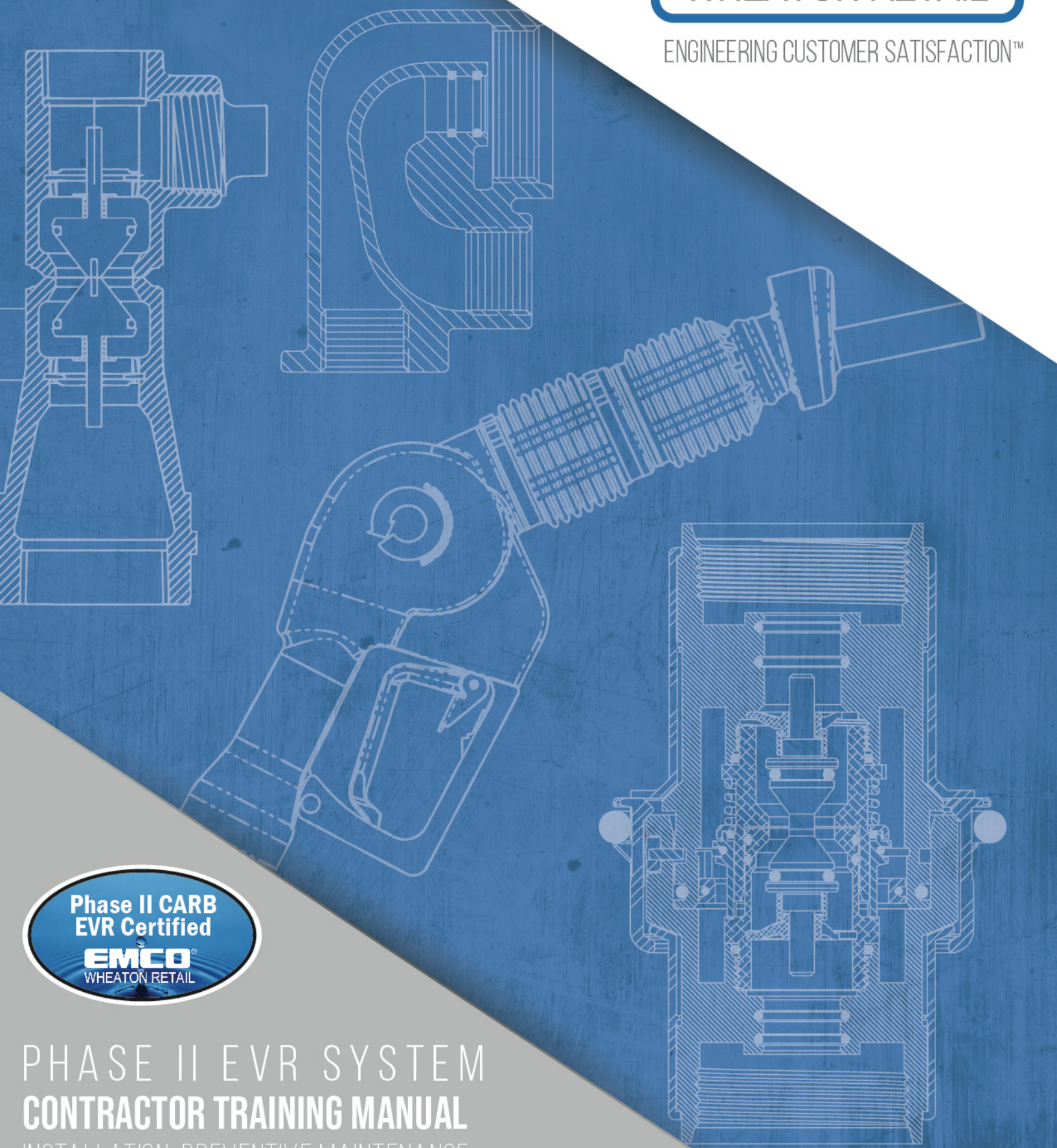
EMCO
WHEATON RETAIL

ENGINEERING CUSTOMER SATISFACTION™



Phase II CARB
EVR Certified
EMCO
WHEATON RETAIL

PHASE II EVR SYSTEM
CONTRACTOR TRAINING MANUAL
INSTALLATION, PREVENTIVE MAINTENANCE & COMPLIANCE TESTING

EMCO® WHEATON RETAIL

Balance Phase II EVR Components

For Use w/ Executive Orders VR-203, VR-204, VR-207, VR-208, VR-501

Phase II CARB EVR Certified
EMCO® WHEATON RETAIL

99.5% Vapor Collection Efficient

UL LISTED 610L

Classified by UL to UL 2586, Valves for Flammable Fluids

CARB Approved Mix & Match with VST

CARB Approved for UST & AST Installations

The True Low Cost Solution to Phase II CARB EVR Compliance!

EMCO WHEATON RETAIL CORPORATION
2300 Industrial Park Drive • Wilson, North Carolina 27893 • 252-243-0150 • 252-243-4603 (fax) • www.emcoretail.com

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A4005EVR
BALANCE VAPOR RECOVERY NOZZLE

Model Numbers	Description
A4005EVR-XXX	Balance Vapor Recovery Nozzle, New
RA4005EVR-XXX	Balance Vapor Recovery Nozzle, Rebuilt

A4005EVR = Model Number
XXX = Scuff Color
R = Rebuilt

The Model A4005EVR Nozzle and A4119EVR Safebreak Valve are CARB EVR Certified for use with the various pressure management and ISD systems.

Pressure Management System Options

Healy Clean Air Separator (CAS)

Hirt VCS 100 Oxidizer

Veeder-Root Canister

In-Station Diagnostic ISD System Options

Franklin Fueling Systems INCON

Veeder-Root TLS-350

Performance Standards & Specifications

This component is factory tested to, and meets the following specifications:

1. Meets SAE Spout Dimension Standards J285, Rev SEP92.
2. Meets ARB Material Compatibility with Fuel Blends as per Section 3.8 of CP-201.
3. Meets ARB Capable of Refueling Any Vehicle Standards as per Section 4.7.1 of CP-201.
4. Meets ARB Spout Dimension Standards as per Section 4.7.3 of CP-201.
5. Meets ARB Nozzle and Dispenser Compatibility Standards as per Section 4.9 of CP-201.
6. Meets ARB Balance Nozzle Criteria Standards as per Section 5.1 of CP-201.
7. TP-201.2B – Complies with the maximum allowable leak rate of 0.07 CFH @ 2.00 inches of water column pressure.
8. TP-201.2C – Complies with the maximum allowable spillage factor of 0.24 pounds/ 1,000 gallons.
9. TP-201.2D – Complies with the maximum allowable average of 3 post fuel drips.
10. TP-201.2E – Complies with the maximum allowable average of 100mL liquid retention and 1mL liquid spit-back.
11. TP-201.2J – Complies with the maximum allowable component pressure drop of 0.08 inches of water column @ 60 CFH.

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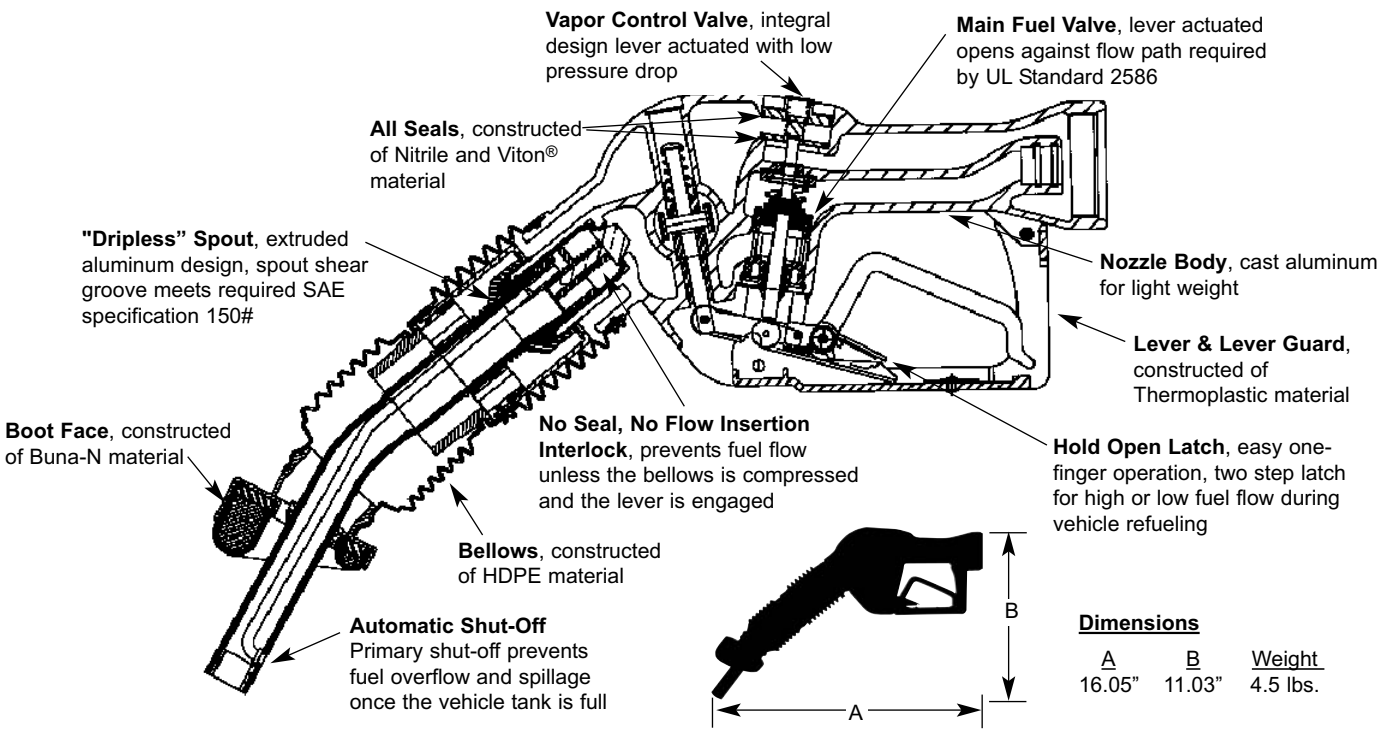
A4005EVR

BALANCE VAPOR RECOVERY NOZZLE



Dimensions

A	B	Weight
16.05"	11.03"	4.5 lbs.

Guide Specification: The Model A4005EVR Nozzle is designed for use with Balance Phase II Vapor Recovery Systems. Complies with the California Air Resources Board CARB Enhanced Vapor Recovery Program EVR Certification Procedures CP-201.

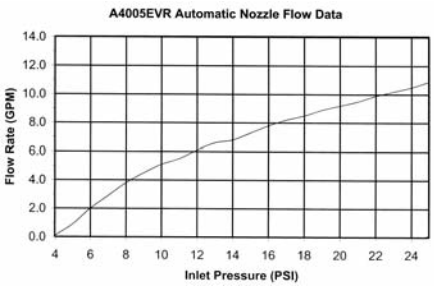
During vehicle refueling, the *nozzle* is securely latched to the vehicle fill pipe by means of a permanent band located on the spout. The position of the band permits the *nozzle* to remain in place on ether a vertical or horizontal place. The flexible bellows and soft boot face together provide the proper vapor seal connection between the spout and vehicle fill pipe as fuel passes into the vehicle tank.

The *No Seal, No Flow insertion interlock mechanism* assures adequate compression of the bellows and boot face against the vehicle fill pipe, creating a tight vapor seal for proper balance phase II vapor recovery.

The integral *vapor control valve* is located within the nozzle body. It opens to allow the return of vapor when the nozzle is securely latched to the vehicle fill pipe, with the bellows compressed and the lever engaged.

The *automatic shut-off* is a required safety device of the nozzle that stops and prevents the overflow and spillage of fuel once the vehicle tank is full.

Flow Rate Performance Chart



Certification & Listings

Agency	Approval Number
CARB EVR	Executive Orders VR-203, VR-204, VR-207, VR-208, VR-501
CARB Pre-EVR Mix & Match	Approval Letter #09-10/ Advisory #408 9/19/2010
California State Fire Marshal	GVRC 005:007:025
California Division of Measurement Standards	3211(d)-09
UL Listing	MH1460, Volume 11, Section 5, 08NK20256 Classified by UL to UL 2586, Valves for Flammable Fluids

EMCO® WHEATON RETAIL

A4119EVR

Coaxial SafeBreak® Valve

Dimensions

A	B
3.0”	5.6”

Weight
1.3 lbs.

Body, cast aluminum for light weight vapor paths

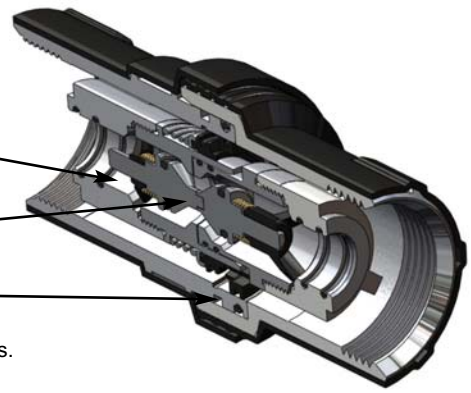
All Seals, constructed of Viton® and Buna-N material

Vapor Path, designed with low pressure drop

Dual Poppet Design, seals off the fuel and vapor path

Shear Pins, constructed of aluminum to fracture at a maximum pull force of 350 lbs.

Scuff Guard, constructed of vinyl material



Viton® is a registered trademark of DuPont Dow Elastomers.

Guide Specification: The Model A4119EVR Coaxial SafeBreak Valve is a shear pin style non-reconnectable component designed for use with Balance Phase II Vapor Recovery Systems. Complies with the California Air Resources Board CARB Enhanced Vapor Recovery Program EVR Certification Procedures CP-201. A dual poppet design seals off both the fuel and vapor paths upon separation due to customer related “drive-off” occurrences, eliminating fuel spillage, vapor emissions and minimizing damage to the dispenser unit.

Model Numbers	Description
A4119EVR-020	Coaxial SafeBreak Valve

Performance Standards & Specifications

These components are factory tested to, and meet the following specifications:

1. Meets ARB Material Compatibility with Fuel Blends as per Section 3.8 of CP-201.
2. TP-201.2B – Complies with the maximum allowable leak rate of 0.00 CFH @ 2.00 inches of water column pressure.
3. TP-201.2J – Complies with the maximum allowable component pressure drop of 0.04 inches of water column @ 60 CFH.

Certification & Listings

Agency	Approval Number
CARB EVR	Executive Orders VR-203, VR-204, VR-207, VR-208, VR-501
CARB Pre-EVR	Approval Letter #95-3
CARB Pre-EVR Mix & Match	Approval Letter #09-10/ Advisory #408 9/19/2010
California State Fire Marshal	GVRC 005:007:031
California Division of Measurement Standards	3211(d)-09
UL Listing	MH17833, Volume 1, 08NK20256

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N-1005
09/15

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Phase II EVR System

Repair and Replacement Kits

Phase II CARB EVR Certified
EMCO® WHEATON RETAIL

492775EVR ***Bellows & Boot Face Kit***

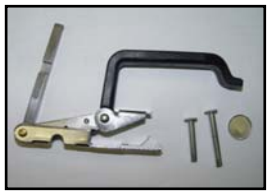
(1) Bellows & Boot Face
(1) Bellows O-ring
(2) Bellows Band Clamps

492776EVR ***Boot Face Kit***

(1) Boot Face
(4) Mounting Screws

492834EVR ***Spout Kit***

(1) Spout
(1) Bellows O-ring
(2) Bellows Band Clamps
(1) Interlock Guide
(1) Interlock Push Rod



494150EVR ***Latch Kit***

(1) Latch Assembly
(2) Mounting Rivets
(1) Dust Plug

494748EVR ***Fuel Path O-ring Kit***

(2) Fuel Path O-rings

494749EVR ***Vapor Path O-ring Kit***

(1) Vapor Path O-ring

494750EVR ***Bellows Band Clamp Kit***

(6) Bellows Band Clamps

A0557EVR-002 ***Scuff Guard Kit Black***

(1) Scuff Guard

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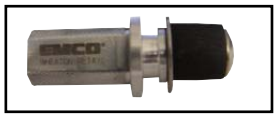
Phase II EVR System

Installation and Maintenance Tools

Phase II CARB EVR Certified
EMCO® WHEATON RETAIL

494655EVR Balance Phase II EVR Service Kit

Includes all balance phase II installation and maintenance tools and sturdy, canvas tool bag.



494635EVR Spout Plug

Used for conducting CARB test procedure TP-201.6 or TP-201.6C Liquid Removal Test.

494652EVR Bellows Band Clamp Crimp Tool

Used for installing and crimping the A4005EVR nozzle bellows band clamps.

494653EVR Lever Guard Rivet Installation Tool

Used for installing the A4005EVR nozzle lever guard rivets.

494654EVR Lever Guard Rivet Removal Tool

Used for removing the A4005EVR nozzle lever guard rivets

494712EVR Bellows Retainer Plate Tool

Used for securing the A4005EVR nozzle bellows during installation of the bellows band clamps.

494761EVR Balance Nozzle Adapter

Used for testing and verifying the accuracy of the ISD vapor flow meter.

494771EVR Surrogate Spout Assembly

Used for conducting a leak tightness integrity test on the ISD vapor flow meter test assembly.

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Phase II CARB EVR Certified EMCO

CARB EVR Certifications for the
EMCO Balance Phase II EVR System

1st Certification, September 23, 2009 EMCO Executive Orders: VR-207-A & VR-208-A

System Configuration:

- EMCO Model A4005EVR Balance Nozzle, A4119EVR Breakaway & A4110EVR Hose Swivel
- Goodyear hoses
- Hirt VCS-100 processor
- Franklin Fueling INCON ISD system

2nd Certification, November 12, 2010 VST Executive Orders: VR-203-I & VR-204-I (Amendment)

System Configuration:

- EMCO Model A4005EVR Balance Nozzle & A4119EVR Breakaway
  (mix & match with VST hanging hardware components)
- Goodyear hoses
- Veeder-Root Canister
- Veeder-Root ISD system

3rd Certification, February 8, 2013 VST Executive Orders: VR-203-N & VR-204-N (Amendment)

System Configuration:

- EMCO Model A4005EVR Balance Nozzle & A4119EVR Breakaway
  (mix & match with VST hanging hardware components)
- Goodyear hoses
- Healy Clean Air Separator CAS
- Veeder-Root ISD system

4th Certification, March 13, 2015 EMCO Executive Orders: VR-501-A (Aboveground Storage Tanks)

System Configuration:

- EMCO Model A4005EVR Balance Nozzle & A4119EVR Breakaway
- Goodyear hoses
- Hirt VCS-100 processor
- Franklin Fueling Liquid Condensate Trap LCT
- No ISD system

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER VR-204-V

Relating to Certification of Vapor Recovery Systems

Balance Phase II Enhanced Vapor Recovery (EVR) System Including In-Station Diagnostics (ISD) Systems

WHEREAS, the California Air Resources Board (CARB) has established, pursuant to California Health and Safety Code sections 25290.1.2, 39600, 39601 and 41954, certification procedures for systems designed for the control of gasoline vapor emissions during motor vehicle fueling operations (Phase II EVR system) in its Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201) as last amended April 23, 2015, incorporated by reference in Title 17, California Code of Regulations, Section 94011;

WHEREAS, CARB has established, pursuant to California Health and Safety Code Sections 39600, 39601, 39607, and 41954, test procedures for determining the compliance of Phase II EVR systems with emission standards;

WHEREAS, EMCO Wheaton Retail (EMCO) requested an amendment of the Balance Phase II EVR System Executive Order VR-204 to add the INCON ISD software version 1.3.1 with the Hirt VCS 100 processor configuration;

WHEREAS, Vapor Systems Technologies, Inc. (VST) requested an amendment of the Balance Phase II EVR System Executive Order VR-204 to add an optional scuff guard, part number VST-BBSG-100, for use on VST's breakaway coupling to help mitigate damage to dispensers during fueling events;

WHEREAS, CP-201 provides that the CARB Executive Officer shall issue an Executive Order if he or she determines that the vapor recovery system conforms to all of the applicable requirements set forth in CP-201;

WHEREAS, Executive Order G-01-032 delegates to the Chief of the Monitoring and Laboratory Division the authority to certify or approve modifications to certified Phase I and Phase II vapor recovery systems for gasoline dispensing facilities; and

WHEREAS, I, Michael T. Benjamin, Chief of the Monitoring and Laboratory Division, find that the Balance Phase II EVR System including ISD, as amended to include the components listed above, conforms with all requirements set forth in CP-201, including compatibility when fueling vehicles equipped with onboard refueling vapor recovery systems, and results in a vapor recovery system which is at least 95 percent efficient and shall not exceed 0.38 pounds of hydrocarbons per 1,000 gallons of gasoline

transferred when tested pursuant to TP-201.2, Efficiency and Emission Factor for Phase II Systems (July 26, 2012).

NOW, THEREFORE, IT IS HEREBY ORDERED that the Balance Phase II EVR System including ISD is certified to be at least 95 percent efficient and do not exceed 0.38 pounds of hydrocarbon per 1,000 gallons of gasoline transferred in attended and/or self-service mode when used with a CARB-certified Phase I vapor recovery system and installed, operated, and maintained as specified herein and in the following exhibits. Exhibit 1 contains a list of the equipment certified for use with Balance Phase II EVR System including ISD. Exhibit 2 contains the performance standards, specifications, and typical installation drawings applicable to Balance Phase II EVR System Including ISD as installed in a gasoline dispensing facility (GDF). Exhibit 3 contains the manufacturing performance specifications and warranties. Exhibit 4 provides items required in conducting TP-201.3. Exhibit 5 is the liquid removal test procedure. Exhibit 6 provides items required in conducting TP-201.4. Exhibit 7 is the nozzle bag test procedure. Exhibit 8 is VST ECS hydrocarbon sensor verification test procedure. Exhibit 9 is the test procedure for determining VST ECS vapor processor activation pressure. Exhibit 10 is the Veeder-Root vapor pressure sensor verification test procedure. Exhibit 11 is the Veeder-Root vapor polisher operability test procedure. Exhibit 12 is the Veeder-Root vapor polisher hydrocarbon emissions verification test procedure. Exhibit 13 is the Hirt VCS 100 Processor with Indicator Panel Operability Test Procedure. Exhibit 14 is the Franklin Fueling Systems (FFS) Clean Air Separator static pressure performance test procedure. Exhibit 15 is the VST Green Machine Compliance Test Procedure. Exhibit 16 is the Liquid Condensate Trap compliance test procedure. Exhibit 17 is the Veeder-Root ISD vapor flow meter operability test procedure. Exhibit 18 is accessing PMC and ISD parameters at gasoline dispensing facilities (GDFs) with Veeder-Root's "Maintenance Tracker" security feature installed & enabled. Exhibit 19 is the INCON ISD vapor flow meter operability test procedure. Exhibit 20 is the INCON vapor pressure sensor verification test procedure.

