

# **WINTERIZING**

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## INTRODUCTION

**The purpose of this section is to provide the required procedures to winterize the Butler System and Optional Equipment in an effective, systematic, safe and environmentally-sound manner.**

During the winter months with the temperature is expected to be below freezing (32°F), it is **EXTREMELY IMPORTANT** to WINTERIZE the Butler System and all Optional Equipment in order to protect your investment. The Butler Corporation's warranty does NOT cover freeze damage. With a few basic procedures, freeze damage can be avoided. Whether or not you are heating the interior of the vehicle, it is recommended that the entire Butler System (including Optional Equipment) be WINTERIZED. COLD temperatures surrounding the vehicle could penetrate and freeze the components, or a heater failure could occur without your knowledge.

Winterizing kits are available for winterizing all components for your convenience or you may use similar hoses, adapters, connectors, and container. Please contact us for the required kits.

**Use ONLY windshield washer antifreeze fluid rated at -20°F or below. DO NOT USE ethylene or propylene glycol-based, radiator-type antifreeze.**

**NOTE: Some windshield washer antifreeze may contain dye that may permanently stain. Be sure to thoroughly evacuate all antifreeze from the Machine before resuming operation.**

**NOTE: Because of shipping restrictions, windshield washer antifreeze is not included in the kits and must be obtained locally.**

Upon completion of the winterizing procedures remove and place in a HEATED area any items that can freeze such as:

- High-Pressure Hoses
- Garden-type hoses
- Cleaning tools
- Cleaning products
- High-Pressure Gauge (2030)
- Detergent Container (4000)
- Simulator Nozzle
- Automatic Water Fill

If you choose NOT to remove items such as, cleaning tools and High-Pressure Hose(s) for storage in a HEATED area, they must be winterized. These items can be winterized during Step #28 in the section titled "Winterizing the Machine."

Winterizing involves evacuating water and detergent from the Butler System and Optional Equipment, displacing them with windshield washer antifreeze and evacuating the windshield washer antifreeze.

**Use the "Winterizing Flowchart" to identify the correct order in which the Machine and Optional Equipment must be winterized.** Start at the top of the chart, answer the YES or NO questions, and follow the appropriate arrows. Any Optional Equipment included with your machine, follow the YES arrow and turn to the winterizing section for that item. It is important that you complete the directions in the order listed. When you have completed an item, return to the location where you were on the "Winterizing Flowchart" and continue to follow the arrows. Any Optional Equipment that is not included with your Machine, follow the NO arrow, which will lead to the next section on the flowchart.

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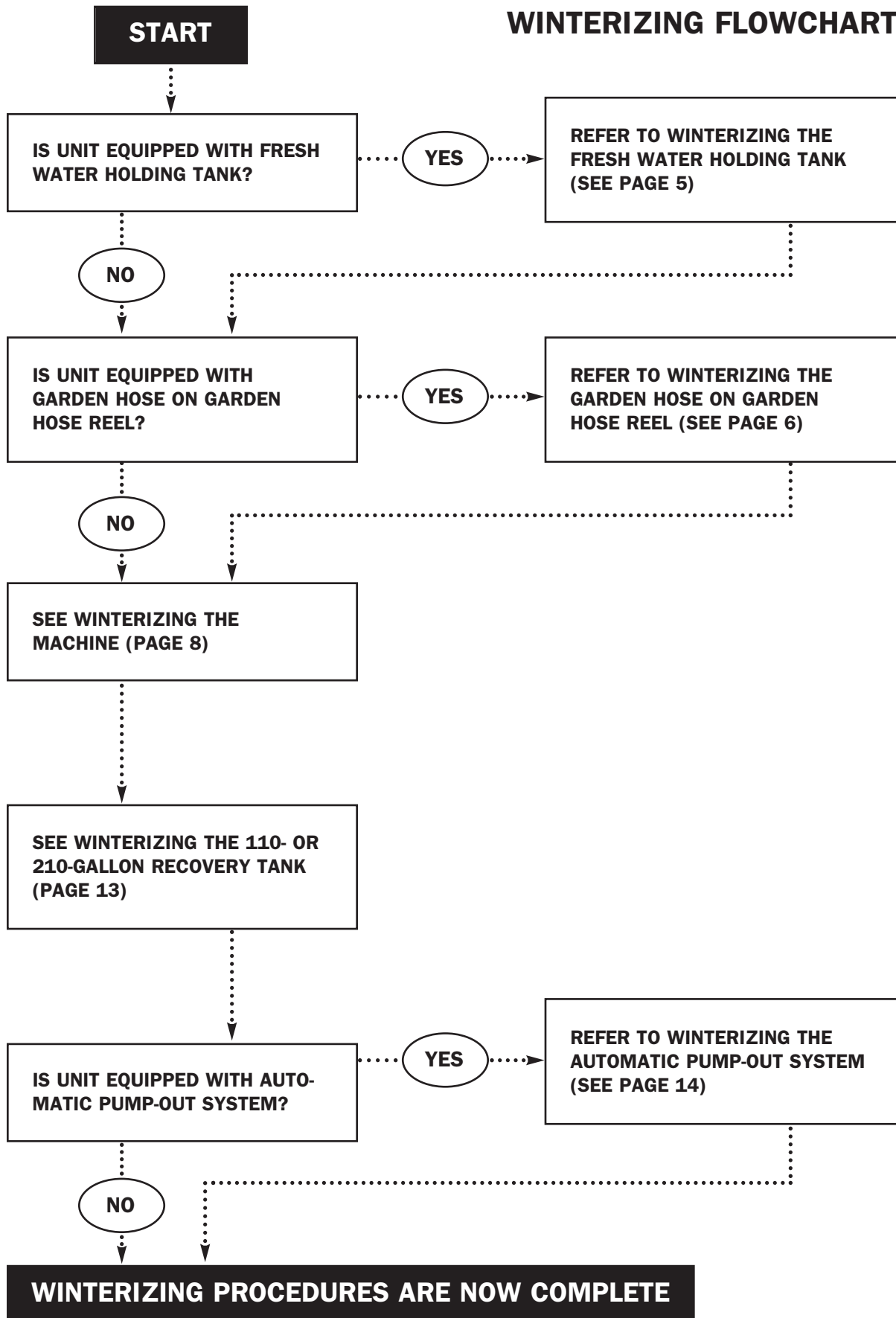
Once the winterizing procedures have been completed, to reuse the same antifreeze remove the container from the vehicle, install cap and place it in a safe and secure location outdoors away from children and pets. Keep container where it is easily visible, so that it can be monitored to ensure that the fluid isn't freezing. **If the antifreeze has become too diluted and begins to freeze, it must be replaced with new antifreeze. You may also need to re-winterize, if this condition occurs.**

