

VAPOR ASSIST INSTALLATION INSTRUCTIONS

For Series 8753E, 8853E, 9153A, and 9853A Single and Twin Models

This instruction sheet covers the installation of the Vapor Assist System for the models named above. Assembly and installation of a Vapor Assist System requires a kit containing the following:

Qty.	P/N	Description	Qty.	P/N	Description
1	017270	¾" to 1" Bushing*	1	N/A	External Vapor Pump
1	030424	¾" Hardwall UL 1' 9" hose	1	N/A	Pump Cover
1	028930	¾" Rubber Grommet	1	N/A	Bellowless Nozzle
1	045802	Plate, Vapor Assist	1	N/A	Breakaway
1	047302	Pulley, 5/8" Bore, 2.6 Dia.	1	N/A	Hose Retractor Clamp
1	012163	Belt, A35	1	N/A	¾" Elbow, 90°
1	035282	Warnings and Safeguards	2	Optional	Thermoid Inverted Coaxial Hose***
1	032169	Template			
1	046631	Decal, Nozzle/Hose/Clamp	1	N/A	Metal Mounting Plate **
1	032170	Instruction Sheet	2	N/A	Locking Nuts
			2	N/A	Set Screws

*Required for units with 1" discharge only.

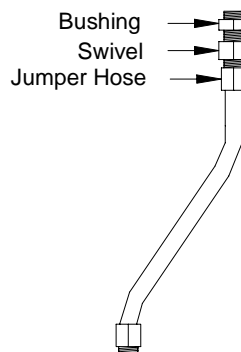
**Discard item and use P/N 045802 plate noted at left.

***Must be a UL-Listed Inverted Coaxial Hose assembly.

1. Read all instructions before beginning. Installation should be done according to the instructions on this sheet. Also, read and follow all precautions regarding remote dispensers and pumps on the *Warnings and Safeguards* sheet, 035282, included in the kit. **SAFETY NOTE: Before drilling or performing any other operation which may generate a spark, we recommend removing the dispenser and other pertinent equipment a safe distance from the island.**
2. Turn off power to the dispenser at the breaker and activate emergency shutoff valve.
3. On models 8853E/ETW, 9153A/ATW, and 9853A/ATW, replace existing motor pulley and V-belt with supplied pulley and V-belt. **Model 8853ETW1 does not require this conversion.**

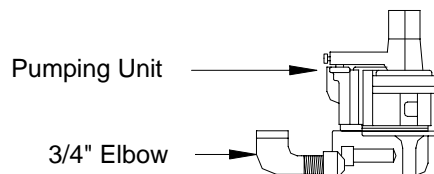
Assemble Product Jumper Hose

4. Use a UL-Classified gas- and oil-resistant pipe compound on all threads when assembling these components. *NOTE: All further references to pipe compound in these instructions imply UL-classified pipe compound.*
5. Assemble ¾"-1" bushing (017270) to ¾" jumper hose/swivel assembly (030424).
6. Set aside.



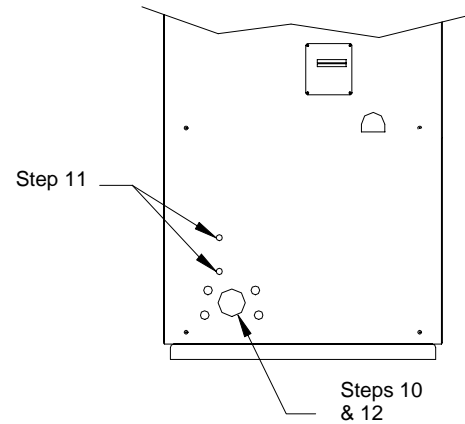
Assembling Pumping Unit

7. Using pipe thread compound, attach ¾" x 90° elbow into product connector on bottom of OPW pumping unit (Blackmer Model VRFO, ID No. 2).
8. Thread set screws into the pump. Use a 1/8" Allen wrench to fully tighten. Remove the protective vapor connection plug from the vapor connection on the OPW pumping unit. **Be careful not to allow any foreign matter, such as dirt or metal shavings to get into the pump fitting. This could cause pump seizure and malfunction.**
9. Gasboy recommends that you install a UL-Listed vapor line shear valve, such as OPW 60VSP as part of the new vapor line plumbing. Refer to instructions supplied with shear valve for installation details.



