



PREWETTING SYSTEM ACTIVATOR

PN: 00016834
Service and Parts Manual



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NOTE: Refer to Prewet Systems: *Tank with Mounting Hardware and Optional Accessories* under separate cover for installation and parts breakdown of these items not listed in this manual.

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.

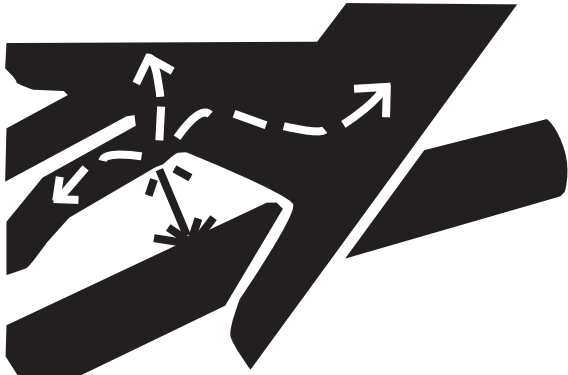
AVOID HIGH-PRESSURE FLUIDS

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.



"IF IT CAN'T BE DONE SAFELY, DON'T DO IT!"

Monroe Truck Equipment safety slogan

WARNING:

Some anti-icing/de-icing/pre-wetting chemicals and/or their vapors are **NOT** compatible with 304 stainless steel and can cause damage to 304 stainless steel tanks and tank welds. Storing those types of chemicals in 304SS tanks is not recommended and may void the tank's warranty. Monroe Snow & Ice Control assumes no responsibility for damage to 304SS tanks caused by incompatible chemicals being used for anti-icing/de-icing/pre-wetting applications. Monroe Snow & Ice Control recommends that you contact your chemical supplier to check your anti-icing/de-icing/pre-wetting chemical's compatibility with 304SS prior to loading into tanks.

GENERAL MAINTENANCE INSTRUCTIONS - PREWET

In Season:

- During periods of non-use it is recommended that the system be flushed of deicing chemicals.

Example: CARGILL recommends the vehicle be steam-cleaned after each use and that the liquid system be flushed with hot water. After flushing, it is extremely important to rid the system of all water. If this is not done, the water will freeze and damage or destroy your components.

Other chemical companies may not want water used. Water used for flushing could turn the chemical into a jelly-like substance. Check with your chemical supplier for proper flush liquids.

- Inspect hoses and plumbing for leaks. Repair or replace as needed.
- Check and clean in-line strainer filter on a regular basis. (Remove bowl and screen and flush thoroughly, don't just drain).
- Inspect the nozzles for residue caking of liquid material and clean them.
- Reapply dielectric grease periodically to pins and receivers of all wiring and harness connectors to prevent corrosion of these terminals.

Off Season Storage:

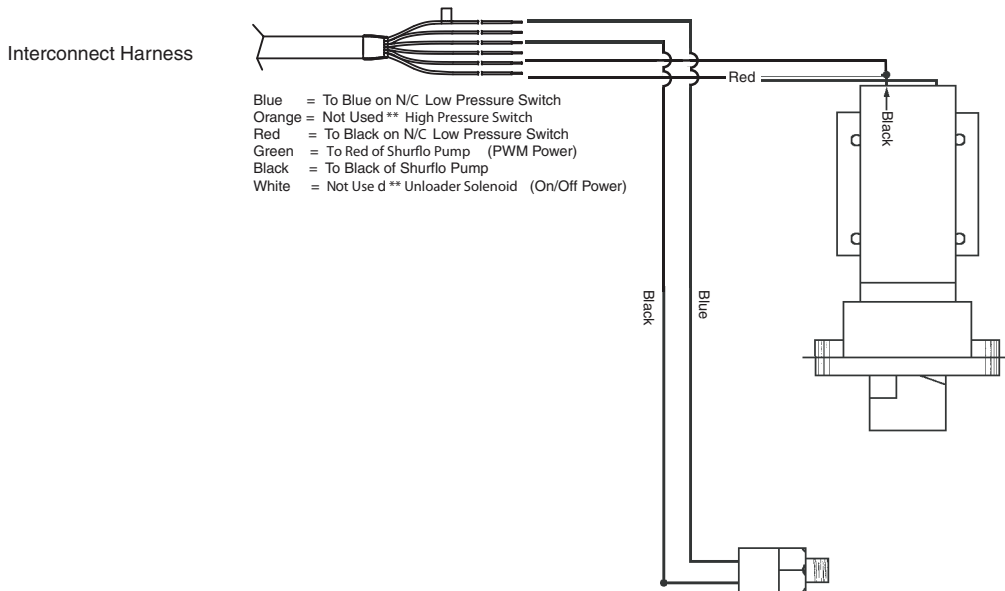
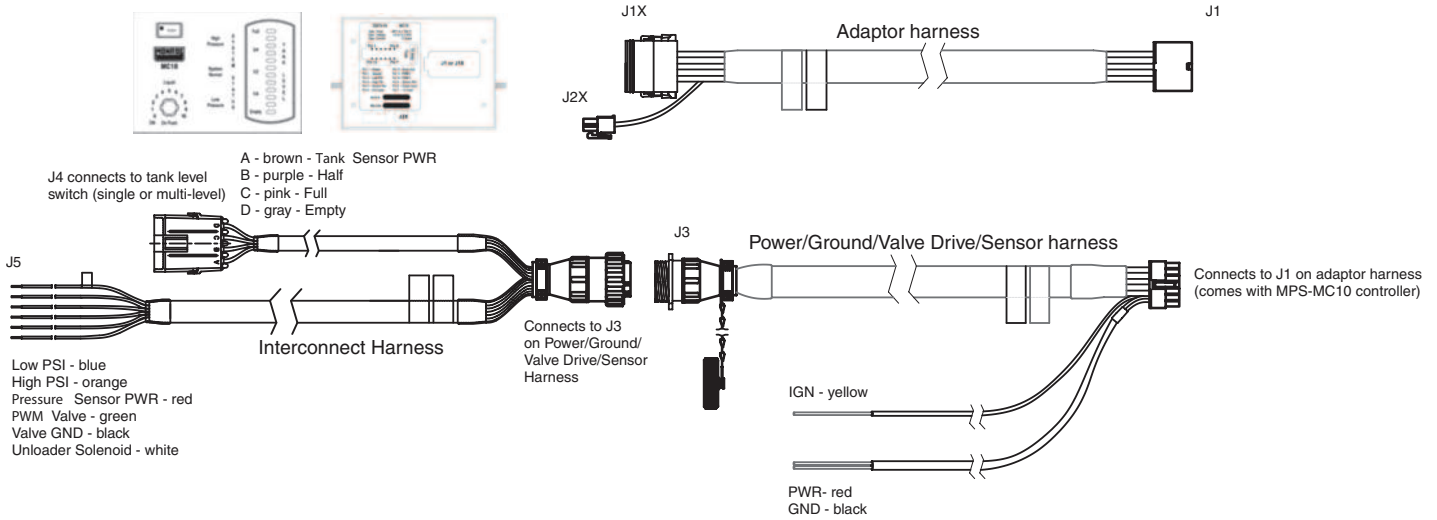
Getting the liquid system ready for summer storage will save you a great deal of time and money when fall comes for remounting.

- Fully flush the complete system including tanks. (Recommend an RV anti-freeze solution or equivalent). This will prevent high concentrations from forming and help rid system of any residue build up.
- Inspect hoses and plumbing for leaks. Repair or replace as needed.
- Drain and clean strainer.
- Disassemble and clean spray nozzles. Check for debris and renew worn components. (Make sure to reposition nozzle tips for maximum granular coverage).
- Dismount in-line poly check-valve. Flush and clean of any build up and/or debris.

Note: Make sure to re-install properly, matching arrow to direction of flow.

- Disassemble the brass liquid pump. Clean and inspect. Renew worn components and reassemble with a very light layer of grease to protect the bushings and gears from corroding and/or oxidizing fast.
- Reapply dielectric grease periodically to pins and receivers of all wiring and harness connectors, to prevent corrosion of these terminals.

WIRING SCHEMATIC - ACTIVATOR/LDS333



Pump Enclosure and Nozzle Mounting Instructions Activator System

1. Fasten the pump enclosure to the spreader or use optional pump enclosure mounting bracket. (Refer to optional accessories page 25-30 for parts and installation.)

NOTE: (Mount enclosure in an accessible area for ease of service.)




2. Pre-assemble the three spray nozzles as shown on page 9.
3. Install nozzle assemblies on spinner chute or other desired location.
4. Install ½" hose between pressure side of pump to poly check valve and nozzle assembly using fittings and hose clamps provided.
(Ref. Items 6,10,13, 20, page 9)
5. Install a 1¼" to ¾" reducing nipple into the tank. (Ref. Item 1, page 9)
6. Install a ¾" ball valve onto the reducing nipple. (Ref. Item 2, page 9)
7. Install a ¾" short nipple into suction strainer and into ball valve. The arrow on the strainer should be pointing in the direction of flow. (Ref. Items 3,4, page 9)
8. Install a 90° hose barb, ¾" MNPT x ½" Male Barb, into the other end of the suction strainer. **NOTE:** (Optional fittings may be needed to fit application.)
(Ref. Items 5,18,19, page 9)
9. Install ½" EPDM, 150 PSI hose onto hose barb, located next to strainer, and route to suction side of pump enclosure using clamps provided.
10. Wire unit as per diagram page 4.

NOTE: (Also refer to Cab Controller Installation page 5.)