It is recommended that foam pipe insulation be installed on the stainless steel Braided Hose (1060) to and from the Fresh Water Tank (if equipped) and the Braided Hose (3068) to the High-Pressure Hose Reel (if equipped). This should be done regardless of whether you are or are not going to winterize the Machine at the end of your daily cleaning schedule. *The Automatic Pump-Out Hose, located behind the Fresh Water Holding Tank (if equipped with an Automatic Pump-Out System) has been provided with foam pipe insulation at the time of factory installation.*

**Whether heating the interior of the vehicle or not, it is recommended that you winterize the entire Butler System (including Optional Equipment). COLD temperatures surrounding the vehicle could penetrate and freeze the components or a heater failure could occur without your knowledge.**

**If the Butler System has experienced a freezing situation anywhere within its components, there is a possibility that other unforeseen complications may appear sometime in the future. Replacing the part or parts that were obviously damaged from freezing will solve the immediate problem. However, it is the unseen damage that may cause one or more of the Machine's components to fail at any time. Exposing any mechanical component to freezing will put excessive stress on that component and may cause distortion and premature part failure. This distortion may not become evident for months. In fact, a part may fail in the middle of the summer, and its cause is the direct result of freezing during the past winter.**

## WINTERIZING FLOWCHART



## WINTERIZING THE FRESH WATER HOLDING TANK

**WARNING:** It is important before starting this or any other procedure, that you or anyone who operates, works with, maintains, services or repairs the Butler System and/or vehicle (Unit), be familiar with its operation and thoroughly read, understand and follow in their entirety all of the Warnings, Cautions and Notices described in their designated section (highlighted on the yellow pages) of this Owner's Manual. YOUR SAFETY AND THE SAFETY OF OTHERS DEPENDS ON IT.

Carefully read and understand the complete list of instructions before proceeding.

### EQUIPMENT REQUIRED TO PERFORM THIS WINTERIZING PROCEDURE:

- Female-to-female Garden Hose Adapter with washers (FIG 1)
- Garden Hose (FIG 1)
- Measuring Cup (supplied as Standard Equipment with the Butler System) or similar container

**NOTE:** It is important that you familiarize yourself and comply with all municipal, county, state and federal regulations regarding the legal and proper disposal of any and all fluids, including, but not limited to: water, recovered water, cleaning products, windshield washer antifreeze, solutions, oil, etc.

### How to winterize the FRESH WATER HOLDING TANK:

1. Position vehicle near an approved wastewater receptacle.

**NOTE:** Vehicle should be parked on a level surface.

2. Engage vehicle shift selector into the PARK (P) position and FIRMLY set parking brake.
3. Attach female-to-female Garden Hose Adapter to Garden Hose.

4. Remove Cap from Brass Drain Valve on Fresh Water Holding Tank.
5. Attach Garden Hose to Brass Drain Valve and OPEN Valve. (FIG 1)

6. Drain water from Fresh Water Holding Tank.

**NOTE:** If the vehicle was not parked on a level surface there may be a chance that water could remain in the Fresh Water Holding Tank. Remove hose, start Machine and attach a Vacuum Hose over the Brass Drain Valve and vacuum out any water that may be remaining.

7. CLOSE Brass Drain Valve, remove hose and replace Cap.

8. If equipped with a Garden Hose Reel, detach the Quick Connect Fitting located on the underside of the Automatic Water Fill Assembly. (FIG 2)

9. To winterize the Automatic Water Fill System, place Measuring Cup or (similar container) under the Garden Hose Quick Connect Fitting and OPEN Shut-Off Valve, if equipped. (Shut-Off Valve shown in the closed position.)

