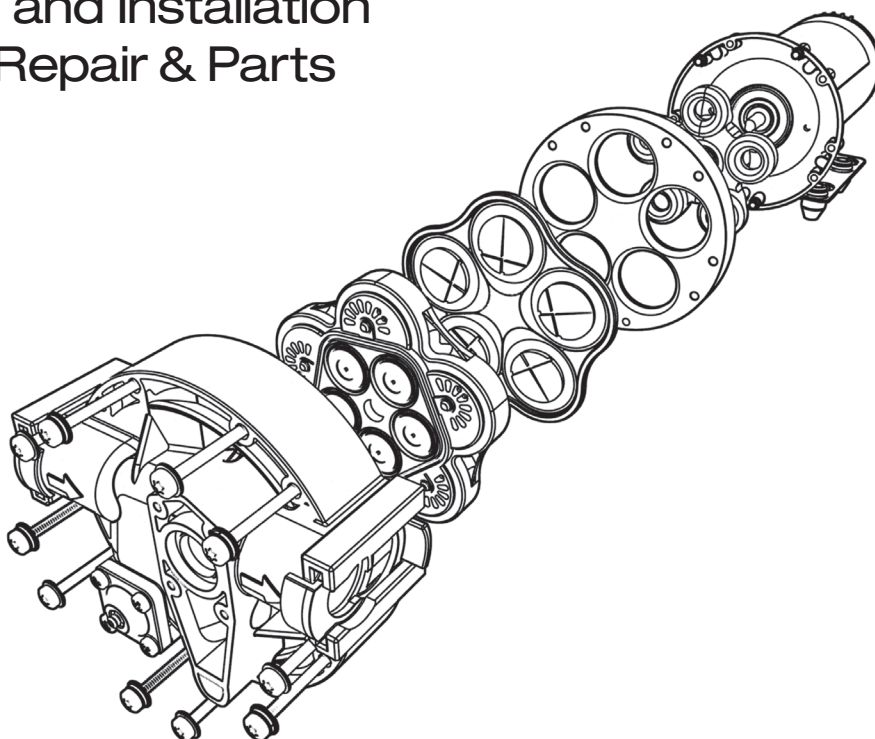




The Standard For  
Professional Grade  
Diaphragm Pumps.

## ProFlo™ 3300 | 5500 | FatBoy®

Operational and Installation  
Guidelines, Repair & Parts



### Contents



Operational and Installation Guidelines . . . . .	2
Installation Procedure. . . . .	3
Troubleshooting Guidelines . . . . .	3
Servicing. . . . .	3
ProFlo™ 3300 Series Performance/Heat Rise Charts. . . . .	4
ProFlo™ 5500 Series Performance/Heat Rise Charts. . . . .	4
ProFlo™ FatBoy Series Performance/Heat Rise Charts . . . . .	4
Replacement parts ProFlo™ 3300. . . . .	5
Replacement parts ProFlo™ 5500. . . . .	6
Replacement parts ProFlo™ FatBoy. . . . .	7
Standard Warranty . . . . .	8



## Operational and Installation Warnings

Please read this Owner’s Manual completely before using this pump. Assemble, test, and use only in accordance with the Owner’s Manual instructions.

READ and FOLLOW chemical safety instructions. Pesticides are hazardous chemicals.

KNOW emergency procedures BEFORE handling chemicals. Pump leaks, bodily chemical contact, poisoning, and spills require immediate response.

AVOID inhaling, ingesting, or coming into contact with any chemicals.

**NOTE**

This pump is recommended for use in spraying non-flammable liquids such as pesticides, water for plants/trees or dust control, ice control chemicals, or water-based non-flammable sealants or stains for outdoor wood surfaces. However, WE RECOMMEND THAT THE PUMPS NOT BE USED FOR OTHER PURPOSES ONCE IT HAS BEEN USED FOR SPRAYING PESTICIDES.

Any chemical will leave some residual in the pump, even after the pump has been properly cleaned. These residual chemicals can have unexpected effects on future uses. For example, spraying water or other liquids that are contaminated with residual pesticide may result in unforeseen hazards to plant or animal life.

## Operational and Installation Guidelines

Please read these Operational and Installation Guidelines before installing the ProFlo™ Series Pumps. If additional help is needed, please consult the Factory.