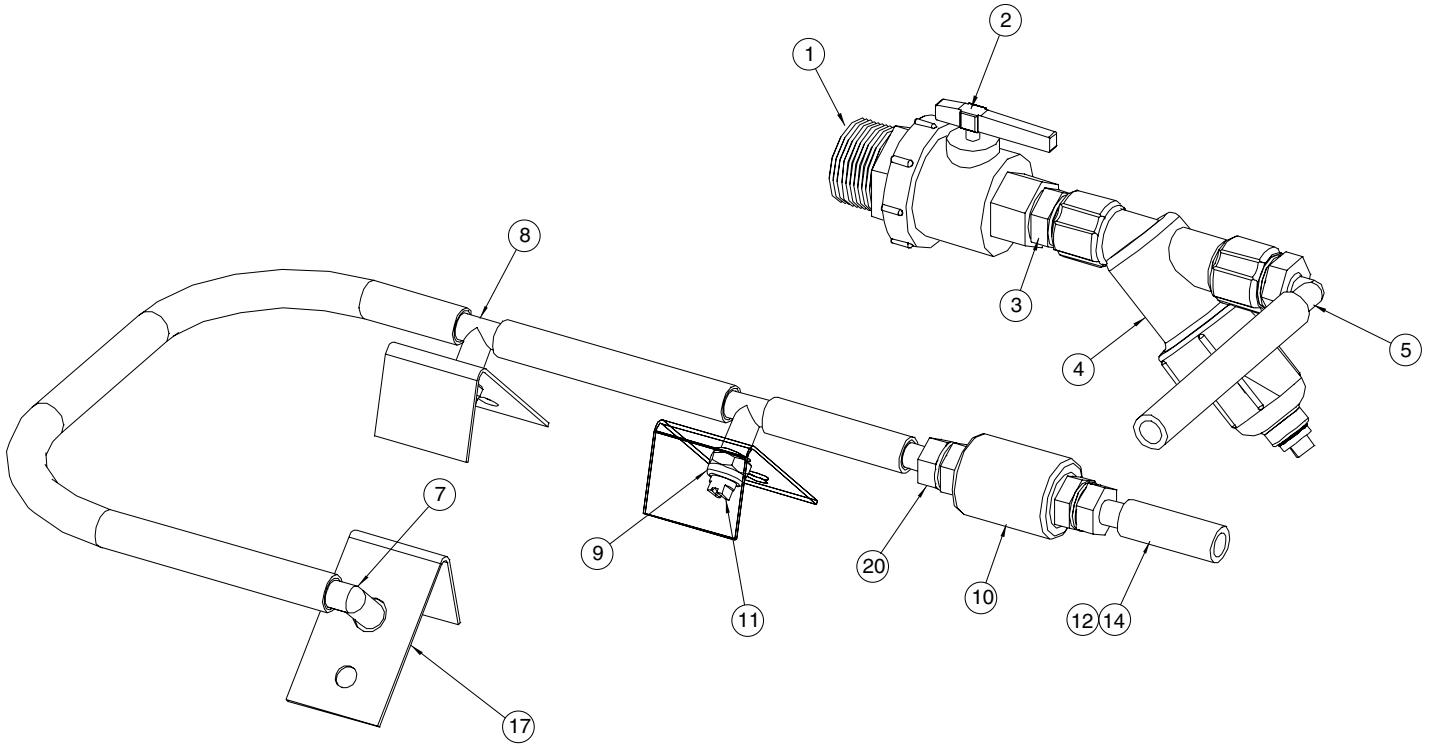
GENERAL INFORMATION

- 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 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.

TORQUE CHART

SIZE	 GRADE 2	 GRADE 5	 GRADE 8
1/4-20	50 IN-LBS	75 IN-LBS	9 FT-LBS
3/8-16	15 FT-LBS	23 FT-LBS	35 FT-LBS
1/2-13	35 FT-LBS	55 FT-LBS	80 FT-LBS
5/8-11	75 FT-LBS	110 FT-LBS	170 FT-LBS
3/4-10	130 FT-LBS	200 FT-LBS	280 FT-LBS
1-8	190 FT-LBS	480 FT-LBS	680 FT-LBS
1 1/4-7	380 FT-LBS	840 FT-LBS	1360 FT-LBS

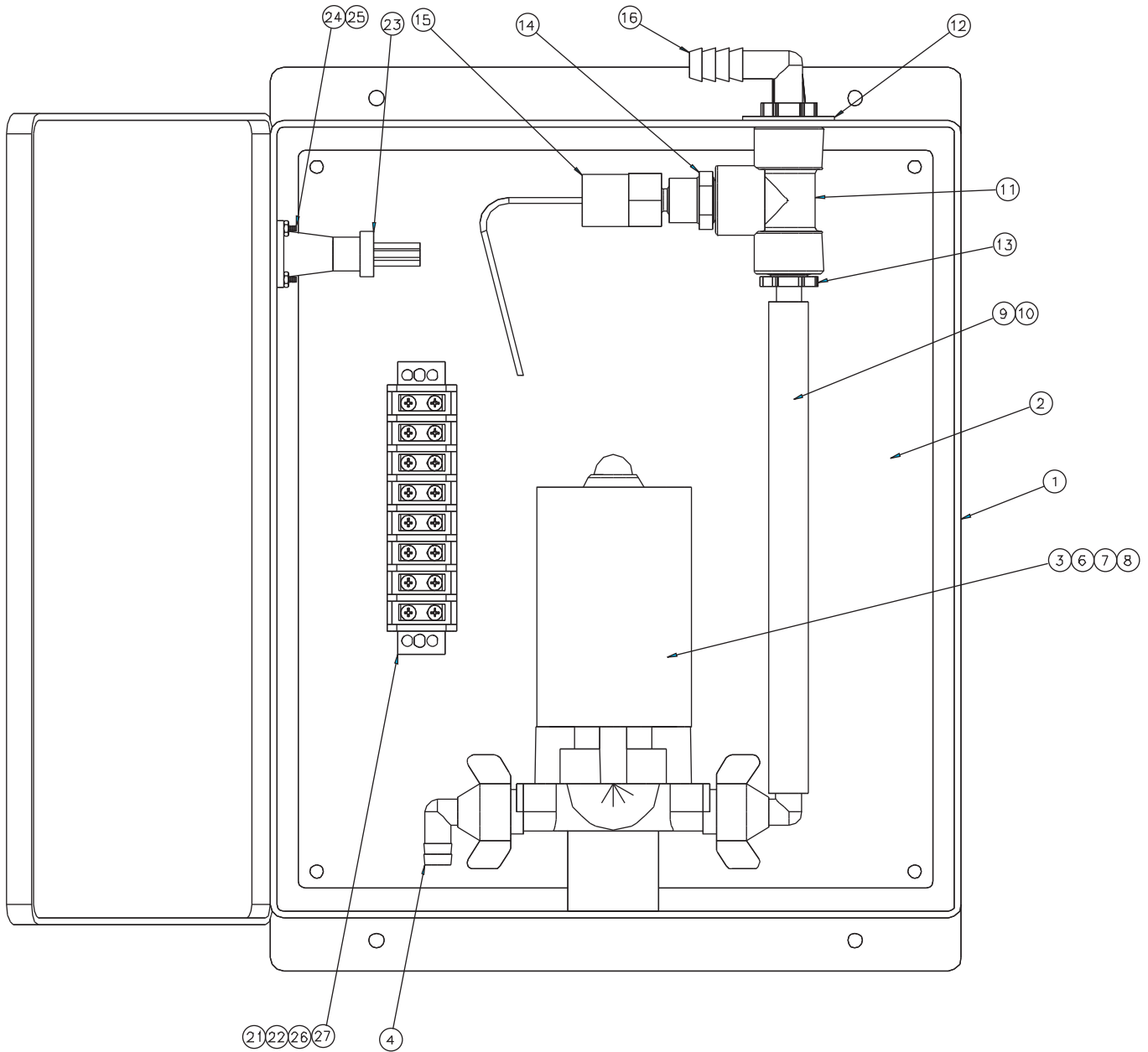
NOZZLE KIT, ELECTRIC UNIT, 3 NOZZLE



00065208 NOZZLE KIT, ELECTRIC, 1 GPM, 3 NOZZLE

ITEM	QTY	PART #	DESCRIPTION
1	1	05037311	Nipple, Reducing, 1 $\frac{1}{4}$ " MNPT x $\frac{3}{4}$ " Male NPT, Poly
2	1	05037315	Valve, Ball-Union Type, $\frac{3}{4}$ " FNPT x $\frac{3}{4}$ " FNPT, Poly
3	1	05037355	Nipple, $\frac{3}{4}$ " NPT Short, Poly
4	1	05037309	Strainer, Y-Type, $\frac{3}{4}$ " FNPT, 20 Mesh Screen, Poly <i>(See page 12)</i>
5	1	05037303	Hose Barb, 90°, $\frac{3}{4}$ " MNPT x $\frac{1}{2}$ " Male Barb, Poly
6	10	05037281	Clamp, Hose, $\frac{3}{4}$ " SST
7	1	05038197	Nozzle Body, Hose Shank, $\frac{1}{2}$ " Hose Barb, 90°, Poly
8	2	05038196	Nozzle Body, Hose Shank, T, $\frac{1}{2}$ " Hose Barb, Poly
9	3	05038179	Nozzle Cap, Type TT, Nozzle Body, Brass
10	1	05050202	Valve, Check, 5PSI, Poly <i>(New style)</i>
11	3	05037995	Valve, Nozzle Check, 10 PSI, Poly <i>(Old style) (Not Shown)</i>
12	1	05038220	Nozzle, Tip, 1GPM@40PSI, Brass
13	20 FT	05037464	Sealant, Thread, w/ Teflon <i>(Not Shown)</i>
14	1	05037307	Hose, $\frac{1}{2}$ " Black EPDM 150PSI
15	1	05050271	Clamp, Cushioned Metal, $\frac{3}{4}$ " <i>(Not Shown)</i>
16	5	05016040	Bolt, $\frac{1}{4}$ - 20 x 1, HHCS, SST <i>(Not Shown)</i>
17	5	05020904	Nut, $\frac{1}{4}$ - 20, Spin Lock, SST <i>(Not Shown)</i>
18	3	00050939	Shield, Nozzle, 304 SST
19	1	05037585	Elbow, $\frac{3}{4}$ " NPT, Poly Street, 90° <i>(Not Shown)</i>
20	1	05037354	Hose Barb, Poly, $\frac{3}{4}$ " MNPT x $\frac{1}{2}$ " Barb <i>(Not Shown)</i>
20	2	05037302	Hose Barb, $\frac{1}{2}$ " x $\frac{1}{2}$ " MNPT, Poly, Straight

