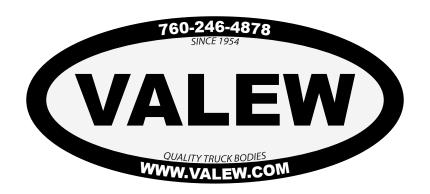


WATER TRUCK MANUAL





Congratulations on purchasing a VALEW quality water truck. Your truck was designed with the highest quality materials and equipment. Many of the manufacturer warranties exceed Valew's warranty.

Included in this owner's manual are all of the manufacturer installation, operation and maintenance instructions. This will help familiarize you with your new truck, and help to ensure a long work life.

Many components on your new body require periodic maintainance such as inspection and adjustments. It is our desire that your new water truck will provide you with years of trouble-free service.

Thank you

VALEW Welding and Fabrication

Corporate office 11746 Mariposa Road Hesperia, California 92345

Plant 12522 Violet Road Adelanto, California. 92301

844-208-2539 support@valew.com www.valew.com

CAUTION: READ BEFORE OPERATING

TANK SYSTEM OPERATION

- Read and understand all manuals provided
- Make pre-inspection of all legal lights and equipment
- Always follow legal load limits
- · Never operate vehicle on uneven ground
- Never adjust sprays while truck is running or in motion
- Check all sprays before operating tank system to ensure proper installation
- Spray water only in a clear safe location away from other traffic or personnel
- Always follow OSHA guidlines when servicing or operating vehicle
- Spray only in low gear at a safe speed for the conditions at your job site
- Always depress clutch to engage PTO never attempt to engage PTO system outside of truck
- Always disengage PTO when parked or when not in use
- Follow proper lock out tag out proceedures when servicing tank system
- Never service truck or tank while engine is running, always follow proper parking procedures
- Service by a qualified mechanic only
- Only operate pump and PTO system from inside cab from drivers position
- Fill tank with water only no pesticides or fuel
- Fill tank from rear loading pipe with approved hose only
- Never throw trash in tank
- Never swim in tank or drink water from tank
- Never transport water on highways
- Drain tank fully before operating on highways
- Tank system to be used on job sites only
- Drain tank when in storage or in freezing conitions
- Make sure mud flaps are in place before entering highways or roads
- Mud and rocks on tires may cause safety hazards for other traffic on highways, always clean vehicle and tires before entering highway
- Always follow instruction safety information and all warnings placards on vehicle
- Vehicle is only to be operated by properly licensed drivers
- Check local DMV requirements to ensure that operator is properly licensed with all necessary endorsements for GVWR class of truck

Suction Plumbing Operation

- 1) Turn off engine
- 2) Close main valve on pump inlet (4" butterfly)
- 3) Open ½" ball valve on bottom of primer pump
- 4) Remove camlock cap on suction pipe
- 5) Attach suction hose on to suction pipe
- 6) Drop hose into water source
- 7) Pump the primer pump till water comes out of it
- 8) Close ½" ball valve on bottom of primer pump
- 9) Make sure all spray valves are closed
- 10) Start engine
- 11) Engage P.T.O
- 12) Crack open 2 1/2" tank fill gate valve off of manifold
- 13) Open 2 ½" tank fill gate valve all the way

When Suction Is Complete:

- 1) Disengage P.T.O.
- 2) Close 2 ½" tank fill gate valve
- 3) Turn off engine
- 4) Remove suction hose and replace cap
- 5) Open 4" pump inlet valve

You are now ready to go.

NOTE: If you are experiencing a loss in pressure after suction is complete, confirm main valve is open and tank fill valve is closed completely

