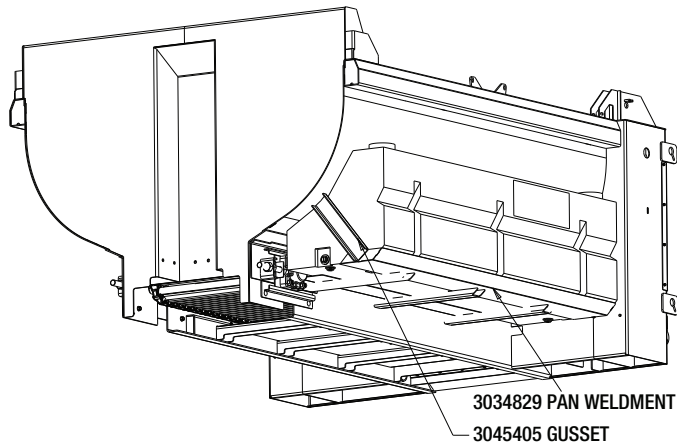


Installation & Operator's Manual

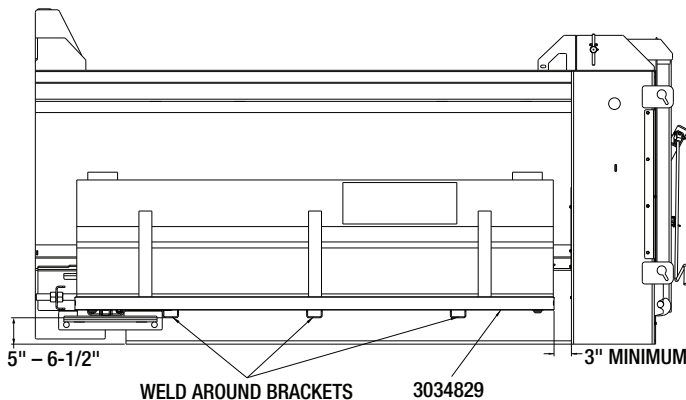
LS11 Liquid Spray System 2 x 160 Gallon Tanks

Tank Installation

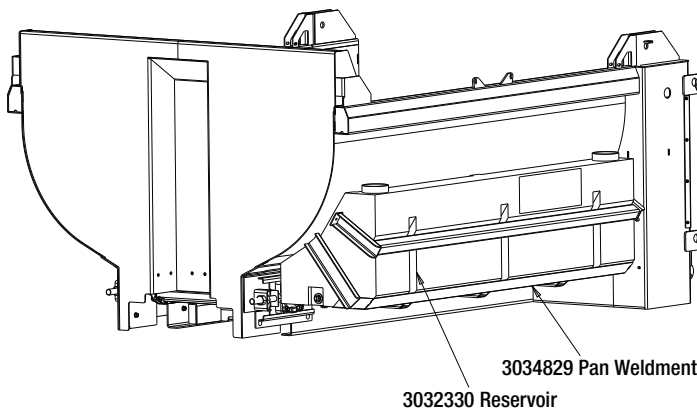
1. Position Pan Weldment on spreader's body as shown below.



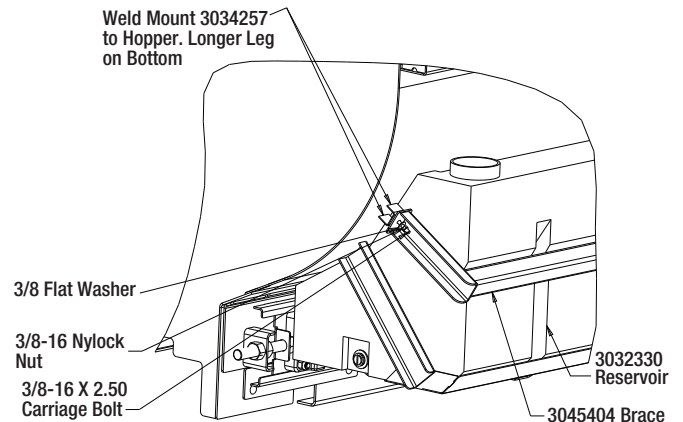
2. Weld Pan Weldment and Gussets to spreaders body using dimensions shown below.



