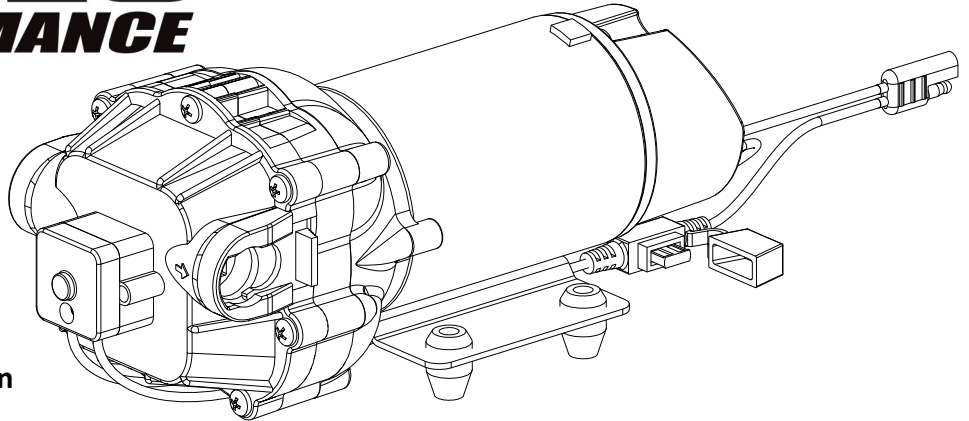


OWNER'S MANUAL

HIGH-FLO HIGH PERFORMANCE

12 Volt, 4.5 GPM, 60 PSI
Diaphragm Pump
Model: HFP-45060-113
(5281372/5151088)



Installation and Service Information

Fimco High-Flo High Performance pumps are designed to pump water and aqueous solutions of common pesticides. They are not designed to pump petroleum products or other flammable materials. They are not designed to pump bleach solutions. **Use of this pump for petroleum products or bleach solutions will void the warranty.** When pumping liquids other than water, the pump should be flushed out with a cleaning solution, such as Fimco Tank Neutralizer & Cleaner, or clean water mixed with a good grade dish soap after each use to prolong pump life.

This High-Flo High Performance pump is equipped with a demand switch that reacts to outlet pressure and shuts the pump motor off at a factory set pressure limit of 60 PSI. When the pressure drops below this preset limit the switch allows the pump motor to start again.

High-Flo High Performance pumps are self-priming. Vertical prime will depend on the viscosity of the liquid and suction line size. Minimum recommended suction line size is 3/8 inch. All hose connections need to be tight or air leakage will break the prime and disrupt water flow. The installation of a 50 mesh strainer is recommended to prevent debris or other foreign material from entering the pump and causing pump failure. The pump should be mounted in a dry and adequately ventilated area. The pump can be mounted horizontally or vertically. If mounted vertically, the pump head should be down and the motor should be up. Your pump will come with adapters which will allow you to hook up to various plumbing configurations. These fittings push into the ports of the pump and a slide mechanism 'locks' them into place. Use flexible hose or tubing to connect to the inlet and outlet ports on the pump. This minimizes stress on the pump head. Never use rigid pipe connections. Do not compress the feet. Overtightening will reduce the ability to isolate vibration & noise.

Your pump is rated at 4.5 GPM @ open flow. If the discharge plumbing is very restrictive or nozzle tips are undersized, the back pressure will cause the pump to cycle rapidly. This rapid cycling will increase the operating temperature of the motor and the amperage draw on the power supply. Extended use with this cycling will cause premature failure of the pump.

Your pump is designed to run off of the battery of your ATV, lawn tractor, or other vehicle with a 12V system. If using a stand alone battery, use a deep cycle RV or marine battery.

The pump should be winterized before storage, by pumping a solution of RV antifreeze through it, and the entire plumbing system.

Retain a copy of receipt for your pump.

As it will be required to validate any warranty service. High-Flo High Performance Pumps are warranted against manufacturer or workmanship defects for Two (2) years from date of purchase for home owner usage and 90 days for commercial usage.

See Page 4 for Warranty Information



WARNING: To reduce the risk of injury, the user must read and understand the operator's manual before using this product.