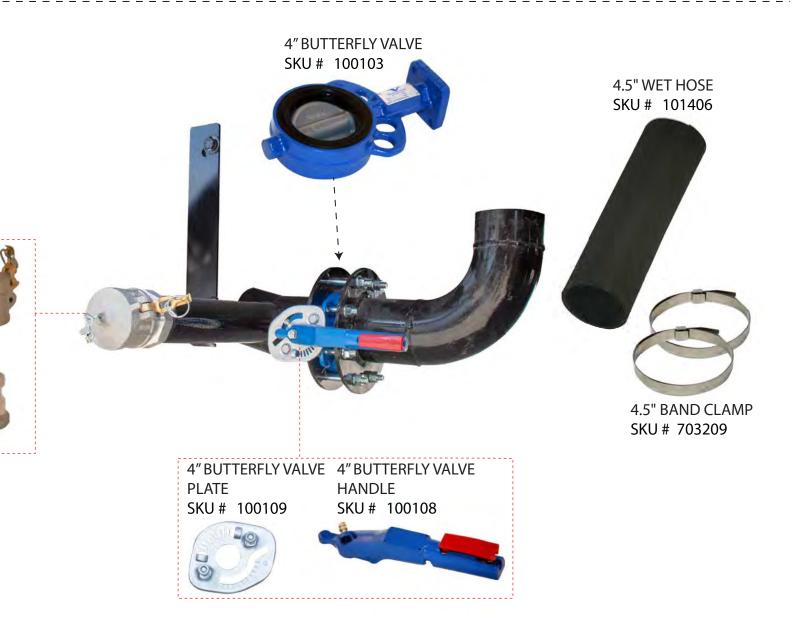


PLUMBING PARTS AND MISC

2 1/2 " DUST CAP SKU # 101302

(LOADING PIPE) SKU # 101301

2 1/2" F X M CAMLOCK



COMMON PARTS FOR VALEW WATER TRUCK

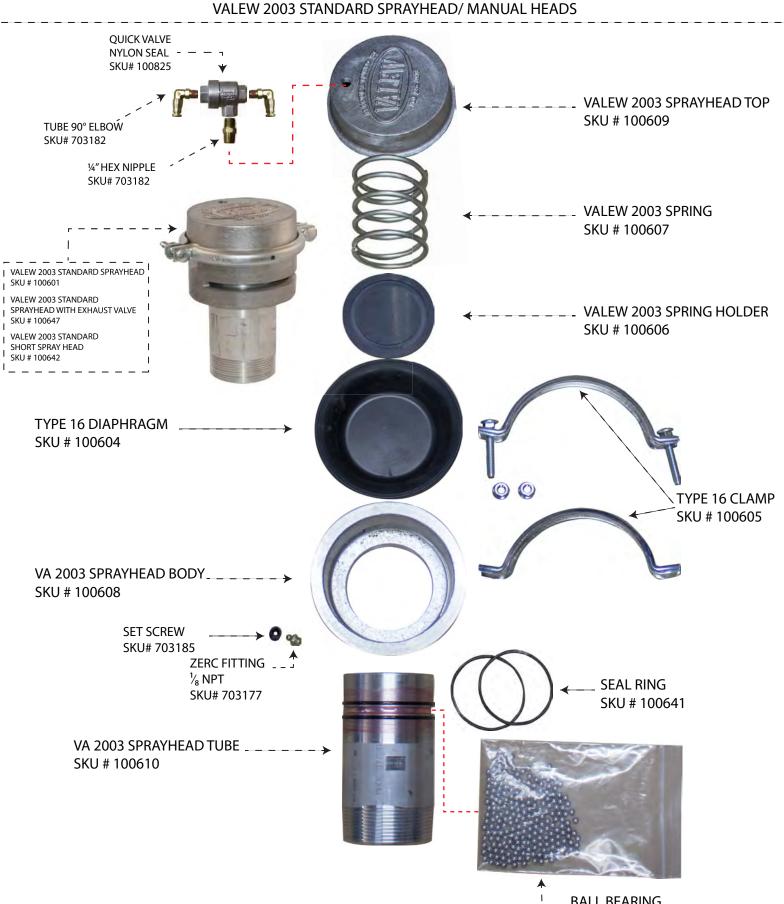
1. 2 ½" CLA - Style valve					
2. Water pump shaft ring packing					•
3. Water pump square bolt					-
4. Water pump CCW impeller					
5. Water pump volute gasket					
6. Manual control handle assembly					
7. Manual control handle backet	_	_	_	-	part # 101002
8. Manual control handle black knob	_	_	_	-	part # 101003
9. CCW 3"x 4" water pump split flange	_	_	_	-	part # 100812
10. CCW shaft kit	_	_	_	_	part # 100802
11. 1 ½" victaulic clamp	_	_	_	-	part # 101204
12. 3" CLA - style valve	_	_	_	_	part # 100619
13. Water truck air control box					•
14. Water truck control switch					•
15. 2 ½" strainer for 2 ½" suction hose					
16. 50' x 1 ½" Hose reel hose					
17. Red hose reel nozzle					•
18. 3" Victaulic clamp					•
19. CLA valve large diaphragm					
20. CLA valve small diaphragm- — — — — — — — — — — — — —					
21. CLA valve spring					•
22. 4.5" Wet hose					
21. 1½" x 18" truck tank hose					•
22. 3" Royal flex hose					
					•
23. 2 ½" Royal flex hose- — — — — — — — — — — — — — — — — — — —					•
24. CLA- style valve top					•
25. 3" CLA- Style valve body- — — — — — — — — — — — — — — — — — — —					
27. 4" Male thread x male camlock- — — — — — — — — — — — — —					
28. CLA valve spacer block- — — — — — — — — — — — — — — — — — — —					
29. 4" Female thread x female camlock- — — — — — — — — — — —					
30. 4" Male thread x male camlock					
31. CLA valve spacer block	_	_	_	_	part # 100623
32. 2 ½" Camlock dust cap	_	_	_	-	part # 101302
33. 2 ½" Male thread x male camlock	_	_	_	-	part # 101303
34. 3" Male thread x male camlock					
35. 3" Female thread x female camlock					
36. VALEW hose reel rebuilt kit	_	_	_	-	part # 100628
37. 2 ½" Manual butterfly valve- — — — — — — — — — — — — — — — — — — —	_	_	_	_	part # 100101
39. 3" Ball valve- — — — — — — — — — — — — — — — — — — —					
40. VALEW 2003 Short sprayhead					
41. VALEW electric water cannon					
42. Type 16 diaphragm- — — — — — — — — — — — — —					
43. 1" Gate valve					
44. 1 ¼" Gate valve	_	_	_	_	part # 100302