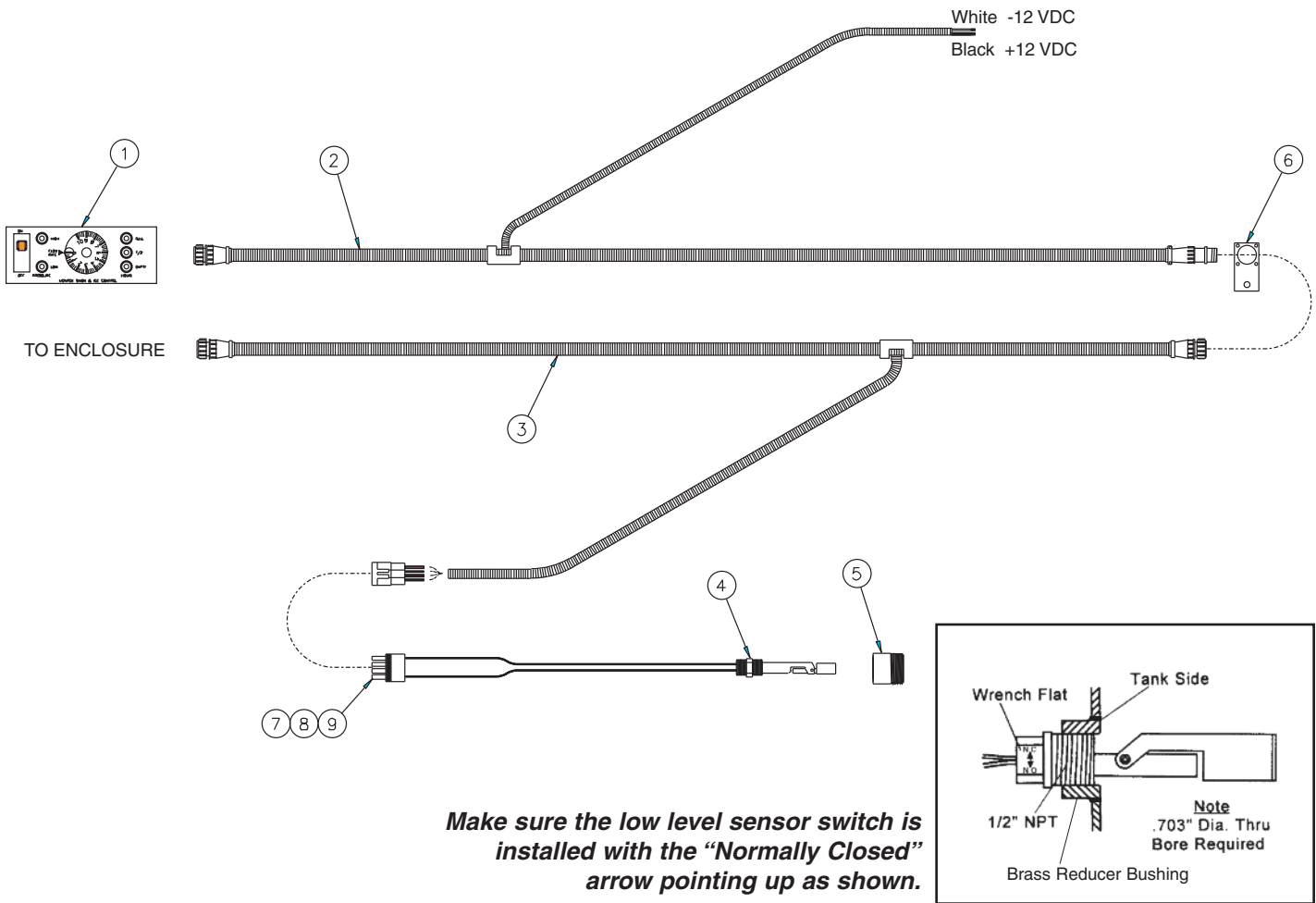
PLUMBING KIT, ELECTRIC, 3 GPM



00017168 PLUMBING KIT, ELECTRIC, 3 GPM

ITEM	QTY	PART #	DESCRIPTION
1	1	05041187	Junction Box, 12" x 10" x 5", Nema, Prewet Enclosure
2	1	05041188	Plate, Junction Box, 12" x 10"
3	1	05008007	Pump, Shurflo 12 VDC, 3 GPM Flow <i>(See page 13)</i>
4	2	05037299	Elbow, 90°, Shurflo, Pump to Hose Barb
5	1	05051625	Decal-Monroe Snow & Ice Control <i>(Not Shown)</i>
6	4	05016968	Screw, #10-24 x 1½, Hex Head, SST
7	6	05021413	Washer, #10 Flat, SST
8	6	05020964	Nut, #10-24, Nylon Lock, SST
9	2	05037281	Clamp, Hose, ¾", SST
10	½ FT	05037307	Hose, ½" Black, EPDM 150PSI
11	1	05037313	Tee, ½" Female NPT, All Ports, Poly
12	2	05021402	Washer, .85 ID x 1.73 OD x .078 Thick, SS
13	1	05037302	Hose Barb, ½" MNPT x ½" Barb
14	1	05037312	Bushing, Reducer, Male, ½" MNPT, ¼" FNPT, Poly
15	1	05041129	Switch, Low Pressure Warning, ¼" NPT, Brass
16	1	05037305	Hose Barb, ½" NPT Male x ½" Barb, Poly, 90°
21	1	05041161	Terminal Block, Double Row (8) Positions, 30AMP
22	1	05041162	Jumper Strip, Two Terminal
23	1	05041365	Cable Assembly, F/VersaCoat & Activator, Inside Enclosure
24	4	05016966	Screw, #4-40 x ½, PH Round Head, SST, 18-8
25	4	05020983	Nut, #4 - 40, Nylon Lock, 18-8 SST
26	2	05016956	Screw, #10-24 x 1, Hex Head, SST <i>(Not Shown)</i>
27	2	05020964	Nut, #10-24, Nylon Lock, 316, SST

USED PRIOR TO OCTOBER 2008

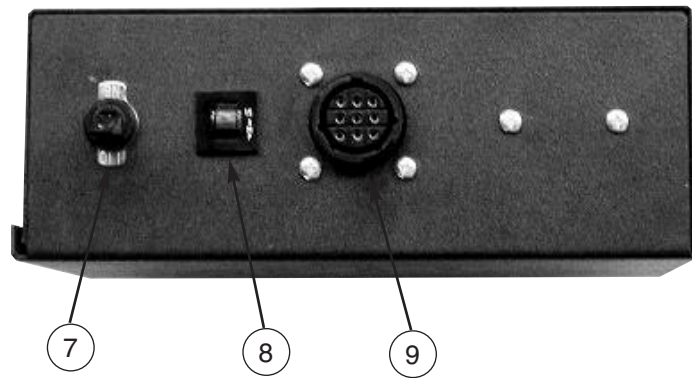
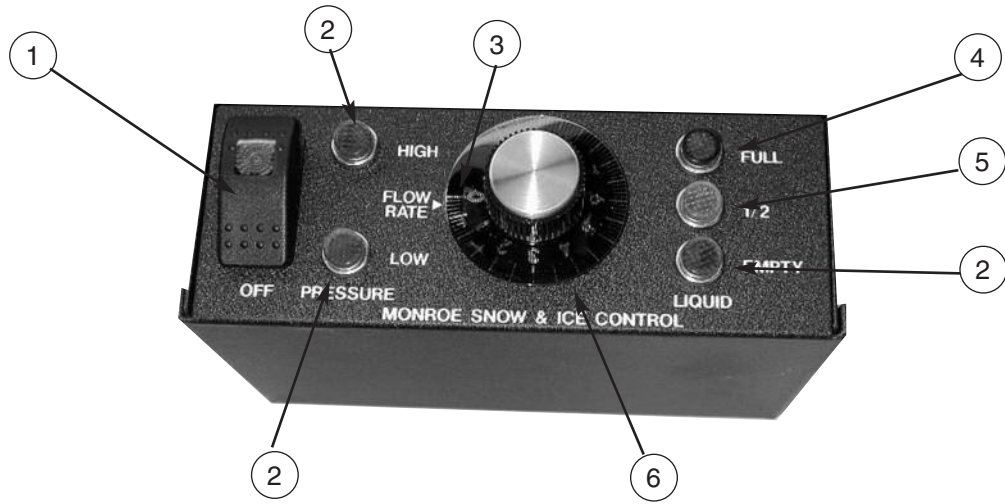


00065203 CONTROL/HARNESS KIT, VERSA COAT & ACTIVATOR

ITEM	QTY	PART #	DESCRIPTION
1	1	05041124	Panel, Control, 12 VDC (See page 11)
2	1	05041363	Cable Assembly, 31' OAL
3	1	05041364	Cable Assembly, 10' OAL
4	1	05041150	Switch Low Level Sensor
5	1	05037339	Bushing, Reducer, Brass
6	1	00046773	Mounting Plate, Connector, Cable
7	1	05041384	Connector, 4 Term, Shroud Half, Packard
8	2	05041355	Terminal, Female, Packard Weatherpack
9	2	05041386	Cavity Seal, Packard Weather, Pack 280
10	1	05051534	Cap, Protective, 31' Cable (Not shown)
11	1	05051535	Cap, Protective, 18' Cable (Not shown)

USED PRIOR TO OCTOBER 2008

PANEL, CONTROL ASSEMBLY



05041124 PANEL, CONTROL ASSEMBLY

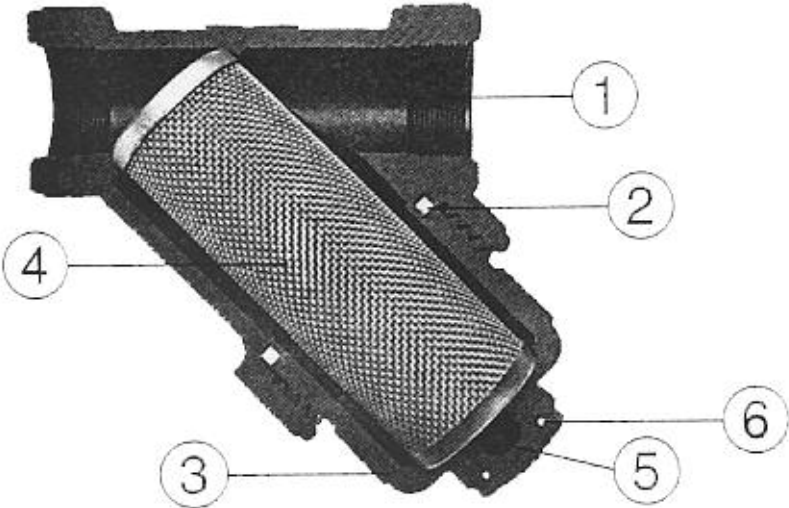
ITEM	QTY	PART #	DESCRIPTION
1	1	05041433	Switch, Power, Amber Illuminated 12V
2	3	05041434	Light, Red Flasher, LED, 14V Indicator
3	1	05041435	Light, Clear, 14V, Indicator (Behind Knob)
4	1	05041436	Light, Green, 14V, Indicator
5	1	05041437	Light, Amber, 14V, Indicator
6	1	05041132	Knob, Rate Control
7	1	05041438	Switch, Toggle Buzzer, Off/On
8	1	05041443	Circuit Breaker, 15 AMP
9	1	05041106	Receptacle, 9-Pole, Square Mount

