



Owner's Manual
s4.0 MP System

Everything you need to know.



MADE IN USA



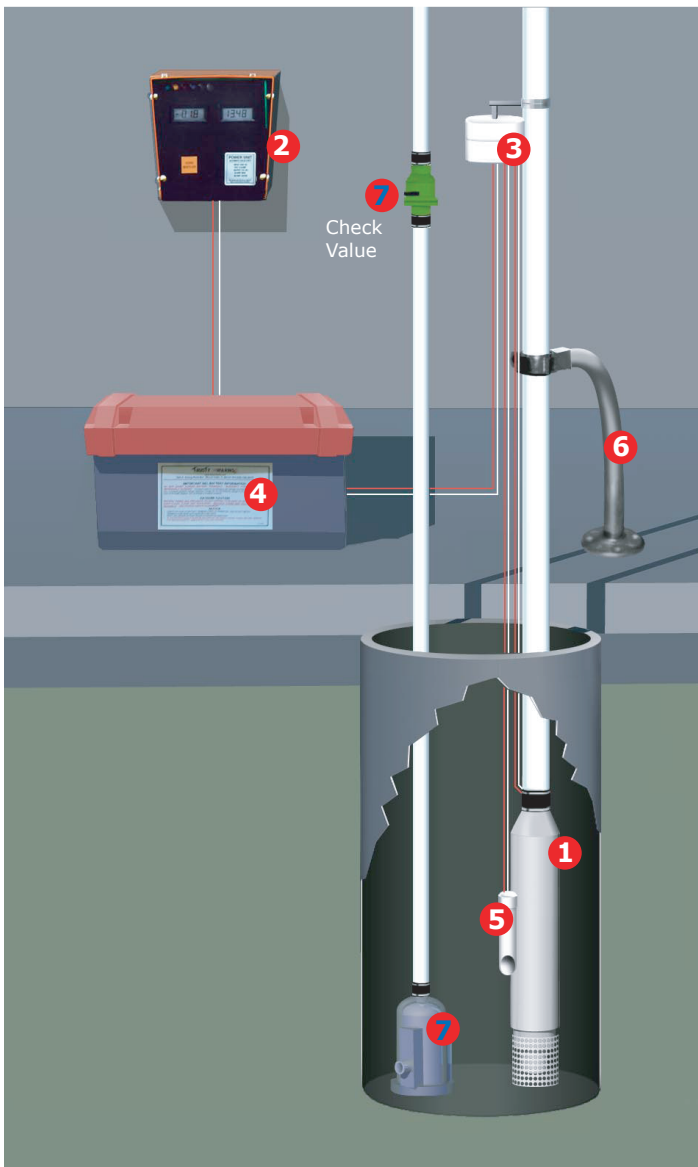
Trusty Warns
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1-800-300-9015
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In order to get the most protection

from your Trusty Warns system, you will need to understand how your system works piece by piece. This diagram shows how your system components and pump work with each other. Each piece of your system is equally important and depends heavily on the next to perform its assigned function.

NOTE: Item #7, listed in blue, references your existing equipment



How Your System Works

- 1 Battery Backup sump pump** pumps the water up by a 2 -3/16" bronze impeller at the bottom of the pump. The water is then pumped up the patented 2" flow thru, then discharged through a 2" PVC pipe attached to the top of the pump.
- 2 Wall Mounted Power Unit** 50 amp capability delivers a proper charge to the battery and enables the pump system to run on standard electricity. Each system is equipped with a battery monitoring device to avoid improper battery levels.
- 3 Controller** Non-mechanical sensor recognizes the battery back up pump's needs and requirements. In case of an emergency it will trigger the battery back-up sump pump and alert property owners of equipment use and potential equipment failure.
- 4 Battery** Our heavy duty battery powers the system when the electricity is out. The battery is protected by a weather resistant case for indoor and outdoor use. A dual second battery of the same age and make can be added to extend run time.
- 5 Sensor Tube** 1 -1/4 PVC tube is connected to the controller by an airline. When water rises air pressure is built up in the tube, activating the controller, which activates the pump.
- 6 Pump Floor Mount** holds the battery backup sump pump in place, anchoring it to the floor.
- 7 Existing Equipment**

