

LDS-455 PREWETTING SYSTEM

4GPM & 7GPM Service and Parts Manual



Monroe Snow & Ice Control A Division of Monroe Truck Equipment 1051 W. 7th Street

Monroe, WI 53566 Phone: 608-328-8127

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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.



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.

Off Season Storage:

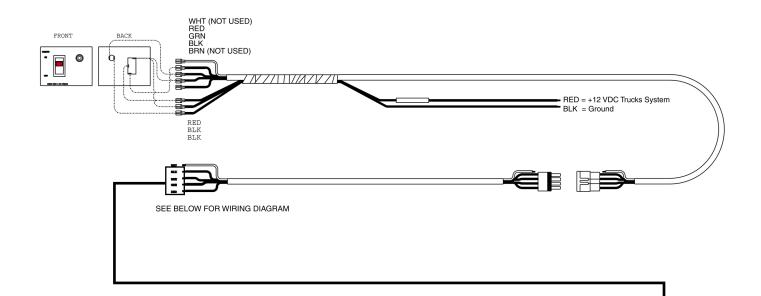
Getting the liquid system ready for summer storage will save you a great deal of time and money when fall comes for remounting.

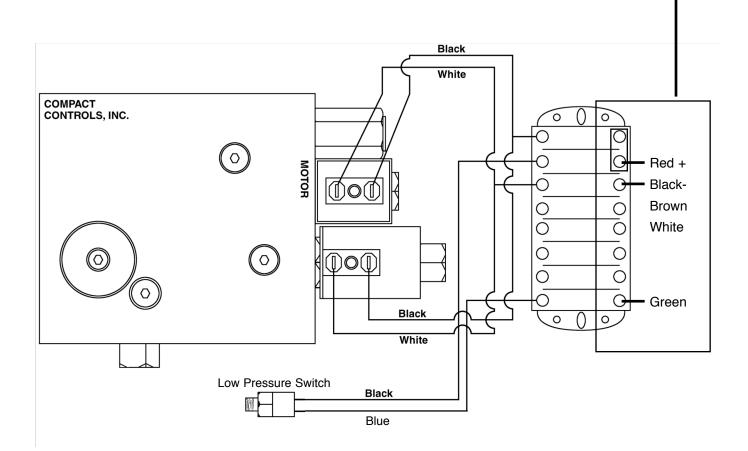
- Fully flush the complete system including tanks. (Recommend an RV anti-freeze solution or equivalent). This will prevent high concentrations from forming and help rid system of any residue build up.
- Inspect hoses and plumbing for leaks. Repair or replace as needed.
- Drain and clean strainer.
- Disassemble and clean spray nozzles. Check for debris and replace 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. Replace worn components and reassemble with a very light layer of grease to protect the bushings and gears from corroding and/or oxidizing fast.