10. Place the Water Fill Switch to the START position. Water will drain from the Automatic Water Fill Assembly into the Measuring Cup.

11. When the flow of water stops, place the Water Fill Switch to the STOP position and leave Shut-Off Valve (if equipped) OPEN.

FIG 1

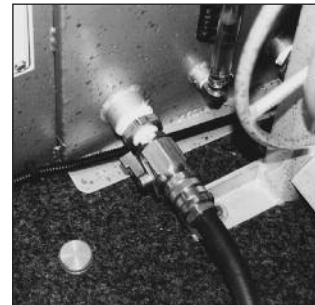


FIG 2



12. Dispose of water in cup.

**This portion of the winterizing procedure is complete. Continue to winterize the remaining components according to the “Winterizing Flowchart” on Page 4.**

## WINTERIZING THE GARDEN HOSE ON THE GARDEN HOSE REEL

**WARNING:** It is important before starting this or any other procedure, that you or anyone who operates, works with, maintains, services or repairs the Butler System and/or vehicle (Unit), be familiar with its operation and thoroughly read, understand and follow in their entirety all of the Warnings, Cautions and Notices described in their designated section (highlighted on the yellow pages) of this Owner’s Manual. **YOUR SAFETY AND THE SAFETY OF OTHERS DEPENDS ON IT.**

Carefully read and understand the complete list of instructions before proceeding.

**NOTE:** Before beginning this procedure, please see “Winterizing Flowchart” for winterizing sequence.

### EQUIPMENT REQUIRED TO PERFORM THIS WINTERIZING PROCEDURE:

- Garden Hose to Vacuum Hose Winterizing Adapter (included with Winterizing Kit) (FIG 4)

### How to winterize the GARDEN HOSE on the GARDEN HOSE REEL (if equipped):

1. Engage vehicle’s shift selector into the PARK (P) position and FIRMLY set parking brake.
2. Start the vehicle’s engine.
3. Position Ball Valve (1050) in the CLOSED position.

**NOTE:** There are 2 different mounting locations for the Garden Hose Reel. One is mounted overhead and one is located on the bottom of the Stacked Reel, mounted to the floor.

4. CLOSE both valves at Swivel on Garden Hose Reel. (FIG 3) (Shut-Off Valves shown in the closed position.)

5. SECURELY attach the Winterizing Adapter to the Cold Water Inlet Connection (1010) on the Instrument Panel. (FIG 5)

6. Attach the end of the 2" Vacuum Hose (with a 2" Hose Barb) to the Winterizing Adapter. (FIG 5) Place Vacuum Hose so that it is straight into the Adapter (FIG 4) and allow some slack in the Vacuum Hose.

**NOTE:** To connect and remove Vacuum Hose from the Winterizing Adapter more easily, coat inside of Adapter with a thin coat of lubricating-type oil (WD-40).

7. OPEN Cold Water Inlet Valve (1020) on the Instrument Panel. (FIG 5) (Valve shown in the closed position.)

8. Place the Key Activated ON/OFF Switch (9460) to the “ON” position and start the Machine by activating the Engage System Switch (9310).

FIG 3

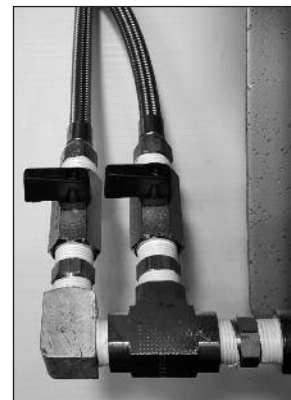


FIG 4



9. Place the Speed Control Switch (9330) in the Black range (LOW Speed, 900–1050 RPM).
10. OPEN Left Side Valve located on the Garden Hose Reel (FIG 6). (Shut-Off Valves shown in the closed position.)
11. OPEN Shut-Off Valve at end of Garden Hose on Garden Hose Reel, (if equipped).
12. DETACH the Quick Connect Fitting, located on the underside of the Automatic Water Fill Assembly. (FIG 7)
13. Vacuum water from Garden Hose for approximately 2–3 minutes. (After approximately 1 minute, you can feel the air with the tip of your finger entering the opening of the Garden Hose.)

**NOTE: If more suction is required, increase Speed Control Switch (9330) to the White range (NORMAL Speed, 1450–1550 RPM).**

14. SLOWLY OPEN then SLOWLY CLOSE the Right Side Valve on the Garden Hose Reel (FIG 6). This procedure will vacuum the remaining water from the hose and fittings. (Shut-Off Valves shown in the closed position.)
15. To be sure all water has been drawn from the Garden Hose Reel and connecting hoses, continue vacuuming for another 1–2 minutes.

**NOTE: Before shutting Machine OFF place Speed Control Switch (9330) to the LOW Speed (bottom) position.**

16. Shut Machine OFF by deactivating the Engage System Switch (9310), place the Key Activated ON/OFF Switch (9460) to the OFF position and remove Key.
17. CLOSE Cold Water Inlet Valve (1020).
18. CLOSE Left Side Valve on the Garden Hose Reel.
19. Remove 2" Vacuum Hose from Winterizing Adapter and store.
20. Remove the Winterizing Adapter from the Cold Water Inlet Connection (1010) and store.

