# EXHIBIT 14

# Dispenser Integrity Test

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 "CARB" refers to the California Air Resources Board, and the term "Executive Officer" refers to the Executive Officer of the CARB or his or her authorized representative or designate

## 1. PURPOSE AND APPLICABILITY

This test procedure is used to verify and check the integrity of the vapor line and hanging hardware of vacuum assist dispensers at gasoline dispensing facilities (GDF).

## 2. PRINCIPLE AND SUMMARY OF PROCEDURE

2.1. A mechanical or digital vacuum gauge (vacuum gauge) is installed into a test port within an assist GDF dispenser. The dispenser is authorized to dispense fuel so that the VP1000 vacuum pump can start running. Once the vacuum gauge has reached a stable value, the ball valve is turned to the closed position. The vacuum gauge is observed to see whether the initial vacuum value decreases which will determine the integrity of the vapor lines and the associated hanging hardware of the dispenser.

2.2. **There will be no liquid fueling in this procedure.**

2.3. The test procedure requires opening the doors or side panels of a dispenser to access the test port and ball valve.

2.4. The test procedure will be conducted on the side of the dispenser that has the easiest access to the test port and ball valve. The dispenser will be coned or closed off during the test.

2.5. The remainder of the GDF and dispensers may remain open while conducting this test procedure.

## 3. BIASES AND INTERFERENCES

3.1. Leaking or damaged connectors and hoses associated with the vacuum gauge test assembly will bias the test results resulting in a failure non-related to the integrity of the dispenser.

3.2. Threaded pipe fittings must use gasoline vapor rated Teflon tape, pipe sealant or equivalent to ensure leak free connections.

3.3. Fueling or engaging the nozzle's vapor valve during this test will bias the test results resulting in a failure non-related to the integrity of the dispenser.

3.4. This test procedure cannot be conducted if the initial vacuum reading is less than 60.0 inH20 (this means a vacuum value between 0 – 60 inH20).

## 4. SENSITIVITY, RANGE, AND ACCURACY

4.1. The mechanical or digital vacuum gauge shall have a minimum vacuum range of 0 – 100 inH20.

4.2. The minimum readability of the vacuum gauge shall be 2.0 inH20.

4.3. Accuracy is not required by this test procedure but whether or not the dispenser being tested can hold a vacuum for a predetermined period of time.

## 5. EQUIPMENT

5.1. **Mechanical or Digital Vacuum Gauge**
Use vacuum gauge to measure the vacuum of the VP1000 vacuum pump. Vacuum gauge must have a range of 0 – 100 inH20 and minimum readability of 2.0 inH20. See Figure 14-1.

5.2. **Test Assembly**
This test assembly consists of a hose and fittings that are attached to the vacuum gauge and used to install onto the test port. The test assembly will ease in the installation of the vacuum gauge in hard to reach locations. See Figure 14-2.

5.3. **Stopwatch**
Use a stopwatch accurate to within 0.2 seconds.

5.4. **Thread Sealant**
Use gasoline vapor rated Teflon tape, pipe sealant or equivalent to ensure a leak-tight seal between threaded fittings.

