

Ledwell Water Trucks

Discount Equipment 1014 South Congress Ave. West Palm Beach, FL 33406 561-964-4949 (ext 106) 877-690-3101 (Toll Free)

CAUTION

When loading or unloading, be aware of any overhead obstructions — power lines, buildings, etc. — that could create a safety hazard during the operation

WARNING

NEVER GET UNDER YOUR TRUCK IF THE ENGINE IS RUNNING!

Hands, clothes, hair, etc. can get caught on spinning shafts and U-joints.

YOU COULD BE HURT OR EVEN KILLED!

It is against Federal Law to try to fix P.T.O. driven machinery if the engine is running. Always turn the engine off. Then, put the keys in your pocket.

(OSHA 1910.147)

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<u>Ledwell Water Tank</u> Water Tank Primer Valve



2000 Gallon Tanks





4000 Gallon Tanks



DURING SPRAY OPERATION KEEP PRIMER VALVE CLOSED

DO NOT START THE PUMP BEFORE YOU READ THESE INSTRUCTIONS

MOST PACKING BOX TROUBLES RESULT FROM EXCESSIVE TIGHTENING OF THE PACKING GLAND: A LITTLE LEAKAGE IS REQUIRED TO LUBRICATE THE PACKING AND PROTECT THE PUMP SHAFT.

NOTICE! Before starting pump be certain gland is engaged into packing box at least 1/8". (Without this engagement, adjustment of gland nut may cock and break gland.)

IMPORTANT!

Allow packing box to leak liberally at the start of the pumping operation. Tighten the gland nuts one flat at a time at 10 minute intervals until leakage is reduced to a few drops per minute. While this procedure may take two or three hours, it will definitely minimize packing box problems and lengthen the life of the pump.

UNLESS THIS PROCEDURE IS FOLLOWED WHEN PUMP IS INSTALLED, PUMP COMPANY WILL NOT ACCEPT RESPONSIBILITY FOR FAILURE.

NOTICE: IN FREEZING TEMPERATURES, PRIMER TANK AND PUMP MUST BE DRAINED

TO FILL THE TANK:

Method 1 — You may hook a fire hose to the rear inlet nozzle.

Method 2 — You may top fill

Method 3 — You may fill from standing water. Simply move the bottom valve from pump position to the fill position. Attach pick-up hose to inlet fitting. Put pick-up hose with foot valve in water. Open interior primer tank. NOTE: Primer tank should be full of water. Allow time for the pump and hose to fill from the primer tank. Now engage P.T.O., tank will begin to fill from standing water. Accelerate engine to recommended operating speed. When tank is full, disengage P.T.O. Close interior primer tank valve. Return bottom valve to pump position.

You are now ready to spray.

CAUTION

OPERATE THIS VEHICLE IN A SAFE MANNER AT ALL TIMES. BE AWARE OF PEOPLE AND/OR EQUIPMENT IN THE AREA OF OPERATION TO AVOID INJURY OR DAMAGE.

CAUTION: DO NOT GET UNDER TRUCK WHILE ENGINE IS RUNNING SHUT TRUCK ENGINE OFF AND PLACE THE KEYS IN YOUR POCKET BEFORE SERVICING ANYTHING UNDER THE TRUCK

DRAFTING INSTRUCTIONS

- 1. Hook up 20' suction hose with foot valve utilizing the 3" cam lock on the pump.
- 2. Close water intake (Valve #2) coming from tank.
- 3. Open primer valve (Valve #1). Leave valve open during drafting operation.
- 4. Purge pump until air is out of system (This is about 10 seconds or until water can be seen coming from purging valve).
- 5. Start the truck and engage the PTO.
- 6. If the pump does not prime, shut off truck and return to Step 4.
- 7. After filling tank shut off truck.
- 8. Close primer valve (Valve #1).
- 9. Disconnect the 3" suction hose.
- 10. Open water intake (Valve #2) and resume standard tank operation. {See pages 6 & 7.}

