

**State of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER NVR-1-B

Relating to Certification of Non-Vapor Recovery Hoses

For Use at Gasoline Dispensing Facilities with No Phase II Vapor Recovery Systems

WHEREAS, pursuant to California Health and Safety Code Sections 25290.1.2, 39600, 39601 and 41954, the California Air Resources Board (ARB) has established certification procedures for control of gasoline vapor emissions from hoses used during motor vehicle fueling operations (low permeation hoses) in its Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) as last amended January 9, 2013 and Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities Using Aboveground Storage Tanks (CP-206) as last amended May 27, 2014, incorporated by reference in Title 17, California Code of Regulations, Sections 94011 and 94016, respectively;

WHEREAS, ARB has established, pursuant to California Health and Safety Code Sections 39600, 39601, 39607, and 41954, a test procedure for determining the compliance of low permeation hoses with the emission standard established in CP-201 and CP-206 for low permeation hoses;

WHEREAS, Husky Corporation (Husky) requested certification of the Husky Model EagleFlex Low Perm Conventional Hose Assembly;

WHEREAS, Vapor Systems Technology (VST) requested certification of the VST Model V34EC Low Perm Conventional Hose Assembly;

WHEREAS, CP-201 and CP-206 provides that the ARB Executive Officer shall issue an Executive Order if he or she determines that the hose assembly conforms to the applicable low permeation hose standard set forth in CP-201 and CP-206; and

WHEREAS, I, Richard W. Corey, Executive Officer, find that the above-referenced Husky and VST low permeation hoses conform with all requirements set forth in CP-201 and CP-206 and result in a permeation rate which shall not exceed the low permeation hose standard of 10 grams per square meters per day ($\text{g/m}^2/\text{day}$) as determined by UL 330 (7th edition) - Underwriters Laboratories' Standard for Hose and Hose Assemblies for Dispensing Flammable Liquids.

NOW, THEREFORE, IT IS HEREBY ORDERED that the above-referenced Husky and VST low permeation hoses are certified that they will not exceed $10 \text{ g/m}^2/\text{day}$ when installed, operated, and maintained as specified herein and in the following exhibits. Exhibit 1 contains a list of the certified low permeation hoses covered by the Executive Order. Exhibit 2 contains the performance standards and specifications applicable to the low permeation

hoses as installed in a gasoline dispensing facility (GDF) with no Phase II vapor recovery systems. Exhibit 3 contains the manufacturer warranty.

IT IS FURTHER ORDERED that compliance with the applicable certification requirements, rules and regulations of the Division of Measurement Standards of the Department of Food and Agriculture, the Office of the State Fire Marshal of the Department of Forestry and Fire Protection, the Division of Occupational Safety and Health of the Department of Industrial Relations, and the Division of Water Quality of the State Water Resources Control Board are made conditions of this certification.

IT IS FURTHER ORDERED that the manufacturer of each low permeation hose listed in Exhibit 1 shall provide a warranty to the initial purchaser of the hose that shall be honored by the manufacturer for each and every subsequent purchaser of the hose within the warranty period. The warranty shall warrant that the applicable low permeation hose listed in the Executive Order complies with all warranty requirements in Section 16.5 of CP-201 or Section 17.5 of CP-206 and will continue to meet all applicable performance standards for the duration of the warranty period. Manufacturers may specify that the warranty is contingent upon the use of trained installers. The manufacturer warranty tag, included with each component, shall be provided to the service station owner/operator at the time of installation.

IT IS FURTHER ORDERED that certified low permeation hoses shall be installed, operated, and maintained in accordance with the ARB Approved Installation, Operation, and Maintenance Manual. A copy of the Executive Order and the ARB Approved Installation, Operation and Maintenance Manual shall be maintained at each GDF where certified low permeation hoses are installed.

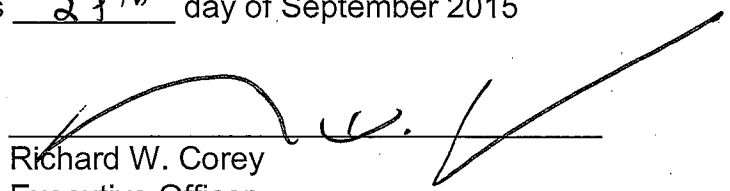
IT IS FURTHER ORDERED that low permeation hoses listed in Exhibit 1, unless exempted, shall be clearly identified by a permanent identification showing the manufacturer's name, model number, and serial number.

IT IS FURTHER ORDERED that the certification is conditioned upon there being no alteration in a listed low permeation hose of its design, installation, or operation from that set forth in the manufacturers' certification application or documents considered and relied upon in granting the certification, unless the alteration has been submitted in writing and approved in writing by the Executive Officer or his delegate; failure to comply with this condition is prohibited and inconsistent with the certification and shall result in the suspension or revocation of the certification.

IT IS FURTHER ORDERED that the listed low permeation hose assemblies are certified as being compatible with gasoline in common use in California at the time of certification and is not compatible with gasoline containing more than 15 percent ethanol. Any modifications to comply with future California gasoline requirements shall be approved in writing by the Executive Officer or his delegate.

IT IS FURTHER ORDERED that the certification of the low permeation hoses is valid through June 10, 2018.

