

# Dyna-Star<sup>®</sup> HP Vent Valve Kit

332519H

EN

Used with the Dyna-Star HP or HF Pump to reduce system pressure and allow injector to reset. For professional use only.

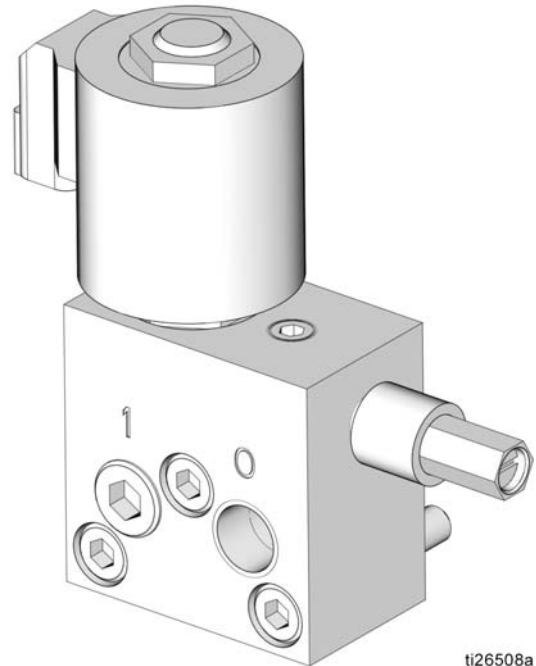
Part No.: 77X540

*Maximum Working Pressure: 3500 psi (241 bar, 24 MPa)*



## Important Safety Instructions

Read all warnings and instructions in this manual and the Dyna-Star HP and HF Pump instruction manual included with your unit. Save all instructions.







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# Instructions

## Warnings

See the Dyna-Star HF and HP Pump Instruction manual for additional warnings.






					
<b>SKIN INJECTION HAZARD</b>					
<p>High-pressure fluid from dispense device, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. <b>Get immediate surgical treatment.</b></p> <p>Follow <b>Pressure Relief Procedure</b> in this manual, when you stop dispensing and before cleaning, checking, or servicing equipment.</p>					
<b>PRESSURIZED EQUIPMENT HAZARD</b>					
<p>Over-pressurization can result in equipment rupture and serious injury.</p> <ul style="list-style-type: none"> <li>• A pressure relief valve is required at each pump outlet.</li> <li>• Follow <b>Pressure Relief Procedure</b> in this manual before servicing.</li> </ul>					
<b>PRESSURIZED ALUMINUM PARTS HAZARD</b>					
<p>Use of fluids that are incompatible with aluminum in pressurized equipment can cause serious chemical reaction and equipment rupture. Failure to follow this warning can result in death, serious injury, or property damage.</p> <ul style="list-style-type: none"> <li>• Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents.</li> <li>• Many other fluids may contain chemicals that can react with aluminum. Contact your material supplier for compatibility.</li> </ul>					

## Installation

### Pressure Relief



Follow the Pressure Relief Procedure whenever you see this symbol.

						
<p>This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid and moving parts, follow the Pressure Relief Procedure when you stop dispensing and before cleaning, checking, or servicing the equipment.</p>						

To relieve pressure in the system, use two wrenches working in opposite directions on pump outlet fitting to **slowly loosen fitting only** until fitting is loose and no more lubricant or air is leaking from fitting as shown in FIG. 1.

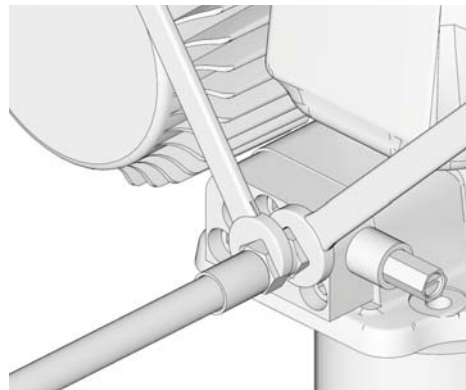


FIG. 1

## Vent Valve Installation



Reference numbers used in these instructions correspond to Parts included in Kit and are provided on page 5. Parts identified with an alpha character are user provided or already installed components.

To ensure the correct pressure relief valve is used and pressure settings are correct, always use new parts included in your Vent Valve Kit for reassembly.

1. If unit has already been in service, **relieve pressure** (see Pressure Relief procedure, page 2).
2. Disconnect Dyna-Star HP or HF pump from main power source.
3. Remove outlet tubing from port marked "0" on the pump adapter block (a) (FIG. 2).