OPERATING AND SAFETY INSTRUCTIONS AUTOMATIC TRANSMISSION



- 1. Stop the vehicle. Engage the vehicle brakes, DO NOT engage the parking brake at this time.
- 2. Shift transmission to any drive position, this will stop the transmission gears from turning.
- 3. Turn on P.T.O. If the P.T.O. does not engage fully, turn off the P.T.O., release the vehicle brakes, move the vehicle slightly, and repeat steps 1 and 2.
- 4. Shift the transmission into neutral (N), this will start the gears rotating again.
- 5. For stationary operation apply parking brake and then release the vehicle brakes.

TO SPRAY:

Engage the P.T.O. By operating the in-cab valve controls, you may operate the nozzles independently or in tandem. To activate the appropriate nozzle, pull the valve control toward you. To disengage, push the valve control away from you.

NOTE: YOU MUST ATTACH THE SIDE SPRAY NOZZLE HEAD TO THE SIDE OUTLET PIPE BEFORE SPRAYING.

CAUTION: WHEN WATER IS DEPLETED, DISENGAGE P.T.O. LEAVING THE P.T.O IN GEAR WHEN NOT SPRAYING WILL CAUSE DAMAGE TO THE TRUCK TRANSMISSION, WATER PUMP, & THE P.T.O.

CAUTION

OPERATING AND SAFETY INSTRUCTIONS MANUAL TRANSMISSION

- 1. Stop the vehicle. Engage the vehicle brakes, DO NOT engage parking brake at this time.
- 2. Disengage the clutch by pushing it to the floor and shift transmission to neutral position. Wait for the gears to stop rotating.
- 3. Pull up on the P.T.O. lever to the engaged position.

NOTE: If you encounter resistance when you first try to engage the P.T.O., let out on the clutch slightly until P.T.O. engages, then push the clutch back down. This enables the gears of the P.T.O. to align with the gears of the transmission. When the P.T.O. is engaged the indicator light will come on.

- 4. Let out on the clutch to engage the P.T.O.
- 5. For stationary operation, leave the transmission in neutral, apply parking brake, engage (release) clutch.



TO SPRAY:

Engage the P.T.O. By operating the in-cab valve controls, you may operate the nozzles independently or in tandem. To activate the appropriate nozzle, pull the valve control toward you. To disengage, push the valve control away from you.

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CAUTION

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Ledwell Water Tank Water Tank Options



2000 Gallon Water Tank Mounted On Single Axle Truck



4000 Gallon Water Tank Mounted On Tandem Axle Truck

<u>Ledwell Water Tank</u> Control Handles and Kits



Control Handle Left, Center, and Right specific. When ordering, please, let our Parts Department know what position you need.



Air Switch Kit P/N: Order By Number Of Switches

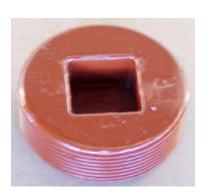
Ledwell Water Tank End Caps



Plug P/N: PLUG 2 1/2



2" Pipe To 1/2" Spigot P/N: BSHG-2X1/2



Plug P/N: SQPLUG 2 1/2



Spray Bar Caps P/N: L080034



Spray Bars

Bars Available In Multiple Widths According To Your Bumper Size
Please Measure Previous Bracket Holes (center of hole to center of hole) And Have
That Width Available When You Call Our Service Department

Some Spray Bars Are Equipped With Air Gate Valves
Please Know If Your Unit Is Equipped With These Devices
(4000 Gallon Truck Spray Bar Shown In Above Picture, Gate Valves Installed)

Ledwell Water Tank Pumps And Hose Reel





CENTRIFUGAL PUMPS

Current Pump Options Western Pumps 349M

P/N: CWF SPP (Clockwise)

P/N: CCF SPP (Counterclockwise)

PREVIOUS PUMPS

Berkley Pumps

P/N: B80302 (Clockwise)