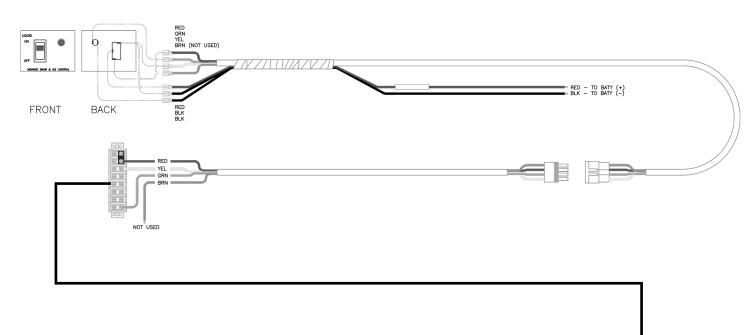
WIRING SCHEMATIC LDS-455 PRIOR TO 2006

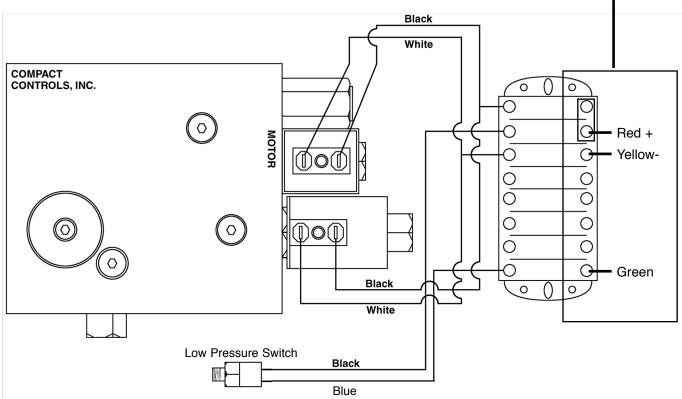




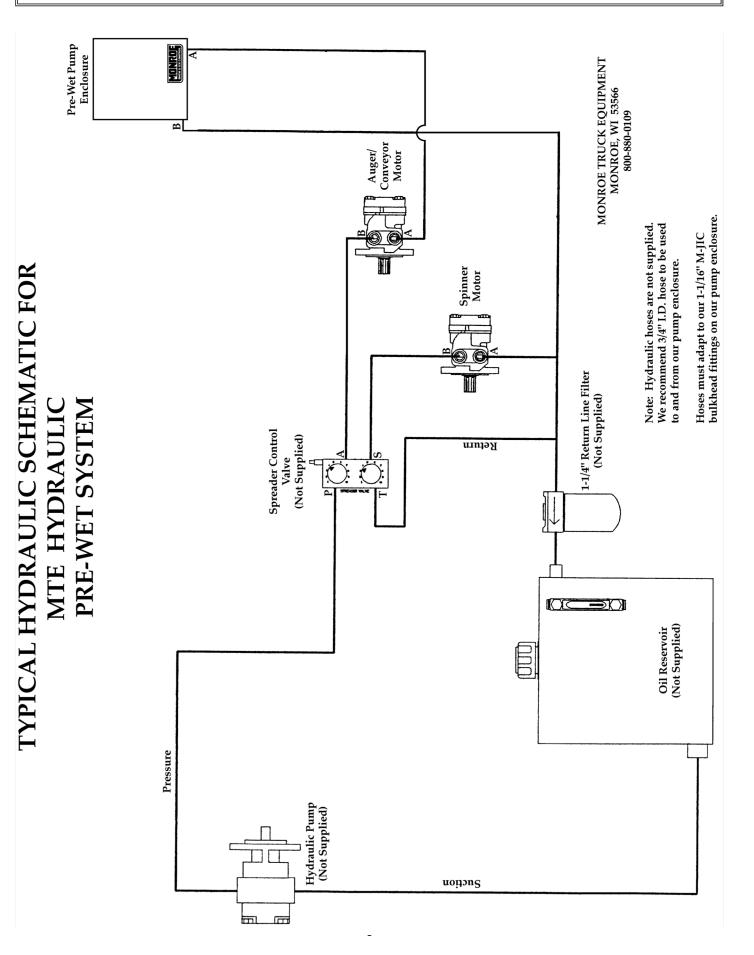
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WIRING SCHEMATIC LDS-455 CURRENT





PUMP ENCLOSURE PLUMBING (HYDRAULIC OIL)



CAB CONTROLLER INSTALLATION INSTRUCTIONS LDS-455

- 1. Locate and mount the cab controller within easy reach of the operator. Keep in mind the possible long hours of vehicle operation, and make sure it will not hinder safe vehicle operation.
- 2. The control panel is supplied with an integral mounting bracket.
 - When mounting control panel, attach it securely to your chosen mounting location, making sure to leave enough room for the connectors to be plugged into the back of the controller.
 - Connect fused console power harness to +12 VDC power source (Red wire) and good ground -12 VDC (Black wire)
 - Route 30 foot long console control harness through the cab to rear of the vehicle. Make sure the hole the cable passes through is grommeted and sealed.
 - Connect truck portion to 15 foot long tail harness routed to pump enclosure
 - **NOTE:** 1) Refer to wiring schematic page 4-5.
 - 2) Take care to keep cables routed away from pinch points, sharp corners, heat sources, and other areas that may prevent proper operation.
 - 3) We recommend the use of a quality dielectric grease be applied to all wire connections to help prevent corrosion.