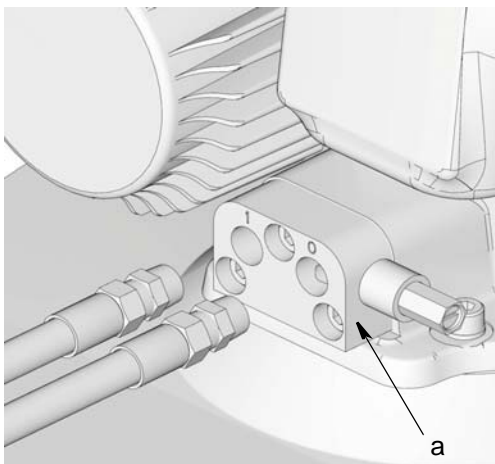


FIG. 2

4. Remove plug or inlet tubing from port marked "1" on the pump adapter block (a) (FIG. 2).

5. Loosen, remove and discard the 3 socket head cap screws (b) from the adapter block (a) (FIG. 3).

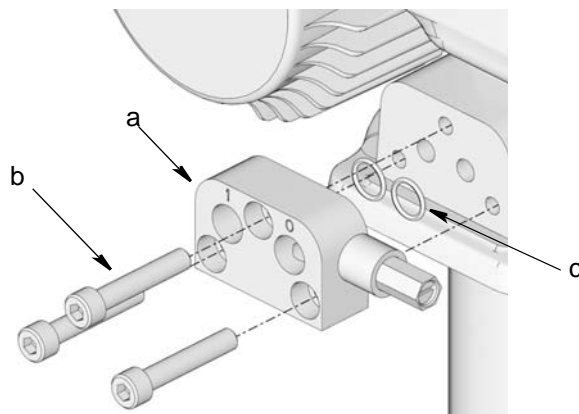


FIG. 3

6. Remove adapter block (a) and o-rings (c) (FIG. 3). Discard these parts according to state and local codes for proper disposal. These parts will not be used for reassembly.
7. Grease o-rings (8) and install o-rings in vent valve block as shown in FIG. 4.

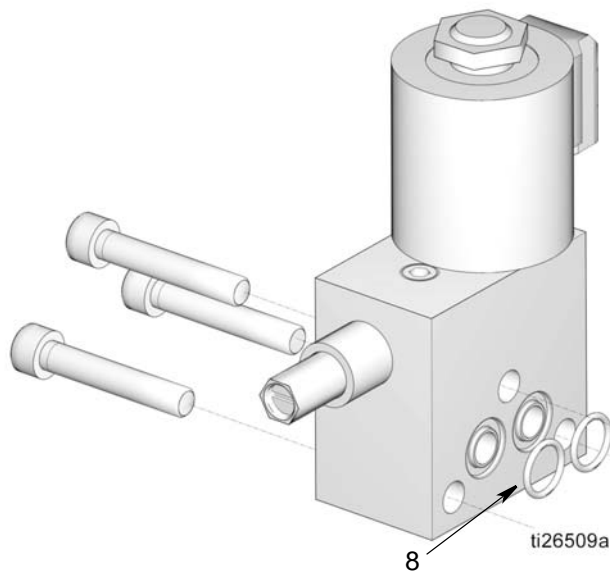


FIG. 4

Clean surface of the Dyna-Star pump outlet with a clean dry cloth. Inspect pump surface for scratches or nicks. A scratched surface can result in fluid leakage.

8. Install vent valve (1) to pump surface using the 3 cap screws (4) included in the kit (FIG. 5). Hold the vent valve tight to the surface of the pump to ensure o-rings stay in place during installation. Torque screws to 17-19 ft-lbs (23-26 N.m).