P/N: B80303 (Counterclockwise)

P/N: B66161 (Clockwise)

P/N: B66168 (Counterclockwise) P/N: B79125 (Counterclockwise)

Victaulic Pumps

P/N: B66895 (Counterclockwise)

P/N: B66899 (Clockwise)



Hose Reel P/N: LHOSEREEL



Reel Bushing P/N: Order By Part Name



Hose Reel Handle P/N: LHR HANDLE



Tubular Drive Shaft

Due to chassis differences Ledwell drive shafts are always built custom for each vehicle

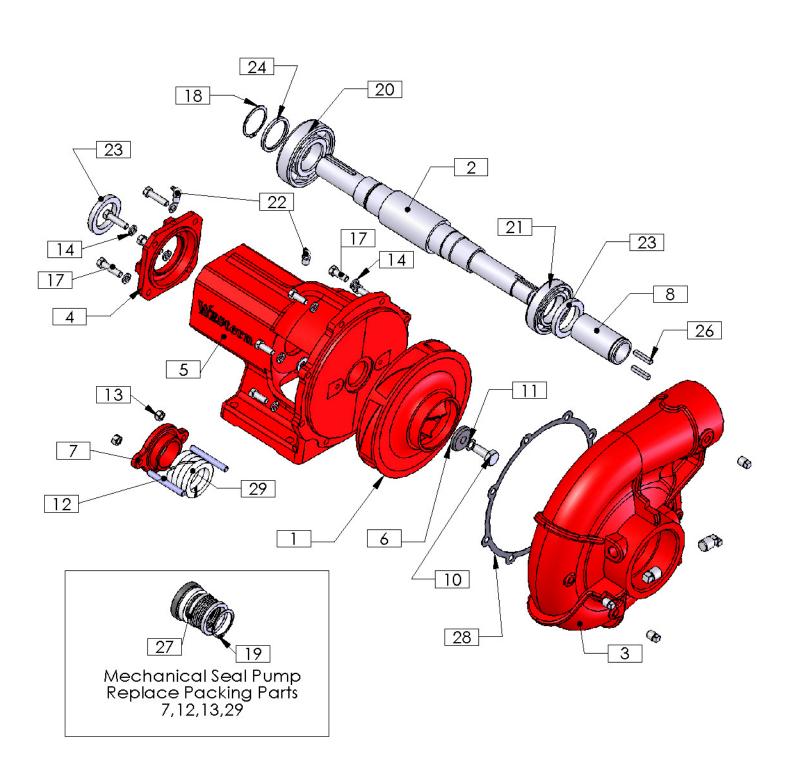
Please, call our parts department to order your drive shaft.

When you call have the following:

- Shaft Length
 - -Measure from the end of the PTO shaft to the end of the pump shaft
- PTO & Pump model number to determine yoke size