COMMON PARTS FOR VALEW WATER TRUCK

45. 1 ½" Gate valve	_	_	-	part # 1003	303
46. 3" Manual butterfly valve	_	_	-	part # 100 ⁻	102
47. 4" Manual butterfly valve	_	_	-	part # 100 ²	103
48. 2 ½" Air butterfly valve	_	_	_	part # 100 ²	104
49. 3" Air butterfly valve					
50. 4" Air butterfly valve	_	_	-	part # 100 ⁻	106
51. 6" Air butterfly valve	_	_	-	part # 100 ⁻	107
52. 4" Manual butterfly valve handle	_	_	-	part # 100 ⁻	108
53. ½" Ball valve					
54. 2 ½" Gate valve	_	_	-	part # 100	305
55. 2" Gate valve					
56. 2 ½" Street flusher	_	_	-	part # 1006	613
57. 2 ½" Side spray assembly- — — — — — — — — — — — — —	_	_	-	part # 1006	614
58. 4" Victaulic clamp				•	
59. 2 ½" Loading hose					
60. 2 ½" Suction hose					
61. 2 ½" Female x male camlock (loading pipe) - $ -$	_	_	-	part # 1013	301
62. 3" Side spray assembly	_	_	-	part # 1006	615
63. 3" Slotted cap sprayhead					
64. 2 ½" Fan spray					
65. VA 2003 sprayhead tube					
66. ¾" Hose bib					
67. Sight glass fitting set	_	_	-	part # 100!	502
68. Type 16 clamp				•	
69. VA 2003 spring holder					
70. VA 2003 spring				•	
71. VA 2003 sprayhead body	_	_	-	part # 1006	608
72. VA 2003 sprayhead top					
73. 2 ½" Slotted cap sprayhead	_	_	-	part # 1006	616

For more parts please visit **parts.valew.com** or give us a call at 844.208.2539





BALL BEARING
SKU # 100640



SIDE SPRAY ASSEMBLY





CLA-STYLE VALVE





5/8 11X2 TAP BOLT PLT SKU# 703178

CLA VALVE TOP SKU# 100624





SMALL SPRING SKU# 100622

₁1/₂ TAP BOLT SKU# 703179 **CLA VALVE DIAPHRAGM ASSEMBLY** SKU# 103150



LARGE CLA WASHER SKU# 703181

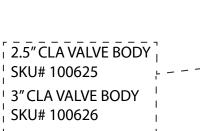
CLA VALVE LARGE _ _ > DIAPHRAGM SKU# 100620



