



# GROUND BASED PUMPING STATION

## Installation and Parts Manual



**MONROE SNOW & ICE CONTROL**

A Division of Monroe Truck Equipment

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## **SAFETY INSTRUCTIONS**

- Read all installation, safety and maintenance instructions completely before operating this equipment.
- Keep all personnel clear of moving parts while equipment is being operated.
- Do not operate equipment in need of maintenance! Repair immediately!
- While operating this equipment use common sense, use caution, be alert and be safety-conscious.

# MAINTENANCE INSTRUCTIONS

## **In Season:**

- Check for loose bolts and nuts daily, and re-torque before use. (Failure to inspect equipment on a daily basis may seriously affect safety and/or efficiency.)
- Check all fittings for tightness on a regular basis.
- Due to the nature of use and environment this equipment is operating in, damage and wear may occur at anytime. Therefore, **Monroe Truck Equipment** recommends the end user establish and follow a daily inspection routine before using this equipment.

## **Off Season:** *(If Applicable)*

- Use care when disconnecting liquid lines to assure that no dirt or foreign objects enter the pumping system. Use caps to cover hose fittings and insert plugs into coupler ports.
- Check mounting bolts for wear and/or damaged threads and replace before re-mounting.

## **Off Season Storage:** *(If Applicable)*

- For extended periods of non-use or for off season storage, we recommend the system be flushed with a non-corrosive liquid. This liquid must have lubricating properties and must be protected against freezing, to a minimum of -20° Fahrenheit or colder, depending on regional climate.

# INSTALLATION INSTRUCTIONS

Locate site for storage tank and pumping station pad. They must be located on level ground and positioned approximately ten feet apart. Prepare tank and pumping station pad site as per the following site preparation instructions.

## **Tank Shipment Receiving Instructions:**

1. Review the specification for the purchased tank. Make sure you have proper **lifting equipment** available to **lift** the tank off of the trailer.
2. When lifting tank make sure you have enough room to clear power lines and other overhead obstructions.
3. Tank must be lifted off of the trailer, not rolled or slid.
4. When lifting tank that is shipped horizontally, use webbing or ropes with proper spreader bars to insure vertical non-crushing loading of side walls.
5. Ensure that the final placement area where the tank is to be set is clear of overhead obstructions and power lines and is free from rocks and other hard objects that could puncture holes in the base of the tank.

## **Liquid De-Icer Storage Site Preparation:**

- Inspect surface to insure a smooth, level area that will supply full bottom support. The bottom radius of the tank needs continuous support. A properly constructed concrete pad that is capable of supporting the contents of the de-icer chemical (approximately 12 pounds per gallon) or very flat black top, or contained, packed sand or pea gravel have been used successfully. It is important that what ever surface is used maintains uniform support through freeze/thaw cycles, erosion and other disturbances.

## **Fitting Inspection:**

1. Inspect and retighten all fittings prior to the initial filling of the liquid de-icer chemical. Transportation and handling may have loosened fittings.
2. Any valves extending long distances from the tank must be supported. For permanent piping installations, expansion joints or flexible tubing must be utilized to allow for tank expansion.
3. To avoid liquid de-icer chemical loss, you may want to fill the tank with water to check fittings for leaks.

The liquid de-icer storage tanks have manhole covers with vents. No other special venting is required, but is an option.

After the season. You may want to leave some chemical in the tank for ballast to prevent tipping over in strong winds.

# INSTALLATION INSTRUCTIONS

## Installation Instructions:

1. Level pumping station cement pad. Pad must be level to support light pole. We recommend, but do not supply, some type of barrier or guard rail be installed two feet in front of the cement pad to prevent accidental damage to light pole and/or pumping station.
  - A. Level pumping station stand pipe assembly if not equipped with light assembly. Pad must be level to support disconnect switch. (Proceed to step 3)

2. Install the light pole onto the cement pump station pad using (8)  $\frac{3}{4}$ -10 stainless steel jam nuts. Tighten bottom nuts securely, then lock the top jam nuts onto the bottom nuts.

**Note:** Caution must be taken when lifting light pole in position. Use a forklift, loader, crane or similar lifting device with enough lifting capacity to lift and hold light pole in position.

3. Uncoil the wire cable from the junction box and install into the electric motor junction box using provided connectors. See index 11, page 6.

4. Retain the cable to the light pole using (3) cable ties.
  - A. Retain the cable to the stand pipe assembly using (3) cable ties if not equipped with light assembly.

5. Install the (2) 2" Bulkhead fittings into tank, (using a 2 $\frac{3}{4}$ " hole saw to make circular cut), (1 each) 90° from existing bulkhead fitting supplied with tank.

6. Install agitation kit (Ref. Page 12) into tank. Screw in (2) 2"HB x 2" MNPT fitting, (1 each) into 2" bulkhead fitting within tank. Layout 2" cross x eductor nozzle assemblies and cut hose sections of required length and retain with 2" t-bolt clamps supplied.

7. Install the 2" valve into one 2" bulkhead fitting and the 2" plug into the other 2" bulkhead fitting from outside of tank.

8. Install the 3" valve into the 3" bulkhead fitting of the storage tank.

**Note:** Use a good quality thread sealant such as Rectorseal Tru-Blu, part number 05037464, on the pipe threads of the valve nipples before installing them.

