384024	87.5gpm @ 2000psi, LH
MSS55	RH	5	1500	A215520	83 @ 2000	MWSR50	A384139	87.5gpm @ 2000psi, RH
MSS55	RH	5	1800	A215516	83 @ 2000	MWSR50	A384024-1800-R	87.5gpm @ 2000psi, RH
MSS55	RH	?	1800	A215518	83 @ 2000	<i>Pre-Hi-Vac - not enough data - call with missing info</i>		



Part No.	Description
TF3759X6	Tee Fitting, 3/8"NPT Male Run
A133620	Pipe Bushing, 3/8" x 1/4"
A151550	Ball Valve, 3/8"NPT x 3/8" Barb
A221441	Air Valve, High Pressure, Steel

NOTE: The above will require drilling and tapping the right hand cover plate for 3/8"NPT or order a p/n A304062 Pre-Drilled and Tapped Cover Plate.



MS45, MS50 MS55 WATER PUMP PARTS

REF. NO.	MS45 P/N	MS50 P/N	MS55 P/N	DESCRIPTION	IN KIT	QTY. REQ.
1		A215519-72		Reduction Gear Housing		1
2		A215519-69		10mm Washer	C	8
3		A215519-48		10mm x 40mm Screw		8
4		A215519-73		Gear Ring, 1500RPM		1
5		A215519-70		Flange Locking Ring		1
6		A215519-5		10mm x 25mm Screw		3
7		A215519-65		12mm x 40mm Cylinder Pin		2
8		A215519-63		10mm x 50mm Screw		7
9		Not Used		Hydraulic Motor Flange		1
10		A215519-28		10mm x 30mm Screw		A.R.
11		(special order)		10mm x 25mm Screw		3
12		A215519-57		Reduction Gear Flange		1
13		A215519-58		O-Ring 1	C	
14		A215519-59		Shaft seal		1
15		A215519-60		Needle Bearing		1
16		A215519-61		Reduction Gear Reduction Cover		1
17		A215519-62		Gasket, Gear Reduction Cover	C	1
18		A215519-64		Key 14mm x 9mm x 60mm		1
19		A215519-66		Pinion Shaft, 1500RPM		1
20		A215519-67		Roller Bearing		1
21		A215519-33		Brass Connecting Rod Inserts		3
22		A215519-31		12mm Washer	C	1
23		A215519-29		Connecting Rod Screw		6
26		A215519-14		6mm x 14mm Cap Screw		16
27		A215519-44		Lower (Bottom) Cover		1
28		A215519-43		Gasket, Lower Cover	C	1
29		A215519-01		Pump Body (Crankcase)		1
30		(special order)		Reference Shaft (Alignment Dowel)		1
31		A215519-74		Needle Bearing		1
32		A215519-93		Shaft Seal 70mm x 90mm x 10mm		1
33		A215519-92		Direct Drive Bearing Cover		1
35		A215519-26		Bearing Cover Gasket	C	2
36		A215519-04		Magnetic Plug, 1/2"		1
37		A215519-3		Aluminum Washer, 1/2"	B C	4
38		A215519-6		Back (Rear) Cover		1
39		A215519-17		8mm x 20mm Cap Screw		6
40		A215519-7		Gasket, Back Cover	C	1
41		A215519-9		Oil Level Rod (Dipstick)		2
42		A215519-32		3/8" Washer	C	2
43		A215519-10		16mm Eyebolt		2
44		A215519-11 (special order)		Eyebolt Lining (Spacer)		A.R.
45		A215519-12		Oil Filler Cap		1
46		A215519-13		O-Ring 29.82mm x 2.62mm	C	1
47		A215519-16		Breather Cap		1
48		A215519-15 (special order)		Upper (Top) Cover		1
49		A215519-18		Gasket, Upper Cover	C	1
50		A215519-20 (special order)		Key 20mm x 12mm x 70mm		1
51		A215519-21		Crankshaft		1
52		A215519-22		Needle Bearing		1
53		A215519-23		Pressure Sleeve (Bearing Bushing)		1
54		A215519-24 (special order)		Tab Washer MB12	C	1
55		A215519-25 (special order)		Ring (Spanner) Nut KM12		1
56		A215519-27		Bearing (Side) Cover		1
57		A215519-19		Grease Fitting 10mm x 1.0	C	3
58		A215519-08		Complete Connecting Rod		3
59		A215519-35		Complete Piston		3
60		A215519-36		Elastic Retainer Pin 5mm x 36mm	C	3
61		A215519-37		Piston Wrist Pin		3
62		A215519-45		Piston Shaft Oil Seal 32mm x 45mm	C	3

MS45, MS50 MS55 WATER PUMP PARTS

REF. NO.	MS45 P/N	MS50 P/N	MS55 P/N	DESCRIPTION	IN KIT	QTY. REQ.
63		A215519-46		O-Ring 64.77mm x 2.62mm	C	3
64		A215519-47		Piston Oil Seal Cover		3
65		A215519-39		Guard (Wiper) With O-Ring		3
66		A215519-95		O-Ring 26.65mm x 2.62mm	A C	3
67	A215522-67	A215511-40	A215519-40	Plunger		3
68		A215519-41		Washer, 14mm Special	A C	3
69	A215522-42	A215519-42		Plunger Cap Screw, Socket Head		3
70		A215519-91		Valve Assembly, Suction/Discharge	76-85	3
71		A215519-75		Headless Screw, 6mm x 25mm		6
72		A215519-76		Cap Screw, 14mm x 45mm		12
73		A215519-77		Valve Cover		3
74		A215519-78		Anti Extrusion Ring (Plastic)	B C	3
75		A215519-79		O-Ring 65.09mm x 3.53mm	B C	3
76		A215519-80		Discharge Valve Guide		3
77		A215519-81		Discharge Valve Spring		3
78		A215519-82		Discharge Valve Plate (Disc)		3
79		A215519-83		Discharge Valve Seat		3
80		A215519-84		O-Ring 66mm x 3mm	B C	3
81		A215519-85		O-Ring 50mm x 3mm	B C	6
82		A215519-86		Suction Valve Guide		3
83		A215519-87		Suction Valve Spring		3
84		A215519-88		Suction Valve Plate (Disc)		3
85		A215519-89		Suction Valve Seat		3
86		A215519-107		Washer, 1/4"	C	3
87		A215519-105		Plug, 1/4"BSP-M		5
88		A215519-71		Cap Screw 18mm x 180mm		5
89		A215519-02		Manifold (Fluid Head)		1
90		A215519-90		Cap, 1/2"		3
91		A215519-51		O-Ring 78mm x 2mm	A C	9
92		A215519-56		O-Ring 62mm x 3mm	A C	3
93	A215522-55	A215511-55	A215519-55	Sleeve (Cylinder)		3
94	A215522-54	A215511-54	A215519-54	Spring Loaded Spacer		3
95	A215522-53	A215511-53	A215519-53	Gasket Seal Ring (Packing Ring)		3
96	A215110	A215511-52	A215519-52	Pressure Gasket (Packing)	A C	6
97	A215522-68	A215511-68	A215519-68	O-Ring 69.5 x 3	A C	3
98	A215522-50	A215511-50	A215519-50	Gasket Holder (Packing Support)		3
99		A215511-49	A215519-49	O-Ring 66.40 x 1.78	A C	3
100	A215522-30	A215511-30	A215519-30	Scraper Ring	A C	3
n.i.		A215519-100		Inlet Flange Cover Plate		1
n.i.		A215519-101		Inlet Flange O-Ring		3
n.i.		A215519-102		Inlet Flange Adapter Plate		1
n.i.		A215519-103		Inlet Flange Adapter Plate Bolts		4
n.i.		A380341		Fluid Head Drain Valves (set of 3)		1
Kit A	A215522-F1136	A215511-F1137	A215519-F1138	Plunger Seal Kit		1
Kit B		A215519-F1139		Suction/Discharge Valve Seal Kit		1
Kit C	A215522-F1142	A215511-F1143	A215519-F1144	Major Seal & Gasket Kit		1



B-SERIES TYPICAL WATER HOSES

PART NO.	LENGTH	END 1	END 2	WHERE USED
234996-41	24"	1"MNPT	1"MNPT	Pressure relief valve at pump to 45° fitting at strainer (bypass return)
234996-38	48"	1"MNPT	1"MNPT	Front ball valve to bottom 1" pipe on left frame rail - w/tank flush
234996-35	55"	1"MNPT	1"MNPT	Front ball valve to 1" pipe on left frame rail - w/o tank flush
234996-22	117"	1"MNPT	1"MNPT	1" pipe on left frame rail to top 90° swivel
234996-39	125"	1"MNPT	1"MNPT	Above door bulkhead (street side fitting) to reel ball valve center port (supply)
234996-52	127"	1"MNPT	1"MNPT	Bottom reel manifold port to above door bulkhead (curb side fitting) - tank return
234995-18	26"	1"MNPT	1"FJIC	Top port of rear ball valve to hose reel swivel
234996-42	17"	1"MNPT	1"MNPT	Above door bulkhead (curb side fitting) to water tank (tank return)
234382-12	18"	1/2"FJIC	1/2"FJIC	Wash gun relief valve return line
236375-15	26"	1/2"FJIC	3/8"FJIC	Water pressure gauge line
236375-13	40"	1/2"FJIC	3/8"FJIC	Optional pump off system drain line

B-SERIES FRONT REEL OPTION - TYPICAL HOSES

PART NO.	LENGTH	END 1	END 2	WHERE USED
A381515-4	17"	1"MNPT	1"MNPT	
A381515-7	24"	1"MNPT	1"MNPT	
A381515-5	127"	1"MNPT	1"MNPT	
A381515-1	125"	1"MNPT	1"MNPT	

B-SERIES WITH UNLOADER VALVE OPTION (CHECK BOM)

PART NO.	LENGTH	END 1	END 2	WHERE USED
100013	133"	1"MNPT	1"MNPT	
100012	76"	1"MNPT	1"FJIC	
234995-18	26"	1"MNPT	1"FJICS	
234996-36	152"	1"MNPT	1"MNPT	Frame Rail to Unloader Valve
234996-54	127"	1"MNPT	1"JIC90SR	Frame Rail to Unloader Valve
234996-55	89"	1"MNPT	1"JIC90SR	
234996-65	83"	1"MNPT	1"MNPT	
235021-01	65"	1"MNPT	1"FJIC 90°	

B10 TANK FLUSH OPTION - TYPICAL HOSES

PART NO.	LENGTH	END 1	END 2	WHERE USED
234996-19	120"	1"MNPT	1"MNPT	Top port on front ball valve to top 1" pipe on left frame rail
234996-36	152"	1"MNPT	1"MNPT	Top 1" pipe on left frame rail to tee on rear tank flush nozzle port
234996-37	69"	1"MNPT	1"MNPT	Jumper from tee on center tank flush port to front & rear tank flush port
176109	15"	1"MNPT	1"MNPT	Inside tank down to tank flush nozzles (2 used)

B5 / B52 TANK FLUSH OPTION - TYPICAL HOSES

PART NO.	LENGTH	END 1	END 2	WHERE USED
234996-19	120"	1"MNPT	1"MNPT	Top port on front ball valve to top 1" pipe on left frame rail
234996-47	166"	1"MNPT	1"MNPT	Top 1" pipe on left frame rail to tank flush inlet port
234996-13	35"	1"MNPT	1"MNPT	Inside tank down to front flush nozzle
234996-30	81"	1"MNPT	1"MNPT	Jumper inside tank, front flush nozzle to rear flush nozzle.

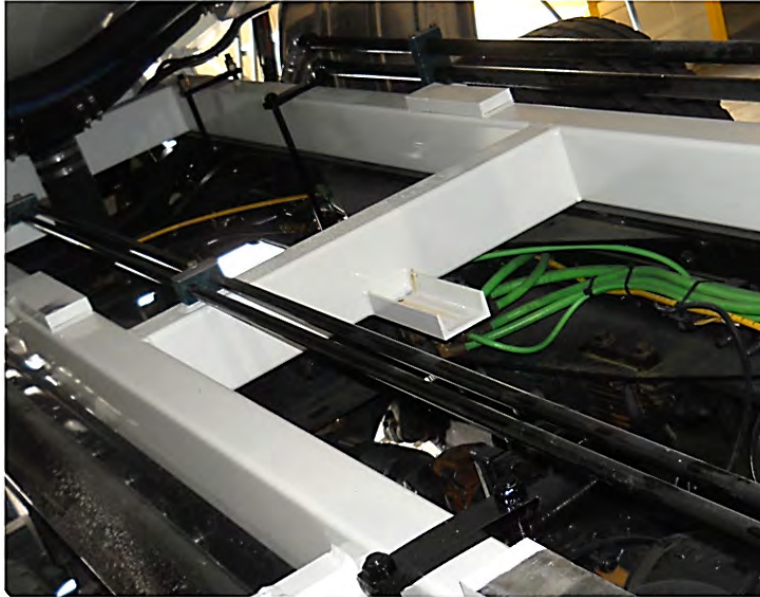
B6 TANK FLUSH OPTION - TYPICAL HOSES

PART NO.	LENGTH	END 1	END 2	WHERE USED
234996-19	120"	1"MNPT	1"MNPT	Top port on front ball valve to top 1" pipe on left frame rail
234996-36	152"	1"MNPT	1"MNPT	Top 1" pipe on left frame rail to tank flush nozzle port
176109	15"	1"MNPT	1"MNPT	Inside tank down to tank flush nozzle

B15 TANK FLUSH OPTION - TYPICAL HOSES

PART NO.	LENGTH	END 1	END 2	WHERE USED
234996-19	120"	1"MNPT	1"MNPT	Top port on front ball valve to top 1" pipe on left frame rail
234996-71	185"	1"MNPT	1"MNPT	Top 1" pipe on left frame rail to tee on rear tank flush nozzle port
234996-15	61"	1"MNPT	1"MNPT	Jumper from flush nozzle port tee to flush nozzle port tee (2 used)
176109	15"	1"MNPT	1"MNPT	Inside tank down to tank flush nozzles (3 used)

HIGH PRESSURE SUPPLY (FRAME) PIPES



Part No.	Description
A235232-40	PIPE TBE, SCH80, 1" X 59"L
A235232-31	PIPE TBE, SCH80, 1" X 63"L
A235232-5	PIPE TBE, SCH80, 1" X 75"L
A235232-19	PIPE TBE, SCH80, 1" X 80"L
A235232-12	PIPE TBE, SCH80, 1" X 85"L
A235232-10	PIPE TBE, SCH80, 1" X 102"L
A235232-37	PIPE TBE, SCH80, 1" X 107"L
A235232-30	PIPE TBE, SCH80, 1" X 117"L
A235232-36	PIPE TBE, SCH80, 1" X 130"L
A235232-38	PIPE TBE, SCH80, 1" X 144"L
A235232-27	PIPE TBE, SCH80, 1" X 145"L
A235232-39	PIPE TBE, SCH80, 1" X 171"L
A235232-80	PIPE TBE, SCH80, 1-1/4" X 80"L

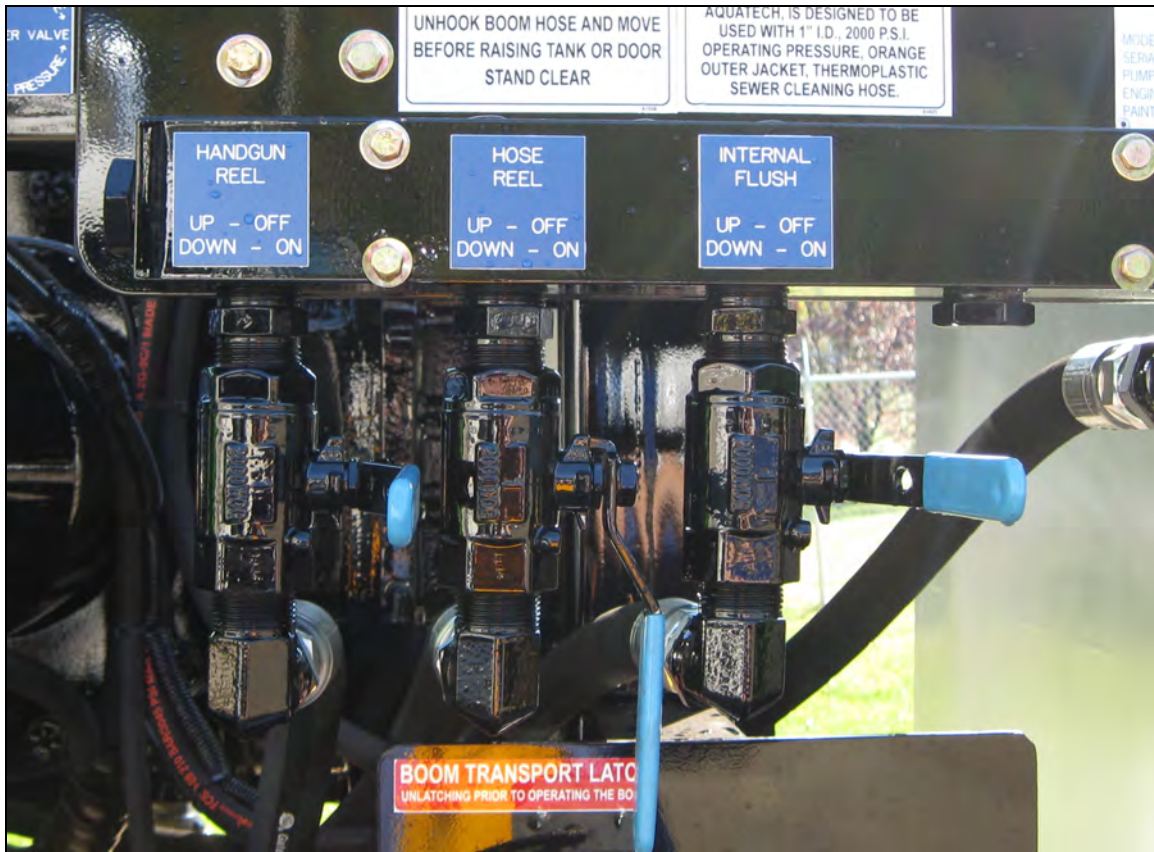


COMMON HIGH PRESSURE WATER SYSTEM COMPONENTS

 <p>Pressure Gauge 0-5000 psi A131788 <i>(replaces A131780 & A131786)</i></p>	 <p>MS Series Water Pump Air Purge Bleeder Valve A110351</p>	 <p>MS Series Water Pump Blow Off Valve A221441 <i>(Replaces A221440)</i></p>
 <p>1/2" Ball Valve for Wash Down Gun A130893</p>	 <p>1/2" 800 psi Pressure Relief Valve for Wash Down Gun Circuit on Older models A130962</p>	 <p>Unloader Valve for Wash Gun Circuit on Current Models 22973C</p>
 <p>1" Pressure Relief Valve A130963 <i>(Pre-Set 2100 psi)</i> A380516 <i>(Pre-Set 2900 psi)</i></p>	 <p>Needle Valve A381906 <i>(1/2")</i> 121004527 A <i>(1" 5000psi)</i> A130904 <i>(1" 6000psi)</i></p>	 <p>3-Way Ball Valve A381714 <i>(1/2")</i> A130925 <i>(3/4")</i> A130920 <i>(1")</i> A100206 <i>(1 1/4")</i> A130922 <i>(3/4" & 1" Repl. Handle)</i></p>



POWERDECK BALL VALVE ARRAY



A130890	Ball Valve, 1/2", 2000 psi, Yellow Handle
A130893	Ball Valve, 1/2", 3000 psi, Yellow Hndl., Padlock Loops
A130908	Ball Valve, 3/4", 4600 psi, Plated Handle
A130901	Ball Valve, 1", 2000 psi, Blue Handle
A130903	Ball Valve, 1", 3000 psi, Orange Handle
A383933-1	Water Manifold, 4 Port, 3/4"FNPT, JVLT
A383932	Water Manifold, 2 Port, 1"FNPT, 3000 psi
A383932-4000	Water Manifold, 2 Port, 1"FNPT, 4000 psi
A383933	Water Manifold, 4 Port, 1"FNPT
A304267	Water Manifold, 5 Port, 1"FNPT
A384126	Water Manifold, 6 Port, 1"FNPT

BALL VALVE STYLES

(See following page)





INLINE BALL VALVES

All valves are FxF (FNPT x FNPT) except where noted.