CLA VALVE SMALL DIAPHRAGM SKU# 100621

SMALL CLA WASHER -SKU# 703184

> 1/2 HEX NUT SKU# 703180



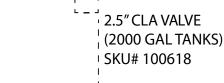


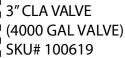












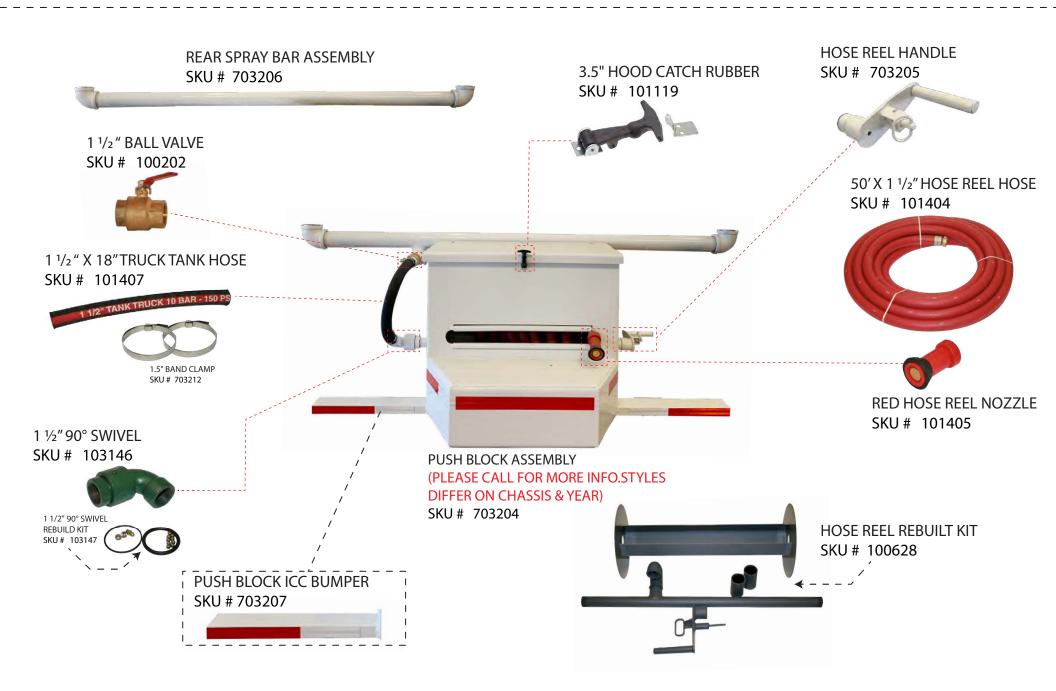
2.5" CLA VALVE WITH I **EXHAUST VALVE**

(2000 GAL TANKS) SKU# 100648

3" CLA VALVE WITH **EXHAUST VALVE** (2000 GAL TANKS) SKU# 100649



PUSH BLOCK/ HOSE REEL ASSEMBLY & PARTS





VALEW MUD FLAP, ALARM AND FENDER

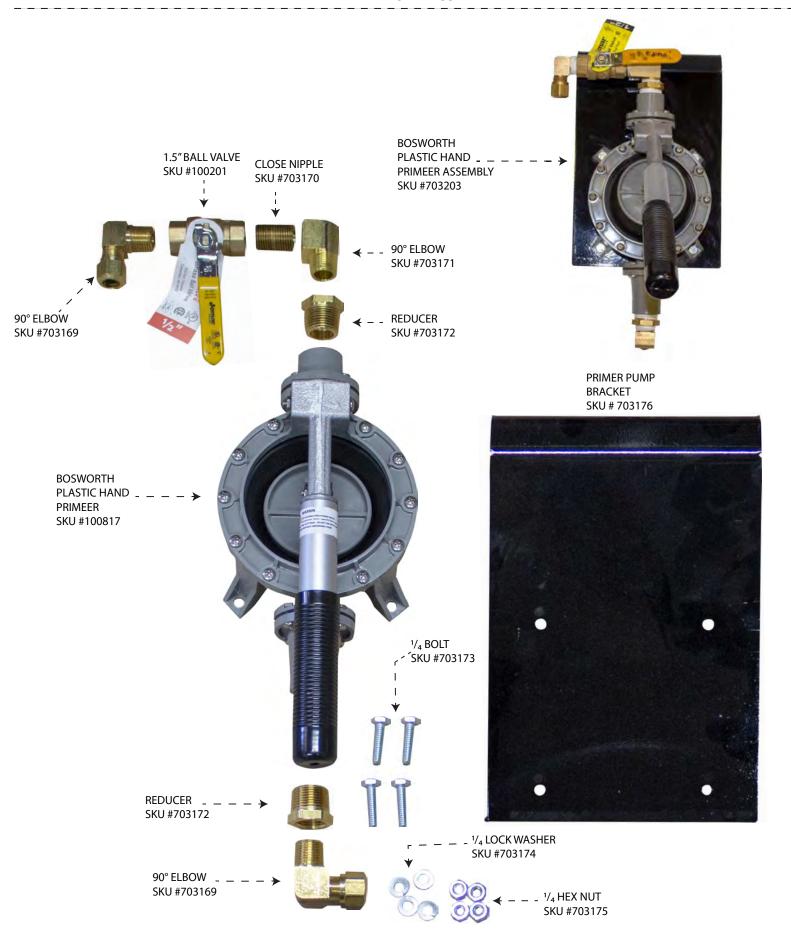




SKU # 703188



PRIMEER PUMP ASSEMBLY







362 MANUAL CONTROL

HANDLE ONLY SKU # 101006 **CABLE HARDWARE KIT** SKU # 101014

Safety First

General Information

Pump Location

General Safety

Do not allow pump, piping, or any other system component containing water to freeze. Freezing may damage system, leading to injury or flooding. Allowing pump or system components to freeze will void warranty.

Pump approved liquids only with this pump.

Periodically inspect pump and system components.

Wear safety glasses at all times when working on pumps.

Keep work area clean, uncluttered and properly lighted; store properly all unused tools and equipment.

Keep visitors at a safe distance from the work areas.



WARNING

Rotating parts. Can catch hands, feet, or clothing.

Stay clear of equipment and keep shields in place while pump is running.

Stop motor or engine before servicing pump.

Read owner's manual before using equipment.

Electrical Safety



Hazardous voltage. Can shock, burn, or cause death.

Ground pump before connecting to power supply.

- Wire motor for correct voltage. See "Electrical" section of this manual and motor nameplate.
- Ground motor before connecting to power supply.
- Meet National Electrical Code and local codes for all wiring.
 - Follow wiring instructions in this manual when connecting motor to power lines.

READ AND FOLLOW SAFETY INSTRUCTIONS!

This is the safety alert symbol. When you see this symbol on your pump or in this manual, look for one of the following signal words and be alert to the potential for personal injury:

M DANGER warns about hazards that will cause serious personal injury, death or major property damage if ignored.

warns about hazards that will or can cause serious personal injury, death or major property damage if ignored.

warns about hazards that will or can cause minor personal injury or property damage if ignored.