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 each component manufacturer listed in Exhibit 1 shall provide a warranty for the vapor recovery components to the initial purchaser. The warranty shall be passed on to each subsequent purchaser within the warranty period. The warranty shall include the ongoing compliance with all applicable performance standards and specifications and shall comply with all warranty requirements in Section 16.5 of CP-201. 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 every certified component manufactured by VST, EMCO, OPW, ContiTech USA, Veeder-Root, Hirt, and FFS including INCON shall meet the manufacturing performance specifications as provided in Exhibit 3.

IT IS FURTHER ORDERED that the certified Balance Phase II EVR System including ISD shall be installed, operated, and maintained in accordance with the CARB Approved Installation, Operation, and Maintenance Manual. Equipment shall be inspected weekly, quarterly, and annually per the procedures identified in the CARB Approved Installation, Operation, and Maintenance Manual. These inspections shall also apply to systems certified by Executive Orders VR-204-A to U. A copy of the Executive Order and the CARB Approved Installation, Operation and Maintenance Manual shall be maintained at each GDF where a certified Balance Phase II EVR System including ISD is installed.

IT IS FURTHER ORDERED that equipment 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 any alteration in the equipment parts, design, installation, or operation of the system provided in the manufacturers' certification application or documents and certified hereby is prohibited and deemed inconsistent with this certification, unless the alteration has been submitted in writing pursuant to the process for Executive Order amendments set forth in Section 18 of CP-201and approved in writing by the Executive Officer or his delegate. Any sale, offer for sale, or installation of any system or component without CARB's approval as set forth above is subject to enforcement action.

IT IS FURTHER ORDERED that the following requirements are made a condition of certification. The owner or operator of the Balance Phase II EVR System including ISD shall conduct and pass the following tests no later than 60 days after startup and at least once in each 12 month period, using the following test procedures. Shorter time periods may be specified by the District.

- TP-201.3, Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities (July 26, 2012);
- TP-201.4, Dynamic Back Pressure (July 3, 2002) in accordance with the condition listed in item 1 of the Vapor Collection section of Exhibit 2;
- Exhibit 4, Required Items in Conducting TP-201.3;
- Exhibit 5, Liquid Removal Test Procedure*;*
- Exhibit 6, Required Items in Conducting TP-201.4;
- Exhibit 8, VST ECS Hydrocarbon Sensor Verification Test Procedure *(if a VST ECS membrane processor is installed)*;
- Exhibit 9, Determination of VST ECS Processor Activation Pressure *(if a VST ECS membrane processor is installed)*;
- Exhibit 10, Veeder-Root Vapor Pressure Sensor Verification Test Procedure*;*

- Exhibit 11, Veeder-Root Vapor Polisher Operability Test Procedure *(if a Veeder-Root Vapor Polisher is installed)*;
- Exhibit 12, Veeder-Root Vapor Polisher Hydrocarbon Emissions Verification Test Procedure *(if a Veeder-Root Vapor Polisher is installed)*;
- Exhibit 13, Hirt VCS 100 Processor with Indicator Panel Operability Test Procedure *(if a Hirt VCS 100 processor is installed);*
- Exhibit 14, Franklin Fueling Systems Healy Clean Air Separator Static Pressure Performance Test Procedure *(if a Clean Air Separator is installed);*
- Exhibit 15, VST Green Machine Compliance Test Procedure *(if a Green Machine is installed);*
- Exhibit 16, Liquid Condensate Trap Compliance Test Procedure *(if a Liquid Condensate Trap is installed);*
- Exhibit 17, Veeder-Root ISD Vapor Flow Meter Operability Test Procedure *(if Veeder-Root ISD is installed)*;
- Exhibit 18, Accessing PMC and ISD Parameters at Gasoline Dispensing Facilities (GDFs) with Veeder-Root's "Maintenance Tracker" Security Feature Installed & Enabled *(if Maintenance Tracker is installed);*
- Exhibit 19, INCON; ISD Vapor Flow Meter Operability Test Procedure *(if INCON ISD is installed); and*
- Exhibit 20, INCON; Vapor Pressure Sensor Verification Test Procedure *(if INCON ISD is installed)*.

Districts may specify the sequence of the above tests. Notification of testing, and submittal of test results, shall be done in accordance with District requirements and pursuant to policies established by that District. Districts may require the use of alternate test form(s), provided they include the same minimum parameters identified in the datasheet referenced in the test procedure(s). Alternative test procedures, including most recent versions of the test procedures listed above, may be used if determined by CARB Executive Officer or his delegate, in writing, to yield equivalent results.

IT IS FURTHER ORDERED that the following requirements are made a condition of certification. The owner or operator of the Balance Phase II EVR System including ISD shall conduct, and pass, the following test no later than 60 days after startup using Exhibit 7, Nozzle Bag Test Procedure. Notification of testing, and submittal of test results, shall be done in accordance with District requirements and pursuant to the policies established by that District. Districts may require the use of alternate test form(s), provided they include the same minimum parameters identified in the datasheet referenced in the test procedure(s). Alternative test procedures, including most recent versions of the test procedures listed above, may be used if determined by the CARB Executive Officer or his delegate, in writing, to yield equivalent results.

IT IS FURTHER ORDERED that, except as provided above, Districts at their discretion will specify the testing, related sequencing, and testing frequency of the nozzle vapor valves. If nozzle vapor valve tests are required by the District, the test shall be conducted in accordance with Exhibit 7, Nozzle Bag Test Procedure.

IT IS FURTHER ORDERED that the Balance Phase II EVR System including ISD shall be compatible with gasoline in common use in California at the time of certification. The Balance Phase II EVR System including ISD is not compatible with gasoline that has a methanol content greater than 5 percent or an ethanol content greater than 10 percent. 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 Balance Phase II EVR Systems including ISD is valid through April 1, 2018.

IT IS FURTHER ORDERED that Executive Order VR-204-U issued on March 30, 2017, is hereby superseded by this Executive Order. Balance Phase II EVR Systems including ISD certified under Executive Order VR-204-A through U may remain in use at existing installations up to four years after the expiration date of this Executive Order when the certification is not renewed.

IT IS FURTHER ORDERED that this Executive Order shall apply to new installations or major modification of Phase II Systems with a throughput of more than 600,000 gallons per year. The installation of the ISD System is not authorized on a GDF with a throughput of less than or equal to 600,000 gallons per year.

Executed at Sacramento, California, this 3rd day of July 2017.

Michael T. Benjamin, Chief
Monitoring and Laboratory Division

Attachments:

General Requirements

Exhibit 1 Equipment List

- Hanging Hardware
- Processors
- Liquid Condensate Trap
- ISD
  - Optional Wireless Components
  - Optional Maintenance Tracker Kit

Exhibit 2 System Specifications

- Hanging Hardware
- Processors
- Pressure/Vacuum Vent Valves for Storage Tank Vents

- Warranty
- Vapor Recovery Piping Configurations
- Dispensers
- Liquid Condensate Traps
- In-Station Diagnostics (ISD)
- Phase I Systems
- Maintenance Records
- Vapor Recovery Equipment Defects
- Veeder-Root ISD System Specifications
- INCON ISD System Specifications

Exhibit 3 Manufacturing Performance Specifications and Warranties

- Vapor Systems Technologies
- EMCO Wheaton Retail
- Veeder-Root
- Veyance Technologies
- Hirt
- Franklin Fueling Systems Including INCON ISD System
- OPW

General Compliance Procedures

Exhibit 4 Required Items in Conducting TP-201.3
Exhibit 5 Liquid Removal Test Procedure
Exhibit 6 Required Items for Conducting TP-201.4
Exhibit 7 Nozzle Bag Test Procedure

Processor Specific Compliance Procedures

Exhibit 8 VST ECS Hydrocarbon Sensor Verification Test Procedure
Exhibit 9 VST ECS Determination of Processor Activation Pressure
Exhibit 10 Veeder-Root Vapor Pressure Sensor Verification Test Procedure
Exhibit 11 Veeder-Root Vapor Polisher Operability Test Procedure
Exhibit 12 Veeder-Root Vapor Polisher Hydrocarbon Emissions Verification Test Procedure
Exhibit 13 Hirt VCS 100 Processor with Indicator Panel Operability Test Procedure
Exhibit 14 Franklin Fueling Systems Healy Clean Air Separator Static Pressure Performance Test Procedure
Exhibit 15 VST Green Machine Compliance Test Procedure

LCT Specific Compliance Procedure

Exhibit 16 Liquid Condensate Trap Compliance Test procedure

ISD Specific Compliance Procedures

Exhibit 10 Veeder-Root Vapor Pressure Sensor Verification Test Procedure
Exhibit 17 Veeder-Root ISD Vapor Flow Meter Operability Test Procedure

Exhibit 18	Accessing PMC and ISD Parameters at Gasoline Dispensing Facilities (GDFs) with Veeder-Root's "Maintenance Tracker" Security Feature Installed & Enabled
Exhibit 19	INCON ISD System Vapor Flow Meter Operability Test Procedure
Exhibit 20	INCON ISD System Vapor Pressure Sensor Verification Test Procedure

EXHIBIT 1[1]

Equipment List
Hanging Hardware

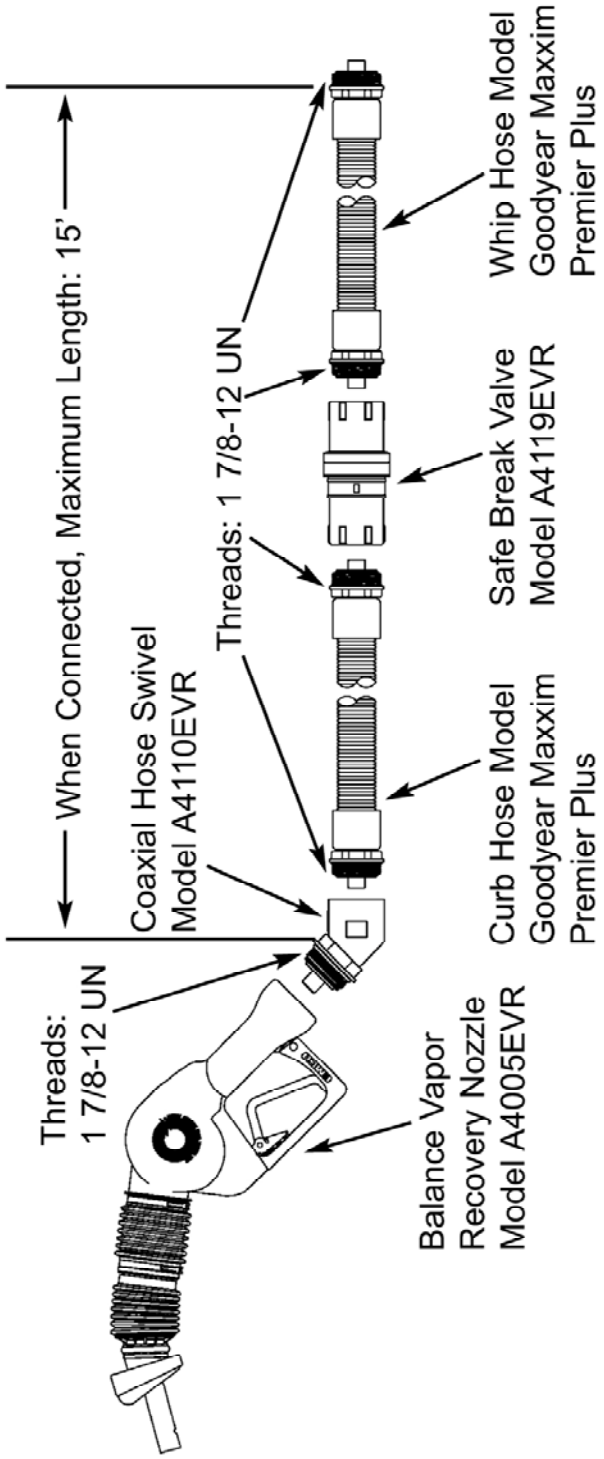
Component	*Manufacturer / Model*
Nozzle	VST Model VST-EVR-NB, VST-EVR-NB (Rebuilt) Or VST Model VST-EVR-NB (G2), VST-EVR-NB (G2 Rebuilt) Or EMCO Models A4005EVR, RA4005EVR (Rebuilt) (Figure 1A-1)
Coaxial Curb Hose	VST Model VDV-EVR Series Or VDVP-EVR Series Or Veyance Model Maxxim Premier Plus *("NV" stamped on nozzle end)* (Figure 1A-2)
Coaxial Whip Hose	VST Model VSTA-EVR Series Or VSTAP-EVR Series Or Veyance Model Maxxim Premier Plus (Figure 1A-2)
Breakaway Coupling	VST Model VSTA-EVR-SBK, VSTA-EVR-SBK (Reattachable)[2] Or EMCO Model A4119EVR Or OPW Model 66CLP (Figure 1A-2)

Allowable Hanging Hardware Combinations Including ISD Systems

	Nozzle		Hose		Breakaway			ISD	
Processor	VST	EMCO	VST	Veyance	VST	EMCO	OPW	Veeder-Root	INCON
VST Membrane	●		●	●	●	●	●	●	
Veeder Root Vapor Polisher	●	●	●	●	●	●	●	●	
FFS Clean Air Separator	●	●[3]	●	●	●	●	●	●	●[3]
Hirt VCS 100	●[4]	●	●	●	●	●	●	●	●[4]
VST Green Machine	●		●	●	●	●	●	●	

[1] The local air district may require a permit application when changing between alternate components.
[2] The lower half of the VST reattachable breakaway, identified with a VST logo, cannot be used on the VST non-reattachable or rebuilt breakaways.
[3] EMCO Nozzle for use with FFS Clean Air Separator is not allowed with INCON ISD System.
[4] VST Nozzle for use with Hirt VCS-100 is not allowed with INCON ISD System.

Figure 1A-2
Emco Hanging Hardware
(Nozzle, Hose Swivel, Coaxial Curb Hose, Safe Break, and Coaxial Whip Hose)



California Environmental Protection Agency

Air Resources Board

ARB Approved

Installation, Operation and Maintenance Manual

For

Executive Order

VR-204-V
Balance Phase II EVR Systems Including
In-Station Diagnostics (ISD) Systems

NOTICE:

The **ARB Approved Installation, Operation and Maintenance Manual (IOM) for VR-204** describes the tools, methods, and skill levels required to install the **Balance Phase II EVR Systems Including ISD Systems.**

Unless specified in this IOM, only skilled technicians that are trained, certified, and licensed by VST, Inc. (i.e. VST Authorized Service Contractors) are able to perform installation, maintenance, or repairs of components manufactured by VST Inc. or the warranty will be void. Unless specified otherwise, only skilled technicians that are trained, certified, and licensed by the Veeder-Root Company are able to perform installation, maintenance, or repairs of components manufactured by the Veeder-Root Company or the warranty will be void. Unless specified otherwise, only skilled technicians that are trained, certified and licensed by Franklin Fueling Systems (i.e. Healy or INCON ISD Certified Technicians) are able to perform installation, maintenance or repairs of components manufactured by Franklin Fueling Systems or warranty will be void. Unless specified otherwise, only skilled technicians that are trained, certified and licensed by EMCO Wheaton Retail (i.e. EMCO Certified Technicians) are able to perform installation, maintenance or repairs of components manufactured by EMCO or ContiTech USA Inc**.** or warranty will be void. Unless specified otherwise, only skilled technicians that are trained, certified and licensed by Hirt Combustion Engineers (i.e. Hirt Certified Technicians) are able to perform installation, maintenance or repairs of components manufactured by Hirt or warranty will be void.

NOTE: GDF Owner / Operator can remove and install hanging hardware (nozzle, curb hose, breakaway, flow limiter and whip hose). Additional certifications may be required in accordance with local district requirements.

It is the responsibility of each VST Authorized Service Contractor (ASC), Veeder-Root technician, Healy Certified Technician, INCON ISD Certified Technician, EMCO Certified Technician, and Hirt Certified Technician to be familiar with the current requirements of state, federal, and local codes for installation and repair of gasoline dispensing equipment.

It is also the responsibility of the VST ASC, Veeder-Root technician, Healy Certified Technician, INCON ISD Certified Technician, EMCO Certified Technician, and Hirt Certified Technician to be aware of all the manuals, necessary safety precautions, and site safety requirements to assure a safe and trouble-free installation.

To participate in a VST training class, a candidate will need to complete an enrollment form, which can be downloaded from the VST website at www.vsthose.com or requested by phone at 937-704-9333. Once the enrollment form is approved by VST, the candidate can enroll in a VST training class.

To confirm a VST Authorized Service Contractor status, a person can go to the VST website at www.vsthose.com. This list is updated periodically.

Vapor Systems Technologies, Inc.
650 Pleasant Valley Drive
Springboro, Ohio 45066
PH: 937-704-9333
FX: 937-704-9443
www.vsthose.com

To confirm Veeder-Root TLS or ISD training, a person should send an email to technicaltraining@gilbarco.com with the name (and company) of the ASC to obtain verification of the ASC TLS/ISD training status or call 800-997-7725 and press "*" to get to the Veeder-Root menu and "*" again to speak to a representative.

To confirm a Healy or INCON ISD Certified Technician training status, a person can access a searchable database at the following web site: http://techlab.franklinfueling.com/mod/resource/view.php?id=64

To confirm the status of an EMCO Certified Technician, please visit the EMCO Wheaton Retail's website at www.emcoretail.com or contact:

Jose E. Rodriguez
Manager of Technical Services & Support
EMCO Wheaton Retail
Phone: 619-421-1743
Email: JERodriguezSD@aol.com

EMCO Wheaton Retail
2300 Industrial Park Drive
Wilson, North Carolina 27893
Phone: 252-243-4394
Fax: 252-243-4759
Email: ewrc@emcoretail.com

To confirm Hirt training, a person should contact Hirt below with the name (and company) of the technician.

Contact Information:
Customer Service Department
Hirt Combustion Engineers, Inc.
Phone: (562) 692-6970
Email: HirtVCS@aol.com

Table of Contents

Weekly Inspections –Hanging Hardware

HANGING HARDWARE SYSTEM					
Component	**Procedure**	**Fail Criteria**	**Corrective Action**	**Reference Manuals**	**Authorized Personnel**
Nozzle Hose Breakaway	Inspect each hose, breakaway, and nozzle for loose connections or leaks	Presence of a leak	Tighten connections or replace with new product	IOM-6	**Nozzle, hose, or breakaway replacement**: GDF owner/operator or VST ASC Levels A, B, C, or D or EMCO Level A **Component repair:** VST ASC Levels A, B, or C or EMCO Level A
		Presence of residue from a leak	Tighten connections or replace with new product	IOM-8	
		Visible o-ring between any component connection	Tighten connections or replace with new product	IOM-9	
CO-AXIAL HOSES					
Component	**Procedure**	**Fail Criteria**	**Corrective Action**	**Reference Manuals**	**Authorized Personnel**
Coaxial Hose	Inspect hoses for wear, severe kinks, cracks, splitting, and functional swivels	Kinks, cracks, splitting, non-functional swivels, or any visible openings	Replace with new hose	IOM-8	**Hose replacement:** GDF owner/operator or VST ASC Levels A, B, C, or D or EMCO Level A
BREAKAWAY					
Component	**Procedure**	**Fail Criteria**	**Corrective Action**	**Reference Manuals**	**Authorized Personnel**
Breakaway	Inspect breakaway for leaks around the scuff	Presence of a leak around the scuff	Replace with new breakaway	IOM-9	**Replace breakaway:** GDF Owner/Operator or VST ASC Levels A, B, C, or D or or EMCO Level A

EMCO NOZZLE					
Nozzle Component	**Procedure**	**Fail Criteria**	**Corrective Action**	**Reference Manuals**	**Authorized Personnel**
Lever, Hold Open Latch, Lever Guard	Inspect for defects, cuts or damage to the: Lever Hold Open Latch Lever Guard Spout	Damaged or missing	Replace with new EMCO latch kit or nozzle	IOM – 6	**Latch Kit Repair:** EMCO Certified Technician Level A **Nozzle Replacement:** GDF Owner/Operator or EMCO Certified Technician Level A
Spout		Sheared or bent	Replace with new EMCO Spout Kit or nozzle	IOM – 6 IOM - 7	**Spout Kit Repair:** EMCO Certified Technician Level A **Nozzle Replacement:** GDF Owner/ Operator or EMCO Certified Technician Level A
Spout Vent Hole	Inspect for defects, cuts or damage to the: Spout Vent Hole Boot Face Bellows	Vent hole blocked	Clear blockage	IOM – 6	**Blockage Repair:** GDF Owner/Operator or EMCO Certified Technician Level A
Boot Face		> than 0.4 sq. inches of boot face material is missing (e.g. A triangular or similar shape in which greater than 7/16 inches of the boot face circumference is missing [accumulated])	Replace with new EMCO boot face kit or nozzle	IOM – 6 IOM - 7	**Boot Face Kit Repair:** EMCO Certified Technician Level A **Nozzle Replacement:** GDF Owner/Operator or EMCO Certified Technician Level A
Bellows		A cut across 7 consecutive bellows convolutions	Replace with new EMCO bellows kit or nozzle	IOM – 6 IOM - 7	**Bellows Kit Repair:** EMCO Certified Technician Level A **Nozzle Replacement:** GDF Owner/Operator or EMCO Certified Technician Level A