XS-9 Series - Frame Mount Parts Diagram 3x4x9/6x8x9



Western Pumps, LLC

P.O. Box 1562

Clovis, CA 93613 (559) 292-9100

XS-9 Series Pump Parts Listing

Models: 3x4x9. 6x8x9- Frame Mount

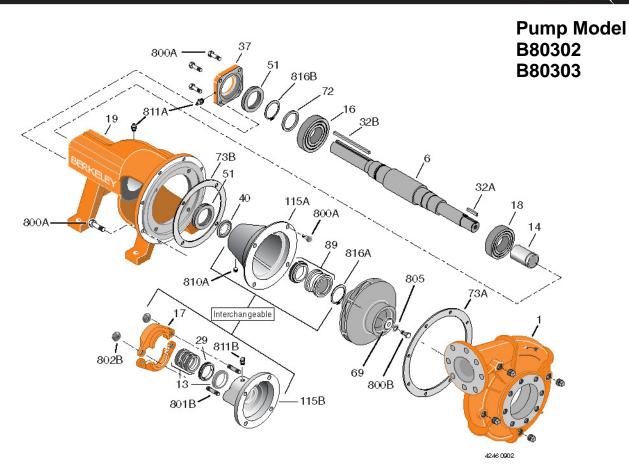
Draw ID	Pump Model	Component ID	Component Description	Qty Needed
	349MCC-FSxx	M-01-IM001-01	Impeller CCW - 349M	1
1	349MCW-FSxx	M-01-IM003-01	Impeller CW - 349M	1
	689HCW-FSxx	M-02-IM005-01	Impeller CW - 689H	1
	349Mxx-FSxx	M-01-SH001-01	Shaft - 349M	1
2	689HCW-FSxx	M-02-SH004-01	Shaft - 689H	1
	349MCW-FSxP	M-01-VL001-01	Volute CW - 349M - NPT	1
	349MCC-FSxP	M-01-VL003-01	Volute CCW - 349M - NPT	1
3	349MCC-FSxV	M-01-VL005-01	Volute CCW - 349M - Vic	1
*****	349MCW-FSxV	M-01-VL007-01	Volute CW - 349M - Vic	1
	689HCW-FSxx	M-02-VL009-01	Volute CW - 689H - Flange	1
4	All	M-05-BC001-01	Bearing Cap - 349M/689H	1
-	xx9xxx-FSPx	M-05-BF001-01	Bearing Frame - 9 Packing	1
5	xx9xxx-FSSx	M-05-BF003-01	Bearing Frame - 9 Seal	1
6	All	M-05-IVV001-01	Washers - 1.75 SS Heavy	1
7	All	M-05-PG001-01	Packing Gland - 349M/689H	1
8	All	M-05-WS001-01	Shaft Wear Sleeve - 349M/689H	1
9	All	P-00-00003-01	Slinger - 1.75	1
10	All	P-00-00006-01	Bolts - 1/2-13 x 1-1/2 SS	1
11	All	P-00-00007-01	Washers - 1/2 Star SS	1
12	All	P-00-00012-01	Studs - 3/8-16 x 3	2
13	All	P-00-00013-01	Nuts - 3/8-16 Flanged	2
14	All	P-00-00014-01	Washers - 3/8 Locking	12
15	All	P-00-00016-01	Pipe Plugs - 1/4	4
16	All	P-00-00018-01	Pipe Plugs - 1/2	2
17	All	P-00-00020-01	Bolts - 3/8-16 x 1-1/4	12
18	All	P-00-00021-01	Snap Ring - 1.969	1
19	All	P-00-00022-01	Snap Ring - 1.750 SS	1
20	All	P-00-00024-01	Bearings - Input Side	1
21	All	P-00-00025-01	Bearings - Impeller Side	1
22	All	P-00-00026-01	Grease Fittings - 1/8 NPT	2
23	All	P-00-00027-01	Grease Seals	2
24	All	P-00-00028-01	Thrust Ring - 1.972	1
25	All	P-00-00030-01	Key - 3/8 x 1.75	1
	349Mxx-FSxx	P-01-00029-01	Key - Impeller - 349M	2
26	689HCW-FSxx	P-00-00062-01	Key - Impeller	2
27	All	P-05-00008-01	Mechanical Seal - 349M/689H	1
28	All	P-05-00036-01	Gasket - Volute - 349M/689H	1
29	All	S-05-00009-01	Packing Set - 3/8 - 349M/689H	1



TYPE "B" SINGLE STAGE CENTRIFUGAL PUMP Bearing Frame Mount

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B3ZRM(S)