**NOTE: It is important that you familiarize yourself and comply with all municipal, county, state and federal regulations regarding the legal and proper disposal of any and all fluids, including, but not limited to: water, recovered water, cleaning products, windshield washer antifreeze, solutions, oil, etc.**

**This portion of the winterizing procedure is complete. Continue to winterize the remaining components according to the “Winterizing Flowchart” on Page 4.**

FIG 5

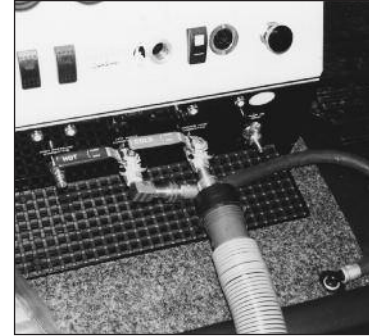


FIG 6

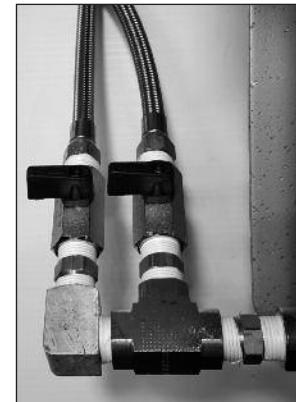


FIG 7



## WINTERIZING THE MACHINE

**WARNING:** It is important before starting this or any other procedure, that you or anyone who operates, works with, maintains, services or repairs the Butler System and/or vehicle (Unit), be familiar with its operation and thoroughly read, understand and follow in their entirety all of the Warnings, Cautions and Notices described in their designated section (highlighted on the yellow pages) of this Owner's Manual. **YOUR SAFETY AND THE SAFETY OF OTHERS DEPENDS ON IT.**

**PARK** vehicle on level surface. Carefully read and understand the complete list of instructions before proceeding.

**NOTE:** Before beginning this procedure, please see "Winterizing Flowchart" for winterizing sequence.

**NOTE:** It is recommended foam pipe insulation be installed on the stainless steel Braided Hose (1060) to and from Fresh Water Tank and the Braided Hose (3068) to the High-Pressure Hose Reel (if equipped), regardless of whether you are going to winterize the Machine or not. The insulation will help protect these hose(s) from freezing during the winter cleaning schedule. The Automatic Pump-Out Hose, located behind the Fresh Water Holding Tank (if equipped with an Automatic Pump-Out System) has been provided with foam pipe insulation at the time of factory installation.

Whether heating the interior of the vehicle or not, it is recommended that you winterize the entire Butler System (including Optional Equipment).

### EQUIPMENT REQUIRED TO PERFORM THIS WINTERIZING PROCEDURE:

Butler Machine Winterizing Kit or similar (FIG 8):

FIG 8



- 3' length of High-Pressure Hose with Female Quick Connect
- 3<sup>1</sup>/<sub>2</sub>' length of Garden-type Hose with Male Garden Hose Threaded Fitting at one end
- 2 gallons of windshield washer antifreeze (-20°F or below)
- 2<sup>1</sup>/<sub>2</sub> Gallon Solution Container with Cap, filled with the 2 gallons of windshield washer antifreeze
- Extra 2<sup>1</sup>/<sub>2</sub> Gallon Container Cap for Detergent Container, when removed
- Empty 4-Gallon Discharge Container with Lid

**NOTE:** Because of shipping restrictions, windshield washer antifreeze is not included in the kit and must be obtained locally. DO NOT USE ethylene or propylene glycol-base, radiator-type antifreeze.

### How to winterize the MACHINE:

1. Engage vehicle's shift selector into the PARK (P) position and FIRMLY set parking brake.
2. Start the vehicle's engine and warm to normal operating temperature.

**NOTE:** If you choose to winterize any cleaning tools or remaining High-Pressure Hoses the procedures will be described in Step #28.

3. Place the Key Activated ON/OFF Switch (9460) to the ON position and start the Machine by activating the Engage System Switch (9310).
4. Start High Pressure Pump (2000) by activating the Engage Pump Switch (9320).



5. Place the Speed Control Switch (9330) to the middle position, then momentarily seal the end of the Vacuum Hose to increase RPM to the White range (NORMAL Speed, 1450–1550 RPM) on the Tachometer (9400).

**NOTE: Until you are totally familiar with this winterizing procedure, you may want to leave the RPM in the Black range, (LOW Speed, 900–1050 RPM), in order to slow the procedure. This can be done by leaving the Speed Control Switch (9330) in the bottom position.**

6. OPEN Ball Valve (1050) if equipped with Fresh Water Holding Tank; if not equipped with a Fresh Water Holding Tank OPEN Cold Water Inlet Valve (1020) on the Instrument Panel.