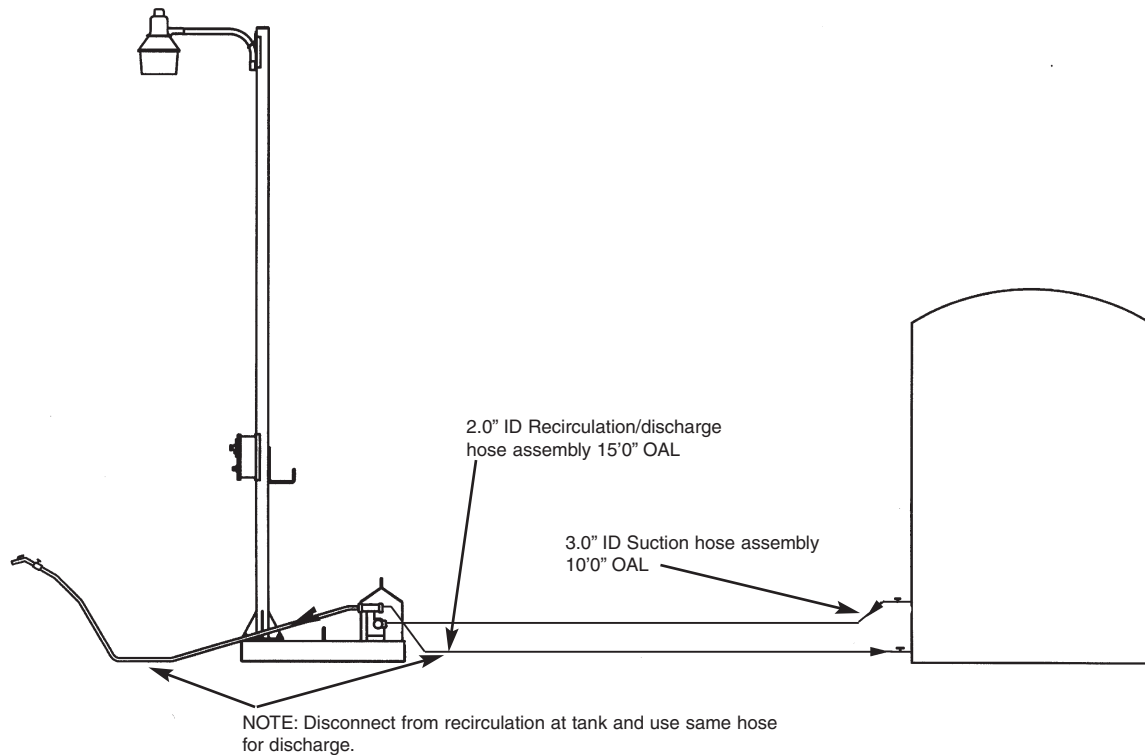
9. Install the 3" I.D. suction hose assembly between the bottom 3" valve of the tank and the bottom 3" fitting, of the pump enclosure. Attach by locking the cam coupler levers toward the hose after inserting the couplers.

# INSTALLATION INSTRUCTIONS

## Installation Instructions (*Continued*):

**NOTE:** Disconnect 2" hose from the 2" valve of tank and use same hose from discharge to fill mobile tanks and reservoirs.

11. Electrical power can now be supplied to the junction box. The electrical power source installation is the responsibility of the customer. We recommend that a certified electrician install the power into the junction boxes.





## OPERATING INSTRUCTIONS

1. To operate the Ground Based Pumping Station, the suction line valve (3" valve on the tank) must be turned to the open position (lever in line with the hose).
2. You can choose to either pump the liquid agent to the discharge nozzle to fill your truck mounted tanks or you can choose to re-circulate the liquid agent back to the tank. This is accomplished by positioning the 2" hose assembly and 2" valve on the tank in different positions.
3. To discharge liquid agent only to the nozzle, turn the control lever on the 2" tank valve to the closed position. (Lever must be turned clockwise 90° to the hose). Disconnect 2" hose from tank valve and reconnect to mobile tank or reservoir to be filled. When tank is full turn 3" tank valve to off position (lever 90° to hose and shut off pump at junction box rotary switch).
4. To re-circulate the liquid agent only, make sure 2" hose is connected to 2" valve on tank and 2" fitting on discharge side of pump. Turn tank valve lever to the on position (lever in line with hose).
5. Rotate the rotary power control switch on the junction box to the "ON" position (clockwise).
6. The yard light if so equipped is automatically activated by a light sensor for off/on (on at dusk, off at dawn).
7. To shut off the pump station, rotate the red switch on the junction box, counter-clockwise to the "OFF" position. This switch can be locked in this position by using a padlock (not supplied).
8. We recommend that both valves on the tank be closed when the system is not being used. This will prevent spillage of liquid agent due to accidental damage to pump station and/or hoses.

## GENERAL INFORMATION

- Location descriptions are noted in direction of travel. (i.e. front, rear, left and right.)
- Delivery of replacement parts is subject to our sales delivery terms.
- Use only **Monroe Truck Equipment** O.E.M. replacement parts. Failure to do so will void warranty.
- Replacement parts listed in this manual reflect our most common Ground Based Pumping Station items. If you do not find the part you require, please call your distributor.
- **Monroe Truck Equipment** reserves the right to make revisions or alterations to this parts manual.