About Your Pump



S 4.0 MPS Pump

MOTOR

- 5/8 PEAK HORSE POWER
- 2 -3/16" HEAVY DUTY BRONZE IMPELLER
- 3570 GALLON PER HOUR CAPACITY AT STANDARD 8'FT
- 18 AMP CURRENT DRAW
- 8.8 LB STATIC PRESSURE
- 4 -1/2" STAINLESS STEEL
- 21" IN LENGTH
- BUILT-IN STAINLESS STEEL IN-TAKE SCREEN
- 2" RUBBER QUICK CONNECT DISCHARGE
- 13 1/2 LB TOTAL WEIGHT

CAPACITY

3390 GPH	10 ft
3570 GPH	8 ft
4200 GPH	6 ft
4460 GPH	4 ft
4820 GPH	2 ft

GPH = GALLONS PER HOUR

FT = HEAD HEIGHT

About The Battery

The battery supplied with your system has been carefully selected for its quality and performance capabilities. Be sure to read the manufacturers label located on the battery and case before handling.

NOTE: GEL BATTERIES DO NOT REQUIRE MAINTENANCE.



IMPORTANT:

- Battery case top must remain on and dry.
- Do not let corrosion occur on terminals.
- If battery case is hot to the touch, call us.
- Read information on the battery and case.
- Dual batteries have to be the same age and make.

GEL	13.8	100	31	70 LBS
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DMP-BMCF Power Unit

- 50 AMP CAPABILITY
- 50 AMP AUTOMATIC RESET CIRCUIT BREAKER
- GREEN POWER INDICATOR LIGHT
- RED CIRCUIT OVERLOAD LIGHT
- DIGITAL AMP AND CHARGE METERS
- AUTO RESET FUNCTION
- TOTAL WEIGHT 21.75 LBS



- GREEN LIGHT
Indicates that the power unit is on and plugged in.
- YELLOW LIGHT
Indicates improper battery voltage.
- RED LIGHT
Indicates the power unit's circuit breaker has been overloaded.
- BLUE LIGHT
Indicates a battery problem.
- WHITE / CLEAR LIGHT
Indicates cooling fan is on.

About Your Power Unit

Your power unit is a very important part of your system. It uses standard electricity to provide a balanced charge to the battery. This ensures that your battery is ready for the next time the power goes out. The power unit also enables the pump to run when the power is on, in case of primary pump malfunction or inadequacy.

NOTE:

Low and high AC voltage variations will have an affect on DC motor output. The meter pointer should always be directly aligned with the red reference arrow. Check the maintenance section for voltage adjustment instructions .

DMPCF Power Unit

- 50 AMP CAPABILITY
- 50 AMP AUTOMATIC RESET CIRCUIT BREAKER
- GREEN POWER INDICATOR LIGHT
- RED CIRCUIT OVERLOAD LIGHT
- BLUE INDICATES BATTERY PROBLEM



Stage 1:

Monitors the power unit's transformer temperature. When the temperature is above average, you will hear a chirping alarm and the blue indicator light located on the power unit will come on. Generally this will indicate one of the following problems.

Problem: Transformer is hot.

Next step: Remove the black round fuse located on the front of the power unit to silence the alarm wait 24 hours you must replace the fuse after the unit has cooled down.

Stage 2:

Monitors the temperature on the actual battery. When the temperature is above average you will hear a loud siren sound and the yellow indicator light located on the power unit will come on. This generally indicates that the battery is in need of immediate attention.

Problem: The battery is old, defective or has not been maintained and is hot due to improper liquid and or charge levels.

Next Step: Gently feel the label side of the battery case for surface heat. If surface heat is above room temperature and the volt meter on the power unit arrow is to the right of the red area immediately unplug the power unit and call Trusty Warns.