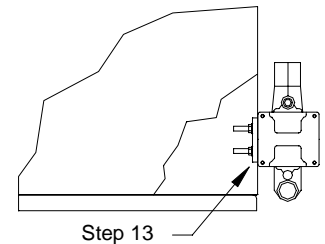
Mounting External Vapor Pump

10. Remove plastic plug (vapor connection opening) from side panel.
11. Refer to template (032169) for instructions on marking and drilling two 5/16" diameter holes through both side panel and side frame.
12. Replace plastic plug removed in Step 10 with rubber grommet (028930).



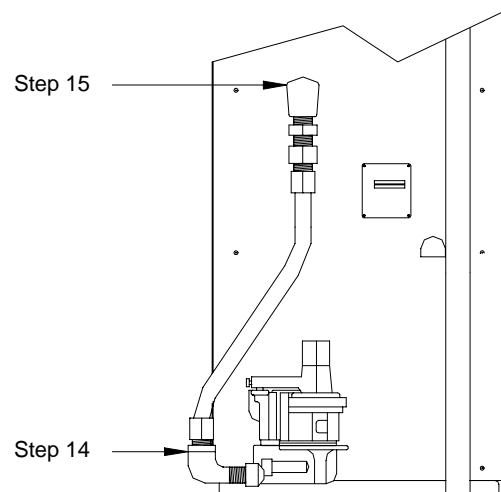
Mount the Pump to the Dispenser

13. Position the OPW pump up to the dispenser. Align the vapor connection of the OPW pumping unit with the side panel vapor opening. Insert set screws through mounting holes. From inside the dispenser, place Gasboy metal plate (045802) over the screws and tighten locking nuts onto screws.



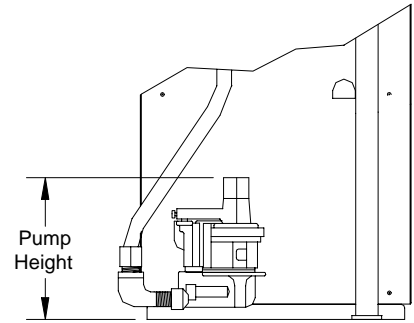
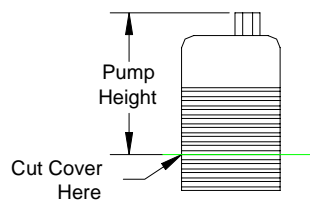
Install Jumper Hose

14. Using pipe thread compound, thread product jumper hose onto 90° elbow. Tighten with crescent wrench.
15. Using pipe thread compound, assemble jumper hose/bushing/swivel assembly to existing dispenser discharge and tighten.

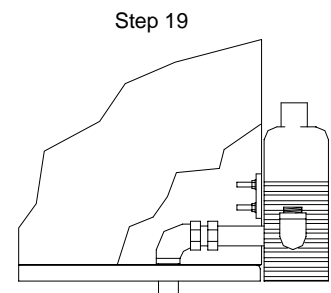


Assemble Pump Cover

16. Measure the distance from the top of the OPW pump to the dispenser island surface. This measurement will determine the height of the pump cover.
17. Mark this measurement on the pump cover. Using a hacksaw, cut the pump cover on the nearest ridge to meet this dimension. Using a coping saw, cut out the edge section of the cover to allow for elbow connection to the pump.

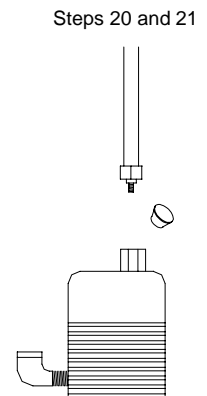


18. Loosen nuts inside dispenser. Place pump cover completely over the pump and tighten the nuts inside the dispenser with a 7/16" socket or box wrench. **Do not overtighten locking nuts. Overtightening could result in damage to the pump cover.**
19. Measure nipple length from pipe fitting to the UL-Listed internal union half (nto supplied). **Be certain pipe thread engagement length is included in measurement.** Cut nipple and, using pipe compound, thread into pump. Thread union half onto other end of nipple. Connect both union halves and tighten.