NPT SIZE	PART NO.	STYLE	PSI (WOG)	HANDLE	PORT	BODY	BALL	COMMENT
3/8"	20035	1	7350	Plated	Full	Zinc PI	Nickle PI	
1/2"	U4003-0008	2	600	Yellow	Full	Brass	Chromed	
	A130890	3	2000	Yellow	Reduced	A105 CS	SS	
	A130891	8	2000	Blue	Reduced	SS	316 SS	
	A130893	7	3000	Yellow	Reduced	CS	CS	w/Padlock Loops
	A383039	6	3000	Green	Full	Brass	Chromed	
	A383072	?	3000	Yellow	Full	CS	Chromed	
	A304477	1	7250	Plated	Full	CS	Chromed	
3/4"	A130895	6	600	Yellow	Full	Brass	Chromed	
	A130906	3	2000	Yellow	Full	A105 CS	SS	
	A130908	1	4600	Plated	Full	CS	Chromed	
1"	U3904-0026	6	600	Yellow	Full	Brass	Chromed	
	A130901	8	2000	Blue	Reduced	A216 CS	Chromed	Cold Weather Recirc.
	A130903	7	3000	Orange	Reduced	CS	SS	w/Padlock Loops
1 1/4"	A130909	6	600	Green	Full	Brass	Chromed	
	A130910	4	2000	Yellow	Full	A108 CS	Chromed	A221970*
	A100188	4	3000	Yellow	Full	A108 CS	Chromed	A221970*
1 1/2"	U4003-0143	6	600	Yellow	Full	Brass	Chromed	Cold Weather Recirc. Pump
2"	U4631-0012	6	600	Yellow	Full	Brass	Chromed	
2 1/2"	A140062	6	600	Green	Full	Brass	Chromed	
3"	A140079	2	600	Yellow	Full	Brass	Chromed	B-Series Supply Shut-off, A222590*
	16-0505	?	1000	Yellow	Std.	CS	316SS	
4"	A382094	6	450	Yellow	Full	Brass	Chromed	
	A382094-SS	5	450	Yellow	Full	Bronze	316 SS	

* Replacement Lever

CHECK VALVES BY THREAD SIZE & PSI



STYLE	PART NO.	SVC	SIZE	MAX PSI	CRACK PSI	TEMP RANGE *	BODY
1	A381995	W	½"FNPT	200	swing type	-20° to 405°F	Bronze
2	A383977	W	½"FNPT	400	0.5	350° Max	SS
3	U3904-0027	W	½"FNPT	400	0.5	-20° to 350°F	Bronze
3	A110311-SS	W	½"FNPT	3,000	0.33	-4° to 350°F	316 SS
4	A383977-5000	W	½"FNPT	5,000	1	-30° to 200°F	303 SS
2	A140015	W	¾"FNPT	400	0.5	406° Max	Bronze
4	A140015-5000	HW	¾"FNPT	5,000	1	-30 to 200°F	SS
8	121002877	P	1"FNPT	350	NA	250°F Max	Brass
2	A384013	W	1"FNPT	400	0.5	350° Max	316 SS
5	A304417-SS	W	1"FNPT	10,000	1	-20° to 400°F	SS
5	A304429	HW	1"FNPT	10,000	5	-20° to 400°F	SS
5	121005954 A	H	1½"NPT	10,000	1	-20° to 400°F	SS
1	A381996	W	2½"FNPT	125	swing type	-20° to 405°F	Bronze
5	A249118	H	#8 SAE	10,000	5	-20° to 400°F	CS
6	A100097	H	#12 SAE	3,000	3	-13 to 176°F	CS
5	121005022 A	H	#12 SAE	5,800	7	-4°F to 176°	CS
5	A380833	H	#12 SAE	10,000	5	-20° to 400°F	CS
7	121003667 A	H	#16 SAE	5,075	65	-20° to 212°F	CS
5	A249624	H	#16 SAE	10,000	5	-20° to 400°F	CS
5	U3904-0110	H	1"BSP	3,000	5	-45°C to 230°C	316 SS

↳ H = Hydraulic P = Pneumatic W = Water



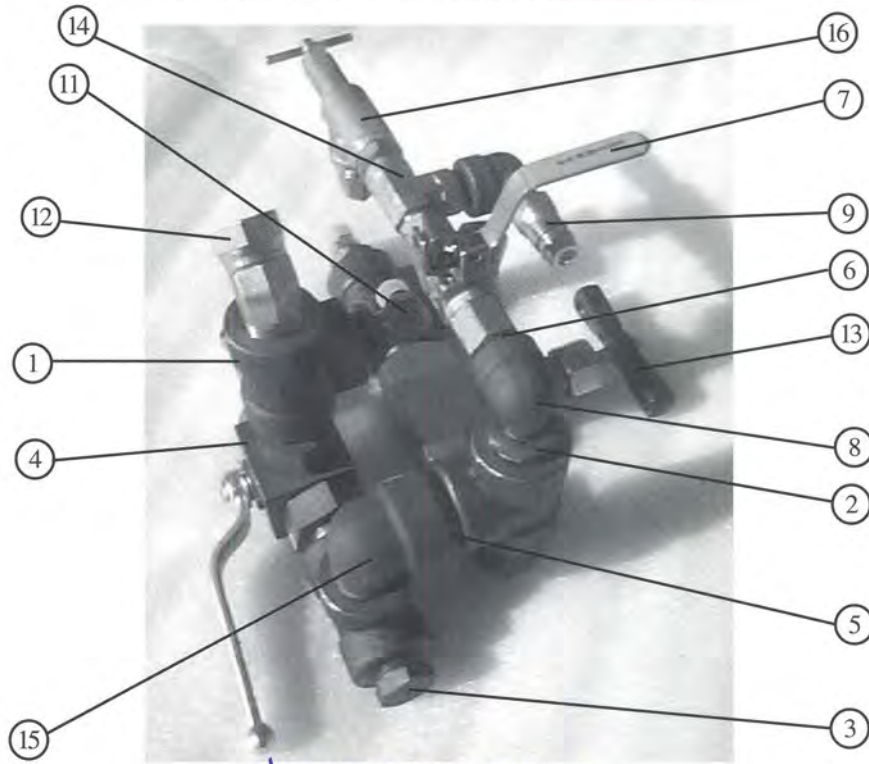
1" REAR REEL WATER MANIFOLD COMPARISON

REAR REEL WATER MANIFOLD BOMs		<div style="display: flex; justify-content: space-around;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">A241239</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">A241239-1</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">A241239-3</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">A241239-5</div> </div>			
		Qty.	Qty.	Qty.	Qty.
Part No.	Description				
A100203	TEE, PIPE, 1.25", 3000# HD				4
A100205	VALVE, NEEDLE GLOBE, 1.25", 6000#				1
A100206	VALVE, BALL, 1.25", 3-WAY, W/ OFFSET HNDL				1
A110860	ADAPTER, 1/2" MNPT X 1/2" MJIC	--		1	1
A130770	ADAPTER, ELBOW, 90D, 1FNPT X 1MNP	2	2	2	
A130780	ADAPTER, ELBOW, 45D, 1MNPT X 1FNP	1	1	1	
A130820	COUPLER, QUICK DISCONNECT, 1/2"	1	1	1	1
A130851	SWIVEL 90 DEG. 1-1/4M X 1-1/4F				2
A130855	SWIVEL 45DEG. 1-1/4M X 1-1/4F				1
A130890	VALVE, BALL 1/2" 2000# CS, RE		1		
A130893	BALL VALVE, 1/2" 3000 PSI	1		1	1
A130901	VALVE, BALL, 1", 2000PSI	1	2	--	
A130904	VALVE, NEEDLE GLOBE, 1", 6000#, SC	--		1	
A130920	VALVE, BALL, 1", 3-WAY, W/OFFSET S	1	1	1	
A130962	VALVE, RELIEF, 1/2", 800 PSI, SPS	1	1	1	1
A132210	NIPPLE, CLOSE, 1/2" SCH40 SEAMLESS		1		
A132210-2	NIPPLE, PIPE, 1/2" X CLOSE, 3000#	2		2	2
A132410	NIPPLE, PIPE, 1" X CLOSE, SCH80, B	5	5	5	
A132530	NIPPLE, CLOSE, 1-1/4" H				5
A132826	ADAPTER, TEE, STREET, 1/2"	1		1	1
A132830	TEE, PIPE, 1/2" FNPT, L, 150#		1		
A132841	TEE, PIPE, 1", L, 3000#, H.D.	4	3	4	
A133090	ELBOW, PIPE, 90D, STREET 1/2" 300	2	1	2	2
A133110-1	ELBOW, PIPE, 90D, 1" STREET, 3000	2		2	
A133120	ELBOW, PIPE, 90D, STREET, 1-1/4", 3 2				
A133410	PLUG, PIPE, 1-1/4" NPT, SQUARE HEAD				1
A133730	BUSHING, REDUCER, HEX, 1"-1/2", F.	3		3	
A133780	BUSHING, REDUCER, HEX, 1-1/4"-1/2				3
A135198	ADAPTER, STRAIGHT, #10MSAE X #4FNPT		1		
A135340	ADAPTER, ELBOW, 90D, #8MNPT X #8M	2	1	2	2
A142290	PLUG, PIPE, 1", H, 3000# FS HEX H	1		1	
	Drawing Available?	N	N	Y	Y
	Parts Page Available?	Y	Y	Y	Y

WATER SYSTEM



WATER MANIFOLD ASSEMBLY 241239



L HANDLE 130922

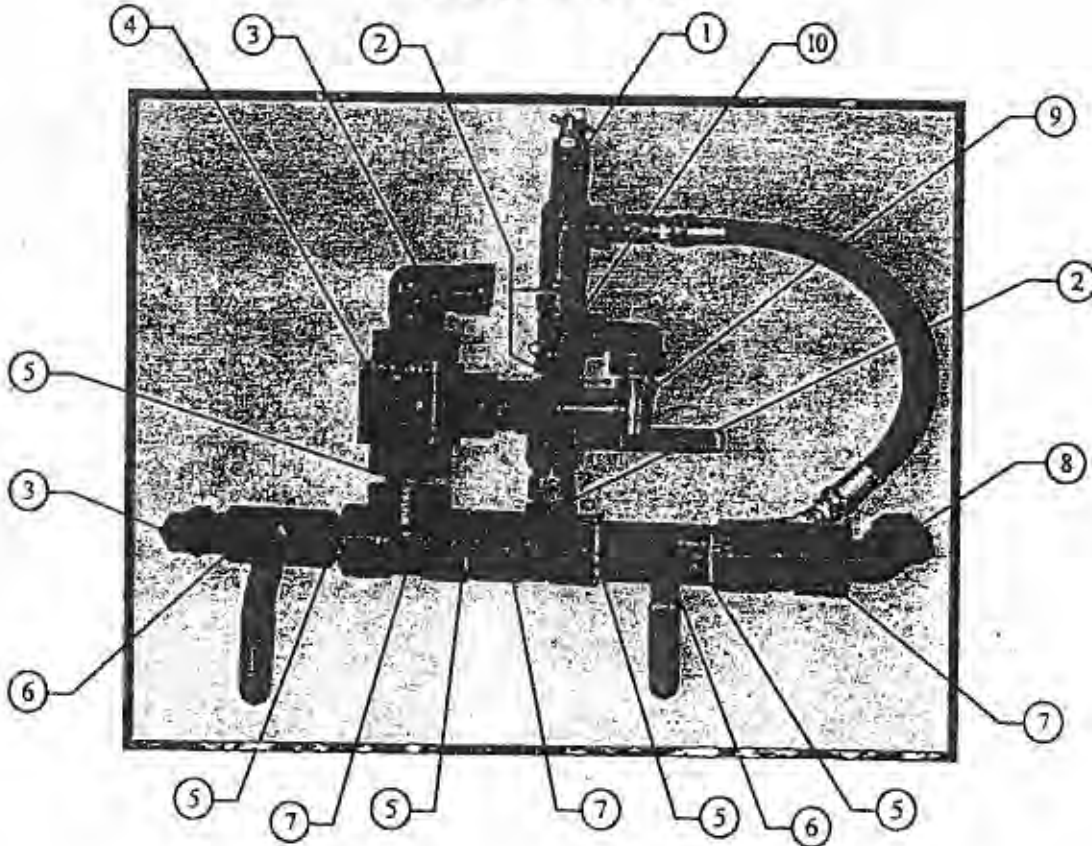
ITEM	PART NO.	DESCRIPTION	QTY.
1	132841	1" PIPE TEE	4
2	133730	1"X1/2" REDUCER BUSHING	3
3	142290	1" PIPE PLUG	1
4	130920	1" 3 WAY BALL VALVE	1
5	132410	1" NIPPLE	5
6	132210-2	1/2" NIPPLE	2
7	130890 ³	1/2" BALL VALVE	1
8	133090	1/2" PIPE ELBOW	2
9	130820	1/2" MALE QUICK DISCONNECT	1
10 (NOT SHOWN)	130770	1" SWIVEL 90 DEGREE ELBOW	2
11	135340	#8 MNPT X #8 MJIC 90 DEGREE ELBOW	2
12	130780	1" SWIVEL 45 DEGREE ELBOW	1
13	130904	1" NEEDLE GLOBE VALVE	1
14	132826	1/2" STREET TEE	1
15	133110-1	1" STREET ELBOW	2
16	130962	^{1/2"} 800 PSI RELIEF VALVE	1

AQUATECH

A241239-1

WATER MANIFOLD

PAGE 1 OF 2



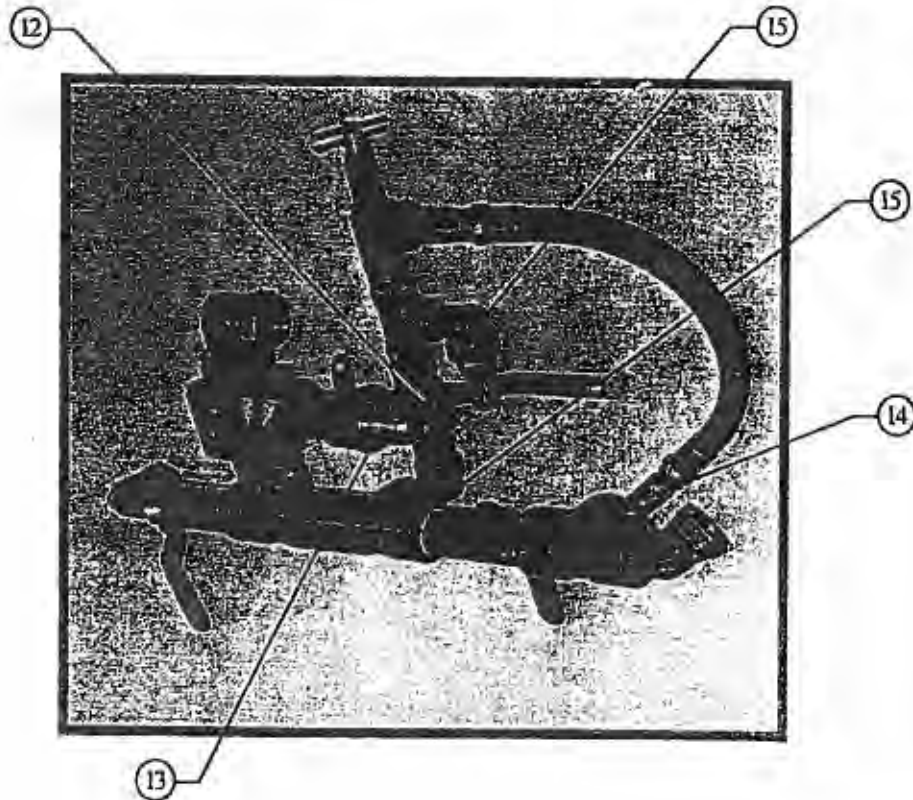
ITEM	PART #	DESCRIPTION	QTY.
1	130962	1/2" 800 PSI RELIEF VALVE	1
2	132210	1/2" X CLOSE NIPPLE	3
3	130770	90 DEG. 1" NPT SWIVEL NUT	2
4	130920	1" 3-WAY BALL VALVE WITH OFFSET HANDLE	1
5	132410	1" X CLOSE, H, BLK. NIPPLE	5
6	130901	1" BALL VALVE, 2000 PSI	2
7	132841	1" L 3000 PSI TEE, H.D.	3
8	130780	45 DEG. 1" NPT SWIVEL NUT	1
9	130820	1/2" MALE QUICK DISCONNECT	1
10	132830	1/2" L TEE	1