## FIGURE 14-1

## Typical Mechanical and Digital Vacuum Gauges




**Typical Mechanical Vacuum Gauges**




**Typical Digital Vacuum Gauges**

**FIGURE 14-2**

**Typical Test Assembly**




**Typical Test Assembly with Mechanical Gauge**




**Typical Test Assembly with Digital Gauge**

## 6. PRE-TEST PROCEDURES

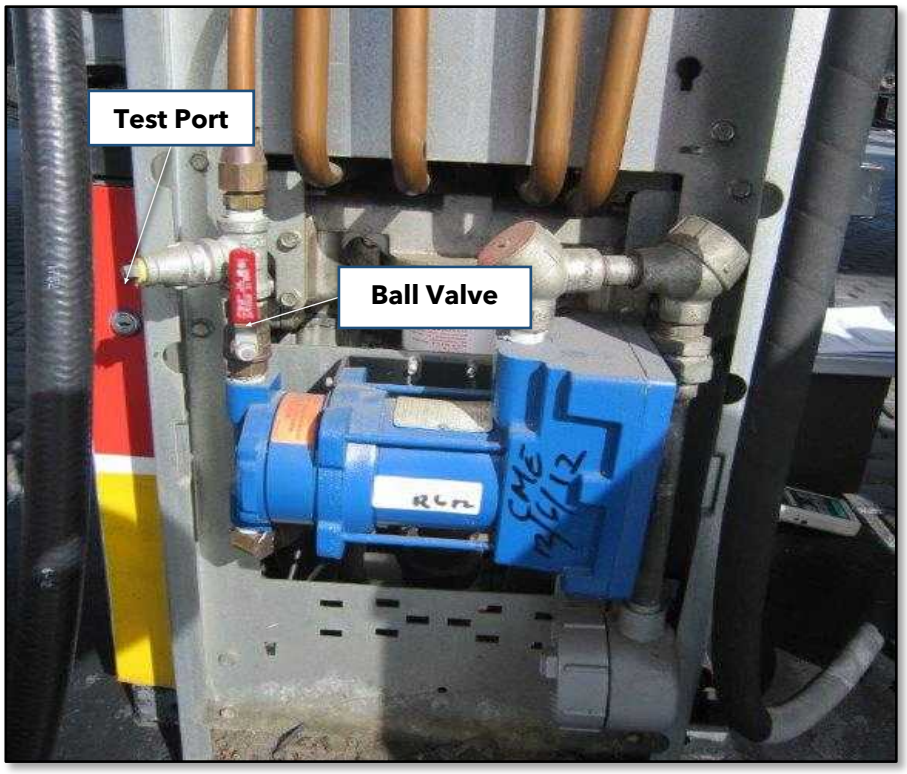
6.1. Close off dispenser to be tested by placing safety cones on both sides.

6.2. Use the appropriate dispenser key to open the dispenser panels and determine which side of the dispenser has the best access to test port and ball valve. Some dispensers require removal of a side panel in order to access the test port and ball valve. See Figure 14-3.

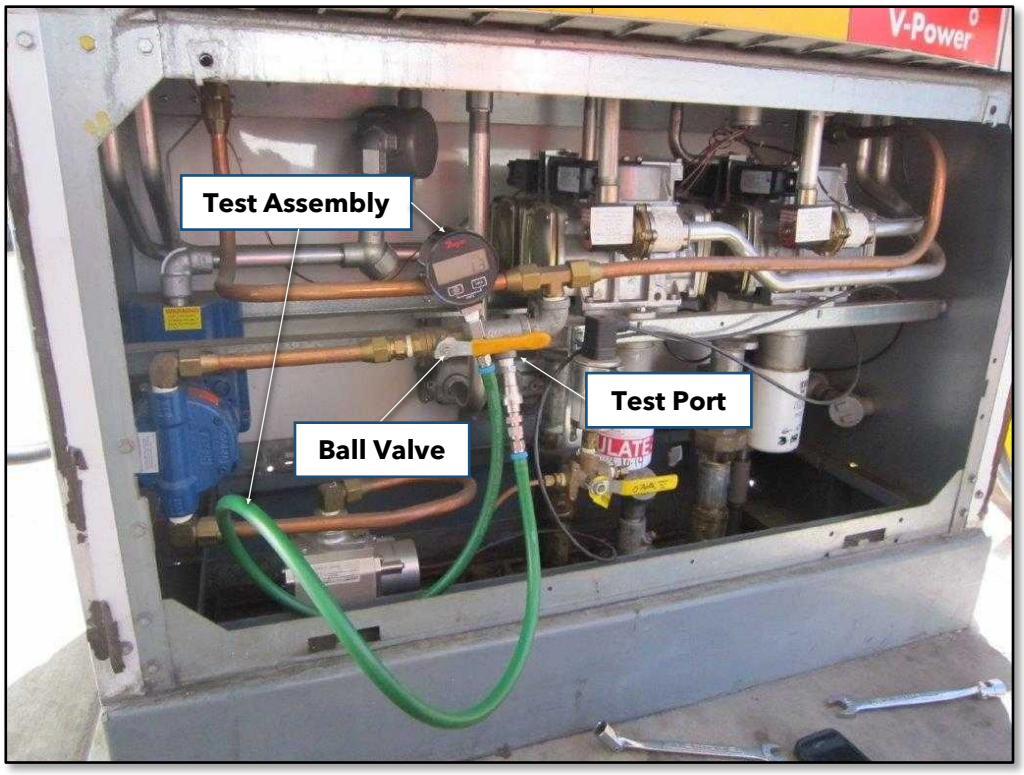
6.3. **No liquid fueling will be allowed at the dispenser being tested.**