Pump Enclosure and Nozzle Mounting Instructions LDS-455 System

1. Fasten the pump enclosure to the spreader or use optional pump enclosure mounting bracket. (Refer to the Tank and Mounting Hardware Kit Service and Parts Manual PN: 05051884)

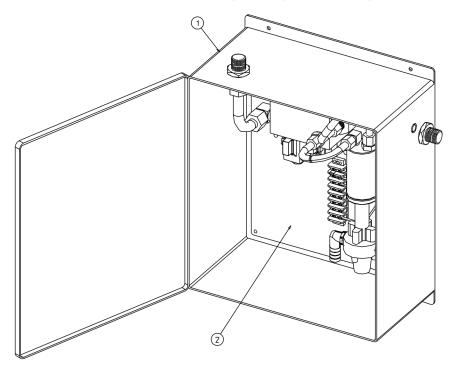
NOTE: (Mount enclosure in an accessible area for ease of service.)

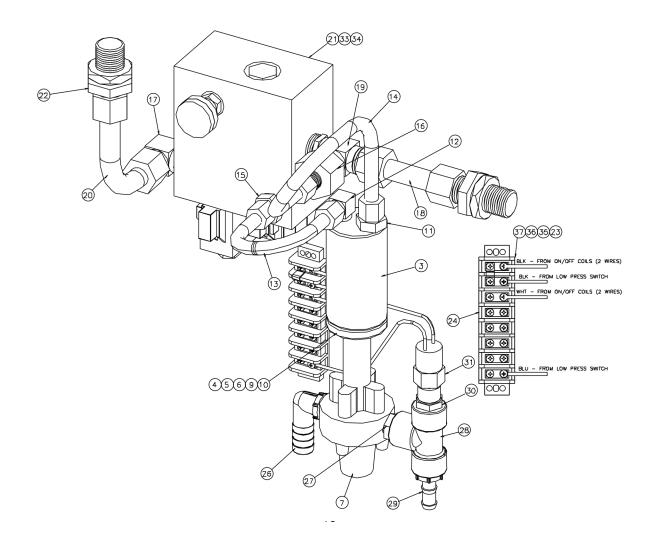
- 2. Pre-assemble the two spray nozzles.
- 3. Install nozzle assemblies on spinner chute or other desired location.
- 4. Install ½" hose between pressure side of pump to poly check valve and nozzle assembly using fittings and hose clamps provided.
- 5. Install a $1\frac{1}{4}$ " to $\frac{3}{4}$ " reducing nipple into the tank.
- 6. Install a ³/₄" ball valve onto the reducing nipple.
- 7. Install a ³/₄" short nipple into suction strainer and into ball valve. The arrow on the strainer should be pointing in the direction of flow.
- 8. Install a 90° hose barb, ³/₄" MNPT x ³/₄" Male Barb, into the other end of the suction strainer. **NOTE:** (Optional fittings may be needed to fit application.)
- 9. Install ³/⁴ 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 4-5.

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.

