



Model No.  
DVSA-DF and DVSA-VS



# Pump Alternator System Installation Instructions

## Features:

- Prolongs pump life by alternating two primary pumps
- Runs one pump at a time when the lower switch is activated
- Both pumps will run when the upper switch is activated (there will be a 3 second delay before the second pump turns on)
- If one pump fails the other pump will take over and an audible alarm will sound
- The audible alarm will remain on until the reset button is pressed
- The audible alarm can be silenced
- Flashing light will indicate which pump is failing
- Remote terminal allows the unit to connect to the Pro Series WiFi Module or any security system, auto dialer or other device
- Includes two float switches
- Float switches easily unplug from the unit
- If one float switch fails the other float switch will take over and an audible alarm will sound
- Angled receptacles to accept a standard or right angled pump plugs
- 15 Total Amps max.
- 9V battery back-up for "High Water Alarm" alarm
- Plug and play for easy installation
- 9 foot long power cord

The PHCC Pro Series Alternator is designed to operate two primary pumps. Every time the lower float switch is activated, it will alternate the pump that turns runs. This will prolong the life of both pumps. If one of the pumps fails to turn on, the Alternator will automatically switch to the other pump. If this occurs three times in a row, a light will flash indicating exactly which pump is failing.

For added reliability, the system features two separate float switches. There is an upper and lower float switch. Should the lower float switch fail, the upper float switch will turn the pump on and will sound a High Water Alarm. When the upper float switch activates, it will turn on both pumps in case one pump is not strong enough to keep up with the incoming water.

### Pro Series Pump Alternator includes:

- Control unit
- Two float switches
- Two hose clamps for mounting the float switches

### You will also need to supply:

- **Two (2) Primary pumps** Consider one of our strong and dependable primary pumps. All PHCC Pro Series primary pumps are designed for higher pumping capacities and increased energy efficiency. Using them in this application will greatly extend their life. (Visit [www.StopFlooding.com](http://www.StopFlooding.com) for more information)
- **9V heavy duty-alkaline battery**
- **Proper mounting hardware**
- **1½" rigid PVC pipe and fittings**
- **PVC primer and cement**
- **A union with hose clamps or a "Y" connector and two (2) check valves**, depending on the installation method you use
- **PHCC Pro Series Sump Foot** is recommended which provides a platform for both pumps, keeping them elevated and away from pit debris

### ⚠ WARNING



### ELECTRICAL SHOCK HAZARD

Disconnect power before installing or servicing this product. A qualified service person must install and service this product according to applicable electrical and plumbing codes.

### ⚠ WARNING



### EXPLOSION OR FIRE HAZARD

Do not use this product with flammable liquids. Do not install in hazardous locations as defined by National Electrical Code, ANSI/NFPA 70.

Failure to follow these precautions could result in serious injury or death. Replace product immediately if switch cable becomes damaged or severed. Keep these instructions with warranty after installation. This product must be installed in accordance with National Electric Code, ANSI/NFPA 70 so as to prevent moisture from entering or accumulating within boxes, conduit bodies, fittings, float housing, or cable.

## Pump & Pipe Installation Instructions

There are two basic methods that can be used to install both pumps together, a direct discharge to the outside of the building, or a connection to an existing discharge pipe. It is highly recommended to install the second pump with a direct discharge to outside (Diagram A). By using this method, there will always be an outlet for the water from the sump. For this, you will need to drill a hole through the wall to the outside of the house.

If the separate discharge method is not possible or convenient, both pumps can be connected to the same discharge pipe by installing a “Y” connector and two (2) check valves (Diagram B).

### CAUTION

When a check valve is used, a 1/8 in. (3.2mm) air bleed hole must be drilled in the PVC pipe above the pump. Drill the hole at a 45° angle toward the bottom of the sump to avoid splashing water outside the sump pit. Make sure the hole is above the water line, and below the check valve. If a hole is not drilled above the pump, an air lock may prevent the pump from operating.

