



State of Illinois
Office of the State Fire Marshal

Checklist for Documenting UST Compatibility

KEEP THIS FORM AT THE FACILITY WITH SUPPORTING DOCUMENTATION.

DO NOT MAIL OR FAX TO OSFM.

Facility where equipment is located:

Facility Number: 2024542
Facility Owner: Ahmad Zahdan
Facility Name: South Side Gas, Inc.
Street Address: 4000 Southwest Hwy
City: Hometown
County: Cook

UST Information:

Tank ID Number: 9
Tank Material: Steel _____
FRP X
Single Wall _____ or Double Wall X
Tank Volume: 5000
Tank Product: E-85

Complete the checklist below, listing compatibility determination, method used and description. **All answers must be "YES" and supported with a sufficient description or supporting documentation** in order for your UST system to demonstrate compatibility with the blended fuel/biofuel product.

UST SYSTEM COMPONENTS	DOCUMENTATION DEMONSTRATING COMPATIBILITY WITH SUBSTANCE LISTED ABOVE		METHOD A or B (MAY USE BOTH)	DESCRIPTION OF COMPONENT TYPE, MODEL NUMBER, & NATIONAL LABORATORY CERTIFICATION, LISTING OR MANUFACTURER APPROVAL (ATTACH TO CHECKLIST)
TANK	NO	<u>YES</u>	B	Xerxes Tank warranty statement
PIPING	NO	<u>YES</u>	B	Dualoy 300L 3000 LCX
CONTAINMENT SUMPS	NO	<u>YES</u>	B	Manufacturer compatibility letter. Bravo B427 tank sump & B1000 dispenser sump.
PUMPING EQUIPMENT	NO	<u>YES</u>	B	FE Petro STPAG150. Manufacturer product statement.

UST SYSTEM COMPONENTS	DOCUMENTATION DEMONSTRATING COMPATIBILITY WITH SUBSTANCE LISTED ABOVE		METHOD A or B (MAY USE BOTH)	DESCRIPTION OF COMPONENT TYPE, MODEL NUMBER, & NATIONAL LABORATORY CERTIFICATION, LISTING OR MANUFACTURER APPROVAL (ATTACH TO CHECKLIST)
RELEASE DETECTION EQUIPMENT	NO	YES	B	Veeder-Root interstitial tank sensor. 794380-345 Sump sensor. 794380-323 Veeder-Root PLLD
SPILL PREVENTION EQUIPMENT	NO	YES	B	Franklin fueling DEFENDER SERIES DOUBLE WALL
OVERFILL PREVENTION EQUIPMENT	NO	YES	B	Manufacturer approval statement. OPW 71SOM overfill drop tube.
GASKETS & SEALS	NO	YES	B	
JOINT ADHESIVES	NO	YES	B	Gasolite E-85 compatible.

Methods:

- Certification or listing of UST system equipment or components by a nationally recognized, independent testing laboratory for use with the regulated substance stored.
- Equipment or manufacturer approval. The manufacturer's approval must be in writing, indicate an affirmative statement of compatibility, specify the range of biofuel blends the component is compatible with, and be from the equipment or component manufacturer

Note: Owners and operators may find American Petroleum Institute's Recommended Practice 1626, *Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Filling Stations*, useful in complying with the compatibility requirements.

In order to be in compliance with the 2015 federal UST regulation compatibility requirements for storing biofuels, you must keep documentation of compatibility of the UST system components listed on this page as long as you store the fuel.

For your records, you should update this checklist each time you repair or replace components of your UST system to ensure you have all the required compatibility documentation while storing biofuels.

Checklist Completed By:

print name: Dana Scott

date completed: 7-24-2018

signature: 

position/title: President

OPW 7150 Overfill Prevention Valves

The CARB-certified OPW 7150 vapor-tight Overfill Prevention Valve is designed to prevent the overfill of underground storage tanks by providing a positive shut-off of product delivery. The shut-off valve is an integral part of the drop tube used for gravity filling. The OPW 7150 allows easy installation (without breaking concrete) and requires no special manholes.

The OPW 7150 is a vapor-tight two-stage shut-off valve. When the liquid level rises to about 95% of tank capacity, the valve mechanism is released, closing automatically with the flow. This reduces the flow rate to approximately 5 gpm through a bypass valve. The operator may then stop the filling process and disconnect and drain the delivery hose. As long as the liquid exceeds the 95% level, the valve will close automatically each time delivery is attempted.

If the delivery is not stopped and the liquid rises to about 98% of tank capacity, the bypass valve closes completely. No additional liquid can flow into the tank until the level drops below a reset point.

NOTE: The 7150 Overfill Prevention Valve can be adjusted to shutoff at any desired tank capacity. Please contact the Authority Having Jurisdiction (AHJ) and review local, state, and national codes to determine the regulatory requirements governing shut-off capacity in your region, as well as take into account other considerations such as extreme tank tilt. In all cases, the upper tube must protrude into the tank at least 6 1/2" to ensure that the valve can shut off flow into the tank completely before the top of the tank is wetted as per EPA requirements.

7150 Instruction Sheet Order Number: H15524PA

Listings and Certifications



Materials

Valve Body: Cast aluminum
Float: Nitrile rubber, closed cell foam
Valve: Aluminum
Seals: Viton®
Upper & lower Drop Tube: Aluminum
Plastic parts: Acetal
Hardware: Stainless steel

Features

- ◆ **Simple, Easy and Quick Installation** – no excavation or special manholes required.
- ◆ **Economical** – costs a fraction of expensive, complicated and difficult-to-install valves.
- ◆ **Furnished Complete** – supplied with new upper and lower drop tubes, mounting hardware and thorough instructions for quick job site time.
- ◆ **Completely Automatic Operation** – no prechecks to perform, no resets and no overrides to be broken or abused.
- ◆ **No Pressurization of the Tank** – operates directly from liquid level.
- ◆ **Will Accept a Dipstick for Gauging**
- ◆ **Retrofits Directly** – for both new and existing tanks with 4" fill risers.
- ◆ **Quick Drain Feature** – automatically drains hose when head pressure is relieved.
- ◆ **Best Flow Rate in The Industry***