USED: OCTOBER 2008 - PRESENT

00041340 CONTROL HARNESS KIT, LDS 333

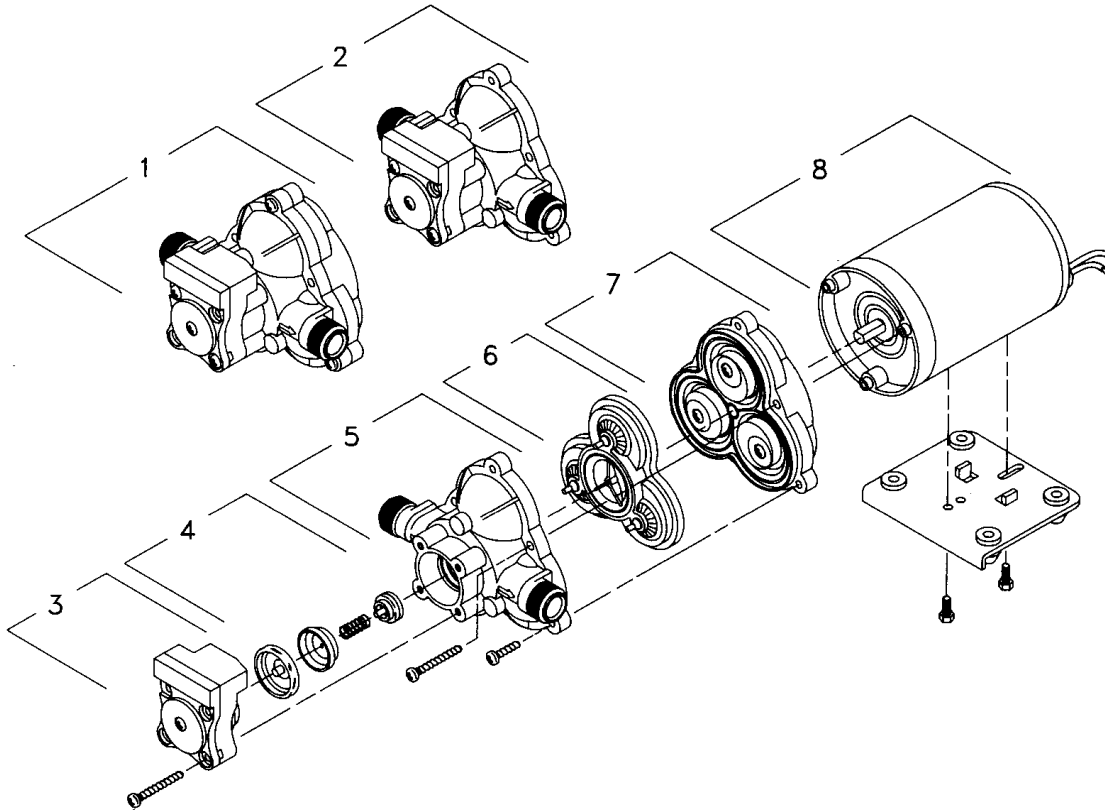
ITEM	QTY	PART #	DESCRIPTION
1	1	MPS-MC10	MPS, Controller, MC10
2	1	MPS-MC10IC	MPS, Cable, Interconnect, MC10
3	1	MPS-MC10PGVSC	MPS, Cable, Power/Ground/Valve
4	1	05041150	Switch, Low-Level Sensor, Poly
5	1	05037339	Fitting, Bushing, Reducer, 1.25 MNPT

05037309 STRAINER, Y-TYPE, 3/4" FNPT, 20 MESH SCREENS



ITEM	QTY	PART #	DESCRIPTION
1	1	05039528	Y" Body and Cap
2	1	05038107	Gasket
3	1	05038564	End Cap
4	1	05038392	20 Mesh Screen
5	1	05038563	1/4" Drain Plug
6	1	05039534	EPDM O-Ring for Drain Plug

05008007 PUMP, SHURFLO, 12 VDC, 3GPM



ITEM	QTY	PART #	DESCRIPTION
1	1	05008092	Pump Head
2	1	05008093	Upper Housing/Switch Assembly
3	1	05008094	Switch Assembly
4	1	05008095	Check Valve Assembly
5	1	05008096	Upper Housing
6	1	05008097	Valve Assembly
7	1	05008098	Diaphragm / Drive Assembly
8	1	05008099	Motor



2088 INDUSTRIAL SERIES PUMPS

Installation and Operation Manual

SHURflo offers various pumps models for different applications. The information outlined by this manual is general, and not specific to all 2088 series pumps. Be certain the pumps' materials will be compatible with the fluid being pumped. 2088 series pumps are intended for intermittent or continuous duty when the proper operating criteria is met. Product Data Sheets outlining specific thermal limits, load, flow curves, and other technical information for a particular model are available. If unsure of the chemical compatibility with a given elastomer or the motors intended design, please call SHURflo for assistance.

CAUTION: "Intermittent Duty" is defined as: operated and/or frequently started within a period of time that would cause the motor to reach its maximum thermal limits. Once the maximum thermal limit is obtained, the motor must be allowed to return to ambient temperature before resuming operation.

CAUTION: *DO NOT* use to pump flammable liquids. Never operate the pump in an explosive environment. Arcing from the motor brushes, switch or excessive heat from an improperly cycled motor may cause an explosion.

CAUTION: *DO NOT* assume fluid compatibility. If the fluid is improperly matched to the pumps' elastomers, a leak may occur. Pumps used to transfer hazardous or hot (max. temperature 170°F [76°C] viton only) chemicals must be in a vented area to guard against the possibility of injury due to harmful or explosive liquid/vapors.

CAUTION: *DO NOT* operate the pump at pressures which cause the motor to exceed the amperes rating indicated on the name plate. Various pump models are equipped with thermal breakers to interrupt operation due to excessive heat. Once the temperature of the motor is within proper limits it will automatically reset, and the pump will start operation without warning.

CAUTION: To prevent electrical shock, disconnect power before initiating any work. In the case of pump failure, the motor housing and/or the pumped fluid may carry high voltage to components normally considered safe.

PRESSURE SWITCH OPERATION

The pressure switch reacts to outlet pressure, and interrupts power at the preset shut-off pressure indicated on the pump label. When outlet pressure drops below a predetermined limit (typically 15-20 psi.[1-1.4 bar] less than the shut-off pressure), the switch will close and the pump will operate until the shot-off (high) pressure is achieved. The shut-off pressure is set to factory calibrated standards. See the motor label and Product Data Sheet for specific pump specifications.

CAUTION: Improper adjustment of the pressure switch, may cause severe overload or premature failure. Refer to SHURflo Service Bulletin #1031 for the adjustment procedure. Failures due to improper adjustment of the pressure switch will not be covered under the limited warranty.

If the plumbing is restrictive or the flow rate is very low, the pump may re-pressurize the outlet faster than the fluid is being released causing rapid cycling (ON/OFF within 2 seconds). If the pump is subjected to rapid cycling during normal operation, or for infrequent periods, damage may occur. Applications which exhibit rapid cycling should have restrictions in the outlet minimized. If not feasible considered a SHURflo Accumulator or a SHURflo "bypass" model pump.

BYPASS OPERATION

A bypass pump may be used for applications that normally induce frequent start/stop of the motor, and thereby create a potential for overheating. Models equipped with an internal bypass are designed to pump at high pressure while at low flow rates. Bypass models equipped with a switch may operate for several seconds even though the outlet side has been closed off. Contact SHURflo for information regarding bypass pumps.

SHURflo

MOUNTING

- The 2088 series pumps are self priming. Horizontal and vertical prime vary depending on the fluid viscosity and pump configuration. Refer to the pumps Product Data Sheet.
- The pump should be located in an area that is dry and provides adequate ventilation. If mounted within an enclosure, provisions to cool the motor may be necessary. Heat sinks which attach to the motor are available from SHURflo if increased heat dissipation is necessary.

CAUTION: *DO NOT* locate the motor near low temperature plastics or combustible materials. The surface temperature of the motor may exceed 250°F [120°C]. Refer to the pumps Product Data Sheet.

- The pump may be mounted in any position. However, if mounting the pump vertically the pump head should be in the down position so that in the event of a leak, fluid will not enter the motor.
- Secure the rubber feet with #8 hardware. *DO NOT* compress the feet, doing so will reduce their ability to isolate vibration/noise.

PLUMBING

- Flexible high pressure tubing compatible with the fluid should be used to connect the inlet/outlet ports. Tubing should be either 3/8" or 1/2" [10 or 13 mm] I.D., and at least 18 in. [46 cm] length is suggested to minimize stress on the fitting/ports and reduce noise. Allow for the shortest possible tubing route and avoid sharp bends that may kink over time.

NOTE: Restrictions on the inlet may cause vacuum levels to reach the fluid vapor pressure, causing cavitation, degassing, vapor lock and a loss in performance. Inlet pressure *must* not exceed 30 psi [2.1 bar] maximum.

- **1/2" Male threaded models:** Are intended to be used with SHURflo Swivel Barb Fittings which seal with an internal taper when *hand tightened*. Standard 1/2" NPT fittings may be used when tightened to a maximum torque of 3.7ft/Lb (45in/Lb) [5Nm].

NOTE: SHURflo does not recommend the use of metal fittings or rigid pipe to plumb the inlet/outlet ports. Standard plastic male and female threaded fittings can be acquired at commercial plumbing supply stores. SHURflo also distributes Swivel Barb Fittings, and special fitting through it's dealers (Form #07-010-0011).

CAUTION: Sealers and Teflon tape may act as lubricant causing cracked housings or stripped threads due to over-tightening. Care should be used when applying sealers. Sealers may enter the pump inhibiting valve action, causing no prime or no shut-off. *Failures due to foreign debris is not covered under warranty.*

- Installation of a 50 mesh strainer is recommended to prevent foreign debris from entering the pump.
- If a check valve is installed in the plumbing, it must have a cracking pressure of no more than 2 psi [.14 bar].

ELECTRICAL

CAUTION: Electrical wiring should be performed by a qualified electrician, in accordance with all local electrical codes.

- The pump should be on a dedicated (individual) circuit, controlled with a double pole switch (U.L./C-UL certified) rated at or above the fuse ampere indicated by the pump motor label. Depending on distance of the power source from the pump and ampere load on the circuit, wire may need to be heavier than indicated by the chart.

CAUTION: All 115 VAC and 230 VAC pump motors and systems, *MUST* be ground per local and state electrical codes.

- Improper duty cycle and/or rapid start & stop conditions may cause the internal thermal breaker (if equipped) to trip, or can result in premature motor failure due to excessive heat. Refer to the pumps Product Data Sheet.

- For the pump to meet U.L./C-UL requirements the circuit **MUST** be protected with a slow-blow fuse (U.L./C-UL certified) or equivalent circuit breaker as indicated on the motor label. Use an approved wire of the size specified or heavier.

VOLTAGE FUSE RATING	WIRE LEADS	WIRE SIZE	
12 DC	RED (positive +) BLACK (negative -)	#14 AWG [2.5 Mm ²] (or heavier)	SEE PUMP MOTOR LABEL
24 DC			
36 DC			
115 AC	BLACK (common) WHITE (neutral) GREEN (ground)	#16 AWG C-UL - TEW / UL 1015	
230 AC	BLACK (common) BLUE (neutral) GRN/YELL (ground)	(or heavier) [1Mm ²]	

VDE requires a fuse (slow blow) or equivalent circuit breaker.

CAUTION: Circuit protection is dependent on the individual application requirements. Failure to provide proper overload / thermal devices may result in a motor failure, which will not be covered under warranty.

TROUBLESHOOTING

PUMP WILL NOT START:

(equipped)

- ✓ Fuse or breaker
- ✓ For correct voltage ($\pm 10\%$) and electrical connections
- ✓ Pressure switch operation and correct voltage at switch or motor wires (as equipped)
- ✓ Rectifier or motor for open or grounded circuit
- ✓ For locked drive assembly

WILL NOT PRIME: (No discharge/Motor runs)

- ✓ Out of product
- ✓ Strainer for debris
- ✓ Inlet tubing/plumbing for severe vacuum leak
- ✓ Inlet/Outlet tubing severely restricted (kinked)
- ✓ Debris in pump inlet/outlet valves
- ✓ Proper voltage with the pump operating ($\pm 10\%$)
- ✓ Pump housing for cracks

LEAKS FROM PUMP HEAD OR SWITCH:

- ✓ For loose screws at switch or pump head.
- ✓ Switch diaphragm ruptured or pinched
- ✓ For punctured diaphragm if fluid is present at bottom drain

SERVICE KITS

Kits are readily available to repair standard 2088 series pumps. Repair kits include simple illustrated instructions allowing easy installation. To insure that the correct kit is received the model numbered and all name plate data must be included with the order. Contact a SHURflo distributor or SHURflo directly to order the necessary repair kit.