The label **NOTICE** indicates special instructions which are important but not related to hazards.

Carefully read and follow all safety instructions in this manual and on pump.

Keep safety labels in good condition. Replace missing or damaged safety labels.

LOCATION:

Locate the pump as near to the water source as practical. Make the suction pipe run short and straight with as few pipe fittings as possible to keep total friction loss to a minimum.

Install pump in a clean, dry and well drained location if possible and protect against moisture and adverse weather conditions. Pump should be located on a level, hard surface to prevent shifting or tipping. Locate to be readily accessible for inspection and maintenance.

Careful attention should be taken to assure that Net Positive Suction Head Available (NPSHA) exceeds Net Positive Suction Head Required (NPSHR) by the pump or reduced performance and severe pump damage may result.

Figure 1, Page 4, illustrates where these terms (NPSHA / NPSHR) come from, and how to determine if the pumping conditions at which you want to operate meet the proper criteria. When in doubt, consult your nearest Berkeley Professional Dealer.

NOTE: If pump site is 1000 feet above sea level, subtract 1.2 feet from the NPSHA equation and an additional 1.2 feet for each additional 1000 feet of elevation.

Maintenance

General Pump Care

ROUTINE MAINTENANCE

A well maintained pumping system will extend the life of the unit and will require fewer repairs. This means less down time which can be very critical when a constant delivery of water is required.

A routine maintenance and inspection schedule should be set up on a weekly, quarterly, and annual basis with records kept of these actions. For weekly checks see observational maintenance on Page 18. For quarterly and annual maintenance, refer to check list on the following page. Copy page as necessary for continual usage.

RECOMMENDED SPARE PARTS

It is recommended that the following spare parts be kept on-site as a minimum back-up to service your pump and reduce down-time. Check your model/style against parts breakdown drawing on Page 25 when selecting spares.

- Mechanical Shaft Seal
- Packing Set and Packing Hooks
- Shaft Sleeve(s)
- · All Gaskets and O-Rings Required for One Pump
- Impeller Wear Ring
- Retaining Rings

If having a pump non-operational has severe consequences, a back-up pump should be considered. Otherwise, a back-up impeller, volute case, bearings and shaft, would be prudent.

WINTERIZING

If pump is to be out of service for an extended period of time, such as the winter months, the following storage procedures should be followed.

- Remove exterior dirt and grime or any substance that may trap moisture. Exposed metal is subject to oxidation, prime and repaint if necessary. If this is not possible, coat with grease or heavy oil.
- Flush suction and discharge lines. Check for leaks at this time and replace any worn gaskets.
- Remove lowest plug in pump and drain pump casing and suction and discharge lines.
- Lubricate bearings.
- If possible, keep unit clean and dry during storage period to guard against corrosion.
- Seal all open ports to keep out foreign objects such as insects, rodents, dust and dirt.
- Rotate driver shaft periodically to prevent freeze-up of internal components.
- Shelter unit from elements if possible.
- Work oil into impeller wear ring by dripping oil into the gap while rotating by hand.

SPRING START-UP

- Inject sufficient grease into the bearings to displace old grease.
- Visual inspection.
- Rotate by hand, if any binding occurs, disassemble and inspect.

Cold Weather Operation of Powershift P.T.O.s

WARNING: During extreme cold weather operation [32°F (0°C) and lower], a disengaged Powershift Power Take-Off can momentarily transmit high torque that will cause unexpected output shaft rotation. This is caused by the high viscosity of the transmission oil when it is extremely cold. As slippage occurs between the Power Take-Off clutch plates, the oil will rapidly heat up and the viscous drag will quickly decrease.

The Power Take-Off output shaft rotation could cause unexpected movement of the driven equipment resulting in serious personal injury, death, or equipment damage.

To avoid personal injury or equipment damage:

- Driven equipment must have separate controls.
- The driven equipment must be left in the disengaged position when not in operation.
- Do not operate the driven equipment until the vehicle is allowed to warm up.

Rotating Auxiliary Driveshafts



WARNING:



- Do not go under the vehicle when the engine is running.
- Do not work on or near an exposed shaft when the engine is running.
- Shut off the engine before working on the Power Take-Off or driven equipment.

Guarding Auxiliary Driveshafts

WARNING: We strongly recommend that a Power Take-Off and a directly mounted pump be used to eliminate the auxiliary driveshaft whenever possible. If an auxiliary driveshaft is used and remains exposed after installation, it is the responsibility of the vehicle designer and P.T.O. installer to install a guard.

Owner's Manual Geared Adapters

These instructions are for your safety and the safety of the end user. Read them carefully until you understand them.

General Safety Information

To prevent injury to yourself and/or damage to the equipment:

- Read carefully all owner's manuals, service manuals, and/or other instructions.
- Always follow proper procedures, and use proper tools and safety equipment.
- Be sure to receive proper training.
- Never work alone while under a vehicle or while repairing or maintaining equipment.
- Always use proper components in applications for which they are approved.
- Be sure to assemble components properly.
- Never use wornout or damaged components.
- Always block any raised or moving device that may injure a person working on or under a vehicle.
- Never operate the controls of the Power Take-Off or other driven equipment from any position that could result in getting caught in the moving machinery.

