

INSTALLATION, OPERATION AND PARTS MANUAL

BCS Water Pump 921WP147

Manual P/N: 921WP147-M
Revision: 12/2016



Distributed by:
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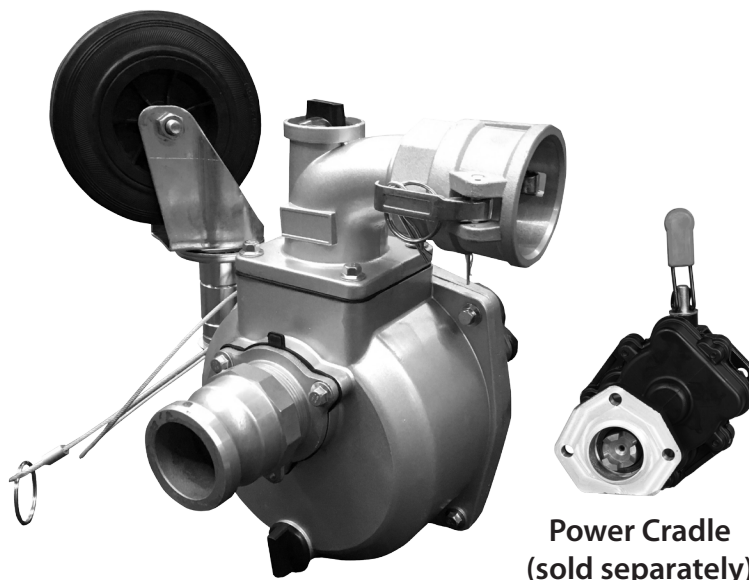
Please read and understand this manual and all instructions prior to operating or servicing this attachment.

DESCRIPTION

Hypro Self-Priming Centrifugal Pumps handle big, high-capacity, liquid transfer jobs with ease. Use them for transferring water, liquid fertilizers, and other chemicals compatible with pump materials. Make short work of other farm jobs: filling nurse

tanks, watering seedbeds, and transferring liquids. This self-priming model makes it ideal for dewatering applications.

Max. Flow Rate:147 GPM
Max. Pressure:50 PSI
Max. Total Head:115 FT.
Max. Suction Lift:28 FT.
Ports:2" NPT Inlet
2" NPT Outlet



PERFORMANCE DATA

Performance data is based on testing with water. Performance will vary with fluid density and/or viscosity.

5 PSI	10 PSI	15 PSI	20 PSI	25 PSI	30 PSI	35 PSI	40 PSI	45 PSI
GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM
161.85	147.04	132.24	116.38	100.5	79.42	59.1	30.3	6.75



HAZARDOUS SUBSTANCE ALERT

Please Note: It is illegal to ship or transport any hazardous chemicals without United States Environmental Protection Agency Licensing.

1. Always drain and flush pumps before servicing or disassembling for any reason.

2. Before returning unit for repair, drain all liquids and flush unit with neutralizing liquid. Then, drain the pump. Attach a tag or include a written notice certifying that this has been done.
3. Never store pumps containing hazardous chemicals.



GENERAL SAFETY INFORMATION

California Proposition 65 Warning -- This pump and related accessories can transfer liquids that may contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

WARNING: Do not pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in explosive atmospheres. The pump should be used only with liquids that are compatible with the pump component materials. Failure to follow this warning can result in personal injury and/or property damage and will void the product warranty.

1. DO NOT EXCEED recommended speed, pressure and temperature (140° F) for pump and equipment being used.
2. BEFORE SERVICING, drain all liquids from the system and flush. Remove spark plug wire from the spark plug before servicing the pump or engine.
3. Secure the discharge lines before starting the pump. An unsecured line may whip, causing personal injury and/or property damage.
4. Check hose for weak or worn condition

before each use. Make certain that all connections are tight and secure.

5. Periodically inspect the pump and the system components. Perform routine maintenance as required (see Maintenance section).
6. Protect pump from freezing conditions by draining liquid and pumping a permanent-type automobile antifreeze containing a rust inhibitor through the system, coating the pump interior. A 50% mixture with water is recommended.
7. Do not operate a gasoline engine in an enclosed area. Be sure the area is well ventilated.