## HOW TO ORDER PARTS

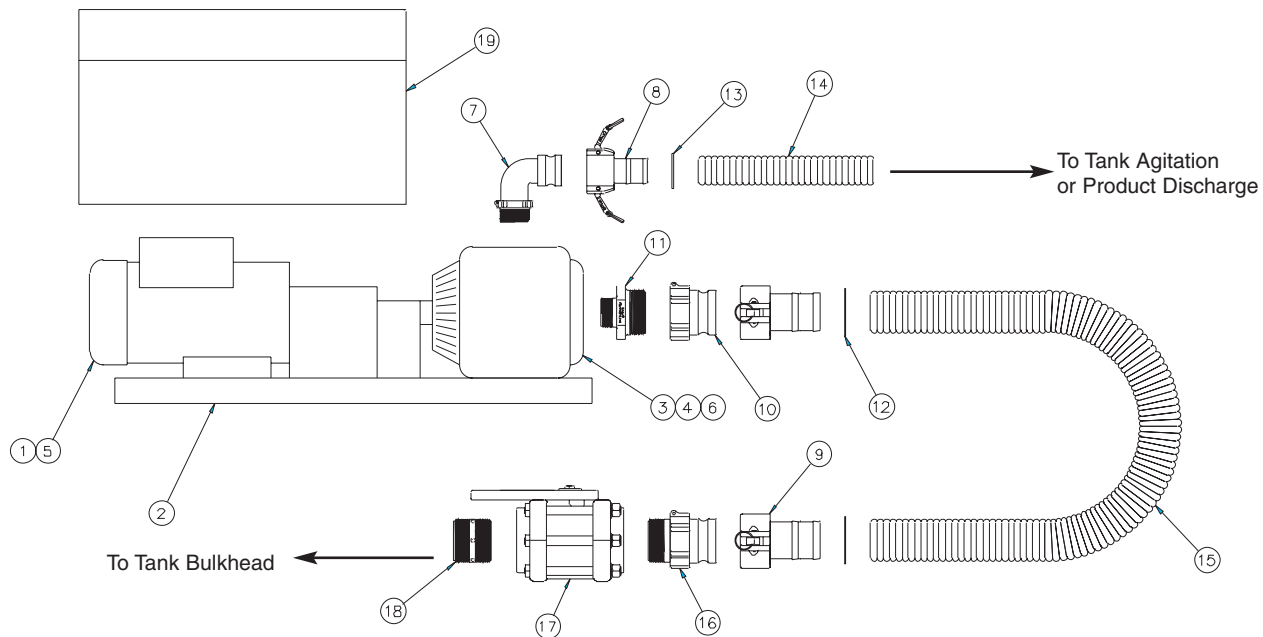
To order or inquire about replacement parts, please contact the **distributor** or **store** that the product was purchased through. To speed the information flow, please have the following information ready:

- Model Number
- Serial Number
- Part Number and/or description as per the parts manual
- Quantity needed

For further information about **Monroe Truck Equipment** replacement parts, please call 800-880-0109 and ask for **Snow & Ice Parts Sales**.

## RETURN POLICY

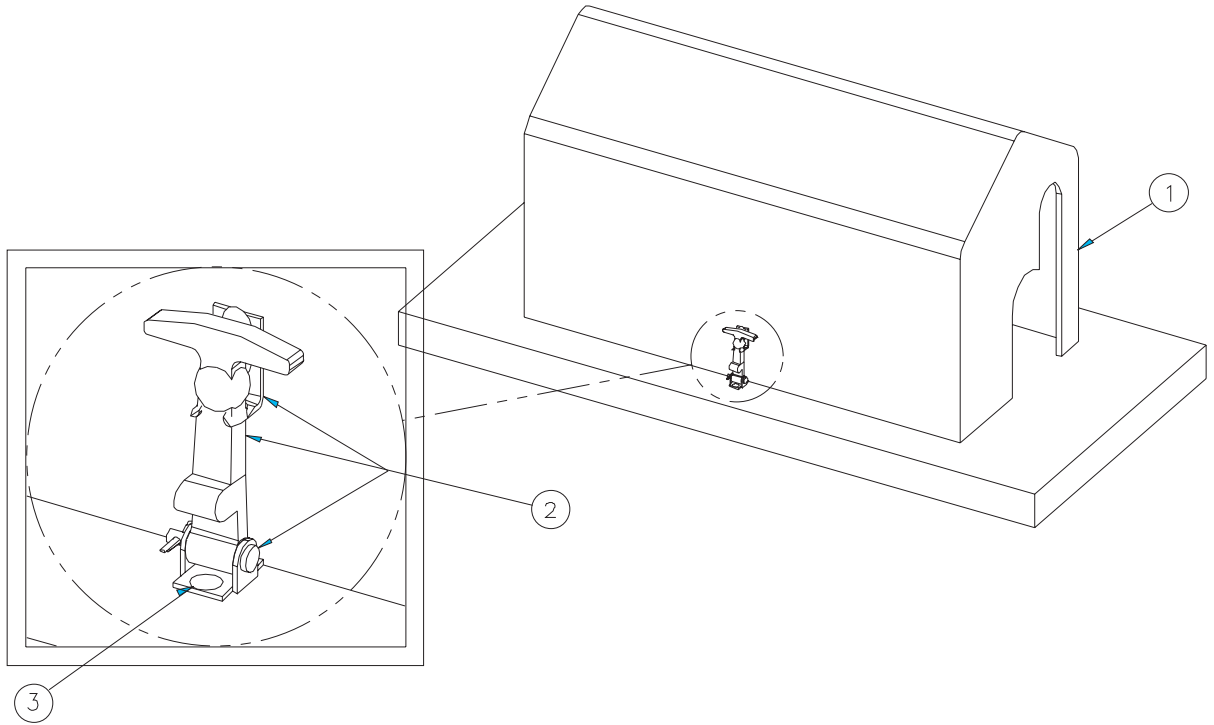
Merchandise returned to **Monroe Truck Equipment** must have a Warranty Service Request (WSR) form filled out completely and signed by authorized personnel. To get your WSR form, call 800-880-0109. For whole goods ask for **Snow & Ice Sales**. For replacement parts, ask for **Snow & Ice Parts Sales**. All returned items are subject to a 15% restocking fee and must be sent freight prepaid!