Proper Matching of P.T.O.

WARNING: A Power Take-Off must be properly matched to the vehicle transmission and to the auxiliary equipment being powered. An improperly matched Power Take-Off could cause severe damage to the vehicle transmission, the auxiliary driveshaft, and/or the auxiliary equipment being powered. Damaged components or equipment could malfunction causing serious personal injury to the vehicle operator or to others nearby.

To avoid personal injury and/or equipment damage:

- Always refer to Chelsea catalogs, literature, and owner's manuals and follow Chelsea recommendations when selecting, installing, repairing, or operating a Power Take-Off.
- Never attempt to use a power take-off not specifically recommended by Chelsea for the vehicle transmission.
- Always match the Power Take-Off's specified output capabilities to the requirements of the equipment to be powered.
- Never use a Power Take-Off whose range of speed could exceed the maximum safe speed of the equipment to be powered.

Maintenance

Routine Inspection Record

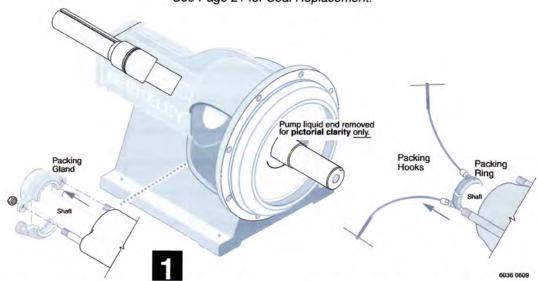
I. QUARTERLY INSPECTION	III. QUARTERLY INSPECTION
Inspect all system piping connections for leakage or possible misalignment.	Inspect all system piping connections for leakage or possible misalignment.
Check pump foundation for soundness and see that all hold-down bolts are secure.	Check pump foundation for soundness and see that all hold-down bolts are secure.
Complete any lubrication requirements as dictated by pump and driver owner's manual.	Complete any lubrication requirements as dictated by pump and driver owner's manual.
Inspect packing or mechanical seal for possible replacement. Examine shaft sleeve, if present, for wear and replace if necessary.	Inspect packing or mechanical seal for possible replacement. Examine shaft sleeve, if present, for wear and replace if necessary.
Inspect pumping plant panel for signs of wear (ie: replace pitted contactors, etc., as needed).	Inspect pumping plant panel for signs of wear (ie: replace pitted contactors, etc., as needed).
Check pump and motor bearings from signs of wear. Repack or replace as necessary.	Check pump and motor bearings from signs of wear. Repack or replace as necessary.
Check alignment of couplings and/or pulleys and belt tension if applicable.	Check alignment of couplings and/or pulleys and belt tension if applicable.
II. QUARTERLY INSPECTION	IV. QUARTERLY INSPECTION
Inspect all system piping connections for leakage or possible misalignment.	Inspect all system piping connections for leakage or possible misalignment.
Check pump foundation for soundness and see that all hold-down bolts are secure.	Check pump foundation for soundness and see that all hold-down bolts are secure.
Complete any lubrication requirements as dictated by pump and driver owner's manual.	Complete any lubrication requirements as dictated by pump and driver owner's manual.
Inspect packing or mechanical seal for possible replacement. Examine shaft sleeve, if present, for wear and replace if necessary.	Inspect packing or mechanical seal for possible replacement. Examine shaft sleeve, if present, for wear and replace if necessary.
Inspect pumping plant panel for signs of wear (ie: replace pitted contactors, etc., as needed).	Inspect pumping plant panel for signs of wear (ie: replace pitted contactors, etc., as needed).
Check pump and motor bearings from signs of wear. Repack or replace as necessary.	Check pump and motor bearings from signs of wear. Repack or replace as necessary.
Check alignment of couplings and/or pulleys and belt tension if applicable.	Check alignment of couplings and/or pulleys and belt tension if applicable.
	ANNUAL INSPECTION
NOTES:	Inspect pump and entire pumping system for signs of wear.
	Inspect system valves, screens, etc.
	If electric motor is used, check windings for degredation, rewind if necessary.
	Check pump impeller eye for clearance.
	Inspect impeller, volute case, and seal chamber for signs of excessive wear or corrosion.

Maintenance

Packing Ring Replacement

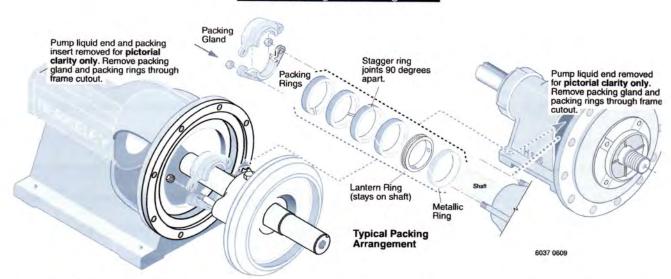
Removal

See Page 21 for Seal Replacement.