EMCO NOZZLE					
Insertion Interlock Rod	Inspect for defects, cuts or damage to the: Insertion Interlock Rod Band Clamps Serial Plate Security Rivet	Insertion interlock rod sticks during engagement or disengagement	Replace with new EMCO Spout Kit or nozzle	IOM – 6 IOM - 7	**Spout Kit Repair:** EMCO Certified Technician Level A **Nozzle Replacement:** GDF Owner/Operator or EMCO Certified Technician Level A
Band Clamps		Damaged or missing	Replace with new EMCO band clamp kit or nozzle	IOM – 6 IOM - 7	**Band Clamp Kit Repair:** EMCO Certified Technician Level A **Nozzle Replacement:** GDF Owner/Operator or EMCO Certified Technician Level A
Serial Plate, Security Rivet		Damaged or missing	Replace with new EMCO nozzle	IOM – 6	**Nozzle Replacement:** GDF Owner/Operator or EMCO Certified Technician Level A

Weekly Inspection and Testing Checklist

Checklist results may be used to assist with filling out GDF maintenance log.			Date:	Page: _____of_____
Dispenser Number	Unihose or Fuel Grade (circle one)	Nozzle Inspection (circle one)	Hose Inspection (circle one)	Breakaway (circle one)
	Unihose 87 89 91 other _____	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other _____	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other _____	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other _____	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other _____	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other _____	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other _____	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other _____	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other _____	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other _____	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other _____	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other _____	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other _____	Pass Fail	Pass Fail	Pass Fail
	Unihose 87 89 91 other _____	Pass Fail	Pass Fail	Pass Fail

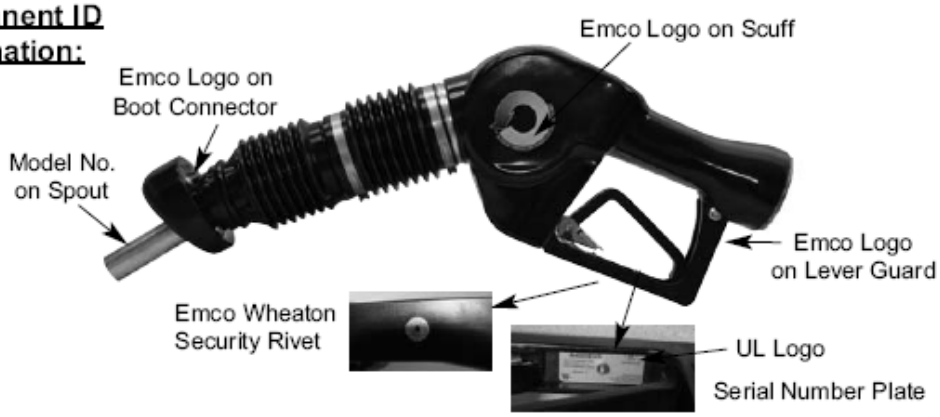
EMCO®
WHEATON RETAIL

A4005EVR

Balance Vapor Recovery Nozzle
RA4005EVR = Rebuilt
XXX = Scuff Guard Color

For use with the Vapor Systems Technologies VST Coaxial Curb and Whip Hoses

Permanent ID Information:



INSTALLATION INSTRUCTIONS

Service Tools Required:

- 1 7/8" Crows Foot
- Torque Wrench w/ 50 ft-lbs Setting
- Pipe Wrench w/ Flat Jaws
- Gasoline Approved Container
- Petroleum Jelly or Other Suitable Lubricant

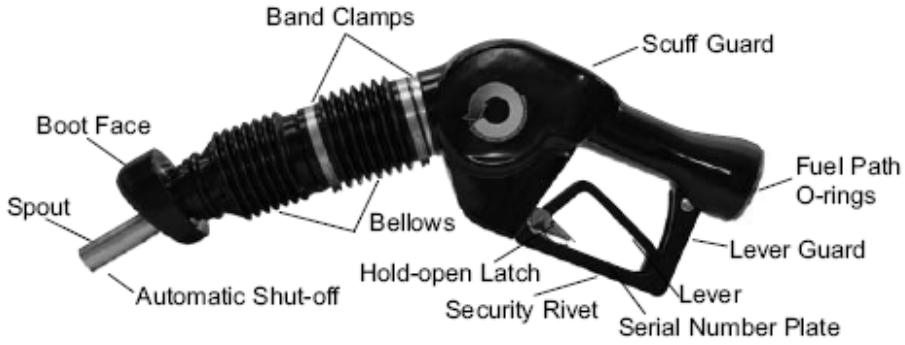
CAUTION:

1. Always barricade work area to keep pedestrians and vehicles from accessing the dispenser.
2. Always use a gasoline approved container or test can when performing any type of preventive maintenance.
3. Before attempting to install, remove or service the A4005EVR nozzle, turn off and tag out power to the corresponding dispenser.
4. Before attempting to install, remove or service the A4005EVR nozzle, close the emergency impact valves located inside the base of the dispenser. Relieve the line pressure and standing fuel through the nozzle spout into a gasoline approved container by compressing the bellows and squeezing the lever.

IMPORTANT: Failure to perform cautions 3 and 4 may result in a hazardous gasoline spill, damage to equipment, personal injury and/or death.

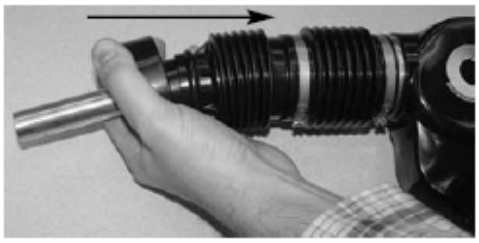
1

Pre-Inspection:



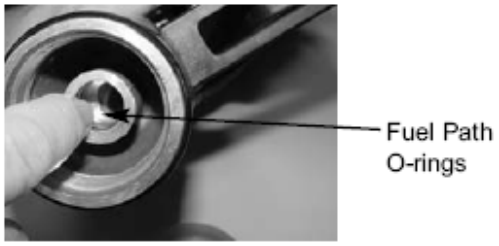
1. Carefully unpack and remove the A4005EVR nozzle from the shipping container. Evaluate the following components for damage: scuff guard, lever guard, lever, hold open latch, serial number plate, security rivet, bellows, band clamps, boot face and spout.
2. Verify the automatic shutoff located at the end of the spout. The vent hole must be free and clear of all debris.
3. Verify the fuel path o-rings located at the hose end of the A4005EVR nozzle. Both o-rings must be properly secured inside the factory machined grooves.

Pre-Functional Test:



4. Functional test the insertion interlock of the A4005EVR nozzle by compressing the bellows and then squeezing the lever. The A4005EVR nozzle will not function unless the insertion interlock is properly engaged.

Pre-Installation:



5. Lightly lubricate both fuel path o-rings using petroleum jelly or other suitable lubricant.

2

6. Before attempting to install the A4005EVR nozzle onto the curb hose, verify the vapor path o-ring is properly secured onto the connector, and in good working condition. Lightly lubricate the o-ring using petroleum jelly or other suitable lubricant.

IMPORTANT: Do not use pipe thread sealant compound or Teflon tape when installing the A4005EVR nozzle. Failure to comply will void warranty.

Installation:

IMPORTANT: If this is a new facility installation, the fueling point must be flushed into a gasoline approved container before installing the A4005EVR nozzle. Failure to perform this procedure could result in foreign material becoming lodged inside the nozzle's fuel path causing it not to shut off or a reduction in fuel flow.

7. Attach the A4005EVR nozzle onto the curb hose connector. Tighten by hand to avoid cross threading. Take caution to avoid pinching the vapor path o-ring.

8. Using a 1 7/8" crows foot and torque wrench tighten the curb hose connector to 50 ft-lbs of torque.

3

Post Functional Tests:

9. Carefully purge the trapped air from the fueling point. Begin dispensing by compressing the bellows and then squeezing the lever. Dispense one gallon of fuel into a gasoline approved container.

10. Functional test the automatic shutoff of the A4005EVR nozzle. Begin dispensing by compressing the bellows and then squeezing the lever. Place the hold-open latch in "high" clip position to secure the lever. Dispense one gallon of fuel into a gasoline approved container. At the same time, lower the spout tip into the standing fuel until the vent hole is completely submersed. The main valve of the A4005EVR nozzle will automatically close causing fuel flow to stop.

IMPORTANT: Perform step 10 a minimum of three times to assure the insertion interlock, hold open latch and the automatic shutoff of the A4005EVR nozzle are operating properly.

According to UL requirement 842, the fuel flow rate must be greater than 3 gallons per minute for the automatic shutoff to operate properly. A common cause of low flow rates are dirty or clogged dispenser filters.

Post Inspection:

11. Before placing the A4005EVR nozzle onto the dispenser cradle, inspect all hanging hardware connections for potential fuel leaks. Make proper adjustments if necessary.

PREVENTIVE MAINTENANCE

1. Weekly inspect the A4005EVR nozzle, evaluate the following components for damage: scuff guard, lever guard, lever, hold open latch, serial number plate, security rivet, bellows, band clamps, boot face and spout. Damage components must be replaced with factory authorized service kits.

Part Number	Description
492775EVR	Bellows & Boot Face Kit
492776EVR	Boot Face Kit
492834EVR	Spout Kit
494150EVR	Latch Kit
494748EVR	Fuel Path O-ring Kit
494750EVR	Bellows Band Clamps Kit
A0557EVR-XXX	Scuff Guard Kit

4

IMPORTANT: Do not remove the serial number plate and security rivet from the A4005EVR nozzle. Failure to comply will void warranty.

2. Weekly inspect the automatic shutoff located at the end of the spout. The vent hole must be free and clear of all debris.
3. Weekly inspect all hanging hardware connections for potential fuel leaks.

IMPORTANT: Should a drive-off or incidence of customer abuse occur, follow the initial inspection and function instructions found in the installation section.

PERFORMANCE STANDARDS & SPECIFICATIONS

This component was factory tested to, and met the following specifications:

1. Meets ARB Material Compatibility with Fuel Blends as per Section 3.8 of CP-201.
2. Meets ARB Capable of Refueling Any Vehicle Standards as per Section 4.7.1 of CP-201.
3. Meets ARB Spout Dimension Standards as per Section 4.7.3 of CP-201.
4. Meets ARB Nozzle and Dispenser Compatibility Standards as per Section 4.9 of CP-201.
5. Meets ARB Balance Nozzle Criteria Standards as per Section 5.1 of CP-201.
6. TP-201.2B – Complies with the maximum allowable leak rate of 0.07 CFH @ 2.00 inches of water column pressure.
7. TP-201.2C – Complies with the maximum allowable spillage factor of 0.24 pounds/ 1,000 gallons.
8. TP-201.2D – Complies with the maximum allowable average of 3 post fuel drips.
9. TP-201.2E – Complies with the maximum allowable average of 100mL liquid retention and 1mL liquid spit-back.
10. TP-201.2J – Complies with the maximum allowable component pressure drop of 0.08 inches of water column @ 60 CFH.

IMPORTANT: Leave these installation instructions with the station owner and/or operator.

EMCO® WHEATON RETAIL

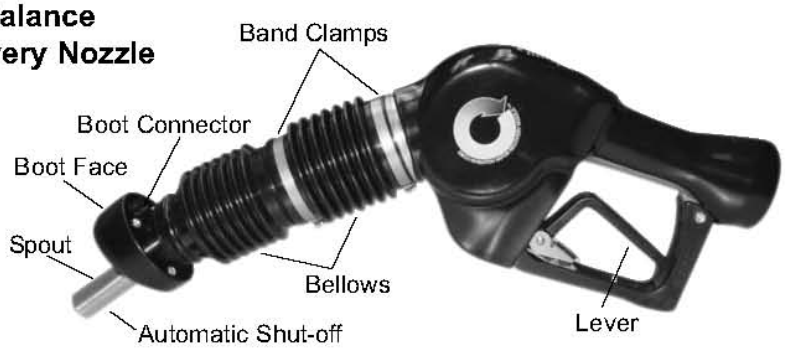
492775EVR

Bellows & Boot Face Kit

Packing List:

(1) Bellows & Boot Face
(1) Bellows O-ring
(2) Bellows Band Clamps

A4005EVR Balance Vapor Recovery Nozzle



INSTALLATION INSTRUCTIONS

Service Tools Required:

- Flat Head Screw Driver w/ Fine Tip
- Scribe Tool w/ 90 degree tip
- Bench Vise w/ 5" Jaw Width
- Gasoline Approved Container
- Bellows Retainer Plate Tool p/n 494712EVR
- Bellows Band Clamp Crimp Tool p/n 494652EVR

CAUTION:

1. Always barricade work area to keep pedestrians and vehicles from accessing the dispenser.
2. Always use a gasoline approved container or test can when performing any type of preventive maintenance.
3. Before attempting to install, remove or service the A4005EVR nozzle, turn off and tag out power to the corresponding dispenser.
4. Before attempting to install, remove or service the A4005EVR nozzle, close the emergency impact valves located inside the base of the dispenser. Relieve the line pressure and standing fuel through the nozzle spout into a gasoline approved container by compressing the bellows and squeezing the lever.

IMPORTANT: Failure to perform cautions 3 and 4 may result in a hazardous gasoline spill, damage to equipment, personal injury and/or death.

Pre-Inspection:

1. Carefully unpack and remove all kitted parts from the shipping container and evaluate for any kind of damage. Verify that no parts are missing from the packing list before proceeding with the installation.

Pre-Installation:

2. Empty all standing fuel within the spout and bellows into a gasoline approved container before attempting to service the bellows and boot face.

3. It is unnecessary to remove the A4005EVR nozzle from the fueling point during the removal and installation of the bellows and boot face. Use the bench vise to properly secure the A4005EVR nozzle during service.

Installation:

Removing the Existing Bellows & Boot Face

4. Locate the top bellows band clamp. Use the flat head screw driver to dislodge the locking mechanism and remove the band clamp from the bellows.

2

5. Locate the bottom bellows band clamp. Use the flat head screw driver to dislodge the locking mechanism and remove the band clamp from the bellows.

6. Remove the bellows and boot face from the A4005EVR nozzle. Grab the bellows and pull away from the nozzle body.

7. Use the scribe tool to remove the bellows o-ring.

IMPORTANT: Properly discard all removed components.

Installing the New Bellows & Boot Face

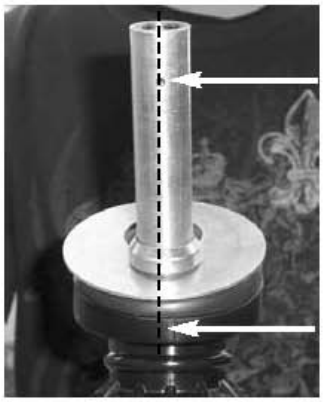
8. Before attempting to install the new bellows and boot face verify that the top of the interlock push rod is properly aligned with the bottom edge of the interlock guide.

3

9. Install the new bellows o-ring. Verify that the o-ring seats properly into the machined groove.

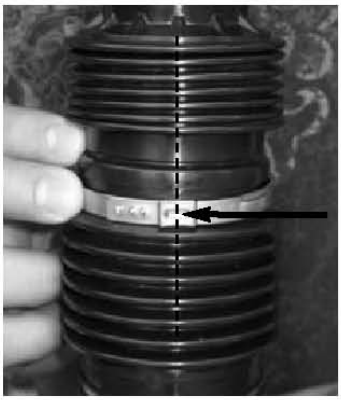
10. Slide the new bellows over the spout until the end reaches the nozzle body. Push down over the bellows o-ring until properly seated.

11. Use the bellows retainer plate tool p/n 494712EVR to secure and lock the bellows and boot face in place.



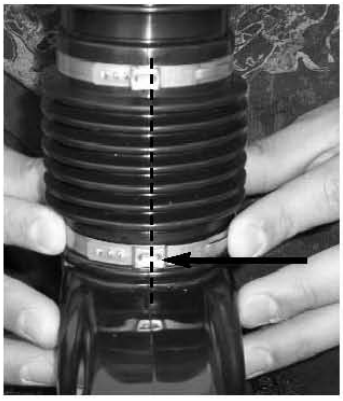
12. Slowly rotate the bellows until the parting line of the boot connector is aligned with the spout and automatic shut-off.

4



13. Install the new top bellows band clamp into the groove of the bellows. Lock and align the crimp portion with the parting line of the bellows.

14. Use the bellows band clamp crimp tool p/n 494652EVR to crimp and secure into place.



15. Install the new bottom bellows band clamp into the groove of the bellows. Lock and align the crimp portion with the parting line of the bellows.

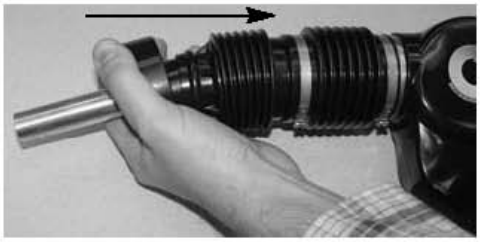
5

16. Use the bellows band clamp crimp tool p/n 494652EVR to crimp and secure into place.

17. Remove the bellows retainer plate tool p/n 494712EVR from bellows and spout.

18. Remove the A4005EVR nozzle from the bench vise.

Post-Functional Test:



19. Functional test the insertion interlock of the A4005EVR nozzle by compressing the bellows and then squeezing the lever. The A4005EVR nozzle will not function unless the insertion interlock is properly engaged.

Post-Installation:

20. Place the A4005EVR nozzle back onto the dispenser cradle.

6

PREVENTIVE MAINTENANCE

1. Weekly inspect the bellows & boot face for tears, cuts and slits. Replace with factory authorized service kits.

Part Number	Description
492775EVR	Bellows & Boot Face Kit

PERFORMANCE STANDARDS & SPECIFICATIONS

This component was factory tested to, and met the following specifications:

1. Meets ARB Material Compatibility with Fuel Blends as per Section 3.8 of CP-201.
2. Meets ARB Capable of Refueling Any Vehicle Standards as per Section 4.7.1 of CP-201.

IMPORTANT: Leave these installation instructions with the station owner and/ or operator.

7

EMCO® WHEATON RETAIL

492776EVR
Boot Face Kit

Packing List:

(1) Boot Face
(4) Mounting Screws

A4005EVR
Balance Vapor Recovery Nozzle

INSTALLATION INSTRUCTIONS

Service Tools Required:

- Philips Head Screw Driver w/ Fine Tip
- Bench Vise w/ 5" Jaw Width
- Gasoline Approved Container

CAUTION:

1. Always barricade work area to keep pedestrians and vehicles from accessing the dispenser.
2. Always use a gasoline approved container or test can when performing any type of preventive maintenance.
3. Before attempting to install, remove or service the A4005EVR nozzle, turn off and tag out power to the corresponding dispenser.
4. Before attempting to install, remove or service the A4005EVR nozzle, close the emergency impact valves located inside the base of the dispenser. Relieve the line pressure and standing fuel through the nozzle spout into a gasoline approved container by compressing the bellows and squeezing the lever.

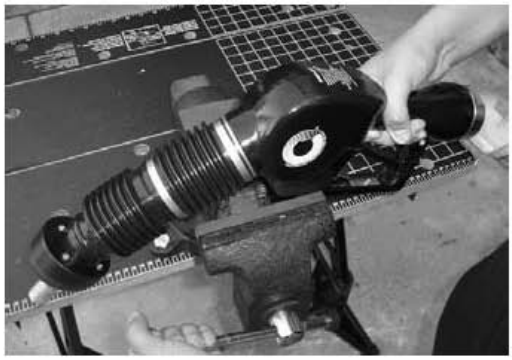
IMPORTANT: Failure to perform cautions 3 and 4 may result in a hazardous gasoline spill, damage to equipment, personal injury and/or death.

Pre-Inspection:

1. Carefully unpack and remove all kitted parts from the shipping container and evaluate for any kind of damage. Verify that no parts are missing from the packing list before proceeding with the installation.

Pre-Installation:

2. Empty all standing fuel within the spout and bellows into a gasoline approved container before attempting to service the boot face.



3. It is unnecessary to remove the A4005EVR nozzle from the fueling point during the removal and installation of the boot face. Use the bench vise to properly secure the A4005EVR nozzle during service.

Installation:

Removing the Existing Boot Face

4. Use the philips screw driver to remove the four mounting screws located on the back of the boot connector.

5. Remove the existing boot face by pulling out of the boot connector.

IMPORTANT: Properly discard all removed components.

2

Installing the New Boot Face

6. Install the new boot face into the boot connector by pressing evenly. Align the four mounting holes of the boot face with those of the boot connector.

7. Use the philips screw driver to install and tighten the four new mounting screws.
8. Remove the A4005EVR nozzle from the bench vise.

Post-Installation:

9. Place the A4005EVR nozzle back onto the dispenser cradle.

PREVENTIVE MAINTENANCE

1. Weekly inspect the boot face for tears, cuts and slits. Replace with factory authorized service kits.

Part Number	Description
492776EVR	Boot Face Kit

PERFORMANCE STANDARDS & SPECIFICATIONS

This component was factory tested to, and met the following specifications:

1. Meets ARB Material Compatibility with Fuel Blends as per Section 3.8 of CP-201.
2. Meets ARB Capable of Refueling Any Vehicle Standards as per Section 4.7.1 of CP-201.