Executed at Sacramento, California, this 23rd day of September 2015



Richard W. Corey
Executive Officer

Attachments:

- Exhibit 1 Low Permeation Hose List
- Exhibit 2 Low Permeation Hose Specifications
- Exhibit 3 Manufacturer Warranties

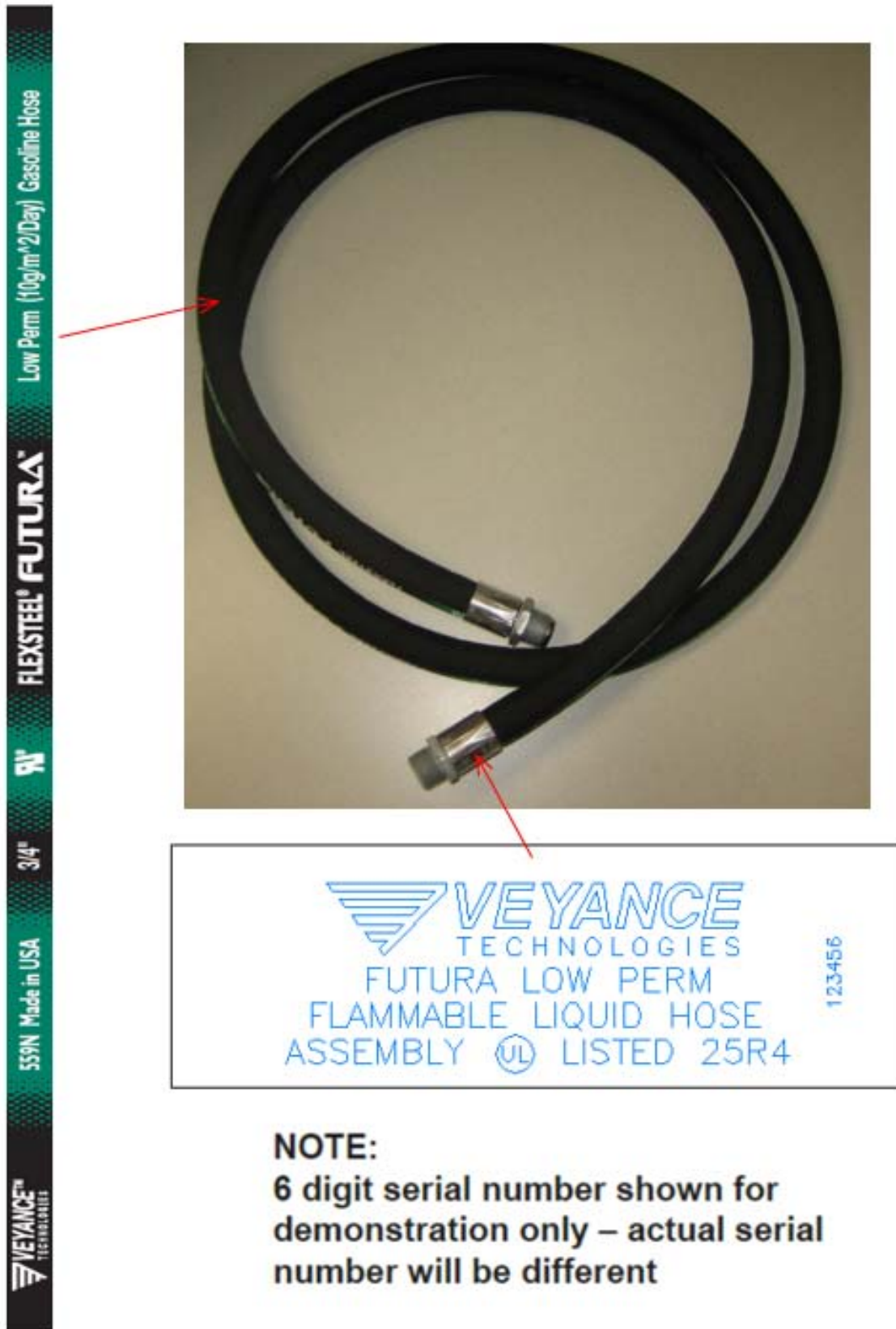
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EXHIBIT 1

Low Permeation Hose List

<i>Component</i>	<i>Manufacturer / Model</i>	<i>Hose Size (inch)</i>
Low Permeation Curb Hose and Whip Hose	Veyance Futura Low Perm	3/4
	Parker 7282 Low Perm	5/8, 3/4, 1
	VST V58EC Low Perm	5/8
	VST V34EC Low Perm	3/4
	Husky EagleFlex Low Perm	5/8, 3/4, 1