**CAUTIONS**

- Water pipe connections and fixtures directly connected to a potable water supply shall be sized, installed and maintained in accordance with Federal, State, and local codes.
- Do not operate the pump above the pressure limitations specified on the data label.
- Never operate the pump in a harsh environment or hazardous atmosphere, since motor brush and switch may cause electrical arcing.
- **Do not pump gasoline or other flammable liquids. Pump head materials are designed for use with water only. Do not use with petroleum products.**
- **Do not assume fluid compatibility. If the fluid is improperly matched to the pumps’ elastomers, a leak may occur**
- As long as there is inlet water pressure, the pump will not stop forward flow of water even if the motor is turned off. Be sure the system has positive means of shutting off water supply.
- Always consider electrical shock hazard when working with and handling electrical equipment. If uncertain, consult an Electrician. Electrical wiring should only be done by a qualified Electrician per Local and State Electrical Codes.

**MOUNTING**

- The pump should be mounted in a dry place and away from any source of heat. If an enclosure is used, special instructions for cooling the motor may be necessary. Consult the Factory.
- Do not subject the pump to extreme high or low (freezing) temperatures while in operation. (Operating ambient temperature range is 32°F to 115°F).

WEAR personal protective gear when operating, cleaning, and servicing the pump.

KEEP pump and spray materials away from children and pets. Pesticides are especially toxic to them.

DO NOT TURN ON POWER to pump until ready to spray in order to avoid unintentional spray release.

Improper use of the pump or handling of chemicals could result in serious injury or illness to the operator or nearby persons/ animals, or could cause damage to the environment.

- The pump may be mounted horizontally with the outlet port on the right when viewed from the pump end or with the pump above the mount; or vertically with the pump above or below the motor.

**PLUMBING**

- The pump is equipped with either a pressure sensing demand switch, a bypass relief valve, or both which controls the maximum safe operating pressure.
- We recommend use of flexible tubing with proper pressure rating.
- Pump will prime only if all pressure is relieved from outlet port.
- It is recommended that debris-free water be pumped or an in-line sediment filter (100 mesh) be installed at the inlet side to keep foreign debris out of the system.
- The pump should always be mounted prior to any components which could introduce particles to the water; thus, preventing them from entering the pump chambers and possibly causing clogging.
- Avoid any sharp bends which may crimp tubing and restrict flow. Use 90° elbow fittings if necessary. REMCO provides pumps with different kinds of fittings. Please consult Factory for your needs.

**ELECTRICAL**

- The ProFlo™ Series Pumps are designed for intermittent duty, but may run continuously if the motor temperature does not exceed the recommended limit. Some ProFlo™ Series Pumps are equipped with thermally protected motors and in case motor temperature exceeds thermal cut-out rating, pump will shut down and will not restart until motor cools down to specified temperature. Please consult the appropriate Data Sheet for continuous running parameters, noting the effect of rapid On/Off Cycling (paragraph 9, page 2).
- If a power supply is used with the system and the supply is not furnished by REMCO, it will need to be reviewed for correct application and approval by REMCO.

## Installation Procedure

The basic demand pump is controlled by a built-in pressure sensing demand switch. When a faucet or valve is opened down stream of the pump, line pressure drops, thus starting the pump automatically. Conversely, when the valve shuts, the line pressure increases turning the pump off automatically. The pressure switch actuates in response to the pump outlet pressure at a predetermined and preset pressure. The pump label indicates the pre-set OFF pressures. Typically, the OFF pressure is accurately set at the FACTORY and the ON pressure is within an allowable range below that value. In response to the characteristics of the system in which the pump is installed, such as the flexibility and length of the tubing, and the faucet or valves and the duration that they are open, these pressure settings may vary. Therefore, change in pressure settings is expected with use and over time.

If the pump does not have an integral pressure sensing demand switch (i.e. pump is operated with an external control), pump will be equipped with a bypass relief valve (bypass is factory preset).

**Read the OPERATIONAL AND INSTALLATION GUIDELINES on the other side carefully before starting to install the pump. Consult the Factory if there is any question.**

Determine the optimum location for your pump before proceeding.

- Turn off the fluid supply.
- Cut the flexible tubing in sufficient length to avoid any stress on the tubing or hose where it connects to the pump or the fitting on any accessory or hose.
- Insert tubing or hose into pump ports. If compression fittings with threaded nuts are used, insert tubing until it bottoms out

in the port and hand tighten the compression nut until the connection is tight. Then use a wrench to tighten the nut 1/2 turn clockwise or follow the wrench tightening instructions provided by the fitting manufacturer.