WARNING: Gasoline is a highly combustible fuel. The improper use, handling, or storage of gasoline can be dangerous. Never touch or fill a hot engine.

8. Use only pipe, hose and fittings rated for the maximum psi rating of the pump.
9. Do not use these pumps for pumping water or other liquids for human or animal consumption.

PLUMBING INSTALLATION

Preliminary to Mounting

Before connecting the Water Pump to the Power Cradle (sold separately), verify there are no obstructions in the pump by checking that the pump will rotate freely. To do so, turn the 3-dog PTO Jaw on the end of the pump's male tang by hand in either direction. If a full rotation cannot be completed, remove the pump housing, locate and remove the obstruction; then, reinstall the housing.

Basket Strainer & Foot Valve / Strainer Combination

To prevent debris from damaging your pump, both a Basket-style Strainer and a Foot Valve / Strainer combination are supplied with this pump. For ease of priming, we recommend the use of the Foot Valve / Strainer combination.

In either case, firmly install the strainer on the threaded end of the suction (inlet) hose.



OPERATION AND MAINTENANCE

Connecting the Pump to a BCS Tractor

1. Connect the Power Cradle to your tractor either by attaching it to the two PTO studs with 12mm conical washers and nuts, or by utilizing the BCS Quick Hitch (bushing and tang not included).
2. Mount the pump to the Power Cradle: raise the red lever on the bushing of the cradle, insert the male tang of the pump, then lower the red lever, making sure that the lever is fully seated.
3. Using the provided spacers, adjust the stem caster wheel setting so as to position the pump as level as possible. Secure stem caster placement with the provided lynch pin, located on the shorter lanyard and connected to the pump.
4. Prime pump according to instructions in next section below.

Priming the Pump

IMPORTANT: PUMP MUST NOT BE RUN DRY

This self-priming pump must be primed prior to the PTO engagement or damage will occur to the mechanical seal which depends on the liquid for its lubrication.

1. Submerge the suction hose (with Foot Valve / Strainer combination installed) into the water source to fill suction hose as much as possible prior to connecting the suction hose to the inlet port, located near the center of the pump.
2. Connect the suction hose to the pump using the cam lock provided and secure with safety hair pins.
3. Remove the top plug located above the discharge port outlet and fill with water until water runs out of the discharge port.
4. Reinstall the top plug. Be sure to tighten to avoid any air or water leaks.
5. Connect your discharge hose via provided cam locks and secure this fitting with the safety hair pins.

Operation of the Pump

1. Place tractor and pump on level ground, whenever possible.
2. Check that the tractor's wheel speed selector is in the neutral position.
3. Raise the throttle lever to full throttle position after engine has warmed up.
4. Attach suction and discharge hoses; then prime the pump (see instructions).
5. Engage the PTO.
6. Once pump is primed and water is being discharged, adjust your engine RPM to proper speed, according to your pumping application.
7. Using the OPC ring located on the longer lanyard, secure the red OPC handle on the left side of the handle bar to keep it engaged while the pump is in use.

Storage

1. Drain pump. Flush pump after use.

One of the most common causes for faulty pump performance is gumming or corrosion inside the pump. Flush the pump and entire system with a solution that will chemically neutralize the liquid pumped. Mix according to the manufacturer's directions. This will dissolve most residues remaining in the pump, leaving the inside of the pump clean and ready for use.

To Prevent Corrosion and Freezing:

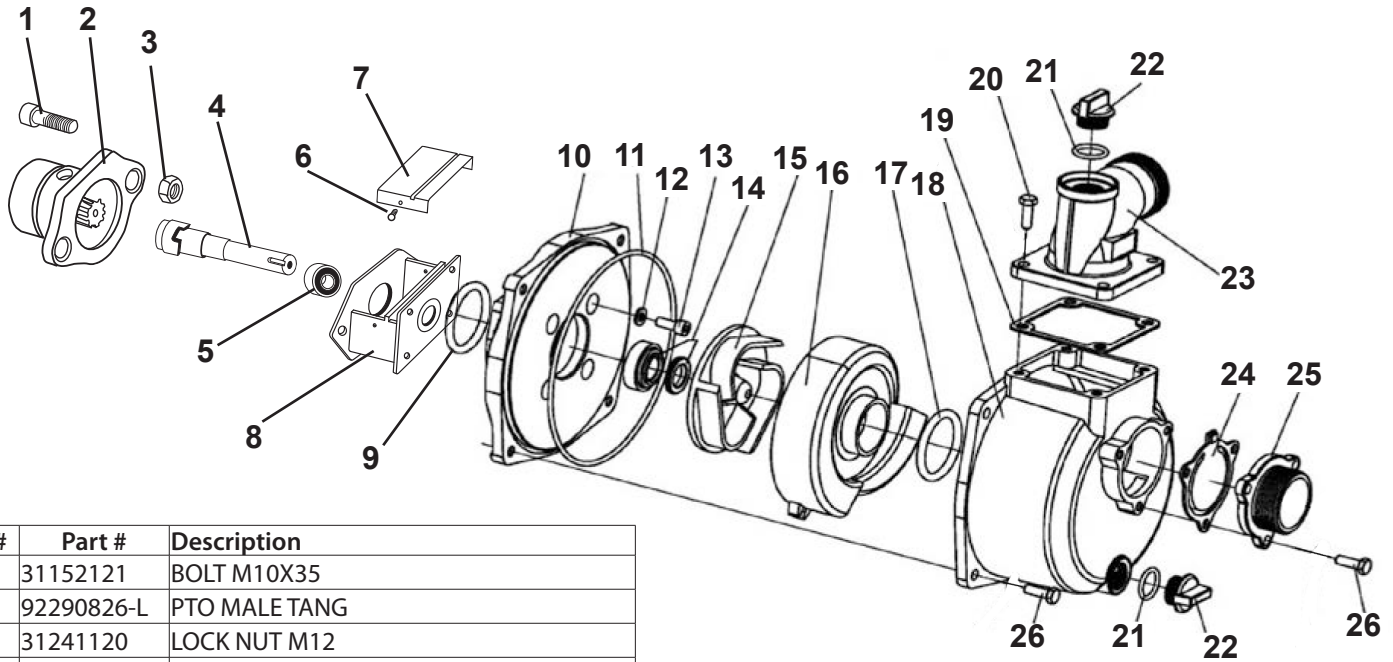
After cleaning the pump as directed above, flush it with permanent-type automotive antifreeze (Prestone, Zerex, etc.) containing a rust inhibitor. Use a 50% solution; half antifreeze and half water, or fill the pump with FLUID FILM and drain it. A protective coating of FLUID FILM will remain on the inner pump surfaces. Save the excess FLUID FILM for the next application. Plug ports to keep out air during storage. For short periods of idleness, noncorrosive liquids may be left in the pump, BUT AIR MUST BE KEPT OUT. Plug the ports or seal port connections.

2. Store pump in a clean, dry environment.

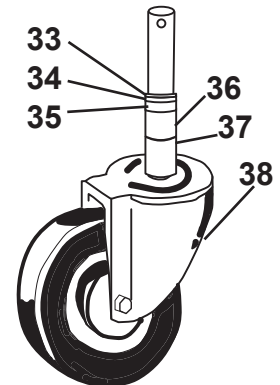
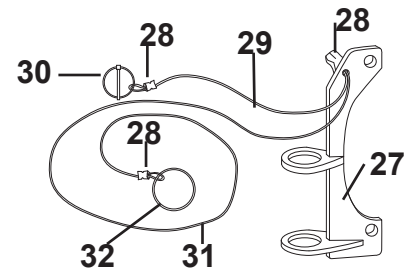
TROUBLESHOOTING

Symptom	Probable Cause(s)	Corrective Action(s)
No discharge	Pump not priming	Fill priming chamber with water.
	Pump not priming	Increase engine speed.
	Pump not priming	Confirm PTO is engaged.
	Pump not priming	Confirm OPC handle is depressed.
Low discharge	Air leaks in suction line	Check inlet fittings for leaks. Seal leaks.
	Undersized or collapsed suction hose	Suction inlet hose should be same diameter as inlet port fitting. Check hose for kinks.
	Blocked or clogged inlet	Inspect strainer and clear any debris from screen.
	Impeller plugged	Inspect and clear obstruction.
Fluid leaking from pump	Mechanical seal failure	Determine fluid is coming from weep holes between pump and engine.
	Crack in pump housing	Check casing and casing cover for damage.