Veyance Futura Low Perm Conventional Hose Assembly

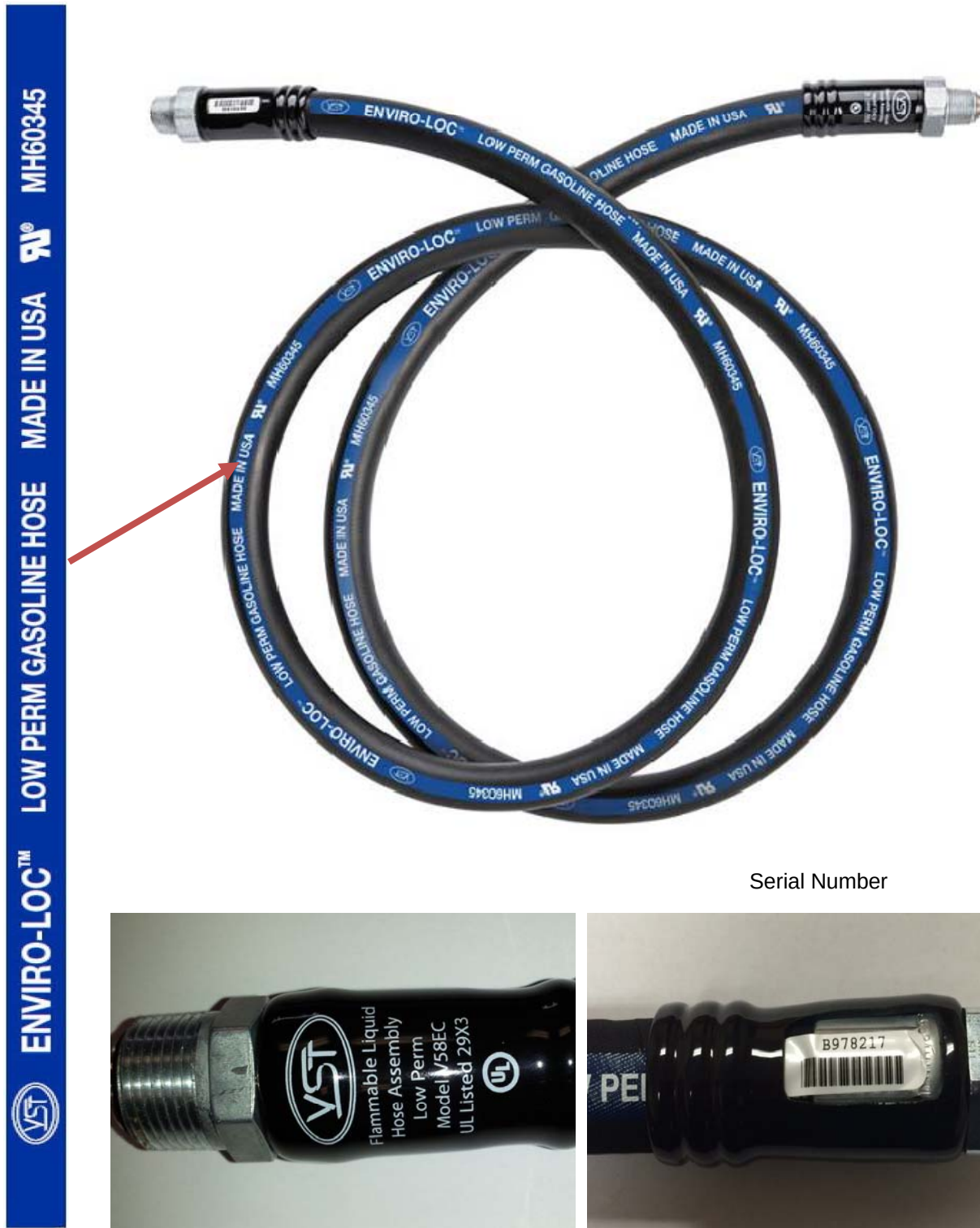


NOTE:
6 digit serial number shown for
demonstration only – actual serial
number will be different

Parker 7282 Low Perm Conventional Hose Assembly



VST V58EC and V34EC Low Perm Conventional Hose Assembly



Husky EagleFlex Low Perm Conventional Hose Assembly

Husky EagleFlex® LPHW 3/4 LOW PERM ($\leq 10\text{g}/\text{m}^2/\text{day}$) HARDWALL GASOLINE HOSE MH20477 Made in USA www.husky.com



Serial Number

EXHIBIT 2

Low Permeation Hose Specifications

This exhibit contains the installation, maintenance and compliance standards and specifications that apply to low permeation conventional hoses installed at gasoline dispensing facilities (GDF) with no Phase II vapor recovery system. All components must be installed, maintained, and operated in accordance with the **ARB Approved Installation, Operation and Maintenance Manual (IOM)**. Installation and inspection of low permeation hoses can be performed by any technician and GDF owner/operator. Certifications to install low permeation hoses may be required in accordance with local district requirements.

Low Permeation Conventional Hoses

1. The maximum length of the hose assembly, including the low permeation curb hose, breakaway, and low permeation whip hose combined shall not exceed eighteen (18) feet as measured from the base of the nozzle to the end of dispenser adapter or dispenser.
2. All hoses shall have a permanent identification showing the manufacturer name, model of hose, and serial number.
3. Any hose configuration is allowed.

Warranty

Each manufacturer listed in Exhibit 1 shall include a warranty tag with the certified low permeation hose(s). The manufacturer warranty tag, included with each low permeation hose, shall be provided to the service station owner/operator at the time of installation.

Maintenance Records

1. Each GDF operator owner shall keep records of maintenance/inspections performed at the facility. Such records shall be maintained on site in accordance with district requirements or policies. An example of a GDF maintenance and inspection form is shown in Figure 2-1.
2. Inspections shall be conducted in accordance with the ARB Approved Installation, Operation, and Maintenance Manual.

Figure 2-1 Hose Inspection/Maintenance Record Form				
Inspection Procedure: Inspect for leaks, kinks, blisters, bulges, flattened areas, soft spots, any cuts or gouges				
Date of Inspection	Fueling Point	Pass (P) Fail (F) (circle one)	Maintenance Performed (if required)	Name of Individual Conducting Inspection/Maintenance and Affiliation
		P / F		
		P / F		
		P / F		
		P / F		
		P / F		
		P / F		
		P / F		
		P / F		
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EXHIBIT 3

Manufacturer Warranty

This exhibit includes the manufacturer warranty for low permeation hoses listed in Exhibit 1. The manufacturer warranty tag, included with each low permeation hose, shall be provided to the service station owner/operator at the time of installation.

Table of Content Manufacturer Warranties

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WARRANTY FOR LOW PERMEATION HOSES USED IN CALIFORNIA: Seller warrants Product(s) consisting of low permeation hoses used in California ("California Low Permeation Hose Product(s)") to meet the performance standards and specifications to which such Product(s) were certified by the California Air Resources Board for a period of one (1) year from the date of installation. This warranty extends to Buyer and any subsequent Buyer of the California Vapor Recovery Product(s) during the warranty period. SELLER MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND WITH RESPECT TO PRODUCT(S), EXPRESS OR IMPLIED, RESPECTING MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

WARRANTY TAG

PART #: _____
INSTALLATION DATE: _____ NAME OF INSTALLER: _____
LOCATION: _____

This hose was factory tested to and met all applicable performance standards & specifications to which it was certified: Reference CARB Executive Order NVR-1, CARB Test Procedure CP-201, and UL Standard UL-330.