**00016235 PLUMBING KIT, PUMP STATION, 200GPM, POLY**

ITEM	QTY	PART #	DESCRIPTION
1	1	05006407	Motor, Electric, 5HP Single Phase, 3450 RPM
2	1	05008087	Mounting Kit
3	1	05008086	Pump, Liquid, 200 GPM, Poly (See page 16)
4	1	05038457	Coupler, LoveJoy, 3/4"
5	1	05038458	Coupler, Love Joy, 1 1/2"
6	1	05038459	Insert, Spider Sox
7	1	05038252	Coupler, Poly Cam, 90°, 2" MNPT x 2" Male
8	1	05037598	Coupler, Poly, Cam Levers, 2" Barb x Female
9	2	05037870	Coupler, Poly, Cam, 3" Barb x Female
10	1	05037913	Coupler, Poly, Cam, 3" FNPT x 3" Male
11	1	05037458	Nipple, Reducing, 3" MNPT x 2" MNPT, Poly
12	2	05050461	Clamp, 3" T-Bolt, SS
13	1	05050615	Clamp, 2" T-Bolt, SS
14	15 FT	05037577	Hose, 2" ID, Black Ribbed, EPDM, Poly
15	10 FT	05037623	Hose, 3" ID, Black Ribbed, EPDM, Poly
16	1	05030505	Coupler, Poly, Cam, 3" MNPT x 3" Male Adapter
17	1	05037475	Valve, 3" NPT, Poly, Full Port
*18	1	05037446	Nipple, 3" NPT, Short Poly
19	1	00016704	Enclosure Kit, Motor, 200 GPM (See page 11)
20	1	05037468	Fitting, Coupling, Cam, 2" Barb

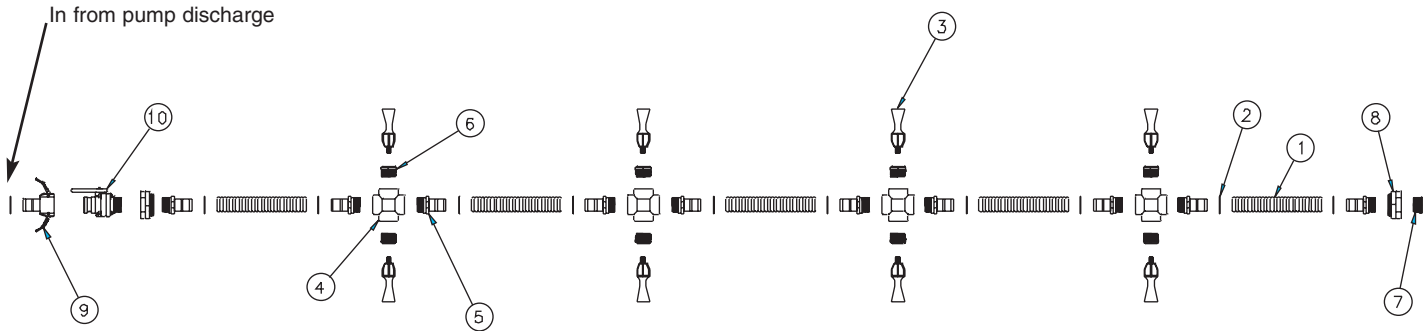
\* NOTE: Some tank applications may require #05037458 .3" x 2" reducer nipple in lieu of 3" nipple.