* OPW Test Lab results

Advantages of Overfill Prevention Compared to Overfill Warning Systems:

- ◆ **Completely Automatic Operation** – does not rely on the alertness or speed of response of the delivery attendant for certainty of overfill prevention.
- ◆ **Keeps the Top of UST "Dry," per EPA Requirements** – eliminating possible leaks at loose bung fittings and the need for double containment on vent lines.
- ◆ **Does Not Rely on Pressure in the UST to Stop Flow** – allowing faster fill times and reducing spill risk.
- ◆ **Speeds Delivery Operations** – product flows unimpeded into the tank until the hose "kick" that accompanies the valve shut-off provides a clear signal that the liquid has reached the shut-off level.
- ◆ **Simple and Inexpensive Installation** – in both two-point and coaxial fill applications, no additional excavation, manholes or vent piping are required.

Important

In order to prevent product spillage from the Underground Storage Tank (UST), properly maintained delivery equipment and a proper connection at the tight-fill adaptor are essential. Delivery personnel should be managed and trained to inspect delivery elbows and hoses for damaged and missing parts. They should always make certain there is a positive connection between the adaptor and elbow. If delivery equipment is not properly maintained, or the elbow is not securely coupled to the adaptor, a serious spill may result when the OPW 7150 closes, causing a hazard and environmental contamination.

NOTE: The OPW 7150 is designed for use on tight-fill gravity drop applications only. Do not use for pressure fill applications.



Look for this label for authentic OPW EVR Approved products.
OPW 7150 is EVR Approved for E85

Raising The Standard In Overfill Prevention

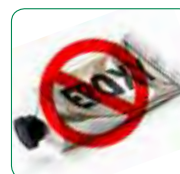
From the company that brought you the industry standard OPW 6150, OPW raises the standard with the introduction of the **7150 Overfill Prevention Valve** – breakthrough innovation that takes overfill prevention to a whole new level of overfill perfection.

- **Eliminates curing issues due to hot or cold temperatures**
- **Easier, quicker, installation**
- **Higher quality, more reliable installation**
- **Lower costs**
- **Greater protection against fugitive emissions and pressure decay**
- **Fastest flow rate in the industry**

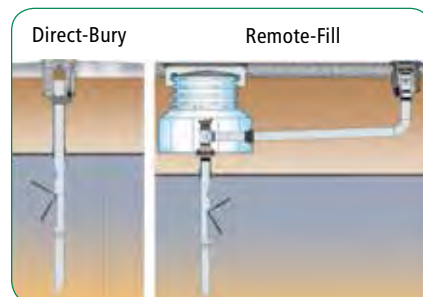
The new 7150 is a two-stage, positive shut-off valve, providing completely automatic operation with no pre-checks to perform, no resets, and no overrides to be broken or abused. The valve closes when the tank level rises to 95% capacity and provides a special bypass valve so the tank can be filled to a maximum capacity of 98%. The 7150 is available for direct-bury and remote applications.



All Vapor-Tight Overfill Valves are CARB EVR Certified



No Epoxy Sealants Required!



Replacement Parts

Part #	Description
61SOK-0001	Replacement Float Kit
H11931M	Drop Tube Seal
H14840M	Lower Tube Seal

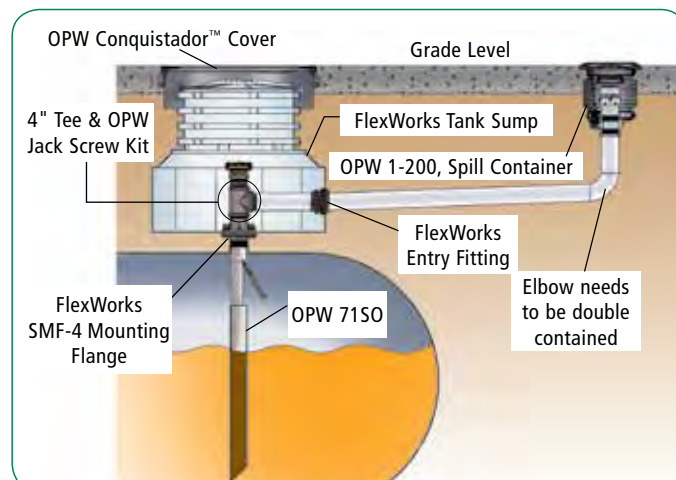
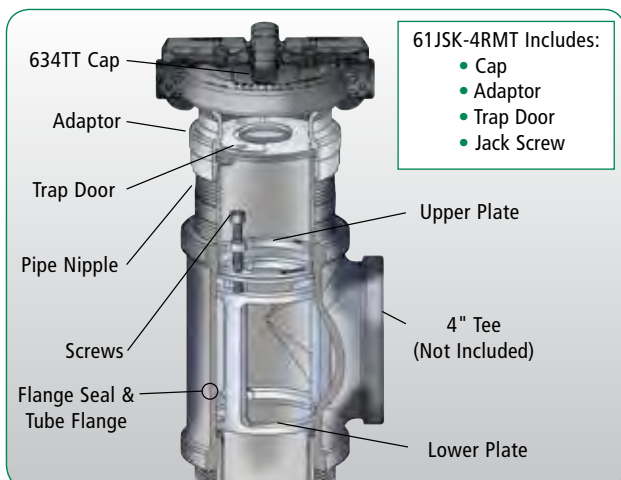
7150 Ordering Specifications

