

## Clean Air Separator Testing Frequently Asked Questions

In CARB Executive Orders VR-201 and VR-202, the ullage pressure management device is the Clean Air Separator (CAS). The CAS is required to be tested within 30 days of startup and annually thereafter per Exhibit 4 testing protocol as outlined in these Executive Orders.

This bulletin addresses common questions regarding the testing of the vertical (p/n: 9961) and horizontal (p/n: 9961H) configurations of the CAS.

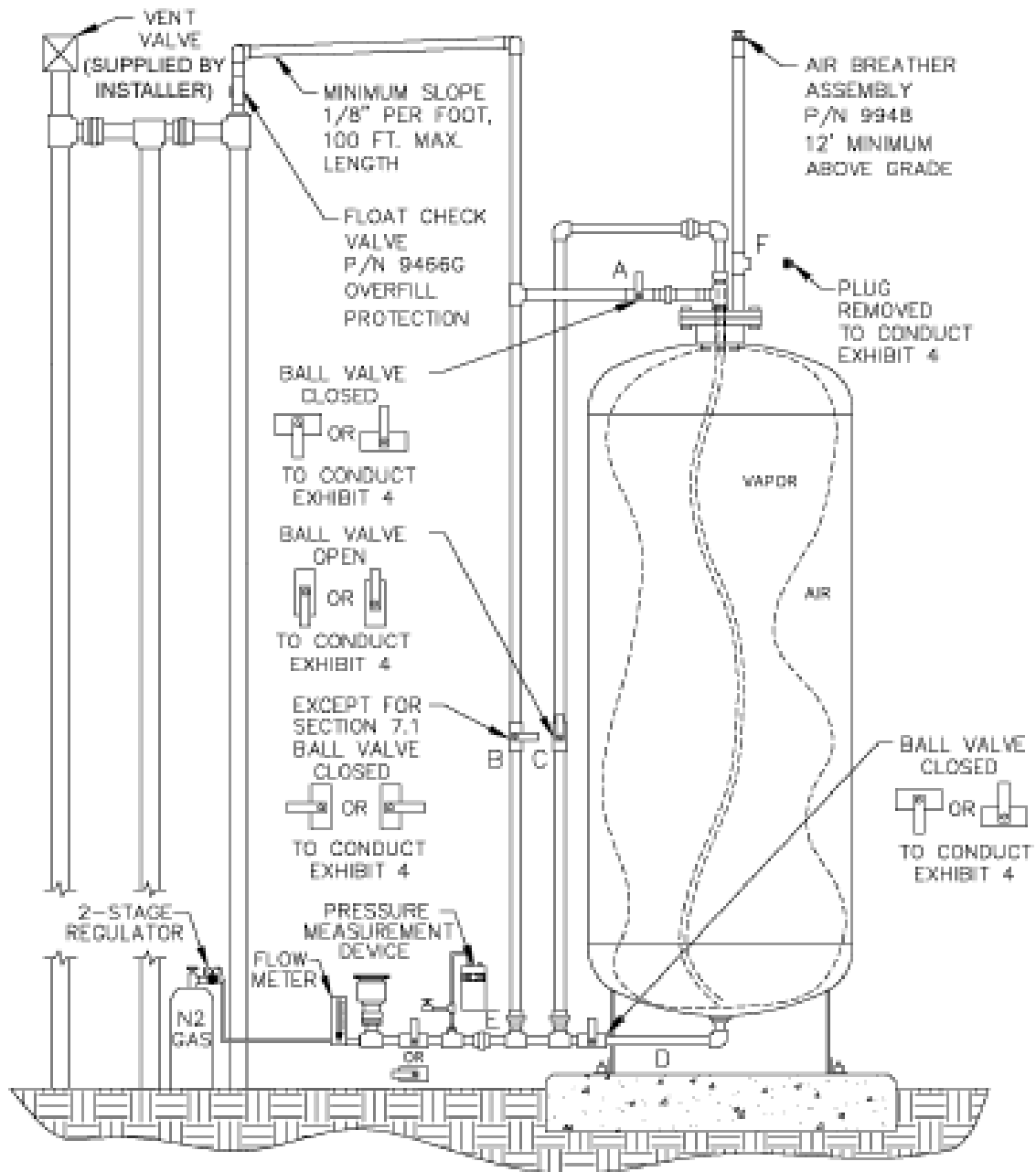
- **Q:** What type of test port assembly is required?
- **A:** Use a test port assembly constructed similar to the one shown in Figure A of Exhibit 4. Also the model/part number 9968 CAS Test Port Assembly can be purchased from Franklin Fueling Systems.
- **Q:** How long do I have to wait to perform a CAS test after a Phase I bulk delivery?
- **A:** There shall be no Phase I bulk deliveries into or out of the gasoline storage tank(s) within three hours prior to the CAS test or during the performance of the CAS test procedure.
- **Q:** When can I perform a vacuum decay test on the CAS?
- **A:** According to Exhibit 4 when the Phase II system's vacuum is greater than (more negative) than -2.00" WC. EVR Phase II systems per VR-201 and VR-202 will commonly be below -2" W.C. during normal GDF operation. The negative pressure test conducts the same evaluation as a positive pressure test. Check with your local AQMD for specific requirements.
- **Q:** During Exhibit 4 testing is the CAS isolated from the Phase II system?
- **A:** Yes. It is isolated from the Phase II system by arranging the CAS ball valves as shown in Figures 1 and 2.
- **Q:** What is the nitrogen flowrate when pressurizing the CAS?
- **A:** The nitrogen flowrate is specified in Exhibit 4 of the EO as 2.0 – 4.0 CFM (120-240 CFH).
- **Q:** How long does it take to pressurize the CAS bladder with nitrogen?
- **A:** Depends on the positive or negative pressure of the system when starting the test. It may take 30 minutes or more for the bladder to fully inflate from a deep negative ullage pressure.
- **Q:** How long does the pressure or vacuum decay test last?
- **A:** The decay test is 5 minutes per Exhibit 4 for both the pressure and vacuum tests.
- **Q:** Should air be coming out of where the "F" plug is normally installed?
- **A:** Yes. The reason the "F" plug is removed is to allow air surrounding the bladder to be pushed out at a faster rate instead of through the CAS Air Breather Assembly alone.
- **Q:** Where do I find the allowable minimum pressures for the positive and negative pressure decay tests?
- **A:** For the negative pressure decay test refer to Table 1 in Exhibit 4 for the allowable minimum vacuum after five minutes.

