

# HFR™ for NVH PrePoly Refresh Kit

332544E

EN

For the draining of stagnant prepoly material and the restoring of new prepoly material.  
For professional use only.

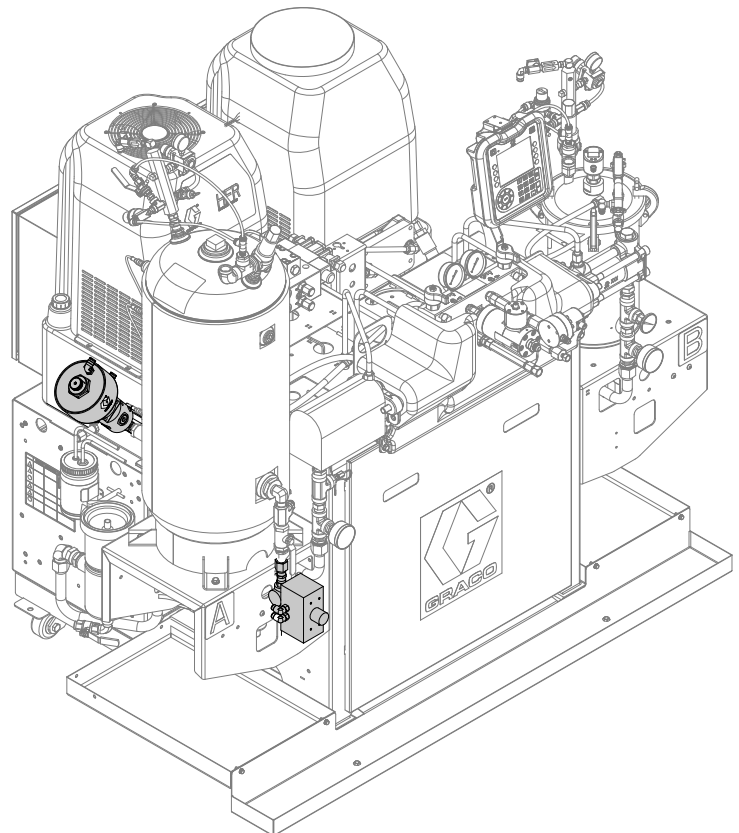
Not approved for use in explosive atmospheres or hazardous locations.

*1000 psi (7 MPa, 69 bar) Maximum Working Pressure*



## Important Safety Instructions

Read all warnings and instructions in this manual and in both the HFR for NVH Foam-Cart and HFR for NVH Foam-Modular manuals. Save all instructions.



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# Related Manuals

Manuals are available at [www.graco.com](http://www.graco.com). Manuals below are in English:

3A1792	DV Series Dispense Valves, Instructions-Parts
3A1961	HFR for NVH Foam-Modular, Setup-Operation
3A2797	HFR for NVH Foam-Cart, Setup-Operation

# Models

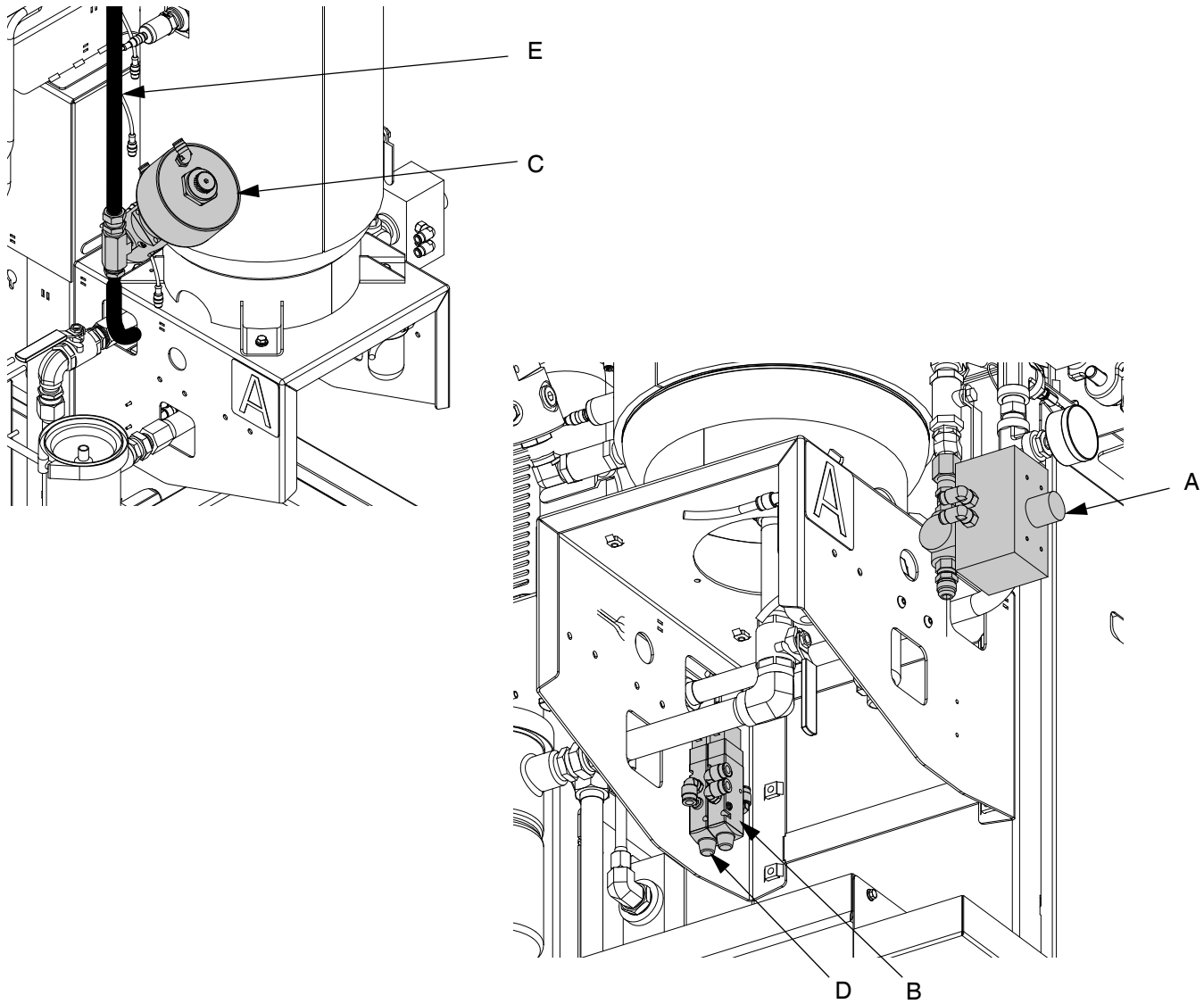
## HFR for NVH Foam - Cart Kits

Part No.	Description
24T180	Prepoly refresh with fill valve, NVH Cart Models
24T181	Prepoly refresh without fill valve, NVH Cart Models

## HFR for NVH Foam - Modular Kits

Part No.	Description
24T202	Prepoly refresh with fill valve, NVH Modular Models
24T203	Prepoly refresh without fill valve, NVH Modular Models

# Typical Installation



**FIG. 1: Typical Installation**

**Key:**

- A Prepoly Refresh Assembly
- B Prepoly Refresh Power Valve
- C Autofill Valve
- D Autofill Valve Power Valve
- E Header (by others)

# Overview

The prepoly refresh kit operates by the following sequence.

**NOTE:** If there is an overlap between the prepoly refresh event and another scheduled event, the prepoly refresh will finish prior to starting the next scheduled event.