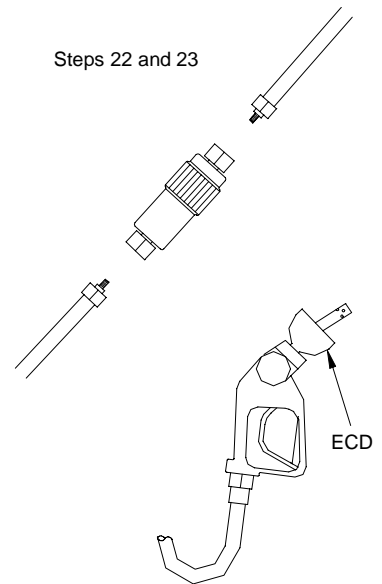


Install Fueling Hose

20. Remove inverted coaxial inlet protective cap from pump. **Be careful not to allow any foreign matter, such as dirt or metal shavings to get into the inverted coaxial inlet. This could cause pump seizure and malfunction.**
21. Lubricate the new inverted hose threads and O-rings with grease and thread the hose onto the pump. Tighten the hose/pump connection. **Do not use pipe thread compound or Teflon tape on hose connection.**

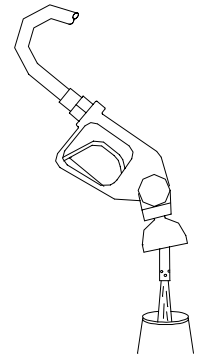


22. With grease, lubricate the threads on the opposite end of the hose and install the breakaway. Lubricate and thread the second section of the hose into the breakaway.
23. Thread OPW11VAI bellowless nozzle fitted with an efficiency compliance device (ECD) onto the hose and tighten. *NOTE: For additional installation instructions, refer to specific procedures supplied with the breakaway and nozzle.*



Test System

24. Reset the emergency shutoff valve. Turn on the power to the pumping system.
25. Activate the dispenser and purge the air from the hose and pump by dispensing 1 to 1-1/2 gallons of gasoline into the authorized 5-gallon container. Upon completion, return gasoline to the underground tank.



Check Performance

26. After the system has been completely installed, the performance of each dispensing hose point must be measured by a trained technician with one of the following standards:
 - Latest revision of State of California Air Resources Board (CARB), procedure TP-201.5 – **Determination (by Volume Meter) of Air to Liquid Volume Ratio of Vapor Recovery Systems of Dispensing Facilities**. The measured A/L (Air/liquid) ratio should be between .9 and 1.1.
 - Latest revision of State of California Air Resources Board (CARB), procedure TP-201.5A – **Determination (by Orifice Meter) of Air to Liquid Volume Ratio of Vapor Recovery Systems of Dispensing Facilities**. The measured A/L (Air/liquid) ratio should be between .9 and 1.1.

If the A/L reading does not fall between .9 and 1.1 it is not necessarily an indication of pump malfunction.

If the A/L ratio exceeds the specified range, check the entire vapor system for possible leaks. If the A/L is below the specified range, check the entire system for possible blockages. If A/L discrepancies persist, individual system components should be evaluated for proper functionality.