7. Position Temperature Adjusting Ball Valve (3030/2080) to the HOT position. (As shown on the Schematic) (FIG 9)

8. Position and hold the Hot Water Convenience Hose (3080) attached to Hot Water Convenience Valve (3070), so that it is pointing away from you and into the 4-Gallon Discharge Container or (similar container) outside the vehicle. (FIG 10)

FIG 9

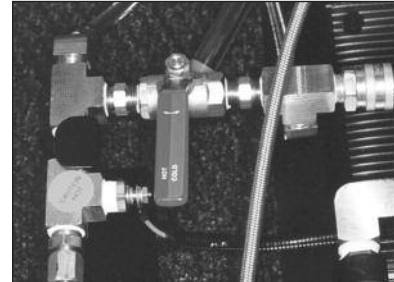


FIG 10



**The Hot Water Convenience Hose will become EXTREMELY HOT.**

9. SLOWLY OPEN the Hot Water Convenience Valve (3070).

10. Allow Machine to run until the full flow of water stops and an air/water mixture occurs. You can identify this condition when you see and hear a “spitting” type action occurring at the end of the Hot Water Convenience Hose (3080).

11. Shut OFF High Pressure Pump (2000) by deactivating the Engage Pump Switch (9320).



**NOTE: Before shutting Machine OFF place Speed Control Switch (9330) to the LOW Speed (bottom) position.**

12. Shut OFF Machine by deactivating the Engage System Switch (9310), place the Key Activated ON/OFF Switch (9460) to the OFF position and remove Key.

13. CLOSE Hot Water Convenience Valve (3070). Return Hot Water Convenience Hose (3080) into its storage holder and move the 4-Gallon Discharge Container away from the vehicle.

14. CLOSE Ball Valve (1050) if equipped with Fresh Water Holding Tank; if not equipped with Fresh Water Holding Tank CLOSE Cold Water Inlet Valve (1020).

15. Place the 2½ Gallon Solution Container or (similar container), filled with 2 gallons of windshield washer antifreeze (-20°F or below), onto the floor of the vehicle in front of the Instrument Panel.

**DO NOT use ethylene or propylene glycol-base, radiator-type antifreeze.**

**NOTE: The Inlet Strainer Gasket (1015) at the Cold Water Inlet Connection (1010) must be in place and in good condition to prevent air from being drawn into system.**

16. SECURELY attach the 3½' length of Garden Hose to the Cold Water Inlet Connection (1010).

17. Place the OPEN end of the 3<sup>1</sup>/<sub>2</sub>' length of Garden Hose attached to Cold Water Inlet Connection (1010) into the 2<sup>1</sup>/<sub>2</sub> Gallon Solution Container filled with 2 gallons of windshield washer antifreeze. The 3<sup>1</sup>/<sub>2</sub>' Garden Hose should be fully submerged at the bottom of container. (FIG 11)

18. Remove Detergent Hose (4020) from Detergent Container (4000) and place Detergent Hose into the 2<sup>1</sup>/<sub>2</sub> Gallon Solution Container (FIG 11). (Detergent Hose should be fully submerged at the bottom of the solution container.) Hold or secure both hoses, until the winterizing instructions indicate changing hose position. DO NOT allow hoses to kink.

19. OPEN Cold Water Inlet Valve (1020).

20. Fully OPEN Detergent Flow Control Valve (4110) by turning Detergent Flow Control Adjustment Knob (4120) counterclockwise.

21. If your Machine is equipped with a High-Pressure Hose Reel with a shut-off valve, attach the 3' length of High-Pressure Hose to the Male Quick Connect at the end of the High- Pressure Hose on the High-Pressure Hose Reel. *Note: Valve (3065) must be in the open position.* If your Machine is not equipped with a High-Pressure Hose Reel, attach a length of 50' or longer High-Pressure Hose with a shut-off valve, to one of the high-pressure Quick Connects (3090 or 3100) on the Instrument Panel. Attach the 3' length of High-Pressure Hose to the Male Quick Connect at the end of the High-Pressure Hose.

22. Point and hold the 3' length of High-Pressure hose away from you into the 4-Gallon Discharge Container outside the vehicle. (FIG 12)



**The High-Pressure Hose will become EXTREMELY HOT.**

23. Place the Key Activated ON/OFF Switch (9460) to the ON position and start Machine by activating Engage System Switch (9310).

24. Start High Pressure Pump (2000) by activating the Engage Pump Switch (9320).

25. Place the Speed Control Switch (9330) to the middle position, then momentarily seal the end of the Vacuum Hose to increase RPM to the White range (NORMAL Speed, 1450–1550 RPM) on the Tachometer (9400).

**NOTE: Until you are totally familiar with this winterizing procedure, you may want to leave the RPM in the Black range (LOW Speed, 900–1050 RPM), in order to slow the winterizing procedure.**

26. SLOWLY OPEN the Shut-Off Valve located at the end of the High-Pressure Hose that is attached to the 3' length of High-Pressure Hose while still holding the end of the 3' High-Pressure Hose into the 4-Gallon Discharge Container.