**NOTE:** The prepoly refresh only operates in Night Mode.

1. The sequence is activated either manually or by a scheduled event.
2. The system will set inline temperature to the prepoly refresh material temperature.
3. The system will perform a cold start.
4. Once the cold start is complete, the prepoly refresh assembly will activate and allow the material inside the tank to flow into the customer's material supply system at a maximum pressure set by the maximum outlet pressure.
5. The tank will empty to the low level sensor.
6. The prepoly refresh assembly will return to the initial state and allow material from the customer's material supply system to flow back into the tank.
7. The tank will fill to the middle sensor.
8. The system will automatically switch back to Night Mode.

The following are the actions that would cause the prepoly refresh sequence to stop.

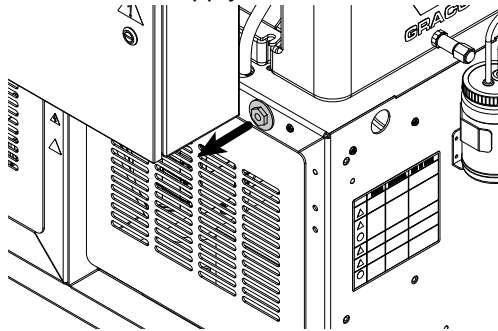
Action	Tank Refilled
Manually Canceled	No
Standby or Disabled Mode Selected	No
Power Button	No
Red Stop Key	No
Shot, Operator, or Sequence Mode Selected	Yes (If auto fill is active)

# Installation

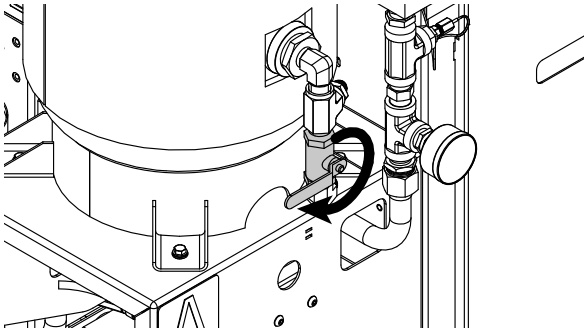
						
<b>TOXIC FUMES HAZARD:</b> Always wear respirators, protective clothing, and chemically impermeable gloves when servicing equipment.						
<b>SKIN INJECTION HAZARD:</b> Follow the <b>Pressure Relief Procedure</b> before servicing equipment.						

## NVH - Cart

1. Perform the **Shutdown** procedure found within the HFR for NVH Foam - Cart manual.
2. Remove the air supply.



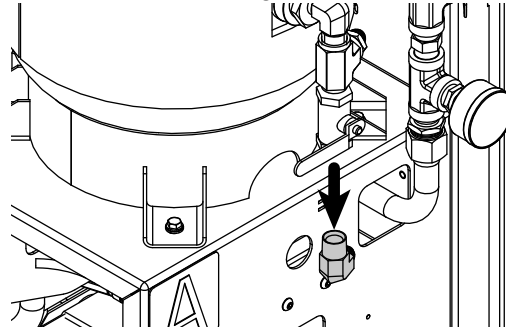
3. Close the material return ball valve.



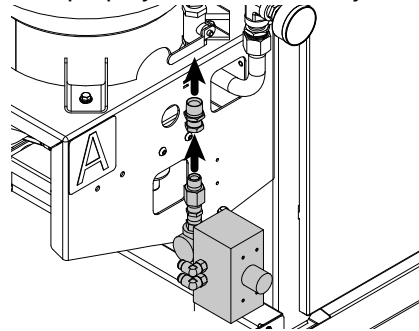
4. Remove the return line.

<b>NOTICE</b>
The return line will have chemical inside that will leak out when the return line is loosened. To avoid chemical spills that may cause damage or injury, place a waste container underneath the return line when removing it from the system.

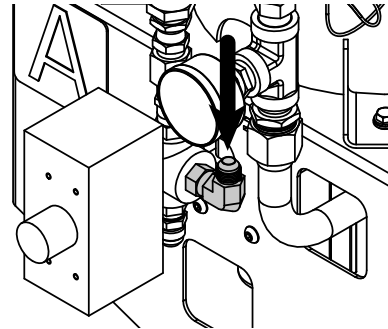
5. Remove the fitting.



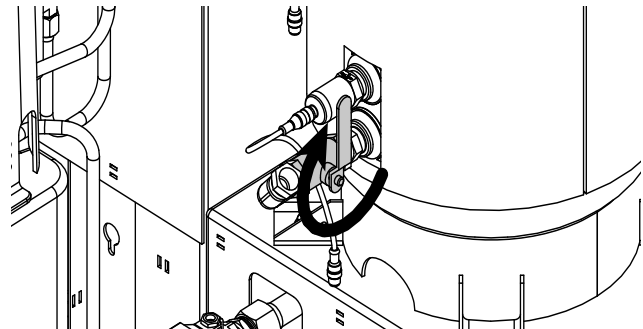
6. Install the prepoly refresh assembly.



7. Connect the return line.

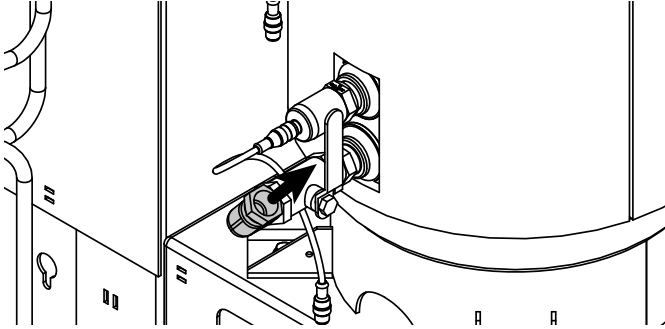


8. Close the inlet ball valve.

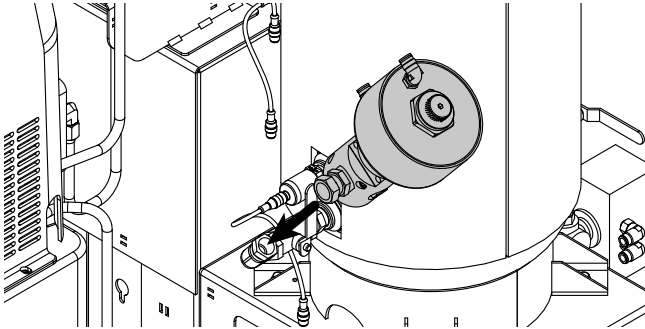


9. Close or depressurize the material supply line.

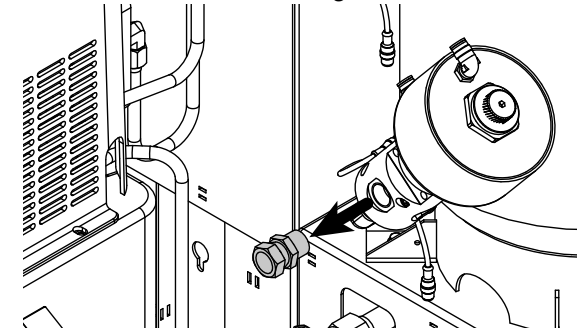
10. Disconnect the material supply line.