**00016704 ENCLOSURE KIT, MOTOR, 200GPM**

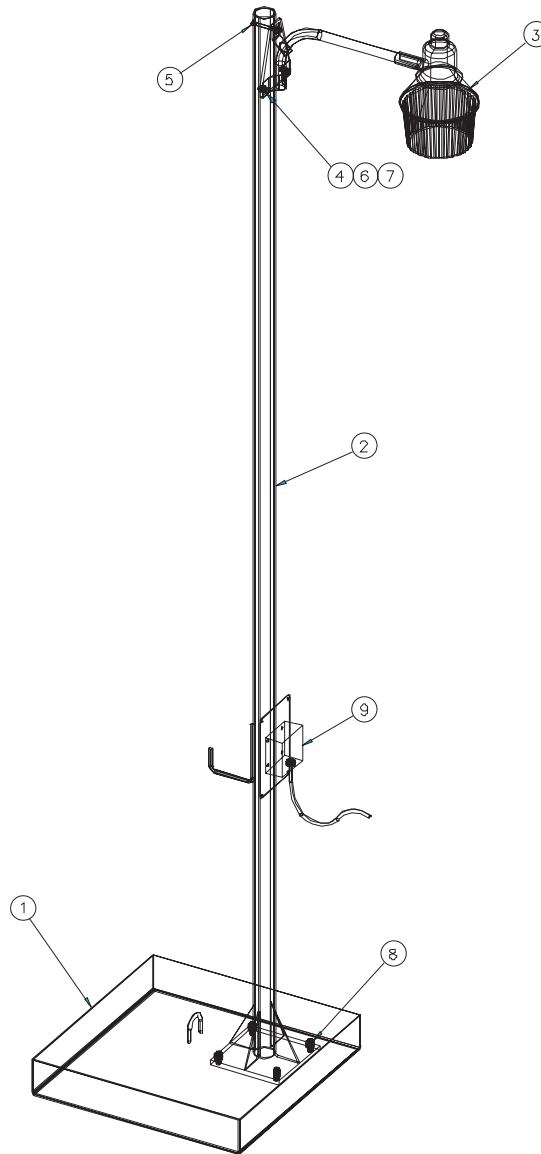
ITEM	QTY	PART #	DESCRIPTION
1	1	05050558	Enclosure, Top, Poly
2	2	05050248	Hood Catch, Rubber w/ Bracket
3	8	05050660	Rivet, Pop, .125 x .525

**View from Inside the Tank**



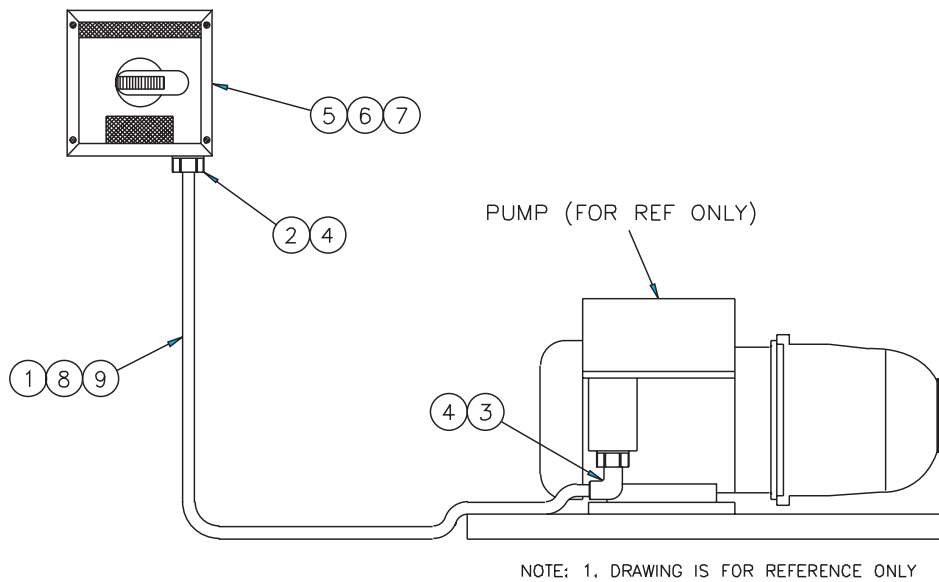
**00016237 AGITATION KIT, PUMP STATION**

ITEM	QTY	PART #	DESCRIPTION
1	6 FT	05037577	Hose, 2" ID, Black Ribbed, EPDM, Poly
2	11	05050615	Clamp, 2" T-Bolt, SS
3	8	05037824	Nozzle, Educator, Poly, 3/4" MNPT
4	4	05037444	Cross, 2" Poly Pipe, FNPT
5	10	05037386	Hose Barb, Poly, 2" MNPT x 2" Barb
6	8	05037484	Bushing, 2" x 3/4" Reducer
7	1	05037551	Plug, 2" MNPT, Poly
8	2	05037550	Fitting, Bulkhead, Poly, 2" FNPT
	1	05037390	Fitting, Nipple, Pipe, 2" Short
	1	05037395	Valve Ball, 2" FNPT, 1.5" Port
	1	05037380	Fitting, Coupling, Cam, 2" MNPT x 2"