00017217 PLUMBING KIT, HYD, LDS-455, 4GPM 00017224 PLUMBING KIT, HYD, LDS-455, 7GPM



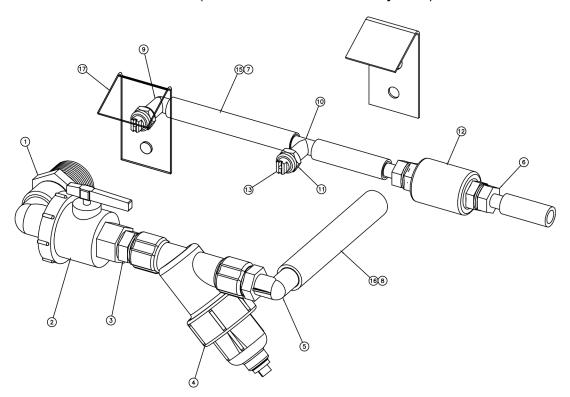


00017217 PLUMBING KIT, HYD, 4GPM, LDS455 00017224 PLUMBING KIT, HYD, 7GPM, LDS455

			17224 PLUMBING KIT, HYD, 7GPM, LDS455			
Item	Qty	Part Number	Description			
1	1	05041358	JUNCTION BOX, 18 X 8, NEMA, HYD			
2	1	00056100-A	MOUNTING PLATE, INNER, JB, MS			
3	1	05006735	MOTOR, HYD, .79 CI, 3-B MOUNT			
4	1	05050529	MOTOR MOUNTING ANGLE, DIRECT COUPLE			
5	1	05037811	COUPLING, LOVEJOY SPECIAL, W/ SET SCREW			
6	1	05051530	INSERT, RUBBER, LOVEJOY, MOTOR TO PUMP			
7	1	05008068 05008067	PUMP, BRASS DIRECT COUPLE, 4GPM W/RELIEF VALVESee page 19PUMP, BRASS DIRECT COUPLE, 7GPM W/ RELIEF VALVESee page 20			
8	1	05051625	DECAL, MONROE SNOW & ICE CONTROL			
9	2	05016138	BOLT, .313-18 X 1, HHCS, SST			
10	2	05020901	NUT, .313-18, SPINLOCK, SST			
11	1	05037341	ADAPTER, STRAIGHT, .750-16 MJIC X 9/16-18 MORB			
12	1	05037342	ADAPTER, 90°, .75-16 MJIC X 9/16-18 MORB			
13	1	05037348	TUBE, STEEL, .5" W/ (2) .75-8FJIC, C-SHAPE			
14	1	05037347	TUBE, STEEL, .5 W/ (2) .750-8FJIC, LOOP			
15	1	05037343	ADAPTER, STRAIGHT, .75-16MJIC X .75-16MORB			
16	1	05037345	ADAPTER, STRAIGHT, REDUCER			
17	1	05037340	ADAPTER, 90°, 1-1/16FJIC X .75-16 MJIC			
18	1	05037349	TUBE, STEEL, .75 W/ 2 FJIC 1-1/16			
19	1	05037344	ADAPTER, TEE, (2) 1-1/16 MJIC X (1) 1-1/16 MORB			
20	1	05037350	TUBE, STEEL, .75 W/ 2 FJIC 1-1/16, LG EL			
21	1	05037328	MANIFOLD, HYD			
22	2	05037346	ADAPTER, BULKHEAD, 1-1/16MJIC BOTH ENDS			
23	1	05041161	TERMINAL BLOCK, DOUBLE ROW (8) POSITIONS			
24	1	05041162	JUMPER STRIP, TWO TERMINAL			
25	2	05041177	WIRE HARNESS, 15 OAL, HYD ENCLOSURE			
26	1	05037509	HOSE BARB, .750 X .5 MNPT, POLY, 90°			
27	1	05037314	NIPPLE, .5" NPT, SHORT POLY			
28	1	05037313	TEE, .5 FEMALE NPT ALL PORTS POLY			
29	1	05037302	HOSE BARB, .5 X .5 MNPT, POLY, STRAIGHT			
30	1	05037312	BUSHING, REDUCER, .5 MNPT X .25 FNPT			
31	1	05041129	SWITCH, LOW PRESSURE WARNING			
32	1	05051882	MANUAL, LDS 455			
33	4	05010641	BOLT, .375-16 X .750, G8, HHCS, ZINC			
34	4	05021392	WASHER, 375, LOCK, SST			
35	2	05016956	SCREW, #10-24 X 1 HX HD 18-8			
36	2	05021413	WASHER, #10, FLAT, 18-8 SS			
37	2	05020964	NUT, #10-24, NYLONG LOCK 316 SST			
38	1	05041147	FITTING, .5 COMPRESSION (Not Shown)			
39	1	05041149	NUT, .5 W/ SEAL (Not Shown)			
40	3	05041311	TERMINAL RING #10 STUD (Not Shown)			
41	3	05016935	BOLT, .25-28 X .75 SHCS, SST			