AQUATECH

A241239-1

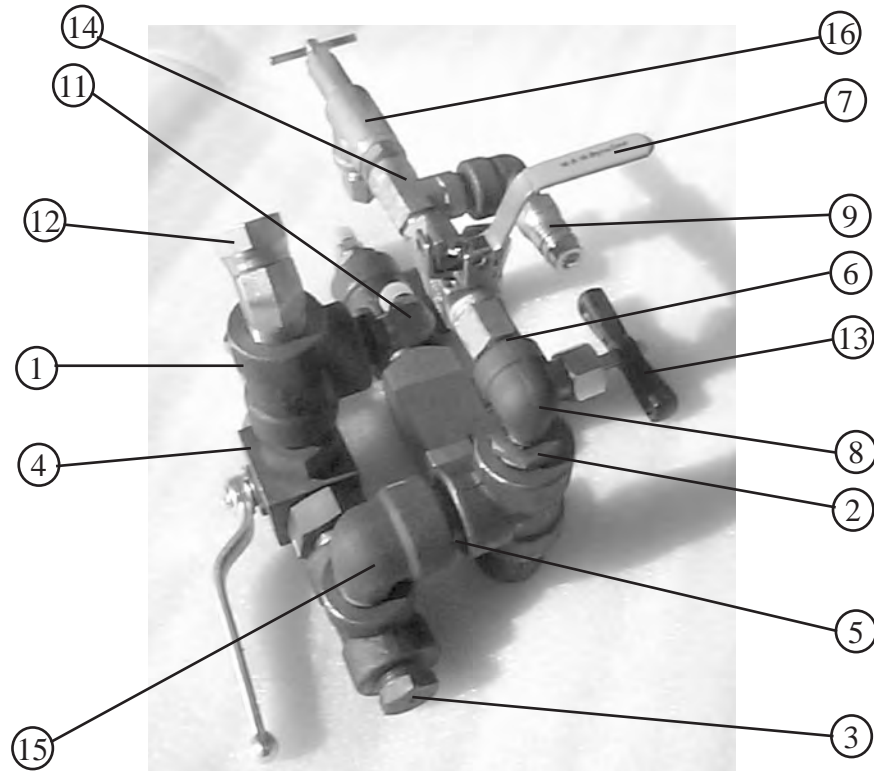
WATER MANIFOLD

PAGE 2 OF 2



ITEM	PART #	DESCRIPTION	QTY.
12	130890	1/2" BALL VALVE, FULL PORT	1
13	135198	1" BULKHEAD ASS'Y WITH GAUGE PORT	1
14	135340	90 DEG. 8 MNPT X 8 MJIC	1
15	133091	1/2" 90 DEG. STREET ELBOW, 3000 PSI	2
16		1" X CLOSE, H, BLK. NIPPLE	5

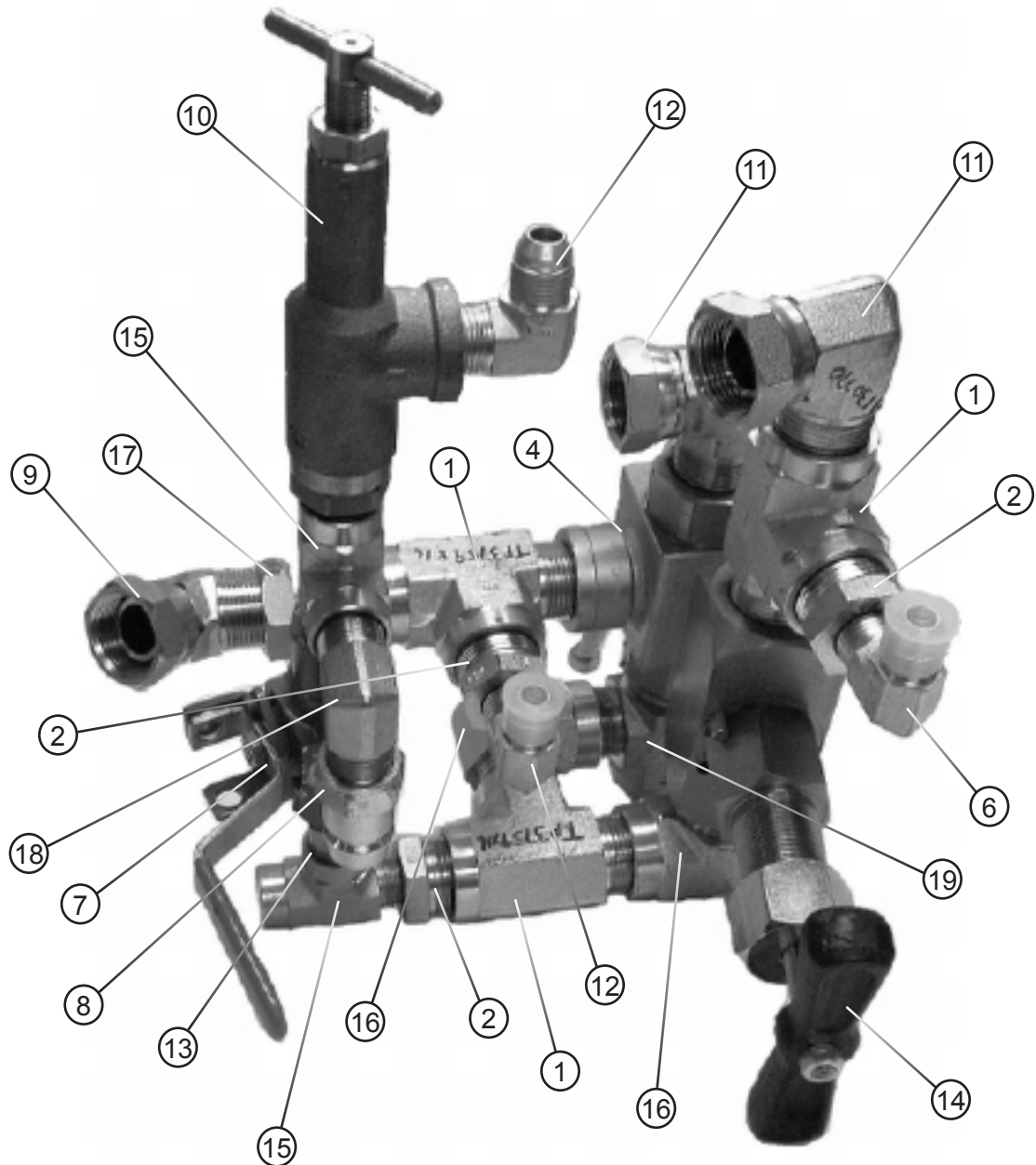
WATER MANIFOLD ASSEMBLY 241239-3



ITEM	PART NO.	DESCRIPTION	QTY.
1	132841	1" PIPE TEE	4
2	133730	1"X1/2" REDUCER BUSHING	3
3	142290	1" PIPE PLUG	1
4	130920	1" 3 WAY BALL VALVE	1
5	132410	1" NIPPLE	5
6	132210-2	1/2" NIPPLE	2
7	130890	1/2" BALL VALVE	1
8	133090	1/2" PIPE ELBOW	2
9	130820	1/2" MALE QUICK DISCONNECT	1
10	(NOT SHOWN) 130770	1" SWIVEL 90 DEGREE ELBOW	2
11	135340	#8 MNPT X #8 MJIC 90 DEGREE ELBOW	2
12	130780	1" SWIVEL 45 DEGREE ELBOW	1
13	130904	1" NEEDLE GLOBE VALVE	1
14	132826	1/2" STREET TEE	1

WATER MANIFOLD W/ NEEDLE GLOBE VALVE

PART # A241239-3

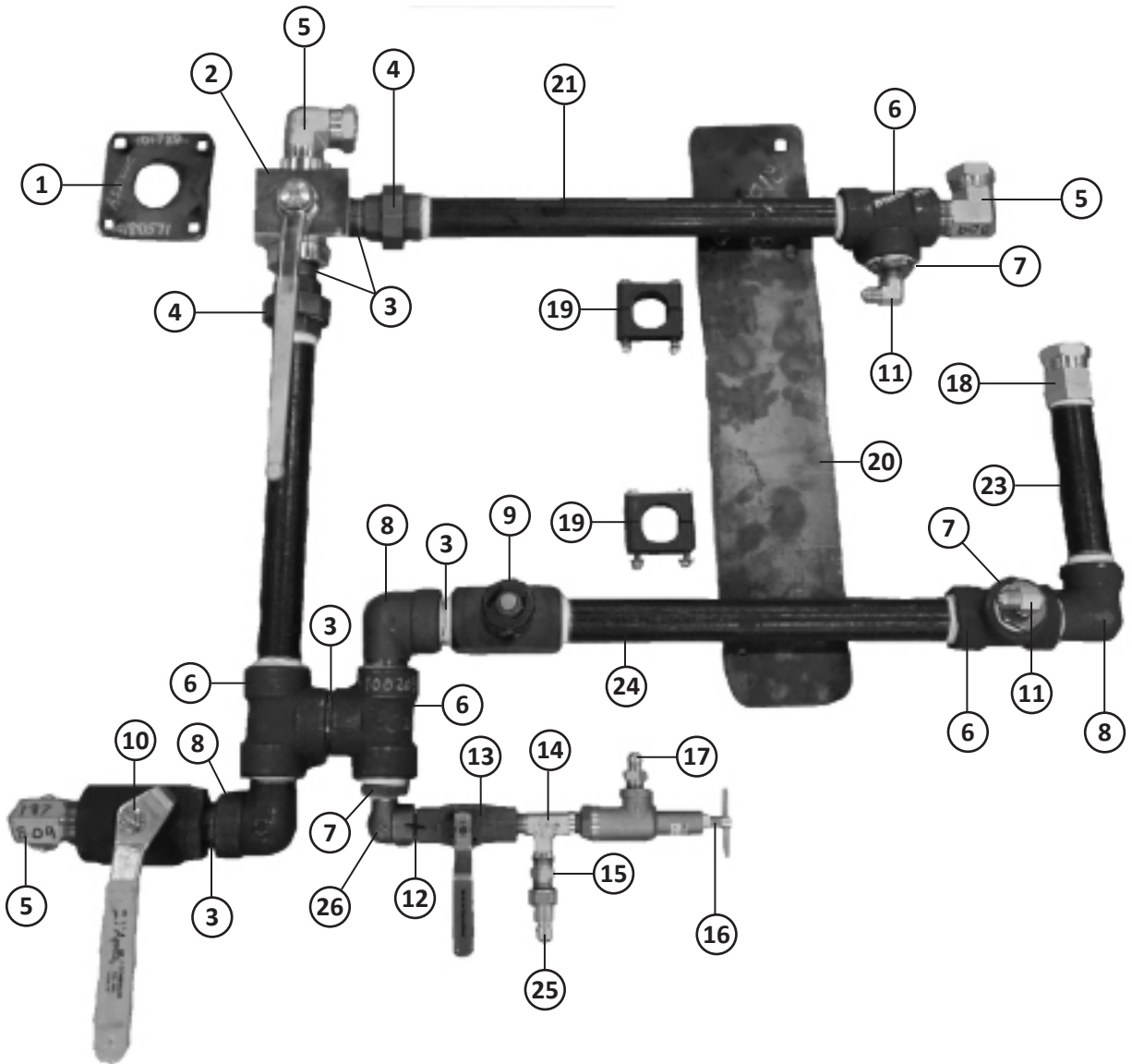


WATER MANIFOLD W/ NEEDLE GLOBE VALVE
PART # A241239-3

Note: Items 3 and 5 not shown

ITEM	PART #	DESCRIPTION	QTY
1	TF3759X16	TEE,1" MALE RUN	3
2	A249185	ADAPTER,BUSHING,1"MNPT X 1/2"FNPT	3
3	A142290	PLUG,PIPE,1", H,3000# FS HEX HEAD	1
4	A130920	VALVE,BALL,1",3-WAY,W/OFFSET STL HANDLE	1
5	A136817	PLUG,PIPE,1/2,5000 PSI	1
6	A110860	ADAPTER,STR,1/2"MNPT X 1/2"MJIC	1
7	A130893	BALL VALVE, 1/2" 3000 PSI	1
8	A130820	COUPLER,QUICK DISCONNECT,1/2" MALE	1
9	A130780	ADAPTER,ELBOW,45D,1MNPT X 1FNPT SWIVEL	1
10	A130962	VALVE,RELIEF,1/2",800 PSI,SPS	1
11	A130770	ADAPTER,ELBOW,90D,1FNPT X 1MNPT SWIVEL	2
12	A135340	ADAPTER,ELBOW,90D,#8MNPT X #8MJIC	2
13	A131830	ADAPTER,NIPPLE,PIPE,HEX,1/2"NPTx1/2"NPT	1
14	A130904	VALVE,NEEDLE GLOBE,1",6000#,SCREWED	1
15	A132826	ADAPTER,TEE,STREET,1/2"	1
16	TF3409X16	ELBOW-90D,1"NPT STREET	1
17	A130790	ADAPTER,STR,1"MNPT X 1"FNPT,SWIVEL	1
18	TF3529X8	ELBOW-90D,1/2"MNPT X 1/2"MNPT	1
19	TF3805X16	TEE-1" FEMALE RUN	1

1-1/4" Water Manifold Assy.



1-1/4" Water Manifold Assy.

ITEM	PART #	DESCRIPTION	QTY
1	A180571	MOUNTING PLATE	1
2	A100206	VALVE,BALL,1.25",3-WAY,W/ OFFSET ST HAND	1
3	A132530	NIPPLE,CLOSE,1-1/4"	5
4	02-0353	UNION,PIPE,1-1/4"FNPT	2
5	A130851	SWIVEL 90 DEG. 1-1/4M X 1-1/4F NPT	3
6	A100203	TEE, PIPE, 1.25", 3000# HD	4
7	A133780	BUSHING,REDUCER,HEX,1-1/4"-1/2",H,F.S.	3
8	A133120	ELBOW,PIPE,90D,STREET,1-1/4",3000#,BLACK	3
9	A100205	VALVE,NEEDLE GLOBE,1.25",6000#,SCREWED	1
10	A100188	VALVE,BALL,1-1/4",CS BODY,3000 PSI	1
11	A135340	ADAPTER,ELBOW,90D,#8MNPT X #8MJIC	2
12	A132210-2	NIPPLE,CLOSE,1/2" 3000#	1
13	A130893	VALVE,BALL,1/2",3000PSI,W/PADLOCK LOOPS	1
14	A132826	ADAPTER,TEE,STREET,1/2"	1
15	A131830	NIPPLE,HEX,1/2"MNPT X 1/2"MNPT,3000 PSI	1
16	A130962	VALVE,RELIEF,1/2"NPT,800 PSI,F/WASH GUN	1
17	A110860	ADAPTER,STR,1/2"MNPT X 1/2"MJIC	1
18	A100178	ADAPTER,SWIVEL,1.25"FNPTS X 1.25"FNPT,ST	1
19	A100208	CLAMP FOR 1.25" SCH 80 PIPE MOUNT	2 SETS
20	121001452	MOUNT, CLAMP, WATER MANIFOLD	1
21	TBD	NIPPLE, PIPE, 1-1/4" X 19" LONG, TBE	1
22	TBD	NIPPLE, PIPE, 1-1/4" X 14-1/2" LONG, TBE	1
23	TBD	NIPPLE, PIPE, 1-1/4" X 8" LONG, TBE	1
24	TBD	NIPPLE, PIPE, 1-1/4" X 16-1/2" LONG, TBE	1
25	A130820	QUICK COUPLER,1/2" MALE,WATER,4K PSI	1
26	A133090	ELBOW,PIPE,90D,STREET 1/2" 3000#	1