3

EMCO® WHEATON RETAIL

492834EVR
Spout Kit

Packing List:

(1) Spout
(1) Bellows O-ring
(2) Bellows Band Clamps
(1) Interlock Guide
(1) Interlock Push Rod

A4005EVR Balance Vapor Recovery Nozzle

INSTALLATION INSTRUCTIONS

Service Tools Required:

- Flat Head Screw Driver w/ Fine Tip
- 15" Crescent Wrench
- Torque Wrench w/ 45-55 ft-lbs. Setting
- Bench Vise w/ 5" Jaw Width
- Scribe Tool w/ 90 Degree Tip
- Needle Nose Pliers
- 40mm Crows Foot
- Snap Ring Pliers w/ Fine Tip
- Bellows Retainer Plate Tool p/n 494712EVR
- Bellows Band Clamp Crimp Tool p/n 494652EVR
- Gasoline Approved Container

CAUTION:

1. Always barricade work area to keep pedestrians and vehicles from accessing the dispenser.
2. Always use a gasoline approved container or test can when performing any type of preventive maintenance.
3. Before attempting to install, remove or service the A4005EVR nozzle, turn off and tag out power to the corresponding dispenser.
4. Before attempting to install, remove or service the A4005EVR nozzle, close the emergency impact valves located inside the base of the dispenser. Relieve the line pressure and standing fuel through the nozzle spout into a gasoline approved container by compressing the bellows and squeezing the lever.

IMPORTANT: Failure to perform cautions 3 and 4 may result in a hazardous gasoline spill, damage to equipment, personal injury and/or death.

Pre-Inspection:

1. Carefully unpack and remove all kitted parts from the shipping container and evaluate for any kind of damage. Verify that no parts are missing from the packing list before proceeding with the installation.

Pre-Installation:

2. Empty all standing fuel within the spout and bellows into a gasoline approved container before attempting to service the spout.

3. It is unnecessary to remove the A4005EVR nozzle from the fueling point during the removal and installation of the spout. Use the bench vise to properly secure the A4005EVR nozzle during service.

Installation:

Removing the Existing Bellows & Boot Face

4. Locate the top bellows band clamp. Use the flat head screw driver to dislodge the locking mechanism and remove the band clamp from the bellows.

2

5. Locate the bottom bellows band clamp. Use the flat head screw driver to dislodge the locking mechanism and remove the band clamp from the bellows.

6. Remove the bellows and boot face from the A4005EVR nozzle. Grab the bellows and pull away from the nozzle body.

7. Use the scribe tool to remove the bellows o-ring.

IMPORTANT: Properly discard bellows band clamps and bellows o-ring.

Removing the Existing Spout

8. Locate the snap ring on the spout. Use the snap ring and needle nose pliers to remove the snap ring from the machined groove. Slide the snap ring upward.

3



9. Disassemble the interlock guide. Remove the top piece by pulling upward and sliding over the spout. Remove the bottom piece by sliding over the spout.


10. Use the 15" crescent wrench to loosen the spout nut. Unfasten the spout nut by hand to avoid cross threading.

11. Remove the spout by slowly pulling upward.

12. Use the needle nose pliers to remove the interlock push rod.

IMPORTANT: Properly discard all removed components.

4

Installing the New Spout

13. Use the needle nose pliers to install the new interlock push rod.

14. Install the new spout by inserting the vent tube connector into the nozzle vent port. Slowly push downward on the spout and align the dimple on the spout with the notch on the nozzle body.

15. Fasten the new spout nut by hand onto the nozzle threads to avoid cross threading. Use the 40mm crows foot and torque wrench to tighten the spout nut between 45 to 55 ft-lbs of torque.

16. Install the new interlock guide by sliding the top and bottom pieces over the spout. Press the top piece into the bottom piece.

5

17. Use the snap ring and needle nose pliers to install the new snap ring into the machined groove located on the spout. Slide the snap ring downward until seated properly.

Installing the Existing Bellows & Boot Face

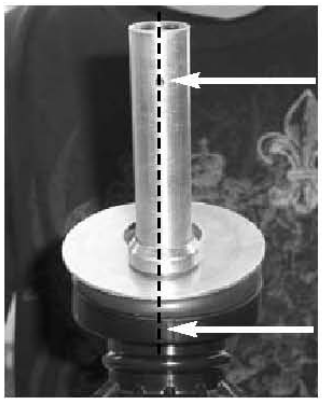
18. Before attempting to install the existing bellows & boot face verify that the top of the interlock push rod is properly aligned with the bottom edge of the interlock guide.

19. Install the new bellows o-ring. Verify that the o-ring seats properly into the machined groove.

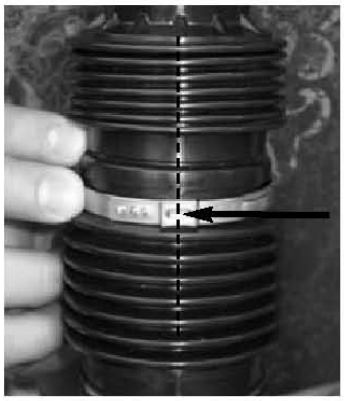
20. Slide the bellows over the spout until the end reaches the nozzle body. Push down over the bellows o-ring until properly seated.

6

21. Use the bellows retainer plate tool p/n 494712EVR to secure and lock the bellows and boot face in place.

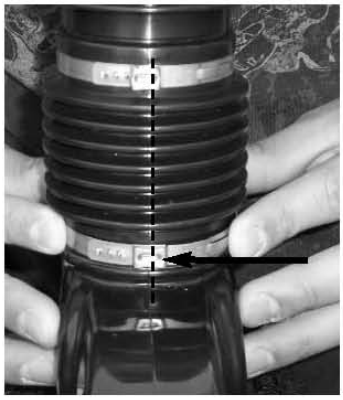


22. Slowly rotate the bellows until the parting line of the boot connector is aligned with the spout and automatic shut-off.



23. Install the new top bellows band clamp into the groove of the bellows. Lock and align the crimp portion with the parting line of the bellows.

24. Use the bellows band clamp crimp tool p/n 494652EVR to crimp and secure into place. 7



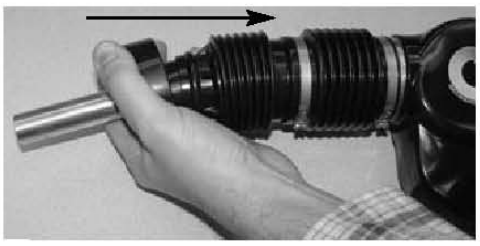
25. Install the new bottom bellows band clamp into the groove of the bellows. Lock and align the crimp portion with the parting line of the bellows.

26. Use the bellows band clamp crimp tool p/n 494652EVR to crimp and secure into place.

27. Remove the bellows retainer plate tool p/n 494712EVR from bellows and spout.

28. Remove the A4005EVR nozzle from the bench vise.

Post-Functional Test:



8

29. Functional test the insertion interlock of the A4005EVR nozzle by compressing the bellows and then squeezing the lever. The A4005EVR nozzle will not function unless the insertion interlock is properly engaged.

30. Functional test the automatic shutoff of the A4005EVR nozzle. Begin dispensing by compressing the bellows and then squeezing the lever. Place the hold-open latch in "high" clip position to secure the lever. Dispense one gallon of fuel into a gasoline approved container. At the same time, lower the spout tip into the standing fuel until the automatic shut is completely submersed. The main valve of the A4005EVR nozzle will automatically close causing fuel flow to stop.

IMPORTANT: Perform step 30 a minimum of three times to assure the insertion interlock , hold open latch and the automatic shutoff of the A4005EVR nozzle are operating properly.

According to UL requirement 842, the fuel flow rate must be greater than 3 gallons per minute for the automatic shutoff to operate properly. A common cause of low flow rates are dirty or clogged dispenser filters.

Post-Installation:

31. Place the A4005EVR nozzle back onto the dispenser cradle.

PREVENTIVE MAINTENANCE

1. Weekly inspect the spout for sheared, bent or blocked vent hole. Replace with factory authorized service kits.

Part Number	Description
492834EVR	Spout Kit

PERFORMANCE STANDARDS & SPECIFICATIONS

This component was factory tested to, and met the following specifications:

1. Meets ARB Material Compatibility with Fuel Blends as per Section 3.8 of CP-201.
2. Meets ARB Capable of Refueling Any Vehicle Standards as per Section 4.7.1 of CP-201.
3. Meets ARB Spout Dimension Standards as per Section 4.7.3 of CP-201.

EMCO®
WHEATON RETAIL

494748EVR
Fuel Path O-ring Kit

For use with Vapor Systems Technologies VST California Air Resources Board Executive Orders VR-203 and VR-204

Packing List:
(2) Fuel Path O-rings

A4005EVR Balance Vapor Recovery Nozzle

A4119EVR Coaxial Safe Break Valve

INSTALLATION INSTRUCTIONS

Service Tools Required:

- Pipe Wrench w/ Flat Jaws
- Bench Vise w/ 5" Jaw Width
- Petroleum Jelly or Other Suitable Lubricant
- Scribe Tool w/ 90 Degree Tip
- Gasoline Approved Container

CAUTION:

1. Always barricade work area to keep pedestrians and vehicles from accessing the dispenser.
2. Always use a gasoline approved container or test can when performing any type of preventive maintenance.
3. Before attempting to install, remove or service the A4005EVR nozzle and A4119EVR safe break valve, turn off and tag out power to the corresponding dispenser.
4. Before attempting to install, remove or service the A4005EVR nozzle and A4119EVR safe break valve, close the emergency impact valves located inside the base of the dispenser. Relieve the line pressure and standing fuel through the nozzle spout into a gasoline approved container by compressing the bellows and squeezing the lever.

IMPORTANT: Failure to perform cautions 3 and 4 may result in a hazardous gasoline spill, damage to equipment, personal injury and/or death.

1

Pre-Inspection:

1. Carefully unpack and remove all kitted parts from the shipping container and evaluate for any kind of damage. Verify that no parts are missing from the packing list before proceeding with the installation.

Pre-Installation:

2. Empty all standing fuel within the spout and bellows into a gasoline approved container before attempting to service the fuel path o-rings.

3. It is necessary to remove the A4005EVR nozzle and A4119EVR safe break valve from the curb hose during the removal and installation of the fuel path o-rings. Use the pipe wrench with flat jaws to loosen the curb hose connector. Unfasten the curb hose connector by hand from the A4005EVR nozzle to avoid cross threading.

IMPORTANT: Drain the fuel from the hanging hardware into a gasoline approved container when removing the A4005EVR nozzle from the curb hose.

A4005EVR Nozzle

A4119EVR Safe Break Valve

4. Use the bench vise to properly secure the A4005EVR nozzle or A4119EVR safe break valve during service.

2

Installation:

Removing the Existing Fuel Path O-rings

A4005EVR Nozzle

A4119EVR Safe Break Valve

5. Use the scribe tool to remove the existing fuel path o-rings.
6. Clean and remove all existing grease, fuel residue, debris, etc. from within the machined grooves.

IMPORTANT: Properly discard all removed components.

Installing the New Fuel Path O-rings

A4005EVR Nozzle

A4119EVR Safe Break Valve

7. Use the scribe tool to install the new fuel path o-rings. Verify that both o-rings seat properly into the machined grooves.

A4005EVR Nozzle

A4119EVR Safe Break Valve

8. Lightly lubricate the fuel path o-rings using petroleum jelly or other suitable lubricant.

3

Post-Installation:

9. Before attempting to reinstall the A4005EVR nozzle or A4119EVR safe break valve, please refer to the following installation instructions below.
    - A4005EVR Balance Vapor Recovery Nozzle p/n 570435
    - A4119EVR Coaxial Safe Break Valve p/n 569043

PREVENTIVE MAINTENANCE

1. Weekly inspect the A4005EVR nozzle and A4119EVR safe break valve connections for leaks or fuel residue. Replace with factory authorized service kits.

Part Number	Description
494748EVR	Fuel Path O-ring Kit

PERFORMANCE STANDARDS & SPECIFICATIONS

This component was factory tested to, and met the following specifications:

1. Meets ARB Material Compatibility with Fuel Blends as per Section 3.8 of CP-201.

IMPORTANT: Leave these installation instructions with the station owner and/ or operator.

4

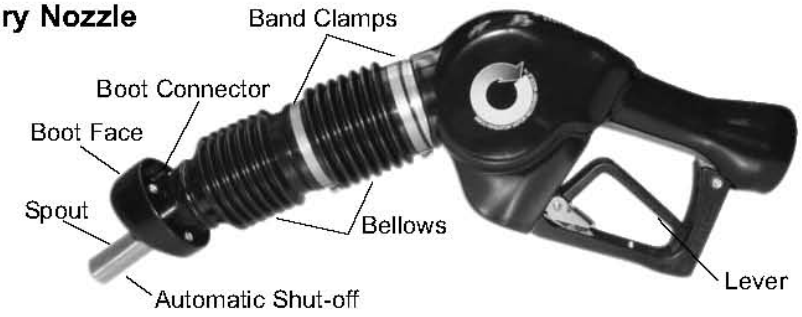
EMCO®
WHEATON RETAIL

494750EVR
Bellows Band Clamp Kit

Packing List:

(6) Bellows Band Clamps

A4005EVR Balance Vapor Recovery Nozzle



INSTALLATION INSTRUCTIONS

Service Tools Required:

- Flat Head Screw Driver w/ Fine Tip
- Bench Vise w/ 5" Jaw Width
- Bellows Retainer Plate Tool p/n 494712EVR
- Bellows Band Clamp Crimp Tool p/n 494652EVR
- Gasoline Approved Container

CAUTION:

1. Always barricade work area to keep pedestrians and vehicles from accessing the dispenser.
2. Always use a gasoline approved container or test can when performing any type of preventive maintenance.
3. Before attempting to install, remove or service the A4005EVR nozzle, turn off and tag out power to the corresponding dispenser.
4. Before attempting to install, remove or service the A4005EVR nozzle, close the emergency impact valves located inside the base of the dispenser. Relieve the line pressure and standing fuel through the nozzle spout into a gasoline approved container by compressing the bellows and squeezing the lever.

IMPORTANT: Failure to perform cautions 3 and 4 may result in a hazardous gasoline spill, damage to equipment, personal injury and/or death.

Pre-Inspection:

1. Carefully unpack and remove all kitted parts from the shipping container and evaluate for any kind of damage. Verify that no parts are missing from the packing list before proceeding with the installation.

Pre-Installation:

2. Empty all standing fuel within the spout and bellows into a gasoline approved container before attempting to service the bellows band clamps.

3. It is unnecessary to remove the A4005EVR nozzle from the fueling point during the removal and installation of the bellows band clamps. Use the bench vise to properly secure the A4005EVR nozzle during service.

Installation:

Removing the Existing Bellows Band Clamps

4. Locate the top bellows band clamp. Use the flat head screw driver to dislodge the locking mechanism and remove the band clamp from the bellows.

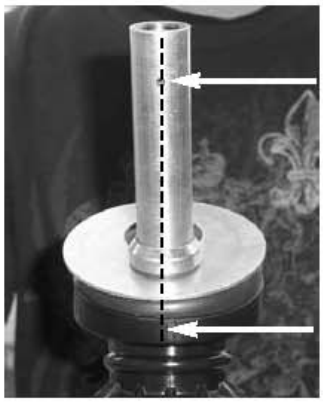
2

5. Locate the bottom bellows band clamp. Use the flat head screw driver to dislodge the locking mechanism and remove the band clamp from the bellows.

IMPORTANT: Properly discard all removed components.

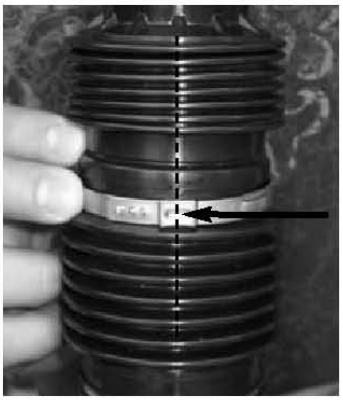
Installing the New Bellows Band Clamps

6. Use the bellows retainer plate tool p/n 494712EVR to secure and lock the bellows and boot face in place.



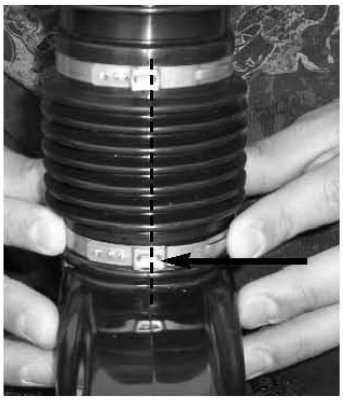
7. Slowly rotate the bellows until the parting line of the boot connector is aligned with the spout and automatic shut-off.

3



8. Install the new top bellows band clamp into the groove of the bellows. Lock and align the crimp portion with the parting line of the bellows.

9. Use the bellows band clamp crimp tool p/n 494652EVR to crimp and secure into place.



10. Install the new bottom bellows band clamp into the groove of the bellows. Lock and align the crimp portion with the parting line of the bellows.

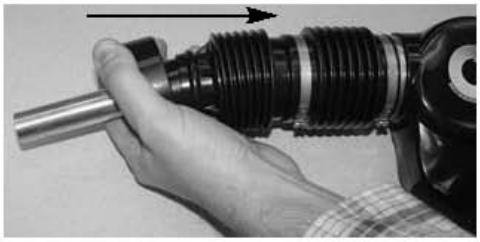
4

11. Use the bellows band clamp crimp tool p/n 494652EVR to crimp and secure into place.

12. Remove the bellows retainer plate tool p/n 494712EVR from bellows and spout.

13. Remove the A4005EVR nozzle from the bench vise.

Post-Functional Test:



14. Functional test the insertion interlock of the A4005EVR nozzle by compressing the bellows and then squeezing the lever. The A4005EVR nozzle will not function unless the insertion interlock is properly engaged.

Post-Installation:

15. Place the A4005EVR nozzle back onto the dispenser cradle.

5

PREVENTIVE MAINTENANCE

1. Weekly inspect the bellows band clamps for damage or if missing. Replace with factory authorized service kits.

Part Number	Description
494750EVR	Bellows Band Clamp Kit

PERFORMANCE STANDARDS & SPECIFICATIONS

This component was factory tested to, and met the following specifications:

1. Meets ARB Material Compatibility with Fuel Blends as per Section 3.8 of CP-201.
2. Meets ARB Capable of Refueling Any Vehicle Standards as per Section 4.7.1 of CP-201.

IMPORTANT: Leave these installation instructions with the station owner and/ or operator.

EMCO® WHEATON RETAIL

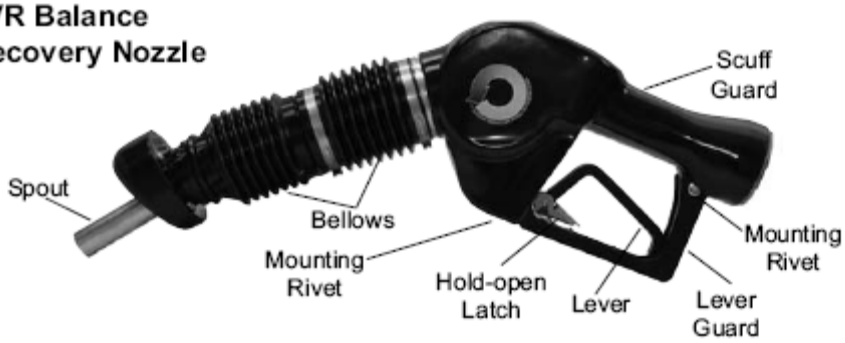
494150EVR
Latch Kit

For use with Vapor Systems Technologies VST California Air Resources Board Executive Orders VR-203 and VR-204

Packing List:

(1) Latch Assembly
(2) Mounting Rivets
(1) Dust Plug

A4005EVR Balance Vapor Recovery Nozzle



INSTALLATION INSTRUCTIONS

Service Tools Required:

- Pipe Wrench w/ Flat Jaws
- Flat Head Screw Driver w/ Wide Tip
- 1/8" Diameter Punch
- Bench Vise w/ 5" Jaw Width
- Awl w/ ¼"Tip
- Hammer
- 5/8" Diameter Punch
- Gasoline Approved Container
- Lever Guard Rivet Installation Tool p/n 494653EVR
- Needle Nose Pliers

CAUTION:

1. Always barricade work area to keep pedestrians and vehicles from accessing the dispenser.
2. Always use a gasoline approved container or test can when performing any type of preventive maintenance.
3. Before attempting to install, remove or service the A4005EVR nozzle, turn off and tag out power to the corresponding dispenser.
4. Before attempting to install, remove or service the A4005EVR nozzle, close the emergency impact valves located inside the base of the dispenser. Relieve the line pressure and standing fuel through the nozzle spout into a gasoline approved container by compressing the bellows and squeezing the lever.

1

IMPORTANT: Failure to perform cautions 3 and 4 may result in a hazardous gasoline spill, damage to equipment, personal injury and/or death.

Pre-Inspection:

1. Carefully unpack and remove all kitted parts from the shipping container and evaluate for any kind of damage. Verify that no parts are missing from the packing list before proceeding with the installation.

Pre-Installation:

2. Empty all standing fuel within the spout and bellows into a gasoline approved container before attempting to service the latch.

3. It is necessary to remove the A4005EVR nozzle from the curb hose during the removal and installation of the latch. Use the pipe wrench with flat jaws to loosen the curb hose connector. Unfasten the curb hose connector by hand from the A4005EVR nozzle to avoid cross threading.

IMPORTANT: Drain the fuel from the hanging hardware into a gasoline approved container when removing the A4005EVR nozzle from the curb hose.

Installation:

Removing the Existing Latch

4. Pull the rear end of the scuff guard over the nozzle body unit the dust plug is visible. Use the bench vise to properly secure the A4005EVR nozzle during service.

2


5. Use the awl and hammer to lightly tap and remove the dust plug.


6. Use the flat head screw driver to loosen the brass screw. Use the needle nose pliers to remove the brass screw and spring from the nozzle body.


7. Remove the A4005EVR nozzle from the bench vise and place on a flat surface. Use the 1/8" diameter punch and hammer to lightly tap and remove both mounting rivets located on the lever guard.

8. Remove the lever guard from the nozzle body.

3

9. Remove the existing latch by slowly pulling upward until the square stem clears the nozzle body.

IMPORTANT: Properly discard the dust plug and mounting rivets and latch.

Installing the New Latch

10. Locate the notch on the square stem and align to the right of the nozzle body. Install the new latch by pressing downward on the square stem.

11. Remove the A4005EVR nozzle from the bench vise and turn top side up. Install the existing spring around the square stem. Fasten the existing brass screw by hand onto the top of the square stem to avoid cross threading. Use the flat head screw driver to tighten.