WARNING: Cancer and Reproductive Harm
www.P65Warnings.ca.gov



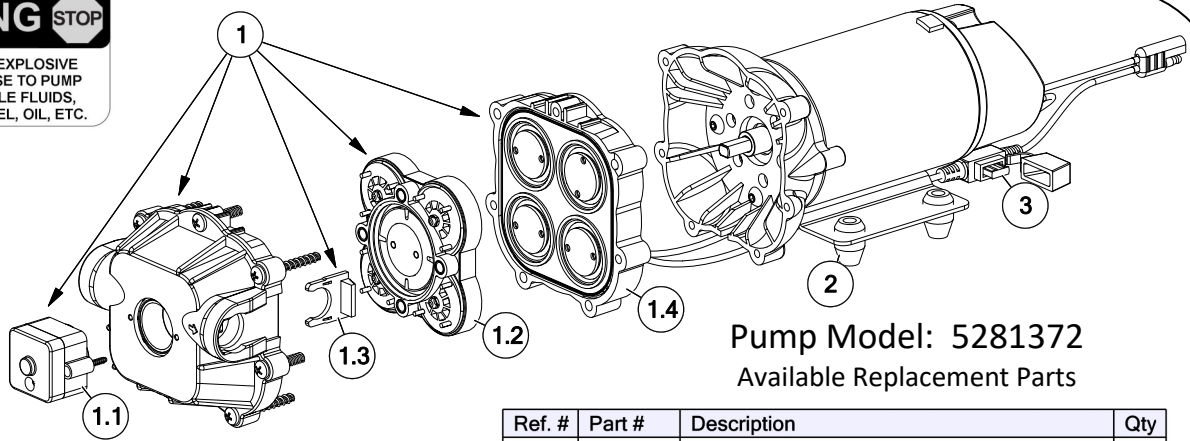
www.fimcoindustries.com

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Toll Free Phone: 800-831-0027 : Toll Free Fax: 800-494-0440

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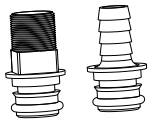
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STOP WARNING STOP
 DO NOT USE PUMP IN AN EXPLOSIVE ENVIRONMENT. DO NOT USE TO PUMP FLAMMABLE/COMBUSTIBLE FLUIDS, GASOLINE, KEROSENE, FUEL, OIL, ETC.



Pump Model: 5281372
 Available Replacement Parts

Replacement Pump: 5151088



Includes:
 1/2" MNPT Port Kit Fitting #5168832
 1/2" Hose Barb Port Kit Fitting #5168833

Ref. #	Part #	Description	Qty
1	5151097	4.5 GPM Pump Head	1
1.1	5164271	60 PSI Pressure Switch	1
1.2	5168824	Check Valve w/O-Ring	1
1.3	5051162	Pump Slide Clips (Pkg/2)	1
1.4	5063271	4.5 GPM Diaphragm/Piston/Cam/Bearing Kit	1
2	5075019	Grommets (Pkg/4)	1
3	5157206	15 Amp 'Mini Blade' Fuse	1

DO

- Clean and rinse your pump after each use with Fimco Tank Neutralizer
- Winterize your pump or sprayer by rinsing, draining and running RV Antifreeze through it before storing for the winter.
- Use clean water for your spray mixture
- Store inside a building when not in use.

DON'T

- Use to pump bleach.
- Use to pump petroleum products such as diesel fuel, gasoline or kerosene
- Leave your pump sit with spray mixture in it for extended periods
- Use dirty or unfiltered water for spraying

Troubleshooting the Pump:

Motor does not run:

- Check for loose wiring connection(s).
- Make sure the 'ON/OFF' switch in the lead wire assembly is in the 'ON' position. "I" is the 'ON' position and 'O' is the 'OFF' position.
- Check for defective pressure switch. Make sure you are connected to a good 12 volt power source. Make sure any on/off switches are in the 'on' position. Remove the cap to the pressure switch. Pull both red wires off of their terminals, and touch the two ends together. If your pump runs when you do this, your pressure switch will need to be replaced.
- Check the fuse.
- Check for low voltage at the power supply.

Pump does not prime:

- Check for air leaks in supply line.
- Check for debris in the check valve assembly.
- Check for defective check valve.
- Check for clogged strainer/filter.
- Check for cracks in the pump housing.
- Check for empty product supply.

Low Pressure/Low Flow:

- Check for leaks in the discharge line.
- Check for restriction in the discharge line.
- Check for debris in nozzle orifice.
- Check for clogged strainer.
- Check for proper voltage—try another 12-volt battery.

CAUTION
PRESSURE SWITCH OPERATION
 Pressure switch is pre-set at the factory. Improper adjustment of the pressure switch, may cause severe overload or premature failure. If the pump is subjected to rapid cycling during normal operation, or infrequent periods, damage may occur.