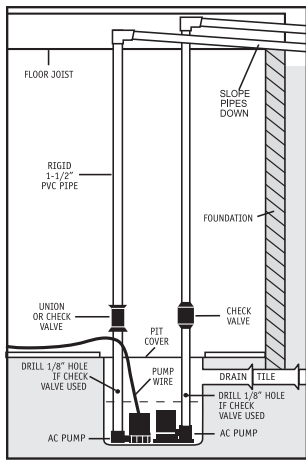


Diagram A

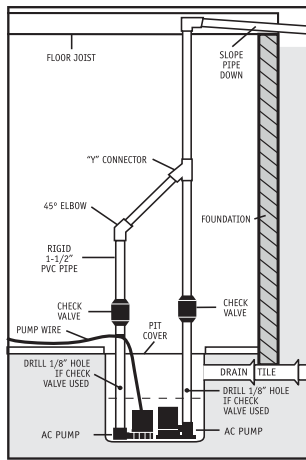


Diagram B

## Installing the Float Switches

Determine desired activation level of the float switch. The lower switch will run the pump for about 6 seconds after activation. The upper switch will run both pumps for about 11 seconds. If the float is still raised, it will continue to run the pump.

**Please note, if the upper float is raised, there will be a 3 second delay before the second pump activates. The pumping range can be adjusted by moving the floats up or down on the pipe.**



Vertical  
Float  
Switch



Dual  
Float  
Switch

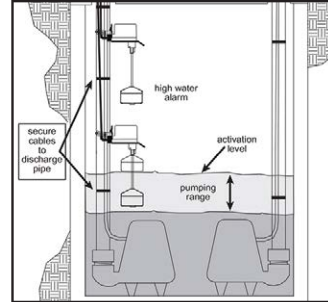
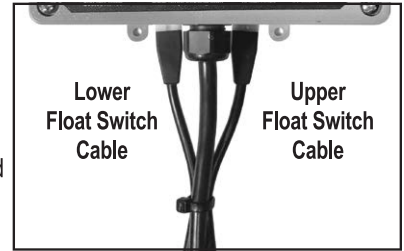
1. Hold the LOWER float switch to the discharge pipe so the cage is below the bracket.
2. Secure the float to the pipe with the enclosed hose clamp, but do not completely tighten the clamp at this time.
3. Position the float switch to a level where the bottom of the float cage is no lower than 3" above the bottom of the pump. To avoid debris pouring onto the float, it should be positioned on the side of the discharge pipe opposite the drain tile.

**Note: It is important to mount the float below the drain tile that empties into the pit. Mounting it above the drain tile would allow water to fill the drain tile before the pump is activated.**

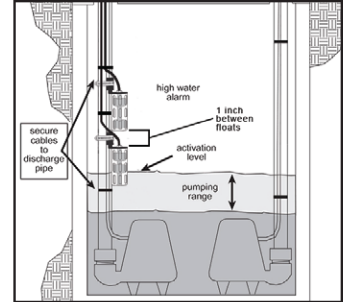
4. Once the float switch is in the desired position, tighten the clamp.
5. Repeat the steps above for the UPPER float switch.
6. Make sure that the UPPER float switch is mounted about 1" above the LOWER switch. The LOWER float switch will operate the pump on a daily basis. The UPPER float switch will only be used if the LOWER float switch or one of the pumps fails.

## Installing the Float Switches continued...

7. Plug both floats into the corresponding connectors on the bottom of the unit.
8. Secure both float switch cables to the power cable with the included zip tie in order to avoid accidental disconnect of the float switches.



Vertical Switch Installation  
(Clear water and sewage applications)



Dual Float Switch Installation  
(For clear water application only)

## Installing the Alternator Control Unit

1. **Mounting the Control Unit:** Mount the controller to the wall through four (4) holes on the cabinet using the proper mounting hardware for the application.

### CAUTION

Do not mount the control unit anywhere that it will be susceptible to moisture or flooding.

2. **Install 9V Battery:** Open the battery compartment on the front panel of the unit. Install a 9V battery and close the battery compartment.