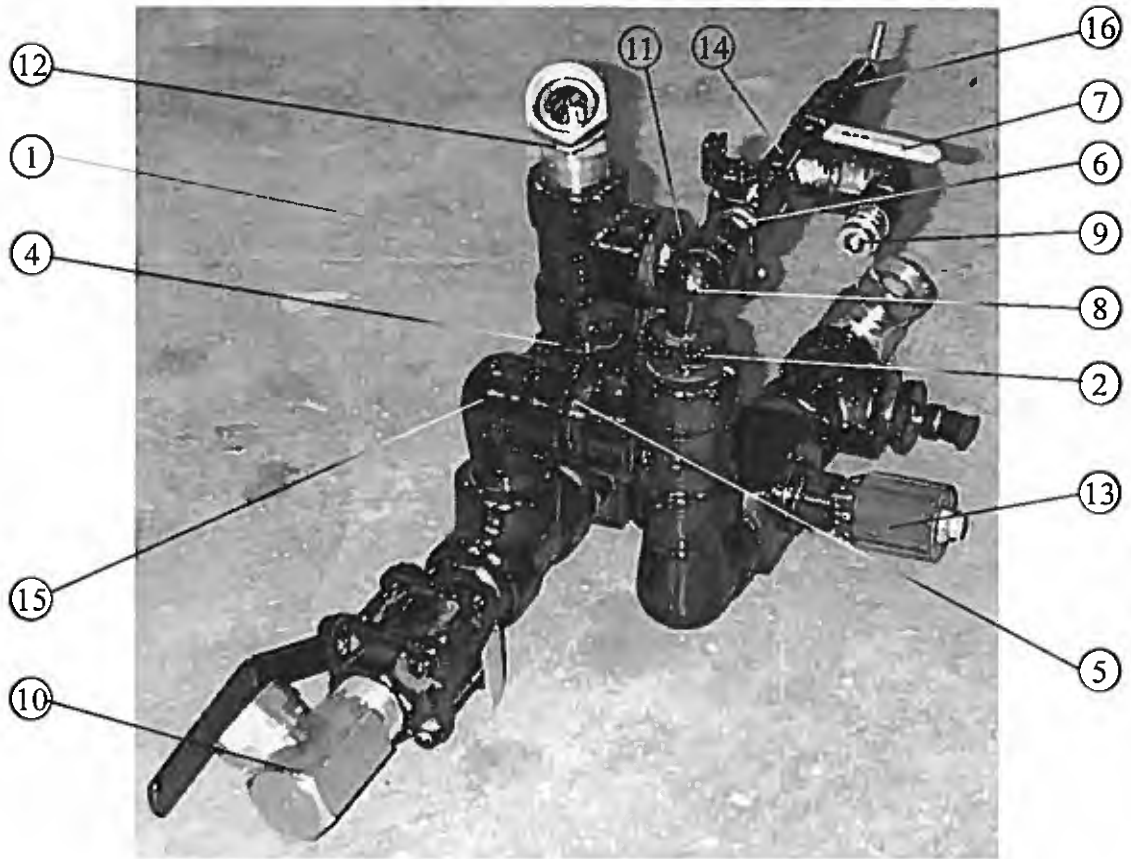
WATER SYSTEM



A Product of Hi-Vac Corporation

③ NOT SHOWN

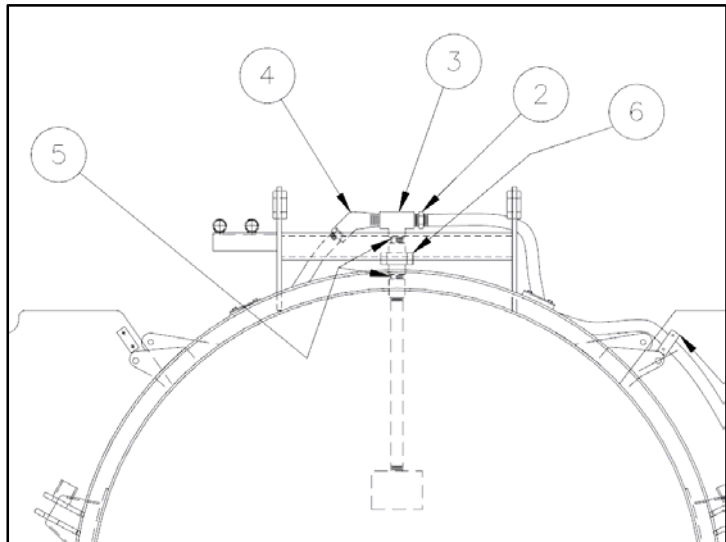
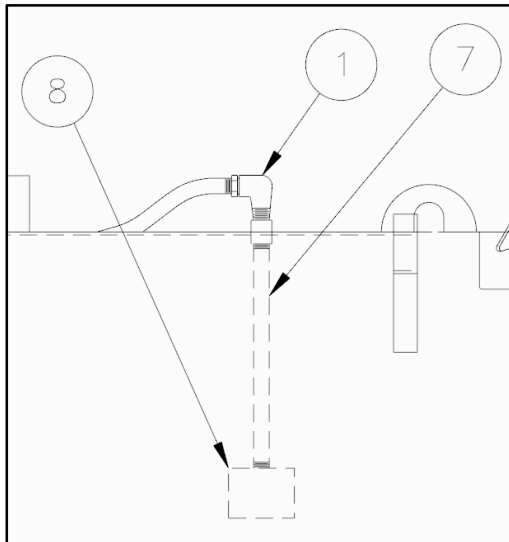
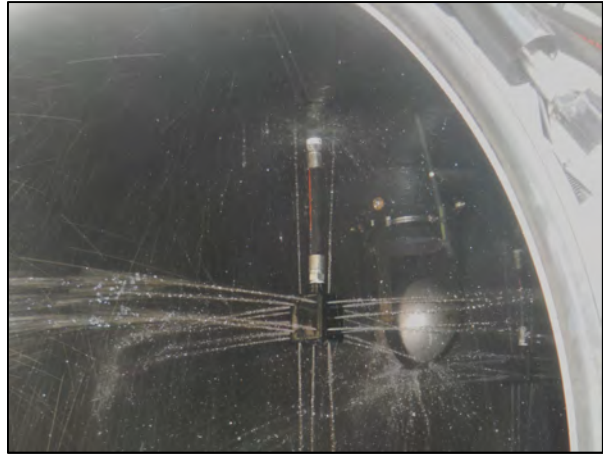
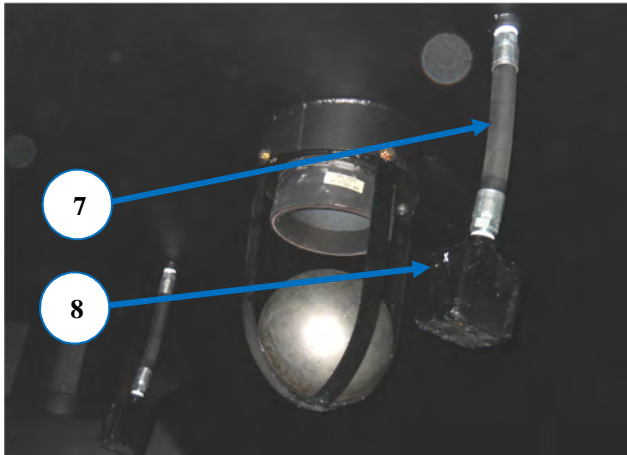
WATER MANIFOLD ASSEMBLY 241239-5



ITEM	PART NO.	DESCRIPTION	QTY.
1	100203	1.25" PIPE TEE	4
2	100204	1.25"X1/2" REDUCER BUSHING	3
3	133410	1.25" PIPE PLUG	1
4	100206	1.25" 3 WAY BALL VALVE	1
5	132530	1.25" NIPPLE	5
6	132210-2	1/2" NIPPLE	2
7	130893	1/2" BALL VALVE	1
8	133090	1/2" PIPE ELBOW	2
9	130820	1/2" MALE QUICK DISCONNECT	1
10	130851	1.25" SWIVEL 90 DEGREE ELBOW	2
11	135340	#8 MNPT X #8 MJIC 90 DEGREE ELBOW	2
12	130855	1.25" SWIVEL 45 DEGREE ELBOW	1
13	100205	1.25" NEEDLE GLOBE VALVE	1
14	132826	1/2" STREET TEE	1
15	133120	1.25" STREET ELBOW	2
16	130962	800 PSI RELIEF VALVE	1



INTERNAL TANK FLUSH OPTION



ITEM	PART #	DESCRIPTION	QUANTITIES
1	A130770	1"MNPT X 1" Swivel FNPT, 90° Elbow	AR
2	A130790	1"MNPT X 1" Swivel FNPT, Straight	AR
3	A132841	1" Pipe Tee	AR
4	A130780	1"MNPT X 1" Swivel FNPT, 45° Elbow	AR
5	A132410	1" Close Pipe Nipple	AR
6	A142390	1" Female Pipe Union	AR
7	A176109	Hose Assy., 1"R2 x 15", 1"MNPT to 1"MNPT	B6 – 1 each B5, B10, B52 – 2 each
8	A241771 ^{Rev A}	Hi-Flow Tank Flush Nozzle	B15 – 3 each

NOTE: WHEN INSTALLING THE NOZZLES, THE FACES OF THE NOZZLE THAT HAVE FIVE HOLES NEEDS TO FACE THE SIDES OF THE DEBRIS TANK.

AQUATECH[®]

FLOOR FLUSH OPTION COMMON COMPONENTS



Part Number	Description	Qty.
A387135	1" 3-WAY BALL VALVE, 12VDC ACTUATED	1
A387135-24	1" 3-WAY BALL VALVE, 24VDC ACTUATED	
A387135-BV	REPLACEMENT 1" 3-WAY BALL VALVE ONLY	
A136700	NOZZLE, FLATJET, TANKFLUSH	2
A120861-1	SWITCH, TOGGLE, DPDT - ON, ON,	1
A121735	BOOT, TOGGLE SWITCH	1
A304417-SS	VALVE, CHECK-1"NPT, 3000#, 1 PSI CRACK	2



WASHDOWN GUN

INDIVIDUAL COMPONENTS		ASSEMBLIES						
		A381492	A131625	A131626	A131628	A131629	A131629-100	121005526 A
PART NO.	DESCRIPTION							
A131632	Quick Adjusting Spray Gun, 25gpm@850psi, 17"L	1	1	1	1	1	1	
121005972 A	Quick Adjusting Spray Gun, 25gpm@3000psi, 21"L							1
A130810	Female Quick Coupler, 1/2", 4000psi rated	1	1	1	1	1	1	1
A130820	Male Quick Coupler, 1/2", 4000psi rated			1		1		1
A131930	Pipe Coupling, 1/2"NPT, 3000psi rated		1	1	1	1	1	
A175065	Hose Assy., 25' SAE R2, 1/2"MNPTS X 1/2"MNPT		1					
A175066	Hose Assy., 35' SAE R2, 1/2"MNPTS X 1/2"MNPT			1				1
A175068	Hose Assy., 45' SAE R2, 1/2"MNPTS X 1/2"MNPT				1			
A175069	Hose Assy., 50' SAE R2, 1/2"MNPTS X 1/2"MNPT					1		
A175071	Hose Assy., 70' SAE R2, 1/2"MNPTS X 1/2"MNPT							
A175064	Hose Assy., 75' SAE R2, 1/2"MNPTS X 1/2"MNPT							
A175072	Hose Assy., 85' SAE R2, 1/2"MNPTS X 1/2"MNPT							
A175075	Hose Assy., 100' SAE R2, 1/2"MNPTS X 1/2"MNPT						1	
A175080 *	Hose Assy., 150' SAE R2, 1/2"MNPTS X 1/2"MNPT							
A175085 *	Hose Assy., 200' SAE R2, 1/2"MNPTS X 1/2"MNPT							
A175090 *	Hose Assy., 250' SAE R2, 1/2"MNPTS X 1/2"MNPT							
A175092 *	Hose Assy., 300' SAE R2, 1/2"MNPTS X 1/2"MNPT							

NOTE: 1/2" SAE R2 hose has a 3500 psi working pressure rating.

* Not typically used for washdown, for reference only.



A130810



A131632



A130820



121005526 Rev A



A131930

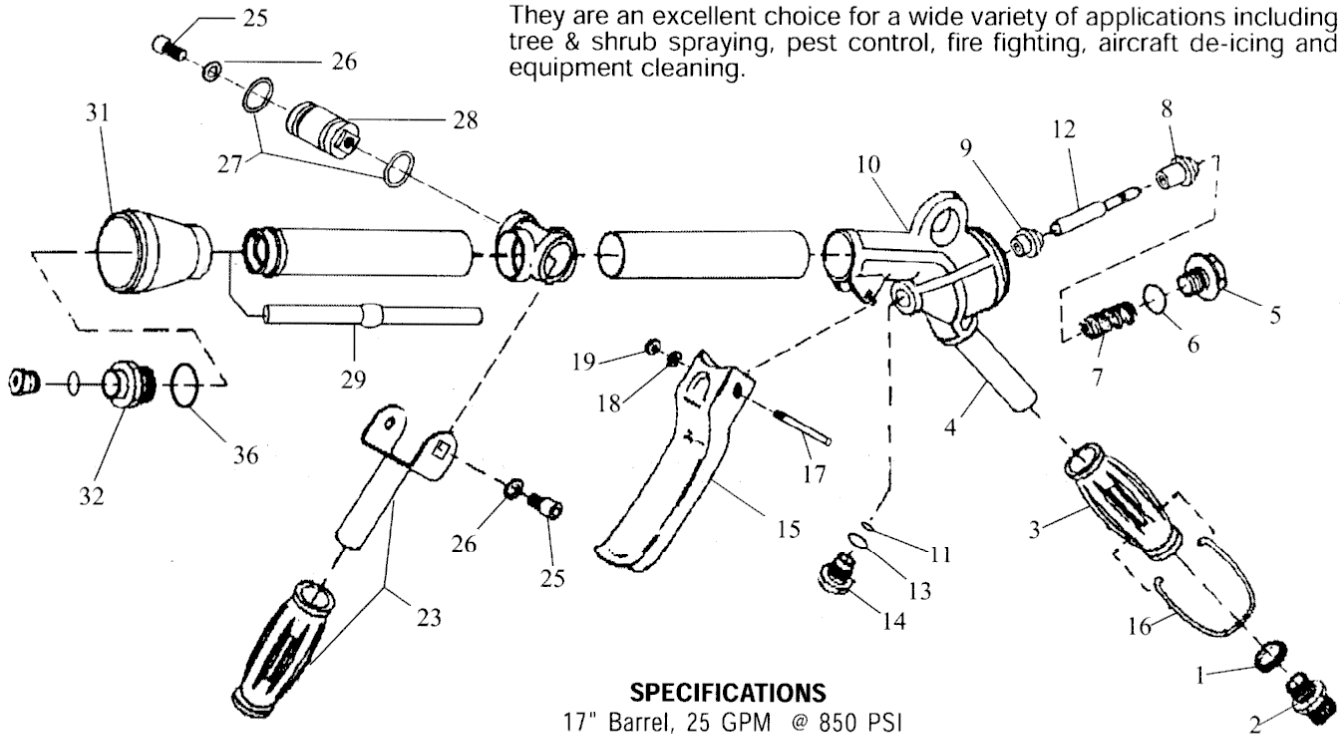
1/2" FPT



A131632

800PSI WASH DOWN GUN

High Performance Spray Guns have a spray pattern that is adjustable from a concentrated 0° straight stream to a 60° fine mist cone. They are an excellent choice for a wide variety of applications including tree & shrub spraying, pest control, fire fighting, aircraft de-icing and equipment cleaning.



ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY
1	Washer	1	16	Trigger Clip	1
2	Inlet Adapter	1	17	Trigger Pin	1
3	Handle	1	18	Washer	1
4	Inlet Tube	1	19	Nut	1
5	Plug	1	23	Front Grip Assembly	1
* 6	O-Ring	1	25	Bolt	2
7	Spring	1	26	Washer	2
* 8	Poppet	1	* 27	O-Ring	2
* 9	Seat	1	28	Regulator	1
10	Body	1	29	Inner Tube	1
* 11	O-Ring	1	31	Nozzle Protector	1
12	Plunger	1	32	Nozzle Retainer	1
* 13	O-Ring	1	* 36	O-Ring	1
14	Guide	1			
15	Trigger	1			

* Parts included in repair kit

ORIFICES: A131633 - 2.5mm (standard)

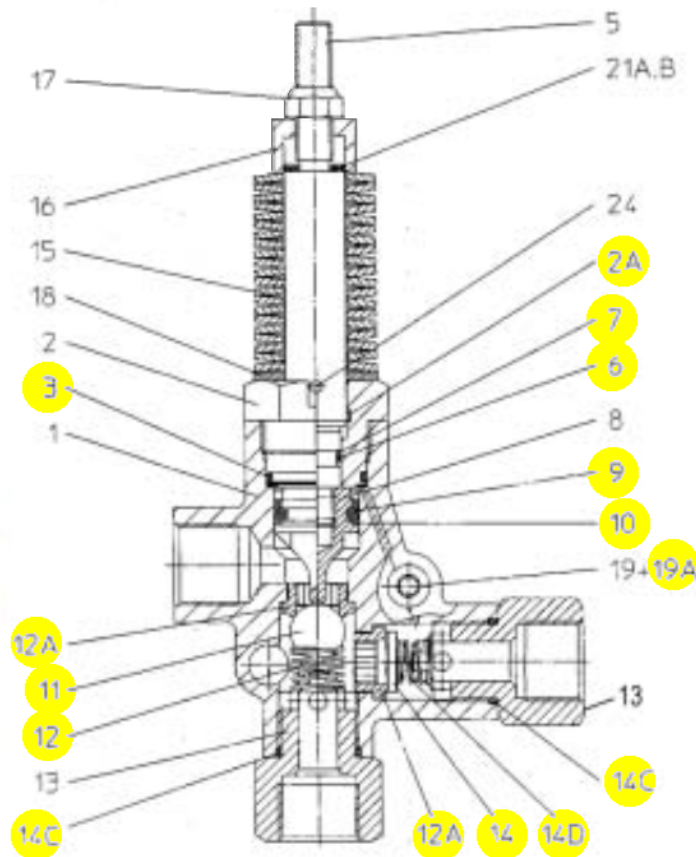
A161634 - 3.5mm (optional)

UNLOADER VALVE FOR WASHDOWN AND HYDRO-EXCAVATION CIRCUITS ON NEWER UNITS

PART NO. 22973C



Contents of 09461 Repair Kit



HI-VAC QUICK COUPLERS

MALE	FEMALE	DESCRIPTION	WHERE USED
 A130811	 A130821	1/4" Quick Coupler	Air Coupler
 A222145	 A222130	1/4" Quick Coupler	Air Coupler
 A222140			
 60N6-6F	 60C6-6F	3/8" Quick Coupler 4000 PSI	O'Brien Wash Down Gun
 A130820	 A130810	1/2" Quick Coupler 4000 PSI	Aquatech Wash Down Gun
 A383063	 A383062	1/2" Locking Coupler 10,000 psi Smooth bore "straight through" design for high flow fluid requirements	Hydroexcavating Wand
 A133376	 A131744	1/2" Brass Coupler 2200 PSI 33 GPM flow rate	Various Hose Reels

IN-LINE "LIVE" SWIVELS

Male JIC (37° Flare)



Female JIC (37° Flare)

Part Number A130776
 Part Number A130775

SWIVEL, LIVE INLINE, 1/2" MJIC X (2), BULKHEAD
SWIVEL, LIVE INLINE, 1" MJIC X (2), BULKHEAD

Male Pipe



Female Pipe

Part Number A130847
 Part Number A130848
 Part Number A130849

SWIVEL, LIVE INLINE, 1/2" MNPT X 1/2" FNPT
SWIVEL, LIVE INLINE, 3/4" MNPT X 3/4" FNPT
SWIVEL, LIVE INLINE, 1" MNPT X 1" FNPT

Female JIC (37° Flare)



Male JIC (37° Flare)

Part Number A100058

SWIVEL, LIVE INLINE, 1" MJIC X 1" FJIC

Male Pipe



Female JIC (37° Flare)



* (styles may vary)

Part Number A100061

SWIVEL, LIVE INLINE, 1" MNPT x 1" FJIC

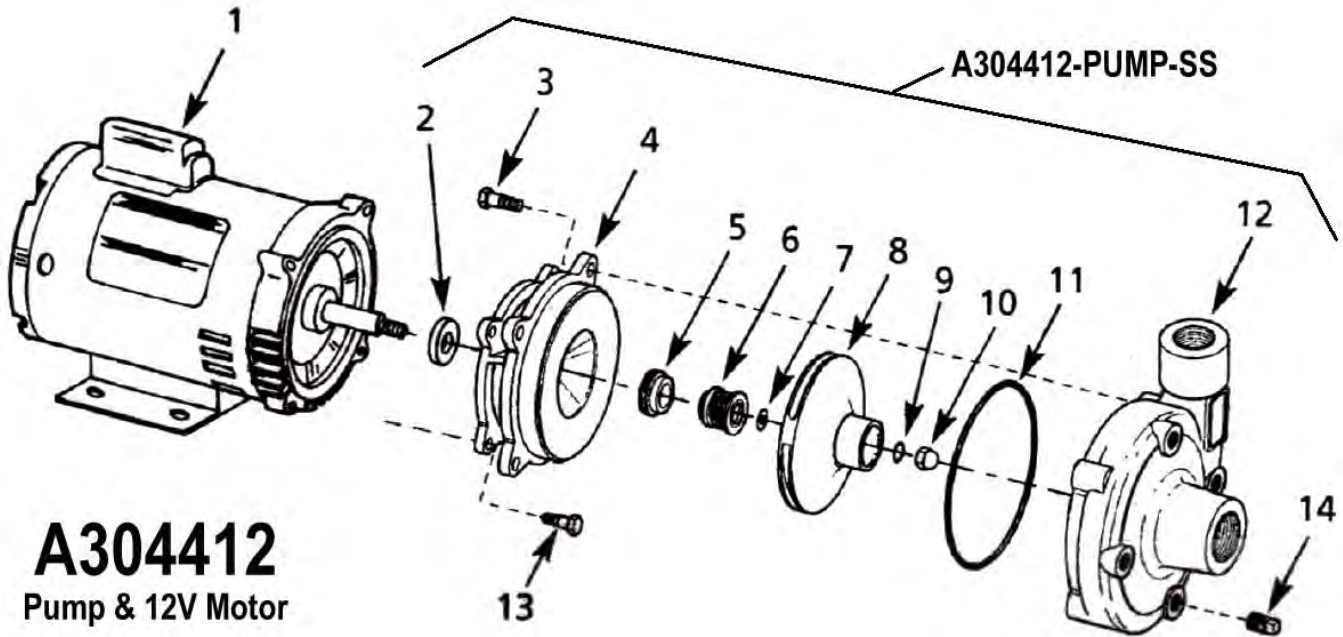
AQUATECH[®]
PARTS BULLETIN

This is an informational bulletin showing the components added to the hose reel water manifold for our cold weather recirculation option (option no. A131402) on B-Series, SJRs and some SJ series trucks with 1" jetting hose.