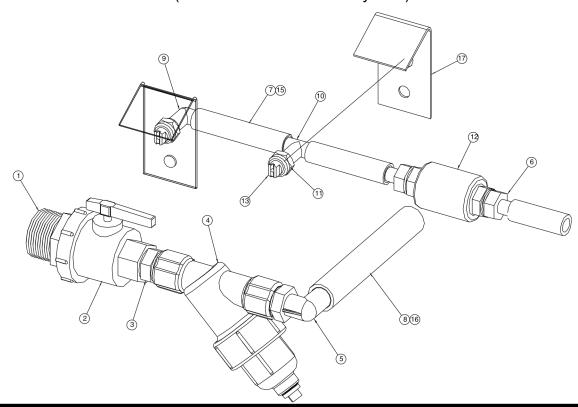
NOZZLE KIT, HYDRAULIC UNIT, 2 NOZZLE

(For use with the 4 GPM system)

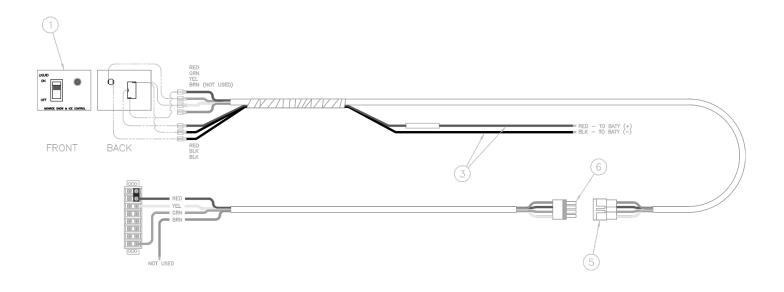


	00020034 NOZZLE KIT, HYDR UNIT, 2 GPM, 2 NOZZLE						
Item	Qty	Part Number	Description				
1	1	05037311	NIPPLE, REDUCING, POLY, 1.25 MNPT X .75" MNPT				
2	1	05037315	VALVE, BALL-UNION TYPE POLY, .75 FNPT				
3	1	05037355	NIPPLE, .75 NPT SHORT POLY				
4	1	05037309	STRAINER, Y-TYPE, .75" FNPT, 20 MESH SCREEN See page 21				
5	1	05037304	HOSE BARB, 90°, POLY, .75 MNPT X .75 BARB				
6	2	05037302	HOSE BARB, .5 X .5 MNPT, POLY, STRAIGHT				
7	6	05037281	CLAMP, HOSE, .75 SST				
8	2	05037300	CLAMP, HOSE, 1 SS				
9	1	05038197	NOZZLE BODY, POLY, .5 HOSE BARB, 90°				
10	1	05038196	NOZZLE BODY, POLY, .5 HOSE BARB, TEE				
11	2	05038179	NOZZLE CAP, BRASS				
12	1	05050202	VALVE, IN-LINE CHECK, .5 NPT				
13	2	05038198	NOZZLE, TIP, BRASS, 2GPM@40PSI, QUICK				
14	1	05050271	CLAMP, 1" ID, CUSHIONED METAL, #12 (Not Shown)				
15	20 FT	05037307	HOSE, .5 BLACK EPDM, 150 PSI WORKING				
16	5 FT	05037308	HOSE, .75, BLACK, EPDM, 150PSI WORKING				
17	2	00050939	SHIELD, NOZZLE, 304				
18	4	05016138	BOLT, .313-18 X 1, HHCS, SST				
19	4	05020901	NUT, .313-18, SPINLOCK, SST				
20	1	05016040	BOLT, .250-20 X 1, HHCS, SST (Not Shown)				
21	1	05020904	NUT, .250-20 SPINLOCK, SST (Not Shown)				
22	1	05037464	SEALANT, THREAD W/ TEFLON (Not Shown)				
23	1	05037585	ELBOW, .75" NPT, POLY STREET				
24	1	05037301	HOSE BARB, POLY, .75 NPT X .75 BARB (Not Shown)				