*Note: Battery is not included, use a heavy-duty alkaline battery.*

3. **Connect AC Power Cord:** Plug the AC power cord into a properly grounded, 3-prong receptacle.
4. **Connect Pumps:** Plug both pumps into receptacles located on the left side of the control unit (Diagram C)

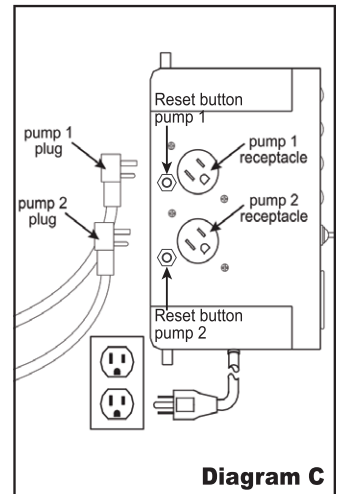


Diagram C

**Note: Push reset buttons to reset circuit breakers. Buttons will pop out if breaker trips (Diagram C)**

## Understanding the Operation of the Alternator

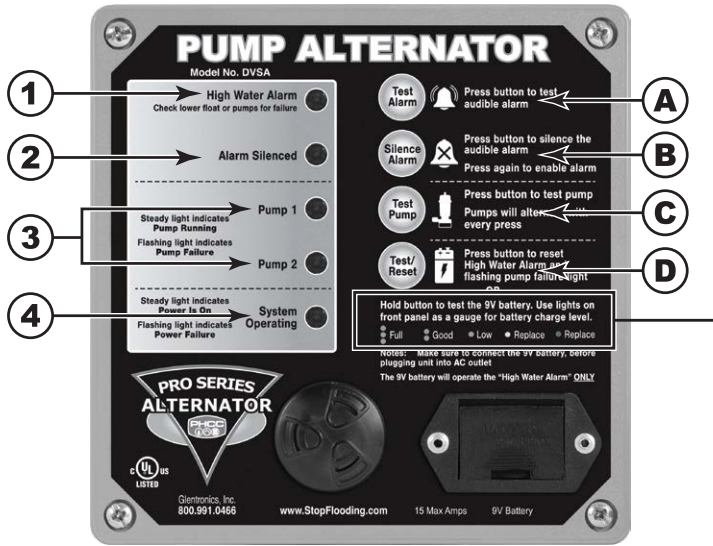
The Pro Series Alternator features two float switches and is designed to operate two primary pumps. It also has a remote terminal on the side of the control unit that can be connected to a Pro Series WiFi Module or an auto dialer, security system or other devices.

The pumps will alternate with every activation of the float switch. Should one pump fail to turn on, the water level will rise higher and activate the UPPER float switch. This float switch will automatically turn on the other pump. If this happens 3 times in a row, you will receive a flashing light next to the pump that is failing.

Should the LOWER float switch fail, the water level will rise and activate the UPPER float switch, which will operate the pumps during this failure. When the UPPER float switch activates for any reason, the High Water Alarm will sound and both pumps will activate.

## Understanding the Warning Lights

The Pro Series Alternator features a series of lights that either pinpoint potential problems or give you the status of the system. In addition, an alarm will sound to alert of a problem.



**Hold button to test the 9V battery. Use lights on front panel as a gauge for battery charge level.**

● Full ● Good ● Low ● Replace ● Replace

- 1. High Water Alarm:** If this warning light and alarm is on, it means that the UPPER float switch has been activated. This means there is a failure with the LOWER float switch or one of the pumps. This light will remain on until the reset button is pressed on the front panel. This is done to alert the user of high water in the pit. Check the list below before you replace the pump or the float switch.
  - Manually activate the LOWER float switch
  - If no green Pump lights come on, the LOWER float switch may be bad
  - If one of the green Pump lights comes on but the pump doesn't turn on, one of the pumps may be bad
- 2. Alarm Silenced:** This light will flash yellow when the alarm is silenced.
- 3. Pump 1 & 2:** These lights will come on green when the one of the pumps is running. The light will indicate which pump is running. When the light is on steady green, it means that the pump is operating. If the light is flashing green, it means that pump is failing. Check the list below before you replace the pump.
  - Verify by manually activating the float switch or by pressing the test button that the pump is failing
  - If one of the pumps fails to turn, replace it
- 4. System Operating:** This light should be on as long as there is power coming from the outlet and the 9V battery. If it is slowly flashing, it means there is no power coming into the unit. Make sure it's plugged in all the way and the outlet is good. If it's flashing fast, it means that the 9V battery is not installed or dead. Replace the 9V battery.