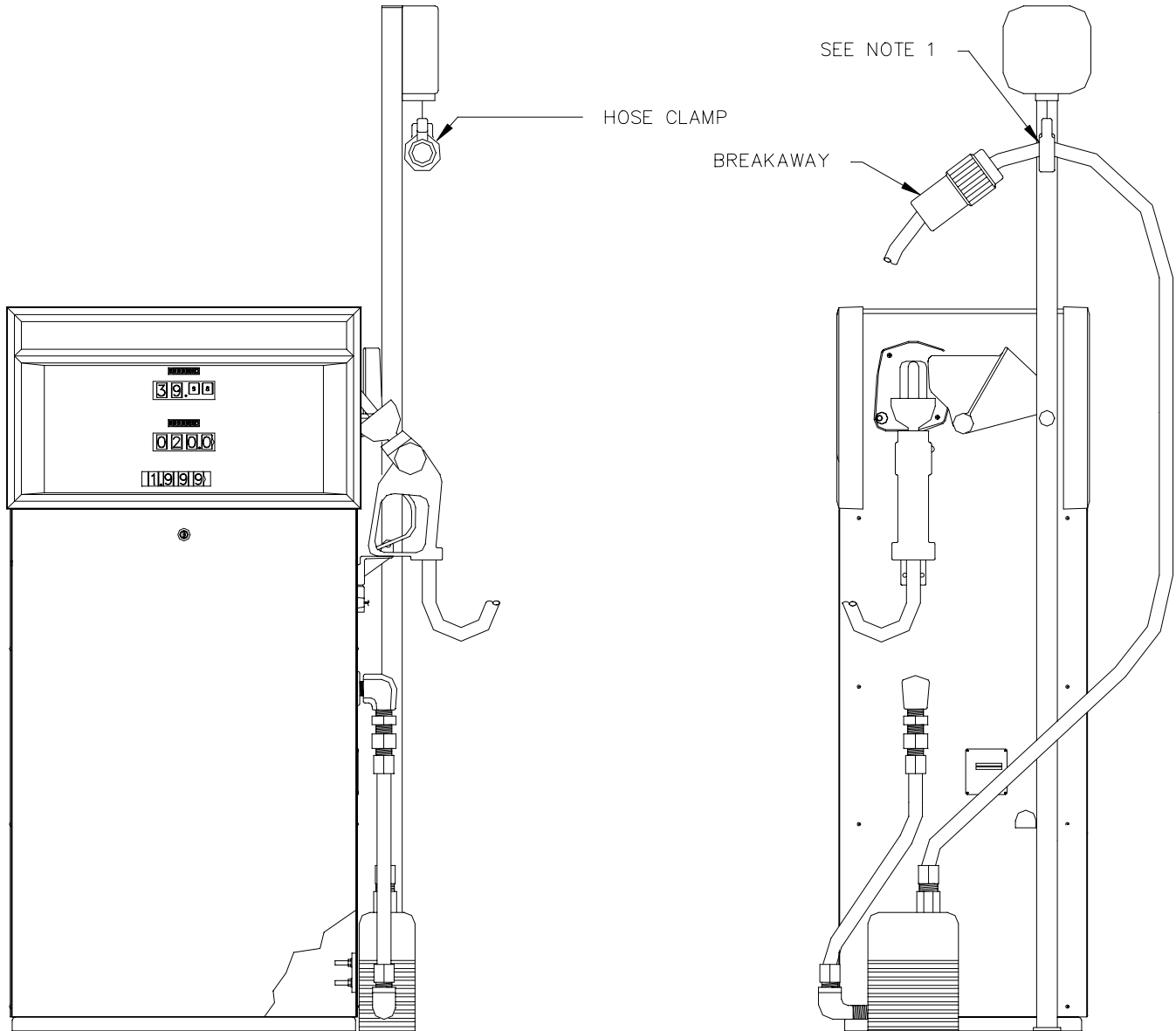
Important: Vent stacks must be outfitted with CARB-approved pressure vacuum vents with a 3” water column positive and 8” water column negative rating, such as the OPW523LP.

27. Replace decal on side panel **For use only in UL Listed Interchangeable Service Station Type Hose Nozzle Valve** with the new decal (P/N 046631).

28. If using a Gasboy High Hose Retriever, refer to the drawing below for final assembly overview.

NOTE: If you need a high hose retriever kit, order Gasboy part number 032660 for all units except 9800 Series. Order part number 032661 for 9800 Series units and complete as shown in the illustration.

HIGH HOSE RETRIEVER OVERVIEW



NOTE: Assemble supplied hose retractor clamp to high hose retriever reel assembly. Clamp should be positioned so that hose does not touch the ground when nozzle is hung in nozzle boot.