- The ProFlo™ Series pump is now ready for operation. Open the inlet valve if any to allow fluid to flow to the pump.
- If the power source is a transformer, plug the appropriate REMCO supplied or approved transformer into the receptacle and connect the pump to the transformer. If the power source is not a transformer, connect the pump to the appropriate power source. Open the discharge or dispensing valve. Allow water to circulate, purging any entrapped air.
- The pump will now start building pressure. Operating pressure will vary with flow rate, flow valve, feed-water pressure and line voltage. Check for fitting leaks.
- If compression fittings with threaded nuts are used, observe any leaks after pump has run for approximately 15 minutes. Further tighten compression nuts approximately 1/8 to 1/4 of a turn on all fittings in the system. Wait 15 minutes and repeat the leak check.

**NOTE: Further adjustments should not be necessary although it may take several days of operation before all the air has been purged and the system is stabilized.**

- Rapid On/Off Cycling must be limited to no more than 6 times per minute, even if the pump is operating in the Continuous Duty zone. Cycling could cause the motor to heat beyond the recommended maximum temperature, and reduce the operational life of the pump and pressure-sensing switch.

## Troubleshooting Guidelines

**IF PUMP WILL NOT START CHECK**

- Correct voltage (±10%) and electrical connections
- Fuse or breaker
- Pressure switch operation and correct voltage at switch
- Rectifier or motor for open or grounded circuit
- Locked drive assembly.

**IF PUMP WILL NOT PRIME (NO DISCHARGE WITH MOTOR RUNNING) CHECK**

- Debris in strainer
- Restriction (kinks) in inlet/outlet tubes
- Debris or swelling in inlet/outlet valves
- Air leaking in from inlet

**IF PUMP WILL NOT SHUT OFF (OUTPUT LINE CLOSED AND NO LEADS) CHECK**

- Air trapped in outlet line or pump head
- Correct voltage to pump
- Debris in pump inlet/outlet valves
- Loose drive assembly or pump head screws
- Pressure switch operations/adjustments
- Leaks

**IF PUMP LEAKS FROM PUMP HEAD OR SWITCH CHECK:**

- Loose screws at switch or pump head
- Switch diaphragm ruptured or pinched
- Punctured diaphragm if fluid is present

## Servicing

**EVERY YEAR**

Check system against operating standards. If continuous duty, replace lower housing assembly

**EVERY OTHER YEAR**

Check against operating standards. If continuous duty, replace motor

**EVERY FIFTH YEAR**

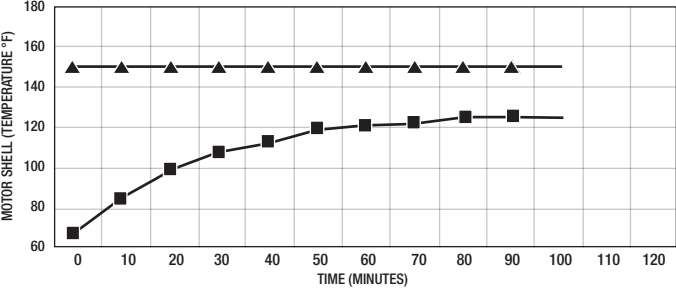
Replace valves

ProFlo™ 3300 Series | Performance & Heat Rise

Performance 3301 & 3321

PSI	GPM	Amps
OPEN	1.20	3.50
10	1.10	4.25
20	1.05	4.50
30	1.00	5.00
40	.95	5.25
50	0.9	5.50
60	0.8	5.50

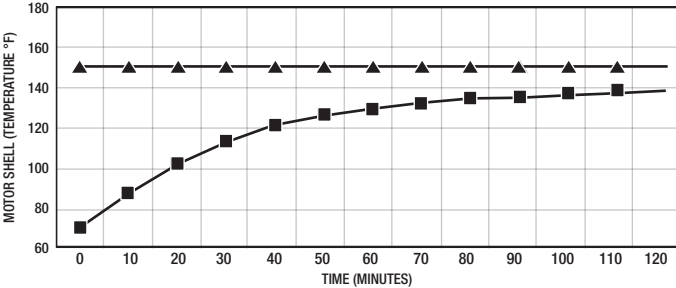
Heat Rise 3321/3301



Performance 3303 & 3323

PSI	GPM	Amps
OPEN	2.00	3.50
10	1.70	4.50
20	1.60	5.00
30	1.45	5.50
40	1.40	6.00
50	1.35	7.00
60	1.25	7.50