NOZZLE KIT, HYDRAULIC UNIT, 2 NOZZLE (For use with the 7 GPM system)



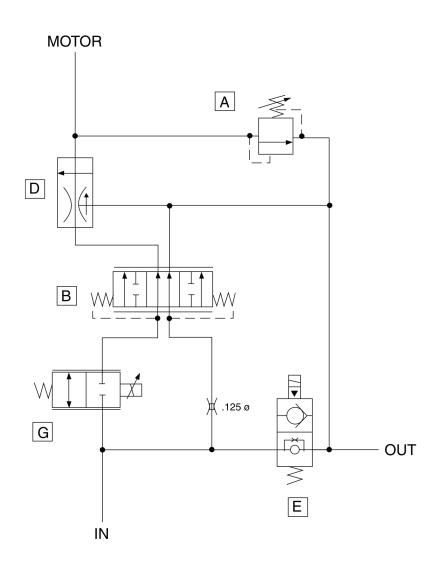
	00065209 NOZZLE KIT, HYDR UNIT, 3 GPM, 2 NOZZLE					
Item	Qty	Part Number	Description			
1	1	05037311	NIPPLE, REDUCING, POLY, 1.25 MNPT X .75" MNPT			
2	1	05037315	VALVE, BALL-UNION TYPE POLY, .75 FNPT			
3	1	05037355	NIPPLE, .75 NPT SHORT POLY			
4	1	05037309	STRAINER, Y-TYPE, .75" FNPT, 20 MESH SCREEN See page 21			
5	1	05037304	HOSE BARB, 90°, POLY, .75 MNPT X .75 BARB			
6	2	05037302	HOSE BARB, .5 X .5 MNPT, POLY, STRAIGHT			
7	6	05037281	CLAMP, HOSE, .75 SST			
8	2	05037300	CLAMP, HOSE, 1 SS			
9	1	05038197	NOZZLE BODY, POLY, .5 HOSE BARB, 90°			
10	1	05038196	NOZZLE BODY, POLY, .5 HOSE BARB, TEE			
11	2	05038179	NOZZLE CAP, BRASS			
12	1	05050202	VALVE, IN-LINE CHECK, .5 NPT			
13	2	05038221	NOZZLE, TIP, BRASS, 3GPM@40PSI, QUICK			
14	1	05050271	CLAMP, .75" ID, CUSHIONED METAL, #16 (Not Shown)			
15	20 FT	05037307	HOSE, .5 BLACK EPDM, 150 PSI WORKING			
16	5 FT	05037308	HOSE, .75, BLACK, EPDM, 150PSI WORKING			
17	2	00050939	SHIELD, NOZZLE, 304			
18	4	05016138	BOLT, .313-18 X 1, HHCS, SST			
19	4	05020901	NUT, .313-18, SPINLOCK, SST			
20	1	05016040	BOLT, .250-20 X 1, HHCS, SST (Not Shown)			
21	1	05020904	NUT, .250-20 SPINLOCK, SST (Not Shown)			
22	1	05037464	SEALANT, THREAD W/ TEFLON (Not Shown)			
23	1	05037585	ELBOW, .75" NPT, POLY STREET (Not Shown)			
24	1	05037301	HOSE BARB, POLY, .75 NPT X .75 BARB (Not Shown)			