27. Windshield washer antifreeze will be drawn from the 2<sup>1</sup>/<sub>2</sub> Gallon Solution Container through the Machine. Within a few moments the windshield washer antifreeze will begin to appear from the 3' length of High-Pressure Hose. When the windshield washer antifreeze begins to appear (you will be able to tell by the color change of the liquid, momentarily shut OFF the valve on the High-Pressure Hose. Place the end of the 3' length of High-Pressure Hose into the 2<sup>1</sup>/<sub>2</sub> Gallon Solution Container, along with the Garden Hose and Detergent Hose. SLOWLY reopen the shut-off valve on the High-Pressure Hose. Let the antifreeze circulate for a few minutes.

FIG 11



FIG 12



**CAUTION**

**Hoses and antifreeze will become EXTREMELY HOT.**

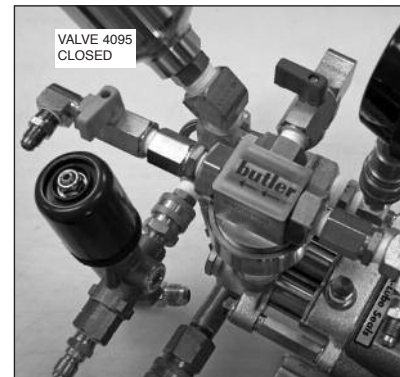
28. If you choose to winterize your cleaning tools and other High-Pressure Hoses, shut OFF valve at end of the High-Pressure Hose and disconnect the 3' length of High-Pressure Hose. Momentarily connect the other items to the High-Pressure Hose and dispense windshield washer antifreeze through each tool and into the 4-Gallon Discharge Container. Upon completion, reconnect the 3' length of High-Pressure Hose, place hose in the 2<sup>1</sup>/<sub>2</sub> Gallon Container and OPEN shut-off valve.

29. OPEN ON/OFF Valve (4095), (if CLOSED). SLOWLY OPEN then SLOWLY CLOSE the Detergent Pump Bleeder Valve (4220). This procedure will winterize the Detergent Injection Pump, hoses, fittings and the Detergent Flow Meter.

30. While the windshield washer antifreeze is circulating in the 2<sup>1</sup>/<sub>2</sub> Gallon Solution Container, view detergent Hose (4020), and Detergent Flow Meter (4030) to see if the antifreeze has displaced the detergent in the detergent system. (You will be able to tell by the color change of the liquid.) If the detergent has not been displaced with the antifreeze, you may have to repeat Step #29.

31. CLOSE Instant ON/OFF Valve (4095). (FIG 13) (Valve shown in closed position.)

FIG 13



32. Remove Detergent Hose (4020) from the 2<sup>1</sup>/<sub>2</sub> Gallon Solution Container and place on tray at front of Instrument Panel.

33. CLOSE shut-off valve on the High-Pressure Hose for approximately 10–15 seconds. This procedure will ensure that the Unloader (High-Pressure Unloader) (2050) and the Unloader Return (Bypass Hose) (2070) is winterized.

34. Using CAUTION, raise the 3<sup>1</sup>/<sub>2</sub>' Garden Hose and the 3' length of High-Pressure Hose above the antifreeze level in the 2<sup>1</sup>/<sub>2</sub> Gallon Solution Container.

35. OPEN the shut-off valve on the High-Pressure Hose. Antifreeze will pump from the 3' length of High-Pressure Hose back into the 2<sup>1</sup>/<sub>2</sub> Gallon Container.

**NOTE: Air will now be drawn through the Machine and will displace most of the antifreeze. Within a few moments, the Machine will start to pump air. You can identify this condition when you hear and see a “spitting” type action appearing from the 3' length of High-Pressure Hose. When this occurs, CLOSE the Cold Water Inlet Valve (1020) and then CLOSE the shut-off valve on the High-Pressure Hose.**

**NOTE: Before shutting Machine OFF place Speed Control Switch (9330) to the LOW Speed (bottom) position.**

36. Shut OFF High Pressure Pump (2000) by deactivating the Engage Pump Switch (9320).

37. Shut OFF the Machine by deactivating the Engage System Switch (9310).

38. Turn the Key Activated ON/OFF Switch (9460) to the OFF position and remove Key.

39. Disconnect the 3<sup>1</sup>/<sub>2</sub>' Garden Hose attached to the Cold Water Inlet Connection (1010) and store.

**CAUTION**

**High-Pressure Hose and container will be very HOT.**

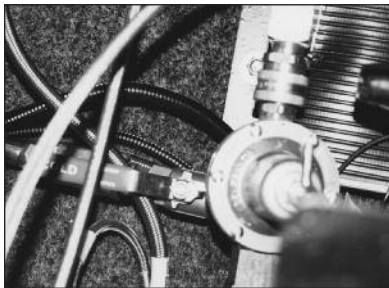
40. Disconnect the 3' length of High-Pressure Hose and store.

41. Remove the 2<sup>1</sup>/<sub>2</sub> Gallon Solution Container of windshield washer antifreeze from the vehicle, install cap and place in a safe and secure location outdoors, away from children and pets. Keep container where it is easily visible, so that it can be monitored to ensure that the fluid isn't freezing. **If the windshield washer antifreeze has become too diluted and begins to freeze, it must be replaced with new antifreeze. You may also need to re-winterize the Machine.**

FIG 14



FIG 15



42. OPEN then CLOSE Hot Water Convenience Valve (3070). Leave Hot Water Convenience Valve (3070) CLOSED. (This procedure will winterize the valve.) (FIG 14) (Valve shown in closed position.)

