EXHIBIT 11

Veeder-Root Vapor Polisher Operability Test Procedure

Definitions common to all certification and test procedures are in:

D-200 Definitions for Vapor Recovery Procedures

For the purpose of this procedure, the term "ARB" refers to the California Air Resources Board, and the term " ARB Executive Officer" refers to the ARB Executive Officer or his or her authorized representative or designate.

1. PURPOSE AND APPLICABILITY

This test verifies the pressure integrity of the vapor polisher, confirms that the operating pressure is within certification parameters at a known flow rate, and verifies the readings of the various thermometer elements and atmospheric pressure sensor. Proper function of the valve is confirmed during the leakage and flow tests.

The pressure integrity test will identify leaks that can be caused by valve or seal failure, loose fittings, cracking or structural damage. The flow test identifies any restrictions that can be caused by dirty filters, clogged passageways, contaminated carbon or any other restriction or collapse of flow passages. The thermometer test will identify a failed sensor element that could lead to reduced performance in vapor containment or pressure management. The atmospheric pressure sensor test verifies the accuracy of that sensor.

The station may remain open (normal fuel dispensing, deliveries, etc.) while conducting this procedure.

The term “TLS Console” used throughout this Exhibit includes but is not limited to TLS-350, TLS-350 Plus, TLS-350R, TLS-450PLUS, Red Jacket ProMax, Gilbarco EMC consoles which are also referenced in Exhibit 1.

2. PRINCIPLE AND SUMMARY OF TEST PROCEDURE

2.1. Pressure Integrity Test

This test confirms that the vapor polisher is capable of maintaining system pressures within certification limits. The leak tightness of the polisher is checked at 8 inches water column (WC). Proper closure of the vapor valve is verified during this test.

2.2. Flow Test

This test confirms flow characteristics through the vapor polisher are maintained within certification limits. The back-pressure across the polisher is checked at a flow rate of 18.0 standard cubic feet per hour (scfh). Proper opening of the vapor valve is verified during this test.

2.3. Thermometer Test

This test verifies that the temperature sensing elements are functioning correctly and indicating valid temperature readings within acceptable ranges. Thermometers are checked against each other as an indication of valid readings. If criteria are not met, accuracy of the thermometers is checked against a calibrated reference thermometer.

2.4. Atmospheric Pressure Sensor Test

This test verifies that the atmospheric pressure sensing element is functioning correctly and indicating valid readings within an acceptable range. The sensor is checked against a local independent source (e.g., U.S. Weather Service, airports, Districts etc.)

3. BIASES AND INTERFERENCES

3.1. The pressure integrity test should not be conducted within 2 hours of Vapor Polisher loading or purging to minimize affects of thermal decay in the carbon bed. Thermal conditions created by heavy loading of the vapor polisher can cause the test pressure to collapse as it cools.

3.2. The thermometer test should not be conducted within 2 hours after a delivery into any tank that is connected to the vapor recovery system. This allows sufficient time for the fuel and ullage temperatures to equalize in the event that fuel is dropped into the tank at significantly different temperatures from the ambient UST temperature.

3.3. If Veeder-Root's TLS-350 series "Maintenance Tracker" is installed and enabled, access to the "diagnostic mode" and "set-up mode" of the TLS Console is prohibited unless a Maintenance Tracker Technician Key or personal computer equipped with Veeder-Root's ISD Setup Tool Software Version 1.09 or higher is made available. Maintenance Tracker is an optional security device designed to prevent unauthorized tampering and clearing of Veeder-Root tank monitoring and ISD alarms. Maintenance Tracker resides within the TLS console and when enabled, a message will appear on the two line display of the TLS console. For additional instructions on how to access the desired parameters to complete this test procedure, see Exhibit 18; "Accessing PMC and ISD Parameters at

Gasoline Dispensing Facilities (GDFs) with Veeder-Root's "Maintenance Tracker" Security Feature Installed & Enabled".

4. EQUIPMENT, RANGE AND ACCURACY

4.1. Nitrogen tank fitted with a pressure regulator capable of maintaining a 10 inch WC test pressure.

4.2. A flow meter, with flow control valve, with 18.3 scfh full scale range and ± 2% of full scale accuracy. The meter must be accurate within 0.4 scfh for any flow setting made during the prescribed tests.

4.3. A digital (electronic) manometer with 0.01 inches WC, or better, resolution. The sensor must have a minimum measuring range of +/- 10 inches WC. The sensor must also be accurate to 0.05 inches WC for any pressure measurement made during the prescribed tests. For a manometer with a +/- 10 inches WC measurement range, this requires a 0.25% basic accuracy.

