



The ! Voice

Message from the President

Glenn Walker, President, VST { walker@vsthose.com }



Greetings Friends of VST:

At VST, innovation starts with identifying our customers' needs based on the real-life issues they face. And from that analysis, we design safe, user-friendly, and cost-effective solutions for those issues.

Here are just a few examples of VST innovative products born of customer-based needs:

VST, a world class manufacturer and leader of Stage II vapor recovery equipment, integrates our patented hanging hardware that reduces front-end emissions with our unique [™]GREEN MACHINE[™] that controls the UST pressure of back-end emissions. When the UST tank pressure exceeds 0.2 IWC, the GREEN MACHINE[™] senses the pressure and is triggered to cycle. This cycle releases fresh air to the atmosphere and returns saturated hydrocarbon vapor back into the tank, which in turn becomes "sellable" gasoline. The combination of the front-end technologies coupled with our GREEN MACHINE[™] that continuously monitors the UST tank pressure, provides the industry with lowest emissions available from any known technology.

Specifically, our vapor recovery hanging hardware includes the ENVIRO-LOC [™] G2 nozzle with the patented interlock design providing the lowest emissions and notwithstanding the safest system available at any price. Paired with the Platinum Balance hose, these two products are power houses in providing safety to the customer during re-fueling and minimizing fugitive emission loss all the while delivering the lowest cost of ownership possible.

VST integrates these innovative technologies into its conventional product line as well.

The VST conventional hanging hardware uses the same interlock technology, such as in the ENVIRO-LOC[™] ECO Dripless/Spitless nozzle. The VST conventional curb hoses benefit from our patented "Lip Seal" swivel coupling. This innovative swivel coupling reduces hose resistance during refueling, which not only makes it easy for the customer to use, but also eliminates the need for a 3-plane (non-value) hose swivel. Be sure to read this edition's article about the VST Lip Seal.

VST currently holds several active patents and continues to address the industry and regulatory issues with innovative products that concurrently provide customer ease of use and protection; are environmentally friendly; and provide the highest quality with the lowest cost of ownership.

Until next time,

Glenn Walker



VST Mission

To design and manufacture innovative products for retail refueling systems that are specifically engineered to protect the environment and consumers with safety and reliability.



VST Values

R: Respect
Employees,
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O: Operational
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VST Vision

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VST Green Initiative: Carbon Neutral

Gonzalo Perez, Application Engineer { perez@vsthose.com }



Sustainability

Since inception in 1990, VST has been setting industry standards on sustainability. This year, we set company goals to further improve our environmental footprint. Our primary goal is to become a Carbon Neutral company. VST products already reduce harmful Volatile Organic Compounds (VOC's) in a gasoline dispensing facility (GDF) by over 98%. Now, we also want to also make our manufacturing sustainable. Starting his year, we will work with Carbon Neutral to begin the Carbon Neutral Certification process.

Benefits of the VST Carbon Neutral Certification

The Carbon Neutral Certification process will allow VST to quantify our carbon footprint. This carbon quantification will be used:

First, it will allow VST to find areas for improvement, which will guide us in implementing a Carbon Neutralization plan.

Second, it will allow us to share our carbon footprint and yearly sustainability reports with others via The VST Voice and our website.

Once our Carbon Neutralization plan is implemented, we will offset any remaining carbon. This carbon offset process will be assisted by Carbon Neutral with environmental projects. Some of the projects include: Amazon reforestation; wind energy implementation in India; solar cookers for rural China; solar energy implementation in East Africa; water filtration in Guatemala; and North American grasslands conservation.

VST is excited to continue this new journey to sustainability. We are proud to reduce carbon emissions in both customers' gasoline dispensing facilities and at our own facility. We will share our journey as we progress through the Carbon Neutral Certification process, hopefully giving ideas to others about reducing carbon footprints.

You can learn more about our journey by following us on LinkedIn.

[VST LinkedIn](#)



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ENVIRO-LOC™ Flex Fuel Gasoline Hoses

Scott Brown, VP Sales & Marketing { brown@vsthose.com }



Renewable fuel blend options at gasoline stations continue to increase every year under the Renewable Fuel Standards (RFS) program in the United States that requires a certain volume of renewable fuel to replace the quantity of petroleum-based fuel used in the transportation industry. The goal is to help reduce the amount of greenhouse gas (GHG) emissions released to atmosphere in vehicle exhaust. More and more gasoline stations across the USA, as well as other countries around the world, are adding fueling positions with increased amounts of ethanol included in their fuel.

From our inception, VST has continually engineered and developed product solutions that reduce harmful emissions associated with the gasoline dispensing industry. To continue with those efforts, VST has added the **ENVIRO-LOC™ Flex Fuel** gasoline dispensing hose to our product mix. This new hose offers the industry one option that is suitable for multiple applications.