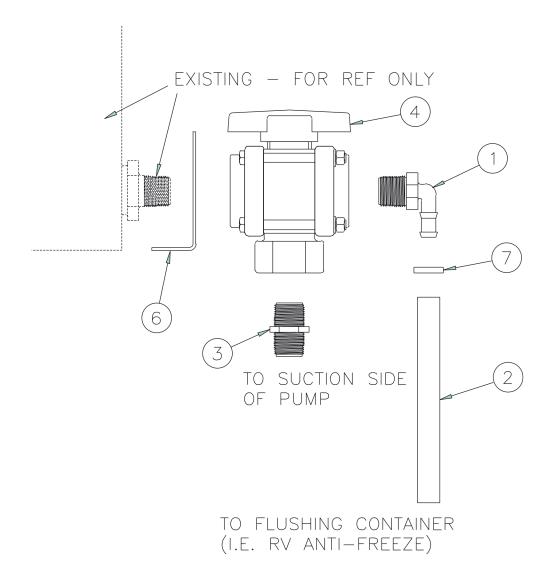
	00065202 CONTROL/HARNESS KIT, LDS455							
Item	Qty	Part Number	Description					
1	1	05041159	PANEL, CONTROL, W/O HARNESS See page 15					
3	1	05041563	WIRE HARNESS, FUSED, TRUCK TO CONTROLLER					
5	1	05040380	CABLE ASSEMBLY, TRUCK PORTION, 30' OAL					
6	1	05040381	CABLE ASSEMBLY, TAIL PORTION, 15' OAL					



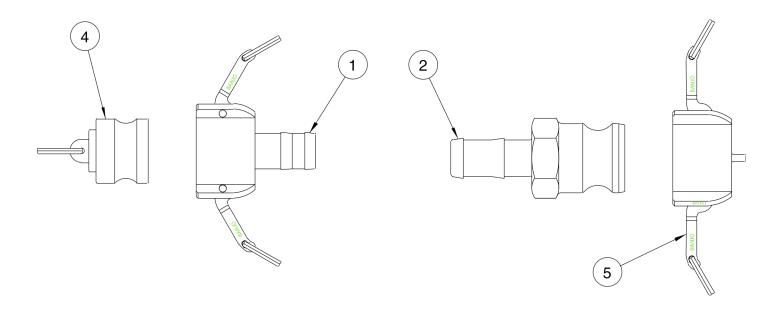
	05041159 PANEL, CONTROL ASSEMBLY				
Item	n Qty Part Number Description				
1	1	05041442	SWITCH, ROCKER, ILLUMINATED, OFF/ON		
2	1	05041267	LIGHT, INDICATOR, RED		



	05037328 MANIFOLD, HYDRAULIC					
Item	Qty	Part Number	Description			
Α	1	05039835	RELIEF VALVE			
В	1	05039833	PRIORITY FLOW CONTROL			
С	1	05039836	SHUTTLE VALVE			
D	1	05039838	NEEDLE VALVE WITH KNOB			
E	1	05039834	2-WAY N.O. SOLENOID VALVE, W/O COIL			
G	1	05039837	2-WAY N.C. SOLENOID VALVE, W/O COIL			
Н	1	05041781	COIL, LARGE, #6351012 (VA0685-02 VALVE) NOT SHOWN			
I	1	05041782	COIL SMALL, #6301012 (VA0685-02 VALVE) NOT SHOWN			