Heat Rise 3323/3303

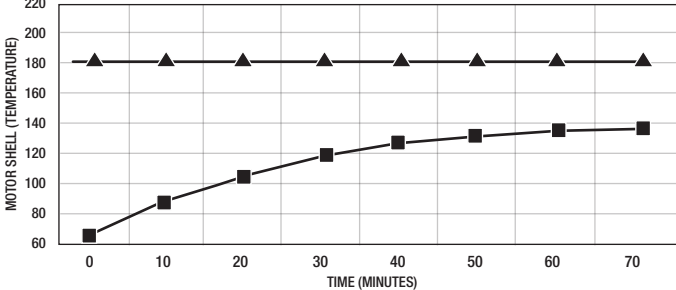


ProFlo™ 5500 Series | Performance & Heat Rise

Performance 5534 & 5535

PSI	GPM	Amps	GPM	Amps
OPEN	3.10	4.00	3.50	4.50
10	2.80	5.00	2.85	5.50
20	2.30	6.00	2.45	6.50
30	2.10	7.00	2.15	7.50
40	1.90	8.00	1.95	8.50
50	1.65	8.50	1.75	9.00
60	1.45	9.50	1.55	10.00

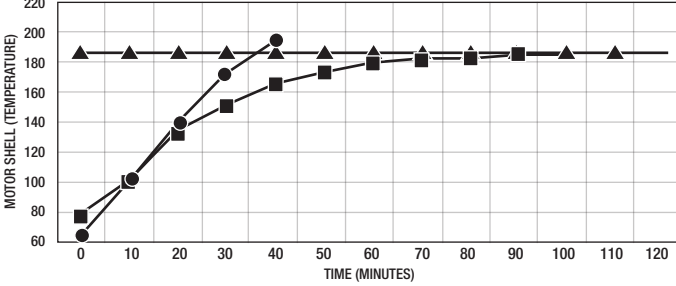
Heat Rise 5534 & 5535



Performance 5536 & 5537

PSI	GPM	Amps	GPM	Amps
OPEN	4.55	7.50	5.11	8.00
10	4.10	8.50	4.75	9.50
20	3.75	9.50	4.30	11.00
30	3.40	11.00	3.85	13.00
40	3.05	12.50	3.40	15.00
50	2.75	14.00	3.00	17.00
60	2.45	15.50	2.55	18.00

Heat Rise 5536 & 5537

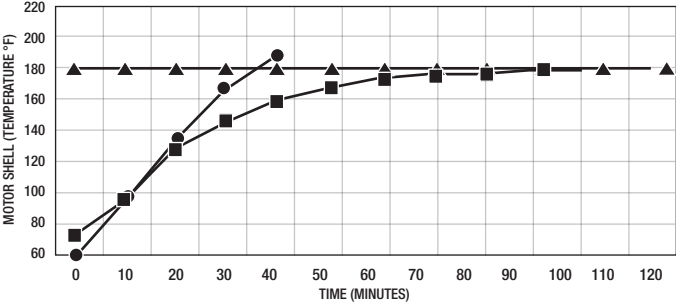


ProFlo™ FatBoy® | Performance & Heat Rise

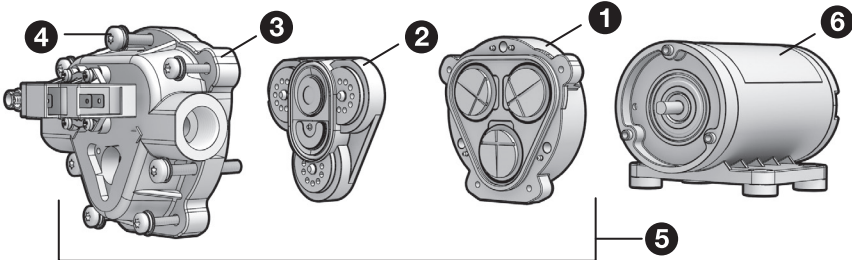
Performance Fatboy

PSI	GPM	Amps
10	7.00	11.00
20	6.81	12.00
30	6.45	12.00
40	5.96	13.00
50	5.50	15.00
60	4.98	17.00
70	4.41	19.00
80	3.96	21.00
90	3.52	23.00
100	2.55	25.00