Product #	Description	Bury Depth		Tank Diameter		Upper Tube Length		Lower Tube Length		Overall Length		Max. Riser Length		Max. Nominal Tank Dia.		Max. Actual Tank Dia.		Weight	
		ft.	m	ft.	m	in.	m	in.	m	in.	m	in.	m	in.	m	in.	m	lbs.	kg
7150-400C	Vapor-Tight Overfill Valve	5	1.5	8	2.4	60	1.5	83	2.1	155 ³ / ₄	3.9	53 ¹ / ₂	1.4	96	2.4	107	2.7	16	7
7150-410C	Vapor-Tight Overfill Valve	10	3.0	10	3.0	120	3.1	102	2.6	234 ³ / ₄	5.9	113 ¹ / ₂	2.9	120	3.1	126	3.2	25	11
7150-420C	Vapor-Tight Overfill Valve	10	3.0	12	3.6	120	3.1	126	3.2	258 ³ / ₄	6.5	113 ¹ / ₂	2.9	144	3.7	150	3.8	26	12
7150-4000	Non Vapor-tight Overfill Valve	5	1.5	8	2.4	60	1.5	83	2.1	155 ³ / ₄	3.9	53 ¹ / ₂	1.4	96	2.4	107	2.7	16	7
7150-4010	Non Vapor-tight Overfill Valve	10	3.0	10	3.0	120	3.1	102	2.6	234 ³ / ₄	5.9	113 ¹ / ₂	2.9	120	3.1	126	3.2	25	11
7150M-412C	E85 Vapor-tight Overfill Valve	10	3.0	10	3.0	120	3.1	102	2.6	234 ³ / ₄	5.9	113 ¹ / ₂	2.9	120	3.1	126	3.2	38	17.3
7150-TOOLCT	7150 Installation Tool																	2.5	1
61JSK-4RMT	Jack Screw Kit For Vapor-Tight Remote Applications																	1.5	0.7
61JSK-4410	Jack Screw Kit For Composite Base Spill Bucketst																	1	0.5
61JSK-44CB	Jack Screw Kit For Cast Iron Base Spill Buckets																	1	0.5
71JSK-4RMT	E85 Jack Screw for Remote-Fill Applications																	1	0.5
71JSK-44MA	E85 Jack Screw for Direct-Fill Applications																	1.5	0.7

61JSK-4410 AND 61JSK-44CB Instruction Sheet Order Number: **H15289M**

7150 Vapor-Tight Remote Fill

The OPW Vapor-Tight Remote Fill is designed for two-point vapor-tight remote-fill applications, where the fill point is not directly over the UST. A CARB approved vapor-tight 7150 overfill valve is installed in the sump through a riser pipe directly over the tank.





S. Bravo Systems, Inc.

2929 Vail Avenue
Commerce, CA 90040
1-800-AT-BRAVO
www.sbravo.com

Wednesday - August 25 - 2010

R3 10.21.13

RE: Bravo Fiberglass Sumps and Alternative fuels

This letter is to certify the compatibility of Bravo (S. Bravo Systems, Inc.) Single and Double Wall Fiberglass Containment Sumps with Alternative Fuels such as Biodiesel and Ethanol blended fuels. It also addresses compatibility with DEF Diesel Exhaust Fluid.

Bravo Fiberglass products are engineered with the same UL Listed materials used in the manufacture and certification of Fiberglass Tanks, matching the UL Standard 1316. Since our Fiberglass containment sumps are Built like a Tank, they can withstand continuous fuel exposure to Biodiesel, Ethanol and Alcohol blends without failure.

All DoubleWall Containment Sumps are engineered to be fully compliant with the California State Water Resource Control Board Assembly Bill AB-2481 for DoubleWall Sumps and Continuous Monitoring Systems.

The following Single and Double Wall Containment Sumps manufactured by Bravo Systems in Commerce, California are compatible with Biodiesel and Ethanol fuel blends up to B100 and E100, respectively.

- | | |
|---|--------------------------|
| > B3XX Series Spill Buckets | > B1XXX Series UDC Sumps |
| > B4XX Series Tank Sumps & Covers | > B7XXX Series UDC Sumps |
| > B5XX Series Planter Transition Sumps | > B8XXX Series UDC Sumps |
| > B6XX Series Walkover Transition Sumps | > B9XXX Series UDC Sumps |
| > B7XX Series H-20 Rated Transition Sumps | |
| > B8XX Series Transition Sumps | |

Bravo Systems also certifies that these products are compatible with and approved for use in secondarily containing DEF Diesel Exhaust Fluid.

Each respective Series may be UL Listed in addition to being manufactured of UL recognized materials approved for use in the manufacture of Fiberglass UST tanks. Any other relevant documentation will be located in the documents area of each product's respective webpage.

Please feel free to contact us with any questions you may have at 800-AT-BRAVO.

Additionally, you may find further information at www.sbravo.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jonathan E. Smith'.

Jonathan E. Smith
Director of Brand Management
S. Bravo Systems, Inc.





THE DEFENDER SERIES®

SPILL CONTAINMENT

The field-proven Defender Series® has gone toe-to-toe with the worst conditions the world's forecourts could throw at it and came out with a reputation for dependability and versatility. So how could you possibly improve upon the most dependable spill containment series on the market? For starters, we've integrated it into our rugged multiport platform and outfitted it for complete biofuel compatibility. The best defense just got better.

Highlights

Spills In, Water Out

The foremost function of a spill container is to keep spills in and keep water out all while enduring constant attack from weather, forecourt traffic and continuous fuel delivery handling. The rugged concrete ring, sturdy snow plow ring, integrated liquid dam and gasketed lid keep the Defender Series® capturing spills and repelling water intrusion for maximum protection of your liquid investment.

Ready for Anything

Regulations and requirements are constantly changing. The Defender Series® lets you choose a single wall spill containment option with the ability to upgrade to a double wall spill containment option in the future for twice the protection. The upgrade is simple and can be carried out without having to break concrete; an expense and hassle that no one wants to encounter.

Easy Installation and Retrofit

Let's face it; installations don't always go exactly as planned. Installers will love the variable height adjustment feature of the Defender Series®, which allows for 3 inches of adjustment in installation height, making it easy to ensure proper grade level installation. This feature also allows for easy replacement of most any other spill container in retrofit applications.

Interstitial Monitoring (double-wall versions only)

The peace of mind in knowing your double wall spill containment is performing as it should is priceless. The Defender Series® features two options, both mechanical and electronic, to receive immediate confirmation of the integrity of the interstitial space so you can spend less time worrying about the possibility of leaks.