4

12. Install the new dust plug. Use the 5/8 punch and hammer to light tap into place.

13. Remove the A4005EVR nozzle from the bench vise and place on flat surface. Install the existing lever guard onto the nozzle body using the new mounting rivets. Use the lever guard rivet installation tool p/n 494653EVR and hammer to properly flare the ends of the mounting rivets.

14. Install the existing scuff guard by pulling over the nozzle body.

Post-Installation:

15. Before attempting to reinstall the A4005EVR nozzle, please refer to the A4005EVR Balance Vapor Recovery Nozzle Installation Instructions p/n 570435.

5

PREVENTIVE MAINTENANCE

1. Weekly inspect the latch for damage or if missing. Replace with factory authorized service kits.

Part Number	Description
494150EVR	Latch Kit

PERFORMANCE STANDARDS & SPECIFICATIONS

This component was factory tested to, and met the following specifications:

1. Meets ARB Material Compatibility with Fuel Blends as per Section 3.8 of CP-201.

IMPORTANT: Leave these installation instructions with the station owner and/ or operator.

6

EMCO®
WHEATON RETAIL

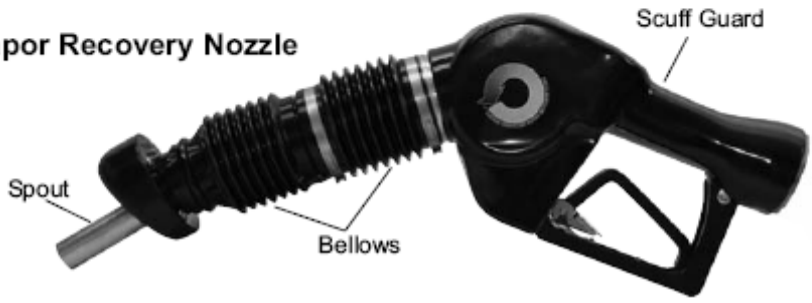
A0557EVR
Scuff Guard Kit

For use with Vapor Systems Technologies VST California Air Resources Board Executive Orders VR-203 and VR-204

Packing List:

(1) Scuff Guard

A4005EVR
Balance Vapor Recovery Nozzle



INSTALLATION INSTRUCTIONS

Service Tools Required:

- Pipe Wrench w/ Flat Jaws
- Gasoline Approved Container
- Utility Knife

CAUTION:

1. Always barricade work area to keep pedestrians and vehicles from accessing the dispenser.
2. Always use a gasoline approved container or test can when performing any type of preventive maintenance.
3. Before attempting to install, remove or service the A4005EVR nozzle, turn off and tag out power to the corresponding dispenser.
4. Before attempting to install, remove or service the A4005EVR nozzle, close the emergency impact valves located inside the base of the dispenser. Relieve the line pressure and standing fuel through the nozzle spout into a gasoline approved container by compressing the bellows and squeezing the lever.

IMPORTANT: Failure to perform cautions 3 and 4 may result in a hazardous gasoline spill, damage to equipment, personal injury and/or death.

1

Pre-Inspection:

1. Carefully unpack and remove all kitted parts from the shipping container and evaluate for any kind of damage. Verify that no parts are missing from the packing list before proceeding with the installation.

Pre-Installation:

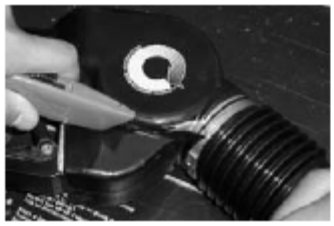
2. Empty all standing fuel within the spout and bellows into a gasoline approved container before attempting to service the scuff guard.

3. It is necessary to remove the A4005EVR nozzle from the curb hose during the removal and installation of the scuff guard. Use the pipe wrench with flat jaws to loosen the curb hose connector. Unfasten the curb hose connector by hand from the A4005EVR nozzle to avoid cross threading.

IMPORTANT: Drain the fuel from the hanging hardware into a gasoline approved container when removing the A4005EVR nozzle from the curb hose.

Installation:

Removing the Existing Scuff Guard



4. Place the A4005EVR nozzle on a flat surface. Use the utility knife to make the first cut along the front side of the scuff guard.

2

5. Use the utility knife to make the second cut along the rear side of the scuff guard.

6. Remove the scuff guard from the nozzle body.

IMPORTANT: Properly discard all removed components.

Installing the New Scuff Guard

7. Before attempting to install the new scuff guard. Soften the scuff guard by soaking in hot water and soap.

8. Install the new scuff guard by sliding over the spout and bellows. Pull the scuff guard completely over the nozzle body.

Post-Installation:

9. Before attempting to reinstall the A4005EVR nozzle, please refer to the A4005EVR Balance Vapor Recovery Nozzle Installation Instructions p/n 570435.

PREVENTIVE MAINTENANCE

1. Weekly inspect the scuff guard for the Emco Wheaton Retail manufacturer's logo. Replace with factory authorized service kits.

Part Number	Description
A0557EVR	Scuff Guard Kit

3

PERFORMANCE STANDARDS & SPECIFICATIONS

This component was factory tested to, and met the following specifications:

1. Meets ARB Material Compatibility with Fuel Blends as per Section 3.8 of CP-201.

IMPORTANT: Leave these installation instructions with the station owner and/ or operator.

Emco Wheaton Retail Corp.
2300 Industrial Park Dr. • Wilson, NC 27893
252-243-0150 • 252-243-4759 (fax)
619-421-1743 (Technical Services, California)

p/n 570542
Rev. C, 10/10

EMCO® WHEATON RETAIL

A4119EVR
Coaxial Safe Break Valve

Permanent ID Information:

INSTALLATION INSTRUCTIONS

Service Tools Required:

- 1 7/8" Crows Foot
- Torque Wrench w/ 50ft-lbs Setting
- Gasoline Approved Container
- Pipe Wrench w/ Flat Jaws
- Petroleum Jelly or Other Suitable Lubricant

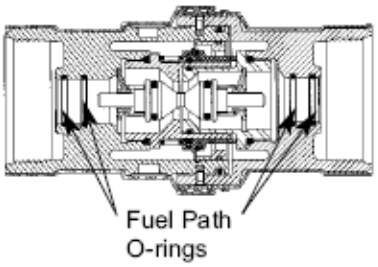
CAUTION:

1. Always barricade work area to keep pedestrians and vehicles from accessing the dispenser.
2. Always use a gasoline approved container or test can when performing any type of preventive maintenance.
3. Before attempting to install, remove or service the A4119EVR safe break valve, turn off and tag out power to the corresponding dispenser.
4. Before attempting to install, remove or service the A4119EVR safe break valve, close the emergency impact valves located inside the base of the dispenser. Relieve the line pressure and standing fuel through the nozzle spout into a gasoline approved container by compressing the bellows and squeezing the lever.
5. If a hose retractor is used, the A4119EVR safe break valve must be attached on the nozzle side of the retractor clamp.

IMPORTANT: Failure to perform cautions 3 and 4 may result in a hazardous gasoline spill, damage to equipment, personal injury and/ or death.

1

Pre-Inspection:



1. Carefully unpack and remove the A4119EVR safe break valve from the shipping container and evaluate for any kind of damage.
2. Verify the fuel path o-rings located on both ends of the A4119EVR safe break valve. All o-rings must be properly secured inside the factory machined grooves.

Pre-Installation:

3. Lightly lubricate the fuel path o-rings using petroleum jelly or other suitable lubricant.

4. Before attempting to install the A4119EVR safe break valve onto the whip hose, verify the word “NOZZLE”, which is printed on the scuff guard of the safe break valve, is on the opposite end. Verify the vapor path o-ring is properly secured onto the connector, and in good working condition. Lightly lubricate the o-ring using petroleum jelly or other suitable lubricant.

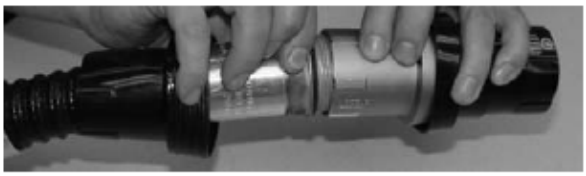
2

5. Before attempting to install the A4119EVR safe break valve onto the curb hose, verify the vapor path o-ring is properly secured onto the connector, and in good working condition. Lightly lubricate the o-ring using petroleum jelly or other suitable lubricant.

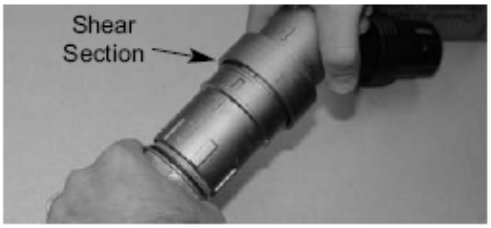
IMPORTANT: Do not use pipe thread sealant compound or Teflon tape when installing the A4119EVR safe break valve. Failure to comply will void warranty.

Installation:

IMPORTANT: If this is a new facility installation, the fueling point must be flushed into a gasoline approved container before installing the A4119EVR safe break valve. Failure to perform this procedure could result in foreign material becoming lodged inside the safe break valve's fuel path causing a reduction in fuel flow.



6. Remove the scuff guard by sliding on to the whip hose. Attach the A4119EVR safe break valve onto the whip hose connector. Tighten by hand to avoid cross threading. Take caution to avoid pinching the vapor path o-ring.



IMPORTANT: Never tighten across the shear section of the A4119EVR safe break valve. Failure to comply will result in damage to the safe break valve and void warranty.

3

7. Using a 1 7/8" crows foot and torque wrench, tighten the whip hose connector to 50 ft-lbs of torque.

8. Remove the scuff guard by sliding on to the curb hose. Attach the A4119EVR safe break valve onto the curb hose connector. Tighten by hand to avoid cross threading. Take caution to avoid pinching the vapor path o-ring.

9. Using a 1 7/8" crows foot and torque wrench, tighten the curb hose connector to 50 ft-lbs of torque.

Post Functional Tests:

10. Carefully purge the trapped air from the fueling point. Begin dispensing by compressing the bellows and then squeezing the lever. Dispense one gallon of fuel into a gasoline approved container.

11. Functional test the automatic shutoff of the A4005EVR nozzle. Begin dispensing by compressing the bellows and then squeezing the lever. Place the hold open latch in "high" clip position to secure the lever. Dispense one gallon of fuel into a gasoline approved container. At the same time, lower the spout tip into the standing fuel until the vent hole is completely submersed. The main valve of the A4005EVR nozzle will automatically close causing fuel flow to stop.

IMPORTANT: Perform step 11 a minimum of three times to assure the insertion interlock, hold open latch and the automatic shutoff of the A4005EVR nozzle are operating properly.

According to UL requirement 842, the fuel flow rate must be greater than 3 gallons per minute for the automatic shutoff to operate properly. A common problem cause of low flow rates are dirty or clogged dispenser filters.

Post Inspection:

12. Before placing the A4005EVR nozzle onto the dispenser cradle, inspect all hanging hardware connections for potential fuel leaks. Make proper adjustments if necessary.

PREVENTIVE MAINTENANCE

1. Weekly inspect the A4119EVR safe break valve, evaluate for any kind of damage. Damaged components must be replaced with factory authorized service kits.

Part Number	Description
494748EVR	Fuel Path O-ring Kit

2. Weekly inspect all hanging hardware connections for potential fuel leaks.

IMPORTANT: Should a drive-off or incidence of customer abuse occur, follow the initial inspection and function instructions found in the installation section.

PERFORMANCE STANDARDS & SPECIFICATIONS

This component was factory tested to, and met the following specifications:

1. Meets ARB Material Compatibility with Fuel Blends as per Section 3.8 of CP-201.
2. TP-201.2J – Complies with the maximum allowable component pressure drop of 0.04 inches of water column @ 60 CFH.

IMPORTANT: Leave these installation instructions with the station owner and/or operator.

EMCO® WHEATON RETAIL

February 12, 2013

003 Technical Service Bulletin

New Amendment to Executive Orders VR-203-N & VR-204-N

EMCO Balance Models A4005EVR Nozzle and A4119EVR Safebreak Valve Receive CARB EVR Approval for Use with the Healy Clean Air Separator CAS!

Attention Service Technicians,

On February 8, 2013, the California Air Resources Board CARB approved the EMCO phase II EVR components listed below as alternate or replacement parts for the Vapor Systems Technologies VST Executive Orders VR-203-N and VR-204-N. Refer to attached *Executive Orders* (legal language and signature only) for more details.

The conditional approval allows for the installation of the EMCO phase II EVR components with the **Franklin Fueling Systems, Healy Clean Air Separator CAS Models 9961 and 9961H.** This applies to existing and new gasoline dispensing facilities GDFs operating in California.

Component Description	**Model Number**
Balance Vapor Recovery Nozzle	A4005EVR
Balance Vapor Recovery Nozzle (Rebuilt)	RA4005EVR
Coaxial Safebreak Valve	A4119EVR

Converting a GDF from Healy to EMCO:

When converting or retro-fitting an existing GDF to EMCO balance phase II EVR, all existing Healy phase II EVR equipment must be removed and taken out of service such as; vacuum pumps, controller boards and hanging hardware components. The dispenser vapor recovery piping must be converted to balance phase II EVR and compliant with CARB TP-201.4 Dynamic Back Pressure. If the GDF is operating with a Veeder-Root ISD system, the existing flow meter must be replaced with a new Veeder-Root balance type flow meter.

Healy Nozzle & Breakaway Core Credit Program:

EMCO will be offering credit for the Healy EVR nozzle and breakaway cores on the purchase of a new EMCO A4005EVR nozzle or A4119EVR safebreak valve. This provides the GDF owner with a total core credit of $102.00 dollars per fueling point.

Description	Core Credit Amount
Healy EVR Nozzle/ Model 900	$82.00
Healy EVR Breakaway/ Models 8701VV or 807	$20.00
Total	$102.00

Balance Hanging Hardware (Mix & Match):

With regards to the installation of the EMCO phase II EVR components with those of VST, there are no approval limitations or conditions when **mixing and matching** the nozzle, breakaway, curb and whip hoses. All hanging hardware combinations are acceptable and CARB EVR approved. Refer to attached *Figure 1* for more details.

Balance Hanging Hardware with Retractors:

When considering to use hanging hardware combinations beyond 8 ½ feet a high hose retractor will be required. Both the **"Curley Q"** and **"Lazy J"** configurations are CARB EVR approved for a maximum length of 15 feet, this measurement is taken from the back of the whip hose 1 7/8" nut to the base of the nozzle.

Annual Compliance Testing:

With regards to EVR equipment annual compliance, all testing must be performed in accordance with the exhibits listed in VST Executive Orders VR-203-N and VR-204-N, please refer below.

1. All **liquid removal testing** performed on Goodyear or VST curb hoses equipped with an EMCO A4005EVR nozzle must be conducted in accordance with **Exhibit 5**. The EMCO Nozzle Spout Plug P/N 494635EVR is a required test tool that seals the fuel path of the nozzle spout during liquid removal testing per CARB TP-201.6 or 6C.

2. All **ISD vapor flow meter operability testing** performed on fueling points equipped with an EMCO A4005EVR nozzle must be conducted in accordance with **Exhibit 17**. The EMCO Nozzle Adapter P/N 494635EVR and the Surrogate Spout P/N 494771EVR are required test tools. Refer to attached *EMCO Service Tools Cut Sheet* for details.

EMCO Contractor Certification Program:

As part of our CARB EVR approval we are required to provide certification training to anyone performing installation and/ or preventive maintenance on EMCO phase II EVR components. The training course is approximately 3 ½ hours long and is free of charge. I encourage everyone to make arrangements to sign-up for new or re-certification training.

Frequently Asked Questions:

I have provided a list of "Frequently Asked Questions" that should eliminate areas of concern during the installation and routine preventive maintenance of the EMCO phase II EVR components.

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Frequently Asked Questions

1. **Q: Will a new operating permit be required when converting or retro-fitting an existing GDF from Healy to EMCO balance phase II EVR?**

   A: Yes, in most cases a new operating permit will be required by the local Air Pollution Control District.

2. **Q: Will the existing Veeder-Root ISD software operate with the Healy CAS and EMCO phase II EVR components?**

   A: Yes, only if the current software version is v1.02 or higher.

3. **Q: Will a new operating permit be required when installing an EMCO phase II EVR component at an existing GDF equipped with the Healy CAS and VST EVR hanging hardware?**

   A: No, the new CARB Rev. N approval allows for installation and removal between EMCO and VST phase II EVR components without requiring a new operating permit.

4. **Q: An existing GDF is equipped with 100 percent VST EVR hanging hardware and the nozzle on fueling position 5 requires replacement. Can a service provider replace the VST nozzle with an EMCO A4005EVR nozzle without having to replace the rest?**

   A: Yes, the new CARB approval allows for the installation of a single EMCO A4005EVR nozzle or A4119EVR safebreak valve without replacing the remaining VST nozzles or breakaways.

5. **Q: Will the EMCO A4005EVR nozzle be required to comply with CARB Advisory #418 "VST Nozzle Daily Check" dated May 28th, 2010?**

   A: No, the advisory only applies to VST nozzles operating in California such as: Models VST-EVR-NBcc, VST-EVR-NBccR, VST-EVR-NBcc-1 and VST-EVR-NBccR-1.

6. **Q: Is the EMCO A4110EVR hose swivel part of the new CARB approval for use with VST Executive Orders VR-203-N and VR-204-N?**

   A: No, the EMCO A4110EVR hose swivel is only CARB approved for use with EMCO Executive Orders VR-207 and VR-208.

7. **Q: Is the Goodyear EVR hose CARB approved for use with EMCO and VST phase II EVR components?**

   A: Yes, the Goodyear EVR curb and whip hoses were CARB approved back in December of 2009 and are listed in Exhibit 1 of VST Executive Orders VR-203-N and VR-204-N.

As before, I thank you for your attention to this matter. Should you have additional questions or concerns, please do not hesitate to contact me. I thank you for your continued support.

Best regards,

Jose E. Rodriguez
Director of Technical Service & Support
CARB Liaison

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State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER VR-203-N

Balance Phase II Enhanced Vapor Recovery (EVR) Systems
Not Including In-Station Diagnostics (ISD)

WHEREAS, the California Air Resources Board (ARB) has established, pursuant to California Health and Safety Code sections 25290.1.2, 39600, 39601 and 41954, certification procedures for systems designed for the control of gasoline vapor emissions during motor vehicle fueling operations (Phase II EVR vapor recovery systems) in CP-201, ***Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities*** (Certification Procedure) as last amended May 25, 2006, incorporated by reference in title 17, California Code of Regulations, section 94011;

WHEREAS, ARB has established, pursuant to California Health and Safety Code sections 39600, 39601, 39607, and 41954, test procedures for determining the compliance of Phase II vapor recovery systems with emission standards;

WHEREAS, Vapor Systems Technologies (VST), Inc. requested amendment of the VST Phase II EVR System Executive Order VR-203 to include the Green Machine Vapor Processor as an alternate processor;

WHEREAS, Veeder-Root Company (Veeder-Root) requested amendment of the VST Phase II EVR System Executive Order VR-203 to include an optional TLS Console security feature known as “Maintenance Tracker” and a low powered wireless vapor pressure sensor as an alternative component;

WHEREAS, OPW requested amendment of the VST Phase II EVR System Executive Order VR-203 to include a reconnectable balance OPW breakaway as an alternate component;

WHEREAS, EMCO Wheaton Retail requested amendment of the VST Phase II EVR System Executive Order VR-203 to include EMCO Wheaton Retail hanging hardware (nozzle and safe break valve) for use with the Franklin Fueling Systems Clean Air Separator;

WHEREAS, ARB staff has changed the title of this Executive Order from “Vapor Systems Technologies (VST), Inc. Phase II Enhanced Vapor Recovery (EVR) Not Including In-Station Diagnostics (ISD)” to “Balance Phase II Enhanced Vapor Recovery (EVR) Systems Not Including In-Station Diagnostics (ISD);”

WHEREAS, the Certification Procedure provides that ARB Executive Officer shall issue an Executive Order if he or she determines that the vapor recovery system conforms to all of the applicable requirements set forth in the Certification Procedure;

WHEREAS, G-01-032 delegates to the Chief of the Monitoring and Laboratory Division the authority to certify or approve modifications to certified Phase I and Phase II vapor recovery systems for gasoline dispensing facilities; and

WHEREAS, I, Cynthia L. Castronovo, Acting Chief of the Monitoring and Laboratory Division, find that the Balance Phase II EVR System, as modified herein, conforms with all requirements set forth in the Certification Procedure, including compatibility when fueling vehicles equipped with onboard refueling vapor recovery systems, and results in a vapor recovery system which is at least 95 percent efficient and shall not exceed 0.38 pounds of hydrocarbons per 1,000 gallons of gasoline transferred when tested pursuant to TP-201.2, ***Efficiency and Emission Factor for Phase II Systems*** (October 8, 2003).

NOW, THEREFORE, IT IS HEREBY ORDERED that the Balance Phase II EVR Systems including Veeder-Root PMC software version 1.04 are certified to be at least 95 percent efficient and does not exceed 0.38 pounds of hydrocarbon per 1,000 gallons of gasoline transferred in attended and/or self-service mode when used with an ARB-certified Phase I vapor recovery system and installed, operated, and maintained as specified herein and in the following exhibits. Exhibit 1 contains a list of the equipment certified for use with Balance Phase II EVR Systems. Exhibit 2 contains the performance standards, specifications, and typical installation drawings applicable to the Balance Phase II EVR Systems as installed in a gasoline dispensing facility (GDF). Exhibit 3 contains the manufacturing performance specifications and warranties. Exhibit 4 provides items required in conducting TP-201.3. Exhibit 5 is the liquid removal test procedure. Exhibit 6 provides items required in conducting TP-201.4. Exhibit 7 is the nozzle bag test procedure. Exhibit 8 is the VST ECS hydrocarbon sensor verification test procedure. Exhibit 9 is the test procedure for determining VST ECS vapor processor activation pressure. Exhibit 10 is the Veeder Root vapor pressure sensor verification test procedure. Exhibit 11 is the Veeder-Root vapor polisher operability test procedure. Exhibit 12 is the Veeder-Root vapor polisher hydrocarbon emissions verification test procedure. Exhibit 13 is the Hirt VCS 100 processor operability test procedure. Exhibit 14 is the Franklin Fueling Systems Clean Air Separator static pressure performance test procedure. Exhibit 15 is the VST Green Machine Compliance Test Procedure. Exhibit 16 is the Liquid Condensate Trap compliance test procedure. Exhibit 17 is reserved for a future procedure and intentionally left blank. Exhibit 18 is Accessing PMC and ISD Parameters at Gasoline Dispensing Facilities (GDFs) with Veeder-Root's "Maintenance Tracker" Security Feature Installed & Enabled.