## Understanding the Buttons

The Pro Series Alternator features 4 buttons. These buttons are designed for your convenience to test different features of the system and to silence the audible alarm.

- A Test Alarm:** Press and hold this button to test the audible alarm. The alarm will sound and the High Water Alarm light will be on as long as you hold the button.

## Understanding the Buttons continued...

- B Silence Alarm:** Press this button to silence the audible alarm. This is used in a case when you have a failure with the LOWER float switch or one of the pumps. Alarm Silenced light will flash yellow when the alarm is silenced. Press again to enable the alarm and the Alarm Silenced light should stop flashing. The alarm will only remain in the silence mode for 3 days. After 3 days, the alarm will not be silenced and the yellow light will stop flashing.
- C Test Pump:** Press this button to test your pumps. Only one pump will run with every press and will run as long as you are holding the button. The pumps will alternate with every press. A green light next to Pump 1 or Pump 2 will come on depending on which pump is running. If a pump doesn't run, check the pump for failure.
- D Test/Reset:** This button is also used to test the 9V battery. Press and hold this button to test the 9V battery. Use the lights on the front panel as a gauge for battery charge level (see picture on the left).

## Testing the Float Switches

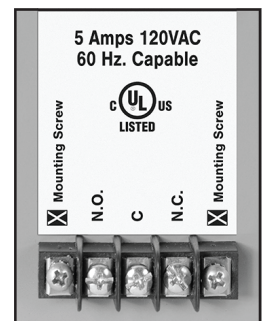
It is important to manually test both float switches periodically or after any maintenance.

Lift the LOWER float switch all the way up and let it go. This will activate the pump. While the pump is running, there should be a green light coming on next to either Pump 1 or Pump 2. After the pump shuts off, activate the float switch again. The other pump should turn on with the green pump light. Perform the same operation on the UPPER float. Keep in mind that every time this float switch is activated, the HIGH WATER ALARM will sound.

## Remote Terminal

The Pro Series Alternator can be connected to a Pro Series WiFi Module or an auto dialer, security system, or other devices. When connected to Pro Series WiFi Module, you will receive remote notifications of high water when away from home. The terminal block is located on the right side of the control unit. There are three (3) positions for wire connections on the terminal:

- N.C. – Normally Closed
- N.O. – Normally Open
- C – Common



## CAUTION

**Only the three (3) middle screws are used on the terminal block. DO NOT unscrew the screws on either end. These screws are used to mount the remote terminal.**

## Connecting to Pro Series WiFi Module

Use the remote terminal cable included with the Pro Series WiFi Module to connect to the remote terminal. Before you begin, make sure your WiFi Module is connected to your WiFi network. Refer to the WiFi Module User Manual for more information.

- Loosen the screw on the remote terminal of the alternator marked N.C.
- Insert the cable labeled N.C. underneath the N.C. screw and tighten the screw
- Loosen the screw on the remote terminal of the alternator marked C
- Insert the cable labeled COM underneath the C screw and tighten the screw
- Make sure both screws are tight and the cables are not loose
- Activate an alarm on the alternator and make sure you receive an e-mail notification

## **Maintenance Check List**

### **Maintenance should be performed 1-2 times per year**

1. Make sure both pumps are plugged in securely on the side of the controller
2. Lift LOWER float switch and make sure the pump activates
3. Lift UPPER float switch, make sure the other pump activates, and the High Water Alarm comes on
4. Remove all debris from the bottom of the pit and pump strainer
5. Remove all debris from the water
6. Remove all debris from the float switch
7. Test the 9V battery by pressing the Test/Reset button on the controller
8. Replace 9V battery as needed

## **LIMITED WARRANTY**

By opening this package and using this GLENTRONICS, INC. product, you are agreeing to be bound by the terms of the GLENTRONICS, INC. limited warranty ("warranty") as set out below. Do not use your product until you have read the terms of the warranty. If you do not agree to the terms of the warranty, do not use the product and return it within the return period stated on your purchase receipt from the retail store or authorized distributor where you purchased it for a refund.