**00016548 STAND PIPE/CONCRETE BASE ASSEMBLY W/ LIGHT**

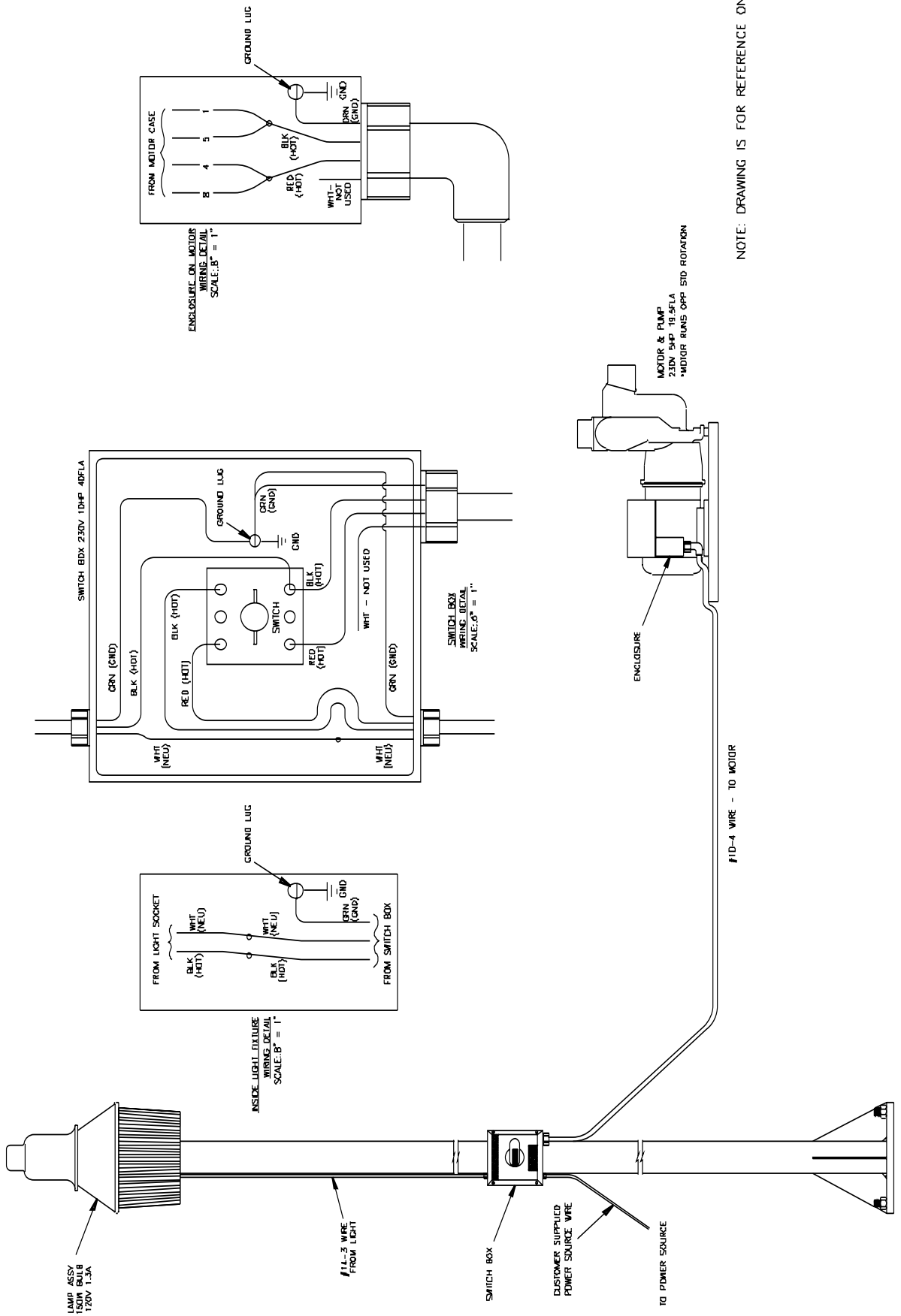
ITEM	QTY	PART #	DESCRIPTION
1	1	00074566	Base, Concrete, Pipe Weldment
2	1	00098420	Pipe Weldment
3	1	05041243	Light, Yard, Sodium Vapor
4	2	05010690	Bolt, ½-13 x 1¼, 120 V
5	1	05010702	Bolt, ½-13 x 4½, G8, HHCS, Zinc
6	3	05021309	Washer, ½, Flat, Zinc
7	3	05020847	Nut, ½-13, GC, Top Lock, C&W
8	8	05020123	Nut, ¾-10, G8, Jam, Zinc
9	1	00074523	Disconnect Kit, Single Phase <i>(See next page)</i>
10	1	00083328	Schematic, Electrical GBPS, w/ Lamp Assembly
	12 FT	05041314	Cable, Wire, 14 Gauge
	5	05050763	Cable Tie
	1	05041147	Fitting, 5" Compression, Dome
	1	05041149	Nut, ½ w/ Seal For 05041147



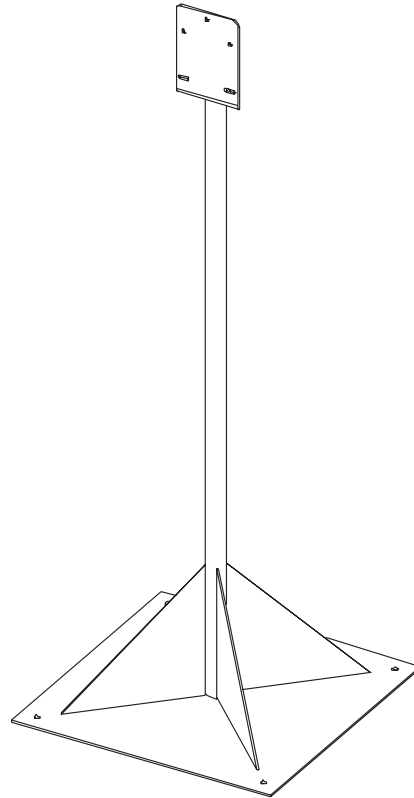
**00074523 DISCONNECT KIT, ELECTRIC, SINGLE PHASE, HOOK-UP**