B3ZR Common Parts Groups Repair Parts List

Item No.	Part Description	Part Number
6	Shaft	M12338
14	1-3/8 ID x 1-3/4 OD Shaft Sleeve	M12422
16	Single Row Ball Bearing	S13395
18	Ball Bearing	S13397
19	Bracket	M12332
32A	Shaft Key, 1/4" Sq. x 2-1/4" Lg Impeller	S23677
32B	Shaft Key, 3/8" Sq. x 2-1/4" Lg.	S23941
37	Bearing Cap	M12335
40	Water Slinger	S10964
51	Grease Seal (2 Req.)	M12337
69	Lock Washer	S06319
72	Thrust Ring	S06519
73A	Volute Gasket	S05 126
73B	Balance Ring Gasket	S09943
800A	3/8-16 x 1"Lg. Hex Hd Capscrew (16 Req.)	S26826
800B	1/2-13 X 1"Lg Hex Hd. Capscrew	S23619
805	Lock Washer	S23038
811A	Grease Fitting (2 Req.)	S23700
816B	External Retaining Ring	S23016

Packing Components

Item No.	Part Description	Part Number
13	Packing Ring Set	S13435
17	Split Packing Gland Set	B82470
29	Lantern Ring	S19200
115B	Packing Housing	M12334
801B	3/8-16NC x 2-1/2" Lg Stud (2 Req.)	S04438
802B	3/8-16 Hex Nut (2 Req.)	S23343
811B	1/8 MPT x 90° Grease Fitting	S23702

Seal Components

Item No.	Part Description	Part Number
89	1-3/4" Mechanical Shaft Seal	S32015
115A	Mechanical Seal Housing	M12333
810A	1/8" NPT Sq. Hd. Pipe Plug	S23714
816A	External Retaining Ring	S16767



TYPE "B" SINGLE STAGE CENTRIFUGAL PUMP Bearing Frame Mount

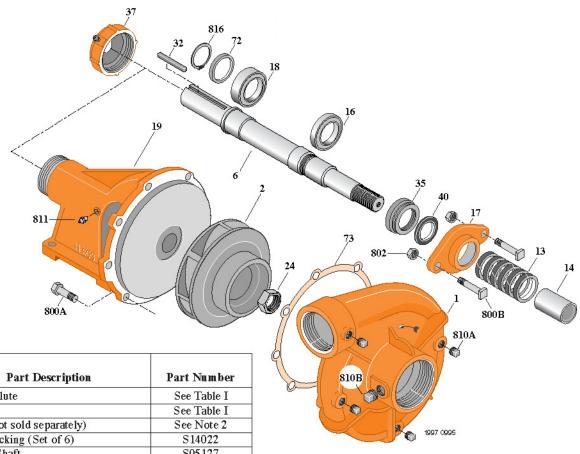
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CAST IRON IMPELLER

B3ZRM

Threaded Case (NPT)

Pump Model B66161 B66168



Item No.	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	S05127
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
40	Slinger, Water	S12260
35	Inner Bearing Cap	S19033
37	Outer Bearing Cap Assembly*	S19914
72	Ring, Thrust	S29218
73	Gas ket, Volute	S05126
800A	Capscrew, Hex 3/8-16x1" (8 Req.)	S26826
800B	Bolt, Sq. Head 3/8-16x2-1/2" (2 Req.)	S23762
802	Nut, Hex 3/8-16 (2 Req.)	S23343

^{*} Includes grease fitting and set screw.

Item No.	Part Description	Part Number
810A	Plug, Pipe 1/4 NPT (4 Req.)	S23715
810B	Plug, Pipe 1/2 NPT	S23717
811	Fitting, Grease	S23670
816	Ring, Retaining	S23010

- 1. A two piece (split) stainless steel packing gland is available for replacement, order part number B82468.
- Shaft Replacement Kit available for this model. Berkeley part number B80698 for CW, B80696 for CCW.

Pump Shaft sold in shaft replacement kit only.