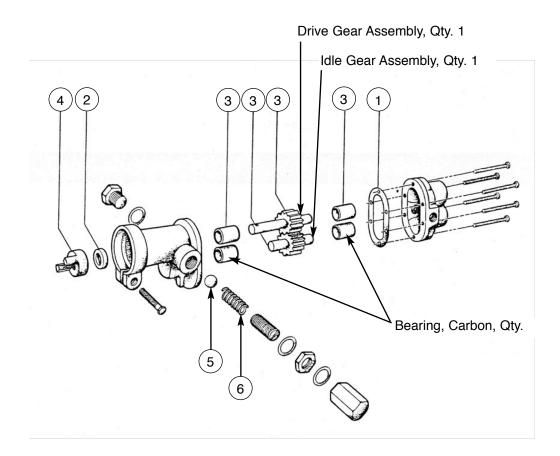


	05050319 FLUSH KIT, 12VDC & HYDRUALIC				
Item	Qty	Part Number	Description		
1	1	05037303	HOSE BARB, .5 X .75 MNPT, POLY, 90°		
2	3 FT	05037307	HOSE, .5, BLACK, EPDM, 150 PSI		
3	1	05037355	NIPPLE, .75 NPT, SHORT, POLY		
4	1	05037363	VALVE, 3 WAY BALL TYPE, .75 FNPT		
5	1	05037300	CLAMP, HOSE, 1 SST (NOT SHOWN)		
6	1	00050989	BRACKET, MOUNTING, VALVE, 2" BALL		
7	1	05037281	CLAMP, HOSE, .75" SST		



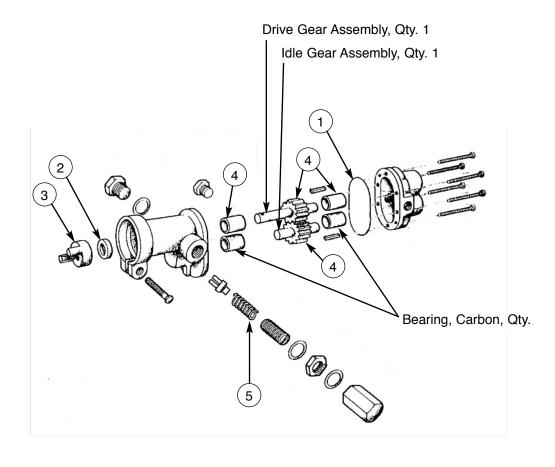
			00020043 QUICK DISCONNECTOR KIT
Item	Qty	Part Number	Description
1	1	05037637	COUPLER, POLY, CAM, .75" FEMALE CO
2	1	05037900	COUPLER, POLY, CAM, .75" MALE X .5" HOSE
3	2	05037281	CLAMP, HOSE, .75 SST (NOT SHOWN)
4	1	05038313	PLUG, POLY, CAM
5	1	05038312	CAP, POLY, CAM

05008068 Pump, Brass, Direct Couple, 4 GPM @ 1725 RPM



ITEM	QTY	PART #	DESCRIPTION
1	1	05051609	Gasket
2	1	05051610	Seal, Lip
3	-	05051611	Kit, Repair (Also Contains items 1 & 2)
4	1	05037811	Coupling Half
5	1	05008294	Ball
6	1	05008643	Spring, Relief Valve

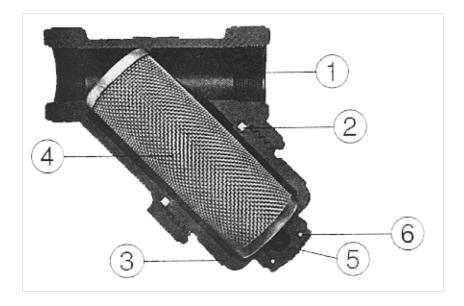
05008067 Pump, Brass, Direct Couple, 7 GPM @ 1725 RPM



ITEM	QTY	PART #	DESCRIPTION
1	1	05051612	Gasket
2	1	05051610	Seal, Lip
3	1	05037811	Coupling Half
4	-	05051614	Kit, Repair (Also Contains items 1 & 2)
5	1	05008641	Spring, Relief Valve

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05037309 STRAINER, Y-TYPE, ¾" 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

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 <u>freight prepaid</u>!

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.

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.

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

The following must accompany any claim submitted to Monroe Truck Equipment: Documented photographs of any physical damage. Inspection notes by MTE personnel or MTE authorized 3rd party. 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 January 1, 2004

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