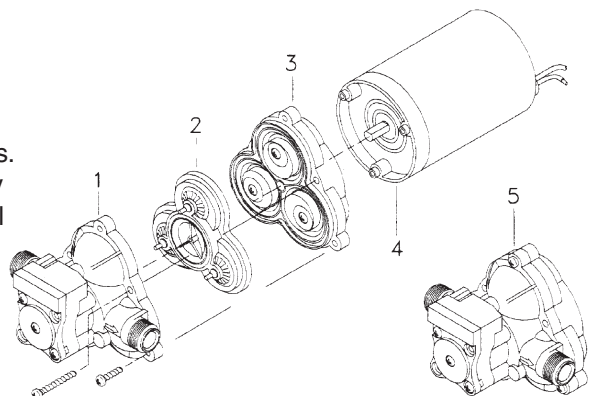
1	Switch / Check valve and Upper Housing Kit (Replaces all previous switch designs)
2	Valve plate assembly
3	Diaphragm / Drive Assembly
4	Motor
5	Complete Pump Head assembly (includes parts #1,2,3) (Replaces all previous switch designs)

PUMP WILL NOT SHUT-OFF: (Pressure switch

- ✓ Output line closed and no leaks
- ✓ For air trapped in outlet line or pump head
- ✓ For correct voltage to pump ($\pm 10\%$)
- ✓ Inlet/Outlet valves for debris or swelling
- ✓ For loose drive assembly or pump head screws
- ✓ Pressure switch operation/adjustment incorrect refer to SB #1031 for differential and pressure adjustment procedure

NOISY / ROUGH OPERATION:

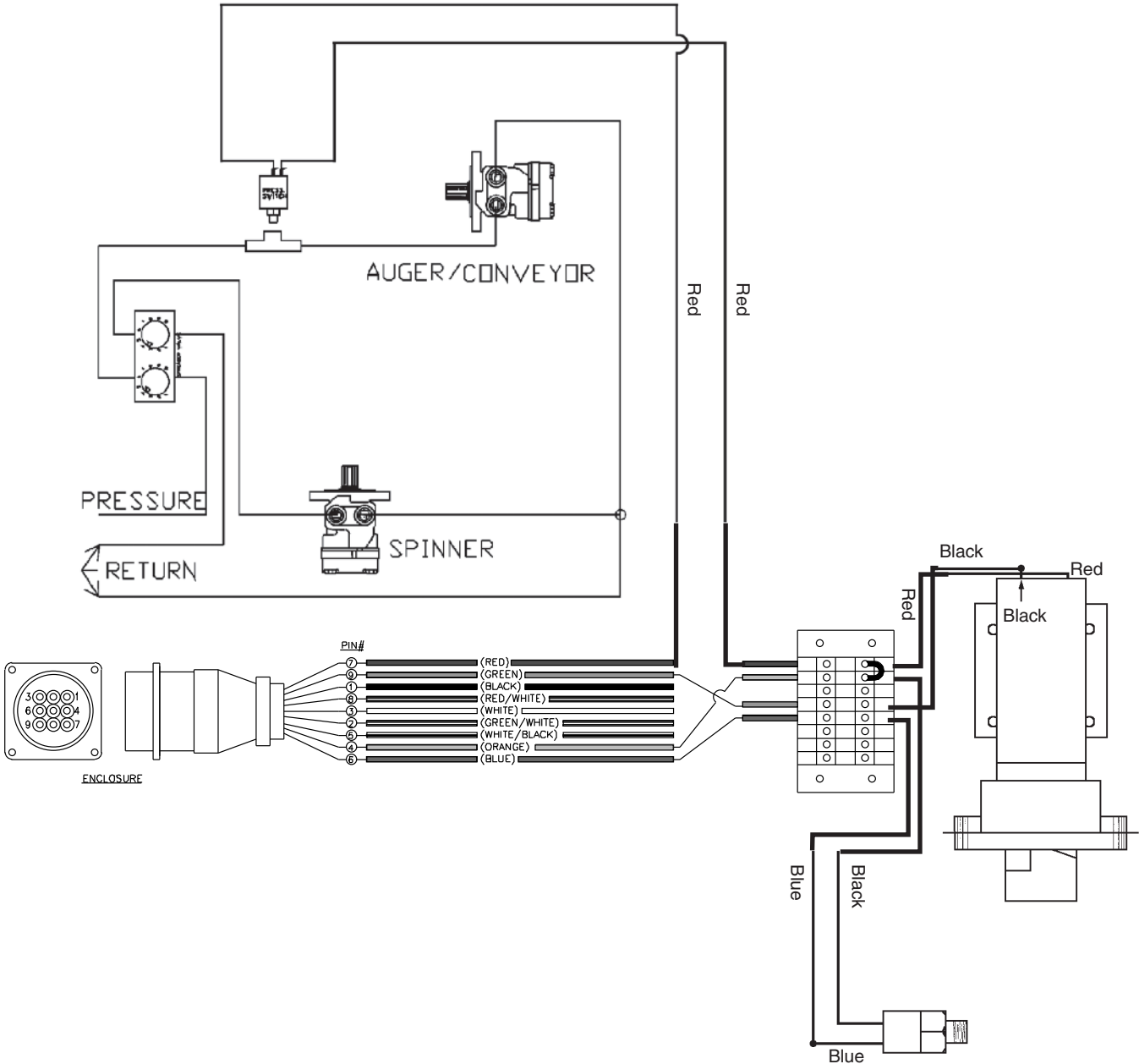
- ✓ Mounting feet that are compressed to tight
- ✓ Does the mounting surface multiply noise (flexible)
- ✓ For loose pump head or drive screws
- ✓ Is the pump plumbed with rigid pipe causing noise to transmit