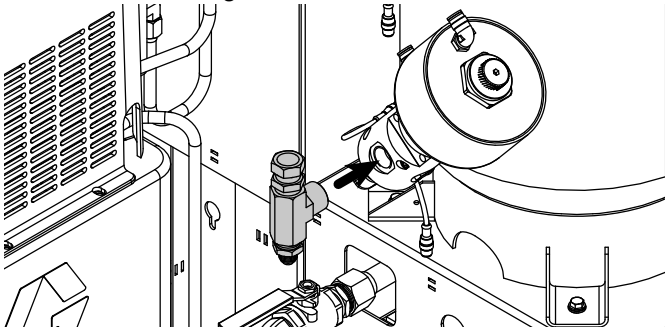
11. Install the autofill valve on the tank if applicable.



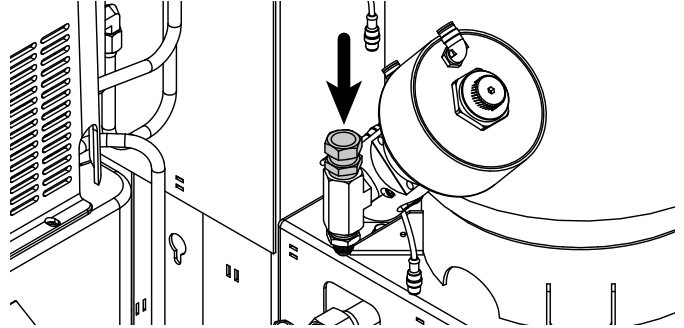
12. Remove the swivel fitting.



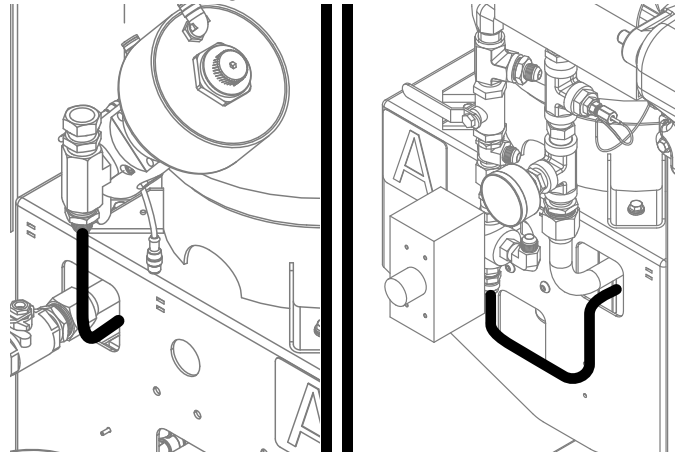
13. Install the fittings onto the autofill valve.



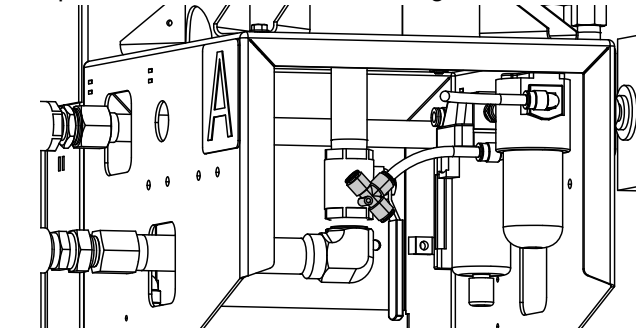
14. Install the material supply line to the 3/4 in. NPT autofill valve inlet port.



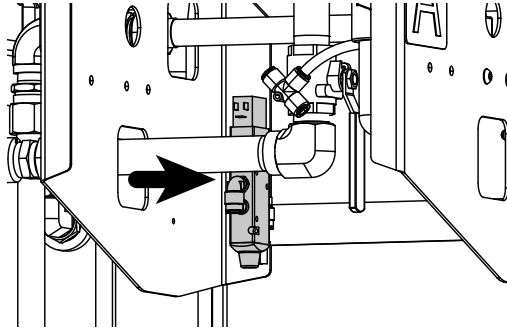
15. Install the stainless steel braided hose from the bottom port of the prepoly refresh assembly to the autofill valve. Route the hose underneath the tank stand mounting bracket.



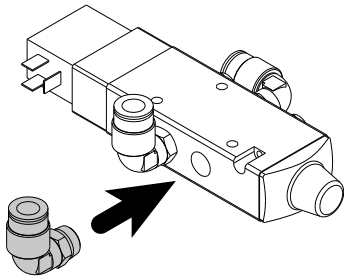
16. Remove the air line from the filter to the autofill power valve. Install the tee fitting onto the airline.



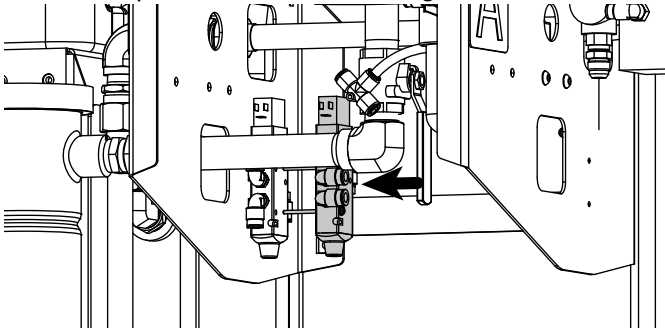
17. Remove the autofill power valve from under the tank stand.



18. Remove the plug and install the air fitting.



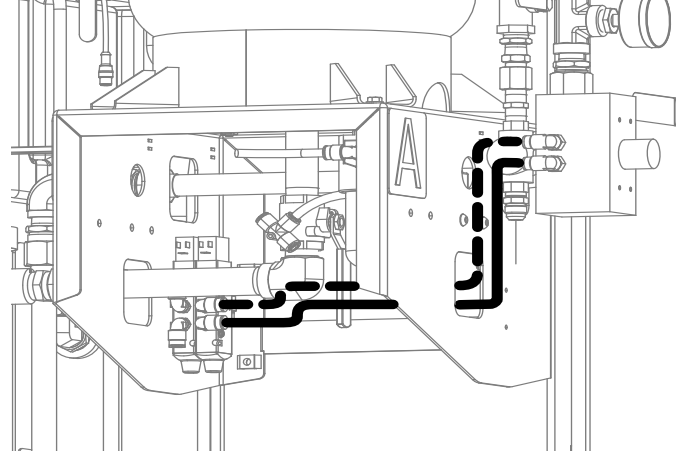
19. Attach the prepoly refresh power valve on top of the autofill power valve with the longer screws.



20. Connect air lines from port 1 of both power valves to the tee fitting.

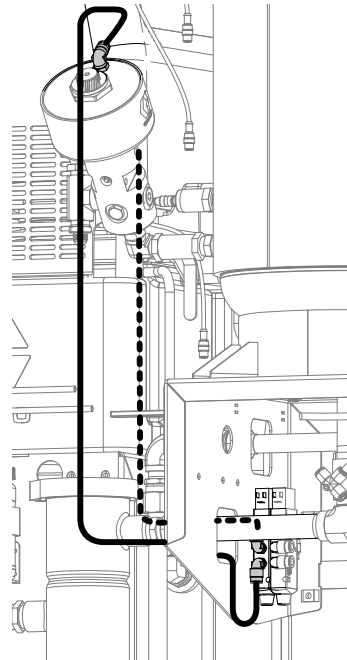
21. Connect the air lines from the prepoly refresh power valve to the prepoly refresh assembly.

**NOTE:** Connect port 2 of the prepoly power valve to port 2 of the prepoly refresh valve and port 4 of the prepoly power valve to port 4 of the prepoly refresh valve.