**FIGURE 14-3**

**Typical Test Port and Ball Valve**




**Side Panel Removed**




**Front Panel Removed**

## 7. TEST PROCEDURES

7.1. Remove the test port plug being careful not to drop the test port plug in the liquid containment area below. The test port plug has a ¼" NPT thread. Apply appropriate gasoline vapor rated Teflon tape, sealant or equivalent on the test assembly thread.

7.2. Install the test assembly onto the test port. Tighten the test assembly using an appropriate wrench. See Figure 14-4.

7.3. Reset the stopwatch, if appropriate.

7.4. Use the GDF attendant or other appropriate means to authorize fueling for one of the nozzles on the dispenser being tested.

7.5. Remove nozzle from its holder and select one of the fuel grades on the dispenser being tested.

7.6. The VP1000 vacuum pump will start running. Observe the reading on the vacuum gauge and wait for the value to stabilize. This will usually take less than 15 seconds.

7.7. Turn the ball valve to the closed position (the ball valve is closed when the handle on the ball valve is perpendicular to the vapor tubing).

**Note:** This test procedure cannot be conducted if the initial vacuum reading is less than 60.0 inH20 (this means a vacuum value between 0 – 60 inH20). This could indicate a problem with the VP1000 vacuum pump or other dispenser issues. Testing the dispenser cannot be conducted until issue is resolved.

7.8. Reinstall the nozzle into its holder. VP1000 vacuum pump will stop running.

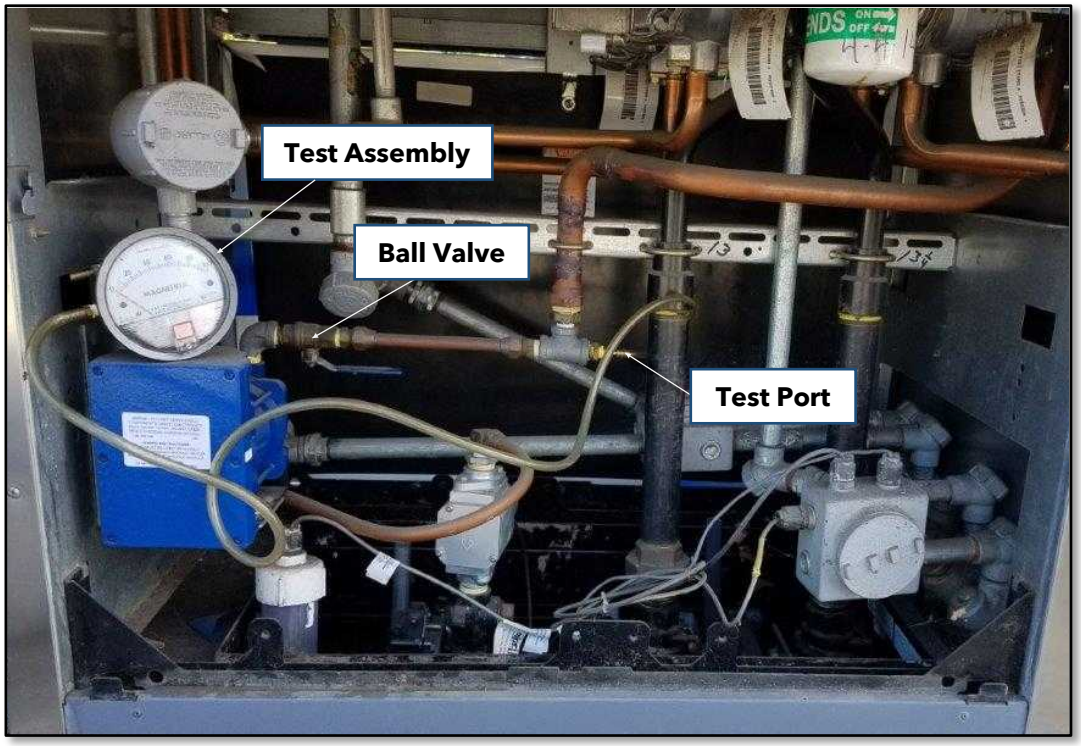
7.9. Transfer the initial observed vacuum reading onto Form 1 and start the stopwatch.