CAUTION

DO NOT ATTEMPT TO DISCONNECT A HOT OR GASSING BATTERY AT THE TERMINALS. A DANGEROUS EXPLOSION COULD POSSIBLY OCCUR FROM SPARKING BATTERY WIRES OR INTERNAL ARCING OF YOUR BATTERY CONNECTIONS. READ ALL LABELS ON THE BATTERY AND THE BATTERY MAINTENANCE SECTION OF THIS MANUAL BEFORE HANDLING. IF YOU HAVE ANY QUESTIONS OR CONCERNS YOU SHOULD CONTACT TRUSTY WARN'S FIRST.

1-800-300-9015

About Your Controller

DCL CONTROLLER

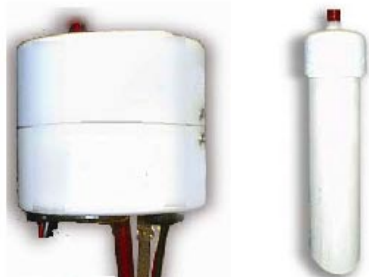
- NON-MECHANICAL FLOAT SENSOR
- ALARM SOUNDS TO IDENTIFY PROBLEM WITH YOUR REGULAR PUMP AND TRUSTYWARN'S TAKING OVER.
- SERVICE ALERT FLAG
- PUMP INDICATOR STATUS LIGHT - ON IS READY, OFF PUMP IS RUNNING
- REMOTE MOUNTING UP TO 25ft

SENSOR TUBE

- 1 1/4" PVC TUBE WITH INTERNAL GALVANIZED ANCHOR WEIGHT

IMPORTANT:

- Sensor tube bottom has to be positioned above the screen at the bottom of the pump.
- Read sticker on the side of controller for proper alarm noise adjustment.



**DCL
CONTROLLER**

**SENSOR
TUBE**



**ASK US
ABOUT OUR
SERVICE
PACKAGE**

Trusty Warns Service

Trusty Warns recommends that you have your pump equipment professionally serviced once a year by certified technician. Much like your car or anything else you rely on, IT NEEDS TO BE MAINTAINED. Proper maintenance will ensure a long life for your Trusty Warns system. Emergency service calls and possible flooding can be avoided by knowing the functionality of your system and maintaining it. Below is a portion of a checklist that we perform on our routine maintenance service.

Primary Pump:

- ✓ All in and outside piping
- ✓ Check valve
- ✓ Clean pit
- ✓ Pump and switch operation
- ✓ Pump intake Openings
- ✓ Grounding of pump
- ✓ Outlet polarity
- ✓ Circuit

Battery Back Up System:

- ✓ All in and outside piping
- ✓ Pump operation
- ✓ Check and adjust battery levels
- ✓ Power unit output
- ✓ Battery load test
- ✓ Sensor test
- ✓ Circuit test
- ✓ Outlet polarity
- ✓ Noted problems
- ✓ Remove debris
- ✓ Fill out a complete report

Maintaining Your System

Please be careful and use caution when you are working with any of your sump pump equipment. Follow all of the directions and keep this book with you to use as a guide. If you should experience any complications or have questions about your Trusty Warns equipment or maintaining it please call us

IMPORTANT:

- ✓ Test your system 4 times a year and check for proper operation.
- ✓ Check standard and therm-oil battery liquid at least 2 times a year.
- ✓ Perform a thorough inspection all indoor and outdoor pump equipment twice a year.
- ✓ Keep pump pit and equipment clean and free of debris.

Understanding Air Locking:

During a heavy rainfall or artificially testing your system your backup pump could experience air locking. Significant aeration has built up in the water causing the pump to airlock.

The common sign of air locking is when the pump is running however it is not pumping any water. The alarm is active and your water level is 6" to 8" inches above the top of the sensor tube.

How to Fix Air Locking:

Raise the sensor tube out of the water The pump should stop running and the alarm should turn off. Wait 5 to ten seconds then lower the sensor tube in a straight position back into the water. System should resume proper activity.

Note: Air locking may be avoided by purchasing a Trusty Warns Aeration Guard. See page 2.