For complete details on the Clean Air Separator please refer to Executive Orders VR-201 and VR-202 on the California ARB website at <http://www.arb.ca.gov/vapor/vapor.htm> for the most current Healy Phase II EVR system information. Contact Franklin Fueling Systems Technical Support for further information.

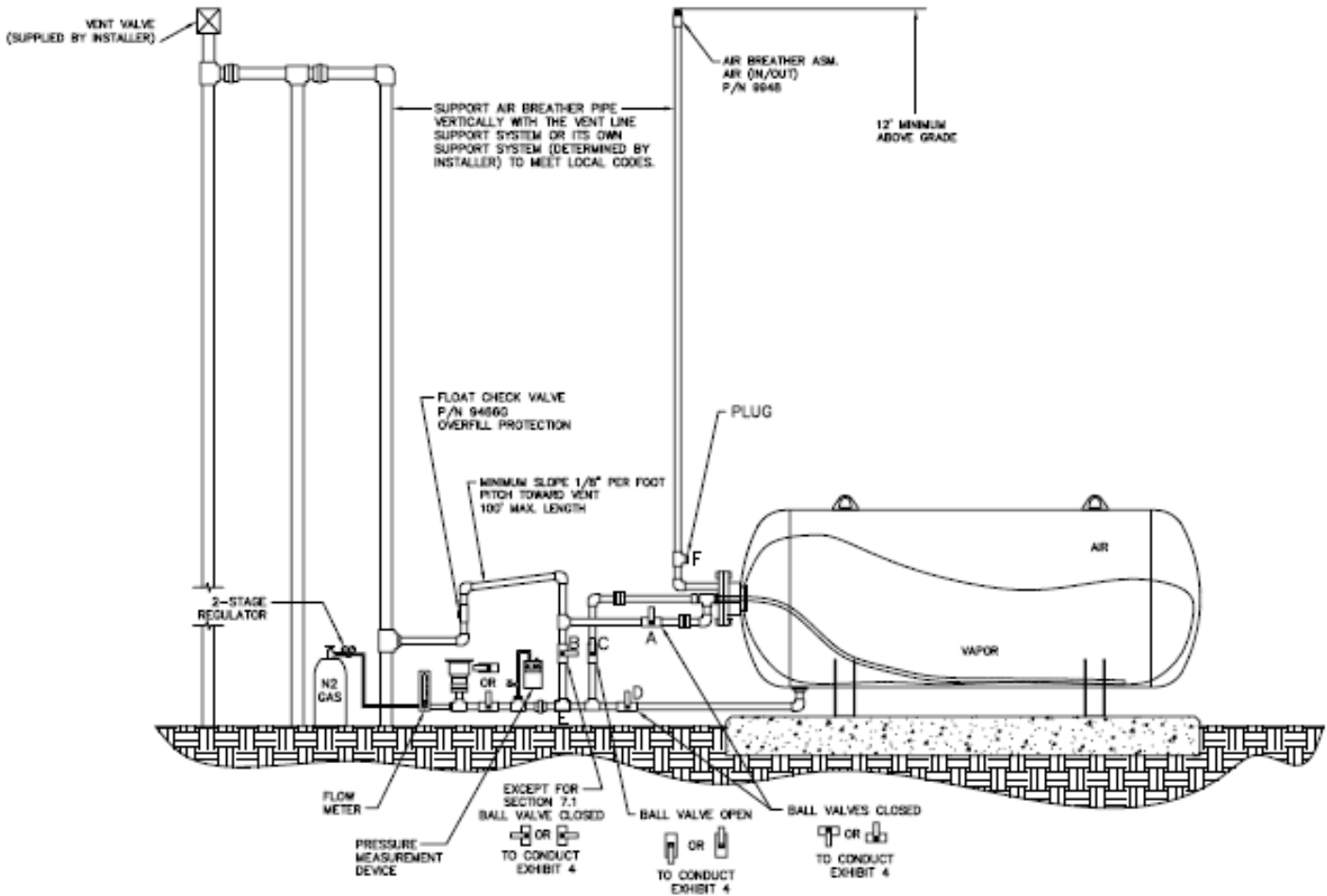
Sincerely,



Matt Johnson  
Applications Engineer-Dispensing Systems



**Figure 1: Vertical Clean Air Separator in Configuration to Conduct Test  
(See VR-201/VR-202 Exhibit 4 for complete details)**



**Figure 2: Horizontal Clean Air Separator in Configuration to Conduct Test  
(See VR-201/VR-202 Exhibit 4 for complete details)**