Pulsating flow (surging):

- Low flow may cause pump to surge.
- Spray wand is adjusted for a small or fine spray pattern.
- Slightly open bypass (if applicable) to overcome.
- If needed, pressure switch may need to be adjusted—adjust a quarter turn at a time clockwise until surging stops.
- Check for defective pressure switch.
- Check for leaks in the discharge line.
- Check for restriction in the discharge line.
- Check for debris in nozzle orifice.
- Discharge hose may be too long.
- Check for clogged strainer.

Motor continues to run after discharge is shut off:

- Check for empty product supply.
- Check for open bypass valve. (if equipped)
- Check for low voltage.
- Check for leak in discharge line.
- Check for defective pressure switch.
- System has leaks.

Fuse blows:

- Excessive voltage.
- Improper adjustment of pressure switch.
- Damaged or defective wiring harness.
- Defective pressure switch.

Checking the Pressure Switch:

If your motor is not running and you've checked the following: for loose wiring connections, fuse, the switch on the lead wire was "ON" and made sure you were connected to a fully charged battery and everything is fine, but the motor won't run, then it's time to check to see if the pressure switch is bad.

- Remove the cover off the 1" square box (pressure switch) on the head of the pump, the cover is held on by one phillips-head screw. This will expose the two red wires.
- With the pump connected to a good 12 volt power source and everything on.
- Slip the two red wires off the terminals and touch them together.

If the motor runs, it means the pressure switch is bad and needs to be replaced. If it still doesn't run, try bypassing the switch in the lead wire or using another lead wire. Even if a tester shows power to the pressure switch, it still could be the switch in the wire that is causing the problem. If still not responsive, use a voltmeter or electrical tester to make sure you are getting power to the head of the pump, as it could possibly be something in one of the wires or even the lead wire assembly may need to be replaced.

Warning: It is NOT recommended to run the pump this way, as the pump will continue to run and not shut off.

This could result in blown hoses when all discharges are closed.

Also, this could result in premature failure of the pump completely.

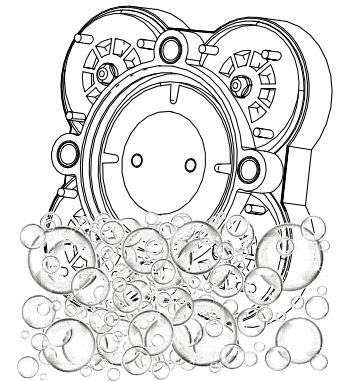
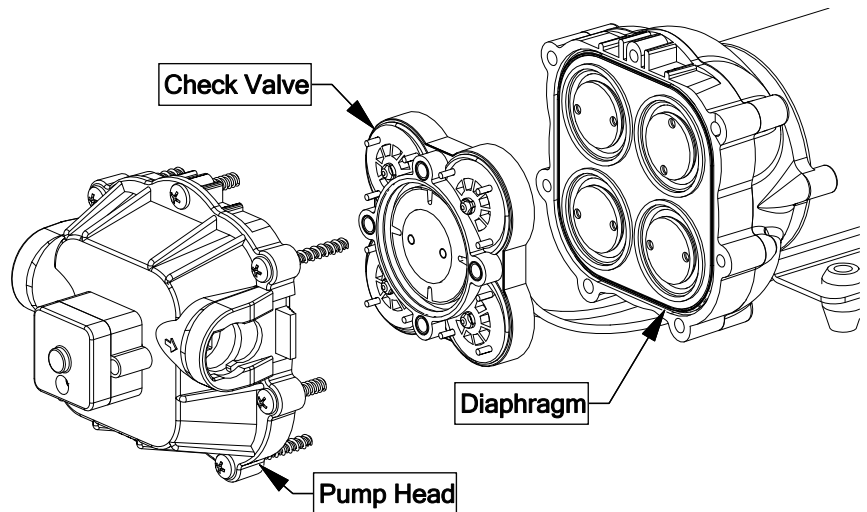
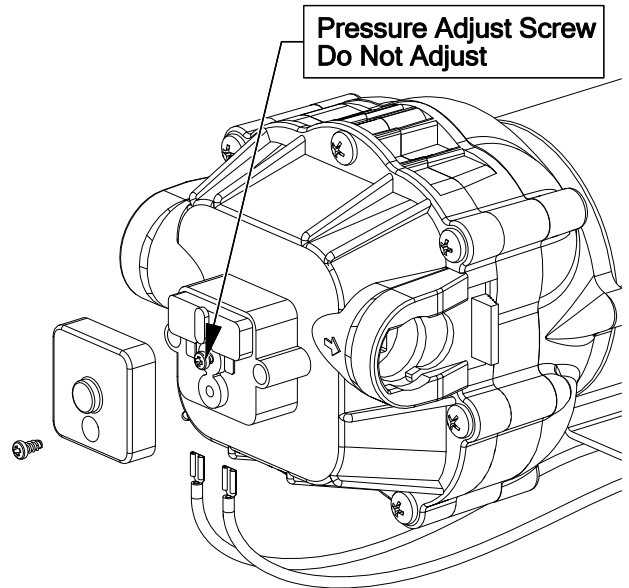
Cleaning the Check Valve:

If you're experiencing little to no pressure or the pump is not priming and you've checked your filter screen and it's clean, and you've gone through the other trouble shooting tips, you may need to clean the check valve.