Multiport Platform

Franklin has integrated the direct bury Defender Series® spill container into its multiport platform for a new level of protection and complete ease of access. With several layout configurations to choose from, the multiport platform lets you incorporate all of your spill containment into one space-saving area.

Multiport & Direct Bury Upgrade

With the multiport platform you have the option to choose single wall spill containers now with the freedom to upgrade to double wall in the future. When the time is right, simply unbolt the multiport top and replace the spill containers. Replacement is different for multi vs direct bury. In direct fill, you unbolt the plow ring and remove the bucket; on multiports you remove the large treadplate lid and change out the buckets.

Simple Maintenance

Maintenance with the Defender Series® is a breeze. With the direct bury models, you can easily replace interior containment without having to break concrete. The Defender Series® plow ring bolts are completely protected – located inside the interior of the container shielding them from the potential wear and tear of the forecourt environment.

Fully Biofuel Compatible

The Defender Series® incorporates only the highest-grade biofuel compatible components, which allow for use with petroleum, petroleum/alcohol blends (including E-85), diesel and biodiesel.



Ordering Information continued

Standard 1½ hp Fixed Speed Submersible Turbine Pumps

Model	Description	Model Length Range Number	Model Length Range*
STP150-VL1	1½ hp fixed speed	VL1	60" - 88"
STP150-VL2	1½ hp fixed speed	VL2	91" - 152"
STP150-VL3	1½ hp fixed speed	VL3	123" - 214"
STPH150-VL1	1½ hp high pressure fixed speed	VL1	61" - 89"
STPH150-VL2	1½ hp high pressure fixed speed	VL2	92" - 152"
STPH150-VL3	1½ hp high pressure fixed speed	VL3	124" - 215"

Alcohol-Gas (AG) 1½ hp Fixed Speed Submersible Turbine Pumps

Model	Description	Model Length Range Number	Model Length Range*
STPAG150-VL1	1½ hp AG fixed speed	VL1	60" - 88"
STPAG150-VL2	1½ hp AG fixed speed	VL2	91" - 152"
STPAG150-VL3	1½ hp AG fixed speed	VL3	123" - 214"
STPAGH150-VL1	1½ hp AG high pressure fixed speed	VL1	61" - 89"
STPAGH150-VL2	1½ hp AG high pressure fixed speed	VL2	92" - 152"
STPAGH150-VL3	1½ hp AG high pressure fixed speed	VL3	124" - 215"

Notes:

- STP models are compatible with fuel mixtures containing up to 10% ethanol with gasoline, up to 5% Biodiesel with diesel fuels, and 20% MTBE, 20% ETBE or 17% TAME with gasoline. STPAG models are compatible with fuel mixtures containing diesel fuel with up to 20% Biodiesel, 100% Biodiesel, up to 85% ethanol with gasoline, and 20% MTBE, 20% ETBE or 17% TAME with gasoline.
 - All models are supplied with a standard check valve unless factory option "R" or "W" is specified.
 - All above models require single-phase, 208-230 VAC, 60 Hz incoming power.
 - 4" riser pipe, if supplied locally, must be 4½" OD by 3/16" WT tubing.
 - For riser pipe lengths 31" to 60", additional charges apply (call Customer Service for lead times).
- *Model length (A) defined as the dimension from turbine manifold bottom to pump motor inlet.

Factory Installed Options

Specified in model number at time of STP order.

Model	Description
F	Floating suction adapter, 1½" NPT female, must be factory installed
K	IFS (intake filter screen) factory assembled to pump motor assembly
R	Model R check valve, factory installed, for Veeder-Root™ PLLD Line Leak
W	Model W check valve, factory installed, for Red Jacket PPM4000 Line Leak

Field Installed Options

1½ hp fixed speed specific accessories.

Model	Description
400137908	Syphon check valve, alcohol-gasoline compatible (when ordered with STP)
400818921	STP-CBS, single-phase control box with lockout switch, 120 Volt coil
402312921	STP-DHI-SCI, combo DHI with factory-wired STP-SCI (when purchased with a 4" STP)*
402312921	STP-DHI-SCI, combo DHI with factory-wired STP-SCI (when purchased without a 4" STP)
402313921	STP-DHI-CBS, combo DHI with factory-wired STP-CBS
402459931	Model 65 psi check valve AG compatible, (for slave of manifolded STPs with Veeder-Root™ PLLD)
402507930	Secondary syphon kit (when two syphon primes are required for one STP)
5800100215	STP-SCI, single-phase Smart Controller (when purchased without a 4" STP)
5800100215	STP-SCI, single-phase Smart Controller (when purchased with a 4" STP)*
5800300100	STP-DHI, dispenser hook isolation for 120 Volt dispenser handle switches, up to eight each

*When purchasing STP-SCI or STP-DHI-SCI in equal quantities of fixed speed 4" STPs, the STP-SCI or STP-DHI-SCI will be invoiced at special discount pricing.

Ordering Information continued

Standard 1½ hp Fixed Speed Submersible Turbine Pumps

Model	Description	Model Length Range Number	Model Length Range*
STP150-VL1	1½ hp fixed speed	VL1	60" - 88"
STP150-VL2	1½ hp fixed speed	VL2	91" - 152"
STP150-VL3	1½ hp fixed speed	VL3	123" - 214"
STPH150-VL1	1½ hp high pressure fixed speed	VL1	61" - 89"
STPH150-VL2	1½ hp high pressure fixed speed	VL2	92" - 152"
STPH150-VL3	1½ hp high pressure fixed speed	VL3	124" - 215"

Alcohol-Gas (AG) 1½ hp Fixed Speed Submersible Turbine Pumps

Model	Description	Model Length Range Number	Model Length Range*
STPAG150-VL1	1½ hp AG fixed speed	VL1	60" - 88"
STPAG150-VL2	1½ hp AG fixed speed	VL2	91" - 152"
STPAG150-VL3	1½ hp AG fixed speed	VL3	123" - 214"
STPAGH150-VL1	1½ hp AG high pressure fixed speed	VL1	61" - 89"
STPAGH150-VL2	1½ hp AG high pressure fixed speed	VL2	92" - 152"
STPAGH150-VL3	1½ hp AG high pressure fixed speed	VL3	124" - 215"