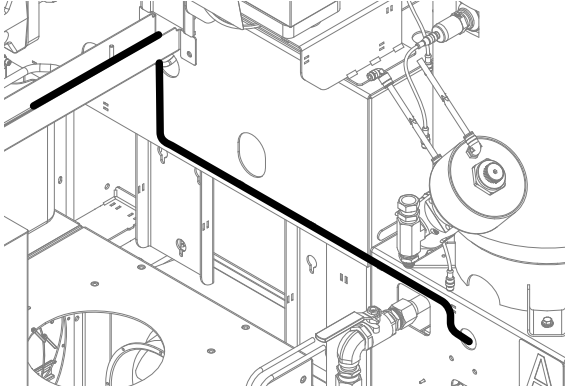
22. Connect air lines from the autofill valve to the autofill power valve. Refer to the DV Series Dispense Vales manual for additional details.

**NOTE:** Connect port 2 of the autofill power valve to the air-to-close air inlet of the autofill valve and port 4 of the autofill power valve to the air-to-open of the autofill valve.





23. Connect the prepoly refresh power valve cable to the prepoly refresh power valve.
24. Route the prepoly refresh power valve cable. Follow the existing autofill valve power cable.

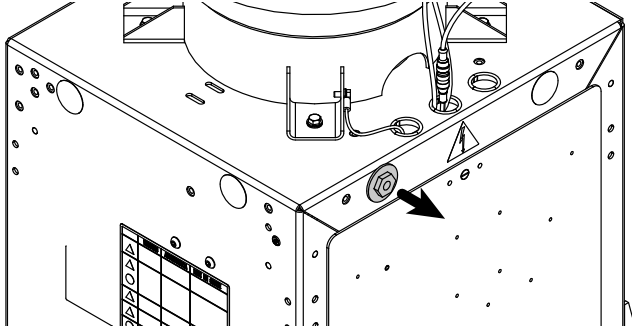


25. Disconnect the autofill valve power cable from the extension cable found within the trough. Connect the splitter (120953).
26. Connect both power valve cables to the splitter.
27. Open all ball valves.
28. Connect the air supply.

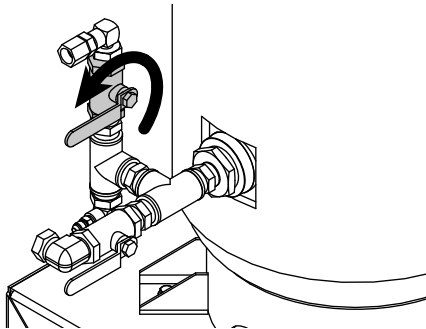
## NVH - Modular

<p><b>TOXIC FUMES HAZARD:</b> Always wear respirators, protective clothing, and chemically impermeable gloves when servicing equipment.</p> <p><b>SKIN INJECTION HAZARD:</b> Follow the <b>Pressure Relief Procedure</b> before servicing equipment.</p>						

1. Perform the **Shutdown** procedure found within the HFR for NVH Foam - Modular manual.
2. Remove the air supply.



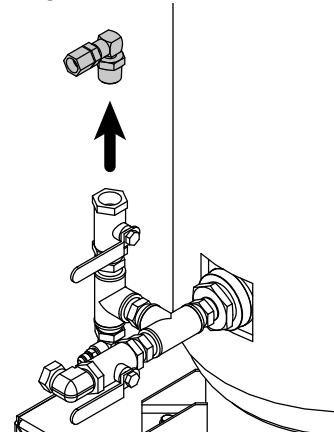
3. Close the material return ball valve.



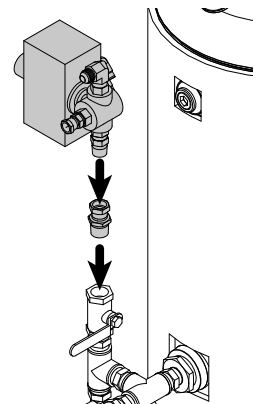
4. Remove the return line.

<b>NOTICE</b>
<p>The return line will have chemical inside that will leak out when the return line is loosened. To avoid chemical spills that may cause damage or injury, place a waste container underneath the return line when removing it from the system.</p>

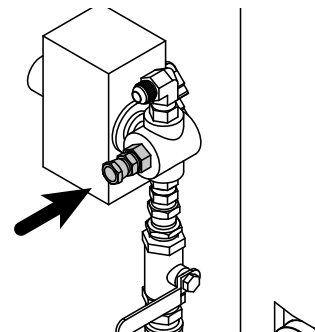
5. Remove the fitting.



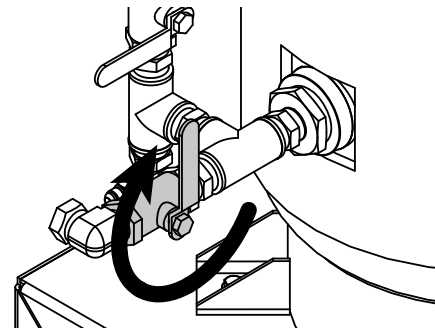
6. Install the prepoly refresh assembly.



7. Connect the return line.

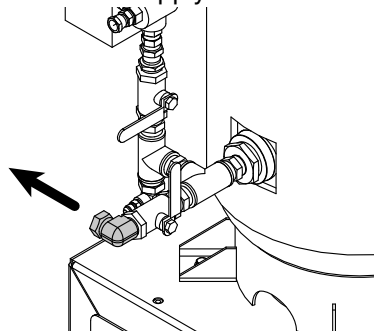


8. Close the inlet ball valve.

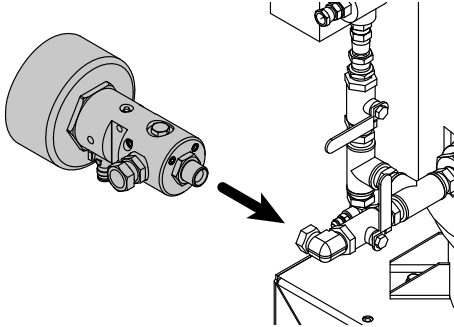


9. Close or depressurize the material supply line.

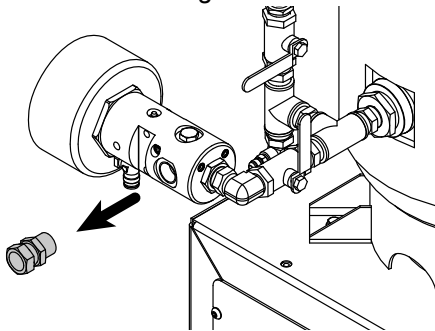
10. Disconnect the material supply line.



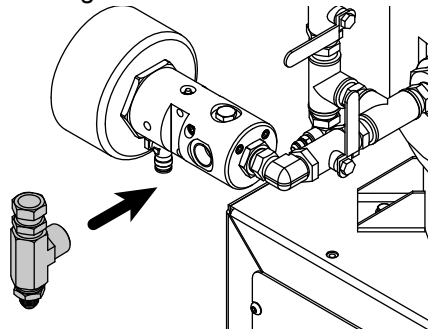
11. Install the autofill valve on the tank if applicable.



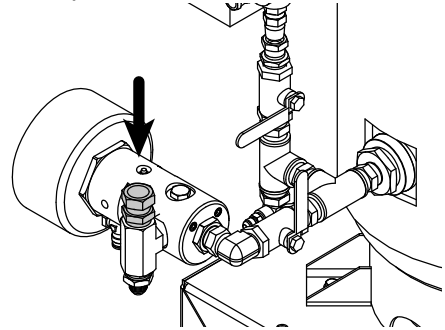
12. Remove the swivel fitting.