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 each component manufacturer listed in Exhibit 1 shall provide a warranty for the vapor recovery component(s) to the initial purchaser. The warranty shall be passed on to each subsequent purchaser within the warranty period. The warranty shall include the ongoing compliance with all applicable performance standards and specifications and shall comply with all warranty requirements in Section 16.5 of the Certification Procedure. 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 every certified component manufactured by VST, EMCO, Goodyear, Veeder-Root, Hirt, OPW, and Franklin Fueling Systems shall meet the manufacturing performance specifications as provided in Exhibit 3.

IT IS FURTHER ORDERED that the certified Balance Phase II EVR Systems shall be installed, operated, and maintained in accordance with the ***ARB Approved Installation, Operation, and Maintenance Manual***. Equipment shall be inspected weekly, quarterly, and annually per the procedures identified in the ***ARB Approved Installation, Operation, and Maintenance Manual***. These inspections shall also apply to systems certified by Executive Orders VR-203-A to M, Executive Order VR-205-A to B, and Executive Order VR-209-A. A copy of the Executive Order and the ***ARB Approved Installation, Operation and Maintenance Manual*** shall be maintained at each GDF where a certified Balance Phase II EVR System is installed.

IT IS FURTHER ORDERED that equipment 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 any alteration in the equipment parts, design, installation, or operation of the system provided in the manufacturers' certification application or documents and certified hereby is prohibited and deemed inconsistent with this certification, unless the alteration has been submitted in writing and approved in writing by the Executive Officer or Executive Officer delegate.

IT IS FURTHER ORDERED that the following requirements are made a condition of certification. The owner or operator of the Balance Phase II EVR System shall conduct and pass the following tests no later than 60 days after startup and at least once in each twelve month period, using the following test procedures:

- TP-201.3, ***Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities*** (March 17, 1999);
- TP-201.4, ***Dynamic Back Pressure*** (July 3, 2002) in accordance with the condition listed in item 1 of the Vapor Collection section of Exhibit 2;
- Exhibit 4, ***Required Items in Conducting TP-201.3***;
- Exhibit 5, ***Liquid Removal Test Procedure***;
- Exhibit 6, ***Required Items for Conducting TP-201.4.***
- Exhibit 8, ***VST ECS Hydrocarbon Sensor Verification Test Procedure*** (if a VST ECS membrane processor is installed);
- Exhibit 9, ***Determination of VST ECS Processor Activation Pressure*** (if a VST ECS membrane processor is installed);
- Exhibit 10, ***Veeder-Root Vapor Pressure Sensor Verification Test Procedure*** (if a VST ECS membrane processor or Veeder-Root Vapor Polisher is installed);
- Exhibit 11, ***Veeder-Root Vapor Polisher Operability Test Procedure*** (if a Veeder-Root Vapor Polisher is installed);
- Exhibit 12, ***Veeder-Root Vapor Polisher Hydrocarbon Emissions Verification Test Procedure*** (if a Veeder-Root Vapor Polisher is installed);

- Exhibit 13, ***Hirt VCS 100 Processor Operability Test Procedure*;** (if a Hirt VCS 100 is installed);
- Exhibit 14, ***Franklin Fueling Systems Healy Clean Air Separator Static Pressure Performance Test Procedure*** (if a Clean Air Separator is installed);
- Exhibit 15, ***VST Green Machine Compliance Test Procedure*** (if a Green Machine is installed);
- Exhibit 16, ***Liquid Condensate Trap Compliance Test Procedure*** (if a Liquid Condensate Trap is installed);
- *Exhibit 17, Reserved for future procedure and intentionally left blank; and*
- Exhibit 18, ***Accessing PMC and ISD Parameters at Gasoline Dispensing Facilities (GDFs) with Veeder-Root's "Maintenance Tracker" Security Feature Installed & Enabled*** (if Maintenance Tracker is installed).

Local districts at their option may specify the testing frequency and related sequencing of the above tests. Notification of testing, and submittal of test results, shall be done in accordance with local district requirements and pursuant to policies established by that district. Local districts may require the use of alternate test form(s), provided they include the same minimum parameters identified in the datasheet referenced in the test procedure(s). Alternative test procedures, including most recent versions of the test procedures listed above, may be used if determined by the ARB Executive Officer or Executive Officer delegate, in writing, to yield equivalent results.

IT IS FURTHER ORDERED that the following requirements are made a condition of certification. The owner or operator of the Balance Phase II EVR System shall conduct, and pass, the following test no later than 60 days after startup using the following test procedure: Exhibit 7, ***Nozzle Bag Test Procedure***. Notification of testing, and submittal of test results, shall be done in accordance with local district requirements and pursuant to the policies established by that district. Alternative test procedures, including most recent versions of the test procedures listed above, may be used if determined by ARB Executive Officer or Executive Officer delegate, in writing, to yield equivalent results.

IT IS FURTHER ORDERED that, except as provided above, local districts at their option will specify the testing, related sequencing, and testing frequency of the nozzle vapor valves. If the district requires the nozzle vapor valve be tested, the test shall be conducted in accordance with Exhibit 7, ***Nozzle Bag Test Procedure***.

IT IS FURTHER ORDERED that the Balance Phase II EVR System shall be compatible with gasoline in common use in California at the time of certification. The Balance Phase II EVR System is not compatible with gasoline that has a methanol content greater than 5 percent or an ethanol content greater than 10 percent. Any modifications to comply with future California gasoline requirements shall be approved in writing by the Executive Officer or Executive Officer delegate.

IT IS FURTHER ORDERED that the certification of the VST Phase II EVR System is valid through April 1, 2014.

IT IS FURTHER ORDERED that Executive Order VR-203-M issued on March 20, 2012, is hereby superseded by this Executive Order. VST Phase II EVR Systems certified under

Executive Order VR-203-A through M may remain in use at existing installations up to four years after the expiration date of this Executive Order.

IT IS FURTHER ORDERED that this Executive Order shall apply to new installations or major modification of Phase II Systems with a throughput of less than or equal to 600,000 gallons per year. Use of this Executive Order for new installations or major modifications at a GDF with a throughput of more than 600,000 gallons per year is not authorized.

Executed at Sacramento, California, this 8TH day of February 2013.

Cynthia L. Castronovo
Acting Chief, Monitoring and Laboratory Division

Attachments: Next Page

General Requirements

Exhibit 1 Equipment List
- Hanging Hardware
- Processors
- Liquid Condensate Traps
- Optional Wireless Components
- Optional Maintenance Tracker Kit

Exhibit 2 System Specifications
- Hanging Hardware
- Processors
- Pressure/Vacuum Vent Valves for Storage Tank Vents
- Warranty
- Vapor Recovery Piping Configurations
- Dispensers
- Liquid Condensate Traps
- Phase I Systems
- Maintenance Records
- Vapor Recovery Equipment Defects
- Veeder-Root PMC System Specifications
- Wireless Components
- Maintenance Tracker Kit

Exhibit 3 Manufacturing Performance Specifications and Warranties
- Vapor Systems Technologies
- EMCO Wheaton Retail
- Veeder-Root
- Goodyear
- Hirt
- Franklin Fueling Systems
- OPW

General Compliance Procedures

Exhibit 4 Required Items in Conducting TP-201.3
Exhibit 5 Liquid Removal Test Procedure
Exhibit 6 Required Items for Conducting TP-201.4
Exhibit 7 Nozzle Bag Test Procedure

Processor Specific Compliance Procedures

Exhibit 8 VST ECS Hydrocarbon Sensor Verification Test Procedure
Exhibit 9 VST ECS Determination of Processor Activation Pressure
Exhibit 10 Veeder-Root Vapor Pressure Sensor Verification Test Procedure
Exhibit 11 Veeder-Root Vapor Polisher Operability Test Procedure
Exhibit 12 Veeder-Root Vapor Polisher Hydrocarbon Emissions Verification Test Procedure

Exhibit 13 Hirt VCS 100 Processor with Indicator Panel Operability Test Procedure
Exhibit 14 Franklin Fueling Systems Healy Clean Air Separator Static Pressure Performance Test Procedure
Exhibit 15 VST Green Machine Compliance Test Procedure

LCT Specific Compliance Procedure
Exhibit 16 Liquid Condensate Trap Compliance Test Procedure

Other Compliance Procedures
Exhibit 17 Reserved for a future procedure and intentionally left blank
Exhibit 18 Accessing PMC and ISD Parameters at Gasoline Dispensing Facilities (GDFs) with Veeder-Root's "Maintenance Tracker" Security Feature Installed & Enabled.

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER VR-204-N

Balance Phase II Enhanced Vapor Recovery (EVR) Systems
Including In-Station Diagnostics (ISD) Systems

WHEREAS, the California Air Resources Board (ARB) has established, pursuant to California Health and Safety Code sections 25290.1.2, 39600, 39601 and 41954, certification procedures for systems designed for the control of gasoline vapor emissions during motor vehicle fueling operations (Phase II EVR vapor recovery systems) in CP-201, ***Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities*** (Certification Procedure) as last amended May 25, 2006, incorporated by reference in title 17, California Code of Regulations, section 94011;

WHEREAS, ARB has established, pursuant to California Health and Safety Code sections 39600, 39601, 39607, and 41954, test procedures for determining the compliance of Phase II vapor recovery systems with emission standards;

WHEREAS, Vapor Systems Technologies (VST), Inc. requested amendment of the VST Phase II Enhanced Vapor Recovery (EVR) System Executive Order VR-204 to include the INCON ISD System as an alternate ISD System for use with the Franklin Fueling Systems (FFS) Clean Air Separator and VST nozzles;

WHEREAS, the INCON ISD System software version 1.3.0 does not support multi-hose (six pack) dispenser configurations and is therefore limited for use with unihose dispensers;

WHEREAS, Veeder-Root Company (Veeder-Root) requested amendment of the VST Phase II EVR System Executive Order VR-204 to include an optional security feature known as “Maintenance Tracker” and a low powered wireless vapor pressure sensor as an alternate component;

WHEREAS, VST requested amendment of the VST Phase II EVR System Executive Order VR-204 including In-Station Diagnostics (ISD) system, to include the Green Machine Vapor Processor as an alternate processor;

WHEREAS, OPW requested amendment of the VST Phase II EVR System Executive Order VR-204 to include a re-connectable balance OPW breakaway as an alternate component;

WHEREAS, EMCO Wheaton Retail requested amendment of the VST Phase II EVR System Executive Order VR-204 to include EMCO Wheaton Retail hanging hardware (nozzle and safe break valve) for use with the Franklin Fueling Clean Air Separator and Veeder-Root ISD System;

WHEREAS, ARB staff has changed the title of this Executive Order from “Vapor Systems Technologies (VST), Inc. Phase II Enhanced Vapor Recovery (EVR) Including Veeder-Root

In-Station Diagnostics (ISD)" to "Balance Phase II Enhanced Vapor Recovery (EVR) Systems Including In-Station Diagnostics (ISD) Systems;"

WHEREAS, the Certification Procedure provides that the ARB Executive Officer shall issue an Executive Order if he or she determines that the vapor recovery system conforms to all of the applicable requirements set forth in the Certification Procedure;

WHEREAS, G-01-032 delegates to the Chief of the Monitoring and Laboratory Division the authority to certify or approve modifications to certified Phase I and Phase II vapor recovery systems for gasoline dispensing facilities; and

WHEREAS, I, Cynthia L. Castronovo, Acting Chief of the Monitoring and Laboratory Division, find that the Balance Phase II EVR Systems, as modified herein, conforms with all requirements set forth in the Certification Procedure, including compatibility when fueling vehicles equipped with onboard refueling vapor recovery systems, and results in a vapor recovery system which is at least 95 percent efficient and shall not exceed 0.38 pounds of hydrocarbons per 1,000 gallons of gasoline transferred when tested pursuant to TP-201.2, ***Efficiency and Emission Factor for Phase II Systems*** (October 8, 2003).

NOW, THEREFORE, IT IS HEREBY ORDERED that the Balance Phase II EVR Systems Including ISD Systems are certified to be at least 95 percent efficient and do not exceed 0.38 pounds of hydrocarbon per 1,000 gallons of gasoline transferred in attended and/or self-service mode when used with an ARB-certified Phase I vapor recovery system and installed, operated, and maintained as specified herein and in the following exhibits. Exhibit 1 contains a list of the equipment certified for use with Balance Phase II EVR Systems including ISD Systems. Exhibit 2 contains the performance standards, specifications, and typical installation drawings applicable to Balance Phase II EVR Systems Including ISD Systems as installed in a gasoline dispensing facility (GDF). Exhibit 3 contains the manufacturing performance specifications and warranties. Exhibit 4 provides items required in conducting TP-201.3. Exhibit 5 is the liquid removal test procedure. Exhibit 6 provides items required in conducting TP-201.4. Exhibit 7 is the nozzle bag test procedure. Exhibit 8 is VST ECS hydrocarbon sensor verification test procedure. Exhibit 9 is the test procedure for determining VST ECS vapor processor activation pressure. Exhibit 10 is the Veeder-Root vapor pressure sensor verification test procedure. Exhibit 11 is the Veeder-Root vapor polisher operability test procedure. Exhibit 12 is the Veeder-Root vapor polisher hydrocarbon emissions verification test procedure. Exhibit 13 is the Hirt VCS 100 Processor with Indicator Panel Operability Test Procedure. Exhibit 14 is the Franklin Fueling Systems Clean Air Separator static pressure performance test procedure. Exhibit 15 is the VST Green Machine Compliance Test Procedure. Exhibit 16 is the Liquid Condensate Trap compliance test procedure. Exhibit 17 is the Veeder-Root ISD vapor flow meter operability test procedure. Exhibit 18 is accessing PMC and ISD parameters at gasoline dispensing facilities (GDFs) with Veeder-Root's "Maintenance Tracker" security feature installed & enabled. Exhibit 19 is the INCON ISD vapor flow meter operability test procedure. Exhibit 20 is the INCON vapor pressure sensor verification test procedure.

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 each component manufacturer listed in Exhibit 1 shall provide a warranty for the vapor recovery components to the initial purchaser. The warranty shall be passed on to each subsequent purchaser within the warranty period. The warranty shall include the ongoing compliance with all applicable performance standards and specifications and shall comply with all warranty requirements in Section 16.5 of the Certification Procedure. 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 every certified component manufactured by VST, EMCO, OPW, Goodyear, Veeder-Root, Hirt, and Franklin Fueling Systems including INCON shall meet the manufacturing performance specifications as provided in Exhibit 3.

IT IS FURTHER ORDERED that the certified Balance Phase II EVR Systems Including ISD Systems shall be installed, operated, and maintained in accordance with the ***ARB Approved Installation, Operation, and Maintenance Manual***. Equipment shall be inspected weekly, quarterly, and annually per the procedures identified in the ***ARB Approved Installation, Operation, and Maintenance Manual***. These inspections shall also apply to systems certified by Executive Orders VR-204-A to M. A copy of the Executive Order and the ***ARB Approved Installation, Operation and Maintenance Manual*** shall be maintained at each GDF where a certified Balance Phase II EVR System Including ISD System is installed.

IT IS FURTHER ORDERED that equipment 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 any alteration in the equipment parts, design, installation, or operation of the system provided in the manufacturers' certification application or documents and certified hereby is prohibited and deemed inconsistent with this certification, unless the alteration has been submitted in writing and approved in writing by the Executive Officer or Executive Officer delegate.

IT IS FURTHER ORDERED that the following requirements are made a condition of certification. The owner or operator of the Balance Phase II EVR System Including ISD System shall conduct and pass the following tests no later than 60 days after startup and at least once in each twelve month period, using the following test procedures:

- TP-201.3, ***Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities*** (March 17, 1999);
- TP-201.4, ***Dynamic Back Pressure*** (July 3, 2002) in accordance with the condition listed in item 1 of the Vapor Collection section of Exhibit 2;
- Exhibit 4, ***Required Items in Conducting TP-201.3***;
- Exhibit 5, ***Liquid Removal Test Procedure****;*

- Exhibit 6, ***Required Items in Conducting TP-201.4***;
- Exhibit 8, ***VST ECS Hydrocarbon Sensor Verification Test Procedure*** *(if a VST ECS membrane processor is installed)*;
- Exhibit 9, ***Determination of VST ECS Processor Activation Pressure*** *(if a VST ECS membrane processor is installed)*;
- Exhibit 10, ***Veeder-Root Vapor Pressure Sensor Verification Test Procedure****;*
- Exhibit 11, ***Veeder-Root Vapor Polisher Operability Test Procedure*** *(if a Veeder-Root Vapor Polisher is installed)*;
- Exhibit 12, ***Veeder-Root Vapor Polisher Hydrocarbon Emissions Verification Test Procedure*** *(if a Veeder-Root Vapor Polisher is installed)*;
- Exhibit 13, ***Hirt VCS 100 Processor with Indicator Panel Operability Test Procedure*** *(if a Hirt VCS 100 processor is installed);*
- Exhibit 14, ***Franklin Fueling Systems Healy Clean Air Separator Static Pressure Performance Test Procedure*** *(if a Clean Air Separator is installed);*
- Exhibit 15, ***VST Green Machine Compliance Test Procedure*** *(if a Green Machine is installed);*
- Exhibit 16, ***Liquid Condensate Trap Compliance Test Procedure*** *(if a Liquid Condensate Trap is installed);*
- Exhibit 17, ***Veeder-Root ISD Vapor Flow Meter Operability Test Procedure*** *(if Veeder-Root ISD is installed)*;
- Exhibit 18, ***Accessing PMC and ISD Parameters at Gasoline Dispensing Facilities (GDFs) with Veeder-Root's "Maintenance Tracker" Security Feature Installed & Enabled*** *(if Maintenance Tracker is installed);*
- Exhibit 19, ***INCON; ISD Vapor Flow Meter Operability Test Procedure*** *(if INCON ISD is installed); and*
- Exhibit 20, ***INCON; Vapor Pressure Sensor Verification Test Procedure*** *(if INCON ISD is installed)*.

Local districts at their option may specify the testing frequency and related sequencing of the above tests. Notification of testing, and submittal of test results, shall be done in accordance with local district requirements and pursuant to policies established by that district. Local districts may require the use of alternate test form(s), provided they include the same minimum parameters identified in the datasheet referenced in the test procedure(s). Alternative test procedures, including most recent versions of the test procedures listed above, may be used if determined by ARB Executive Officer or Executive Officer delegate, in writing, to yield equivalent results.

IT IS FURTHER ORDERED that the following requirements are made a condition of certification. The owner or operator of the Balance Phase II EVR System Including ISD System shall conduct, and pass, the following tests no later than 60 days after startup using the following test procedure: Exhibit 7, ***Nozzle Bag Test Procedure***. Notification of testing, and submittal of test results, shall be done in accordance with local district requirements and pursuant to the policies established by that district. Alternative test procedures, including most recent versions of the test procedures listed above, may be used if determined by the ARB Executive Officer or Executive Officer delegate, in writing, to yield equivalent results.

IT IS FURTHER ORDERED that, except as provided above, local districts at their option will specify the testing, related sequencing, and testing frequency of the nozzle vapor valves. If

the district requires the nozzle vapor valve be tested, the test shall be conducted in accordance with Exhibit 7, ***Nozzle Bag Test Procedure***.

IT IS FURTHER ORDERED that the Balance Phase II EVR Systems Including ISD Systems shall be compatible with gasoline in common use in California at the time of certification. The Balance Phase II EVR System Including ISD System is not compatible with gasoline that has a methanol content greater than 5 percent or an ethanol content greater than 10 percent. Any modifications to comply with future California gasoline requirements shall be approved in writing by the Executive Officer or Executive Officer delegate.

IT IS FURTHER ORDERED that the certification of Balance Phase II EVR Systems Including ISD is valid through April 1, 2014.

IT IS FURTHER ORDERED that Executive Order VR-204-M issued on March 30, 2012, is hereby superseded by this Executive Order. VST Phase II EVR Systems Including Veeder-Root ISD certified under Executive Order VR-204-A through M may remain in use at existing installations up to four years after the expiration date of this Executive Order. This Executive Order shall apply to new installations or major modification of Phase II Systems with a throughput of more than 600,000 gallons per year. The installation of the ISD System is not authorized on a GDF with a throughput of less than or equal to 600,000 gallons per year.

Executed at Sacramento, California, this 8TH day of February 2013.