PARTS



Ref #	Part #	Description
1	31152121	BOLT M10X35
2	92290826-L	PTO MALE TANG
3	31241120	LOCK NUT M12
4	WPC14701	SHAFT WITH COUPLER
5	WPC14703	BEARING 20MM X 47MM X 20.6
6	22100011	SCREW
7	WPC14705	BOTTOM DUST COVER
8	WPC14710	HOUSING
9	WPC14708	SHAFT DUST COVER
10	24040401	PUMP REAR COVER
11	21061964	O-RING REAR COVER 196MM X 4MM
12	23122169	SEALED WASHER
13	22100855	HEX BOLT M8X55
14	31876444	MECHANICAL SEAL
15	04001542	IMPELLER
16	04001787	DIFUSSER
17	21060537	O-RING DIFFUSER 53MM X 7 MM
18	24040468	PUMP BODY
19	23122682	GASKET OUTLET FLANGE
20	22100825	HEX BOLT M8 X 25
21	21062335	O-RING PLUG 23MM X 3.5MM
22	32400008	PLUG
23	24040409	OUTLET FLANGE (DISCHARGE)
24	23123430	GASKET W/CHECK VALVE INLET FLANGE
25	24040405	INLET FLANGE (SUCTION)
26	22100120	HEX BOLT M8 X 20
27	WPC14716	WHEEL BRACKET
28	WPC14722	FERRELL 1/8 "
29	WPC14712	WIRE ROPE 12" X 1/8
30	WPC14778	LYCNH PIN
31	WPC14736	WIRE ROPE 36" X 1/8
32	WPC14754	OPC RING 1.75
33	SRM203ZD	SPACER 25MM X 2MM
34	SRM204ZD	SPACER 25MM X 6MM
35	SRM205ZD	SPACER 25MM X 13MM
36	SRM206ZD	SPACER 25MM X 25MM
37	SRM207ZD	SPACER 25MM X 33MM
38	012600000	STEM CASTER W/ WHEEL



Ref #	Part #	Description
NSI	34300802	COMPLETE SEAL KIT
NSI	50002012	STRAINER
NSI	50002301	FOOT VALVE/ STRAINER COMBINATION
NSI	85400085	2 " DISCHARGE HOSE X 50 FT
NSI	85400089	2 " SUCTION HOSE X 25 FT
NSI	90390200	2 " MALE CAM LOCK
NSI	90393200	2 " FEMALE CAM LOCK
NSI	921WP147-M	MANUAL

NSI: Not Shown in Illustration

WARRANTY

If this product fails due to a defect in material or workmanship within 3 YEARS from the date of purchase, the manufacturer will, at their option, repair or replace it free of charge.

This warranty does not cover:

- Repairs necessary because of operator abuse or negligence.
- Equipment used for commercial or rental purposes.
- Paint that is worn or faded due to normal use or exposure.

For warranty consideration, please call BCS America at 1-800-543-1040, or return your product to an authorized BCS dealer.

This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state. This warranty applies only while this product is in use in the United States and Canada.

In the space below, record the purchase date of your Water Pump.

Model Number: 921WP147

Purchase Date: _____

Serial Number: _____

Keep this Owner's Manual and your receipt in a safe place for future reference. Replacement parts may be ordered by calling BCS America at 1-800-543-1040 or by contacting an authorized BCS dealer.

When ordering replacement parts, always give the following information:

- Product: WATER PUMP
- Model Number: 921WP147
- Part Number: _____
- Part Description: _____



NOTES: _____

BCS Water Pump (921WP147)