The manufacture date is represented by a 4 digit julian date code stamped on the hose fitting.
Example: "1021" represents the 102nd day of 2011.

1. Complete warranty tag at time of installation.
2. Return warranty tag or other evidence of purchase and installation with hose for any necessary warranty claims.

WARRANTY FOR LOW PERMEATION HOSES USED IN CALIFORNIA: Seller warrants Product(s) consisting of low permeation hoses used in California ("California Low Permeation Hose Product(s)") to meet the performance standards and specifications to which such Product(s) were certified by the California Air Resources Board for a period of one (1) year from the date of installation. This warranty extends to Buyer and any subsequent Buyer of the California Vapor Recovery Product(s) during the warranty period. SELLER MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND WITH RESPECT TO PRODUCT(S), EXPRESS OR IMPLIED, RESPECTING MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.





WARRANTY TAG

PART # _____

INSTALLATION DATE: _____

NAME OF INSTALLER: _____

INSTALLATION LOCATION: _____

This hose assembly was factory tested and met all applicable performance standards and specification to which it was certified: Reference all applicable CARB Executive Orders, CARB Test Procedures, Exhibits, Parker Safety Guide (4400-B.1), Parker Technical Advisory (PA 2014.08.012), and UL Standard 330.

Each hose assembly includes an engraved crimp fitting which features the 4-digit Julian date code which represents the manufacturing date. For example, "3214" represents the "321st" day of "2014".

1. Fill out the warranty tag at installation.
2. Return the warranty tag along with hose assembly for any necessary warranty claims.

WARRANTY FOR CONVENTIONAL LOW PERMEATION GASOLINE DISPENSER HOSE ASSEMBLIES USED IN

CALIFORNIA: Seller warrant Product(s) consisting of Parker Conventional Low Permeation Gasoline Dispenser Hose Assemblies used in California to meet the performance standards and specifications to which the Product(s) were certified by the California Air Resources Board (CARB) for one (1) year from the date of installation. This warranty extend to Buyer and any subsequent Buyer of the Parker Conventional Low Permeation Gasoline Dispenser Hose Assemblies. **SELLER MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND WITH RESPECT TO PRODUCT(S), EXPRESS OR IMPLIED, EXCEPT AS EXPRESSLY PROVIDED ABOVE.**

CUSTOMER COPY

To be left at gasoline dispensing facility, GDF,
at time of installation

Manufacturing Date:

Serial Number: (Fill in at time of installation)

VST Warranty Statement

This limited warranty is given by Vapor Systems Technologies, Inc. (hereinafter VST) to the initial purchaser, and any subsequent purchasers of new equipment, within the warranty period of products manufactured by VST. VST products:

- Are factory tested and meet all applicable performance standards and specifications.
- Should be used in compliance with all applicable federal, state, and local laws and regulations to which they were certified.
- Are warranted to be free from defect in material and workmanship with ongoing compliance to all applicable performance standards and specifications under normal use, service, proper installation, inspections, and maintenance practices per manufacturer specifications.

VST warrants the materials and workmanship to be free from defects in accordance with the following provisions:

1. This warranty does not apply to any products that have:
 - Been subject to misuse, abuse, tampering, negligence, accident, or irreparable drive off damage.
 - Been misapplied, improperly installed, or not installed per VST's instructions and specifications.
 - Been modified, altered, rebuilt or repaired by unauthorized persons or outside the criteria of VST specifications.
 - Been improperly maintained and/or improperly inspected in accordance with the system's or product's periodic maintenance schedule, and any inspection and/or maintenance requirements imposed by the State or any government agency.
 - Been exposed to contact with fuels containing greater than 5% methanol, 10% ethanol, or 15% MTBE by volume or any exposure to M85/E85 fuel.
 - Been subject to damage resulting from acts of God.
2. This warranty does not cover and VST is not responsible or liable for:
 - Incidental, consequential and/or indirect damages or loss including, but not limited to, personal injury, death, property damage, environmental damage, cost of labor, clean-up, downtime, installation and removal, product damage, and loss of product, revenue or profits.
 - Any claims or lawsuits against the purchaser and/or distributor.
 - Labor or materials necessary to disconnect or connect the warranted product for return to VST.

VST products used on systems that have not been listed by a nationally-recognized testing laboratory (NRTL) or use that falls outside intended field of use voids all warranties.

The duration of this warranty is TWELVE (12) MONTHS from the time of installation provided timely valid proof of installation is submitted to VST. Valid proof of installation options include, but are not limited to:

- VST Product Warranty Registration Card is properly completed and returned to VST at time of installation and within (6) SIX MONTHS from the date of manufacture.

OR

- In lieu of a legitimate, completed and returned VST Product Warranty Registration Card within the first (6) SIX MONTHS from the date of manufacture, VST requires the following:
 1. A completed gasoline dispensing facility (GDF) monthly maintenance log from the month in which the VST equipment was installed and documented, **AND**
 2. One of the following documents that may be used as a reference installation date:
 - A valid distributor invoice
 - A valid contractor invoice

The above options must be clearly marked with:

- All VST product serial numbers
- Product sale date and/or installation date
- Purchaser name, address, and phone number

If valid proof of installation is not received by VST, as noted above, the warranty period is TWELVE (12) MONTHS from the VST date of manufacture.

In the event of a warranty claim:

- The purchaser/distributor must obtain a copy of a Return Goods Authorization (RGA) from VST prior to returning product so as to ensure proper processing. All warranty claim returns must be shipped freight prepaid by the purchaser and/or distributor.
- Warranty status will be determined upon inspection at VST's facility within THIRTY (30) DAYS of receipt by VST of the warranted products. All returned merchandise deemed *Not Under Warranty*; will be held by VST for SEVEN (7) BUSINESS DAYS prior to disposal. Return of this product to the purchaser/distributor will require purchaser/distributor to issue a call tag within SEVEN (7) BUSINESS DAYS of notification.
- Repair or replacement of the warranted product is the **EXCLUSIVE REMEDY** under the terms of this warranty. No other warranty exists.