Heat Rise Fatboy



ProFlo™ 3300 Series | Replacment Parts



1 Lower Housing Assembly

Part Number	GPM	Description
LHA-7860-7F77	1 GPM	DEMAND OR BYPASS
LHA-7863-7F77	2 GPM	DEMAND OR BYPASS

2 Valve Housing Assembly

Part Number	GPM	Description
VHA-7863-7F77	1 GPM / 2 GPM	DEMAND OR BYPASS

3 Upper Housing Assembly

Part Number	GPM	Description
UHA-7880-7F77	1 GPM / 2 GPM	THREADED W/ PRESSURE SWITCH
UHA-7880-8I77	1 GPM / 2 GPM	THREADED W/ BYPASS
UHA-7863-7F77	1 GPM / 2 GPM	QUICK ATTACH W/ PRESSURE SWITCH
UHA-7863-8I77	1 GPM / 2 GPM	QUICK ATTACH W/ BYPASS

4 Mounting Bolt Kit

Part Number	GPM	Description
11-158-100	1 GPM / 2 GPM	4 MOUNTING BOLTS W/ WASHERS

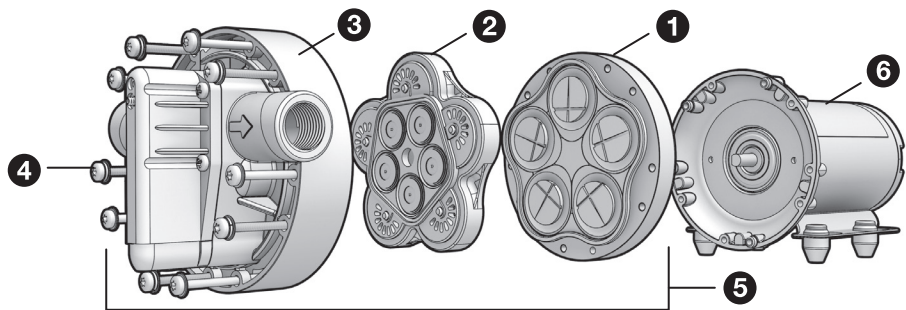
5 Complete Pump Head Assembly

Part Number	GPM	Description
7880-7F77	1 GPM	THREADED W/ PRESSURE SWITCH
7880-8I77	1 GPM	THREADED W/ ADJUSTABLE BYPASS
7883-7F77	2 GPM	THREADED W/ PRESSURE SWITCH
7883-8I77	2 GPM	THREADED W/ ADJUSTABLE BYPASS
7860-7F77	1 GPM	QUICK ATTACH W/ PRESSURE SWITCH
7860-8I77	1 GPM	QUICK ATTACH W/ ADJUSTABLE BYPASS
7863-7F77	2 GPM	QUICK ATTACH W/ PRESSURE SWITCH
7863-8I77	2 GPM	QUICK ATTACH W/ ADJUSTABLE BYPASS

6 12 VDC Motor

Part Number	GPM	Description
M382-S	1 GPM / 2 GPM	W/2 PIN CONNECTOR, NO ON/OFF SWITCH





1 Lower Housing Assembly 291-01-LHA SureFire Part Number

Part Number	GPM	Description
LHA-5510-1E77	3.0-3.6 GPM	DEMAND OR BYPASS
LHA-5512-1E77	4 GPM	DEMAND OR BYPASS
LHA-5513-1E77	5.3 GPM	DEMAND OR BYPASS

2 Valve Housing Assembly 291-01-VHA

Part Number	GPM	Description
VHA-5513-1E77	3.0-5.3 G PM	DEMAND OR BYPASS

3 Upper Housing Assembly 291-01-UHA

Part Number	GPM	Description
UHA-5513-1E77	3.0-5.3 GPM	THREADED W/ PRESSURE SWITCH
UHA-5513-2E77	3.0-5.3 GPM	THREADED W/ BYPASS
UHA-5503-1E77	3.0-5.3 GPM	QUICK ATTACH W/ PRESSURE SWITCH
UHA-5503-2E77	3.0-5.3 GPM	QUICK ATTACH W/ BYPASS