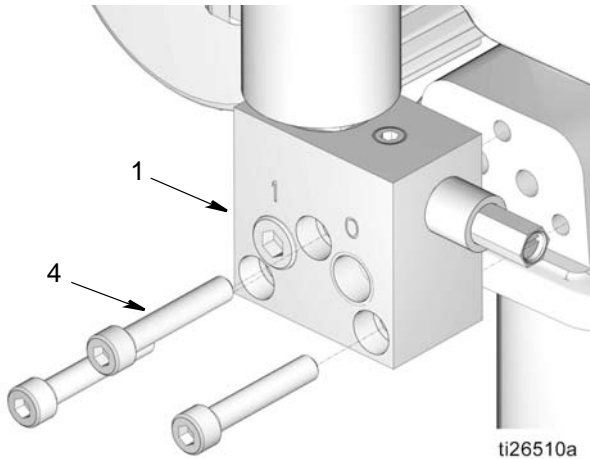


FIG. 5

9. Install lubrication line to vent valve pump outlet port marked "0" (FIG. 6).

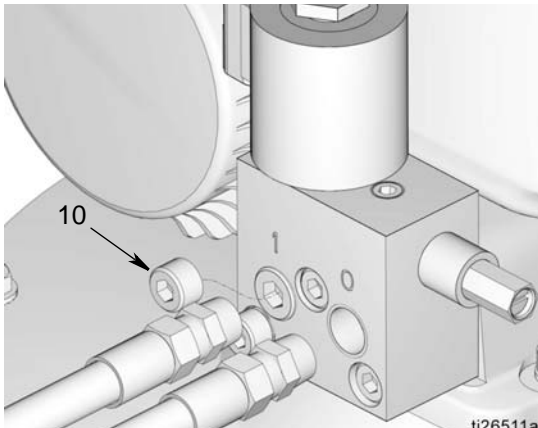


FIG. 6

10. In the inlet port marked "1" (FIG. 6) install either:

- a plug (10).
- inlet plumbing necessary to attach a fill pump.

**NOTE:**

- For tube-in-tube pump models, the "1" inlet can be used as a fill port.
- For models equipped with a follower plate, without a tube-in-tube, the "1" inlet deposits grease on top of the follower plate.

11. Connect cable (d) to valve cartridge (c) (FIG. 7).

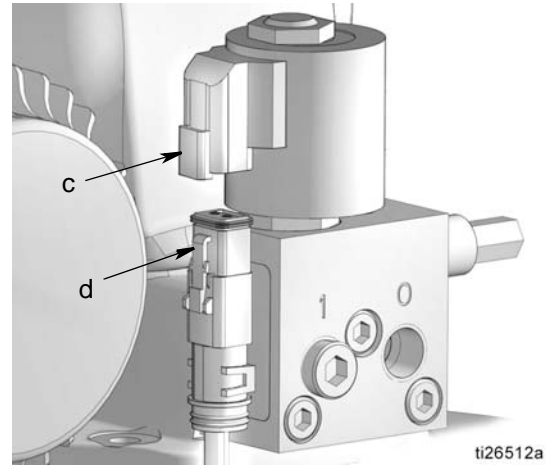


FIG. 7

12. Install other end of cable (d) to solenoid control device.

**NOTE:**

- Cable (d) is available from Graco. See Accessories, page 5 for a list of available cables.
- Connector termination is a Deutsch DT-04-2P.
- Solenoid inputs are not polarity dependent. Voltage can be applied in either direction.
- Solenoid should be activated when the pump is running. See wiring diagrams in pump manual for more details.

13. Reconnect pump to main power supply.

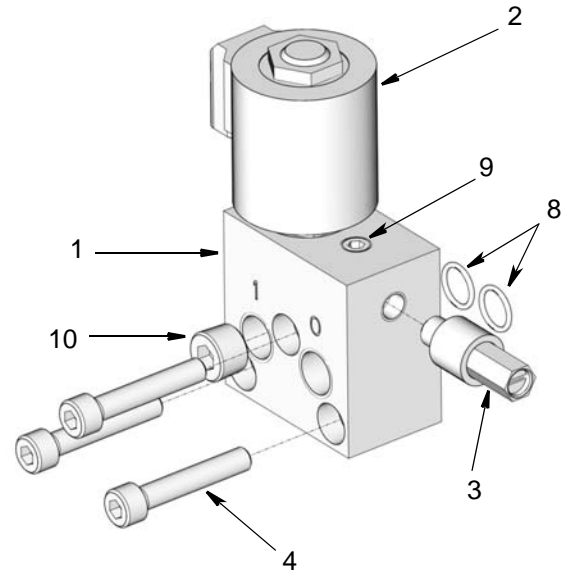
14. Test system to ensure proper operation.