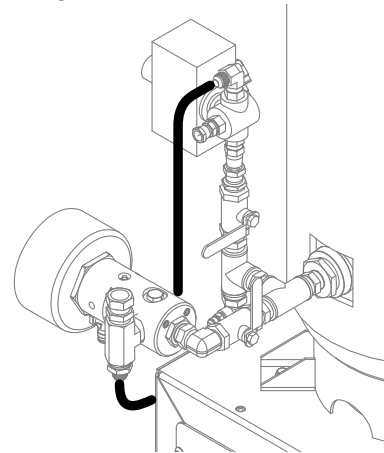
13. Install the fittings onto the autofill valve.



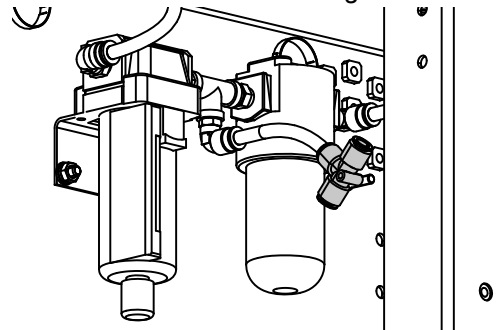
14. Install the material supply line to the 3/4 in. NPT autofill valve inlet port.



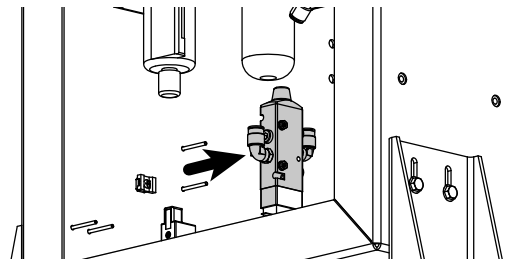
15. Install the stainless steel braided hose from the bottom port of the prepoly refresh assembly to the autofill valve. Route the hose underneath the tank stand mounting bracket.



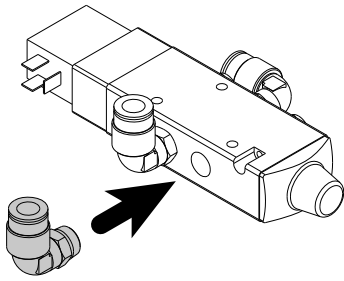
16. Remove the air line from the filter to the autofill power valve. Install the tee fitting onto the airline.



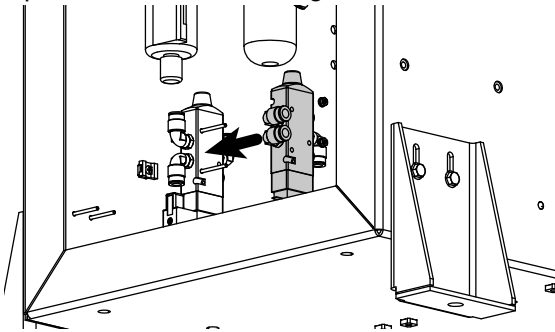
17. Remove the autofill power valve from under the tank stand.



18. Remove the plug and install the air fitting.

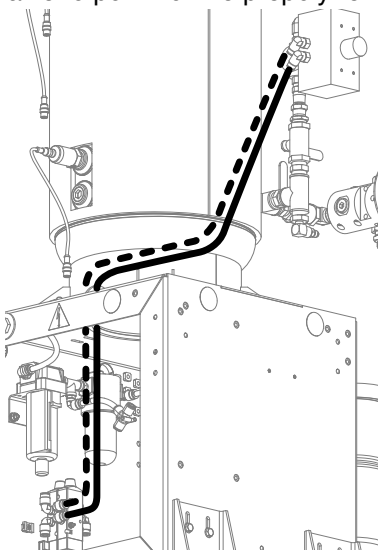


19. Attach the prepoly refresh power valve on top of the autofill power valve with the longer screws.



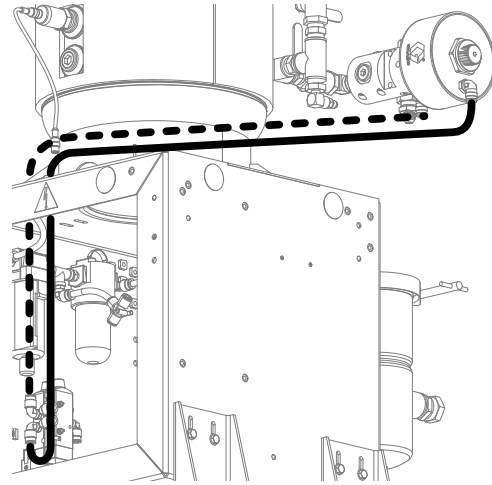
20. Connect air lines from port 1 of both power valves to the tee fitting.
21. Connect the air lines from the prepoly refresh power valve to the prepoly refresh assembly.

**NOTE:** Connect port 2 of the prepoly power valve to port 2 of the prepoly refresh valve and port 4 of the prepoly power valve to port 4 of the prepoly refresh valve.



22. Connect air lines from the autofill valve to the autofill power valve. Refer to the DV Series Dispense Vales manual for additional details.

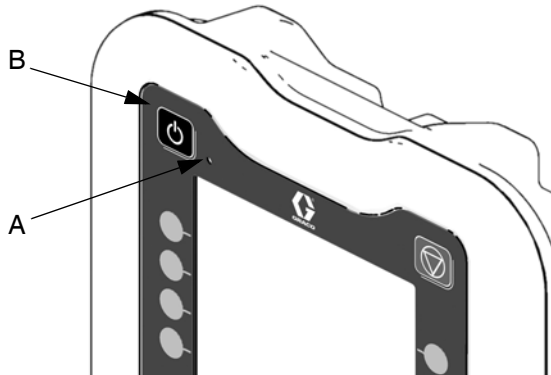
**NOTE:** Connect port 2 of the autofill power valve to the air-to-close air inlet of the autofill valve and port 4 of the autofill power valve to the air-to-open of the autofill valve.





23. Connect the prepoly refresh power valve cable to the prepoly refresh power valve.
24. Route the prepoly refresh power valve cable. Follow the existing autofill valve power cable to the FCM located on the panel.
25. Disconnect the autofill valve power cable from the FCM. Connect the splitter (120953).
26. Connect both power valve cables to the splitter (120953).
27. Open all ball valves.
28. Connect the air supply.

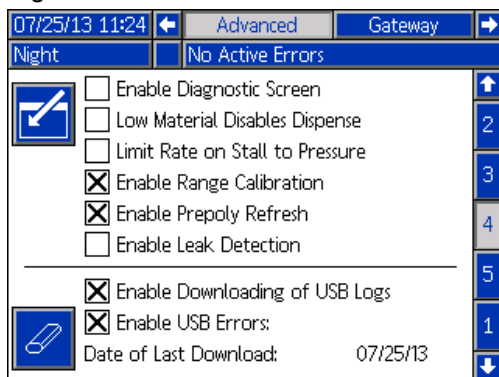
# Setup



To begin using the ADM, the machine must be on and enabled. To verify the machine is enabled, verify the System Status Indicator Light (A) is illuminated green. If the System Status Indicator Light is not green, press the ADM Power On/Off Button (B),



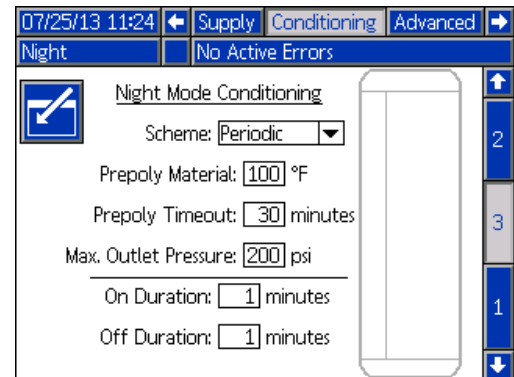
**NOTE:** The blue token (24M560) must be installed to enable the prepoly refresh feature.