3. Place tank #3032330, brace #3045404 as shown below.



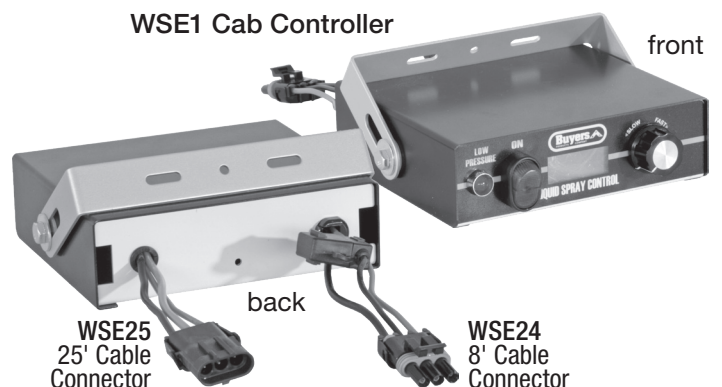
4. Attach Tank Mounts #3034257 to #3045404 using carriage bolts, flat washers and lock nuts as shown below. Adjust mounts #3034257, so they touch spreader body as shown in picture below. Weld mounts to spreader body. Tighten nuts evenly to secure tank on spreader.



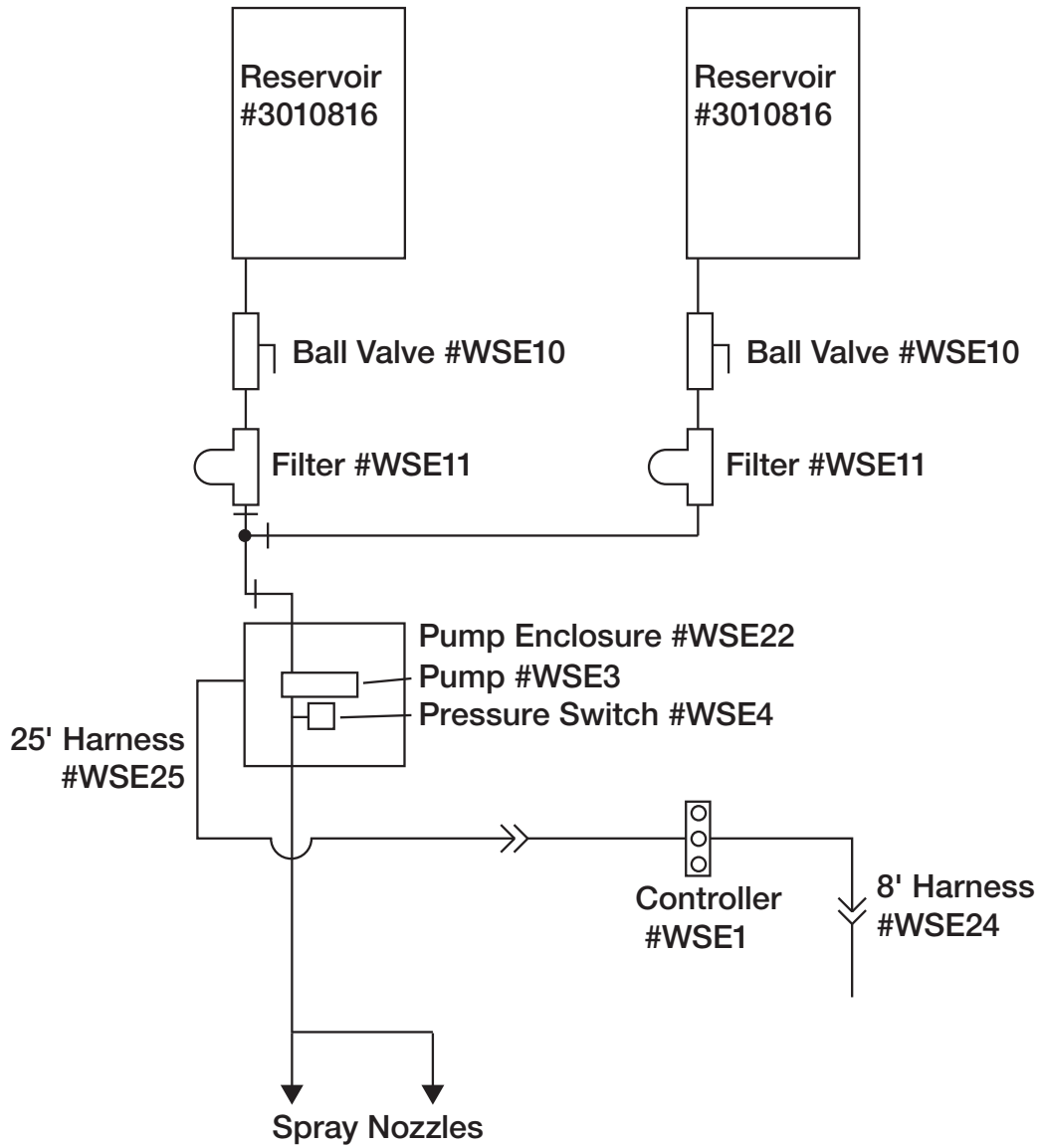
5. Plumb: Reservoir, ball valve, filter, pump enclosure, and spray nozzles according to plumbing schematic using supplied fittings, hose, and hose clamps. Do not use Teflon tape on threads. Use liquid thread sealant.