4.4. A thermometer with 1o C (1.8 o F), or better, resolution and accuracy is required to conduct the alternate thermometer test procedure.

4.5. Gasoline resistant hoses, fittings, connectors as required.

5. CALIBRATION REQUIREMENTS

5.1. A copy of the most current calibration shall be kept with all equipment.

5.2. All flow measuring devices shall be bench tested for accuracy using a reference gauge or National Institute of Standards and Technology (NIST) traceable standard at least once every 180 consecutive days. Accuracy checks shall be performed, with nitrogen, at a minimum of three (3) points (e.g., 20, 50 and 80 percent of full scale) and shall meet the requirements of Section 4.

5.3. All electronic pressure measuring devices shall be bench tested for accuracy using a reference gauge, incline manometer or National Institute of Standards and Technology (NIST) traceable standard at least once every 180 consecutive days. Accuracy checks shall be performed at a minimum of three (3) points (e.g., 20, 50 and 80 percent of full scale) each for both positive and negative pressure readings. Accuracy shall meet the requirements of Section 4.

5.4. Thermometer calibration shall be checked at least once every 180 consecutive days using an ice bath, ambient air, and boiling water. This accuracy check shall be conducted by comparison to a NIST traceable measurement device. Accuracy shall meet the requirements of Section 4.

6. PRE-TEST PROCEDURE

Install all required testing apparatus as illustrated in Figure 1. Connect the digital manometer using a tee to the Vapor Polisher inlet test port. Be sure the connection is made in-line with the 3-way valve. Connect the nitrogen tank via the flow control valve and meter to the tee at the polisher inlet test port. Be sure the connection is made at right angles to the 3-way valve connection so that flow must go through at a 90 degree corner.

7. TEST PROCEDURE

7.1. Pressure Integrity Test: At the TLS console in the GDF kiosk, confirm if the valve has been closed for two hours by checking the date and time when the valve was closed in the IV8000 RS232 command (see example below and VR-203 IOM Section 15, Viewing PMC Reports via RS-232 Connection or VR-204 IOM Section 12, Viewing ISD Reports via RS-232 Connection). Manually close the vapor valve in the PMC Diagnostic menu (VR-203 IOM Section 15, PMC Diagnostic Menus, or VR-204 IOM Section 12, PMC Diagnostic Menus). If the valve had not already been closed for at least two (2) hours then wait two hours before beginning the Pressure Integrity Test. Connect the test apparatus to the vapor polisher inlet by moving the inlet 3-way valve to the test position. Start the nitrogen flow, at 15 to 18 scfh, to pressurize the closed polisher system to 8 ± 0.10 inches WC, then shut off the flow control valve. Wait for at least 1 minute before recording first reading. After 1 minute, record the starting pressure in inches of water column to 2 decimal places and wait for 60 seconds. Record the final pressure 60 seconds after the starting pressure. Record all results on Form 1.

Example IV8000 Command

IV8000
OCT 25, 2008 6:27 PM

VAPOR POLISHER

VALVE EVENT DATE-TIME	PRESSURE "WC	EVENT CODE
8-25-08 2:27PM	-1.528	OPEN EXCESS PURGE
8-25-08 3:03PM	-0.480	CLOSE PURGE Hi P
8-25-08 3:56PM	-1.511	OPEN EXCESS PURGE
8-25-08 4:02PM	-1.330	CLOSE EMPTY

Use leak detection solution to check for leaks at the compression fittings used to connect the bottom of the Vapor Polisher to the inlet 3-way valve during the above pressure integrity test.

7.2. Flow Test: At the TLS console in the GDF kiosk, enter the PMC Diagnostic Menu to manually open the polisher vapor valve (VR-203 IOM Section 15, PMC Diagnostic Menus, or VR-204 IOM Section 12, PMC Diagnostic

Menus). After the valve is open, set flow control valve to 18.0 0.2 scfh. Record pressure at the inlet in inches of water column to 2 decimal places. Turn off flow and set the polisher vapor valve to automatic mode and the inlet test port 3-way valve back to the normal operating position. Record all results on Form 1. Remove test equipment.

7.3. Thermometer Test:

7.3.1 At the TLS-350 console front panel, verify that a delivery had not occurred in the last 2 hours by using the following commands.