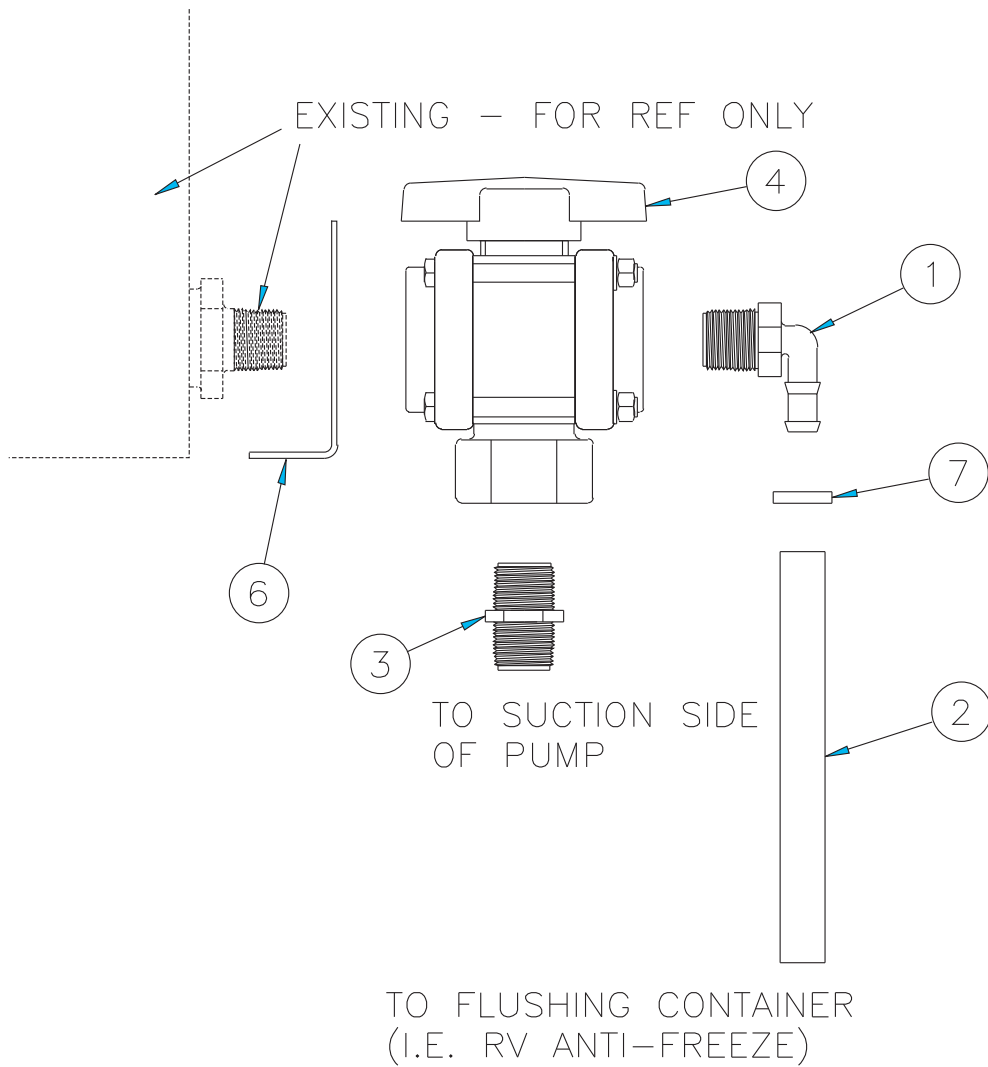


WIRING SCHEMATIC ACTIVATOR WITH OPTIONAL LOW PRESSURE SWITCH

OPTIONAL EQUIPMENT

05037656 Switch, Low Pressure, Hydraulic

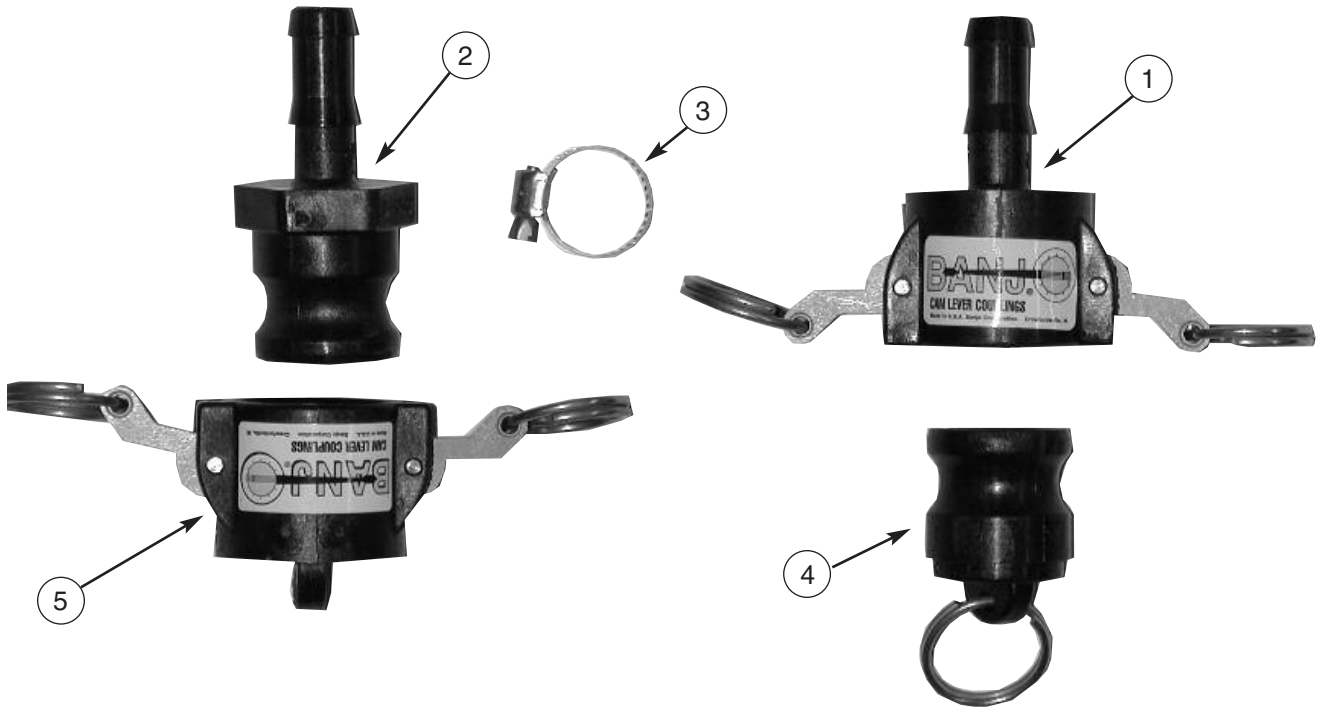




05050319 FLUSHER KIT

ITEM	QTY	PART #	DESCRIPTION
1	1	05037303	Hose Barb, 1/2" x 3/4" MNPT, Poly
2	3 FT	05037307	Hose, 1/2" Black, EPDM, 150 PSI
3	1	05037355	Nipple, 3/4" NPT, Short, Poly
4	1	05037363	Valve, 3-Way Ball Type, 3/4" FNPT
5	1	05037300	Clamp, Hose, 1", SST (Not Shown)
6	1	00050989	Bracket, Mounting, Valve, 2" Ball
7	1	05037281	Clamp, Hose, 3/4", SST

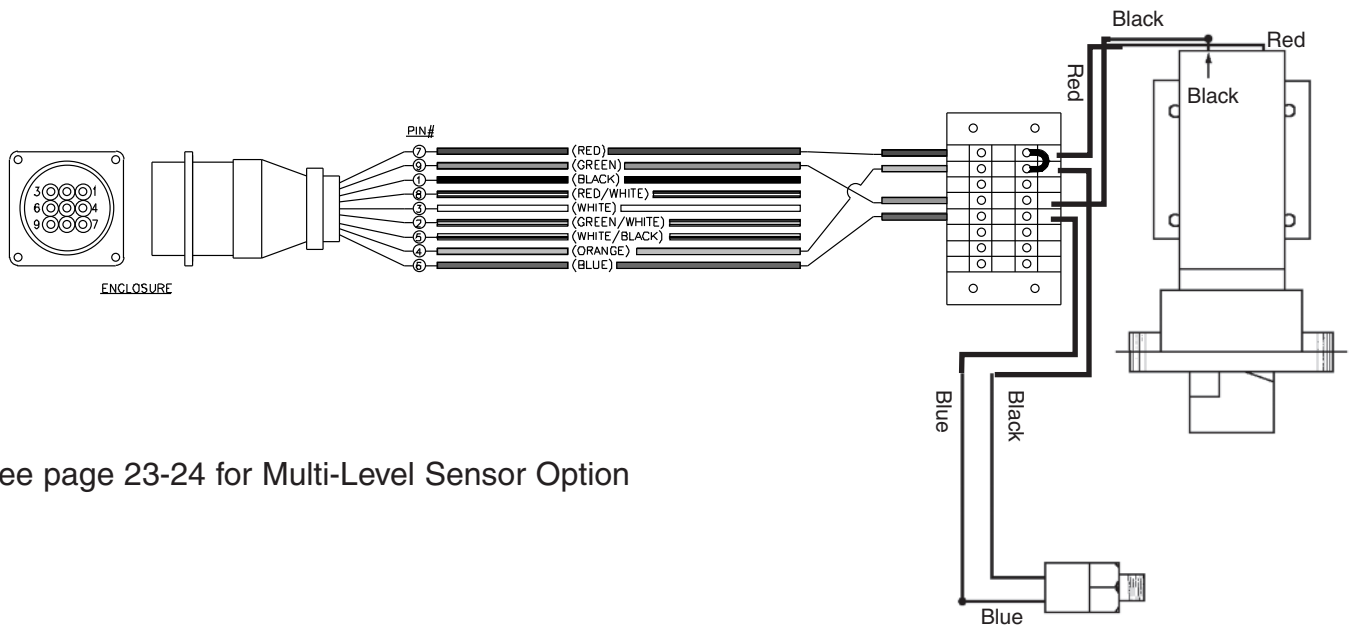
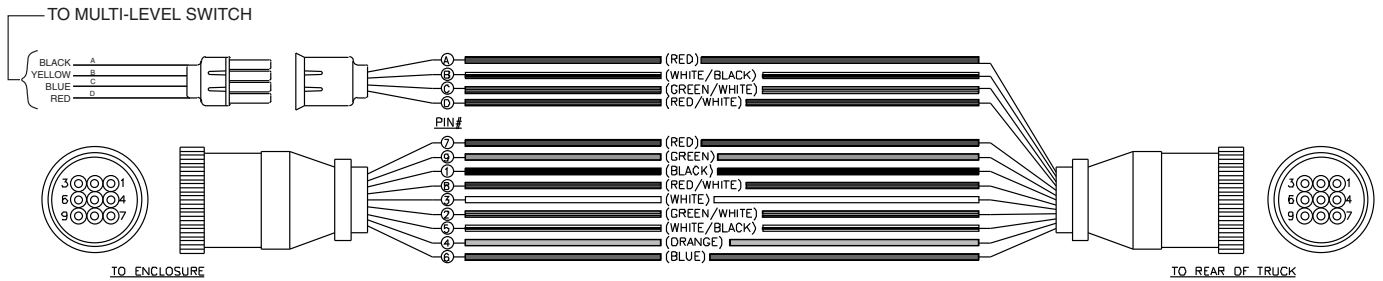
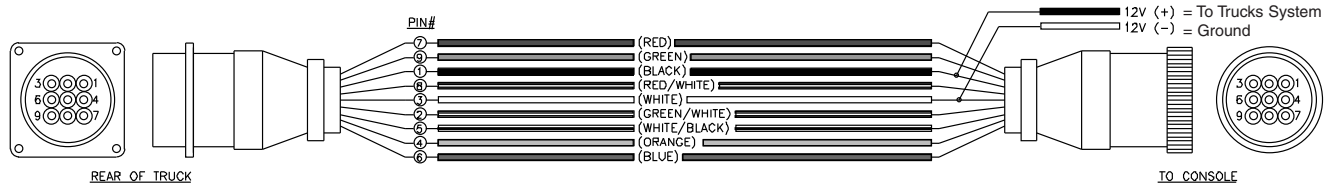
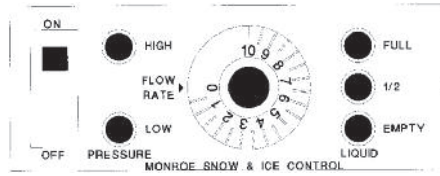
QUICK DISCONNECT KIT



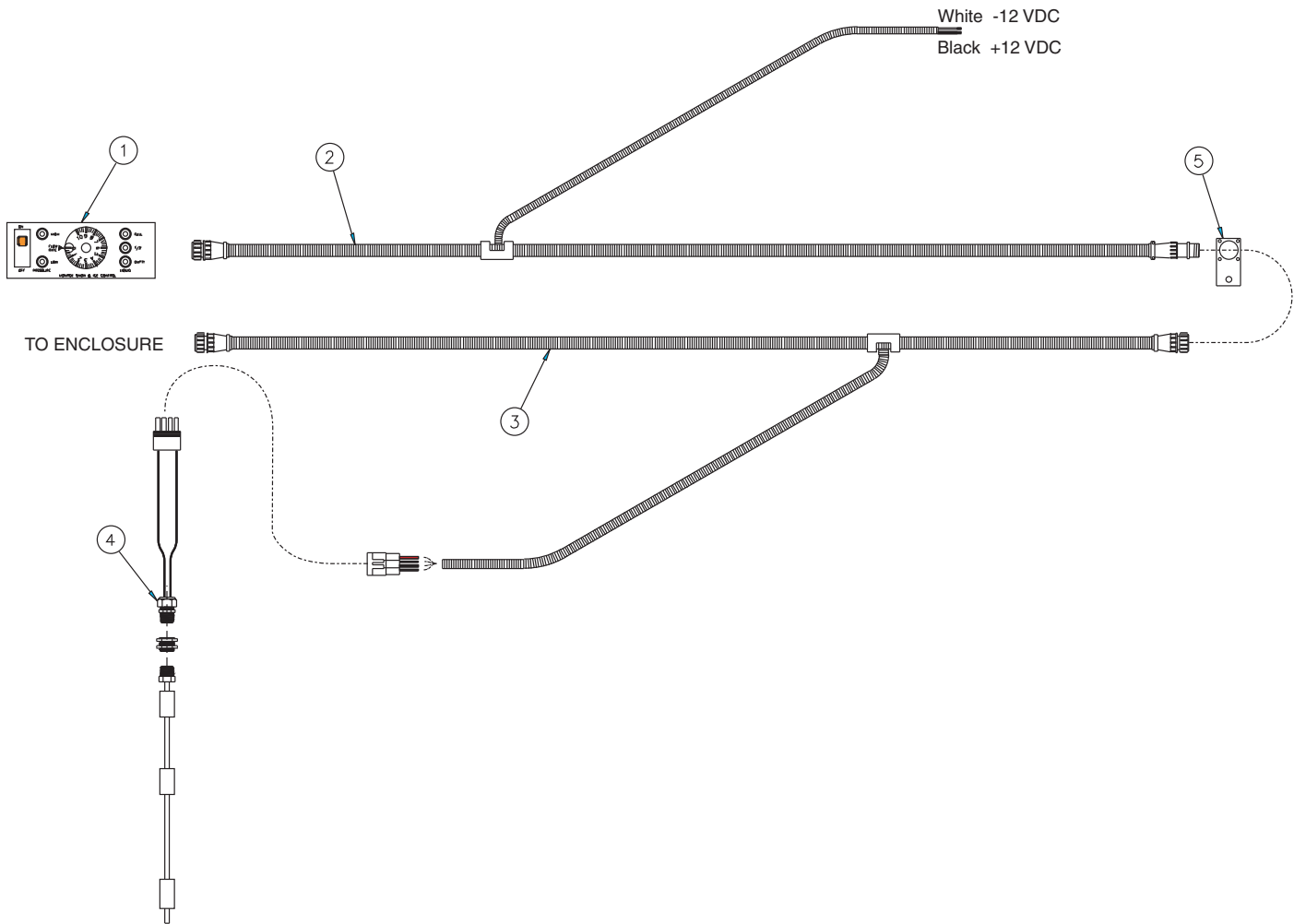
00020043 QUICK DISCONNECT KIT

ITEM	QTY	PART #	DESCRIPTION
1	1	05037637	Coupler, Cam, 3/4" Female, Poly
2	1	05037900	Coupler, Cam, 3/4" Male x 1/2" Hose, Poly
3	2	05037281	Clamp, Hose, 3/4" SST
4	1	05038313	Plug
5	1	05038312	Cap