Cab Controller Installation

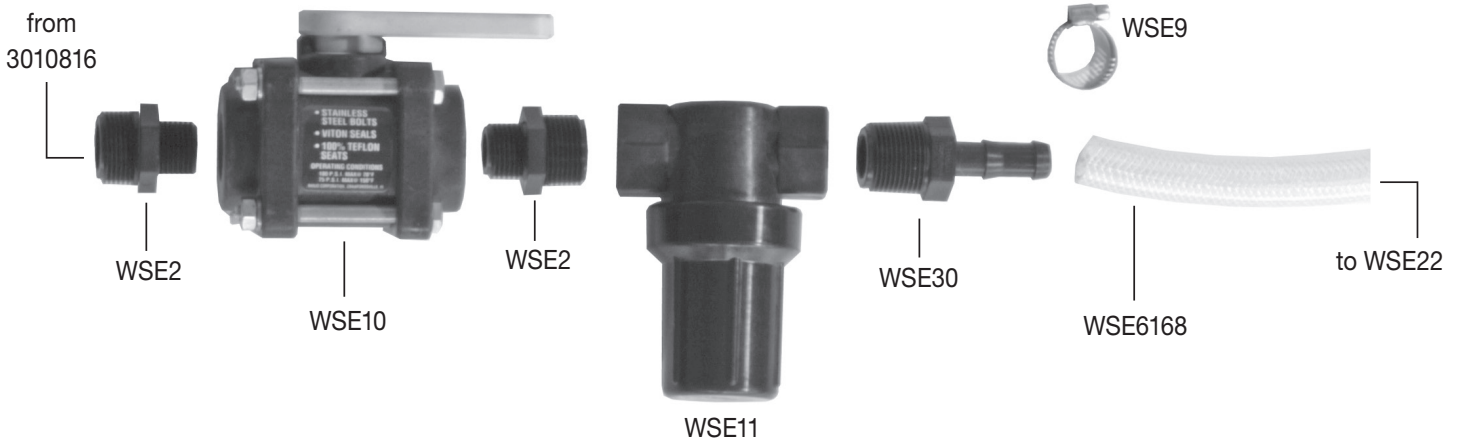
1. Install cab controller (#WSE1) in cab for convenient driver operation. Mounting bracket and fasteners included.
2. Route 8' wire harness (#WSE24) under dash from controller (#WSE1) to truck's fuse panel.
3. Ground "black" wire from controller to truck frame or truck's battery (not dash).
4. Attach "green" wire in 8' wire harness (#WSE24) to a fused and keyed 15 Amp hot wire circuit.
5. Connect main power "white" wire in 8' wire harness (#WSE24) to fuse box that is "hot" full time or to battery "positive".
6. Route the 25' wire harness (#WSE25) from the rear of the spreader to the cab. Plug connector on controller (#WSE1) to the connector on pump harness (#WSE25).