MM DD YY hh mm ss PM
ALL FUNCTIONS
NORMAL

<FUNCTION>
<FUNCTION>

IN TANK INVENTORY
PRESS <STEP> TO CONT **<STEP>** **T1: PROBE TYPE MAG1**
VOLUME = 10,500 GALS

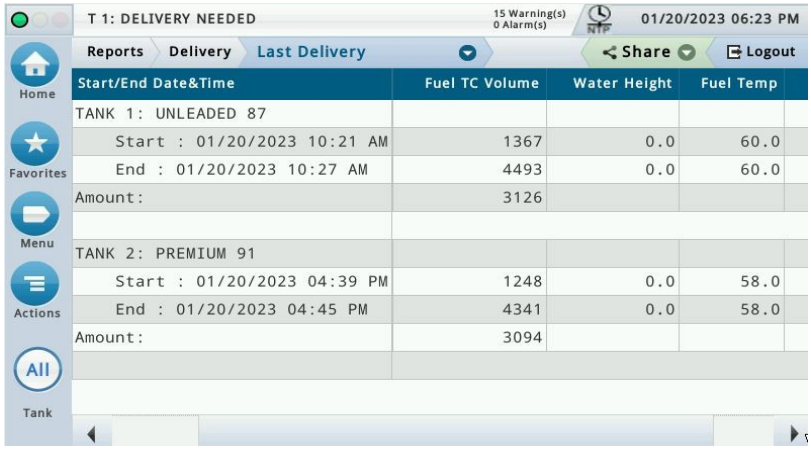
<STEP>

T1: REG
DELIVERY 5,050
GAL

<PRINT> **Print most recent deliveries**

<TANK/SENSOR> **Select next Tank**

7.3.2 If the gasoline dispensing facility is equipped with a TLS-450PLUS, verify that a delivery had not occurred in the last 2 hours by using the following command: press Menu>Reports>Last Delivery. Record the results in Form 1.



7.3.3 At the TLS-350 series console, record the Vapor Polisher Ambient temperature and the Outlet Temperature from the Vapor Polisher SMART SENSOR DIAGNOSTIC Menu on the TLS Console. See

Table 1 below for procedures to access the diagnostic report. Record all results on Form 1.

7.3.4 If the gasoline dispensing facility is equipped with a TLS-450PLUS, verify the Vapor Polisher Ambient temperature and the outlet temperature by using the following commands: Home>Diagnostics>Vapor Valve>Overview>General Section. In the section, scroll screen to the right. See Table 4 below for procedures to access the Vapor Polisher Ambient temperature and the outlet temperature. Record the results in form 1

7.3.5 At the TLS-350 series console, record the gasoline tank thermometer values, for each gasoline storage tank. See Table 2 below for procedures to access the diagnostic report. Record all the results on Form 1.

7.3.6 If the gasoline dispensing facility is equipped a TLS-450PLUS, verify the gasoline tank thermometer values for each gasoline storage tank. See table 5 below for procedures to access the diagnostic report. Record the results in Form 1.

7.4. Atmospheric Pressure Sensor Test:

7.4.1 At the TLS-350 console access the atmospheric pressure reading using the menus outlined below in Table 3 and record on Form 1.

7.4.2 If the gasoline dispensing facility is equipped with the TLS-450PLUS, access the atmospheric pressure reading by using the following command, Home>Diagnostics>Vapor Valve>Overview. In the General Section, scroll to the right. See Table 6 and Table 7 below for procedures to access the atmospheric report. Record the results in form 1

7.4.3 Obtain an atmospheric pressure reading from a local (within 50 miles) independent source (e.g., U.S. Weather Service, airports, Districts, etc.) in inches mercury and record on Form 1. Note: Some sources may give atmospheric pressure values at sea-level and will need to be adjusted to account for altitude. Neglecting to adjust the atmospheric pressure value at higher altitudes may result in differences between the local and TLS Console atmospheric pressure readings greater than 10%.

7.5. Alternative to Form 1: Districts may require the use of an alternate Form, provided it includes the same minimum parameters as identified in Form 1.

Table 1

Accessing Vapor Polisher Ambient and Outlet Temperatures On the TLS-350 Console

DIAG MODE
PRESS <FUNCTION> TO CONT

<FUNCTION>
<FUNCTION>

SMART SENSOR DIAGNOSTIC
PRESS <STEP> TO CONT

<STEP>

S1: ***Valve Label***

TYPE: VAPOR VALVE

<TANK> to change SS device
<PRINT> print report

SMARTSENSOR DIAGNOSTIC
- - - - - - - - - - - -
AUG 20, 2008 4:52 PM
S6:VAPOR VALVE
VAPOR VALVE
SERIAL NUMBER: 111110
VALVE POSITION: OPEN
OPEN CAP: CHARGED
CLOSE CAP: CHARGED
AMBIENT TEMP: 65.08F
OUTLET TEMP **67.11F**
SENSOR FAULT:
NONE