Notes:

- STP models are compatible with fuel mixtures containing up to 10% ethanol with gasoline, up to 5% Biodiesel with diesel fuels, and 20% MTBE, 20% ETBE or 17% TAME with gasoline. STPAG models are compatible with fuel mixtures containing diesel fuel with up to 20% Biodiesel, 100% Biodiesel, up to 85% ethanol with gasoline, and 20% MTBE, 20% ETBE or 17% TAME with gasoline.
 - All models are supplied with a standard check valve unless factory option "R" or "W" is specified.
 - All above models require single-phase, 208-230 VAC, 60 Hz incoming power.
 - 4" riser pipe, if supplied locally, must be 4½" OD by 3/16" WT tubing.
 - For riser pipe lengths 31" to 60", additional charges apply (call Customer Service for lead times).
- *Model length (A) defined as the dimension from turbine manifold bottom to pump motor inlet.

Factory Installed Options

Specified in model number at time of STP order.

Model	Description
F	Floating suction adapter, 1½" NPT female, must be factory installed
K	IFS (intake filter screen) factory assembled to pump motor assembly
R	Model R check valve, factory installed, for Veeder-Root™ PLLD Line Leak
W	Model W check valve, factory installed, for Red Jacket PPM4000 Line Leak

Field Installed Options

1½ hp fixed speed specific accessories.

Model	Description
400137908	Syphon check valve, alcohol-gasoline compatible (when ordered with STP)
400818921	STP-CBS, single-phase control box with lockout switch, 120 Volt coil
402312921	STP-DHI-SCI, combo DHI with factory-wired STP-SCI (when purchased with a 4" STP)*
402312921	STP-DHI-SCI, combo DHI with factory-wired STP-SCI (when purchased without a 4" STP)
402313921	STP-DHI-CBS, combo DHI with factory-wired STP-CBS
402459931	Model 65 psi check valve AG compatible, (for slave of manifolded STPs with Veeder-Root™ PLLD)
402507930	Secondary syphon kit (when two syphon primes are required for one STP)
5800100215	STP-SCI, single-phase Smart Controller (when purchased without a 4" STP)
5800100215	STP-SCI, single-phase Smart Controller (when purchased with a 4" STP)*
5800300100	STP-DHI, dispenser hook isolation for 120 Volt dispenser handle switches, up to eight each

*When purchasing STP-SCI or STP-DHI-SCI in equal quantities of fixed speed 4" STPs, the STP-SCI or STP-DHI-SCI will be invoiced at special discount pricing.



October 28, 2008

FIBERGLASS COMPOSITE PIPE DIVISION
1004 Ameron Road.
Burkburnett Texas, 76354

Hector P. Mercado
Engineering Manager
940-569-8607
Fax: 940-569-8644
hmercado@ameronfpd.com

Ref: Fuel Compatibility of Dualoy® 3000/L & 3000/LCX

Ameron's Dualoy® 3000/L & 3000/LCX piping systems have been tested and were found to comply with the applicable requirements of UL971, Standard for Nonmetallic Underground Piping for Flammable Liquids with revisions through and including March 2, 2006. These include:

Diameters 2", 3", 4" & 6" Series Dualoy 3000/L Primary Carrier and Secondary Containment Piping, Diameters 2", 3" & 4" Series Dualoy 3000/LCX Integral Primary/Secondary Piping and Series PSX-20 and PSX-34 adhesives for conveying Primary Product, Vent and Vapor Recovery of Motor Vehicle Fuels, Concentrated Fuels, High Blend Fuels and Aviation and Marine Fuels.

Based on all available testing Ameron finds the following fuels suitable for use with the Dualoy® 3000/L and 3000/LCX piping systems: B2, B5, B20, B100, E10, E85, E100, low/medium/high grades of unleaded, aviation and marine fuels.

The primary pipe for the Series Dualoy® 3000/L system has maintained the same design performance since 1988.

Sincerely,

Hector Mercado
Engineering Manager

Mag Plus Magnetostrictive Probe and Float Kit Fluid Compatibility Guide, continued

Mag Plus Magnetostrictive Probes for Alternative Fluids without water detection with leak detection (Probe Model No. 846391-4xx, 846397-4xx, 846391-5xx, 846397-5xx) and *Mag Plus* Magnetostrictive Probes for Alternative Fluids without water detection* and no leak detection (Probe Model No. 846391-6xx, 846397-6xx).

Recommended for Inventory Monitoring and Leak Detection:				
Product	Float Kit		Product	Float Kit
Alcohol (<=100% Alcohol)	Alternative Fluids		Ethanol (<=100% Alcohol) Includes E85	Alternative Fluids
Methanol (<=100% Alcohol)	Alternative Fluids		MTBE (<=100% Ether)	Alternative Fluids
ETBE (<=100% Ether)	Alternative Fluids		Used Oil	Alternative Fluids
Recommended for Inventory Monitoring Only (Not Recommended for Leak Detection):				
Product	Float Kit		Product	Float Kit
Ethylene Glycol	Alternative Fluids		Fuel Oil #6	Alternative Fluids
Windshield Washer Fluid	Alternative Fluids		Propylene Glycol	Alternative Fluids
DEF (AdBlue)	Alternative Fluids			

Use of Magnetostrictive Probes in Fluids Not Listed Above

Veeder-Root will not be responsible for probe performance or product contamination in fluids other than those specifically identified in this guide. Veeder-Root does not recommend the use of its probes for tank leak detection other than for the products specifically identified in this guide.

Magnetostrictive Probes for Alternative Fluids

Certified performance for inventory control and in-tank leak detection in fuel blends up to 100% alcohol

Veeder-Root offers two types of Magnetostrictive Probes for Alternative Fluids to provide highly accurate, trouble-free in-tank leak detection and inventory control in fluids up to 100% alcohol. The Magnetostrictive Probe for Alternative Fluids with water detection is ideal for fuel blends with less than 20% alcohol. The Magnetostrictive Probe for Alternative Fluids without water detection has been developed for fluids up to 100% alcohol.