VST, as to each defect, shall be relieved of all obligations and liabilities under this Limited Warranty if the products have been operated with any accessory, equipment, or a part not specifically approved by VST and the appropriate governing regulatory agencies.

THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES. VST MAKES NO OTHER WARRANTIES (WHETHER WRITTEN OR ORAL), EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE, AND ANY OTHER SUCH WARRANTIES ARE HEREBY DISCLAIMED.

VST NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON OR ENTITY TO ASSUME FOR IT OR BIND IT TO ANY OTHER LIABILITY OR OBLIGATION RELATED TO OR IN CONNECTION WITH THIS LIMITED WARRANTY.

VST reserves the right to make changes at any time to prices and designs, or make additions or improvements with respect to its products, without incurring any obligation to modify or install same on previously manufactured products.



WARRANTY TAG

PART # _____

INSTALLATION DATE: _____

NAME OF INSTALLER: _____

INSTALLATION LOCATION: _____

This hose assembly was factory tested and met all applicable performance standards and specifications to which it was certified: Reference all applicable CARB Executive Orders, CARB Test Procedures, Exhibits, Husky Recommended Installation, Maintenance and Inspection Instructions 009349, and UL Standard 330.

Each hose assembly includes an engraved crimp fitting which features the 4-digit Julian date code which represents the manufacturing date. For example, "3214" represents the "321st" day of "2014".

1. Fill out the warranty tag at installation.
2. Return the warranty tag along with hose assembly for any necessary warranty claims.

WARRANTY FOR CONVENTIONAL LOW PERMEATION GASOLINE DISPENSER HOSE

ASSEMBLIES USED IN CALIFORNIA: Seller warrant Product(s) consisting of Husky Conventional Low Permeation Gasoline Dispenser Hose Assemblies used in California to meet the performance standards and specifications to which the Product(s) were certified by the California Air Resources Board (CARB), to be free from defects of workmanship or materials, for one (1) year from the date of installation. This warranty extend to Buyer and any subsequent Buyer of the Husky Conventional Low Permeation Gasoline Dispenser Hose Assemblies. **SELLER MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND WITH RESPECT TO PRODUCT(S), EXPRESS OR IMPLIED, EXCEPT AS EXPRESSLY PROVIDED ABOVE.**

FORM 009396-A 5/2015

California Environmental Protection Agency



ARB Approved

Installation, Operation and Maintenance Manual

For

Executive Order NVR-1-B

Low Permeation Hoses

For Use at Gasoline Dispensing Facilities with
No Phase II Vapor Recovery System

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Veyance Low Permeation Conventional Hose Assembly

1.0 Veyance Low Permeation Conventional Hose Assembly

- 1.1 Select the correct whip and curb hose length. The maximum length of the hose assembly shall not exceed eighteen (18) feet. Lengths greater than eighteen (18) feet are permitted if acceptable to authorities having jurisdiction.
- 1.2 This assembly has NPT threads. Apply a suitable UL approved thread sealant compatible with gasoline to the threads prior to installation.
- 1.3 Following installation of the hose, authorize the dispenser and inspect hose connections for liquid leaks. There shall be no liquid leaks at hose connections.
- 1.4 Hose assemblies should be inspected weekly. Check the hose assembly for leaks, kinks, blisters, bulges, flattened areas, soft spots, or any cuts or gouges deep enough to expose the wire reinforcement beneath the cover of the hose. Hose assemblies showing signs of any of these issues should be replaced.

Note: It is the responsibility of the installer to be familiar with the current requirements of state, federal, local codes and air district rules and regulations for installation of gasoline dispensing equipment.

It is also the responsibility of the installer to be aware of all the necessary safety precautions and site safety requirements to assure a safe and trouble free installation.

Warranty Tag: The warranty tag provided with the component is to remain with component, and must be provided to the end-user.

Veyance Technologies Inc.
703 S. Cleveland Massillon Rd.
Fairlawn, OH 44333 USA
Telephone:1-800-235-4632



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Parker Hannifin Corporation
Industrial Hose Division
30242 Lakeland Boulevard
Wickliffe, OH 44092-1747
Telephone: (440) 833-2120
Fax: (440) 833-2230
www.safehose.com

Technical Advisory

APPLICATION UPDATE

Conventional Low Permeation Gasoline Dispenser Hose Assemblies *Suggested Installation and Inspection Instructions*

Hose Selection

It is important to correctly determine the proper hose size, hose length and fitting thread/size when selecting a gasoline delivery or whip hose. The maximum length of the delivery hose assembly shall not exceed eighteen (18) feet except where permitted by authorities having jurisdiction.

Pre-Installation Inspection

Inspect hose assemblies prior to installation. Do not place a hose assembly into service if any of the following conditions exist:

- Fittings improperly crimped to hose (loose fitting).
- Scored or exposed area at hose/fitting interface where fitting slippage may have occurred.
- Damage to threads on fittings.
- Damage to hose reinforcement caused by crushed or kinked hose.
- Exposed hose reinforcement.

Contact Parker for authorization to return if any of the above conditions are discovered.

Installation Instructions

1. Turn off gasoline dispensing system and relieve line pressure.
2. Seal male threads on fitting; use *Gasolila*® *Soft Set Thread Sealant* or equivalent.
3. Tighten approximately 1 to 2 turns past hand-tight; do not over-tighten.
4. Pressurize system and inspect for leaks.
5. Test for proper nozzle operation according to nozzle manufacturer's installation instructions.