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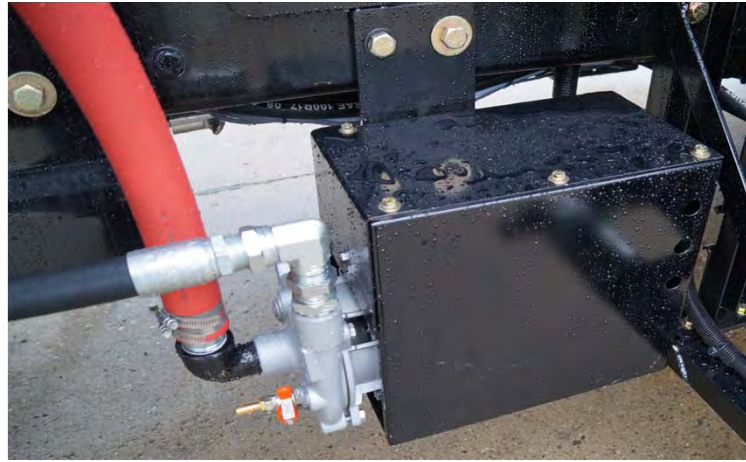
12V COLD WEATHER RECIRC PUMP & MOTOR



ITEM	PART NO.	DESCRIPTION	QTY
1	TBA	12V Motor	1
2	A304412-2	Slinger Washer	1
3	TBA	Screw	4
4	A304412-4	Pump Adapter	1
5/6	A304412-5	Mechanical Seal - Viton	1
7	A304412-7	Impeller Shim Kit	1
8	TBA	Impeller	1
9	A304412-9	Impeller O-Ring - Viton	1
10	A304412-10	Impeller Nut	1
11	A304412-11	Pump Case O-Ring - Viton	1
12	TBA	Pump Case - SS	1
13	TBA	Screw	4
14	A304412-14	Pipe Plug	1
2-14	A304412-PUMP-SS	SS Pump Assy. w/o Motor	1

Part Number A131402-12V		* COLD WEATHER RECIRC,12V MOTOR W/PUMP				
Level	Part Number	Description	Quantity	U/M	SC	
1	A304412	PUMP & MOTOR,12V,1HP,MAX 20GPM	1	EA	P	
1	A304413	BRACKET,12V MOTOR&PUMP,COLD WE	1	EA	M	
1	A120180	SWITCH,TOGGLE,SPST,OFF-ON	1	EA	P	
1	A122007	PILOT LIGHT,RED,12V,2-WIRE	1	EA	P	
1	A121735	BOOT,TOGGLE SWITCH	1	EA	P	
1	A304122	FUSE,200 AMP,BUSSMAN,AMG200	1	EA	P	
1	A304123	FUSE HOLDER,BUSSMAN,HMEG	1	EA	P	
1	A304417-SS	VALVE,CHECK,1"NPT,3000#,SS,1 P	1	EA	P	
1	A121635	SOLENOID,12VDC,4 TERM.,CONTINU	1	EA	P	
1	A140405	REDUCER,HEX BUSHING,NPT,2 1/2x	1	EA	P	
1	A141010	NIPPLE,PIPE,1-1/2" CLOSE	2	EA	P	
1	02-0828	TEE,PIPE,1 1/2" FNPT,150#	1	EA	P	
1	U4003-0143	VALVE,BALL,1.5",125 PSI,FULL F	1	EA	P	
1	A140140	NIPPLE,KING,1-1/2",THREADED	1	EA	P	
1	A140140-1	NIPPLE,KING,1-1/2",THREADED 1-	1	EA	P	
1	A220610	CLAMP,HOSE,#32SS WORM GEAR,1.5	4	EA	P	
1	A249663	HOSE,AIR & WATER,1.5"ID X 2"OD	5	FT	P	
1	A151550	PETCOCK,3/8"	1	EA	P	
1	A130790	ADAPTER,STR,1"MNPT X 1"FNPT,SW	2	EA	P	
1	A234996-11	HOSE ASSY,1"-R2-90",1MNPT-1MNP	1	EA	P	
1	U4402-0122	EL,CL150,1.25NPT,90D,MI,STREET	1	EA	P	
1	A135944	ADAPTER,ELBOW,#20MP X #16MP,90	1	EA	P	
1	A133840	1-1/2" X 1/2" H REDUCER BUSHIN	1	EA	P	
1	A133650	BUSHING,REDUCER,HEX,1/2"-3/8",	1	EA	P	
1	A130770	ADAPTER,ELBOW,90D,1FNPT X 1MNP	1	EA	P	
1	A304427-1	COVER,MOTOR W/PUMP,COLD WEATHR	1	EA	M	

Part Number A131402-12V-125		* COLD WEATHER RECIRC,12V,FOR 125GPM SYSTEM				
Level	Part Number	Description	Quantity	U/M	SC	
1	A304412	PUMP & MOTOR,12V,1HP,MAX 20GPM	1	EA	P	
1	A304413	BRACKET,12V MOTOR&PUMP,COLD WE	1	EA	M	
1	A120180	SWITCH,TOGGLE,SPST,OFF-ON	1	EA	P	
1	A122007	PILOT LIGHT,RED,12V,2-WIRE	1	EA	P	
1	A121735	BOOT,TOGGLE SWITCH	1	EA	P	
1	A304122	FUSE,200 AMP,BUSSMAN,AMG200	1	EA	P	
1	A304123	FUSE HOLDER,BUSSMAN,HMEG	1	EA	P	
1	A304417-SS	VALVE,CHECK,1"NPT,3000#,SS,1 P	1	EA	P	
1	A121635	SOLENOID,12VDC,4 TERM.,CONTINU	1	EA	P	
1	A140405	REDUCER,HEX BUSHING,NPT,2 1/2x	1	EA	P	
1	A141010	NIPPLE,PIPE,1-1/2" CLOSE	2	EA	P	
1	02-0828	TEE,PIPE,1 1/2" FNPT,150#	1	EA	P	
1	U4003-0143	VALVE,BALL,1.5",125 PSI,FULL F	1	EA	P	
1	A140140	NIPPLE,KING,1-1/2",THREADED	1	EA	P	
1	A140140-1	NIPPLE,KING,1-1/2",THREADED 1-	1	EA	P	
1	A220610	CLAMP,HOSE,#32SS WORM GEAR,1.5	4	EA	P	
1	A249663	HOSE,AIR & WATER,1.5"ID X 2"OD	5	FT	P	
1	A151550	PETCOCK,3/8"	1	EA	P	
1	A130790	ADAPTER,STR,1"MNPT X 1"FNPT,SW	2	EA	P	
1	A234996-11	HOSE ASSY,1"-R2-90",1MNPT-1MNP	1	EA	P	
1	U4402-0122	EL,CL150,1.25NPT,90D,MI,STREET	1	EA	P	
1	A133840	1-1/2" X 1/2" H REDUCER BUSHIN	1	EA	P	
1	A133650	BUSHING,REDUCER,HEX,1/2"-3/8",	1	EA	P	
1	A304427-1	COVER,MOTOR W/PUMP,COLD WEATHR	1	EA	M	
1	A249157	BUSHING,REDUCING,HEX,3" X1-1/2	1	EA	P	
1	A142692	ELBOW,PIPE,90D,1-1/2" STREET,L	1	EA	P	
1	A133800	BUSHING,REDUCER,HEX,1-1/4"-1",	1	EA	P	
1	172-2521	NIPPLE-1" CLOSE 3000#172	1	EA	P	
1	A133110	ELBOW,PIPE,90D,STREET,1",L	1	EA	P	





A131402-12V-MK60 COLD WEATHER RECIRC OPTION

Part Number	Description	Qty
A121735	BOOT,TOGGLE SWITCH	1
A122007-LED B	LIGHT,RED-DIALIGHT	1
A120180	SWITCH, TOGGLE, SPST - ON, OFF	1
A304413	BRACKET,MOTOR-12V	1
A304412	PUMP, WATER - 20 GPM	1
A304143	FUSE - 125 AMP	1
A304123	FUSE HOLDER, 300AMP, 32V	1
A130901	BALL VALVE, 1", 2000 PSI	1
A121635	SOLENOID, 12V, 85AMP	1
A160094	BUSHING REDUCER, 3MNPT TO 1-1/2"FNPT	1
A141010	CLOSE NIPPLE, 1-1/2"NPT	2
02-0828	PIPE TEE, 1-1/2"FNPT, 150#	1
U4003-0143	VALVE,BALL-1.5",125 PSI,FULL PORT	1
A140140	KING NIPPLE, 1-1/2"H x 1-1/2"MNPT	1
A140140-1	KING NIPPLE, 1-1/2"H x 1-1/4"MNPT	1
A220610	CLAMP,HOSE-1.5" TO 2.5",#32SS	4
A249663	HOSE,WATER/AIR-1.5"ID,2"OD	5
A151550	VALVE,BALL-3/8"NPT,3/8"BARB,PETCOCK	1
A130790	SWIVEL ADAPTER, 1"MNPT X 1"FNPTS, STR	2
A234996-11	HOSE,HYDRAULIC,1"R2-90"L,1"MNPT x1"MNPT	1
U4402-0122	90° STREET ELBOW, 1-1/2"NPT, CL150	1
A135944	90° ELBOW, 1-1/4"MNPT X 1"MNPT	1
A133840	PIPE BUSHING, 1-1/2" X 1/2", 6000#	1
A133650	PIPE BUSHING, 1/2" x 3/8", LFS	1
A130770	SWIVEL ADAPTER, 90°- 1"MNPT x 1"FNPTS	1
A304427-1	COVER,MOTOR,PUMP	1
02-0939	90° ELBOW, 1-1/2"FNPT, SCH40	2
A142692	90° STREET ELBOW, 1-1/2"L	1
A131402-3000	OPTION, RECIRCULATION, COLD WEATHER	1
A384987	DRAIN KIT,COLD WEATHER RECIRC.	1
A383484-F1299	KIT,OPEN FLANGE,FOR MK60 WATER	1
U1007-4871	MOUNT,PUMP,MOTOR-CWR 12VDC	1

UNLOADER (WATER REGULATING) VALVES

For units equipped with the optional pneumatically operated unloader valve here is information to help identify the particular valve that was used.

 <p>MSUV MSSV</p> <p>Uraca (Germany)</p>		 <p>PN3 PN4</p> <p>Pratisolli (Italy)</p>					
MODEL MSUV29/300		MSSV24/250		MODEL PN3/160	MODEL PN3/240	MODEL PN4/200	MODEL PN4/300
(205-0311-02) (205-0311-01)		(205-0310-01)					
A380279-2	A380279	A380279-1	A215555 <i>use A215555-2900</i>	A381507 <i>use A215555-4350</i>	A215555-2900	A215555-4350	
4350 psi max.		3625 psi max.	2350 psi max.	3500 psi max.	2900 psi max.	4350 psi max.	
170 gpm max.		92 gpm max.	120 gpm max.	80 gpm max.	132 gpm max.	103 gpm max.	
All water ports on all units are 1½" BSPP (British Standard Parallel Pipe)							
1"FNPT adapters (A100167) included		1"MJIC adapters (A135467) included		Uses 1½" BSPP to 1"MJIC adapters - P/N A135467 (not included - order separately if needed)			
Repair Kit A380279-RK		Repair Kit A380279-R		Repair Kit A215555-R		Repair Kit A215555-P4-RK	
Repl. Diaphragm A380279-DIAPHRAGM				Repl. Diaphragm * A215555-R-15		Repl. Diaphragm A215555-P4-50	
Safety Valve * A380279-SV		Safety Valve * A380279-1-SV		Safety Valve * A215555-R43		Safety Valve A215555-P4-55	

*Not included in Repair Kit

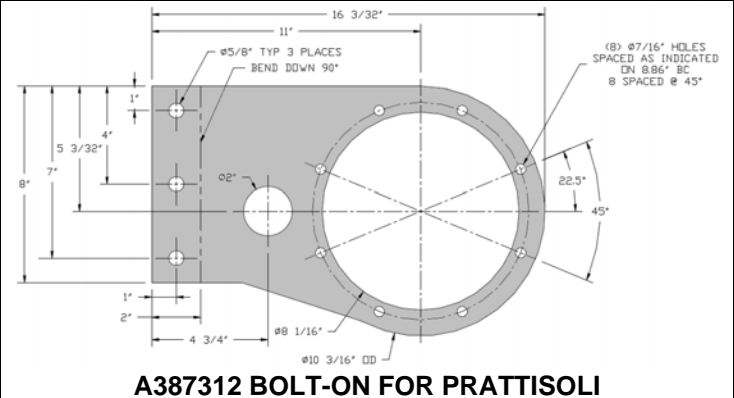
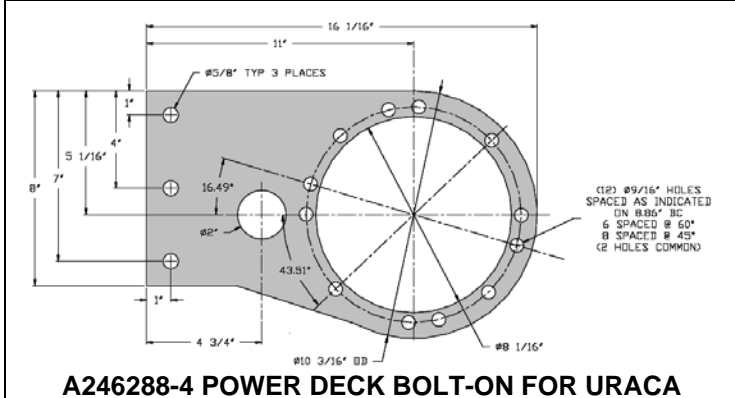
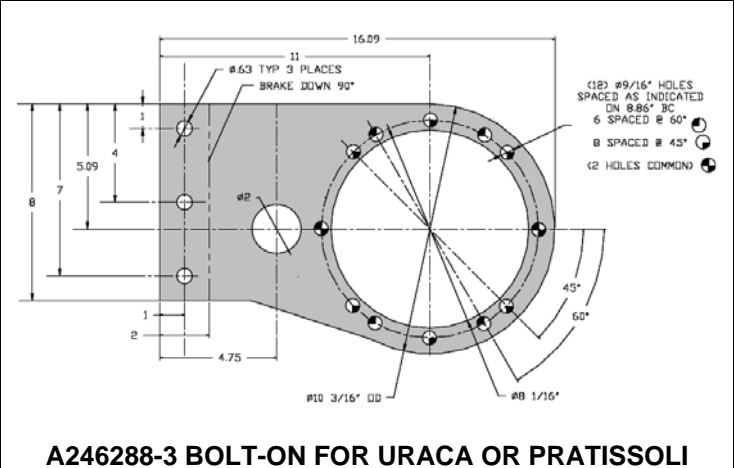
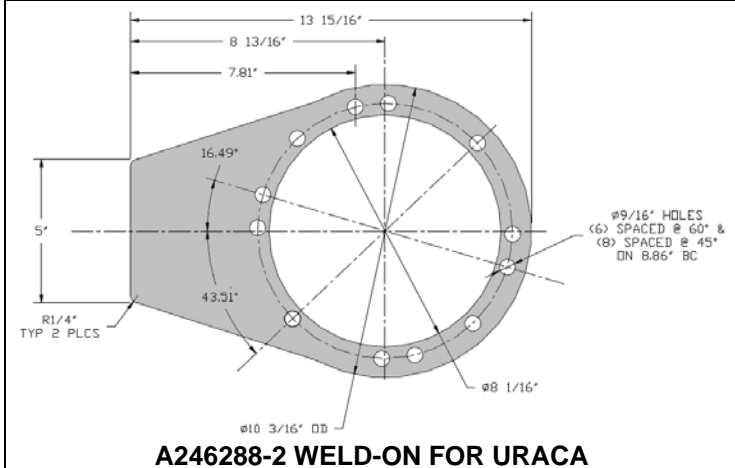
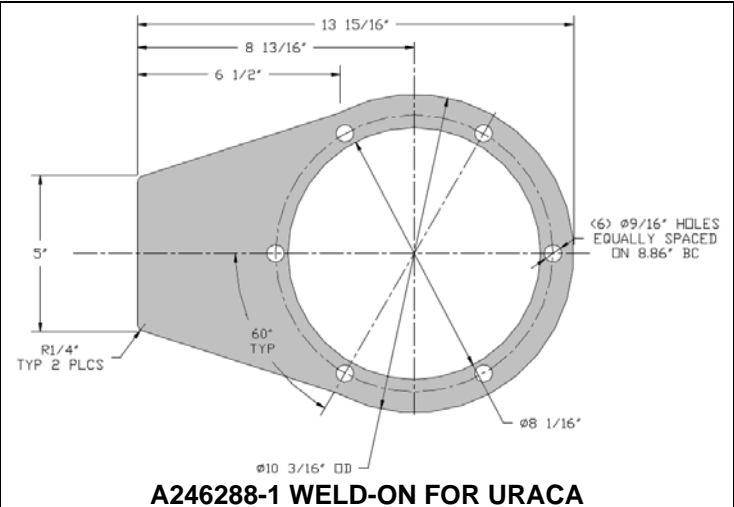
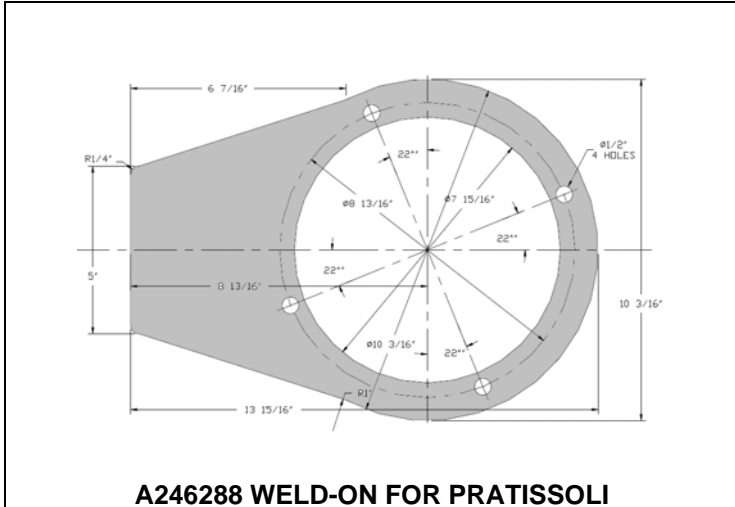
Lubricant = ISO VG46 Hyd. Oil