To the extent permitted by law, this warranty and the remedies set forth are exclusive and in lieu of all other warranties, remedies and conditions, whether oral, written, statutory, express or implied. GLENTRONICS, INC. disclaims all statutory and implied warranties, including without limitation, warranties of merchantability and fitness for a particular purpose and warranties against hidden or latent defects, to the extent permitted by law. GLENTRONICS, INC. will not be liable for any incidental, special or consequential damages for breach of any express or implied warranties on this product. In so far as such warranties cannot be disclaimed, GLENTRONICS, INC. limits the duration and remedies of such warranties to the duration of this express warranty and, AT GLENTRONICS, INC.'s option, the repair or replacement services described below. Some states (countries and provinces) do not allow limitations on how long an implied warranty (or condition) may last, so the limitation described above may not apply to you.

Any and all causes of action arising from, filed as a result of or in reference to, this warranty or the products described under this warranty shall be governed by and construed under the laws of the State of Illinois. Any cause of action arising from, filed as a result of or in reference to, this warranty or the products described under this warranty shall be filed only in the Circuit Court of the 18th Judicial District, Lake County, Waukegan, Illinois, or in the Northern District of Illinois if filed in Federal Court. The maximum liability for any product described in this warranty shall be the cost of product replacement only.

If any term is held to be illegal or unenforceable, the legality or enforceability of the remaining terms shall not be affected or impaired.

### **What is Covered by this Warranty?**

GLENTRONICS, INC. warrants to the end purchaser that its pumps, switch and control unit products are free from defective materials and workmanship for the periods indicated below:

All parts and labor (excluding installation) for a period of:

- 3 years from the date of installation, when used as a sump pump controller

The defective product must be returned directly to the factory, postage prepaid with the original bill of sale or receipt to the address listed below. GLENTRONICS, INC., at its option, will either repair or replace the product and return it postage prepaid.

### **What is NOT Covered by this Warranty?**

This warranty does not cover the cost or value of damaged property, including expressly any property that has been affected by water overflow, seepage or flooding. If GLENTRONICS, INC. determines that a product is deemed defective under this warranty agreement, it will repair or replace the PRODUCT ONLY. GLENTRONICS, INC. will not cover the cost to reinstall the product, nor will GLENTRONICS, INC. pay the cost of having a plumber or contractor repair or replace the product.

GLENTRONICS, INC. will not repair or replace a product that was installed incorrectly. A product shall be considered "installed incorrectly" when it deviates in any way from the instructions described in this manual.

This warranty does not cover product problems resulting from handling liquids hotter than 104 degrees Fahrenheit, handling inflammable liquids, solvents, strong chemicals or severe abrasive solutions; user abuse; misuse, neglect, improper maintenance, commercial or industrial use; improper connection or installation, damages caused by lightning strikes; excessive surges in AC line voltage; water damage to the controller; other acts of nature, or failure to operate in accordance with the enclosed written instructions.

### **How to Obtain Warranty Service**

Within thirty (30) days of the product's defective performance, the unit must be shipped, freight prepaid, or delivered to GLENTRONICS, INC. to provide the services described hereunder in either its original carton and inserts, or a similar package affording an equal degree of protection. Products not received by GLENTRONICS, INC. at the address indicated below within thirty (30) days of the product's defective performance will not be considered for warranty service. Products received after three (3) years from the date of installation, fall outside of the timeframe for warranty service and will not be eligible for warranty service. The product must be returned to GLENTRONICS, INC. for inspection in order to be considered for warranty service. If the product is not returned to GLENTRONICS, INC. or the product is inspected by any person, plumber, contractor or business other than GLENTRONICS, INC., this warranty shall no longer be valid. Prior to defective operation, the unit must not have been previously altered, repaired or serviced by anyone other than GLENTRONICS, INC., or its agent; the serial number on the unit must not have been altered or removed; the unit must not have been subject to accident, misuse, abuse or operated contrary to the instructions contained in the accompanying manual. The dealer's dated bill of sale, or installer's invoice must be retained as evidence of the date of purchase and to establish warranty eligibility.

### **Where are Products Sent for Warranty Service?**

Glentronics, Inc., 645 Heathrow Drive, Lincolnshire, IL 60069

### **How Can I Obtain More Information?**

By calling 800-991-0466.