Adjusting the Power Unit:

For adjustment you will need a screw driver and a digital multi-meter. Place multi-meter on 20 volt DC setting. Hook the terminals to the posts on the battery. Unplug the power unit and run the pump off of the battery to remove surface voltage. After you plug in the unit, the output reading should be 13.4 for other batteries and the gel should be 13.8.

If the volt meter is not correct you can adjust the charge by inserting a small screw driver in the small hole located on the face of the power unit.

- To increase the voltage slightly turn the screwdriver to the right.
- To decrease the voltage slightly turn the screwdriver to the left.

DO NOT APPLY PRESSURE TO THE
SCREW DRIVER WHEN ADJUSTING
THE "POT"

Pushing the Test Button

***Only on 4.0TT and 4.5MP Systems**

"Pushing the Manual test Button" is one way to test system - the controller has a test button and when the pit has water high enough (covering the bottom screen at least and partially of the sensor) you can simply push the button.

OR

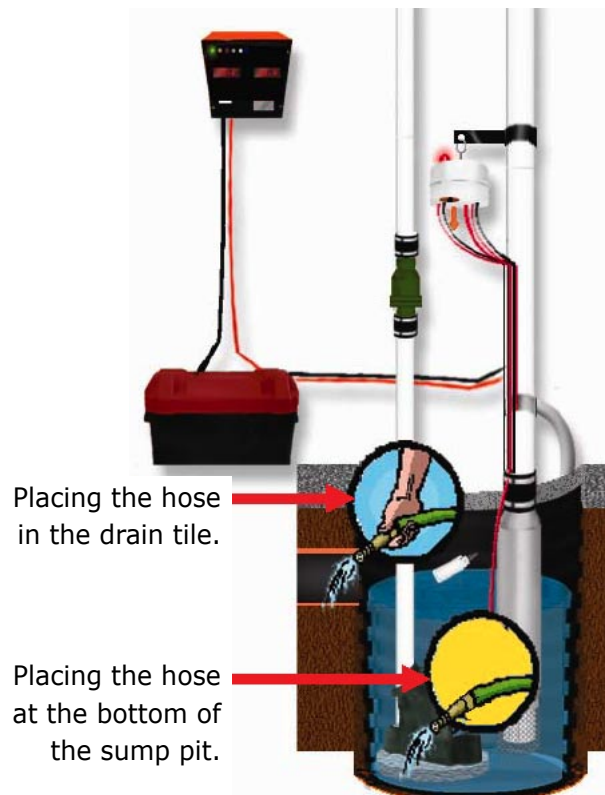
Artificially filling sump pit

Testing Your System

We recommend testing your system two or three times a year. Ideally you will want to test your system during a good rainfall when you plan to be home to get as accurate readings as possible. However you can artificially fill your sump pit with a garden hose. Essentially you are trying to recreate a power failure during heavy rainfall by unplugging both your primary pump and your battery backup pump. Your battery should begin to run the system. This will also load test the battery for condition, strength and capacity based on the power unit readings. Be sure to read all of the testing and battery instructions before you begin.

Artificially Filling the Sump Pit:

When your using a garden hose be sure to avoid directly spraying the Trusty Warns pump. Position the hose into your drain tile (the larger pipe opening on the side of your sump pit.) or place the hose at the bottom of the sump pit. Spray in opposite direction of the backup pump to avoid air locking.



Instructions:

1. From the wall outlet unplug your primary sump pump and the battery backup power unit to simulate a power outage.
2. Let your sump pit fill, the backup pump should begin pumping when the water rises inches above the sensor tube .
3. If your backup pump is not pumping, check for air locking, refer to page 6, or it is running but not pumping. (plug the primary sump pump back into the wall outlet and do not continue testing the system. Call Trusty Warns immediately).
4. For the best testing results possible make sure to exercise your battery backup pump by allowing it to complete its cycle at least 3-5 times.
5. Plug your sump pump equipment back into the wall outlets.
6. Check the volt meter on the face of the power unit. Volt meter needle should read 13.8 for gell batteries and 13.4 for all other batteries supplied other than Trusty Warns. If the reading is below 10 volts you will most likely need a new battery.