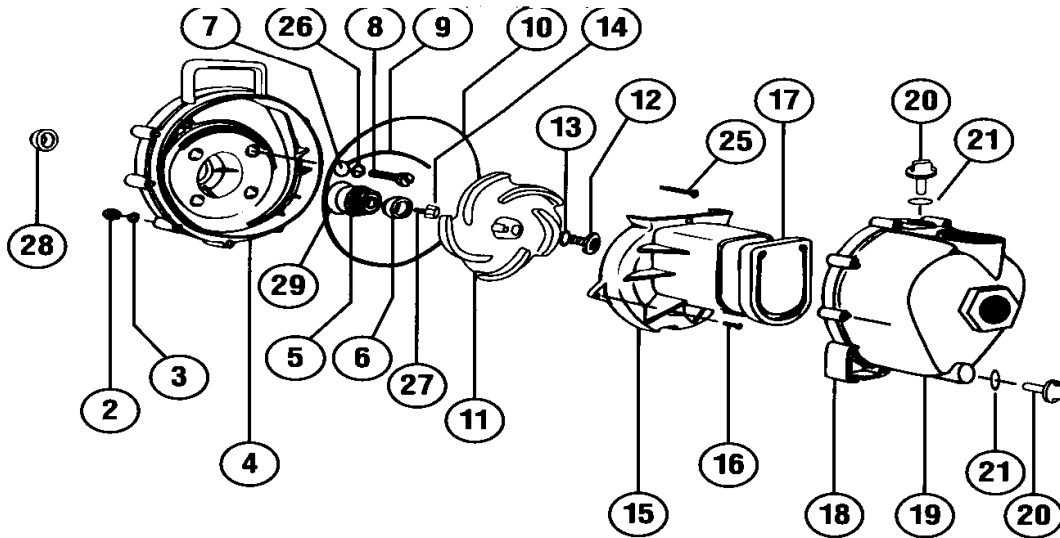
ITEM	QTY	PART #	DESCRIPTION
1	12 FT	05051861	Cable, 10-4 Rubber Jackets, Stranded Wire
2	1	05038558	Fitting, 3/4" Compression, Straight, Plastic
3	1	05038557	Fitting, 3/4" Compression, 90°, Plastic
4	2	05041148	Nut, 3/4" w/ Seal
5	1	05041477	Disconnect, Rotary Type
6	4	05016111	Bolt, 1/4-20 x 1/2, HHCS, SST
7	4	05021403	Washer, 1/4, Flat, SST
8	3	05050608	Cable Tie, HD, 14" x .300" W, Black
9	3	05041488	Connector, Wire, Yellow, 18-10 Guage





**00071371 STAND WELDMENT, SWITCH,  
DISCONNECT ELECTRICAL KIT**





**05008086 PUMP, LIQUID, 200GPM, POLY**

ITEM	QTY	PART #	DESCRIPTION
	1	05008086	Pump, Liquid, 200 GPM, Poly
2	10	05008129	Body Nut, SS
3	10	05008130	Lock Washer, SS
4	1	05008131	Poly Pump Rear Bracket
5 & 6	1	05008132	Seal Assembly
7	4	05008133	Screw Head
8	4	05008134	Bracket Screws, SS
9	1	05008135	O-Ring
10	1	05008136	Body O-Ring
11	1	05008137	5 Vane Poly Pump Impeller
12	1	05008138	Impeller Bolts, SS
13	1	05008139	Impeller Bolt Gasket
14	1	05008140	Impeller Hex Nut
15	1	05008141	Poly Pump Volute
16	2	05008142	Volute Screws, SS
17	1	05008143	Poly Pump Check Valve
18	1	05008144	Poly Pump Body Assembly
19	10	05008145	Body Screws, SS
20	2	05008146	Prime/Drain Plug
21	2	05008147	Prime/Drain Plug O-Ring
22	1	05008153	Bearing Pedestal, 3/4" Straight Shaft Key
23	1	05008154	Impeller Removal Bolt
24	1	05008155	Pump Repair Kit
25	1	05008148	Upper Volute Screw, SS
26	4	05008149	Rear Bracket Washer, SS
27	1	05008150	Impeller Key
28	1	05008151	Poly Pump Slinger
29	1	05008152	O-Ring for Seal Assembly
30	1	05008156	Pump Seal O-Ring Kit

## MONROE TRUCK EQUIPMENT, INC. WARRANTY SNOW & ICE CONTROL PRODUCTS

**Monroe Truck Equipment, Inc.** warrants to the original purchaser, that if any part of the product proves to be defective in workmanship or material within **ONE YEAR** of the original installation, and is returned to us within 30 days of the discovered defect, we will (at our option) repair or replace the defective part. This warranty does not apply to damage resulting from misuse, neglect, accident, improper installation, normal wear items or lack of maintenance. This warranty is exclusive and supersedes all other warranties, whether expressed or implied. **Monroe Truck Equipment, Inc.** neither assumes, nor authorizes anyone to assume for it, any other obligation or liability in connection with this warranty and will not be liable for consequential damages.