Series 8463 0.1 GPH Mag Probe for Alternative Fluids

The 0.1 GPH Mag Probe for Alternative Fluids has been third-party tested and certified to perform far better than the U.S. E.P.A. standards for both 0.1 GPH volumetric tank tightness testing and 0.2 GPH automatic tank gauging. (See the summary of leak test performance on back or call us for a copy of the complete test results.)

0.1 GPH Mag Probe and CSLD — Leak detection without shutting down your tanks!

CSLD, Continuous Statistical Leak Detection, is an advanced tank testing technology that makes full use of the TLS-300 and TLS-350(R)'s in-tank monitoring capabilities. CSLD eliminates the need for tank shutdown to perform a leak test — no lost business, no lost operating time!

The TLS-300 and TLS-350(R) equipped with CSLD use the 0.1 GPH Mag Probe to continuously monitor fuel height and temperature information to detect idle times in the tank. During each idle time, data collected forms a highly accurate leak detection database. Sophisticated statistical analysis techniques in CSLD constantly evaluate the database to discard invalid data and perform leak tests based on only high-quality information in the current database. In fact, a new leak test is performed every time new data from an idle period is added.

Series 8463 0.2 GPH Mag Probe for Alternative Fluids

The 0.2 GPH Mag Probe for Alternative Fluids provides the same reliable inventory control features and fluid compatibility as the 0.1 GPH Mag Probe for Alternative Fluids, but offers 0.2 GPH leak detection at a lower cost.

The 0.2 GPH Mag Probe for Alternative Fluids has also been third-party tested and certified to exceed U.S. E.P.A. standards for 0.2 GPH automatic tank gauging. (See the summary of leak test performance on back or call us for a copy of the complete test results.)

Approved for Aboveground Tank Applications

Veeder-Root Magnetostrictive Probes are approved for use in aboveground storage tanks to monitor fuel inventory. An AST installation Kit (Form Number 312020-984) is required for these applications and is available from Veeder-Root, Customer Service 800-873-3313 or your authorized Veeder-Root distributor.

Magnetostrictive Probes for Alternative Fluids are available in 0.1 GPH and 0.2 GPH Versions

Features & Benefits

- Non-corrosive, stainless steel tubing for long-life monitoring in fuels up to 100% alcohol
- Highly accurate Magnetostrictive measurement technology
- Fast accurate leak tests
- 0.1 GPH Mag Probe for Alternative Fluids is third-party certified to exceed U.S. E.P.A. performance standards for 0.1 GPH Volumetric Tank Tightness Testing
- 0.1 GPH Mag Probe for Alternative Fluids is compatible with TLS-300 and TLS-350R with CSLD for continuous statistical leak detection
- 0.2 GPH Mag Probe for Alternative Fluids is third-party certified to exceed U.S. E.P.A. performance standards for 0.2 GPH Automatic Tank Gauging
- 2", 3" and 4" Float Kits available



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Probe Models

Tank I.D.	Mag Plus Probes for Alternative Fluids with Water Detection Part No*			Mag Plus Probes for Alternative Fluids without Water Detection Part No*		
	0.1 GPH Leak Detection	0.2 GPH Leak Detection	Inventory Only	0.1 GPH Leak Detection	0.2 GPH Leak Detection	Inventory Only
4'	846391-101	846391-201	846391-301	846391-401	846391-501	846391-601
5'	846391-102	846391-202	846391-302	846391-402	846391-502	846391-602
5'4"	846391-103	846391-203	846391-303	846391-403	846391-503	846391-603
6'	846391-104	846391-204	846391-304	846391-404	846391-504	846391-604
7'	846391-105	846391-205	846391-305	846391-405	846391-505	846391-605
7'6"	846391-106	846391-206	846391-306	846391-406	846391-506	846391-606
8'	846391-107	846391-207	846391-307	846391-407	846391-507	846391-607
9'	846391-108	846391-208	846391-308	846391-408	846391-508	846391-608
9'6"	846391-117	846391-217	846391-317	846391-417	846391-517	846391-617
10'	846391-109	846391-209	846391-309	846391-409	846391-509	846391-609
10'6"	846391-110	846391-210	846391-310	846391-410	846391-510	846391-610
11'	846391-111	846391-211	846391-311	846391-411	846391-511	846391-611
12'	846391-112	846391-212	846391-312	846391-412	846391-512	846391-612
2.0M	846391-113	846391-213	846391-313	846391-413	846391-513	846391-613
2.5M	846391-114	846391-214	846391-314	846391-414	846391-514	846391-614
2.67M	846391-116	846391-216	846391-316	846391-416	846391-516	846391-616
3.0M	846391-115	846391-215	846391-315	846391-415	846391-515	846391-615
Custom Length	846391-199	846391-299	846391-399	846391-499	846391-599	846391-699

*Float kits must be ordered separately from probes, water floats not recommended for fuel blends with >20% alcohol

Floats Match Table

Product	Probe	Functions	Float Kit
Gasoline (<=20% Alcohol)	Mag Plus Probe for Alternative Fluids with Water Detection P/N 846391-1xx or -2xx	Inventory: Yes Leak Detection: Yes Water detection: Yes	Gasoline Float Kit P/N 846400-xy0* (*see note for definition of xy below)
	Inventory Only Mag Plus Probe for Alternative Fluids with Water Detection P/N 846391-3xx	Inventory: Yes Leak Detection: No Water detection: Yes	
Alcohol / Ethanol (<=100% Alcohol, including E85) Methanol (<=100% Alcohol) ETBE (<=100% Ether) MTBE (<=100% Ether) Used Oil	Mag Plus Probe for Alternative Fluids without Water Detection P/N 846391-4xx or -5xx	Inventory: Yes Leak Detection: Yes Water Detection: No	Alternative Fluids Float Kit P/N 846400-xy4* *Notes: x=0 -> 4" floats x=1 -> 2" floats x=3 -> 3" floats y=0 -> 5' cable y=1 -> 10' cable y=2 -> 20' cable
	Mag Plus Probe for Alternative Fluids without Water Detection P/N 846391-6xx	Inventory: Yes Leak Detection: No Water Detection: No	
Fuel Oil #4 & #6 Fuel Oil #4 & #6 Ethylene Glycol Propylene Glycol Windshield Washer Fluid	Mag Plus Probe for Alternative Fluids without Water Detection P/N 846391-6xx		