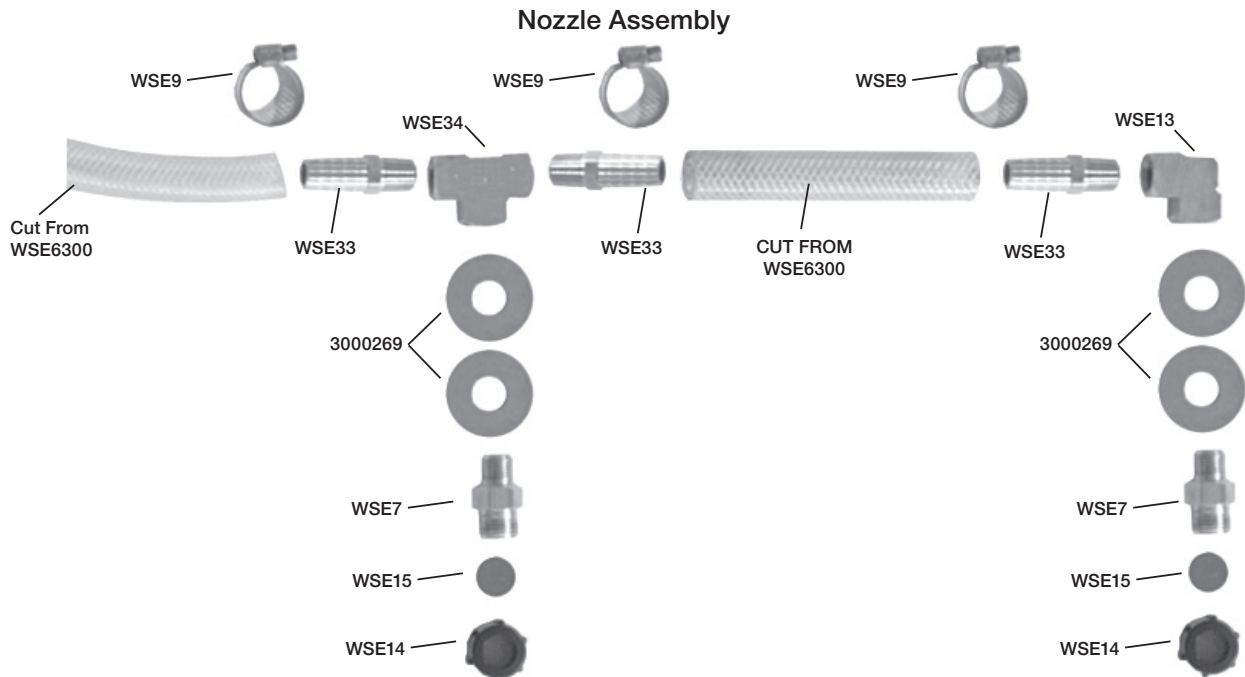


Prewet Plumbing Diagram



Filter/Valve Assembly





Liquid Spray System Operating Instructions

1. Read all instructions before operating. Always wear hand, eye, and skin protection when working with de-icing chemicals. Make sure everyone is standing clear of liquid spray system before operating.
2. Inspect all plumbing for leaks.
3. Open ball valve (#WSE10) at the reservoir.
4. Make sure reservoir has adequate supply of clean de-icing liquid. Do not operate pump without liquid.
5. Before turning the cab controller on, turn the black speed control knob counter clockwise until it stops to set the pump at the slowest speed.
6. To energize system, turn red power button to illuminate LCD screen "on" position.
7. Increase pump speed to desired liquid spray application rate by turning black knob clockwise.
8. If the red low pressure warning light/alarm comes on, the reservoir is empty or the pump is off. Do not operate pump without liquid. **Note: Low pressure light and alarm will sound each time system is started. This is normal and occurs until sufficient pressure is achieved to open pressure switch (turning off light/buzzer).**
9. Close ball valve (#WSE10) at the reservoir when not in use.