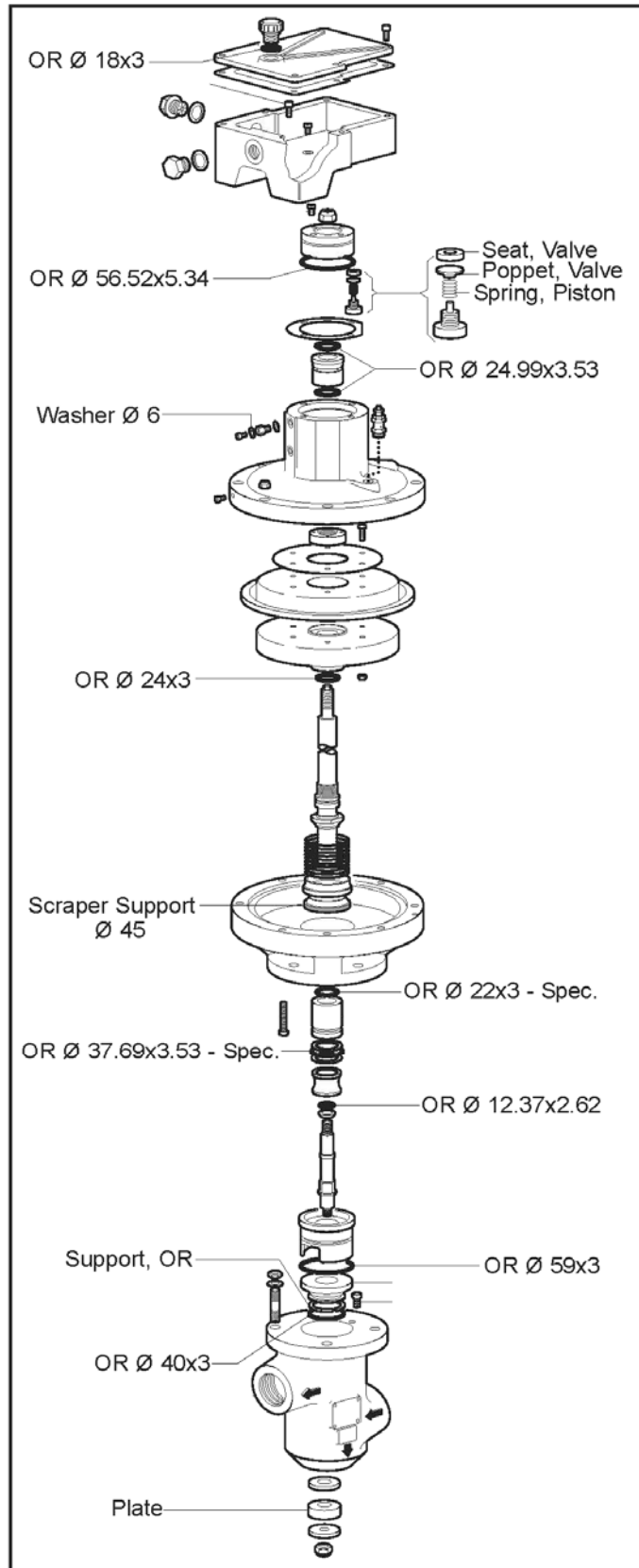
UNLOADER VALVE CONTROL PARTS

Part Number	Description
A380653	Pneumatic Regulator w/Gauge (Item 1)
A380653-2	Gauge Only
A249018	1/2" Bronze 3-Way Ball Valve (Item 2)

AQUATECH. UNLOADER VALVE MOUNTING BRACKETS

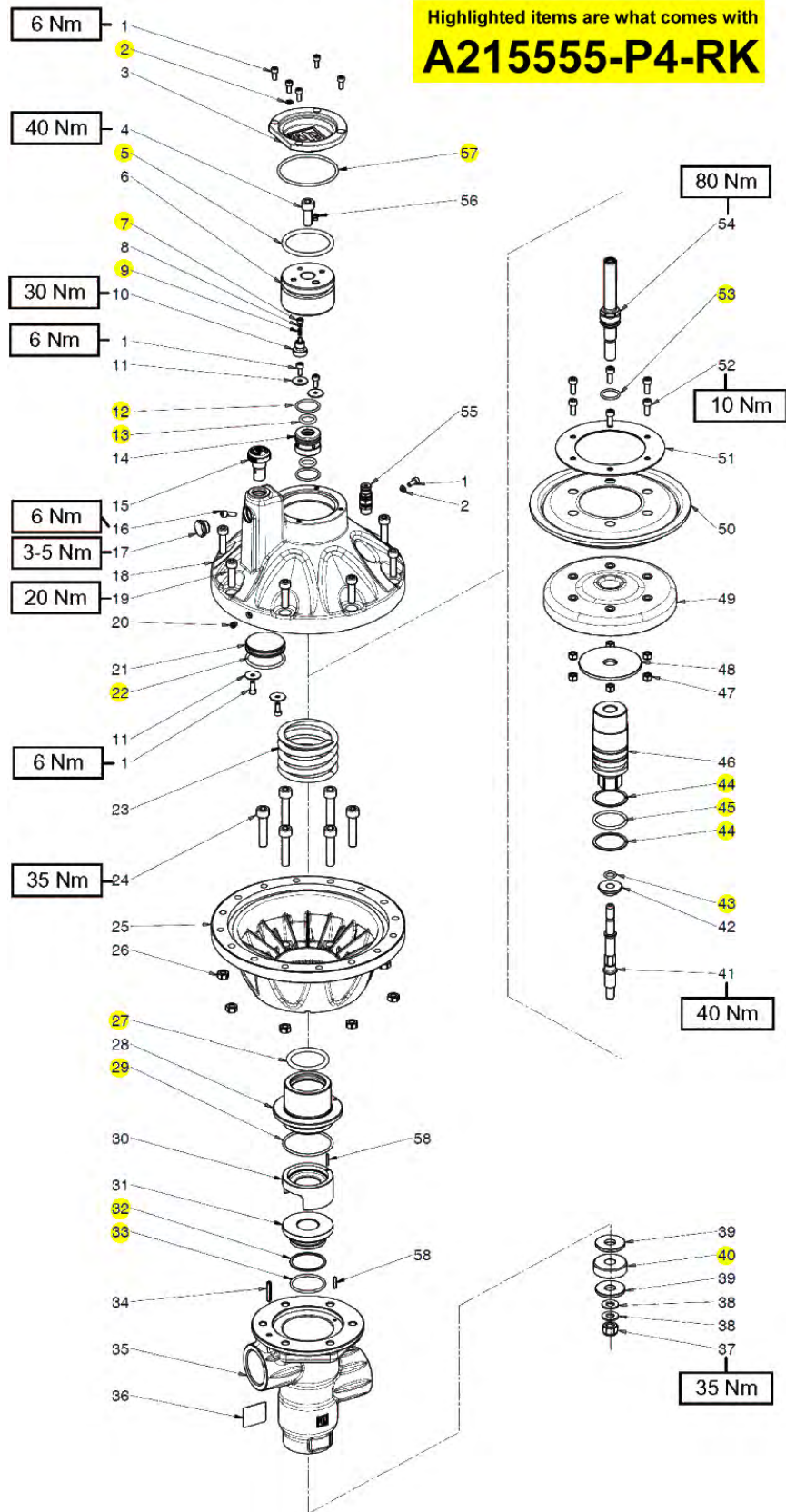


A215555-R SEAL KIT COMPONENTS





PN4 UNLOADER VALVE REPAIR KIT



AQUATECH[®]
PARTS BULLETIN

Part number A110850 accumulator was used from time to time by the old Aquatech Company to dampen the pulsation created by the triplex water pumps. Found mostly on the SJ600E trailer units, it was also used occasionally on truck mounted units. This accumulator has become difficult to acquire on a timely basis, so we decided to find something more readily available. In reviewing the specifications with our engineering department, they informed us that the A110850 accumulator is somewhat undersized for the applications where it is used and so we decided to use this opportunity to improve what we offer. As a result we have gone to a larger capacity accumulator and assigned to it part number A110850-1.

Retrofitting the original accumulator will require re-plumbing the pipe tee from ½"NPT branch port to 1"NPT branch port or install a 1" to ½" pipe reducer (part number A381798). The reducer will not affect the performance of the larger accumulator because the hole through the adapter is larger than the hole in the accumulator. The new accumulator naturally is more expensive but it will do a much better job in smoothing the flow at the nozzle.



Part No. A110850
10GPM, 2500PSI, ½"MNPT

Part No. A110850-1
40GPM, 3000PSI, 1"NPT

NOTE: Accumulator is charged with nitrogen prior to shipment and cannot be shipped by air freight.



A381798 3000PSI 1" to ½"NPT Reducer



A304667

WATER FLOW METER
180 MAX GPM, 5000 MAX PSI



Features

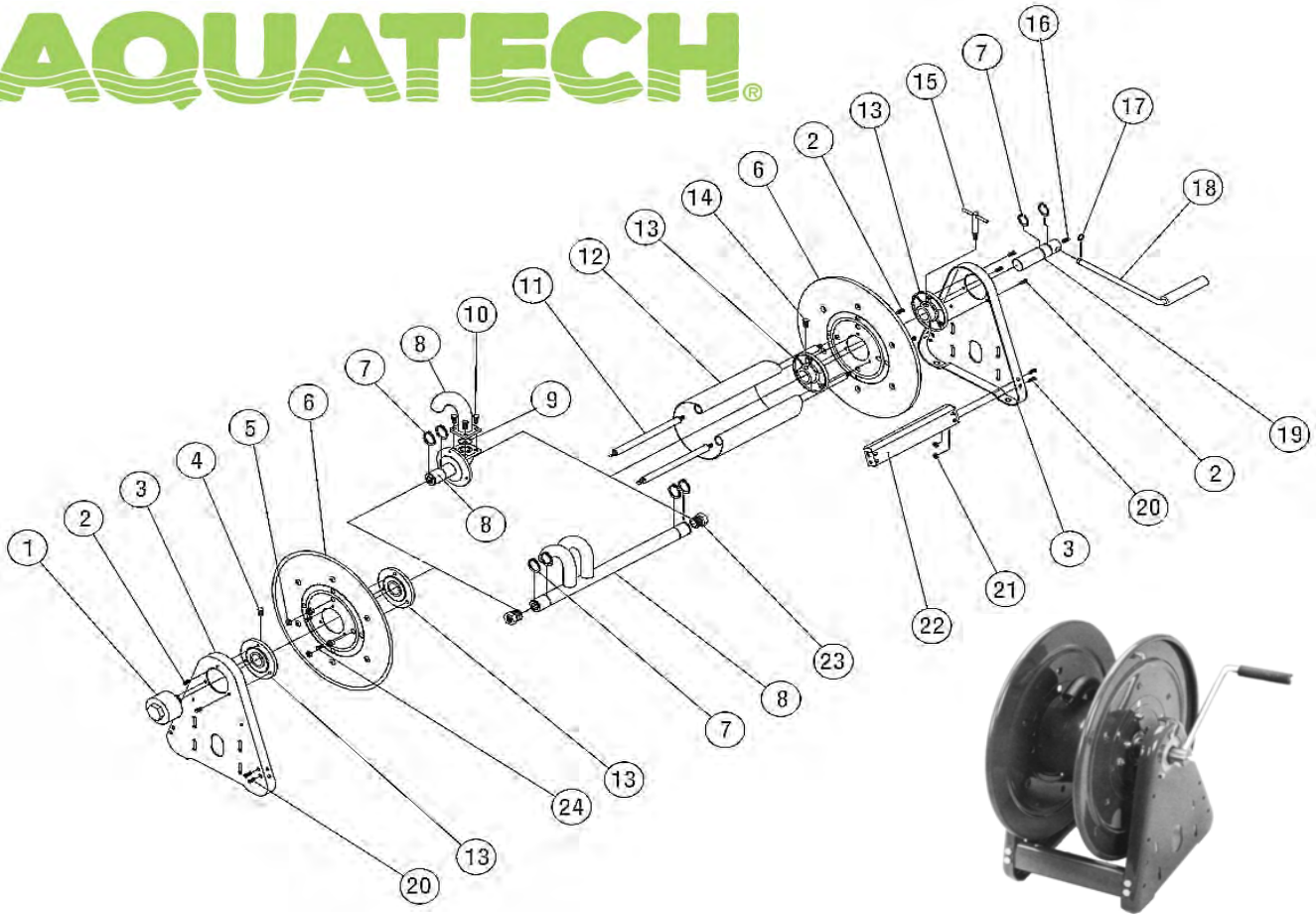
- Displays rate and/or total
- Large 8-digit by 3/4 in. display for easy viewing (meter, remote and swivel mount plus hand-held versions)
- Battery-powered unit uses one “D” size 1.5 volt alkaline battery for up to 3-1/2 years of service
- Loop-powered, 4-20 mA version available
- User friendly front panel programming
- Intrinsically safe (meter, remote and swivel mount versions)
- Microprocessor-based, low power consumption



A130561-WASH * 1/2"X100'HAND CRANK REEL INSTALLATION



Level	Part Number	Description	Quantity	U/M	SC
1	A000045	STOP, RUBBER FOR 1/2"100R2/HOS	1	EA	P
1	A130560	REEL,HOSE,MANUAL,6"W,RED,3000	1	EA	P
1	A130740	ADAPTER,STR,1/2"MNPT X 1/2"FNP	2	EA	P
1	A130750	ADAPTER,ELBOW,45D,1/2"MNPT X 1	1	EA	P
1	A130890	VALVE,BALL 1/2" 2000# CS,RE	1	EA	P
1	A131930	COUPLING,PIPE,FULL,1/2",3000#	2	EA	P
1	A132210-2	NIPPLE,PIPE,1/2" X CLOSE,3000#	3	EA	P
1	A133090	ELBOW,PIPE,90D,STREET 1/2" 300	1	EA	P
1	A234383-16	HOSE ASSY,1/2"-R2-60",1/2MNPTS	1	EA	P
1	A132410	NIPPLE,PIPE,1" X CLOSE,SCH80,B	1	EA	P
1	A132841	TEE,PIPE,1",L,3000#,H.D.	1	EA	P
1	A133730	BUSHING,REDUCER,HEX,1"-1/2",F.	1	EA	P
1	U6001-0056	HOSE,AIR/LP .50DIA.	7	FT	P
1	A171551	ADAPTER,STR,1/2"MNPT X 1/2" HO	2	EA	P
1	A245318	BRACKET ASSY,1/2",SIDE HOSE RE	1	EA	M
1	A131743	NIPPLE,BRASS,1/2" X CLOSE	1	EA	P
1	A131742	ADAPTER,TEE,1/2" BRASS	1	EA	P
1	A131744	COUPLER,QUICK DISCONNECT,1/2"F	1	EA	P
1	A133376	COUPLER,QUICK DISCONNECT,1/2"M	1	EA	P
1	A171551	ADAPTER,STR,1/2"MNPT X 1/2" HO	2	EA	P
1	A338044	BRACKET WELDMENT, HOSE SECURE,	1	EA	M
1	A130810	COUPLER,QUICK DISCONNECT,1/2"	1	EA	P
1	A141430	TEE,PIPE,1/2",2000#	2	EA	P



A130560 Manual Hose Reel

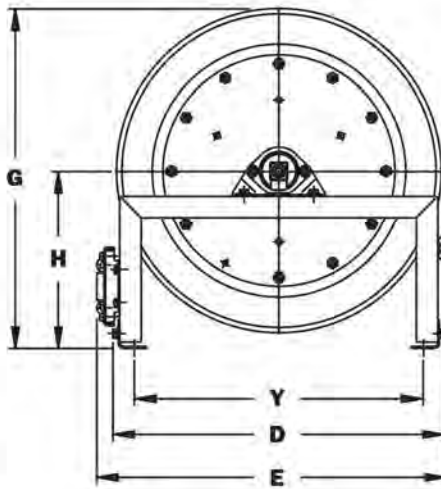
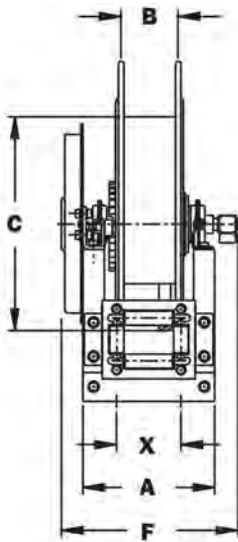
ITEM	DESCRIPTION	QTY	PART NO.
1	Swivel Assembly	1	TBA
2	Screw, 5/16"-12 x 5/8"	9	40023-HBSCR
3	Side Frame	2	TBA
4	Set Screw, 3/8" Brass	1	TBA
5	Nut, 5/16"-18	8	TBA
6	Spool Flange	2	40023-SF
7	Snap Ring	1	TBA
8	Inlet Assembly	1	TBA
9	O-Ring	1	TBA
10	Screw, 5/16"-18 x 3/4"	4	TBA
11	Tie Rod	4	TBA
12	Spacer	4	TBA
13	Hub & Bushing Assembly	3	A130560-HB
14	Set Screw	2	TBA
15	Lock Handle Assembly	1	TBA
16	Set Screw, 3/8" Square Head	1	TBA
17	Snap Ring	1	TBA
18	Crank Handle Assembly	1	TBA
19	Shaft & Snap Ring Assembly	1	TBA
20	Screw, 5/16"-18 x 1/2"	8	TBA
21	Nut, 5/16"-18	8	TBA
22	Cross Brace	2	TBA
23	Reducer Bushing	4	None
24	Screw, 1/4"-20 x 5/8"	3	TBA