All engines, pumps, motors, cylinders and valves are warranted by their manufacturer and not by **Monroe Truck Equipment, Inc.**. The manufacturer's warranty will apply to these parts. Electrical and hydraulic components are not to be disassembled without the express written permission of Monroe Truck Equipment. Use of replacement parts other than original equipment voids this warranty.

All defective parts returned must be accompanied by the model number, serial number, date installed, date of defect, description of defect, and the name of the distributor from whom it was purchased. All warranty claims must have prior written approval from **Monroe Truck Equipment, Inc.**

***Please return the warranty registration card that accompanies this manual to confirm receipt of this parts catalog and acknowledge the information contained within. Failure to return the attached card may result in a voided warranty.***



1051 West 7<sup>th</sup> Street  
Monroe, WI 53566  
608-328-8127 ~ Fax: 608-328-4278

## **Warranty Policy**

### **Uninstalled Parts and Equipment Provided by Monroe Truck Equipment**

Monroe Truck Equipment will provide the following limited warranty for a period of one year to the original purchaser of all uninstalled goods provided by Monroe Truck Equipment:

**LIMITED WARRANTY:** All goods provided by Monroe Truck Equipment (MTE) will be free from defects in material and workmanship for a period of one year from the date of purchase by the original purchaser. This limited warranty shall be the sole and exclusive remedy for any such product found to be defective. This limited warranty supercedes all previous warranties and is exclusive and in lieu of all other warranties, whether expressed or implied.

This limited warranty applies only to parts or accessories manufactured by MTE and/or provided by same. Except with respect to title, this limited warranty does not pertain to parts or accessories not manufactured and/or provided by MTE, regardless of whether such parts or accessories were selected and/or recommended by MTE. MTE will, as a service to the buyer, pass on any warranties received from the original manufacturer of MTE provided parts and/or accessories.

MTE will not under any circumstances be liable for any incidental or consequential damages whether in tort, contract, or otherwise, for any bodily injury, death, property damage, loss of use, or loss of income resulting from or in any way arising out of any goods provided by MTE, or their sale, use, or manufacture.

Any warranty claim deemed to be arising from the result of misuse, abuse, neglect, accident, improper installation, lack of maintenance, act of war (whether declared or otherwise), or act of God will be denied. Any repair or modification by the buyer or any third party, without the prior written consent of MTE, will void any possible warranty compensation. Any damage deemed to be the result of abnormal operation will not be compensated by this warranty.

Normal or special maintenance items such as fuels, fluids, tires, belts, hoses, filters, air cleaners, light bulbs, and any other items subject to normal wear and tear that are supplied in connection with goods provided by MTE are not allowed under this warranty.

All engines, pumps, cylinders, valves, and motors are warranted by their manufacturer and not by Monroe Truck Equipment. The manufacturer's warranty will apply to these parts. Electrical and hydraulic components are not to be disassembled without the express written consent of MTE. Any disassembly of MTE provided components without prior authorization will void the applicable warranty.

Monroe Truck Equipment shall be the sole and final determining authority as it applies to the administration of this warranty policy. Purchaser acknowledges receipt of Monroe Truck Equipment Warranty Policy and agrees to be bound by same.



**GLOBAL SOLUTIONS**  
ARMORED VEHICLES ~ SPORT TRUCK CONVERSIONS  
MUNICIPAL SNOW & ICE CONTROL ~ FIRE APPARATUS  
PICKUP TRUCK ACCESSORIES ~ TRUCK EQUIPMENT/MODIFICATIONS





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Any and all warranty claims must be forwarded to MTE within 10 days of defect discovery. A copy of the original Monroe Truck Equipment invoice as well as the manufacturer's model number, serial number, and date of installation must accompany all correspondence regarding said claims. MTE will, at their option, choose whether to repair or replace the defective part unless otherwise specified by the original manufacturer of said part.

### **Procedures for Warranty Claims Notification**

For submission of any warranty claim please contact Monroe Truck Equipment – Warranty Department at 800-356-8134

The following documentation will be needed when you call for initial warranty authorization:

1. A copy of the original MTE invoice.
2. Make, Model, and VIN or Serial Number of the equipment involved.
3. Part number and serial number of the part in question.
4. A complete description of the problem.

The following must accompany any claim submitted to Monroe Truck Equipment:

1. Documented photographs of any physical damage.
2. Inspection notes by MTE personnel or MTE authorized 3<sup>rd</sup> party.
3. Authorization number issued by Monroe Truck Equipment – Warranty Department.

**Defective parts must be returned to Monroe Truck Equipment (freight prepaid) within 30 days of issuance of Authorization Number.**

**Monroe Truck Equipment reserves the right to void any warranty for failure to comply with Monroe Truck Equipment Warranty Policy.**

**This policy is effective October 11, 2012**