Table 2

Accessing Fuel Thermometer Data on TLS-350 Console

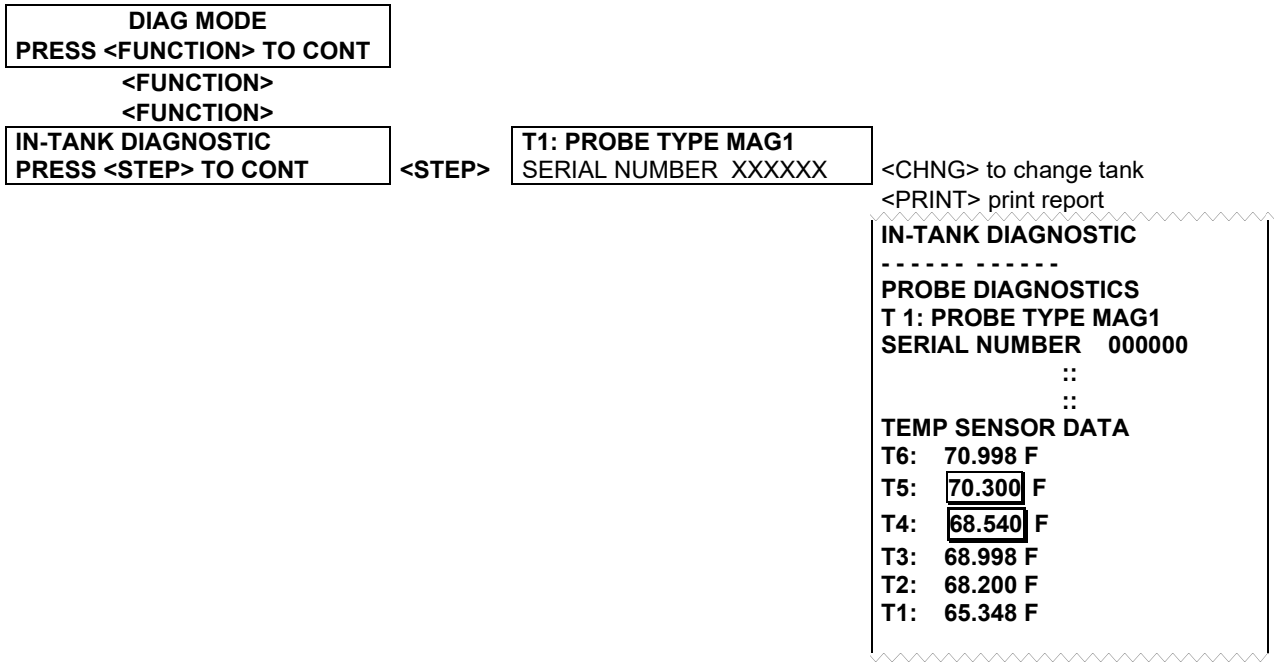


Table 3

Accessing Atmospheric Pressure on the TLS-350 Console

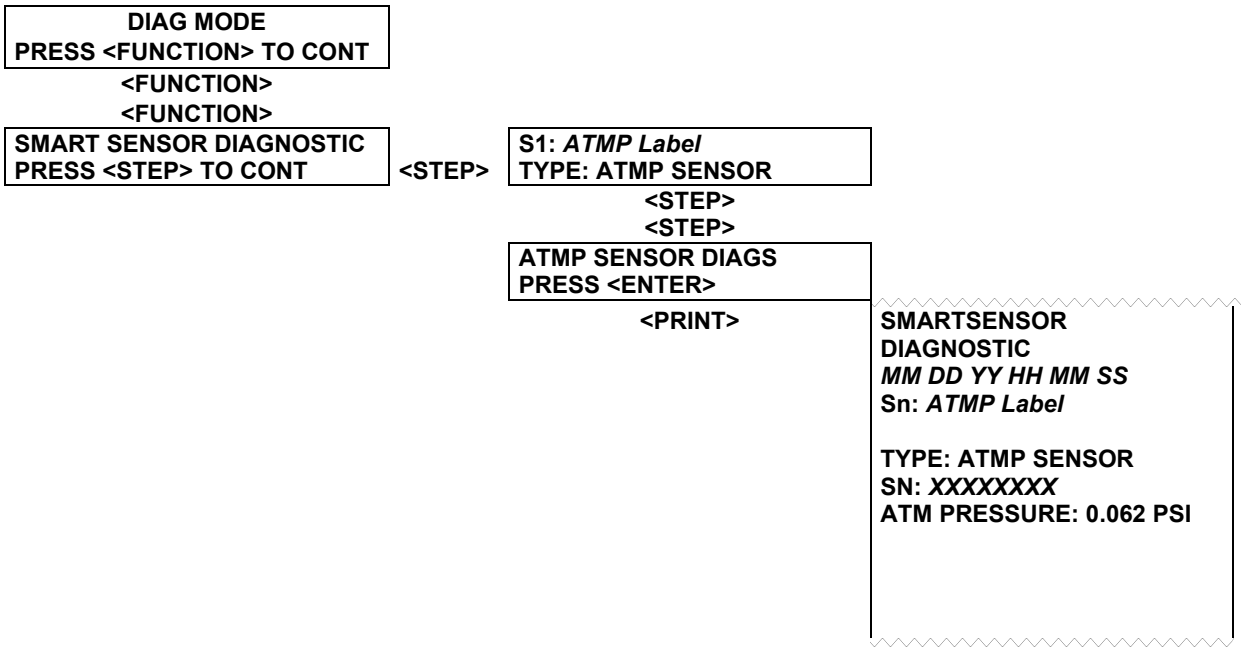


Table 4

Accessing Vapor polisher Ambient and Outlet Temperature on TLS-450PLUS Console

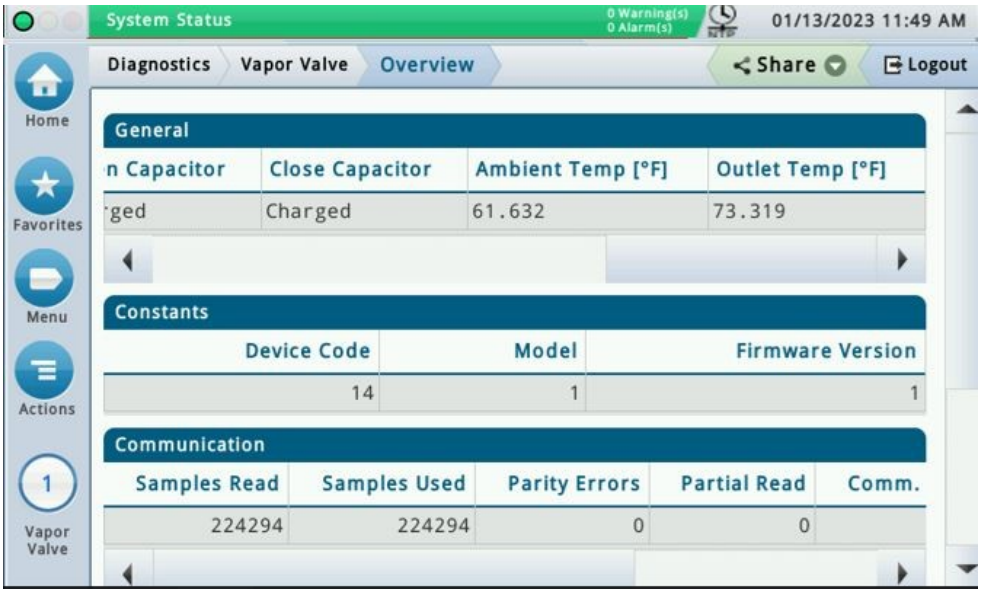


Table 5

Accessing Fuel Thermometer Data on TLS-450PLUS Console



Table 6

Accessing Atmospheric Pressure on TLS-450PLUS Console

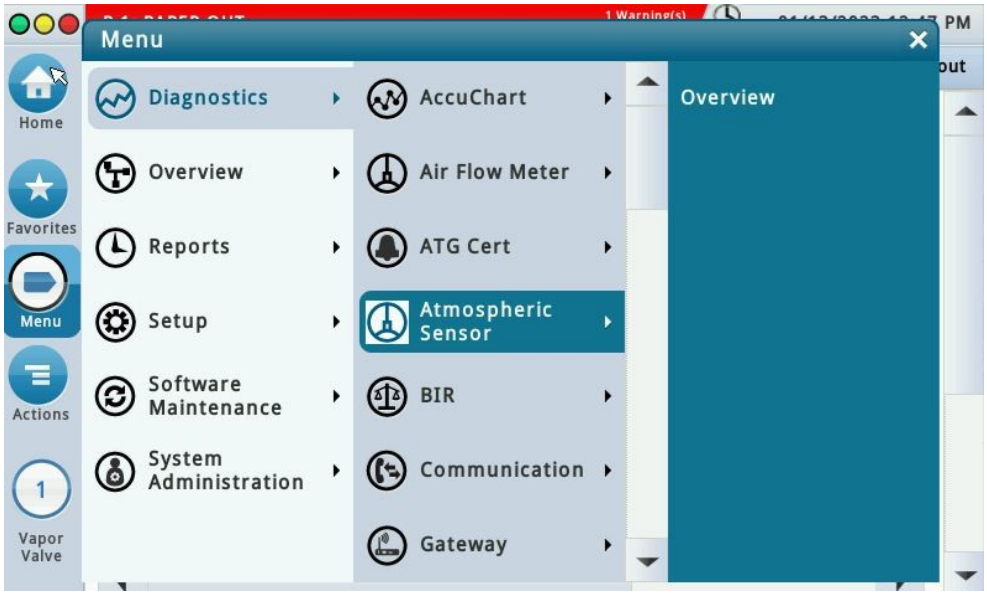
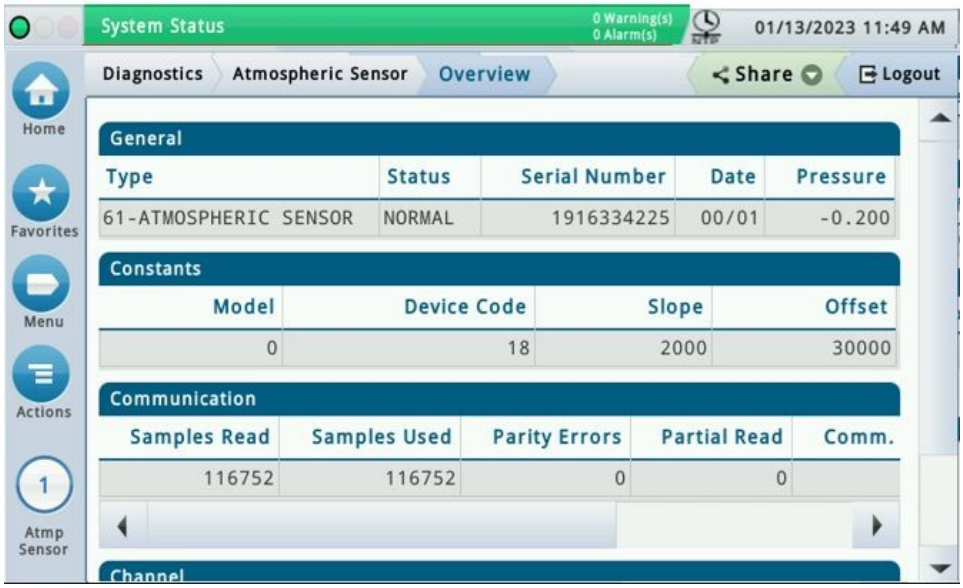


Table 7

Accessing Atmospheric Pressure on TLS-450PLUS Console



8. RESULTS

8.1. Pressure Integrity Test

Verify that the end pressure is greater than 7.0 inches WC and that the decrease (see Form 1) between the start and end pressures is less than 0.5 inches WC. If not the polisher is not