4 Mounting Bolt Kit

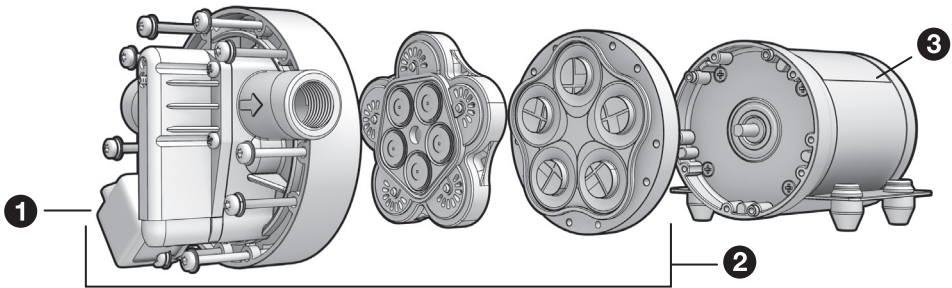
Part Number	GPM	Description
11-133-100	3.0-5.3 GPM	5 MOUNTING BOLTS W/ WASHERS

5 Complete Pump Head Assembly

Part Number	GPM	Description
5510-1X77	3.0-3.6 GPM	THREADED W/ PRESSURE SWITCH
5510-2X77	3.0-3.6 GPM	THREADED W/ ADJUSTABLE BYPASS
5512-1X77	4.0 GPM	THREADED W/ PRESSURE SWITCH
5512-2X77	4.0 GPM	THREADED W/ ADJUSTABLE BYPASS
5513-1X77	5.3 GPM	THREADED W/ PRESSURE SWITCH
5513-2X77	5.3 GPM	THREADED W/ ADJUSTABLE BYPASS
5500-1X77	3.0-3.6 GPM	QUICK ATTACH W/ PRESSURE SWITCH
5500-2X77	3.0-3.6 GPM	QUICK ATTACH W/ ADJUSTABLE BYPASS
5502-1X77	4.0 GPM	QUICK ATTACH W/ PRESSURE SWITCH
5502-2X77	4.0 GPM	QUICK ATTACH W/ ADJUSTABLE BYPASS
5503-1X77	5.3 GPM	QUICK ATTACH W/ PRESSURE SWITCH
5503-1X77	5.3 GPM	QUICK ATTACH W/ ADJUSTABLE BYPASS

6 12 VDC Motor

Part Number	GPM	Description
M582-S	3.0 GPM / 5.3 GPM	W/2 PIN CONNECTOR, NO ON/OFF SWITCH



1 Relay Switch - Fatboy

Part Number	GPM	Description
20-267	7.0 GPM	RELAY SWITCH

2 Complete Pump Head Assembly

Part Number	GPM	Item
PH-5538E-D	7.0 GPM	THREADED W/ PRESSURE SWITCH
PH-5538E-B	7.0 GPM	THREADED W/ ADJUSTABLE BYPASS
PH-5518E-D	7.0 GPM	QUICK ATTACH W/ PRESSURE SWITCH
PH-5518E-B	7.0 GPM	QUICK ATTACH W/ ADJUSTABLE BYPASS

3 12 VDC Motor

Part Number	GPM	Item
70-594-00	7.0 GPM	LEAD WIRE ONLY

## When returning product to REMCO

---

- All returns must have an RMA number issued by REMCO
- Items must be returned within 30 days from date the RMA# was issued or they will not qualify for credit.
- Items that are obsolete, discontinued or custom will not be returnable for credit.
- All returns not found to be defective or at the fault of REMCO will be subject to a restocking charge.
- When returning a pump for warranty or repair, you must do the following or the pump will not be valid for a credit. Since

pumps can contain residues of toxic chemicals, these steps are necessary to protect all the people who handle return shipments and to help pinpoint the reason for the breakdown.

- Flush chemical residue from the pump (best done in the field)
- Tag pump with type of chemicals having been sprayed
- Include complete description of operation problem, such as how pump was used, symptoms of malfunction, ect.