43. SLOWLY OPEN, then SLOWLY CLOSE Temperature Adjusting Ball Valve (2080/3030). Leave Temperature Adjusting Ball Valve in the HOT position (As shown on Schematic). (This procedure will winterize the valve.)

44. If your vehicle is equipped with a Fresh Water Holding Tank, SLOWLY OPEN then CLOSE Ball Valve (1050). (FIG 15) This procedure will winterize the valve. (Valve shown in open position.)

45. Shut OFF the vehicle's engine and remove key from ignition.

46. Install Cap (included in Winterizing Kit) on the 2<sup>1</sup>/<sub>2</sub> Gallon Detergent Container (4000) and store in a HEATED area.

47. Dispose of the water/antifreeze mixture and store the 4-Gallon Discharge Container. The water/antifreeze mixture may be vacuumed into the Recovery Tank for later disposal.

**Important: If machine is NOT going to be used for two or more days, the Internal Lobes in the Vacuum/Blower (5000) must be lubricated, to prevent Vacuum/Blower rust and seizure. Refer to ("Prevent Vacuum/Blower Seizure" in the "Maintenance" section) of this Owner's Manual.**

**NOTE: It is important that you familiarize yourself and comply with all municipal, county, state and federal regulations regarding the legal and proper disposal of any and all fluids, including, but not limited to: water, recovered water, cleaning products, windshield washer antifreeze, solutions, oil, etc.**

48. Remove and place in a HEATED area all items that can freeze, including:

- High-Pressure Gauge (2030)
- High-Pressure Hoses
- Garden-type Hoses
- Cleaning tools
- Automatic Water Fill
- Cleaning products
- Simulator Nozzle
- Detergent Container (4000)

**This portion of the winterizing procedure is complete. Continue to winterize the remaining components according to the "Winterizing Flowchart" on Page 4.**

## WINTERIZING THE 110- OR 210-GALLON RECOVERY TANK

**WARNING:** It is important before starting this or any other procedure, that you or anyone who operates, works with, maintains, services or repairs the Butler System and/or vehicle (Unit), be familiar with its operation and thoroughly read, understand and follow in their entirety all of the Warnings, Cautions and Notices described in their designated section (highlighted on the yellow pages) of this Owner's Manual. **YOUR SAFETY AND THE SAFETY OF OTHERS DEPENDS ON IT.**

**PARK** vehicle on level surface. Carefully read and understand the complete list of instructions before proceeding.

**NOTE:** Before beginning this procedure, please see "Winterizing Flowchart" for winterizing sequence.

**NOTE:** The Machine can remain OFF during this procedure.

**NOTE:** It is important that you familiarize yourself and comply with all municipal, county, state and federal regulations regarding the legal and proper disposal of any and all fluids, including, but not limited to: water, recovered water, cleaning products, windshield washer antifreeze, solutions, oil, etc.

### How to winterize the 110- OR 210-GALLON RECOVERY TANK:

1. Position vehicle so that the end of the Recovery Tank Drain Pipe Assembly, located on the underside of the vehicle at side door, is over an approved wastewater receptacle.
2. Engage vehicle shift selector into the PARK (P) position and FIRMLY set parking brake.

**NOTE:** If vehicle couldn't be parked directly over an approved wastewater receptacle, securely attach a Recovery Tank Drain Extension Hose to the Male Cam-lock Fitting on the end of the Drain Pipe Assembly and direct or connect hose to receptacle.

3. Stand on the vehicle's side door step and fully OPEN the 2" yellow handle Dump Valve located between the Recovery Tank and the Drain Pipe Assembly.
4. Allow Recovery Tank to drain until completely empty and all wastewater has stopped dripping from the end of the Drain Pipe Assembly.
5. Securely CLOSE Dump Valve.

**This portion of the winterizing procedure is complete. Continue to winterize the remaining components according to the "Winterizing Flowchart" on Page 4.**

## WINTERIZING THE AUTOMATIC PUMP-OUT SYSTEM

**WARNING:** It is important before starting this or any other procedure, that you or anyone who operates, works with, maintains, services or repairs the Butler System and/or vehicle (Unit), be familiar with its operation and thoroughly read, understand and follow in their entirety all of the Warnings, Cautions and Notices described in their designated section (highlighted on the yellow pages) of this Owner's Manual. **YOUR SAFETY AND THE SAFETY OF OTHERS DEPENDS ON IT.**

Carefully read and understand the complete list of instructions before proceeding.

**NOTE:** Before beginning this procedure, please see "Winterizing Flowchart" for winterizing sequence.

**NOTE:** If your cube van or truck is equipped with the optional High Volume Auto Pump-Out System (belt driven) please call for winterizing assistance.

Foam pipe insulation has been installed on the Discharge Hose (located behind the Recovery Tank and extending to the left of the Instrument Panel). This insulation MAY HELP protect the hose from freezing during the winter cleaning schedule.