- Remove the head of the pump, which is held on by 7 screws.
- The first piece inside the head of the pump is called a check valve, it's the part responsible for building up pressure and pumping water/solution through the lines.
- Clean the check valve under hot, soapy water (such as a good grade dish soap).
- Give it a very light scrubbing with something like an old toothbrush, something with soft bristles.
- Then let it soak for about an hour or so in the hot soapy solution and replace in the pump and reassemble the pump.

Most times this will restore most, if not all of the prime of a pump.

If you're still having issues with pressure after this step, it would be recommended to replace this part.



Warranty

LIMITED WARRANTY FOR NEW FIMCO EQUIPMENT

WHO MAY USE THIS LIMITED WARRANTY. This limited warranty (the "Limited Warranty") is provided by Fimco to the original purchaser ("you") of the Equipment (as defined below) from Fimco or one of Fimco's authorized dealers. This Limited Warranty does not apply to any subsequent owner or other transferee of the Equipment. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

WHAT THIS LIMITED WARRANTY COVERS AND FOR HOW LONG. Fimco warrants that any new Equipment will be free from defects in material and workmanship for a period of **two (2) years** (homeowner), **90 days** (commercial user), after delivery of the Equipment to you (the "Warranty Period"). The Warranty Period is not extended if Fimco repairs or replaces the Equipment.

WHAT IS NOT COVERED BY THIS LIMITED WARRANTY. This Limited Warranty does not apply to: (1) used Equipment; (2) any Equipment that has been altered, changed, repaired or treated since its delivery to you, other than by Fimco or its authorized dealers; (3) damage or depreciation due to normal wear and tear; (4) defects or damage due to failure to follow Fimco's operator's manual, specifications or other written instructions, or improper storage, operation, maintenance, application or installation of parts; (5) defects or damage due to misuse, accident or neglect, "acts of God" or other events beyond Fimco's reasonable control; (6) accessories, attachments, tools or parts that were not manufactured by Fimco, whether or not sold or operated with the Equipment; or (7) rubber parts, such as tires, hoses and grommets.

HOW TO OBTAIN WARRANTY SERVICE. To obtain warranty service under this Limited Warranty, you must (1) provide written notice to Fimco of the defect during the Warranty Period and within **thirty (30)** days after the defect becomes apparent or the repair becomes necessary, at the following address: Fimco, 1000 Fimco Lane, North Sioux City, SD 57049; and (2) make the Equipment available to Fimco or an authorized dealer within a reasonable period of time. For more information about this Limited Warranty, please call: **800-831-0027**

WHAT REMEDIES ARE AVAILABLE UNDER THIS LIMITED WARRANTY. If the conditions set forth above are fulfilled and the Equipment or any part thereof is found to be defective, Fimco shall, at its own cost, and at its option, either repair or replace the defective Equipment or part. Fimco will pay for shipping and handling fees to return the repaired or replacement Equipment or part to you.

LIMITATION OF IMPLIED WARRANTIES AND OTHER REMEDIES. THE REMEDIES DESCRIBED ABOVE ARE YOUR SOLE AND EXCLUSIVE REMEDIES, AND FIMCO'S SOLE LIABILITY, FOR ANY BREACH OF THIS LIMITED WARRANTY. TO THE EXTENT APPLICABLE, ANY IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED IN DURATION TO THE WARRANTY PERIOD, AND THE REMEDIES AVAILABLE FOR BREACH THEREOF SHALL BE LIMITED TO THE REMEDIES AVAILABLE UNDER THIS EXPRESS LIMITED WARRANTY. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. IN NO EVENT SHALL FIMCO'S LIABILITY UNDER THIS LIMITED WARRANTY EXCEED THE ACTUAL AMOUNT PAID BY YOU FOR THE DEFECTIVE EQUIPMENT, NOR SHALL FIMCO BE LIABLE, UNDER ANY CIRCUMSTANCES, FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL OR PUNITIVE DAMAGES OR LOSSES, WHETHER DIRECT OR INDIRECT. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.