Leak Test Performance (Third Party Certified for all TLS-3xx Consoles*)

PROBE	TEST TYPE	P(D)	P(FA)	TEST TIME
0.1 GPH Mag Probe	0.1 GPH	99%	1%	3 Hours
0.1 GPH Mag Probe	0.2 GPH	99%	<.1%	2 Hours
0.1 GPH Mag Probe w/CSLD	0.2 GPH	99%	<.1%	Continuous
0.2 GPH Mag 2	0.2 GPH	99%	<.1%	2 Hours

Veeder-Root reserves the right to change product specifications without advance notice. Please ensure that you are using the latest version of product literature.



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Below Ground Products Fuel Compatibility Matrix

Updated 1/2015

OPW Product Number	Description	Standard Fuels: ≤15% Ethanol Gasoline ≤5% Bio-Diesel*	High Ethanol Content Gasoline: 15-100% Ethanol	High Biodiesel Content 5-20% Biodiesel*	Av- Gas / Jet Fuel	Kerosene / Fuel Oil
CXXA Double Wall Piping	Double Wall Primary Piping	X	X	X	X	X
DPC-2150/DPC-2200	Double Wall Pipe Couplings	X	X	X	X	X
SPC-0150, SPC-0200, SPC-0300	Single Wall Pipe Coupling	X	X	X	X	X
SPC-0075, SPC-0100	Single Wall Coupling Male NPT	X	X	X	X	X
SMA-1515, SMA-1520, SMA-2020, SMA-3030	E-Coated Male Adaptors	X	X	X	X	X
STF-1515, STF-2020, STF-2215, STF-2020	E-Coated Swivel Tees	X	X	X	X	X
SEF-1515, SRE-2015, SEF-2020, SEF-3030	E-Coated Swivel Elbows	X	X	X	X	X
SBC-2150, SBC-2200	Stainless Steel Swivel Bolt On Coupling	X	X	X	X	X
SMA-7575, SMA-1010	Swivel Male Adaptor (Brass or Zinc Plated)	X			X	X
SFA-7575, SFA-1010	Swivel Female Adaptor (Brass or Zinc Plated)	X			X	X
1-2100 Series / Multiports	Spill Containers	X	X	X	X	X
101BG-Series	Spill Containers	X	X	X	X	X
1-3100 Series (Edge)	Double Wall & Single Wall Spill Container Series	X	X	X	X	X
60V Series	Vapor Line Shear Valve	X	X	X	X	X
10 Series	Emergency Shut Off Valve	X	X	X	X	X
10 Plus Series	Emergency Shut Off Valve	X	X	X	X	X
10P-0152E85	E85 UL Approved Emergency Shut Off Valve	X	UL	X	X	X
61SALP-1020-EVR	Fill Swivel Adaptor	X	X	X	X	X
633T-8076	Fill Adaptor	X	X	X	X	X
61VSA-1020-EVR	Vapor Swivel Adaptor	X	X	X	X	X
1611AVB-1625	Vapor Adaptor	X	X	X	X	X
634TT-7085-EVR	Fill Cap	X	X	X	X	X
1711T-7085-EVR	Vapor Cap	X	X	X	X	X
634LPC-040	Low Profile Fill Cap	X	X	X	X	X
1711LPC-0300	Low Profile Vapor Cap	X	X	X	X	X
62M Series	Monitoring Probe Cap	X	X	X	X	X
6150 Series	Overfill Valve	X			X	X
6150M Series	Overfill Valve Anodized	X	X		X	X
6111 & 61TP Series	Tank Bottom Protectors	X			X	X
61T Series	Drop Tubes	X			X	X
7150 Series	Overfill Valve	X			X	X
7150M Series	Overfill Valve	X	X		X	X
233 Series	Extractor Valve	X	X	X	X	X
FCXX Series	Stainless Flex Connectors	X	X	X	X	X
53VML/30MV Series	Ball Floats	X	X	X	X	X
523V Series	Pressure Vacuum Vent	X	X	X	X	X
623V Series	Pressure Vacuum Vent	X	X	X	X	X

* Bio-Diesel must meet ASTM Standard for fuel quality to maintain compatibility with products above

UL - Emergency valve has UL or UL Approval for greater than 15% Ethanol Content ≤ Refers to less than or equal to the fuel standard rating for percentage of content

LIMITED WARRANTY

Underground Petroleum Storage Tanks

Xerxes Corporation ("Xerxes") warrants to owner ("Owner") that our underground petroleum storage tanks, if installed, used, and maintained in the United States or Canada in accordance with Xerxes' published specifications, installation instructions and operating guidelines, applicable supplemental materials, all applicable laws and regulations, and limited to storage of the products listed below at ambient temperatures or fuel oils, used in oil burning equipment, at temperatures not to exceed 150°F (65° C):