NOTE: The installer must be knowledgeable of all local, state and federal codes and air district rules and regulations applicable to gasoline dispensing equipment. The installer must adhere to necessary safety precautions and site safety requirements that ensure a safe, trouble free installation. The component warranty tag must be completed by the installer and provided to the service station owner/operator at the time of installation. The completed warranty tag must remain with the component thereafter.

(Continued on page 2)

Gasolila® is a registered trademark of Federal Process Corporation

PA 2014.08.012-rev Gasoline Dispenser Hose Assys

ENGINEERING YOUR SUCCESS.



Parker Hannifin Corporation
Industrial Hose Division

Technical Advisory

Page 2

Conventional Low Permeation Gasoline Dispenser Hose Assemblies *Suggested Installation and Inspection Instructions*

Testing and Inspection

Like all rubber hoses, gasoline dispenser hose assemblies have a limited shelf life; routinely rotate all stock in a first-in-first-out (FIFO) manner. Similarly, hose assemblies have a limited service life; perform regular visual inspections.

Weekly Inspections:

- Check for damage or signs of stress or abuse.
- Check for blisters, bulges, flattened areas, leaks, kinks, soft spots or stains.
- Check for cracked or loose hose cover.
- Check for cuts, gouges or other defects in hose cover that may have exposed or damaged hose reinforcement.

Adhere to local, state and/or federal testing procedures as required.

Drive-Off Inspection

When a driver departs from the dispenser, the nozzle is occasionally left in the vehicle fill port. For this reason, gasoline dispenser hoses are to be attached to a breakaway coupling installed between the dispenser hose and the dispenser; the breakaway separates under pressure and minimizes gasoline spillage and hose damage. After every drive-off, inspect the hose assembly using the following criteria:

- Turn off gasoline dispensing system and relieve line pressure.
- Check for signs of damaged or collapsed hose reinforcement.
- Inspect hose cover for blisters, cuts, cracks or exposed reinforcement.
- Check fittings for signs of slippage.
- Pressurize system and inspect for leaks.
- Test for proper nozzle operation according to nozzle manufacturer's installation instructions.

IMMEDIATELY REMOVE FROM SERVICE ANY HOSE THAT FAILS TESTING/INSPECTION.

Warranty

Consult the Parker Hannifin Industrial Hose Division *Offer of Sale* for warranty information.

If there are any questions please contact
Parker Customer Service toll-free at:

866.810.HOSE (4673)	800.242.HOSE (4673)
Wickliffe, OH	South Gate, CA
Eastern USA	Western USA



PA 2014.08.012-rev Gasoline Dispenser Hose Assys

ENGINEERING YOUR SUCCESS.

VST Installation Procedure for Low Perm Premium Conventional Fuel Hoses

Part Number Series: V58EC, V34EC



Vapor Systems Technologies, Inc.

650 Pleasant Valley Drive
Springboro, Ohio 45066 (USA)

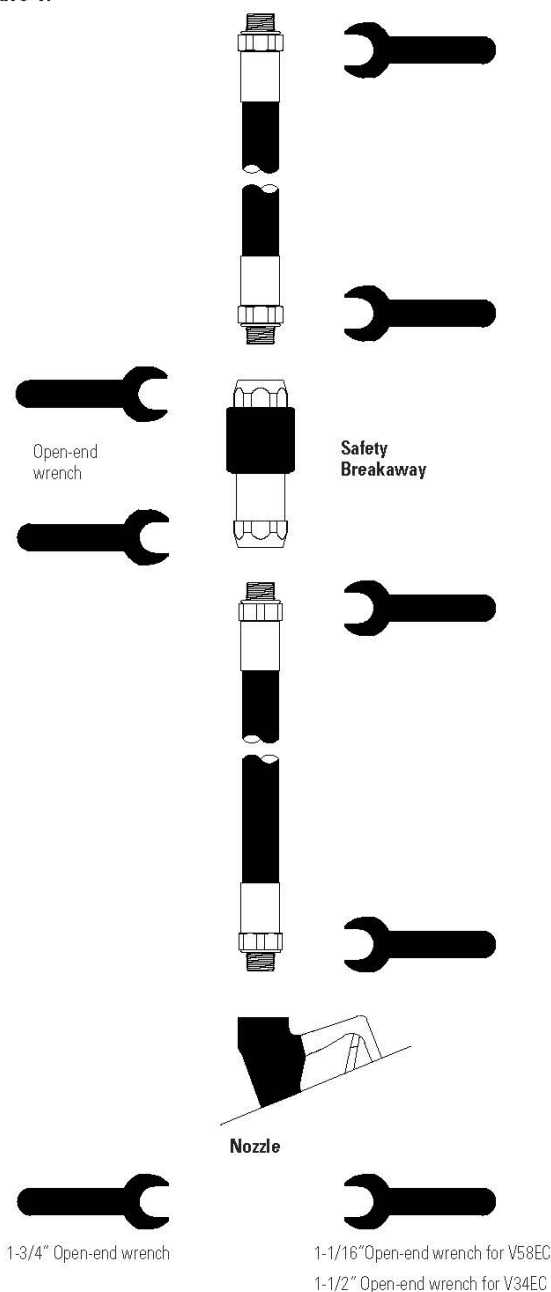
Toll Free: 1-888-878-4673

Phone: 937-704-9333

Fax: 937-704-9443

www.vsthose.com

Figure 1.



GENERAL INFORMATION

If hanging hardware components are involved in a drive-off or incur other customer abuse, each individual component must be functionally tested prior to customer dispensing activities.

INSTALLATION PREPARATION

This procedure must be followed to ensure leak-proof installation and operation of these hose products.

1. Turn off and tag the power to the dispenser. Dispenser must be de-energized prior to service to avoid personal injury.
2. Barricade work area to block vehicle access to the dispenser.
3. Close dispenser shear valve prior to performing any service work with the hanging hardware (hoses, safety breakaways, and nozzles).
4. Drain liquid product from the hanging hardware set into an approved container prior to replacing any hanging hardware component. (Pull nozzle lever.)