1. Press  to select Night mode.
2. Press  to enter Setup mode.
3. Navigate to Advanced Screen 4.



4. Press  to enter the screen.
5. Select and activate the “Enable Prepoly Refresh” option.
6. Press  to exit the screen.

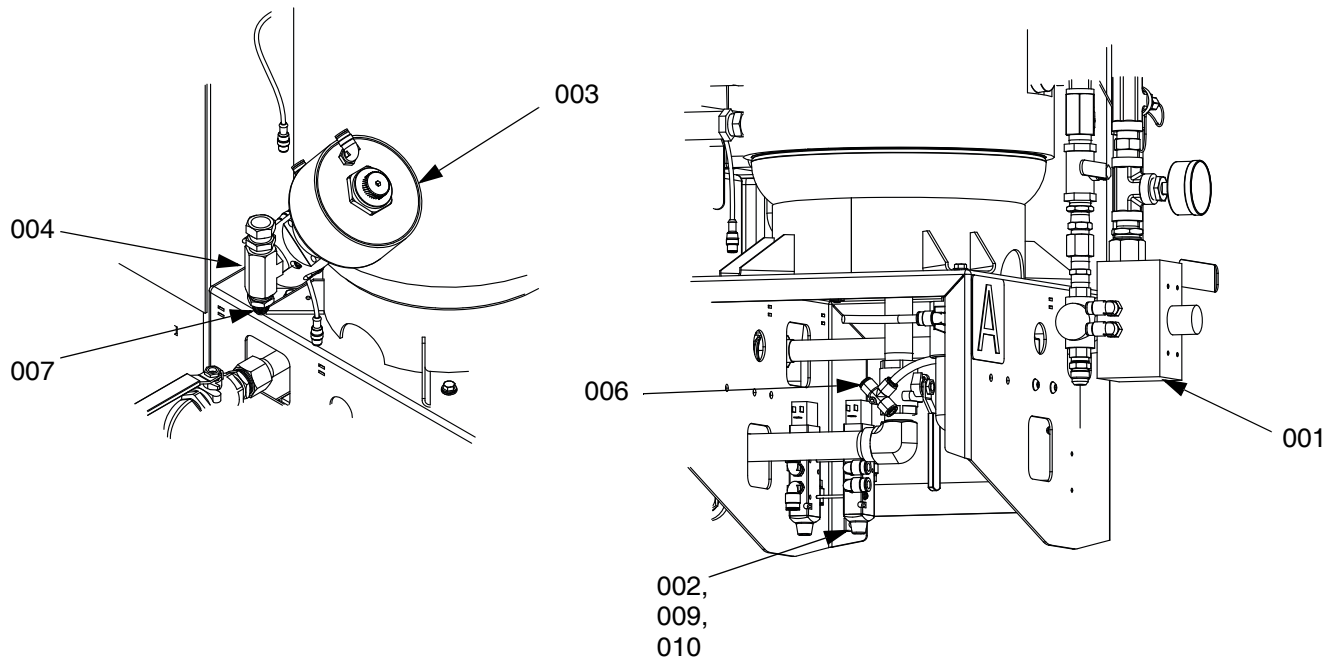
7. Navigate to **Conditioning Screen 3**.



8. Define the prepoly refresh settings. See **Conditioning Screen 3**, page 21, for more detail.

# Parts

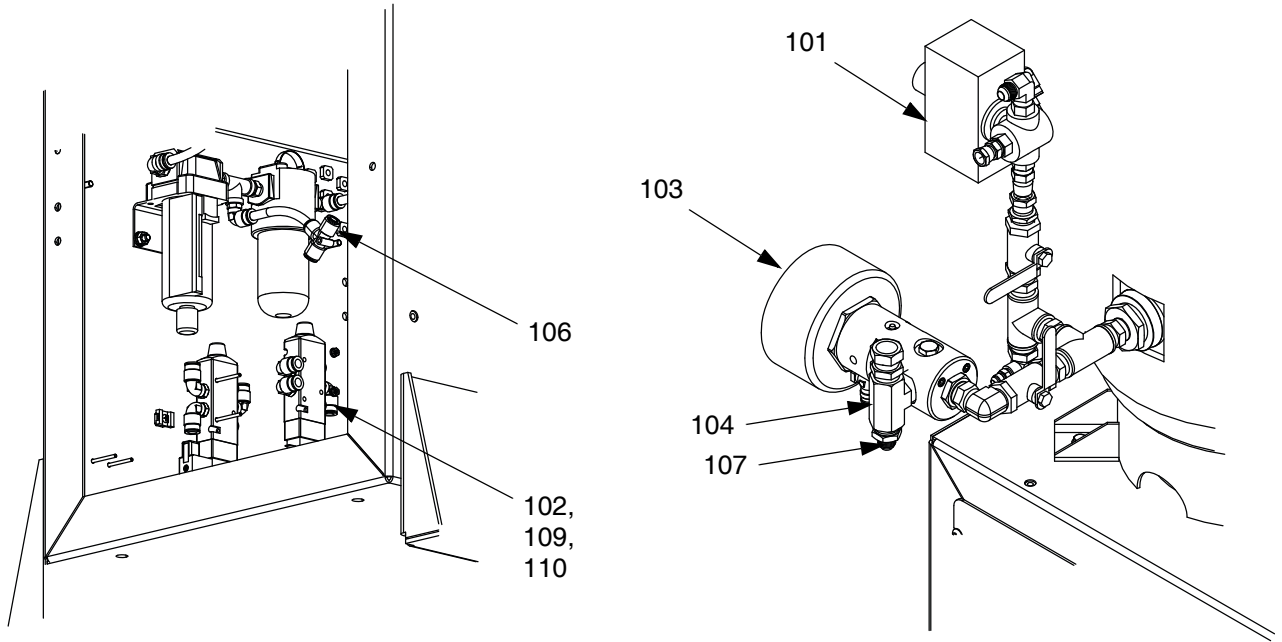
## 24T180, 24T181



Ref	Part	Description	Quantity	
			24T180, KIT, refresh, autofill	24T181, KIT, refresh, no autofill
001	24T184	VALVE, prepoly refresh, NVH cart	1	1
002	24T185	VALVE, assembly, refresh power, NVH	1	1
003	24M419	KIT, refill, HFR, NVH, A-side	1	
004	C20900	FITTING, tee, 3/4x3/4 NPT	1	1
005 ❖	054106	TUBE, plyeth 0.375 OD	8 ft	8 ft
006	U70137	FITTING, tee, 3/8 tube push-lock	1	1
007	124286	FITTING, adapter, 3/4NPTm x 8 JICm	1	1
008 ❖	16C531	HOSE, assy, SST braid, 1/2x48	1	1
009	122955	HARNESS, m12 x mini din	1	1
010	123673	HARNESS, ext, m12xm12, 5pinx5pin, mx	1	1
011 ❖	120953	CONNECTOR, splitter	1	1

❖ Parts not shown.