in compliance with the Exhibit 2 leakage requirements. This is equivalent to a leakage of about 0.01 CFH at 2 inches WC. If the decrease in pressure is greater than 0.5 inches WC, then retest (once) to be sure it is not due to thermal loss during the test. Correct valve function (closure and sealing) is confirmed if the pressure decrease between the start and end of the test are less than 0.5 inches WC.

8.2. Flow Test

Verify that the pressure drop across the polisher at 18.0 scfh flow is between 1.69 inches WC and 2.25 inches WC. If not the polisher is not in compliance with the Exhibit 2 back pressure requirements.

8.3. Thermometer Test

8.3.1 Gasoline (UST) Tank Thermometer

8.3.1.1. Subtract T4 from T5 and record the difference on Form 1.

8.3.1.2. If the difference between sensors in 8.3.1.1 exceeds 10° F, then the test procedures specified in Section 9 must be conducted.

8.3.2 Vapor Valve Thermometer

8.3.2.1. From the diagnostic report, compare the canister outlet temperature with the ambient thermometer.

8.3.2.2. If the difference between sensors in 8.3.2.1 exceeds 10° F, then the test procedures specified in Section 9 must be conducted.

8.4. Atmospheric Pressure Sensor Test

If the difference between the local and TLS Console atmospheric readings is greater than 10% of the local reading (see Form 1 for details) then the polisher is not in compliance with the Exhibit 2 atmospheric pressure sensor requirements.

8.5. All TLS Console and PMC reports used to access information to conduct this procedure must be attached to Form 1.

9. ADDITIONAL TEST PROCEDURES

The following tests are run in the event that the tests specified in Section 7.3 and 8.3 do not pass.