WIRING SCHEMATIC ACTIVATOR SYSTEM WITH OPTIONAL MULTI-LEVEL SENSOR

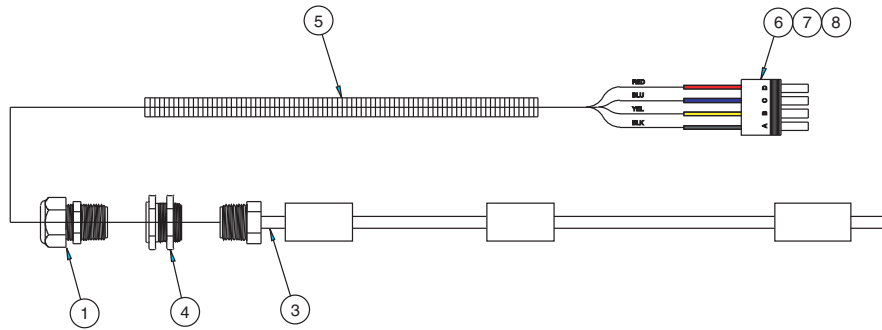


See page 23-24 for Multi-Level Sensor Option



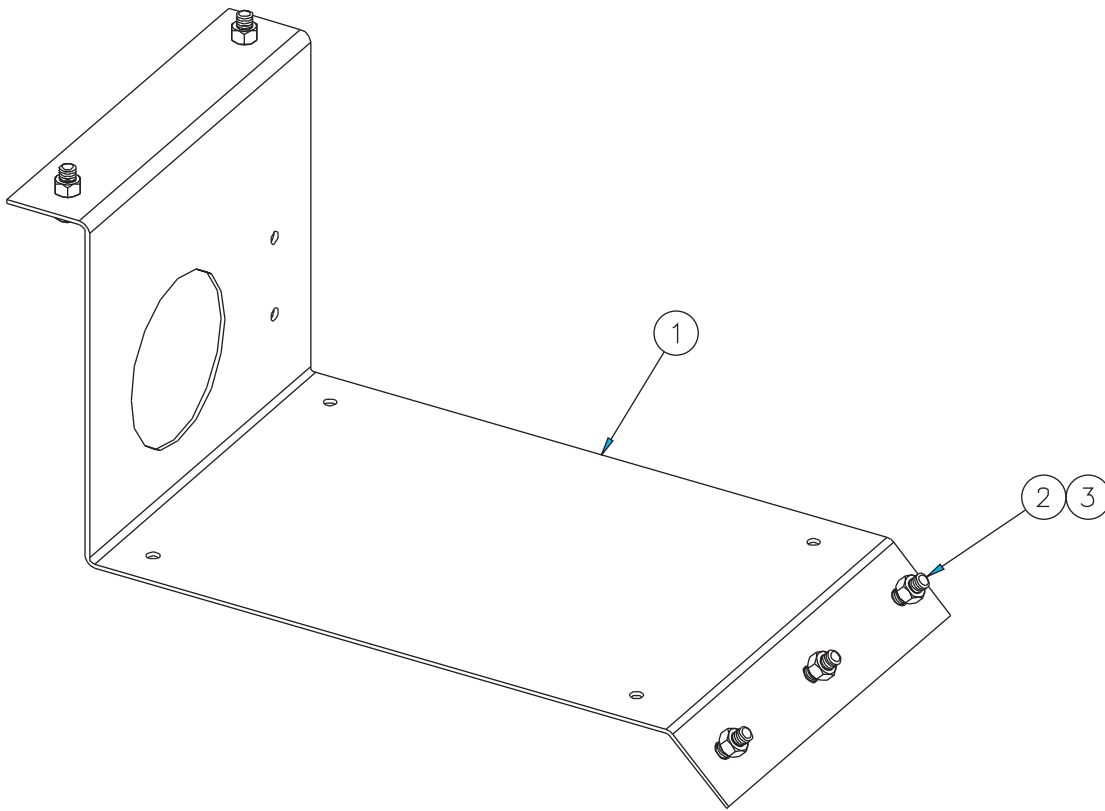
00016284 CONTROL/HARNESS KIT, VERSA COAT & ACTIVATOR

ITEM	QTY	PART #	DESCRIPTION
1	1	05041124	Panel, Control, 12 VDC
2	1	05041363	Cable Assembly, 31' OAL
3	1	05041364	Cable Assembly, 10', OAL
4	1	00016298	Kit, Multi-Level Sensor (See page 24)
5	1	00046773	Mounting Plate, Connector, Cable



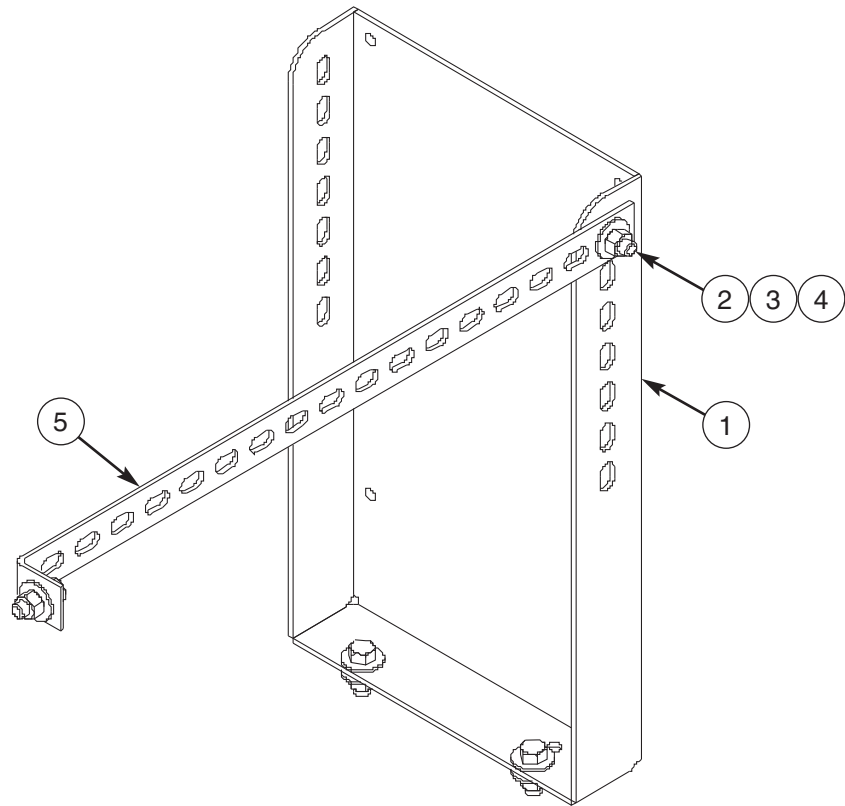
00016298 SENSOR KIT, MULTI-LEVEL

ITEM	QTY	PART #	DESCRIPTION
1	1	05041147	Fitting, ½", Compression, Plastic
3	1	05041456	Sensor, Tank, 3 Level, 17" OAL
4	1	05038211	Fitting, Bulkhead, Poly, ½" NPT
5	2 FT	05051774	Loom, Split, ½ DIA, Black
6	1	05041385	Connector, 4 Term, Tower Half
7	4	05041355	Terminal, Female, Packard Weather
8	4	05041386	Cavity Seal, Packard Weather



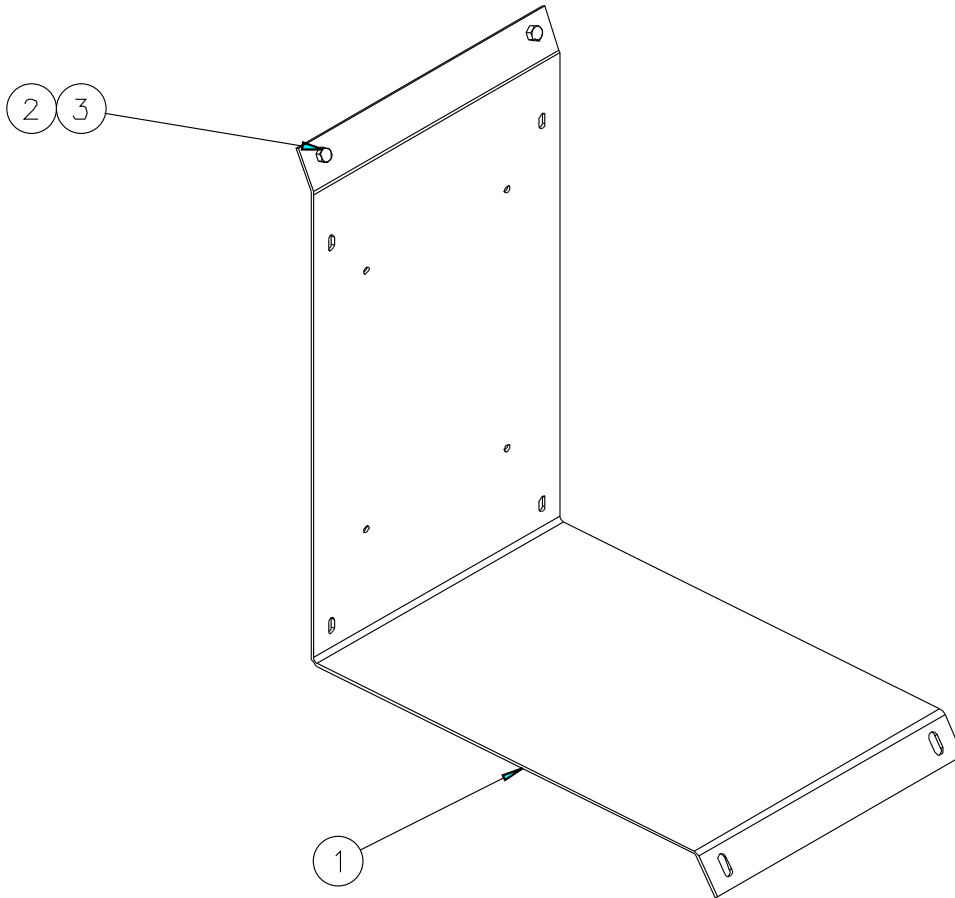
00016129 MOUNTING KIT, SMALL ENCLOSURE, V-BOX (BODY MOUNT)

ITEM	QTY	PART #	DESCRIPTION
1	1	00035948-A	Pump Enclosure Mount, MS
	1	00035948-B	Pump Enclosure Mount, SST
2	5	05010643	Bolt, 3/8-16 x 1, HHCS, G8, Zinc
	5	05016034	Bolt, 3/8-16 x 1, HHCS, SST
3	5	05020898	Nut, 3/8-16, Toplock, C&W
	5	05020891	Nut, 3/8-16, Nylon Lock, 316 SST