### EQUIPMENT REQUIRED TO PERFORM THIS WINTERIZING PROCEDURE:

FIG 16



Winterizing items needed (FIG 16):

- 2 gallons of windshield washer antifreeze (-20°F or below)
- 2½ Gallon Solution Container with cap filled with the 2 gallons of windshield washer antifreeze
- 3' length of High-Pressure Hose with Female Quick Connect
- 4-Gallon Discharge Container with Lid
- 8' or longer Garden Hose with fittings

**NOTE:** Because of shipping restrictions, windshield washer antifreeze is not included in the kit and must be obtained locally. DO NOT USE ethylene or propylene glycol-base, radiator-type antifreeze.

### How to winterize the AUTOMATIC PUMP-OUT SYSTEM:

**NOTE:** The Machine can remain OFF during this procedure. Before starting this procedure the Recovery Tank must be empty.

1. Extending from the rear of the Automatic Pump-Out System is a garden-type Discharge Hose. It is routed behind the Recovery Tank and extends to a bracket located on the left of the Instrument Panel or routed to the front of the Instrument Panel. At the end of this Discharge Hose is a Brass Shut-Off Valve and Cap. Remove the Cap, connect the 8' Garden Hose to the Brass Shut-Off Valve, and OPEN valve. Extend the 8' Garden Hose to the rear area of the vehicle near the Automatic Pump-Out, and place hose into the 4-Gallon Discharge Container.
2. Position the 12 Volt Electrical Outlet Switch (9340) located on the Instrument Panel to the ON position.
3. Position the Shut-Off Valve located between the Automatic Pump-Out System and the Recovery Tank to the CLOSED position.
4. Remove Protective Cover from the Male Quick Connect located next to the Shut-Off Valve on the Automatic Pump-Out.

5. Connect the 3<sup>1</sup>/<sub>2</sub>' High-Pressure Hose to the Male Quick Connect.
6. Submerge the 3<sup>1</sup>/<sub>2</sub>' High-Pressure Hose into the bottom of the 2<sup>1</sup>/<sub>2</sub> Gallon Solution Container filled with 2 gallons of windshield washer antifreeze

**NOTE: After the completion of Step #6, you will be ready to displace the recovered water in the Automatic Pump-Out System with the windshield washer antifreeze.**

7. Engage the Automatic Pump-Out System by holding the Switch (located on the panel of the Automatic Pump-Out) to the "Manual" ON position. Continue to hold the switch in the "Manual" ON position.
8. While the switch is held in the "Manual" ON position, the pump will draw the windshield washer antifreeze in through the pump and displace the recovered water that remains in the pump and the Discharge Hose. When the windshield washer antifreeze is first seen discharging from the end of the 8' Garden Hose into the 4-Gallon Discharge Container, momentarily disengage pump and place end of the 8' hose into the opening of the 2<sup>1</sup>/<sub>2</sub> Gallon Solution Container that contains the windshield washer antifreeze. Engage the Automatic Pump-Out System back ON by holding switch to the "Manual" ON position. Let antifreeze circulate for 1 or 2 minutes.
9. Remove the 3<sup>1</sup>/<sub>2</sub>' High-Pressure Hose from the windshield washer antifreeze and continue to hold the switch in the "Manual" ON position until the full flow of windshield washer antifreeze stops dispensing back into the container.
10. Shut-Off Pump Switch.
11. Disconnect the 3<sup>1</sup>/<sub>2</sub>' High-Pressure Hose and store.
12. Reinstall Protective Cover on Male Quick Connect.
13. Leave Automatic Pump-Out Shut-Off Valve (located between the Automatic Pump-Out and the Recovery Tank) in the CLOSED position.
14. Remove the 8' Garden Hose from the 2<sup>1</sup>/<sub>2</sub> Gallon Solution Container.
15. Disconnect the 8' Garden Hose from the Brass Shut-Off Valve on the Discharge Hose and store.
16. Place Brass Shut-Off Valve in the CLOSED position and replace Cap.
17. Position the 12 Volt Electrical Outlet Switch (9340) located on the Instrument Panel to the OFF position.
18. Remove the 2<sup>1</sup>/<sub>2</sub> Gallon Solution Container that contains windshield washer antifreeze from the vehicle, install cap and place in a safe and secure location outdoors, away from children and pets. If the antifreeze has become too diluted and begins to freeze, it must be replaced with new antifreeze. You may also need to re-winterize the Automatic Pump-Out System.
19. Dispose of the water/antifreeze mixture and store the 4-Gallon Discharge Container. The water/antifreeze mixture may be vacuumed into the Recovery Tank for later disposal.

**NOTE: It is important that you familiarize yourself and comply with all municipal, county, state and federal regulations regarding the legal and proper disposal of any and all fluids, including, but not limited to: water, recovered water, cleaning products, windshield washer antifreeze, solutions, oil, etc.**

**NOTE: The Automatic Pump-Out System will remain winterized provided no water is allowed to reach the pump. If the pump is exposed to water and the temperature is anticipated to be below freezing this procedure must be performed again.**