SPRING REWIND HOSE REELS



- Roll-formed channel frame for heavy-duty applications
- Non-sparking ratchet assembly
- Declutching arbor to prevent damage from reverse winding
- Standard inlet: 90° balanced pressure swivel joint, 1/2" female NPT
- Standard outlet: 1/2" female NPT threads
- Standard pressures to 3,000 psi (207 bar)
- Temperatures from -60° F to +250° F (-51° C to +121° C)
- 4-way roller assembly



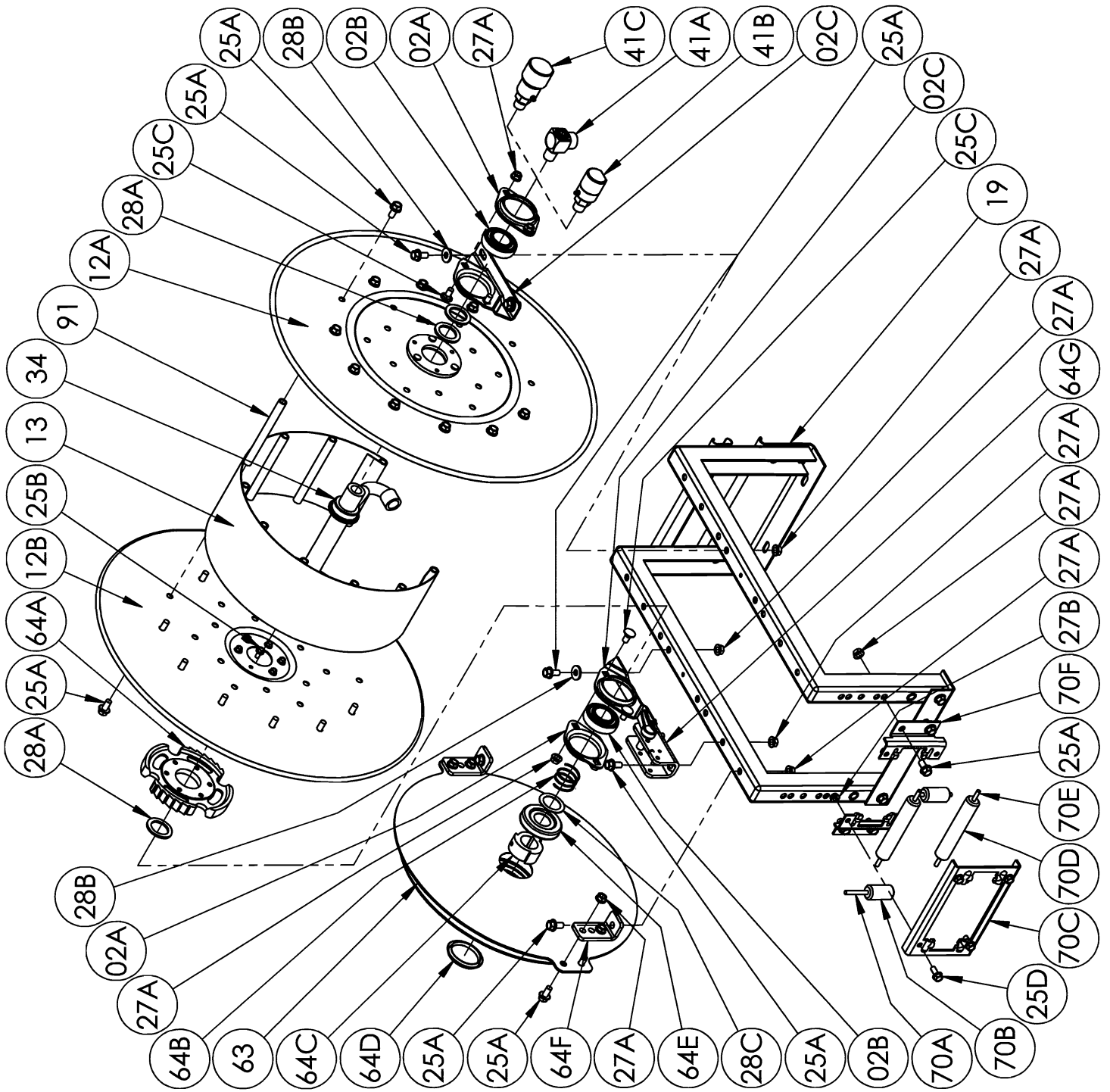
P/N A000045
Bumper Stop
for 1/2" Hose



PART NO.	CAP.	A	B	C	D	E	F	G	H	X	Y
A383074	75'	9.25"	4"	15.5"	25"	26.12"	12.75"	25.88"	13.5"	4.5"	21.75"
A383075	100'	11.25"	6"	15.5"	25"	26.12"	14.75"	25.88"	13.5"	6.5"	21.75"
A130571 *	125'	11.25"	6"	20"	28.5"	29.62"	15.5"	31.38"	17"	6.5"	25.25"

*P/N A130571-5000 is rated for 5000psi

Capacity based on 1/2" ID hose (7/8" OD)

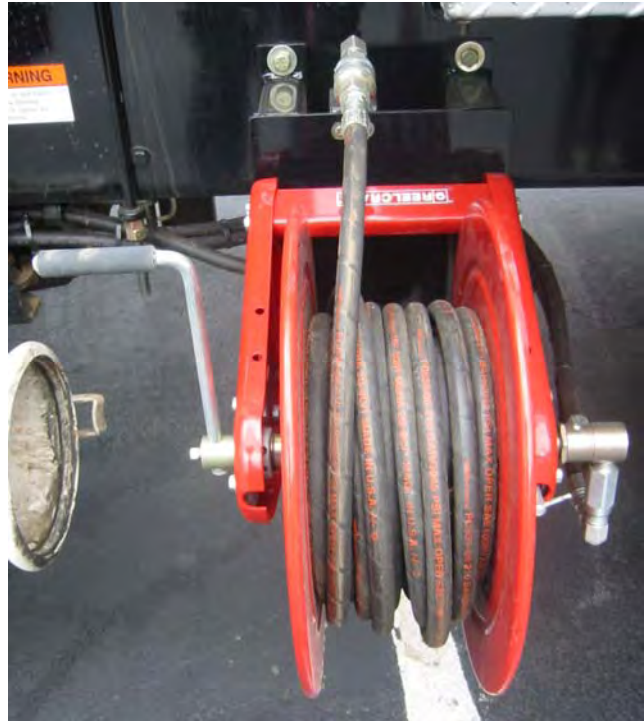


<u>Item No.</u>	<u>Description</u>
02A	Self Aligning Bearing Holder, E-Coated.....
02B	1" Self Aligning Bearing Insert, Plated.....
02C	Self Aligning Bearing Pillow Block, E-Coated.....
02D	1" Self Aligning Bearing Complete (Includes 02A, 02B, 02C, 25C and 27A)
12A	Front Disc (Includes Disc Washer)
12B	Back Disc (Includes 64A and 25B)
13	15-1/2" Diameter 304 SST Wrap Around Drum (Specify Model)
13	20" Diameter 304 SST Wrap Around Drum (Specify Model) (Not Shown) ..
19	1-1/2" Steel Rollform Frame for Spring Reels (Up to 30-31) (Specify Model)
25A	3/8"-16 x 3/4" Spinlock Bolt.....
25B	1/4"-20 x 1/2" Spinlock Bolt.....
25C	3/8"-16 x 3/4" Carriage Bolt
25D	5/16"-18 x 3/4" Spinlock Bolt (For Roller Assembly)
27A	3/8"-16 Spinlock Nut
27B	5/16"-18 Small Flange Spinlock Nut
28A	1-7/8" O.D. x 1-5/16" I.D. x 1/8" Thick Hub Spacer (Plastic)
28B	3/8" Flat Washer
28C	1" Thin Hub Spacer (1-7/8" O.D. x 1-5/16" I.D. x 0.049").....
29	Woodruff Key #9 (3/16" x 3/4") (For Spring Arbor) (Not Shown).....
34	1/2" Welded Barstock Hub Assembly (Specify Model and Fitting).....
34	1/2" 304 SST Welded Barstock Hub Assembly (Specify Model and Fitting)
41A	1/2" 90 Degree MxF Balanced Pressure Swivel Joint 3000 PSI, BUNA.....
41B	1/2" 90 Degree MxF Full Flow Swivel Joint 5000 PSI, AFLAS.....
41B	1/2" 90 Degree Oxygen SST MxF Full Flow Swivel Joint 3000 PSI, VITON
41C	1/2" 90 Degree MxF Oxygen Full Flow Swivel Joint 6000 PSI, VITON
63	"B" Spring (w/ Arbor 64C)
63	"D" Spring (w/ Arbor 64C) (Not Shown).....
63	"G" Spring (w/ Arbor 64C) (Not Shown).....
63	"J" Spring (w/ Arbor 64C) (Not Shown).....
64A	Ratchet Wheel (Includes 25B)
64B	302 Stainless Steel Spring for Dust Cap
64C	Spring Arbor for "B", "G" or "J" Springs
64C	Spring Arbor for "D" Springs (Not Shown).....
64D	Cap-Plug for Spring Outer Side
64E	Cap-Plug for Spring Inner Side.....
64F	Mounting Bracket for Spring Motors
64G	LH Ratchet Locking Assembly for Rollform Frames.....
64G	LH Ratchet Locking Assembly for "J" Springs Rollform Frames (Not Shown)
69	R206 Complete Roller Assembly for models 718.....
69	R204 Complete Roller Assembly for models 716 (Not Shown).....
70A	304 SST Roller Rod for Vertical Roller (1/4" Dia. X 2-11/16" Long).....
70B	Nylon Roller for Vertical Roller (1" Dia. x 2" Long)
70C	Roller Bracket Frame for R206 Roller Ass'y
70C	Roller Bracket Frame for R204 Roller Ass'y (Not Shown).....
70D	Nylon Roller for R206 Rollers (1" Dia. x 5-1/2" Long)
70D	Nylon Roller for R204 Rollers (1" Dia. x 3-1/2" Long) (Not Shown)
70E	304 SST Roller Rod for R206 Rollers (1/4" Dia. X 7-1/4" Long
70E	304 SST Roller Rod for R204 Rollers (1/4" Dia. X 5-1/4" Long) (Not Shown)
70F	Regular Series Roller Mounting Bracket, per P70A-00490
91	6" Long Anodized Threaded Spacer Pipe
91	4" Long Anodized Threaded Spacer Pipe (Not Shown)



A130575-KIT HYDRO-EXCAVATION KIT

STEP 1: Mount reel bracket and hose reel to chassis frame. Install 150' roll of hose onto reel.



STEP 2: Mount Hydro-Excavation control Panel to the side of the hydraulic tank stand. Install Air Pressure Regulator, Brass Ball Valve and Water Pressure Gauge.

STEP 3: Remove 90° pipe elbow on rear water manifold and replace with supplied pipe tee. Then install needle valve followed by the 90° pipe to JIC elbow. Then attach hose "A". See before and after photos below.



Without Hydro-X Kit



With Hydro-X Kit



STEP 4: Raise debris tank and route hose along the water pipe using clamps and ties as necessary to hold hose from moving around and rubbing against edges that may wear the hose. Install JIC union and install next length of hose "A".

STEP 5: Install street pipe tee onto hose reel swivel and attach hose from rear (Hose "A") as pictured. Attach Hose "B" and route to Water Pressure Gauge on the newly installed control panel (see photo on last page).



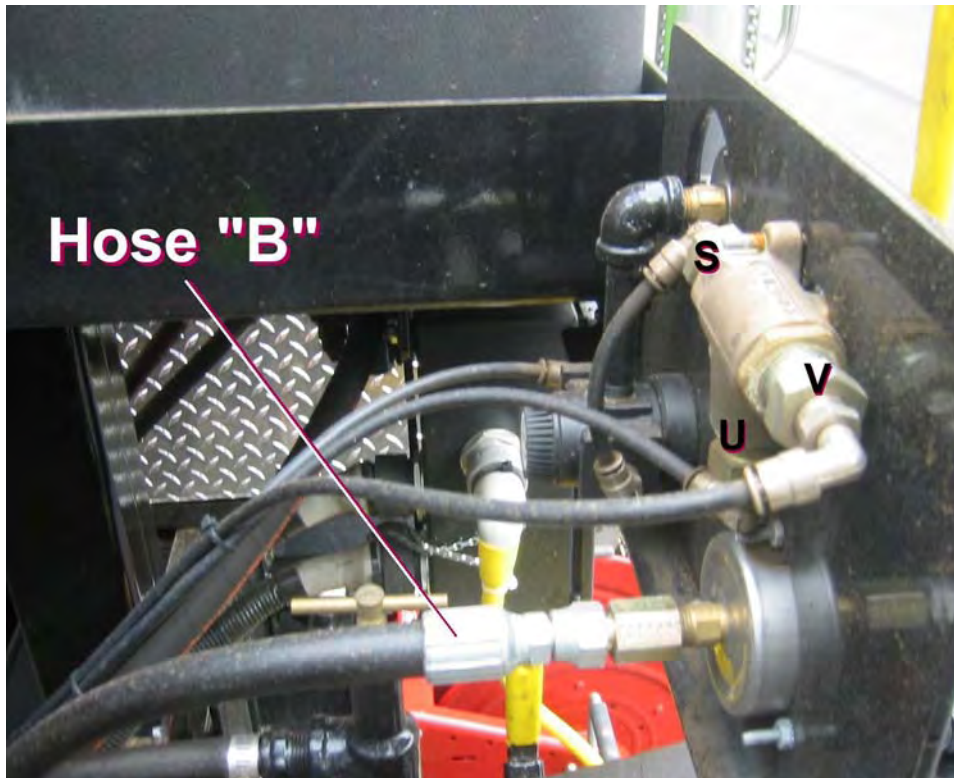


STEP 6: Install Return Hose Bracket, 90° Street Elbow and Quick Coupler as shown in picture. Attach return hose (Hose "C") and route to water return port on the inlet side of the water pump. See picture below.

STEP 7: Remove 90° pipe elbow at the water bypass return port and replace with street tee as shown. Install pipe bushing and 45° street elbow as shown. Attach return hose (Hose "C") from reel as shown.



STEP 8: Remove air line fitting from the unloader valve located on the top of the debris tank. Install 90° pipe elbow. Attach the "Air Shuttle Valve" and reattach air line to either port of the air shuttle valve. Install a second air line and fitting and then route new air line to the hydro-excavation control panel.



STEP 9: Attach air line from the unloader valve to the “U” port on the ball valve (see picture). Route an airline from an unused port on the main air pressure regulator to the air pressure regulator on the control panel. If an unused port is unavailable use a tee in an existing line. From the air pressure regulator on the control panel run a short jumper line to the “S” port on the ball valve. Attach an air line to the “V” (vent) port and route tubing down below frame to route vented air away from the operator.

A130575 HYDRO-X KIT, W/50' HOSE

Comment: FOR USE WITH UNLOADER VALVE

Level	Part Number	Description	Quantity	U/M	SC
1	A000045	HOSE STOP, REEL, RUBBER, FOR 1/2"	1	EA	P
1	A130560	REEL, HOSE, MANUAL, 6"W, BLACK, 300	1	EA	P
1	A130740	ADAPTER, SWIVEL, 1/2" FNPTS X 1/2	2	EA	P
1	A130750	ADAPTER, ELBOW, 45D, 1/2" MNPT X 1	1	EA	P
1	A175069	HOSE ASSY, 1/2" -R2-600", 1/2 MNPT	1	EA	P
1	A171537	ADAPTER, EL, 90D, #8 FNPT X #8 MN	1	EA	P
1	A135130	ADAPTER, UNION, 1/2" MJIC X 1/2" M	1	EA	P
1	A132210-2	NIPPLE, CLOSE, 1/2" 3000#	6	EA	P
1	A110860	ADAPTER, STR, 1/2" MNPT X 1/2" MJI	2	EA	P
1	A170143	ADAPTER, 1/4" FNPT x 3/8" MJIC	1	EA	P
1	A234383-16	HOSE ASSY, 1/2" -R2-60", 1/2 MNPTS	1	EA	P
1	TF3609X16	TEE-1" MALE BRANCH	1	EA	P
1	02-0256	ELBOW, PIPE, 90D, 1/4" FNPT, 150#, M	1	EA	P
1	A249185	ADAPTER, BUSHING, 1" MNPT X 1/2" F	1	EA	P
1	A132826	ADAPTER, TEE, STREET, 1/2"	2	EA	P
1	A234455-01	HOSE ASSY, 1/2" -R2-246", #8 MJIC	1	EA	P
1	A245318	BRACKET ASSY, 1/2", SIDE HOSE RE	1	EA	M
1	A338453	BRACKET, UNLOADER CONTROLS, PWR	1	EA	M
1	A131743	NIPPLE, CLOSE, 1/2" BRASS	1	EA	P
1	A131742	ADAPTER, TEE, 1/2" BRASS	1	EA	P
1	A383062	QUICK COUPLER, 1/2" FEMALE, HYD.	2	EA	P
1	A383063	QUICK COUPLER, 1/2" MALE, HYD., 1	1	EA	P
1	A135301	ADAPTER, ELBOW, 90D, STREET, #4MNP	1	EA	P
1	A338044	BRACKET WELDMENT, HOSE SECURE,	1	EA	M
1	A131786	GAUGE, PRESSURE, 0-5K PSI, W/FLAN	1	EA	P
1	A249018	VALVE, BALL, 3-WAY, 1/2" NPT, BRONZ	1	EA	P
1	A380653	REGULATOR, PNEU. PRESSURE, W/WIK	1	EA	P
1	A135406	FITTING, PUSH-CON, 90D, 1/4" TUBE	7	EA	P
1	A176010	TUBING, 1/4" BLACK POLYETHYLENE	100	FT	P
1	A121240	LOOM, 1/4" SPLIT PLASTIC, PER FT	100	FT	P
1	02-3402	NIPPLE, SCH40, 1/4" NOM, 3" LG, CS,	1	EA	P
1	A338250	VALVE, SHUTTLE, AIR, 1/4" PORTS	1	EA	P
1	A249213	SPRAY GUN W/51" LANCE & SIDE G	1	EA	P
1	A131530	ORIFICE, NOZZLE, 1/4" NPT X .109"	1	EA	P
1	A131536	ORIFICE, NOZZLE, 1/4" NPT X .109"	1	EA	P
1	A234382-90	HOSE ASSY, 1/2" -R2-276", #8 FJIC	1	EA	P
1	A234385-30	HOSE ASSY, 3/8" -R2-95", #6 FJIC X	1	EA	P
1	A224007	LABEL KIT, HYDRO EXCAVATING/UN	1	EA	P
1	A381906	VALVE, NEEDLE GLOBE, 1/2", GRAFOI	1	EA	P
1	A135340	ADAPTER, ELBOW, 90D, #8 MNPT X #8M	1	EA	P
1	A135040	ADAPTER, BUSHING, RED, 1/2" MNPT-1	3	EA	P
1	02-0069	NIPPLE, CLOSE, 1/4" X 7/8" L, SCH4	1	EA	P
1	3400X4	FITTING-1/4 90 STREET ELBOW	1	EA	P
1	A252525	BRACKET, RELIEF VALVE, WELDMENT	1	EA	M