The ENVIRO-LOC™ Flex Fuel Hoses:

- Meet the UL330a Listing requirements
- UL Listed for applications from E0 to E85 fuel
- Include stainless steel 3/4" rigid male couplings
- Are easily identified with a red and yellow branding stripe



Learn more about this product by going to www.vsthose.com or contacting VST at 937-704-9333.



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VST Lip Seal Swivel

Matt Stover, Regional Sales Manager { stover@vsthose.com }



For many years, hanging hardware swivels, be it hose coupling swivels or add-on multiplane swivels, have been a hot topic of discussion regarding their use and inability to handle the most basic functions: 1) to swivel and 2) not leak.

One might argue that hose swivels are thought of as a commodity where all manufacturers are the same. This is true for all other manufactures, except VST.

The industry has historically designed these products by using O-Rings; whereas, we created our innovative **VST Lip Seal Swivel**. In the O-Ring designs, regardless of whether it is a hose coupling swivel or multiplane swivel, they have the same issues no matter the manufacturer.

- The O-Rings are over-sized to maintain a tight seal and tend to not swivel easily.
- The O-Rings may get cut or nicked during assembly, thus creating a leak point.
- Due to the nature of the wet/dry application, the O-Rings ultimately dry out, crack, and leak.

VST changed the game when it comes to hose swivel couplings and has eliminated the “commodity” factor that has become associated with hanging hardware. 20+ years ago, we introduced the industry’s best performing hose coupling swivel - the **VST Lip Seal Swivel** design. It utilizes a spring-loaded wire encapsulated in a fuel-compatible polymer that maintains its shape without being pinched for a consistent, easy swivel action.

The result was a highly engineered product that eliminated the issues associated with O-Rings. Simply stated, the **VST Lip Seal Swivel**:

- 1) Consistently swivels with ease;
- 2) Eliminates leak points, and
- 3) Offers the lowest cost of ownership for a hanging hardware set.



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VST Lip Seal Swivel

Matt Stover, Regional Sales Manager { stover@vsthose.com }



The **VST Lip Seal Swivel** hose coupling has proven its success with customers throughout a variety of applications across many different regions.

It is available on the following VST hoses:

- VSTaflex™ Conventional Curb Pump (black, blue, and green)
- ENVIRO-LOC™ Low Permeation Conventional Curb Pump
- ENVIRO-LOC™ Low Permeation Vapor Assist Curb Pump
- ULTRA VAC™ ISP Series Vapor Assist Curb Pump

As you can see, the **VST Lip Seal Swivel** is a no-brainer choice for gasoline station hose needs. Customers don't need to wrestle with the hose during a fueling event.

Are you ready to add value to your hanging hardware set and improve the customer's experience?

Learn more at www.vsthose.com or call your local VST distributor today.



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How to Check for Vapor Leaks after a Drive-Off on a Balance System with ISD

Doug Harty, Senior Applications Engineer { harty@vsthose.com }

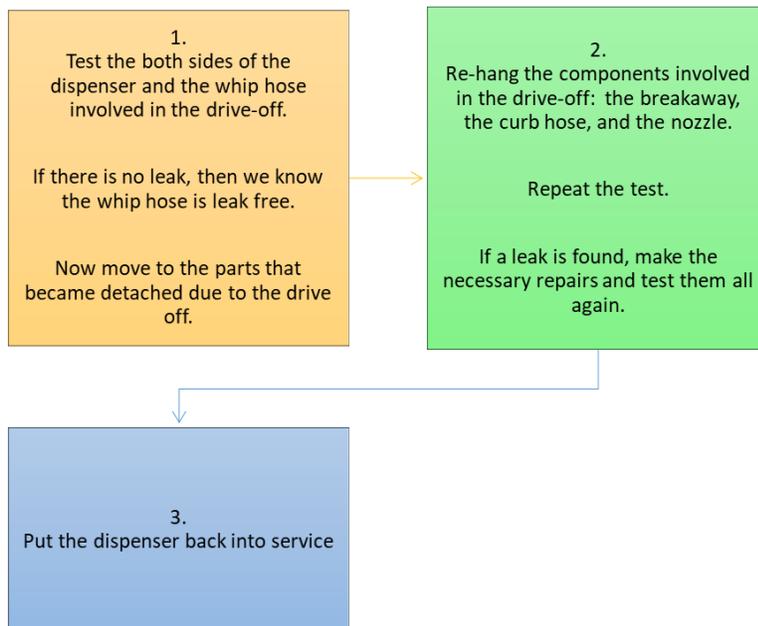


Drive-offs are an unfortunate part of life for GDF's, with the potential for causing post-repair ISD alarms that can result in expensive service calls for the GDF.

It would be advantageous for an ASC to know how to use a laptop to test a dispenser for vapor leaks after a drive-off, so that applicable action can be taken to prevent ISD alarms and excess service calls.

There is a 2-step process to check for leaks:

1. Test the dispenser and components (that are still hanging on the dispenser after the drive off) for leaks.
2. Reattach the components that became detached as a result of the drive off, and test them for leaks.