If the nozzle has an interlock device, engage the interlock before pulling the lever.

5. Remove hanging hardware from the dispenser prior to making replacement component assembly connections. VST recommends connecting the whip hose to the dispenser as the last connection during hanging hardware assembly.

INSTALLATION

1. The maximum length of the hose assembly shall not exceed eighteen (18) feet. Lengths greater than eighteen (18) feet are permitted if acceptable to authorities having jurisdiction.
2. Initial inspection:
 - a. Carefully unpack hose from shipping carton.
 - b. Inspect hose for any damage to threads, exterior, etc.
3. These are pipe thread couplings. Use of thread sealant is recommended. Do not use Teflon® tape. With pipe thread connections, the amount of torque necessary to obtain a seal is dependent on the mating materials and thread condition. **Only enough torque to achieve sealing should be used.**

VST Installation Procedure for Low Perm Premium Conventional Fuel Hoses

Part Number Series: V58EC, V34EC

4. Attach hose on mating connections and tighten to finger tight. After finger tight, use wrenches **ONLY** on the hex flats to tighten an additional 1 to 1-1/2 TFFT (turns from finger tight.) This is normally sufficient to obtain a proper seal. Do not exceed 40 ft.-lbs. for 3/4" pipe threads.

a. DO NOT OVER TIGHTEN

b. DO NOT USE channel locks or pliers to tighten connections.

c. Always follow FLOW DIRECTION ARROW (where applicable)

5. Visually inspect all hose connections for signs of potential leak points. Repair any issue immediately before proceeding.

6. Purge air from the system by pumping one-tenth (1/10) to two-tenths (2/10) of a gallon of fuel into an approved container. Inspect each hose joint connection for liquid leaks and make proper adjustments if necessary.

7. Check the nozzle shut-off action by dispensing fuel into an approved container at least three times to assure proper automatic operation. The fuel flow rate must be greater than 3 gpm for the automatic shut-off mechanism to operate.

To test, operate the nozzle and submerge the spout tip in fuel until the fuel level covers the vent hole. The main valve of the nozzle automatically shuts off when liquid covers the vent hole at the end of the spout. The hold-open latch will disengage automatically when the liquid covers the vent hole in the spout.

8. Measure the resistance between the dispenser outlet casting and the tip of the nozzle spout. Use an electronic multimeter set on the high range of the ohmmeter function. Resistance should not indicate more than 70,000 ohms per foot of hose. Example: The measured resistance for a 12-foot hose must not exceed 840,000 ohms (840 kilohms).

MAINTENANCE

Inspect hoses regularly for damage, loose connections, leaks, kinks, blisters, bulges, flattened areas, soft spots, or any cuts/gouges deep enough to expose the reinforcement beneath the hose cover. Replace as necessary. Subject to customer abuse, hoses should be replaced when damaged.

The hose is designed and constructed to give lasting service if properly handled and maintained. If for any reason it should need attention, contact your VST distributor for proper disposition.

NOTE: Due to abuse, misuse, changing fuel formulas, variation in maintenance practices, environmental conditions and/or conditions beyond the manufacturer's control, dispensing equipment may need replacement before five (5) years. Inspections and proper maintenance procedures should be followed by the station manager to determine if replacement is required before five (5) years.

WARNING

Unauthorized rebuilding or modifying of hoses voids **ALL** approvals and warranties.

VST products must be used in compliance with applicable federal, state and local laws and regulations.



Vapor Systems Technologies, Inc.

650 Pleasant Valley Drive
Springboro, Ohio 45066 (USA)

Toll Free: 1-888-878-4673

Phone: 937-704-9333

Fax: 937-704-9443

www.vsthose.com



IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS IN A READILY ACCESSIBLE LOCATION.

NOTE: IT IS THE RESPONSIBILITY OF THE INSTALLER TO BE FAMILIAR WITH THE CURRENT REQUIREMENTS OF STATE, FEDERAL, LOCAL CODES AND AIR DISTRICT RULES AND REGULATIONS FOR INSTALLATION OF GASOLINE DISPENSING EQUIPMENT.

IT IS ALSO THE RESPONSIBILITY OF THE INSTALLER TO BE AWARE OF ALL THE NECESSARY SAFETY PRECAUTIONS AND SITE SAFETY REQUIREMENTS TO ASSURE A SAFE AND TROUBLE FREE INSTALLATION.

⚠ WARNING: Designed for use at motor fuel dispensing facilities only!

INSPECTION OF HOSE PRIOR TO INSTALLATION

Select the correct whip and curb hose length. The maximum length of the hose assembly shall not exceed eighteen (18) feet. Lengths greater than eighteen (18) feet are permitted if acceptable to authorities having jurisdiction.

All hose assemblies should be carefully inspected prior to installation. Should any of the following conditions exist DO NOT place assembly into service and contact Husky® for return authorization:

- Fittings improperly fastened to the hose i.e. moveable by hand.
- Signs of coupling movement.
- Misalignment of hose and coupling and/or scored or exposed area where slippage may have occurred.
- Damage to threads on couplings.
- Damage in transit.
- Damage to reinforcement.

INSTALLATION INSTRUCTIONS

1. Turn off dispenser and relieve the line pressure.
2. For tapered threads only, use pipe thread sealant (not Teflon® tape) approved for gasoline on the male threads of the hose couplings.
3. For tapered threads only, tighten approximately 1 or 2 turns past hand tight – do not overtighten. For straight threads with seals, tighten completely down to form seal.
4. Pressurize system and visually inspect for leaks.
5. Test nozzle for proper automatic shut off according to the manufacturers installation instructions provided with the nozzle.