9.1. Gasoline (UST) Tank Thermometer

9.1.1 Remove the tank probe from the tank and carefully lay it down on the forecourt while leaving it connected to the TLS Console. Wait 15 minutes for the probe to equalize with ambient temperature. Using the calibrated thermometer, obtain the ambient temperature near the probe. Access the Gasoline Tank Temperature T5 using Table 2. Record T5 and the calibrated thermometer reading (cal) on Form 1.

9.1.2 Compare the In-Tank Probe Diagnostic printout temperature T5 with the calibrated thermometer. If the difference between the two temperatures is greater than 10° F then the T5 thermometer does not meet the specifications set forth in Exhibit 2.

9.2. Vapor Valve Thermometer

9.2.1 Using the setup described in Figure 1, introduce nitrogen flow (18 SCFH) into the canister for 2 minutes. Note: Pressure readings from the Vapor Polisher inlet do not need to be recorded if the canister has already passed the flow test.

9.2.2 Print the diagnostic Smart Sensor Vapor Valve Diagnostic report and record the Vapor Polisher outlet and ambient temperatures on Form 1.

9.2.3 If the difference between the canister outlet and ambient sensors is less than 10 degrees F, both sensors are operating properly. Otherwise, proceed to the next step.

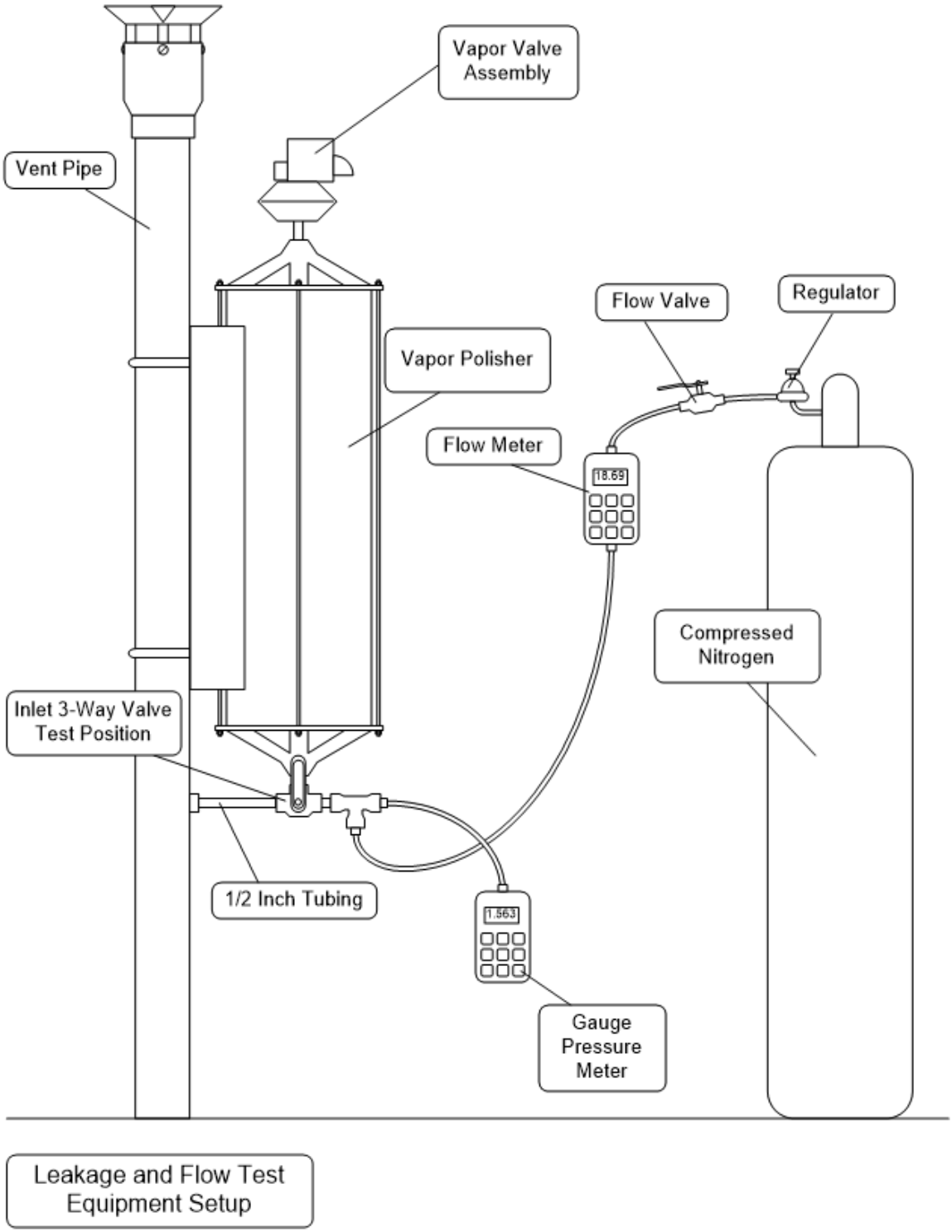
9.2.4 Remove the Vapor Polisher outlet temperature probe from the canister, according to IOM Section 14, Canister Thermal Probe Replacement, and let it sit for 15 minutes to allow the sensor to equalize with ambient temperature. Record the ambient and outlet temperature readings on Form 1.