Cynthia L. Castronovo
Acting Chief, Monitoring and Laboratory Division

Attachments: Next Page

General Requirements

Exhibit 1 Equipment List
- Hanging Hardware
- Processors
- Liquid Condensate Trap
- ISD
  - Optional Wireless Components
  - Optional Maintenance Tracker Kit

Exhibit 2 System Specifications
- Hanging Hardware
- Processors
- Pressure/Vacuum Vent Valves for Storage Tank Vents
- Warranty
- Vapor Recovery Piping Configurations
- Dispensers
- Liquid Condensate Traps
- In-Station Diagnostics (ISD)
- Phase I Systems
- Maintenance Records
- Vapor Recovery Equipment Defects
- Veeder-Root ISD System Specifications
- INCON ISD System Specifications

Exhibit 3 Manufacturing Performance Specifications and Warranties
- Vapor Systems Technologies
- EMCO Wheaton Retail
- Veeder-Root
- Goodyear
- Hirt
- Franklin Fueling Systems Including INCON ISD System
- OPW

General Compliance Procedures

Exhibit 4 Required Items in Conducting TP-201.3
Exhibit 5 Liquid Removal Test Procedure
Exhibit 6 Required Items for Conducting TP-201.4
Exhibit 7 Nozzle Bag Test Procedure

Processor Specific Compliance Procedures

Exhibit 8 VST ECS Hydrocarbon Sensor Verification Test Procedure
Exhibit 9 VST ECS Determination of Processor Activation Pressure
Exhibit 10 Veeder-Root Vapor Pressure Sensor Verification Test Procedure
Exhibit 11 Veeder-Root Vapor Polisher Operability Test Procedure
Exhibit 12 Veeder-Root Vapor Polisher Hydrocarbon Emissions Verification Test Procedure
Exhibit 13 Hirt VCS 100 Processor with Indicator Panel Operability Test Procedure
Exhibit 14 Franklin Fueling Systems Healy Clean Air Separator Static Pressure Performance Test Procedure

Exhibit 15 VST Green Machine Compliance Test Procedure

LCT Specific Compliance Procedure

Exhibit 16 Liquid Condensate Trap Compliance Test procedure

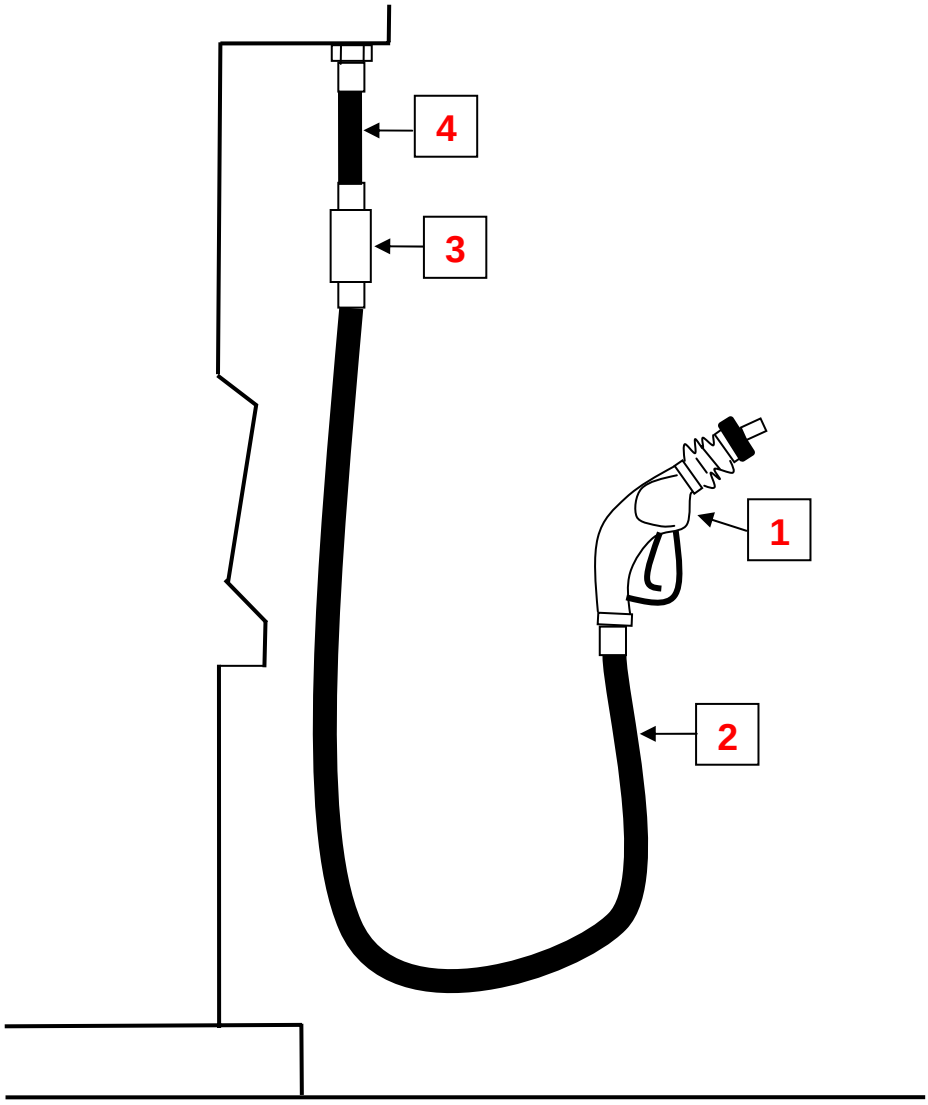
ISD Specific Compliance Procedures

Exhibit 10 Veeder-Root Vapor Pressure Sensor Verification Test Procedure
Exhibit 17 Veeder-Root ISD Vapor Flow Meter Operability Test Procedure
Exhibit 18 Accessing PMC and ISD Parameters at Gasoline Dispensing Facilities (GDFs) with Veeder-Root's "Maintenance Tracker" Security Feature Installed & Enabled
Exhibit 19 INCON ISD System Vapor Flow Meter Operability Test Procedure
Exhibit 20 INCON ISD System Vapor Pressure Sensor Verification Test Procedure

EMCO® WHEATON RETAIL

Figure 1

CARB Approved EVR Hanging Hardware Mix and Match Combinations for
VST Executive Orders VR-203-N and VR-204-N



	1 Nozzle	2 Curb Hose	3 Safe Break Valve	4 Whip Hose
A	VST	VST or Goodyear	VST	VST or Goodyear
B	EMCO	VST or Goodyear	VST	VST or Goodyear
C	VST	VST or Goodyear	EMCO	VST or Goodyear
D	EMCO	VST or Goodyear	EMCO	VST or Goodyear

Note: Each letter identifies acceptable EVR hanging hardware combination.

EMCO® WHEATON RETAIL

November 22, 2010

002 Technical Service Bulletin

New Amendment to Executive Orders VR-203-I & VR-204-I

EMCO Models A4005EVR Nozzle and A4119EVR Safe Break Valve Receive CARB EVR Approval for Mixing And Matching with VST EVR Hanging Hardware!

Attention Service Technicians,

On November 12, 2010, the California Air Resources Board CARB approved the EMCO phase II EVR components listed below as alternate or replacement parts for the Vapor Systems Technologies VST Executive Orders VR-203-I and VR-204-I. Refer to attached *Executive Orders* (legal language and signature only) for more details.

The conditional approval allows for the installation of the EMCO phase II EVR components with the **Veeder-Root Vapor Polisher Canister** and the **Hirt VCS-100 Thermal Oxidizer**. This applies to existing and new gasoline dispensing facilities GDFs operating in California.

Component Description	Model Number
Balance Vapor Recovery Nozzle	A4005EVR
Balance Vapor Recovery Nozzle (Rebuilt)	RA4005EVR
Coaxial Safe Break Valve	A4119EVR

With regard to the installation of the EMCO phase II EVR components with those of VST, there are no approval limitations or conditions when **mixing and matching** the nozzle, safe break valve, curb and whip hoses. All possible hanging hardware combinations are acceptable and EVR approved. Refer to attached *Figure 1* for more details.

With regard to EVR equipment annual compliance, all testing must be performed in accordance with the exhibits listed in VST Executive Orders VR-203-I and VR-204-I, please refer below.

1. All **liquid removal testing** performed on Goodyear or VST curb hoses equipped with an EMCO A4005EVR nozzle must be conducted in accordance with **Exhibit 5**. The EMCO Nozzle Spout Plug P/N 494635EVR is a required test tool that seals the fuel path of the nozzle spout during liquid removal testing per CARB TP-201.6 or 6C.

2. All **ISD vapor flow meter operability testing** performed on fueling positions equipped with an EMCO A4005EVR nozzle must be conducted in accordance with **Exhibit 17**. The EMCO Nozzle Adapter P/N 494635EVR and the Surrogate Spout P/N 494771EVR are required test tools. Refer to attached *EMCO Service Tools Cut Sheet* for details.

Below, you will find a list of "Frequently Asked Questions" that should help eliminate certain areas of concern during the installation and routine preventive maintenance of the EMCO phase II EVR components.

Frequently Asked Questions

1. **Q: Will a new operating permit be required when installing an EMCO phase II EVR component at an existing GDF equipped with VST EVR hanging hardware?**

   A: No, the new CARB approval allows for installation and removal between EMCO and VST phase II EVR components without requiring a new operating permit.

2. **Q: An existing GDF is equipped with 100 percent VST EVR hanging hardware and the nozzle on fueling position 5 requires replacement. Can a service provider replace the VST nozzle with an EMCO A4005EVR nozzle without having to replace the rest?**

   A: Yes, the new CARB approval allows for the installation of a single EMCO A4005EVR nozzle or A4119EVR safe break valve without replacing the remaining VST nozzles or safe break valves.

3. **Q: Will the EMCO A4005EVR nozzle be required to comply with CARB Advisory #418 "VST Nozzle Daily Check" dated May 28th, 2010?**

   A: No, the advisory only applies to all VST nozzles operating in California such as: Models VST-EVR-NBcc, VST-EVR-NBccR, VST-EVR-NBcc-1 and VST-EVR-NBccR-1.

4. **Q: Is the EMCO A4110EVR hose swivel part of the new CARB approval for use with VST Executive Orders VR-203-I and VR-204-I?**

   A: No, the EMCO A4110EVR hose swivel is only CARB approved for use with EMCO Executive Orders VR-207 and VR-208.

5. **Q: Is the Goodyear EVR hose CARB approved for use with EMCO and VST phase II EVR components?**

   A: Yes, the Goodyear EVR hose both curb and whip were CARB approved back in December of 2009 and are listed in Exhibit 1 of VST Executive Orders VR-203-I and VR-204-I.

As before, I thank you for your attention to this matter. Should you have additional questions, please do not hesitate to contact me.

Best regards,

Jose E. Rodriguez
Director of Technical Service & Support/
CARB Liaison

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State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER VR-203-I

Vapor Systems Technologies, Inc.
Phase II Enhanced Vapor Recovery (EVR) System
Not Including In-Station Diagnostics (ISD)

WHEREAS, the California Air Resources Board (ARB) has established, pursuant to California Health and Safety Code sections 25290.1.2, 39600, 39601 and 41954, certification procedures for systems designed for the control of gasoline vapor emissions during motor vehicle fueling operations (Phase II EVR vapor recovery systems) in its CP-201, ***Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities*** (Certification Procedure) as last amended May 25, 2006, incorporated by reference in title 17, California Code of Regulations, section 94011;

WHEREAS, ARB has established, pursuant to California Health and Safety Code sections 39600, 39601, 39607, and 41954, test procedures for determining the compliance of Phase II vapor recovery systems with emission standards;

WHEREAS, Vapor Systems Technologies, Inc. (VST) requested certification of the VST Phase II EVR System not Including ISD (VST Phase II EVR System) pursuant to the Certification Procedure by Executive Order VR-203-A issued on November 5, 2007, and last modified on July 13, 2010, by Executive Order VR-203-H;

WHEREAS, EMCO Wheaton Retail (EMCO) requested certification of the EMCO EVR nozzle and EMCO EVR safe break valve as alternate components for use with the Veeder-Root Vapor Polisher and Hirt Thermal Oxidizer;

WHEREAS, the Certification Procedure provides that ARB Executive Officer shall issue an Executive Order if he or she determines that the vapor recovery system conforms to all of the applicable requirements set forth in the Certification Procedure;

WHEREAS, G-01-032 delegates to the Chief of the Monitoring and Laboratory Division the authority to certify or approve modifications to certified Phase I and Phase II vapor recovery systems for gasoline dispensing facilities; and

WHEREAS, I, Alberto Ayala, Chief of the Monitoring and Laboratory Division, find that the VST Phase II EVR System, including Veeder-Root PMC software version 1.03 conforms with all requirements set forth in the Certification Procedure, including compatibility when fueling vehicles equipped with onboard refueling vapor recovery systems, and results in a vapor recovery system which is at least 95 percent efficient and shall not exceed 0.38 pounds of hydrocarbons per 1,000 gallons of gasoline transferred when tested pursuant to TP-201.2, ***Efficiency and Emission Factor for Phase II Systems*** (October 8, 2003).

NOW, THEREFORE, IT IS HEREBY ORDERED that VST Phase II EVR System including Veeder-Root PMC software version 1.03 is certified to be at least 95 percent efficient and does not exceed 0.38 pounds of hydrocarbon per 1,000 gallons of gasoline transferred in attended and/or self-service mode when used with an ARB-certified Phase I vapor recovery system and installed, operated, and maintained as specified herein and in the following exhibits. Exhibit 1 contains a list of the equipment certified for use with VST Phase II EVR System. Exhibit 2 contains the performance standards, specifications, and typical installation drawings applicable to VST Phase II EVR System as installed in a gasoline dispensing facility (GDF). Exhibit 3 contains the manufacturing performance specifications and warranties. Exhibit 4 provides items required in conducting TP-201.3. Exhibit 5 is the liquid removal test procedure. Exhibit 6 provides items required in conducting TP-201.4. Exhibit 7 is the nozzle bag test procedure. Exhibit 8 is the VST ECS hydrocarbon sensor verification test procedure. Exhibit 9 is the test procedure for determining VST ECS vapor processor activation pressure. Exhibit 10 is the VST ECS / Veeder-Root Vapor Polisher vapor pressure sensor verification test procedure. Exhibit 11 is the Veeder-Root vapor polisher operability test procedure. Exhibit 12 is the Veeder-Root vapor polisher hydrocarbon emissions verification test procedure. Exhibit 13 is the Hirt VCS 100 processor operability test procedure. Exhibit 14 is the Franklin Fueling Systems Clean Air Separator static pressure performance test procedure.

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 each component manufacturer listed in Exhibit 1 shall provide a warranty for the vapor recovery component(s) to the initial purchaser. The warranty shall be passed on to each subsequent purchaser within the warranty period. The warranty shall include the ongoing compliance with all applicable performance standards and specifications and shall comply with all warranty requirements in Section 16.5 of the Certification Procedure. Manufacturers may specify that the warranty is contingent upon the use of trained installers.

IT IS FURTHER ORDERED that every certified component manufactured by VST, EMCO, Goodyear, Veeder-Root, Hirt, and Franklin Fueling Systems shall be performance tested by the manufacturer as provided in Exhibit 3.

IT IS FURTHER ORDERED that the certified VST Phase II EVR System shall be installed, operated, and maintained in accordance with the ***ARB Approved Installation, Operation, and Maintenance Manual***. Equipment shall be inspected daily, weekly, quarterly, and annually per the procedures identified in the ***ARB Approved Installation, Operation, and Maintenance Manual***. These inspections shall also apply to systems certified by Executive Orders VR-203-A to H, Executive Order VR-205-A to B, and Executive Order VR-209-A. A copy of this Executive Order and the ***ARB Approved Installation, Operation and***

Maintenance Manual shall be maintained at each GDF where a certified VST Phase II EVR System is installed.

IT IS FURTHER ORDERED that equipment 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 any alteration in the equipment parts, design, installation, or operation of the system certified hereby is prohibited and deemed inconsistent with this certification, unless the alteration has been submitted in writing and approved in writing by the Executive Officer or Executive Officer delegate.

IT IS FURTHER ORDERED that the following requirements are made a condition of certification. The owner or operator of the VST Phase II EVR System shall conduct and pass the following tests no later than 60 days after startup and at least once in each twelve month period, using the following test procedures:

- TP-201.3, ***Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities*** (March 17, 1999);
- TP-201.4, ***Dynamic Back Pressure*** (July 3, 2002) in accordance with the condition listed in item 1 of the Vapor Collection section of Exhibit 2;
- Exhibit 4, ***Required Items in Conducting TP-201.3***;
- Exhibit 5, ***Liquid Removal Test Procedure***;
- Exhibit 6, ***Required Items for Conducting TP-201.4.***
- Exhibit 8, ***VST ECS Hydrocarbon Sensor Verification Test Procedure*** (if a VST ECS membrane processor is installed);
- Exhibit 9, ***Determination of VST ECS Processor Activation Pressure*** (if a VST ECS membrane processor is installed);
- Exhibit 10, ***VST ECS / Veeder-Root Vapor Polisher Vapor Pressure Sensor Verification Test Procedure*** (if a VST ECS membrane processor or Veeder-Root Vapor Polisher is installed);
- Exhibit 11, ***Veeder-Root Vapor Polisher Operability Test Procedure*** (if a Veeder-Root Vapor Polisher is installed);
- Exhibit 12, ***Veeder-Root Vapor Polisher Hydrocarbon Emissions Verification Test Procedure*** (if a Veeder-Root Vapor Polisher is installed);
- Exhibit 13, ***Hirt VCS 100 Processor Operability Test Procedure*****;** (if a Hirt VCS 100 is installed); and,
- Exhibit 14, ***Franklin Fueling Systems Clean Air Separator Static Pressure Performance Test Procedure*** *(if a Clean Air Separator is installed).*

Local districts at their option may specify the testing frequency and related sequencing of the above tests. Notification of testing, and submittal of test results, shall be done in accordance with local district requirements and pursuant to policies established by that district. Local districts may require the use of alternate test form(s), provided they include the same minimum parameters identified in the datasheet referenced in the test procedure(s). Alternative test procedures, including most recent versions of the test

procedures listed above, may be used if determined by the ARB Executive Officer or Executive Officer delegate, in writing, to yield equivalent results.

IT IS FURTHER ORDERED that the following requirements are made a condition of certification. The owner or operator of the VST Phase II EVR System shall conduct, and pass, the following test no later than 60 days after startup using the following test procedure: Exhibit 7, ***Nozzle Bag Test Procedure***. Notification of testing, and submittal of test results, shall be done in accordance with local district requirements and pursuant to the policies established by that district. Alternative test procedures, including most recent versions of the test procedures listed above, may be used if determined by ARB Executive Officer or Executive Officer delegate, in writing, to yield equivalent results.

IT IS FURTHER ORDERED that, except as provided above, local districts at their option will specify the testing, related sequencing, and testing frequency of the nozzle vapor valves. If the district requires the nozzle vapor valve be tested, the test shall be conducted in accordance with Exhibit 7, ***Nozzle Bag Test Procedure***.

IT IS FURTHER ORDERED that the VST Phase II EVR System shall be compatible with gasoline in common use in California at the time of certification. The VST Phase II EVR System is not compatible with gasoline that has a methanol content greater than 5 percent or an ethanol content greater than 10 percent. Any modifications to comply with future California gasoline requirements shall be approved in writing by the Executive Officer or Executive Officer delegate.

IT IS FURTHER ORDERED that the certification of the VST Phase II EVR System is valid through April 1, 2012.

IT IS FURTHER ORDERED that Executive Order VR-203-H issued on July 13, 2010, is hereby superseded by this Executive Order. VST Phase II EVR Systems certified under Executive Order VR-203-A through H may remain in use at existing installations up to four years after the expiration date of this Executive Order.

IT IS FURTHER ORDERED that Executive Order VR-205-B issued on July 2, 2009, is hereby superseded by this Executive Order. VST Phase II EVR Systems certified under Executive Order VR-205-A through B may remain in use at existing installations up to four years after the expiration date of the Executive Order.

IT IS FURTHER ORDERED that Executive Order VR-209-A issued on November 4, 2009, is hereby superseded by this Executive Order. VST Phase II EVR Systems certified under Executive Order VR-209-A may remain in use at existing installations up to four years after the expiration date of the Executive Order.

IT IS FURTHER ORDERED that this Executive Order shall apply to new installations or major modification of Phase II Systems with a throughput of less than or equal to 600,000 gallons per year. Use of this Executive Order for new installations or major modifications at a GDF with a throughput of more than 600,000 gallons per year is not authorized.

Executed at Sacramento, California, this 12th day of November 2010.

Alberto Ayala, Ph.D., M.S.E.
Chief, Monitoring and Laboratory Division

Attachments: Next Page

General Requirements

Exhibit 1 Equipment List
- Hanging Hardware
- Processors

Exhibit 2 System Specifications
- Hanging Hardware
- Processors
- Pressure/Vacuum Vent Valves for Storage Tank Vents
- Vapor Recovery Piping Configurations
- Dispensers
- Phase I Systems
- Maintenance Records
- Vapor Recovery Equipment Defects

Exhibit 3 Manufacturing Performance Specifications and Warranties
- Vapor Systems Technologies
- Veeder-Root
- Goodyear
- Hirt
- Franklin Fueling Systems
- EMCO Wheaton Retail

General Compliance Procedures

Exhibit 4 Required Items in Conducting TP-201.3
Exhibit 5 Liquid Removal Test Procedure
Exhibit 6 Required Items for Conducting TP-201.4
Exhibit 7 Nozzle Bag Test Procedure

Processor Specific Compliance Procedures

Exhibit 8 **VST ECS**; Hydrocarbon Sensor Verification Test Procedure
Exhibit 9 **VST ECS**; Determination of Processor Activation Pressure
Exhibit 10 **VST ECS / Veeder-Root Vapor Polisher**; Vapor Pressure Sensor Verification Test Procedure
Exhibit 11 **Veeder-Root Vapor Polisher**; Operability Test Procedure
Exhibit 12 **Veeder-Root Vapor Polisher**; Hydrocarbon Emissions Verification Test Procedure
Exhibit 13 **Hirt VCS 100 Processor;** Operability Test Procedure
Exhibit 14 **Franklin Fueling Systems CAS**; Static Pressure Performance Test Procedure

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER VR-204-I

Vapor Systems Technologies, Inc.
Phase II Enhanced Vapor Recovery (EVR) System
Including Veeder-Root In-Station Diagnostics (ISD) System

WHEREAS, the California Air Resources Board (ARB) has established, pursuant to California Health and Safety Code sections 25290.1.2, 39600, 39601 and 41954, certification procedures for systems designed for the control of gasoline vapor emissions during motor vehicle fueling operations (Phase II EVR vapor recovery systems) in its CP-201, ***Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities*** (Certification Procedure) as last amended May 25, 2006, incorporated by reference in title 17, California Code of Regulations, section 94011;

WHEREAS, ARB has established, pursuant to California Health and Safety Code sections 39600, 39601, 39607, and 41954, test procedures for determining the compliance of Phase II vapor recovery systems with emission standards;

WHEREAS, Vapor Systems Technologies, Inc. (VST) requested certification of the VST Phase II EVR System Including Veeder-Root ISD (VST Phase II EVR System Including ISD) pursuant to the Certification Procedure by Executive Order VR-204-A issued on April 1, 2008, and last modified on July 13, 2010, by Executive Order VR-204-H;

WHEREAS, EMCO Wheaton Retail (EMCO) requested certification of the EMCO EVR nozzle and EMCO EVR safe break valve as alternate components for use with the Veeder-Root Vapor Polisher;

WHEREAS, the Certification Procedure provides that the ARB Executive Officer shall issue an Executive Order if he or she determines that the vapor recovery system conforms to all of the applicable requirements set forth in the Certification Procedure;

WHEREAS, G-01-032 delegates to the Chief of the Monitoring and Laboratory Division the authority to certify or approve modifications to certified Phase I and Phase II vapor recovery systems for gasoline dispensing facilities; and

WHEREAS, I, Alberto Ayala, Chief of the Monitoring and Laboratory Division, find that the VST Phase II EVR System Including Veeder-Root ISD software version 1.03 conforms with all requirements set forth in the Certification Procedure, including compatibility when fueling vehicles equipped with onboard refueling vapor recovery systems, and results in a vapor recovery system which is at least 95 percent efficient and shall not exceed 0.38 pounds of hydrocarbons per 1,000 gallons of gasoline transferred when tested pursuant to TP-201.2, ***Efficiency and Emission Factor for Phase II Systems*** (October 8, 2003).