Liquid Spray System Trouble Shooting Guide

Motor & Pump Operate Erratically: 1,2,3,4,5 (Possible Problem)
 Motor runs – Pump does not: 1,2,3,4,5,6,7 (Possible Problem)
 Motor & Pump fail to operate: 8,9,10,11,12 (Possible Problem)

POSSIBLE PROBLEM:

- | | |
|--|-----------------|
| 1. Little or no de-icer in tank/s | Fill |
| 2. Clogged filter | Clean |
| 3. Clogged Nozzles | Clean |
| 4. Damaged suction hose | Replace |
| 5. Ruptured pump diaphragm | Replace |
| 6. Ball valve is closed at tank/s | Open valve |
| 7. Frozen parts | Thaw out |
| 8. Bad electrical connection | Inspect |
| 9. Motor failure- burned/seized | Replace |
| 10. Cab controller on-off switch not turned on | Turn on |
| 11. Bad cab controller on-off switch | Replace |
| 12. Blown fuse in cab controller or fuse panel | Inspect/replace |

REPAIR:

Liquid Spray System Routine Maintenance

CAUTION

Always wear hand, eye, and skin protection when working with de-icing chemicals. Use extreme care!

RESERVOIR:

- Inspect fittings for leaks from cracks or looseness
- Inspect filler/breather for cracks. Depress breather to check for adequate spring pressure or binding

PLUMBING:

- Inspect hoses/fittings/ball valve for leaks, cracks, looseness, chafing, binding etc.

FILTER:

- Remove and clean filter element every 8 to 10 hours or as needed depending on how clean de-icing liquid is

PUMP-PRESSURE SWITCH & ENCLOSURE:

- Inspect wiring for wear and loose or corroded connections
- Inspect door and gasket to prevent corrosion

NOZZLES:

- Inspect operation for even spray pattern. Remove and clean as needed

CAB CONTROLLER:

- Inspect lights, switch, and flow control knob
- Inspect wire harness and connections for wear and loose or corroded connections

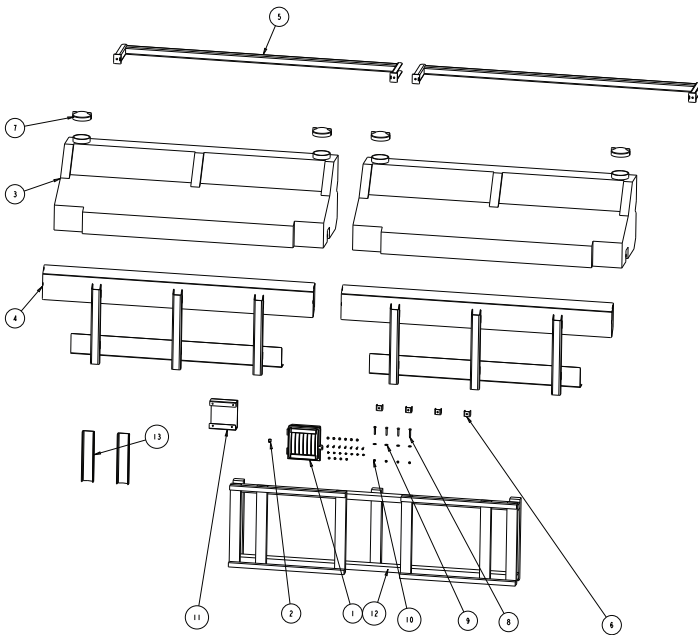
CLEANING:

- Wash with hot water and soap after each use

STORAGE:

- Store inside to prevent freezing
- Drain liquid de-icer from tank/s and hoses when not in use for more than two days or during extremely low temperatures
- RV anti-freeze or windshield washer fluid should be run through the system for several minutes to flush de-icer from the system to prevent component freezing especially for end of season storage