9.2.5 Using the calibrated thermometer (cal), record the ambient temperature taken near the probe on Form 1.

9.2.6 Compare the Smart Sensor Vapor Valve Diagnostic printout Outlet Temp with the calibrated thermometer. If the difference between the two temperatures is greater than 10o F then the outlet thermometer does not meet the specifications set forth in Exhibit 2.

9.2.7 Compare the Smart Sensor Vapor Valve Diagnostic printout ambient Temp with the calibrated thermometer. If the difference between the two temperatures is greater than 10 °F then the outlet thermometer does not meet the specifications set forth in Exhibit 2.

FIGURE 11- 1
Pressure Integrity and Flow Test Equipment Setup



Leakage and Flow Test Equipment Setup

FORM 1

Veeder Root Vapor Polisher Operability Test

DATE OF TEST _____

SERVICE COMPANY NAME	**SERVICE COMPANY'S TELEPHONE**
SERVICE TECHNICIAN	**VST or VEEDER-ROOT TECH CERTIFICATION # (as applicable)** **ICC or DISTRICT TRAINING CERTIFICATION (as applicable)**
STATION NAME	**DISTRICT PERMIT #**
STATION ADDRESS **CITY** **STATE ZIP**	

STEP 7.1	_____**3-WAY VALVE IN CORRECT POSITION (PER FIG. 1)?** ☐ **START PRESSURE:** **FINAL PRESSURE:** _____ **DIFFERENCE:** _____
STEP 8.1	**1. IS THE FINAL PRESSURE > 7.0 INCHES WC?** **Yes** **No** **2. IS THE FINAL PRESSURE > THE START PRESSURE** **Yes** **No** **3. IF NO TO #2, IS THE <u>DECREASE</u> in PRESSURE <0.5 INCHES WC?** **Yes** **No** (IF NO TO QUESTION 1 OR 3 ABOVE: THE VR POLISHER IS NOT IN COMPLIANCE WITH THE LEAKAGE REQUIREMENTS OF EXHIBIT 2.)
STEP 7.2	**VAPOR CONTROL VALVE OPEN?** ☐ **FLOW RATE:** _____ **PRESSURE:** _____
STEP 8.2	**IS THE PRESSURE BETWEEN 1.69 AND 2.25 INCHES WC?** **Yes** **No** (IF NO: THE VAPOR POLISHER IS NOT IN COMPLIANCE WITH THE BACK PRESSURE REQUIREMENTS OF EXHIBIT 2.)

FORM 1
(continue)

STEP 7.3

IS THE DIFFERENCE BETWEEN SENSORS LESS THAN 10° F? **Yes** **No** ☐
(IF NO: THE VAPOR POLISHER IS NOT IN COMPLIANCE WITH THE TEMPERATURE RANGE REQUIREMENTS OF EXHIBIT 2.)

Test	7.3.1	9.2.2	9.2.4&5
Ambient			
Outlet			
Cal			
Diff			
Diff Outlet & Cal (9.2.6)			
Diff Ambient & Cal (9.2.7)			

Tank 1	7.3.2	9.1
T5		
T4		
T5 - T4		
Cal		
T5 - Cal		
Tank 2	**7.3.2**	**9.1**
T5		
T4		
T5 - T4		
Cal		
T5 - Cal		
Tank 3	**7.3.2**	**9.1**
T5		
T4		
T5 - T4		
Cal		
T5 - Cal		

STEP 7.4

TLS Console ATM Pressure Reading _____ psi
Convert PMC pressure reading which is in term of psi value to atmospheric pressure in inches mercury: (psi +14.7) x 2.036 = _____
Atmospheric pressure from local source _____ inches mercury
Difference between Local and TLS Console = _____ A
0.10 x Local = _____ B

IS A < B? **Yes** **No**
(IF NO: THE VR POLISHER IS NOT IN COMPLIANCE WITH THE ATMOSPHERIC TEST REQUIREMENTS OF EXHIBIT 2.)