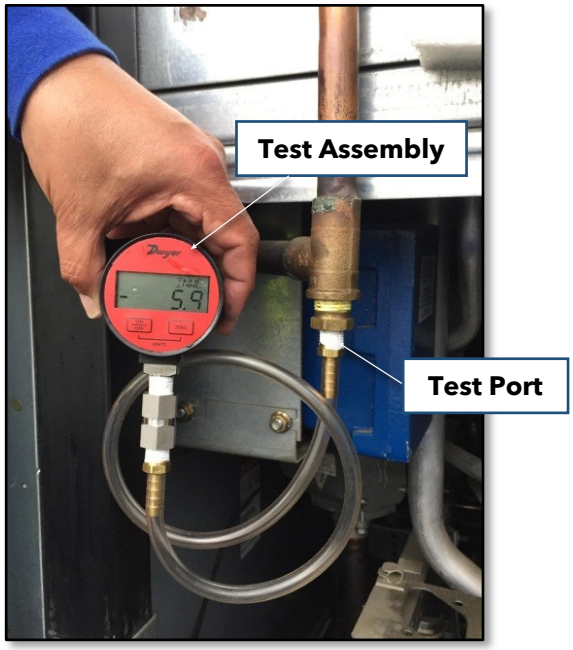
7.10. Observe and record the final vacuum reading after 60 seconds.

**Note:** Leaks must be repaired when the vacuum reading falls more than 4.0 inH20 in 60 seconds. Repair leaks as recommended in IOM Section 8. Retest until all leaks have been repaired.

**Figure 14-4**

**Typical Test Assembly Installed Onto Test Port**



## 8. POST-TEST PROCEDURES

8.1. Turn the ball valve to the open position (the ball valve is open when the handle on the ball valve is in-line with the vapor tubing).

8.2. Remove the test assembly. Apply the port plug with gasoline vapor rated Teflon tape, sealant or equivalent and reinstall and tighten the port plug on the test port using an appropriate wrench.

8.3. Reinstall and secure any dispenser panels previously removed.

## 9. REPORTING RESULTS

Report test data and other information as required in Form1 at the end of this document. Districts may require the use of alternate forms, provided they include the same minimum parameters.

## 10. ALTERNATE PROCEDURES

This procedure shall be conducted as specified. Modifications to this test procedure shall not be used to determine compliance unless prior written approval has been obtained from the CARB Executive Officer, pursuant to Section 14 of Certification Procedure CP-201.

**Form 1**

## Dispenser Integrity Test Worksheet

| Dispenser Number | Vacuum Value | | Difference | Pass/Fail * |
|---|---|---|---|---|
| | Initial ($inH_20$) | Final *(after 60 seconds)* ($inH_20$) | | |
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**Notes:**

* Dispenser Integrity Test fails when the vacuum reading falls more than 4.0 inH20 in 60 seconds.

(For example, initial vacuum value is 76.0 inH20 and final vacuum value is 70.0 inH20. Difference is ≥ 4.0 inH20, thus the dispenser fails dispenser integrity test).

Leaks must be repaired. Repair leaks as recommended in IOM Section 8.
Retest until all leaks have been repaired.