## Parts

Ref	Description	Qty
1	MANIFOLD, electric vent valve	1
2	VALVE, cartridge, 24VDC	1
3	VALVE, pressure relief, 3500 psi	1
4	SCREW, cap, socket, M8 x 1.25	3
8	O-RING	2
9	PLUG, pipe, 1/8 in. npt	1
10	PLUG, 1/4 in. npt	1

### Accessories

Part No.	Description
24N402	CABLE, 6 ft, vent valve, 2 pin for vent valve control
77X546	CABLE, power extension, 15 ft (4.6m), Injector System



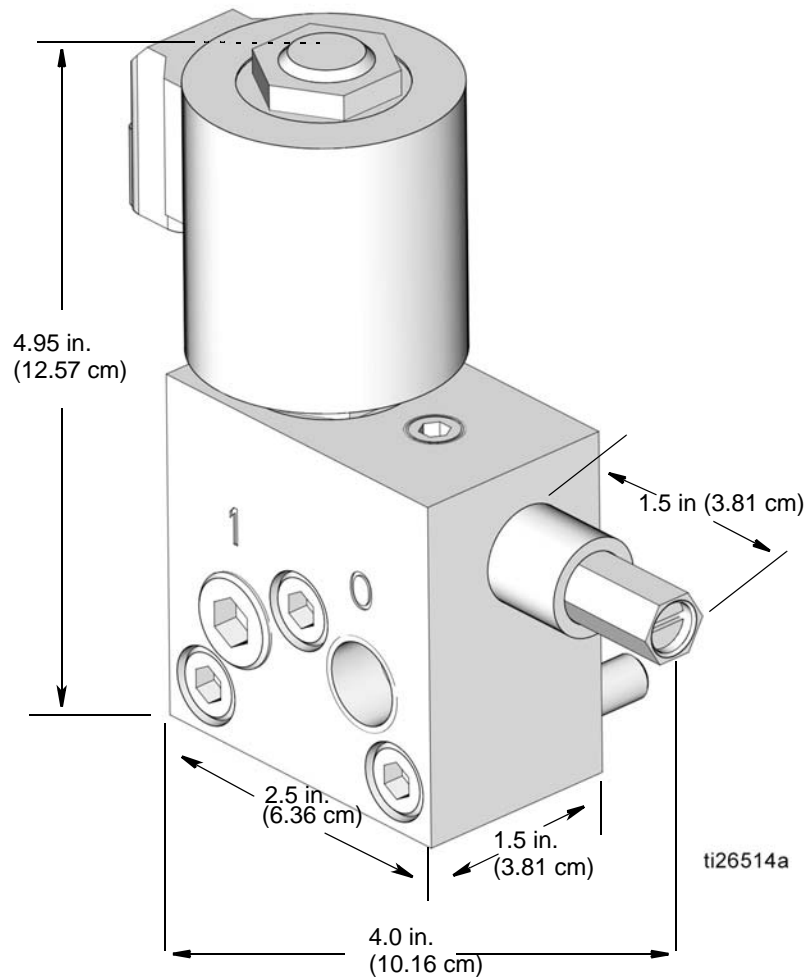
## Technical Data

Vent Valve for Dyna-Star HP		
	US	Metric
Maximum working pressure*	3500 psi	24.1 MPa, 241 bar
<b>Inlet/Outlet Sizes</b>		
Outlet (marked "0")	3/8 in. npt(f)	
Inlet (refill - marked "1")	3/8 in. npt(f)	
<b>Pressure Relief Valve</b>		
Factory Set Pressure	4000 psi $\pm$ 250 psi	27 MPa, 275 bar $\pm$ 10%
Reset Pressure	80% of set pressure	
Relief Rate**	0.1 gallons/minute @3500 psi	0.4 liters/minute @24.1 MPa, 241 bar
<b>Solenoid Valve</b>		
Flow**	Up to gpm 0.2 gallons/minute, 40 in <sup>3</sup> /minute	0.65 liters/minute
Wetted materials	Zinc plated steel, carbon steel, aluminum, fluoroelastomer, polyurethane	
Weight	4.0 lbs	1.8 kg
IP Rating	IP69K	
<b>Solenoid Coil</b>		
24 VDC	Resistance (DC) (Ohms) @ 68°F (20°C)	Initial Current Draw (Amps)
	28.8	0.83

\*Dyna-Star HP Pump Models are rated for 5000 psi (34.47 MPa, 344 bar) maximum working pressure, however, when a vent valve is installed on the HP Pump, the maximum working pressure must be reduced to 3500 psi (24.1 MPa, 241 bar).

\*\*Flow capability depends on viscosity, type of fluid, temperature, etc.

# Dimensions



## Graco Information

For the latest information about Graco products, visit [www.graco.com](http://www.graco.com).

**TO PLACE AN ORDER**, contact your Graco distributor or call to identify the nearest distributor.

**Phone:** 612-623-6928 or **Toll Free:** 1-800-533-9655, **Fax:** 612-378-3590

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*For patent information, see [www.graco.com/patents](http://www.graco.com/patents).*

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