- Unfasten hardware holding packing gland in place and slide back on shaft to expose packing rings. A split packing gland with threaded studs is shown.
- Remove packing rings from stuffing box using two commercially available packing hooks as shown.
- Slide lantern ring (if used) back to expose any remaining rings, including metallic. Remove them in the same manner.

Installing New Rings



- Clean shaft sleeve and packing gland.
- · Inspect shaft sleeve for wear, replace if needed.
- Install new packing rings in stuffing box by placing over shaft sleeve and pushing them in as far as they will go.
- Rotate ring joint 90 degrees when installing each ring as shown.
- Slide packing gland into position (gland must enter stuffing box bore) then gently and evenly tighten nuts to force rings into place and seat (do not over tighten). Loosen nuts again to hand tight.
- · Start primed pump and allow packing to leak liberally.
- While pump is running, evenly tighten gland nuts one complete turn at a time until leakage is reduced to droplet form (40 to 60 drops per minute).

Type "B" Single Stage **Centrifugal Pump Bearing Frame Mount**

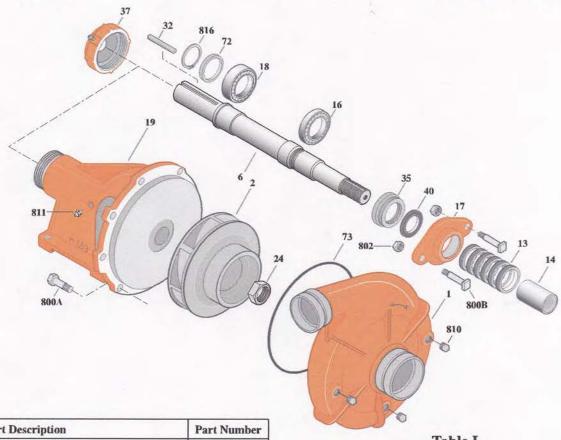
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CAST IRON IMPELLER

B3ZRM

Victaulic Case

Packing Construction



Item	Part Description	Part Number
1	Case, Volute	See Table I
2	Impeller	See Table I
6	Shaft (Not sold separately)	See Note 2
13	Ring, Packing (Set of 6)	S14022
14	Sleeve, Shaft	S05127L
16	Bearing, Ball	S13270
17	Gland, Packing (See Note 1)	S04948
18	Bearing, Ball	S13271
19	Frame	H00553
24	Locknut, Impeller (CW)	M10220
24	Locknut, Impeller (CCW)	U36-189SS
32	Key, 1/4x2-1/8"	S24255
35	Inner Bearing Cap	S19033
37	Outer Bearing Cap Assembly*	S19914
40	Slinger, Water	S12260
72	Ring, Thrust	S29218
73	O-Ring (See Note 3)	M14943

* Includes grease fitting and set screw.

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B/M No.	Rotation	Volute Case	Impeller	Impeller Diameter
B66899	CW	H04040	M02153	9.00"
B66895	CCW	H04041	M02181	9.00"

Item	Part Description	Part Number
800A	Capscrew, Hex 3/8-16x7/8" (8 Req.)	S26825
800B	Bolt, Sq. Head 3/8-16x2-1/2" (2 Req.)	S23762
802	Nut, Hex 3/8-16 (2 Req.)	S23343
810	Plug, Pipe 1/4 NPT (3 Req.)	S23715
811	Fitting, Grease	S23670
816	Ring, Retaining	S23010

NOTE 1: A two piece (split) stainless steel packing gland is available for replacement, order part number B82468.

NOTE 2: Shaft Replacement Kit available for this model. Berkeley part number B80698 for CW, B80696 for CCW. Pump Shaft sold in shaft replacement kit only.

NOTE 3: Also accepts gasket S05126 as replacement for o-ring. See Supplement E located at the beginning of this section.

Form No. S4855BK

Type "B" Single Stage Centrifugal Pump

Bearing Frame Mount

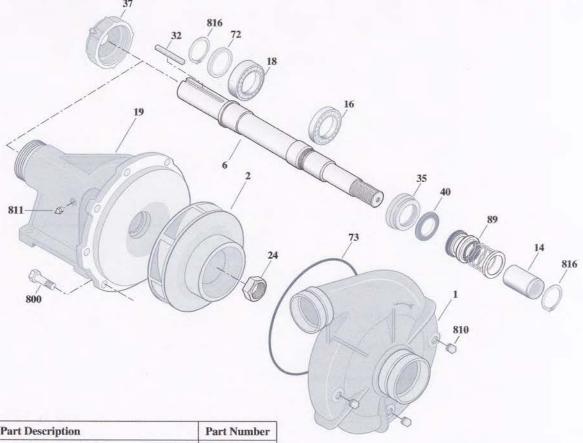
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CAST IRON IMPELLER

B3ZRMS

Victaulic Case

Mechanical Shaft Seal Construction



Item	Part Description	Part Number
1	Case, Volute	See Table I
-2	Impeller	See Table I
6	Shaft (Not sold separately)	See Note 1
14	Sleeve, Shaft	S39242L
16	Bearing, Ball	S13270
18	Bearing, Ball	S13271
19	Frame	H04007
24	Locknut, Impeller (CW)	M10220
24	Locknut, Impeller (CCW)	U36-189SS
32	Key, 1/4x2-1/8"	S24255
35	Inner Bearing Cap	S19033
37	Outer Bearing Cap Assembly*	S19914
40	Slinger, Water	S12260
72	Ring, Thrust	S29218
73	O-Ring (See Note 2)	M14943
89	Seal, Mechanical Shaft	S32690

^{*} Includes grease fitting and set screw.