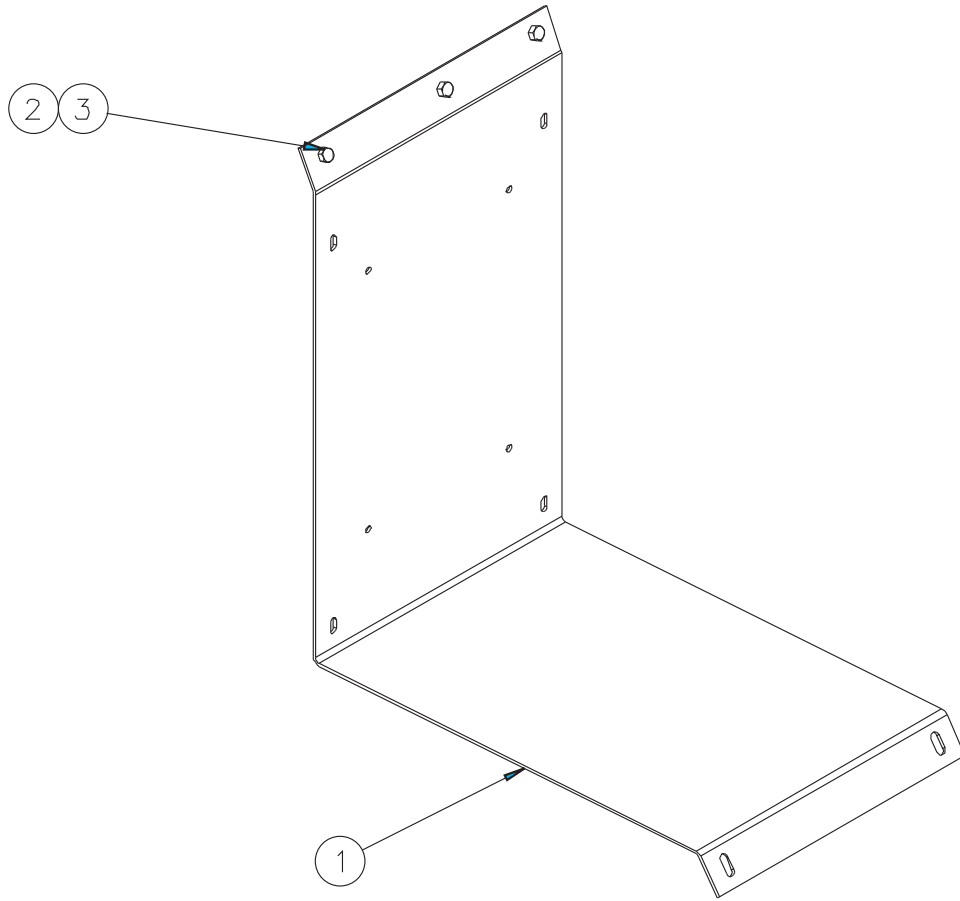
00016173 MOUNTING KIT, SMALL ENCLOSURE, MSPV (PLATFORM MOUNT)

ITEM	QTY	PART #	DESCRIPTION
1	1	00025487-A	Bracket, Mounting, Small Enclosure, MS
	1	00025487-B	Bracket, Mounting, Small Enclosure, 304
2	4	05010643	Bolt, 3/8-16 x 1, G8, HHCS, Zinc
	4	05016034	Bolt, 3/8-16 x 1, HHCS, SST
3	4	05020898	Nut, 3/8-16, Toplock, C&W
	4	05020891	Nut, 3/8-16, Nylon Lock, 316 SST
4	8	05021307	Washer, 3/8, Flat, Zinc
	8	05021390	Washer, 3/8, Flat, SST
5	1	00061895-A	Bracket, Adjuster, Enclosure, MS
	1	00061895-B	Bracket, Adjuster, Enclosure, SST



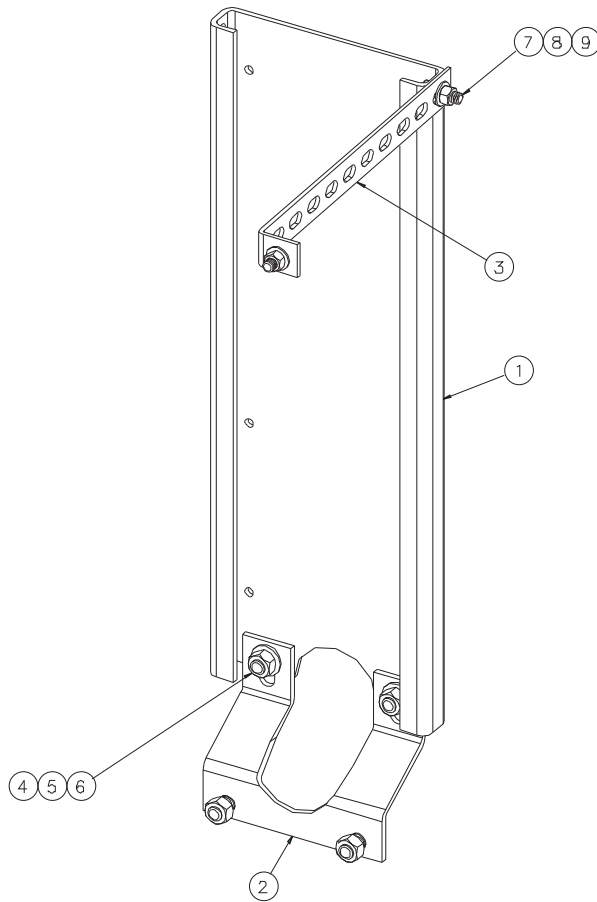
00012990 MOUNTING KIT, ENCLOSURE, RDS (BODY MOUNT)

ITEM	QTY	PART #	DESCRIPTION
1	1	00059394-A	Bracket, Control Box, MS
	1	00059394-B	Bracket, Control Box, 304 SST
2	2	05010643	Bolt, $\frac{3}{8}$ -16 x 1, HHCS, G8, Zinc
	2	05016034	Bolt, $\frac{3}{8}$ -16 x 1, HHCS, SST
3	2	05020898	Nut, $\frac{3}{8}$ -16, Toplock, C&W
	2	05020891	Nut, $\frac{3}{8}$ -16, Nylon Lock, 316 SST



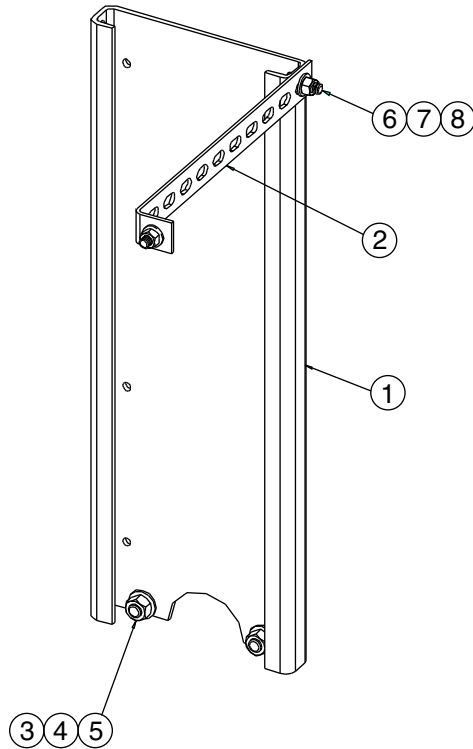
00016130 MOUNTING KIT, ENCLOSURE, DUZ-MOR (BODY MOUNT)

ITEM	QTY	PART #	DESCRIPTION
1	1	00065923-A	Bracket, Control Box, MS
	1	00065923-B	Bracket, Control Box, 304 SST
2	5	05010643	Bolt, $\frac{3}{8}$ -16 x 1, HHCS, G8, Zinc
	5	05016034	Bolt, $\frac{3}{8}$ -16 x 1, HHCS, SST
3	5	05020898	Nut, $\frac{3}{8}$ -16, Toplock, C&W
	5	05020891	Nut, $\frac{3}{8}$ -16, Nylon Lock, 316 SST



00020002 MOUNTING KIT, ENCLOSURE, V-BOX (SADDLE MOUNT) W/FLUSER

ITEM	QTY	PART #	DESCRIPTION
1	1	00059806-A	Mounting Plate, Enclosure, Pump, MS
	1	00059806-B	Mounting Plate, Enclosure, Pump, 304 SST
2	1	00059815-A	Bracket, Mount, Lower, Enclosure, MS
	1	00059815-B	Bracket, Mount, Lower, Enclosure, 304 SST
3	2	00061895-A	Bracket, Adjuster, Enclosure, MS
	2	00061895-B	Bracket, Adjuster, Enclosure, 304 SST
4	2	05010689	Bolt, ½-13 x 1, G8, HHCS, Zinc
	2	05016045	Bolt, ½-13 x 1¼, HHCS, SST
5	2	05021309	Washer, ½, Flat, Zinc
	2	05021391	Washer, ½, Flat, SST
6	2	05020847	Nut. ½-13, GC, Toplock, C&W
	2	05020908	Nut. ½-13, Nylon Lock, 316 SST
7	2	05010643	Bolt, ⅜-16 x 1, HHCS, G8, Zinc
	2	05016049	Bolt, ⅜-16 x 1¼, HHCS, SST
8	2	05021307	Washer, ⅜, Flat, Zinc
	2	05021390	Washer, ⅜, Flat, SST
9	2	05020898	Nut, ⅜-16, Toplock, C&W
	2	05020891	Nut, ⅜-16, Nylon Lock, 316 SST



00020003 MOUNTING KIT, ENCLOSURE, V-BOX (SADDLE MOUNT) W/O FLUSHER

ITEM	QTY	PART #	DESCRIPTION
1	1	00059806-A	Mounting Plate, Enclosure, Pump, MS
	1	00059806-B	Mounting Plate, Enclosure, Pump, 304 SST
2	1	00061895-A	Bracket, Adjuster, Enclosure, MS
	1	00061895-B	Bracket, Adjuster, Enclosure, SST
3	2	05010689	Bolt, 1/2-13 x 1, G8, HHCS, Zinc
	2	05016045	Bolt, 1/2-13 x 1 1/4, HHCS, SST
4	2	05021309	Washer, 1/2, Flat, Zinc
	2	05021391	Washer, 1/2, Flat, SST
5	2	05020847	Nut, 1/2-13, GC, Toplock, C&W
	2	05020908	Nut, 1/2-13, Nylon Lock, 316 SST
6	2	05010643	Bolt, 3/8-16 x 1, HHCS, G8, Zinc
	2	05016049	Bolt, 3/8-16 x 1 1/4, HHCS, SST
7	2	05021307	Washer, 3/8, Flat, Zinc
	2	05021390	Washer, 3/8, Flat, SST
8	2	05020898	Nut, 3/8-16, Toplock, C&W
	2	05020891	Nut, 3/8-16, Nylon Lock, 316 SST

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!

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 7th 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





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

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 3rd 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