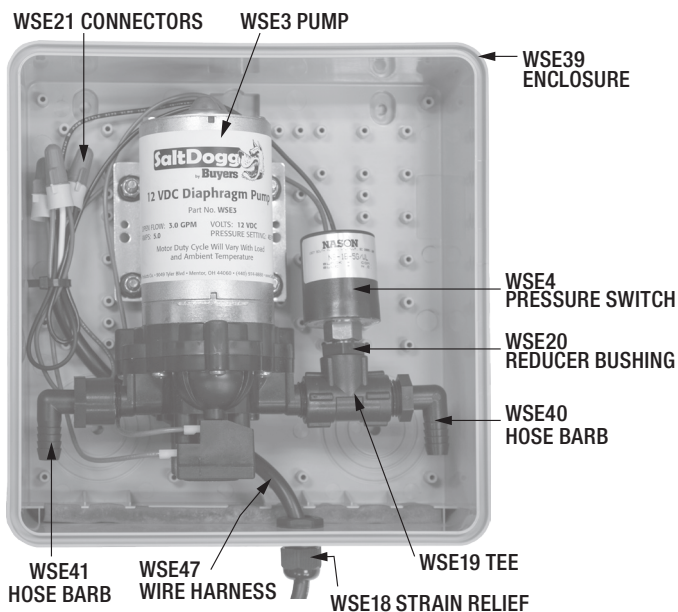
Parts Diagram



Bill of Materials

ITEM	PART NO.	QTY.	DESCRIPTION
1	LS102	1	ENCLOSURE ASSY, WETTING SYST
2	3012164	1	PLUG, SQUARE HEAD, 3/4 NRT
3	3032330	2	RESERVOIR, 160 GAL ROLY, COMBO BODY
4	3034829	2	RAN WELDMENT
5	3045404	2	BRACE, WELDMENT
6	3034257	4	TANK MOUNT MDS
7	3011044	4	LID 5"W/ BALL CHECK VENT
8	3020600	4	BOLT, CRG, 3/8-16x2.50 SST
9	FWF038100007SS	4	WASHER, FLAT 3/8 USS SST
10	FNE038016044SS	4	NUT, NYLOCK 3/8- 1 6X7/16 SST
11	3034260	1	BRACKET ENCLOSURE LS11
12	3013075	1	PALLET, MD68/MD75/MD80 MOLDBOARDS
13	3045405	2	GUSSET SIDE, PAN
	WS E 2	4	NIPPLE, HEX 3/4 X 1/2 POLY
	WS E 7	2	NOZZLE BODY, BRASS
	WS E 9	10	CLAMP, HOSE
	WSE10	2	VALVE BALL, 1/2 NPT, POLYPROPYLENE
	WSE11	2	FILTER, 3/4 NPT, 6 GPM, 300 MICRON, POLY
	WSE13	2	ELBOW, BRASS 1/4 NPTF X 1/4 NPTF
	WSE14	2	NOZZLE CAP
	WS E15	2	RUBBER, NOZZLE
	WSE24	1	HARNES, WIRE W/ CONNECTOR 8 FT
	WSE30	2	BARB, HOSE 3/4 MNPT X 1/2 HB
	3000165	2	LABEL, 1" X 3" ADHESIVE
	3009750	1	DECAL, LIQUID SYSTEM
	WSE1	1	CONTROLLER, WET SPRAY SYSTEM
	WSE33	6	BARB, HOSE 1/4 MNPT X 1/2 HB, BRASS
	WSE34	2	TEE, 1/4 FNPT X 1/4 FNPT X 1/4 FNPT, BRASS
	WSE6168	1	HOSE POLY 1/2 X 168 IN
	CTIOBX	1	BOX, 17-1/4 X 13-1/2 X 1-1/4 200# RSC
	30 1842 1	1	ANTI SEIZE LUBRICANT POUCH 5 GRAMM

Internal Components of LS102



SAFETY ALERT SYMBOL

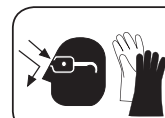


This Symbol Means **ATTENTION!**
 Please Read & Understand Completely
 Before Operating!

EQUIPMENT INSTALLERS & OPERATORS:

TURN OFF ALL POWER BEFORE PERFORMING ANY SERVICE OPERATIONS.

- Follow Recommended Operating Procedure.
- Keep Equipment In Safe Operating Condition At All Times.
- Recognize & Avoid Hazards While Operating, Servicing and Maintaining Equipment.



CAUTION

**RESERVOIR & COMPONENTS MAY
 CONTAIN HAZARDOUS MATERIAL.
 HANDLE WITH CARE.**

WARRANTY

Buyers Products Co. warrants all truck/trailer hardware manufactured or distributed by it, to be free from defects in material and workmanship for a period of one year from date of shipment. Parts must be properly installed and used under normal conditions. Any product which has been altered, including modification, misuse, accident or lack of maintenance will not be considered under warranty. Normal wear is excluded. The sole responsibility of Buyers Products Co. under this warranty is limited to repairing or replacing any part or parts which are returned, prepaid, and are found to be defective by Buyers Products Co. Authorization from Buyers Products Co. must be obtained before returning any part. No charges for transportation or labor performed on Buyers' products will be allowed under this warranty.