TYPE "B" SINGLE STAGE CENTRIFUGAL PUMP Bearing Frame Mount

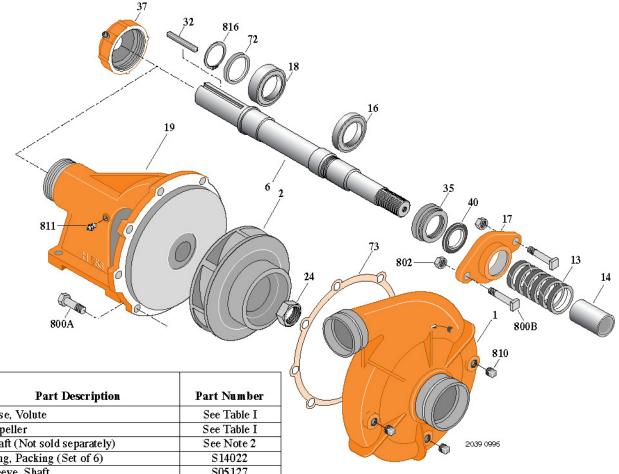
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CAST IRON IMPELLER

B3ZRM

Victaulic Case

Pump Model B66895 B66899



Item No.	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	S05127
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	Gasket, Volute	S05126
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

^{*} Includes grease fitting and set screw.

Item		
No.	Part Description	Part Number
810	Plug, Pipe 1/4 NPT (3 Req.)	S23715
811	Fitting, Grease	S23670
816	Ring, Retaining	S23010

- 1. A two piece (split) stainless steel packing gland is available for replacement, order part number B82468.
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Ledwell Water Tank Piping



2 1/2" Pipe Flange P/N: FLG4B-X2 1/2



2 1/2"X3" Nipple P/N: NIPPLE2 1/2X3N



2 1/2" Bushing P/N: BSHG2.5X2



2 1/2" Pipe Flange P/N: FLG2 1/2XST



2 1/2" Elbow P/N: EL2 1/2X90X1/4



2 1/2" Flange Coupling P/N: FLG2 1/2CPL



2 1/2" Flange—90° Elbow P/N: FLG2 1/2X90

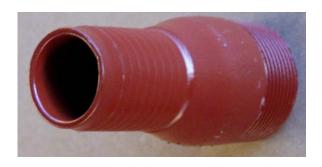


2 1/2"X6" Nipple P/N: NIPPLE-VIC2 1/2X6



2 1/2"X6" Nipple P/N: NIPPLE2 1/2X6

Ledwell Water Tank Outlets & Couplers



1 1/4" Hose Nipple P/N: NIPPLE1 1/4HOSE (Hose Reel)



Side Spray Nozzle Quick Connect P/N: 25-H



Hose Nozzle P/N: PFN-NH



Fill Cam Lock Fitting 2" P/N: 20-F 2 1/2" P/N: 25-F



Side Spray Nozzle P/N: L080020



Cap P/N: 25-V

Ledwell Water Tank Valves



Air Gate Valve P/N: 81664-F



Valve Handle 4" P/N: 8687RC940 2 1/2" P/N: 8687LC940



1/2" Spigot P/N: 1/2HOSEBIB



Gate Valve P/N: 2GV



Valve
4" P/N: MIL4VALVE
2 1/2" P/N: MIL2 1/2VALVE

Ledwell Water Tank Hoses And Clamps



2 1/2" Coupling P/N: VICTCPLG2 1/2



Hose Clamps

1 1/4"	P/N: TBC125
3"	P/N: TBC300
4"	P/N: TBC400
4 1/2"	P/N: TBC450

HOSES ARE AVAILABLE IN MULTIPLE LENGTHS

Please Measure The Hose You Are Replacing And Have That Length Available When You Call Our Service Department



Black Plumbing Hose Available in 2 1/2", 3 1/2", and 4" diameters



1 1/4" Red Hose (Hose For Reel) P/N: 24-1 1/4WATERHOSE



White Hose P/N: ALPHA5-2 1/2X25'

Ledwell Water Tank Lighting



Reverse Light P/N: 40204

Brake Light P/N: 40202R

Grommet P/N: 40700



3-light bar 30740R



2 1/2" Round Red Light P/N: 10205R Grommet P/N: 10700



Tag Light 26330



Yellow Reflector P/N: 98002Y



Red Reflector P/N: 98002R