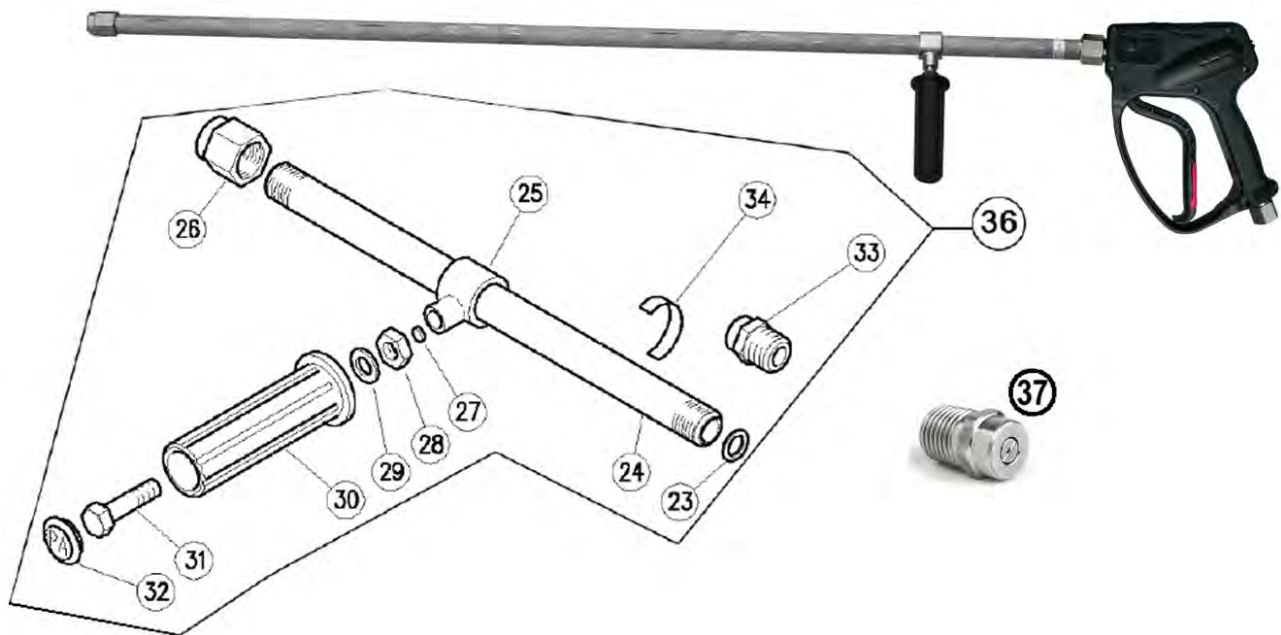


Hydro-Excavating Gun – 21gpm max, 8100psi max

A249213 - Gun with 51” Lance

(Spray tip not included)

A383407 - Gun Only (w/o Lance)

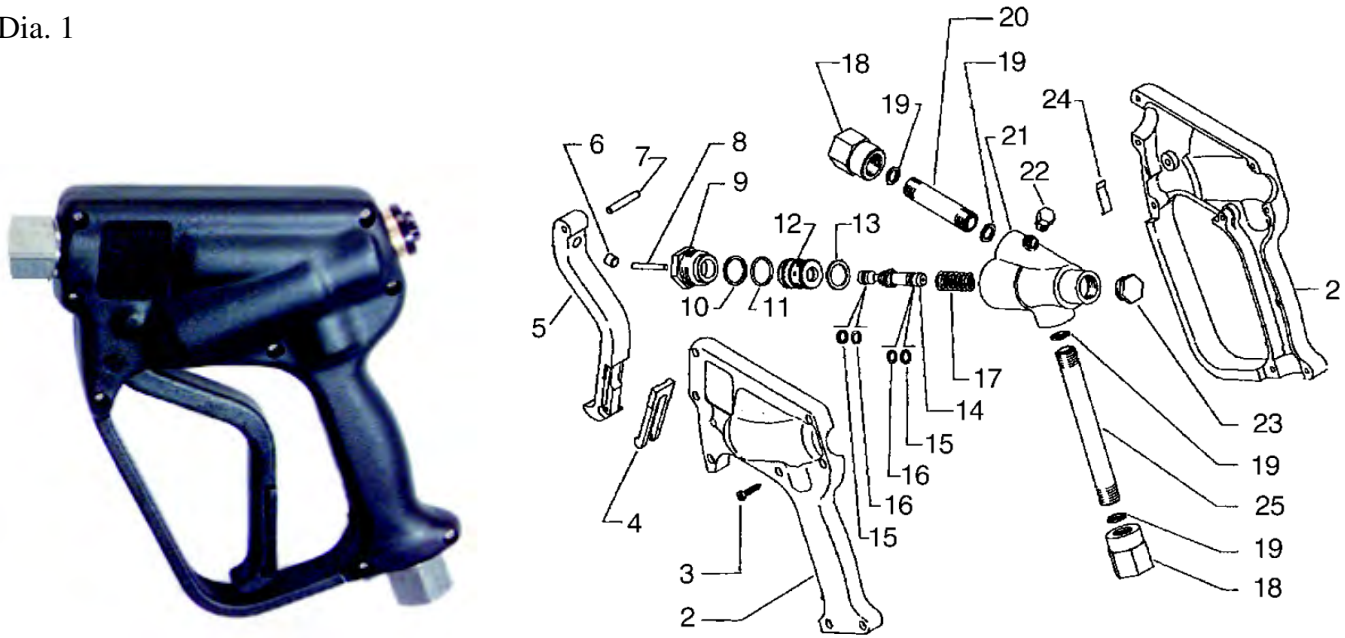


ITEM	DESCRIPTION	PART NO.
25	Handle Casing	A249213-3
26	Spray Tip Adapter, ½”BSPP x ¼”FNPT	A249213-34
N.I.	Copper Washer for item 26	A249213-35
27 to 32	Grip Handle Assembly	A249213-2
36	31” Lance Assembly (optional)	A255081
	51” Lance Assembly (standard)	A249213-L
37	Spray Tip – ¼”NPT x Flat Delta Pattern	A249489
37	Spray Tip – ¼”NPT x Solid Stream Pattern	A249490
N.I.	Coupling, ½”BSPP – for joining lances together	A164613
N.I.	Adapter, ½”FNPT x ½”BSPM – to use newer ½”NPT lances on A383407 gun	A255104

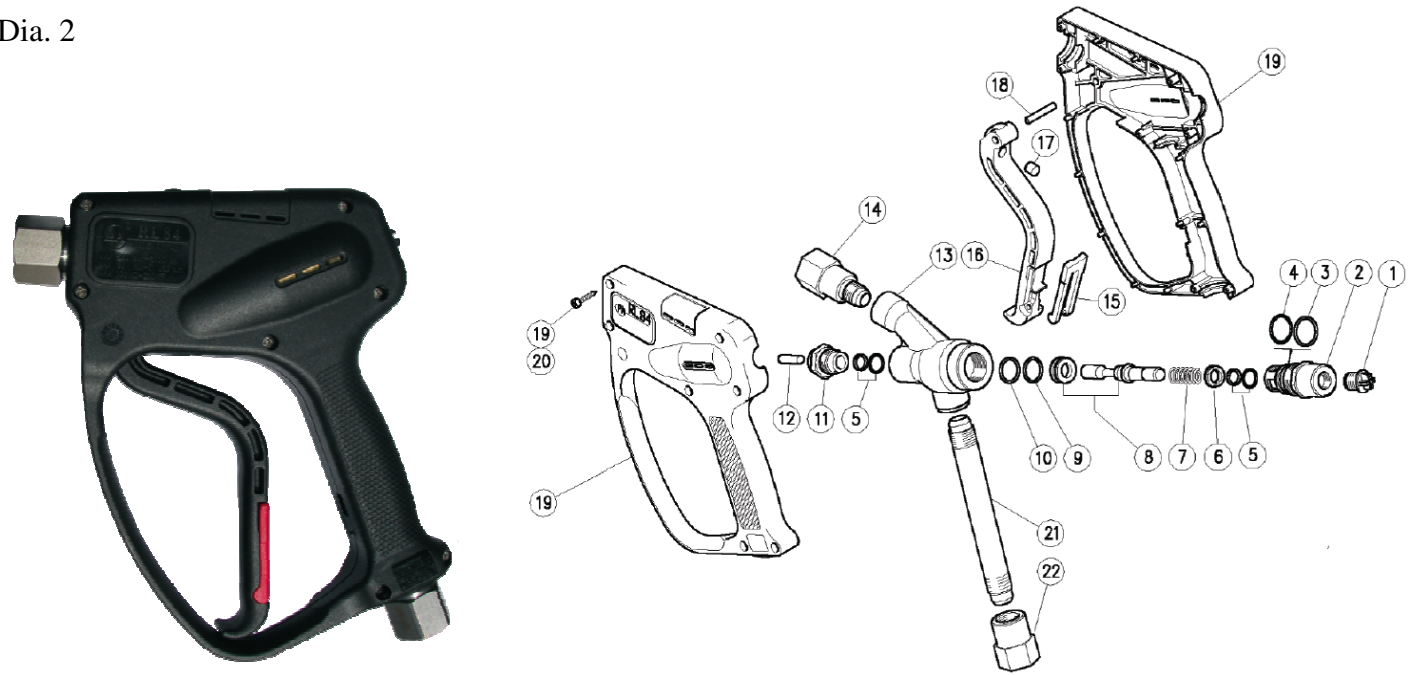
Hydro-Excavating Gun (continued)

NOTE: There was a running change on the A383407 Trigger Gun. The earlier gun is illustrated in the top box and the current gun is below it.

Dia. 1



Dia. 2



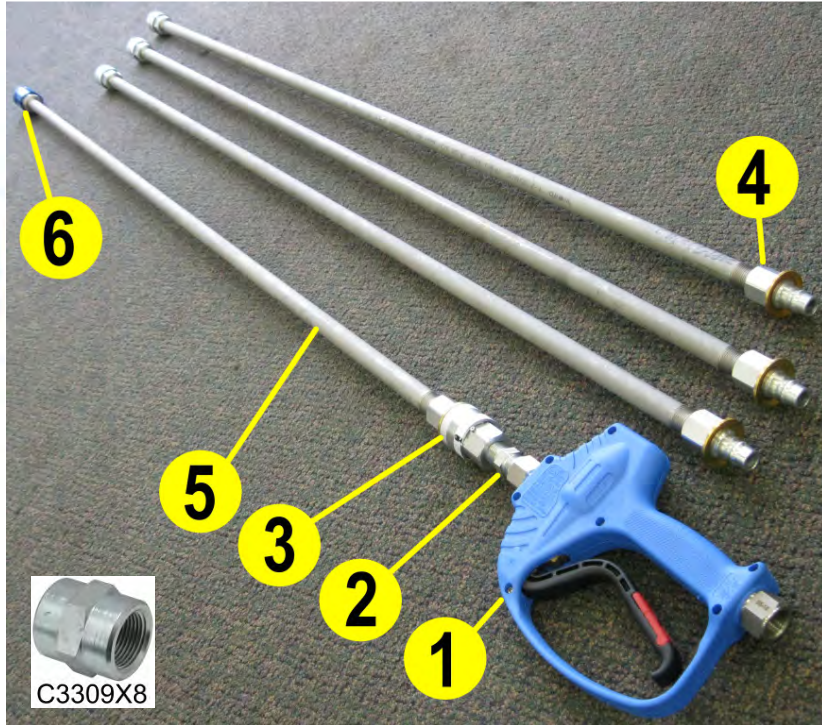
ITEM	DESCRIPTION	PART NO.
2 (Dia. 2)	Spring Holder for Current Gun	A383407-2
4 (Dia. 2)	O-Ring for Current Gun	A383407-4
18 (Dia. 1)	½"BSPP-F Fitting for Old Style Gun	A383407-1



VERTICAL HYDRO-EXCAVATION GUN & LANCES



Ergonomic vertical design minimizes arm fatigue – ideal for hydro-excavation. Gun has ½”FNPT inlet and outlet fittings.



ITEM	DESCRIPTION	PART NO.
1	Vertical Spray Gun – 32 GPM Max, 4000 PSI Max, 320°F Max	A255080
2	½”NPT Nipple (used to attach male & female couplers to gun)	A131830
3	½” Female Coupler with ½”FNPT threads	A383062
4	½” Male Coupler with ½”FNPT threads	A383063
5	½” NPT X 36” 304SS Lance	A255099
	½” NPT X 48” 304SS Lance	A255100
	½” NPT X 60” 304SS Lance	A255101
	½” NPT X 72” 304SS Lance	A255102
inset	½”NPT Coupler (use to join lances together if male & female couplers are not desired)	C3309X8

Spray Nozzle Options...

6	Adapter, ¼”FNPT X ½”FNPT for installing following tips	A255103
	Spray Tip, ¼”MNPT, #30 Orifice - Solid Stream Pattern	A249490
	Spray Tip, ¼”MNPT, #30 Orifice - 15° Delta Pattern	A249489-2
	Spray Tip, ¼”MNPT, #30 Orifice - 50° Delta Pattern	A249489-1
	Spray Tip, ¼”MNPT, #30 Orifice - 95° Delta Pattern	A249489

See separate flyers for other optional nozzle attachments.



ROTATING HYDRO-EXCAVATION NOZZLE

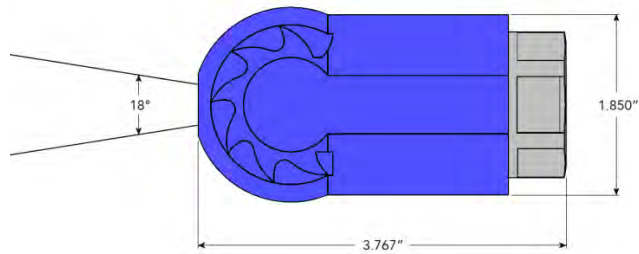


SPECIFICATIONS

- Minimum Inlet Pressure: 1000 PSI (69 bar)
- Maximum Inlet Pressure: 3200 PSI (220 Bar)
- Maximum Water Temperature: 180°F (82°C)
- Housing Material: Stainless Steel
- Coating Material: Urethane
- Nozzle Tip Material: Tungsten Carbide
- Inlet Connection Thread: ½" FNPT



REPAIR KIT



DIMENSIONS

NOZZLE SIZE	NOZZLE PART NUMBER	REPAIR KIT PART NUMBER	FLOW RATE		
			@ 2000 PSI	@ 2500 PSI	@ 3000 PSI
3.0	A255200-3	A255200-3-RK	2.1 GPM	2.4 GPM	2.6 GPM
4.0	A255200-4	A255200-4-RK	2.8 GPM	3.2 GPM	3.5 GPM
5.0	A255200-5	A255200-5-RK	3.5 GPM	4.0 GPM	4.3 GPM
6.0	A255200-6	A255200-6-RK	4.2 GPM	4.7 GPM	5.2 GPM
8.0	A255200-8	A255200-8-RK	5.7 GPM	6.3 GPM	6.9 GPM
10.0	A255200-10	A255200-10-RK	7.1 GPM	7.9 GPM	8.7 GPM
12.0	A255200-12	A255200-12-RK	8.5 GPM	9.5 GPM	10.4 GPM



LINEAR HYDRO-EXCAVATION NOZZLE



SPECIFICATIONS:

- Maximum Inlet Pressure: 3200 PSI (220 Bar)
- Maximum Water Temperature: 180°F (82°C)
- Housing Material: Stainless Steel
- Coating Material: Urethane
- Nozzle Tip Material: Tungsten Carbide
- Nozzle Dimensions: 3.376”L x 3.390”W
- 1/2” NPT Inlet with 30 Mesh Screen
- Four 1/8” NPT Nozzle Pill Ports

NOZZLE KITS

PART NUMBER	DESCRIPTION	NOZZLE FLOW RATE		
		@ 2000 PSI	@ 2500 PSI	@ 3000 PSI
A255201-7.2	A255201 Body with four A255201-2 Nozzle Pills	5.7 GPM	6.3 GPM	6.9 GPM
A255201-8.9	A255201 Body with two A255201-2 and two A255201-3 Nozzle Pills	7.1 GPM	7.9 GPM	8.7 GPM
A255201-12.5	A255201 Body with two A255201-3 and two A255201-4 Nozzle Pills	9.9 GPM	11.1 GPM	12.1 GPM

OR ASSEMBLE YOUR OWN CONFIGURATION

Start with the A255201 body and then select 4 nozzle pills or plugs. Total flow equals the sum of the flows of the individual nozzle pills.

PART NUMBER	DESCRIPTION	COLOR	PILL FLOW RATE		
			@ 2000 PSI	@ 2500 PSI	@ 3000 PSI
A255201-1	1.0 Nozzle Pill, 1/8”NPT	Blue	.7 GPM	.8 GPM	.9 GPM
A255201-2	2.0 Nozzle Pill, 1/8”NPT	Yellow	1.4 GPM	1.6 GPM	1.7 GPM
A255201-3	3.0 Nozzle Pill, 1/8”NPT	Green	2.1 GPM	2.4 GPM	2.6 GPM
A255201-4	4.0 Nozzle Pill, 1/8”NPT	Orange	2.8 GPM	3.2 GPM	3.5 GPM
A255201-5	5.0 Nozzle Pill, 1/8”NPT	Purple	3.5 GPM	4.0 GPM	4.3 GPM
A255201-PLUG	SST Plug	-	0	0	0

1.0 Blue 2.0 Yellow 3.0 Green 4.0 Orange 5.0 Purple