## Standard Warranty

---

**REMCO** warrants its products to be free from defects in material and workmanship on all products sold by REMCO for resale or for use in purchasers' own business or original equipment manufacturer. Under normal use, maintenance and service (rental use excluded) the following terms apply:

For all REMCO products, the warranty will last for a period of **one year from date of shipping from a REMCO warehouse.** REMCO's obligation under this warranty shall be limited to replacing or repairing at REMCO's discretion, any such product or part which must be returned to REMCO's factory with a Return Material Authorization Number (RMA), transportation charges approved by REMCO or prepaid, and which upon examination, is found to REMCO's satisfaction to have been defective under the terms of this warranty. No credit will be allowed against future purchases for items returned as defective under the terms of REMCO's warranty. This warranty does not extend to any products, which have been altered or modified outside the REMCO factory, to any products that have not been properly maintained, nor does it apply to units that are returned in an unassembled condition. Furthermore, the warranty does not extend to pumps that are non-compliance with REMCO's Engineering Standards. This includes, but is not limited to, pumps ordered without an integral pressure control mechanism. The warranty guarantees that products will perform to REMCO's flow and pressure specifications throughout the life of the

warranty. The warranty does not cover wear, appearance, misuse, abuse, misapplication or external water damage. If the returned product is found not to be defective under the conditions of this warranty, a charge will be made for repair or replacement.

Brush wear may be limited to 1000 hours or less.

This is a Limited Warranty. It covers the product only and the extent of the coverage is limited to the cost of the product. As the manufacturer has no control over shipping, handling and installation, the warranty cannot cover water damage, or any other damage, caused by a leak or other malfunction.

THIS WARRANTY IS IN LIEU OF ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING IMPLIED WARRANTIES OR WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE. NO PERSON IS AUTHORIZED TO GIVE ANY OTHER WARRANTY OR ASSUME OBLIGATION OR LIABILITY ON REMCO'S BEHALF. REMCO SHALL NOT BE LIABLE FOR ANY INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY KIND INCURRED BY THE REASON OF THE USE OR SALE OF ANY DEFECTIVE PRODUCT AND PART. THIS WARRANTY SHALL BE GOVERNED BY THE LAWS OF THE STATE OF MINNESOTA, WITH ANY DISPUTE OR CLAIM VENUED OR HEARD IN THE STATE OF MINNESOTA.



14260 23rd Ave. N.  
Plymouth, MN 55447  
Phone: 763-253-4740  
Fax: 763-253-4741  
www.remcoindustries.com  
2012V1

SureFire Electric Pump Parts	
Item Number	Item Description
291-01-11-133-071A-K	(Qty2 needed per head) Mounting Bolt Kit for 3.0 & 5.3 GPM Pump Head
291-01-52-046	Standard Gasket for 5.3 GPM Pump
291-01-CLIP	Clip for 5.3 Gallon Electric Pump
291-01-CV	Outlet Check Valve for Electric Pumps
291-01-FQ3E-038-90	3/8" HB 90 Degree - 2.0 GPM - Electric Pump Fitting
291-01-FQ3S-038	3/8" HB Straight - 2.0 GPM - Electric Pump Fitting
291-01-GROMMET	Replacement Grommet for 5.3 GPM Electric Pump Mount
291-01-LHA	Lower Housing Assembly - 5.3 GPM Pump Head
291-01-SMALLCLIP	Clip for 2 GPM Electric Pump
291-01-UHA	Upper Housing Assembly - 5.3 GPM Pump Head
291-01-UHA5503-1X77	Pressure Switched Upper Housing - 5.3 GPM Pump Head
291-01-VHA	Valve Assembly - 5.3 GPM Pump Head
291-01-VHA-S	Valve Assembly - 5.3 GPM Pump Head (Santoprene Diaphragms)
290-01-08-5514-2F1-63A	12 Volt Electric Pump - 3.0 GPM, Diaphragm
290-01-2963Y1	12 Volt Electric Pump - 2.0 GPM - Diaphragm Pump
290-01-3253Y1	3 Chamber Electric Diaphragm Pump with HD motor and cooling fins (2.0 GPM Open Flow)
290-01-3257Y1	5 Chamber Fat Boy Electric Diaphragm Pump with 100 PSI Bypass
290-01-3840Y1	Shurflo 12 Volt Electric Pump - 5.3 GPM - Santoprene Diaphragm Pump
290-01-5503-5.3-BPSS	12 Volt Electric Pump - 5.3 GPM - Diaphragm Pump