DO NOT OVERTIGHTEN. USE WRENCH ON HOSE NUT ONLY.

IF DRIVE OFF OCCURS

- | | |
|--|--|
| • Turn off dispenser and relieve line pressure. | cover. |
| • Check for signs of stress or collapsed reinforcement. | • Check for signs of slippage on couplings (examine hose adjacent to coupling for breakage). |
| • Check for abrasion to outer cover exposing reinforcement. | • Pressurize system and visually inspect for leaks. |
| • Check for cuts in the hose structure which have damaged the reinforcement. | • Test nozzle for proper automatic shut off according to the manufacturers installation instructions provided with the nozzle. |
| • Check for blistering, cracked or loose outer | |

MADE IN THE USA

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TESTING / MAINTENANCE / INSPECTION

Hose has a limited life - proper periodic inspection is required.



Weekly

- Check the hose assembly for leaks, kinks, blisters, bulges, flattened areas, soft spots, or any cuts or gouges deep enough to expose the wire reinforcement beneath the cover of the hose.
- Check for obvious signs of stress or abuse.

- All drive aways, maintenance and inspection activities must be logged using the serial number of the individual product.

- Apply city, state, or federal testing regulations as appropriate.

ANY TEST / INSPECTION FAILURE
REQUIRES IMMEDIATE EQUIPMENT
REPLACEMENT OR REMOVAL FROM
SERVICE.



Monthly

- Check for cracked or loose outer cover.
- Check for cuts in the hose structure which have damaged the reinforcement.



ALWAYS ADHERE TO INSTALLATION / USAGE INSTRUCTIONS AND WARNINGS.

Improper use may result in injury, damage, or hazardous spill.



GENERAL WARNINGS / INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK OR INJURY TO PERSONS:



- Use of equipment is at individuals' own risk.
- Always abide and adhere to city, state, and federal regulations regarding use and installation of dispensing equipment.



- Always follow the dispenser manufacturer's instructions.
- Always turn off all power to dispenser during maintenance and inspection activities.
- Always close the shear valves during maintenance and inspection activities.
- Always relieve pressure from system prior to performing maintenance activities.
- Always check continuity after installation using a megohmmeter (Refer to PEI RP 400 for details).



- Always replace or remove from service damaged or leaking dispensing equipment immediately.



- Always report leaks / spills / accidents to appropriate authorities.
- Always wear appropriate safety equipment during maintenance activities.



- Always have appropriate fire extinguishing equipment within 5 ft / 1.5 m of dispensers.
- Always use pipe sealant approved for gasoline service.



- Always place containers on the ground before filling.



- Always discharge static electricity before using or servicing equipment by touching a metal part of the dispenser before and after fueling vehicle.



- Never smoke within 20 ft / 6.1 m of dispensers.



- Never keep in service past recommended life.



- Never leave the nozzle unattended while dispensing fuel.



- Never use sparking or flaming devices within 20 ft / 6.1 m of dispensers.



- Never use power tools near dispensers or to aid in the installation process.



- Never use cell phone within 20 ft / 6.1 m of dispensers.



- Never reenter car when fueling vehicle.



- Never allow gasoline to touch eyes or skin.



- Never use at flow rates in excess of regulatory guidelines.



- Never use at flow rates less than 5 gpm / 18.9 Lpm.



- Never dispense flammable material into unapproved containers.



- Never dispense fuel without a valid driver's license.

Refer to manufacturer's installation instructions or PEI's RP500 for proper associated component installation.

STOCK ROTATION & SCHEDULED REPLACEMENT

Absolute dedication to stock rotation is vital when dealing with rubber products. Curb pump and farm tank hose assemblies have a shelf life as do all other rubber products.

CAUTION: USE WRENCH ON HOSE NUT ONLY.

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS IN A READILY ACCESSIBLE LOCATION.

WARRANTY

CONVENTIONAL LOW PERMEATION HOSE PRODUCTS – With respect to Conventional Low Permeation Hose Products installed in California, for a period of one (1) year from the date of installation, Husky warrants that the product will be free from defects in materials and workmanship (if the installation date is in question or indeterminable, Husky will warrant the product for 12 months from sale by Husky). Husky confirms that the warranty is transferable to a subsequent purchaser within the warranty period. However, the warranty does not follow the product from its initial installation location to succeeding locations. Husky confirms these products are warranted to meet the performance standards and specifications to which it was certified by CARB for the duration of the warranty. Conventional Low Permeation Hose Products must be installed per CARB Executive Order and must follow the Husky Installation Instructions or the warranty is void. The warranty tag included with the Conventional Low Permeation Hose Product must be provided to the end user at installation. A completed warranty tag and installation documentation is required to be returned with the product to be eligible for warranty consideration.

CONVENTIONAL HOSE PRODUCTS – Husky Corporation will, at its option, repair, replace, or credit the purchase price of any Husky® manufactured product or Hewitt® branded product which proves upon examination by Husky, to be defective in material and/or workmanship for a period of one (1) year from the manufacture date by Husky.

Buyer must return the products to Husky, transportation charges prepaid. This warranty does not apply to equipment or parts which have been installed improperly, damaged by misuse, improper operation or maintenance, or which are altered or repaired in any way.

The warranty provisions contained herein apply only to original purchasers who use the equipment for commercial or industrial purposes. There are no other warranties of merchantability, fitness for a particular purpose, or otherwise, and any other such warranties are hereby specifically disclaimed.

Husky assumes no liability for labor charges or other costs incurred by Buyer incidental to the service, adjustment, repair, return, removal or replacement of products. Husky assumes no liability for any incidental, consequential, or other damages under any warranty, express or implied, and all such liability is hereby expressly excluded.

Husky reserves the right to change or improve the design of any Husky fuel dispensing equipment without assuming any obligations to modify any fuel dispensing equipment previously manufactured.