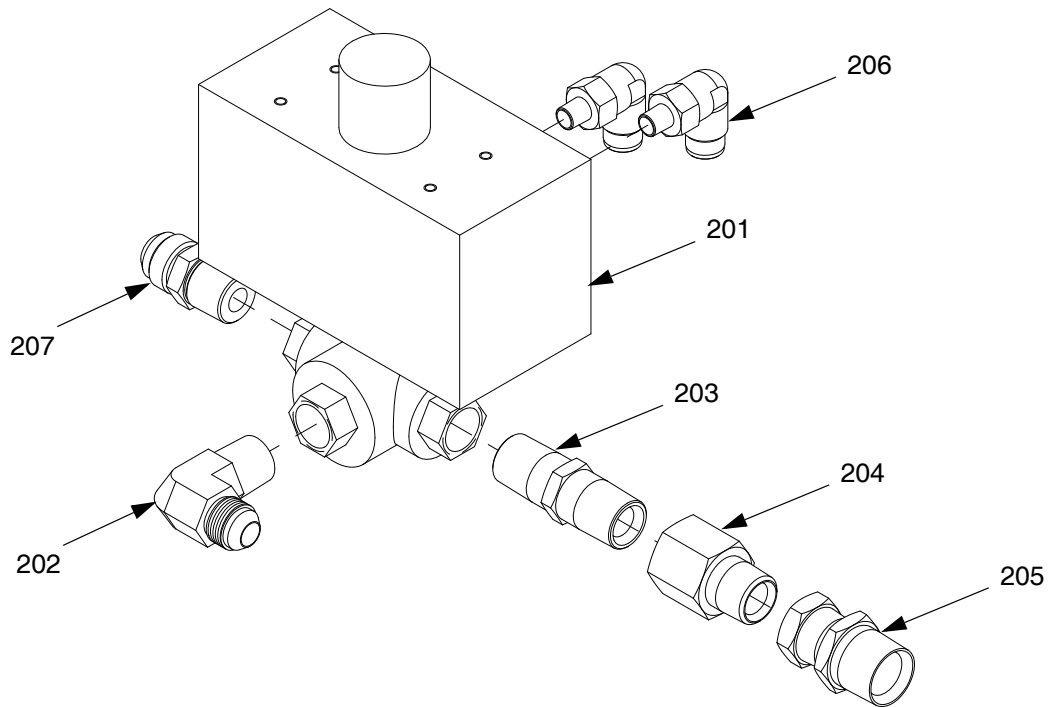
# 24T202, 24T203



Ref	Part	Description	Quantity	
			24T202, KIT, refresh, autofill	24T203, KIT, refresh, no autofill
101	24T186	VALVE, prepoly refresh, NVH modular	1	1
102	24T185	VALVE, assembly, refresh power, NVH	1	1
103	24M419	KIT, refill, HFR, NVH, A-side	1	
104	C20900	FITTING, tee, 3/4x3/4 NPT	1	1
105 ❖	054106	TUBE, plyeth 0.375 OD	8 ft	8 ft
106	U70137	FITTING, tee, 3/8 tube push-lock	1	1
107	124286	FITTING, adapter, 3/4NPTm x 8 JICm	1	1
108 ❖	16C531	HOSE, assy, SST braid, 1/2x48	1	1
109	122955	HARNESS, m12 x mini din	1	1
110	123673	HARNESS, ext, m12xm12, 5pinx5pin, mxf	1	1
111 ❖	120953	CONNECTOR, splitter	1	1

❖ Parts not shown.

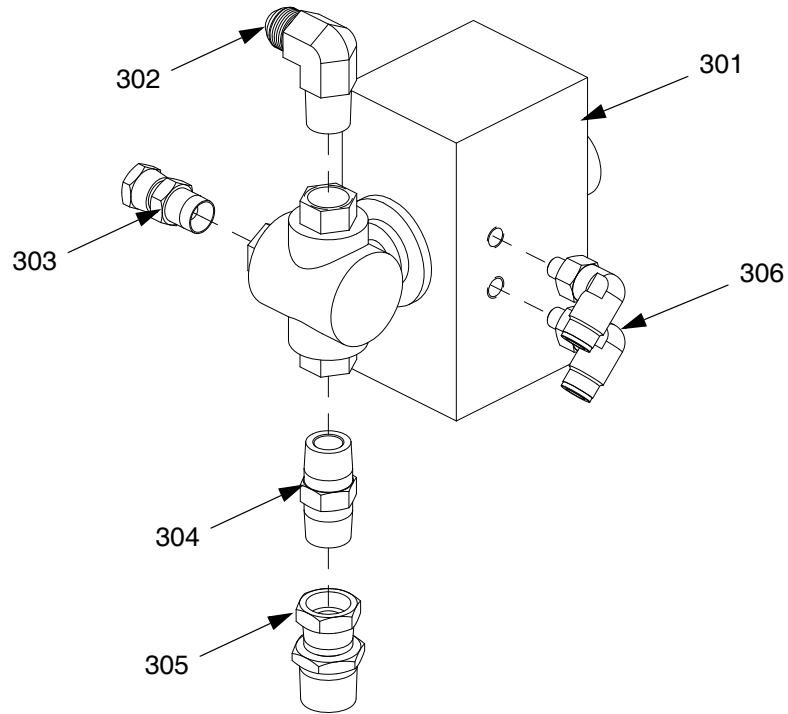
## Valve, NVH Cart



Ref	Part	Description	Quantity
201	16W136	VALVE, ball, 3-way, 1/2NPT, double action	1
202	121486	FITTING, elbow, male, 1/2JICx1/2NPT	1
203	156877	FITTING, nipple, long	1
204	114499	FITTING, adapter	1
205	121282	FITTING, swivel, straight, 1/2fx3/4m	1
206	125383	FITTING, elbow, 1/8NPT, 3/8tube, brass	2
207	120304	FITTING, nipple, straight	1