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B/M No.	Rotation	Volute Case	Impeller	Impeller Diameter
B68417	CW	H04040	M02153	9.00"
B68416	CCW	H04041	M02181	9.00"

Item	Part Description	Part Number
800	Capscrew, Hex 3/8-16x7/8" (8 Req.)	S26825
810	Plug, Pipe 1/4 NPT (3 Req.)	S23715
811	Fitting, Grease	S23670
816	Ring, Retaining	S23009
816	Ring, Retaining	S23010

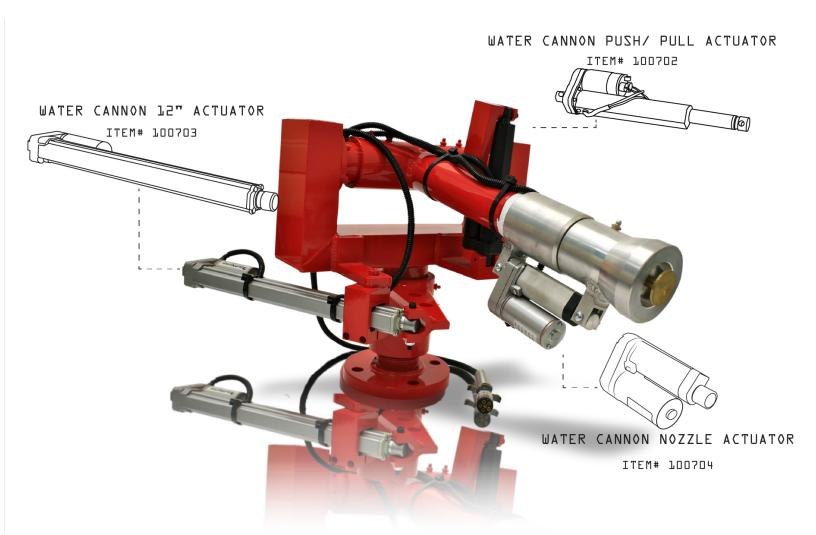
NOTE 1: Shaft Replacement Kit available for this model. Berkeley part number B80699 for CW, B80697 for CCW. Pump Shaft sold in shaft replacement kit only.

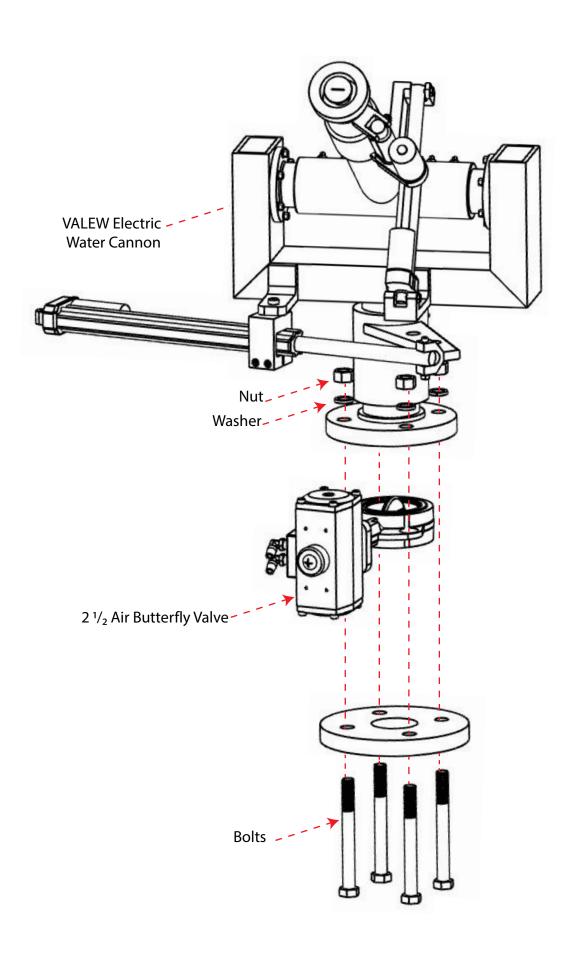
NOTE 2: Also accepts gasket S05126 as replacement for o-ring. See *Supplement E* located at the beginning of this section.

Form No. S4855BK



WATER CANNON MANUAL







VALEW WATER CANNON ASSEMBLY