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Striving Towards Sustainability



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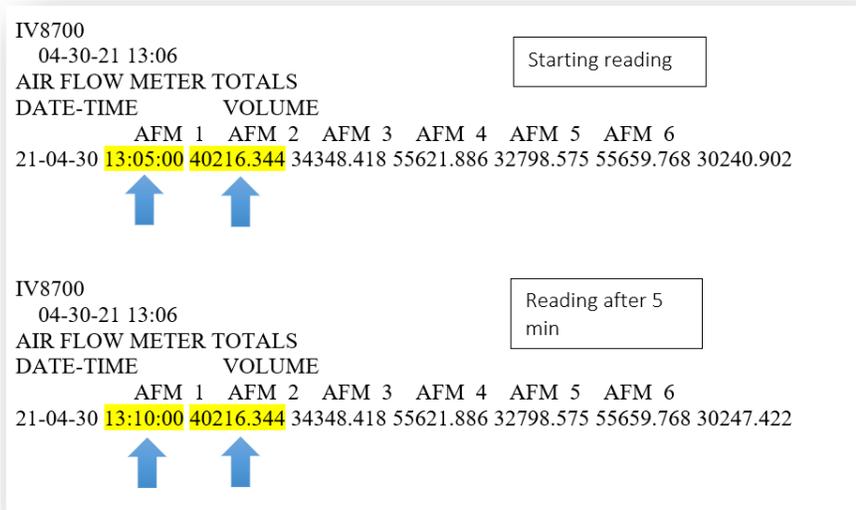
Doug Harty, Senior Applications Engineer { harty@vsthose.com }



Begin the process by assessing any changes in dispenser flow values:

1.	Block off both sides of the dispenser where the drive off happened.
2.	Connect the laptop to the TLS-350 with a compatible serial cable.
3.	Send the IV8700 command to the TLS-350.
4.	Note the value of the Flow Meter being tested.
5.	Wait about 5 minutes, and then send the IV8700 command again.
6.	Look for any change in the values of dispenser flow for the meter being tested.

This graphic shows two IV8700 readings from the ISD in the TLS-350, AFM1 is the dispenser flowmeter being tested after a drive-off. Here you can see that both start and end values of AFM1 are identical. This means the whip hose that was involved in the drive off, and the opposite fueling positions (FP) are leak free. Now that we know the whip hose is leak free, we can move on and test to see if the curb hose and nozzle are also leak free.



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The Process, continued...

7.	Repair any leaks, and repeat steps 1-6 until you do not observe any change on the flow meter.
8.	Reconnect breakaway, curb hose, and nozzle.
9.	Send the IV8700 command to the TLS-350.
10.	Note the value of the Flow Meter being tested. It changed during the breakaway reconnection.
11.	Wait about 5 minutes, and then send the IV8700 command again.
12.	Look for any change in the values of dispenser flow for the meter being tested.

This is showing two IV8700 readings from the ISD in the TLS-350, AFM1 is the dispenser flowmeter being tested after a drive-off. Here you can see that the start and end values of AFM1 are different.

This means the curb hose that was involved in the drive off is leaking, since the other components have already been tested: 5.496 gallons measured by the Flow Meter over 5 minutes.



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IV8700						
04-30-21 13:13						
AIR FLOW METER TOTALS						
DATE-TIME VOLUME						
AFM 1 AFM 2 AFM 3 AFM 4 AFM 5 AFM 6						
21-04-30	13:11:40	40216.627	34362.061	55621.886	32798.575	55658.634 30253.163
	↑	↑				
IV8700						
04-30-21 13:13						
AIR FLOW METER TOTALS						
DATE-TIME VOLUME						
AFM 1 AFM 2 AFM 3 AFM 4 AFM 5 AFM 6						
21-04-30	13:16:40	40222.123	34362.061	55621.886	32798.575	55658.634 30263.262
	↑	↑				

First reading

Reading at 5 min
Leak observed





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The Process, continued...



13.	Repair any leaks, and repeat steps 9-12 until you do not observe any change on the Flow Meter.
	Check dispenser vapor piping, flow meter gaskets, and outlet castings if a leak persists.



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VST Training & Certifications

Susie McLaughlin, Manager, Training & Certifications
{ mclaughlin@vsthose.com }



Training & Certification Links

It's never been easier to get a new VST Certification than it is right now. Below is a list of links taking you directly to the VST online training that is right for you.

All the training can be easily done on your phone, and you will be able to immediately receive and retrieve your certification.

Training Level	Description	Link
Level A	EVR Hanging Hardware Install & Repair	Level A
Level E	CS2 USA GREEN MACHINE™ General Contractor	General Contractor
Level E1	CS2 USA GREEN MACHINE™ Electrical Install	Electrical Install
Level E2	CS2 USA GREEN MACHINE™ Vapor Piping Install	Vapor Piping Install
Level E3	CS2 USA GREEN MACHINE™ Start-Up Contractor	Start-Up Contractor
Level E4	CS2 USA GREEN MACHINE™ Service Contractor	Service Contractor



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