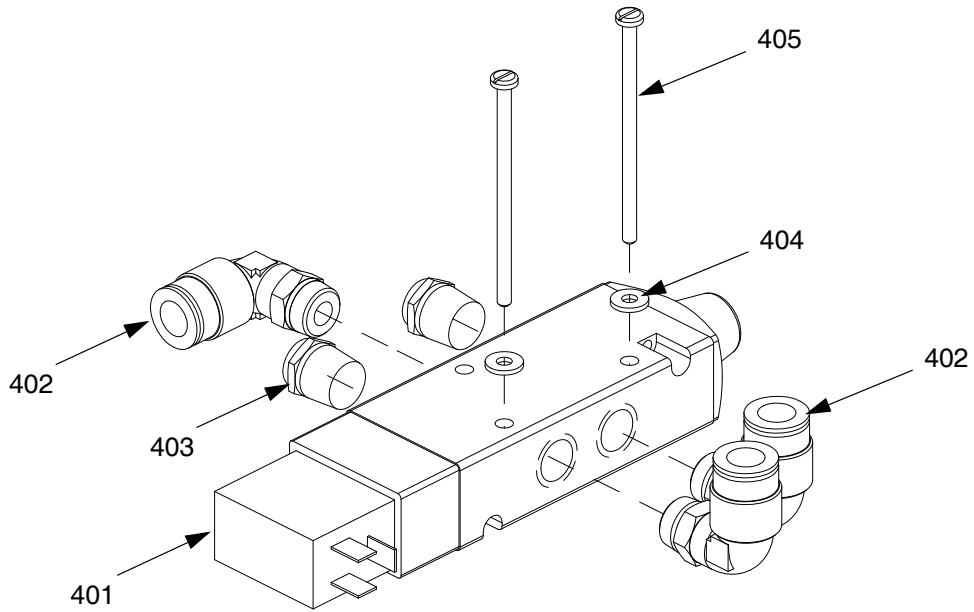


# Valve, NVH Modular



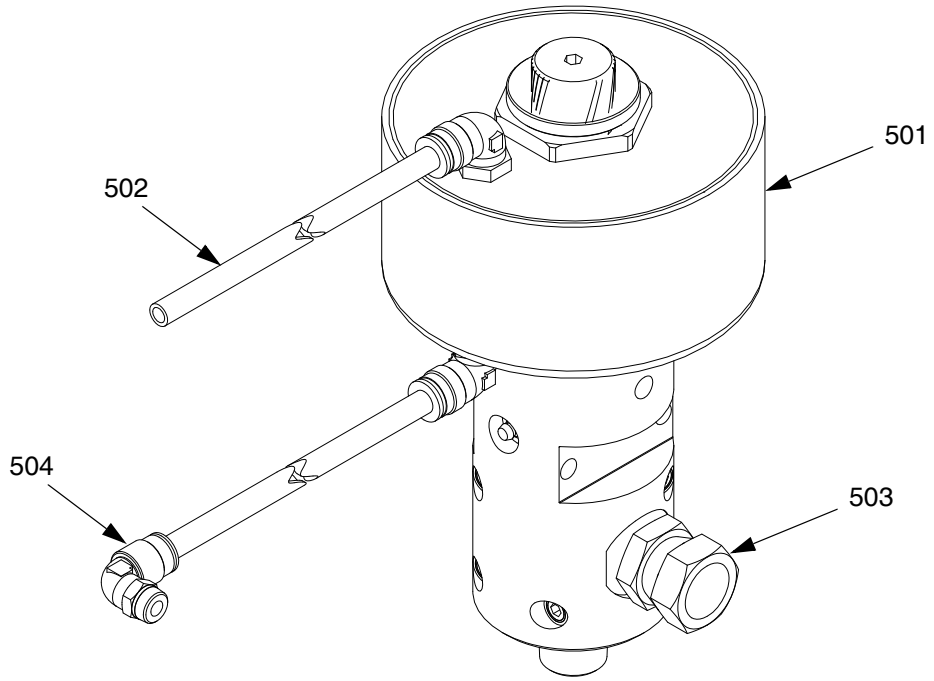
Ref	Part	Description	Quantity
301	16W136	VALVE, ball, 3-way, 1/2NPT, double action	1
302	121486	FITTING, elbow, male, 1/2JICx1/2NPT	1
303	126329	FITTING, swivel, 3/4-16 JICx1/2NPT	1
304	114373	FITTING, nipple, 1/2 NPT, SST hex	1
305	121282	FITTING, swivel, straight, 1/2fx3/4m	1
306	125383	FITTING, elbow, 1/8NPT, 3/8tube, brass	2

## Power Valve



Ref	Part	Description	Quantity
401	120900	VALVE, solenoid, 3 way	1
402	121018	FITTING, elbow, male, swivel, 1/4 NPT	3
403	121021	MUFFLER, 1/4 NPT	2
404	107016	WASHER, plain	2
405	108405	SCREW, machined, panhead	2

# 24M419

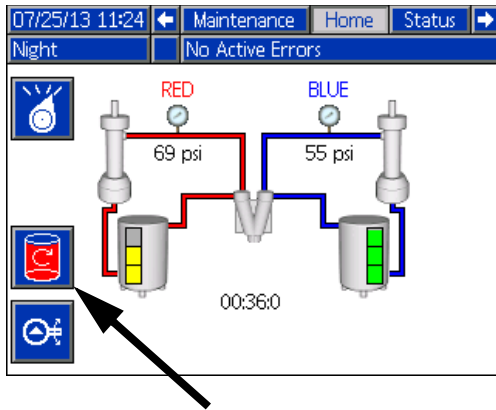


Ref	Part	Description	Quantity
501	V1M350	APPLICATOR, ball seat, 3/4"	1
502	054106	TUBE, plyeth 0.375 OD	6 ft
503	121018	FITTING, elbow, male, swivel, 1/4 NPT	1
504	112268	SWIVEL, union	1

# Appendix A - ADM Screens Overview

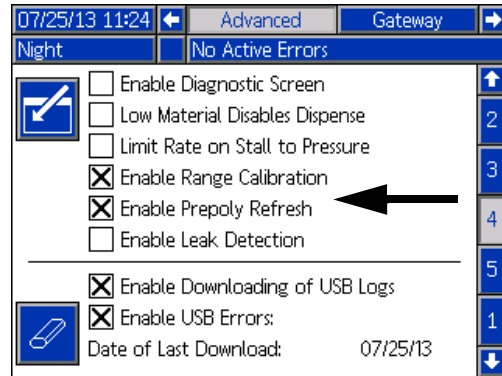
## Home Screen

This screen is shown in Night Mode and has the additional icon for activating the prepoly refresh manually. The icon is enabled in both periodic and time based night modes.



## Advanced Screen 4

This screen has the additional option of activating the prepoly refresh.





## Conditioning Screen 3

### Periodic Night Mode Conditioning Screen

### Time Based Night Mode Conditioning Screen

- **Scheme:** Select between either Time or Periodic modes. Time mode will activate the prepoly refresh at the set time and day specified. Periodic (or manual) mode will activate the prepoly refresh only by

pressing  on the Home Screen when in Night mode.

**NOTE:** The manual activate prepoly refresh button, , is available for either Scheme selected.

- **Prepoly Material:** Sets the material temperature during a prepoly refresh.
- **Prepoly Timeout:** Sets the time limit of the prepoly refresh. If the process times out, it will cancel the prepoly refresh and return to Night Mode.

**NOTE:** The tank will not refill.

- **Max. Outlet Pressure:** Sets the maximum pressure of the material that will be returned back into the customer's material supply. This pressure should not exceed the material supply maximum working pressure.

## Technical Data

<b>Prepoly Refresh Kit</b>		
	<b>US</b>	<b>Metric</b>
Maximum operating pressure*	200 psi	1.4 MPa, 14 bar
Air pressure operating range	80-100 psi	0.5-0.7 MPa, 5.5-7 bar
Maximum fluid operating temperature	180° F	82° C
<b>Inlet/Outlet Sizes</b>		
DV valve, air open size	3/8 in. tube	
DV valve, air close size	3/8 in. tube	
DV valve, fluid inlet size	3/4 in. npt (f)	
DV valve, fluid outlet size	3/4 in. npt (m)	
3-way ball valve, air size	3/8 in. tube	
3-way ball valve, fluid inlet size	1/2 in. npt (f)	
3-way ball valve, fluid outlet size	1/2 in. npt (f)	
<b>Materials of Construction**</b>		
Wetted materials on all models	Stainless steel, tungsten carbide, chemical resistant fluoro-elastomer rubber, UHMWPE, PTFE	
<b>Weight</b>		
24T180, 24T202	29 lb.	13 kg
24T181, 24T203	14 lb.	6 kg
<b>Notes</b>		
* Pressure should not exceed the material supply maximum working pressure.		



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# Graco Information

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