- 1) Will not fail for a period of thirty (30) years from date of original delivery by Xerxes due to natural external corrosion.
- 2) Will not fail for a period of thirty (30) years from date of original delivery by Xerxes due to internal corrosion, provided the tank is used solely, with or without tank water bottoms, to store the following products:
 - a. gasoline, jet fuel, aviation fuels, motor oils, motor vehicle waste oils, kerosene, diesel fuel, or fuel oils
 - gasoline with up to 20%, by volume, of methyl tertiary butyl ether (MTBE), ethyl tertiary butyl ether (ETBE), di-isopropyl ether (DIPE), tertiary butyl alcohol (TBA), tertiary amyl methyl ether (TAME), or tertiary amyl ethyl ether (TAE)
 - b. gasoline and ethanol blended motor fuels (per applicable ASTM fuel standards)
 - E10 (90% gasoline and 10% ethanol)
 - E15 (85% gasoline and 15% ethanol)
 - E85 (85% ethanol and 15% gasoline)
 - other ethanol blends up to and including 100% ethanol
 - c. gasoline and methanol blended motor fuels (per applicable ASTM fuel standards)
 - M85 (85% methanol and 15% gasoline)
 - other methanol blends up to and including 100% methanol
 - Oxinol-50 waiver (90.5% gasoline and 9.5% Oxinol-50 comprised of a 4.75% methanol and 4.75% gasoline-grade tertiary butyl alcohol (GTBA) mixture)
 - Dupont EPA waiver (gasoline with 5% methanol and a minimum of 2.5% cosolvent – the blend may contain a maximum concentration of up to 3.7%, by weight, oxygen in the final fuel)
 - d. biodiesel fuel blends up to 100% biodiesel (per applicable ASTM fuel standards)
- 3) Will not fail for a period of thirty (30) years from date of original delivery by Xerxes due to structural failure (defined as spontaneous breaking or collapse caused by material defects in materials or workmanship).
- 4) Will meet Xerxes' published specifications and will be free of material defects in materials and workmanship for a period of one (1) year following the date of original delivery by Xerxes.

Xerxes warrants to Owner that all Xerxes-manufactured tank accessories, if installed, used and maintained in Canada or the United States in accordance with Xerxes' published specifications, installation instructions and operating guidelines, applicable supplemental materials, and all applicable laws and regulations, will be free of material defects in materials and workmanship for a period of one (1) year following the date of original delivery by Xerxes.

If any tank or accessory is to be removed from an installation, moved and reinstalled at Owner's new location and is intended for active service at the new location, the tank and accessories must be recertified by Xerxes to continue the balance of the limited warranty as originally extended.

The foregoing limited warranty does not extend to tanks or accessories ("individually and collectively Goods") damaged due to acts of God, war, terrorism, or failure of Goods caused, in whole or in part, by misuse, unlawful use, improper installation, storage, servicing or maintenance, or operation in excess of their rated capacity or contrary to their recommended use, whether intentional or otherwise, or any other cause or damage of any kind not the fault of Xerxes. Xerxes only warrants repairs or alterations performed by Xerxes or its authorized contractors performing work authorized in advance, in writing, by Xerxes. Xerxes does not warrant any product, components or parts manufactured by others. All consumable components including but not limited to o-rings and gaskets are excluded from this limited warranty.

Owner's sole and exclusive remedy for breach of warranty is limited at Xerxes' option to: (a) repair of the defective tank or accessory, (b) delivery of a replacement tank or accessory to the point of original delivery, or (c) refund of the original purchase price. No warranty claim will be considered without removing the tank and any accessory from the ground if Xerxes deems it necessary to evaluate a warranty claim. In the event of a breach of warranty claim, a claimant must give Xerxes the opportunity to observe and inspect the installation prior to the removal of any backfill below the tank top, and the removal of the tank and any accessory from the ground, or the claim will be forever barred. All claims must be made in writing within one (1) year after tank or accessory failure or be forever barred. ALL RIGHTS, OBLIGATIONS AND CLAIMS UNDER THIS LIMITED WARRANTY SHALL BE EXCLUSIVELY MADE AND DETERMINED IN THE COURTS OF, AND GOVERNED BY THE LAWS OF, THE STATE OF MINNESOTA, U.S.A., EXCLUDING ITS CONFLICT OF LAW PRINCIPLES.

THE FOREGOING WARRANTY CONSTITUTES XERXES' EXCLUSIVE OBLIGATION AND XERXES MAKES NO OTHER WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, WITH RESPECT TO THE GOODS, OR ANY SERVICE, ADVICE, OR CONSULTATION, IF ANY, FURNISHED TO OWNER BY XERXES OR ITS REPRESENTATIVES, WHETHER AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE. THE SELLER (XERXES) UNDERTAKES NO RESPONSIBILITY FOR THE QUALITY OF THE GOODS, EXCEPT AS OTHERWISE PROVIDED IN THIS CONTRACT. THE SELLER (XERXES) ASSUMES NO RESPONSIBILITY THAT THE GOODS WILL BE FIT FOR ANY PARTICULAR PURPOSE FOR WHICH YOU (OWNER) MAY BE BUYING THESE GOODS, EXCEPT AS OTHERWISE PROVIDED IN THE CONTRACT. THE REMEDIES SET FORTH IN THE ABOVE WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON OR ENTITY FOR BREACH OF WARRANTY OR FOR BREACH OF ANY OTHER COVENANT, DUTY, OR OBLIGATION ON THE PART OF XERXES. XERXES SHALL HAVE NO LIABILITY OR OBLIGATION TO ANY PERSON OR ENTITY FOR BREACH OF ANY OTHER COVENANT, DUTY, OR OBLIGATION UNDER THIS WARRANTY EXCEPT AS EXPRESSLY SET FORTH HEREIN. IT IS EXPRESSLY AGREED THAT THIS WARRANTY DOES NOT FAIL OF ITS ESSENTIAL PURPOSE. XERXES SHALL HAVE NO LIABILITY FOR COSTS OF INSTALLATION OR REMOVAL OF GOODS, ENVIRONMENTAL CONTAMINATION, FIRES, EXPLOSIONS, OR ANY OTHER CONSEQUENCES ALLEGEDLY ATTRIBUTABLE TO A BREACH OF WARRANTY, OR INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR OTHER DAMAGES OF ANY DESCRIPTION, WHETHER ANY SUCH CLAIM OR DAMAGES BE BASED UPON WARRANTY, CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER TORT, OR OTHERWISE. IN NO EVENT SHALL XERXES' TOTAL LIABILITY HEREUNDER EXCEED THE ORIGINAL PURCHASE PRICE OF THE GOODS WHICH GAVE RISE TO SUCH LIABILITY.

Consumer Notice: This warranty gives you (Owner) specific legal rights. You (Owner) may also have other rights which vary from state to state.

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XERXES®
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