	Title:	Winterization
	Document Number:	MFG-WI-012
	Revision Level/Date:	2.0/ 10-17/2024
	Owner:	Manufacturing Supervisor

1. Purpose: The purpose of this instruction is to define the appropriate steps for winterizing trucks at HME.

2. Definitions: N/A

3. Tools/Gauges/Fixtures:

- 3.1. Vacuum
- 3.2. Discharge cap with air chuck adapter
- 3.3. Air line

4. Safety Requirements:

- 4.1. All team members are to follow all HME safety requirements.


5. Instruction:

5.1. Water Tank/ Pump Winterization

- 5.1.1. Open all drain valves on the pump panel.
 - 5.1.1.1. Based on apparatus, there may also be suction, discharge, and suction intake drains under the vehicle.
- 5.1.2. Remove all intake and discharge caps.
- 5.1.3. Open all valves to empty water tank.
- 5.1.4. Open the water and foam tank tower lids.
- 5.1.5. Close all valves.
- 5.1.6. Cap #1 Discharge with winterization cap – discharge cap with an air chuck adapter.
- 5.1.7. Connect an air compressor the cap and open the valve.
- 5.1.8. Once entire system is charged.
 - 5.1.8.1. Open one valve at a time, blow out the water, close the valve, and move onto the next valve until all valves, including tank fill and pump-to-tank, and drain valves have been cycled through.
 - 5.1.8.2. Repeat 5.1.8.1 until all no water is being expelled when valves are opened.
- 5.1.9. Close the water tower lids.
- 5.1.10. Close the valves half-way (valves should be cocked at 45° from closed position) and open all drain valves.
- 5.1.11. Return the intake and discharge caps to their original position, loosely fitting only the discharge caps.

5.2. Foam Tank Winterization (if applicable)

- 5.2.1. Turn diverter valve towards *Calibrate*.
- 5.2.2. Place foam pump into simulated flow mode per operation manual instructions and complete full cycle to properly drain foam tank and pump of all fluid.
 - 5.2.2.1. During this step, open foam tank drain.
- 5.2.3. If apparatus is equipped with a foam tank refill system:

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- 5.2.3.1. Disconnect inlet and outlet lines to lift pump.
- 5.2.3.2. Run lift pump on for 30 seconds.
- 5.2.3.3. Hook up compressed air line to refill port and discharge air into line for 30 seconds.
- 5.2.3.4. Reconnect inlet and outlet line to lift pump.
- 5.3. Vacuum out water and foam tank.
- 5.4. Complete winterization tag and document.
- 5.5. Attach winterization tag upon tank fill valve handle.
- 5.6. Save winterization document by:
 - 5.6.1. Open following folder – “O:\Released Orders\Apparatus Orders\Truck SM\Quality Documents\Winterization”
 - 5.6.2. Create a subfolder within the Winterization folder entitled with the date of winterization using the following format: MM/DD/YYYY
 - 5.6.3. Save within folder.

6. Related Documents:

- 6.1. MFG-FR-001 Winterization Tag
- 6.2. MFG-FR-002 Winterization Signoff
- 6.3. MFG-WI-007 Winterization

7. Revision History:

Revision Level	Date	Changes
1.0	4/5/2023	Initial release
2.0	10/17/2024	Revised and add multiple steps

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