NOW, THEREFORE, IT IS HEREBY ORDERED that VST Phase II EVR System Including Veeder-Root ISD software version 1.03 is certified to be at least 95 percent efficient and

does not exceed 0.38 pounds of hydrocarbon per 1,000 gallons of gasoline transferred in attended and/or self-service mode when used with an ARB-certified Phase I vapor recovery system and installed, operated, and maintained as specified herein and in the following exhibits. Exhibit 1 contains a list of the equipment certified for use with VST Phase II EVR System including Veeder-Root ISD. Exhibit 2 contains the performance standards, specifications, and typical installation drawings applicable to VST Phase II EVR System Including Veeder-Root ISD as installed in a gasoline dispensing facility (GDF). Exhibit 3 contains the manufacturing performance specifications and warranties. Exhibit 4 provides items required in conducting TP-201.3. Exhibit 5 is the liquid removal test procedure. Exhibit 6 provides items required in conducting TP-201.4. Exhibit 7 is the nozzle bag test procedure. Exhibit 8 is VST ECS hydrocarbon sensor verification test procedure. Exhibit 9 is the test procedure for determining VST ECS vapor processor activation pressure. Exhibit 10 is the VST ECS / Veeder-Root Vapor Polisher vapor pressure sensor verification test procedure. Exhibit 11 is the Veeder-Root vapor polisher operability test procedure. Exhibit 12 is the Veeder-Root vapor polisher hydrocarbon emissions verification test procedure. Exhibits 13 through 16 are reserved for future procedures and are intentionally left blank. Exhibit 17 is the Veeder-Root ISD vapor flow meter operability test procedure.

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 each component manufacturer listed in Exhibit 1 shall provide a warranty for the vapor recovery components to the initial purchaser. The warranty shall be passed on to each subsequent purchaser within the warranty period. The warranty shall include the ongoing compliance with all applicable performance standards and specifications and shall comply with all warranty requirements in Section 16.5 of the Certification Procedure. Manufacturers may specify that the warranty is contingent upon the use of trained installers.

IT IS FURTHER ORDERED that every certified component manufactured by VST, EMCO, Goodyear, and Veeder-Root shall be performance tested by the manufacturer as provided in Exhibit 3.

IT IS FURTHER ORDERED that the certified VST Phase II EVR System Including Veeder-Root ISD shall be installed, operated, and maintained in accordance with the ***ARB Approved Installation, Operation, and Maintenance Manual***. Equipment shall be inspected daily, weekly, and annually per the procedures identified in the ***ARB Approved Installation, Operation, and Maintenance Manual***. These inspections shall also apply to systems certified by Executive Orders VR-204-A to H. A copy of this Executive Order and the ***ARB Approved Installation, Operation and Maintenance Manual*** shall be maintained at each GDF where a certified VST Phase II EVR System Including Veeder-Root ISD is installed.

IT IS FURTHER ORDERED that equipment 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 any alteration in the equipment parts, design, installation, or operation of the system certified hereby is prohibited and deemed inconsistent with this certification, unless the alteration has been submitted in writing and approved in writing by the Executive Officer or Executive Officer delegate.

IT IS FURTHER ORDERED that the following requirements are made a condition of certification. The owner or operator of the VST Phase II EVR System Including Veeder-Root ISD shall conduct and pass the following tests no later than 60 days after startup and at least once in each twelve month period, using the following test procedures:

- TP-201.3, ***Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities*** (March 17, 1999);
- TP-201.4, ***Dynamic Back Pressure*** (July 3, 2002) in accordance with the condition listed in item 1 of the Vapor Collection section of Exhibit 2;
- Exhibit 4, ***Required Items in Conducting TP-201.3***;
- Exhibit 5, ***Liquid Removal Test Procedure****;*
- Exhibit 6. ***Required Items in Conducting TP-201.4.***
- Exhibit 8, **VST ECS *Hydrocarbon Sensor Verification Test Procedure*** *(if a VST ECS membrane processor is installed)*;
- Exhibit 9, ***Determination of VST ECS Processor Activation Pressure*** *(if a VST ECS membrane processor is installed)****;***
- Exhibit 10, ***VST ECS / Veeder-Root Vapor Polisher Vapor Pressure Sensor Verification Test Procedure*** (if a VST ECS membrane processor or Veeder-Root Vapor Polisher is installed)*;*
- Exhibit 11, ***Veeder-Root Vapor Polisher Operability Test Procedure*** (if a Veeder-Root Vapor Polisher is installed);
- Exhibit 12, ***Veeder-Root Vapor Polisher Hydrocarbon Emissions Verification Test Procedure*** (if a Veeder-Root Vapor Polisher is installed);
- Exhibits 13 through 16, Reserved for future procedures and are intentionally left blank; and
- Exhibit 17***, Veeder-Root ISD Vapor Flow Meter Operability Test Procedure***

Local districts at their option may specify the testing frequency and related sequencing of the above tests. Notification of testing, and submittal of test results, shall be done in accordance with local district requirements and pursuant to policies established by that district. Local districts may require the use of alternate test form(s), provided they include the same minimum parameters identified in the datasheet referenced in the test procedure(s). Alternative test procedures, including most recent versions of the test procedures listed above, may be used if determined by ARB Executive Officer or Executive Officer delegate, in writing, to yield equivalent results.

IT IS FURTHER ORDERED that the following requirements are made a condition of certification. The owner or operator of the VST Phase II EVR System Including Veeder-Root ISD shall conduct, and pass, the following tests no later than 60 days after startup

using the following test procedure: Exhibit 7, ***Nozzle Bag Test Procedure***. Notification of testing, and submittal of test results, shall be done in accordance with local district requirements and pursuant to the policies established by that district. Alternative test procedures, including most recent versions of the test procedures listed above, may be used if determined by the ARB Executive Officer or Executive Officer delegate, in writing, to yield equivalent results.

IT IS FURTHER ORDERED that, except as provided above, local districts at their option will specify the testing, related sequencing, and testing frequency of the nozzle vapor valves. If the district requires the nozzle vapor valve be tested, the test shall be conducted in accordance with Exhibit 7, ***Nozzle Bag Test Procedure***.

IT IS FURTHER ORDERED that VST Phase II EVR System Including Veeder-Root ISD shall be compatible with gasoline in common use in California at the time of certification. VST Phase II EVR System Including Veeder-Root ISD is not compatible with gasoline that has a methanol content greater than 5 percent or an ethanol content greater than 10 percent. Any modifications to comply with future California gasoline requirements shall be approved in writing by the Executive Officer or Executive Officer delegate.

IT IS FURTHER ORDERED that the certification of VST Phase II EVR System Including Veeder-Root ISD is valid through April 1, 2012.

IT IS FURTHER ORDERED that Executive Order VR-204-H issued on July 13, 2010, is hereby superseded by this Executive Order. VST Phase II EVR System Including Veeder-Root ISD certified under Executive Order VR-204-A through H may remain in use at existing installations up to four years after the expiration date of this Executive Order. This Executive Order shall apply to new installations or major modification of Phase II Systems with a throughput of more than 600,000 gallons per year. The installation of the Veeder-Root ISD System is not authorized on a GDF with a throughput of less than or equal to 600,000 gallons per year.

Executed at Sacramento, California, this 12th day of November 2010.

Alberto Ayala, Ph.D., M.S.E.
Chief, Monitoring and Laboratory Division

Attachments next page:

General Requirements

Exhibit 1 Equipment List
- Hanging Hardware
- Processors
- ISD

Exhibit 2 System Specifications
- Hanging Hardware
- Processors
- Pressure/Vacuum Vent Valves for Storage Tank Vents
- Vapor Recovery Piping Configurations
- Dispensers
- In-Station Diagnostics (ISD)
- Phase I Systems
- Maintenance Records
- Vapor Recovery Equipment Defects
- Veeder-Root ISD System Specification

Exhibit 3 Manufacturing Performance Specifications and Warranties
- Vapor Systems Technologies
- Veeder-Root
- Goodyear
- EMCO Wheaton Retail

General Compliance Procedures

Exhibit 4 Required Items in Conducting TP-201.3
Exhibit 5 Liquid Removal Test Procedure
Exhibit 6 Required Items for Conducting TP-201.4
Exhibit 7 Nozzle Bag Test Procedure

Processor Specific Compliance Procedures

Exhibit 8 **VST ECS**; Hydrocarbon Sensor Verification Test Procedure
Exhibit 9 **VST ECS**; Determination of Processor Activation Pressure
Exhibit 10 **VST ECS / Veeder-Root Vapor Polisher**; Vapor Pressure Sensor Verification Test Procedure
Exhibit 11 **Veeder-Root Vapor Polisher**; Operability Test Procedure
Exhibit 12 **Veeder-Root Vapor Polisher**; Hydrocarbon Emissions Verification Test Procedure
Exhibit 13 This Section left intentionally blank
Exhibit 14 This Section left intentionally blank
Exhibit 15 This Section left intentionally blank
Exhibit 16 This Section left intentionally blank

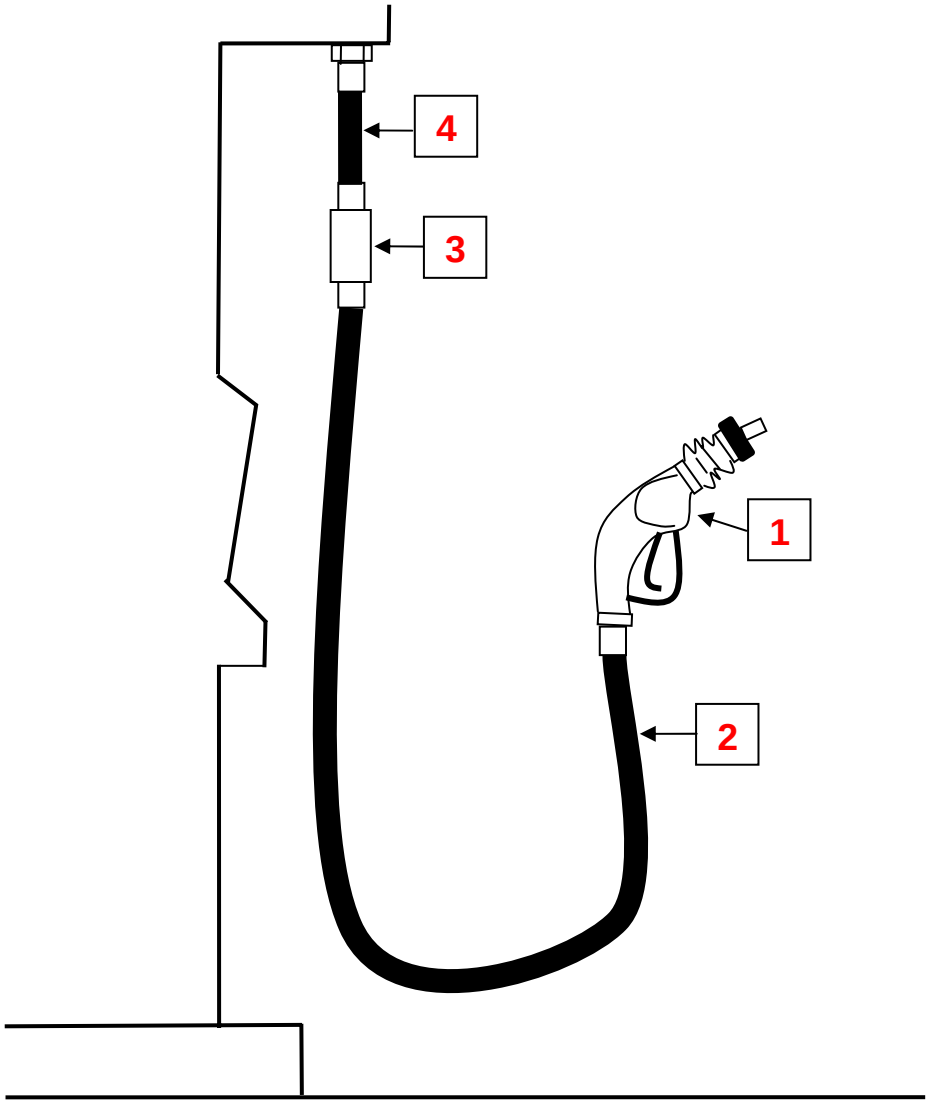
ISD Specific Compliance Procedures

Exhibit 17 **Veeder-Root;** ISD Vapor Flow Meter Operability Test Procedure

EMCO® WHEATON RETAIL

Figure 1

CARB Approved EVR Hanging Hardware Mix and Match Combinations for
VST Executive Orders VR-203-I and VR-204-I



	1 Nozzle	2 Curb Hose	3 Safe Break Valve	4 Whip Hose
A	VST	VST or Goodyear	VST	VST or Goodyear
B	EMCO	VST or Goodyear	VST	VST or Goodyear
C	VST	VST or Goodyear	EMCO	VST or Goodyear
E	EMCO	VST or Goodyear	EMCO	VST or Goodyear

Note: Each letter identifies acceptable EVR hanging hardware combination.

EMCO® WHEATON RETAIL

December 4, 2009

001 Technical Service Bulletin

New CARB EVR Approval Letter #09-10

EMCO Wheaton Receives CARB Approval For Balance Phase II EVR Components As Compatible Replacement Parts For Executive Order G-70-52-AM!

Attention Service Technicians,

On November 19, 2009, the California Air Resources Board CARB determined that the EMCO Wheaton Balance Phase II EVR components listed below are backward compatible replacements for Executive Order G-70-52-AM. All gasoline dispensing facilities GDFs operating in California with a CARB approved pre-EVR balance system will be required to only use EVR approved components for replacement parts during routine preventive maintenance, this also includes GDFs with aboveground storage tanks ASTs.

Component Description	Model Number
Balance Vapor Recovery Nozzle	A4005EVR
Balance Vapor Recovery Nozzle (Rebuilt)	RA4005EVR
Coaxial Safe Break Valve	A4119EVR
Coaxial Hose Swivel	A4110EVR

IMPORTANT: All liquid removal testing conducted on hanging hardware equipped with an EMCO Wheaton Balance Phase II EVR Nozzle must be performed in accordance with Exhibit 5 of CARB Executive Orders VR-207-A and VR-208-A. The EMCO Wheaton Spout Plug P/N 494635EVR is a required test tool that seals the fuel path of the nozzle spout during liquid removal testing per CARB TP-201.6C.

As before, I thank you for your attention to this matter. Should you have additional questions, please do not hesitate to contact me.

Best regards,

Jose E. Rodriguez
Director of Technical Service & Support/
CARB Liaison

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Linda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

November 19, 2009 #09-10

Mr. Jose E. Rodriguez
Manager of Technical Services
EMCO Wheaton Retail
1004 West Covina Parkway #413
West Covina, California 95814

Dear Mr. Rodriguez:

The California Air Resources Board (ARB) staff has determined that the EMCO Wheaton Phase II enhanced vapor recovery (EVR) components listed below are compatible replacement parts for pre-EVR balance systems. The EMCO EVR nozzle, safe break valve, and hose swivel met EVR performance standards[1] when tested with the Goodyear Maxxim Premier Plus hoses for Executive Order (EO) VR-207 and 208. The Goodyear hose assembly was approved and determined to be compatible with pre-EVR balance systems in Approval Letter #07-03. Since the EMCO components met EVR standards when installed with the Goodyear hoses, the EMCO nozzle, safe break valve, and hose swivel have been demonstrated to be compatible with pre-EVR balance components. The EMCO components are approved replacement components for EO G-70-52-AM.

EMCO Wheaton EVR Phase II Components

Component	Model number
Coaxial Nozzles	A4005EVR, RA4005EVR
Coaxial Safe Break Valve	A4119EVR
Coaxial Hose Swivel	A4110EVR

If the liquid removal test ARB TP-201.6C is conducted on a hanging hardware assembly with an EMCO EVR balance nozzle, the procedure in Executive Orders VR-207 or 208, Exhibit 5, should be conducted. The tester should include the following steps when draining gasoline from the hose:

- EMCO spout plug, P/N 494635EVR, must be used to plug the spout;

[1] Operational standards are listed in ARB Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201, May 25, 2006) and ARB Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities Using Aboveground Storage Tanks (CP-206, May 2, 2008).

- Do not activate the dispenser; and
- Engage the nozzle lever (The EMCO EVR nozzle has a lever-actuated vapor valve).

If you have questions or need further information, please contact either Frances Cameron at (916) 445-9314 or via email at fcameron@arb.ca.gov , or Pat Bennett at (916) 322-8959 or via email at pbennett@arb.ca.gov.

Sincerely,

Manjit Ahuja for TAC

Manjit Ahuja, Acting Chief
Monitoring and Laboratory Division

cc: John Marvin
Bay Area Air Quality Management District

Kevin Tokunaga
Glenn County Air Pollution Control District

Gary Ma
Yolo-Solano Air Quality Management District

California Environmental Protection Agency

Air Resources Board
Vapor Recovery Advisory

Gasoline Dispensing Facility
Required Replacement Parts for Pre-EVR Phase II Balance Systems

Number 408 **November 19, 2009**

ENHANCED VAPOR RECOVERY (EVR)-CERTIFIED REPLACEMENT PARTS FOR PRE-EVR BALANCE VAPOR RECOVERY SYSTEMS

The nozzles, breakaways, hoses and swivel listed in Table 1 below are required replacement components for pre-EVR balance systems. These balance system components have been certified to meet the Air Resources Board's (ARB) performance requirements for EVR systems[1] and have been determined to be compatible with pre-EVR balance components listed in Executive Order (EO) G-70-52-AM.

A gasoline dispensing facility (GDF) operator is required to install as replacement parts any hanging hardware components that are certified to EVR standards and are determined to be compatible with pre-EVR balance systems. ARB staff determined the compatibility of replacement components in approval letters to the following manufacturers: Approval Letter #07-09 covers Vapor SystemTechnologies components, Approval Letter #07-03 covers Goodyear hoses, and Approval Letter #09-10 covers EMCO-Wheaton components.

Table 1: Required Replacement Parts for Pre-EVR Phase II Balance Systems

Component/ Manufacturer	Model Number
Nozzles (coaxial only)	
VST, Inc.	VST-EVR-NB, VST-EVR-NB-R
EMCO-Wheaton	A4005EVR, RA4005EVR
Breakaway Coupling (coaxial only)	
VST, Inc.	VSTA-EVR-SBK
EMCO-Wheaton	A4119EVR
Coaxial Curb/Whip Hose Assembly (liquid removal only)[2]	
VST, Inc.	VDV-EVR /VSTA-EVR
Goodyear Engineered Products	Maxxim Premier Plus
Hose Swivel	
EMCO Wheaton	A4110EVR

1 Operational standards are listed in ARB Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (CP-201, May 25, 2006) and ARB Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities Using Aboveground Storage Tanks (CP-206, May 2, 2008).

2 A liquid removal replacement hose is required only if the component being replaced is a liquid removal hose.

The components listed in Table 1 shall be installed and maintained in accordance with the manufacturer's installation and maintenance instructions. Please note that important instructions for the installation and testing of approved EVR replacement components are contained in the ARB approval letters listed above for each manufacturer.

In addition to installing only EVR-certified replacement components, anyone who owns or operates an existing gasoline dispensing facility must replace the pre-EVR balance system with an EVR Phase II system according to the following schedule:

1. If the facility has aboveground storage tanks, the compliance deadline for EVR Phase II is January 1, 2015.

2. If the facility has underground storage tanks (UST) and is operated both as a bulk plant which loads gasoline into cargo trucks and also as a GDF, the compliance deadline for EVR Phase II is April 1, 2011.

3. If the facility has USTs with liquid condensate traps, the compliance deadline for EVR Phase II is April 1, 2010.

4. If the facility is located in one of the following counties or portions of counties the compliance deadline for EVR Phase II is July 27, 2011: San Luis Obispo, Siskiyou, or Northern Sonoma County Air Pollution Control District portion of Sonoma.

5. If the facility is located in one of the following counties and has an annual throughput of 240,000 gallons of gasoline or less, the compliance deadline for EVR Phase II is April 1, 2011: Alpine, Lassen, Modoc, Plumas, or Sierra.

An owner or operator of an existing facility which is located in one of the following counties is not required to install EVR Phase II: Del Norte, Humboldt, Lake, Mendocino, or Trinity.

This advisory supersedes Approval Letter #09-02. If you have questions or need further information regarding this advisory, please contact Frances Cameron at (916) 445-9314 or via email at fcameron@arb.ca.gov, or Pat Bennett at (916) 322-8959 or via email at pbennett@arb.ca.gov.