

2. INSPECTION CRITERIA FOR PHASE II GASOLINE VAPOR BALANCE SYSTEMS

REF: Reg. 8-7-601

2.1 INTRODUCTION

Regulation 8-7-305 requires that all equipment be maintained in good working order. The following criteria have been developed to insure uniformity in the evaluation of Phase II gasoline vapor balance systems and the following procedures are used during the inspection of such systems.

2.2 VAPOR BALANCE SYSTEMS

2.2.1 Only two first generation vapor balance systems are approved for use within the BAAQMD, OPE 7VA and Emco Wheaton A300. Any system installed after September 26, 1978 must be certified by the California Air Resources Board (CARB). The first generation systems require only the nozzle, vapor hose, and underground vapor piping. The state certified systems required the nozzle, shorter hoses, an anti-recirculation valve, on retail facilities, swivels at the nozzle and dispenser, and a flow limiter. A further prerequisite for state certification is a maximum allowable pressure drop, through the underground system, of .35 inches of water column at a flowrate of 50 CFH.

2.3 THE BAAQMD INSPECTION

2.3.1 Various items are checked by BAAQMD inspectors during the evaluation of Phase II vapor balance systems. Figure I-1 is the inspection sheet (Form I-24-79) used to determine compliance status of the system. The following are the procedures for filling out Form #I-24-79.

- 2.3.2 Station. Enter the name of the service station.
- 2.3.3 Address. Enter the street address of the service station.
- 2.3.4 City. Enter the city in which the service station is located.
- 2.3.5 Contact. Enter the name of the station owner or manager.
- 2.3.6 Phone. Enter the telephone number of the service station.
- 2.3.7 Date. Enter the date of the inspection.
- 2.3.8 Inspector. Enter the name of the person performing the inspection.
- 2.3.9 VN #. If a Violation Notice is issued enter the violation notice number. If no VN is issued enter "none". Do not leave this space blank.
- 2.3.10 Permit. Enter the Permit to Operate number. Do not leave this space blank.
- 2.3.11 No. of Self-Service Islands. Enter the number of self-service islands.
- 2.3.12 No. of Full-Service Islands. Enter the number of full-service islands.
- 2.3.13 Total No. of Dispensers. Enter the total number of dispensers.
- 2.3.14 No. of Unleaded Dispensers. Enter the number of unleaded dispensers.
- 2.3.15 No. of Regular Dispensers. Enter the number of regular grade dispensers.

2.3.16 No. of Premium Dispensers. Enter the number of premium grade dispensers.

2.3.17 Pump Number. If a diagram is included on the inspection sheet then enter the number from the diagram (1,2,3, etc.). If a diagram is not included or if the pumps are not numbered then enter the serial number on the dispenser. (Note the dispenser model number.)

2.3.18 Nozzle Type. Enter the manufacturer and model number of the nozzle. The vapor balance nozzles most encountered will be OPW 7VA, OPE 7VC, Emco-Wheaton A300 and Emco-Wheaton A3003.

2.3.19 Gas Grade. Enter P for Premium, R for Regular, UL for unleaded, and D for diesel.

On the following 12 items, enter a Y in the appropriate square on Form I-24-79 if the item is acceptable as installed and enter a N if the item is not acceptable.

2.3.20 Nozzle Type. The following vapor balance nozzles are acceptable: OPE 7VA, Emco-Wheaton A3003, OPW 7VA properly maintained and Emco-Wheaton A300 properly maintained.

2.3.21 Mounting Rack. Nozzle must be mounted securely and in such a manner that the vapor check valve is closed. (Insure that bellows are not compressed.)

2.3.22 Face Seal. The face seal must not be cracked, torn or missing. If the nozzle is not equipped with a separate face seal enter N/A.

2.3.23 Plastic Cup. The OPW 7VA nozzles are equipped with a white plastic cup that pushes against the back.

surface of the face seal. If the cup is broken or cracked, vapor can leak from the nozzle. For all other nozzle types, enter N/A on I-27-79.

2.3.24 Ring or Rivet. The latch ring shall be secured in its specified position and rivets must not be loose or sheared off.

2.3.25 Bellows. The bellows should be clamped securely to the nozzle barrel and must not have cracks or tears or holes.

2.3.26 Flow Limiter. If the state certified Emco-Wheaton A3003 nozzle is used a flow limiter must be present on the product line. If any other nozzle except the OPW 7VC is being used then enter N/A/ The OPW 7VC is equipped with an internal flow limiter.

2.3.27 Swivels. If a state certified OPW 7VC or Emco-Wheaton A3003 nozzle is used there must be two swivels attached to the nozzle. If a first generation OPW 7VA or Emco-Wheaton A300 nozzle is being used and no swivels are present enter N/A.

2.3.28 Hose 9/8 Length. If a state certified nozzle is used the vapor and product hose lengths must be 8 and 9 feet respectively, or 1/2 the island width plus 6 feet. If a first generation nozzle is used, any hose length is acceptable.

2.3.29 Recirculation Trap. If a state certified balance system is installed, an anti-recirculation valve must be included on commercial retail facilities. Acceptable are OPW 78 series or Emco-Wheaton A-8. These may be

installed inside or outside the dispenser and the inlet to the valve must be not greater than 3.5 inches above the island. If a first generation nozzle is used enter N/A.

2.3.30 Swivels. If a state certified system is installed there must be a swivel on the vapor hose at the anti-recirculation valve. The OPW 78-S anti-recirculation valve has a built-in swivel. If a first generation system is used and no swivel is present enter N/A.

2.3.31 Flat, Torn or Kinked. Vapor hoses shall be leak free and kinked or flattened hoses are unacceptable.

2.3.32 Pressure Drop Test, ΔP , Inches of Water Column.

2.3.32.1 Before Draining Hose. See Source Test Method ST-27.

2.3.32.2 After Draining Hose. See Source Test Method ST-27.

2.3.33 Auto Shutoff, Y or N. The automatic shutoff mechanism of the nozzle shall be checked in either of the following ways.

2.3.33.1 Fill a container with gasoline to a depth of approximately 3 inches, begin dispensing gas and dip the spout into the liquid, insuring that the pressure tap is submerged. If the nozzle does not shut off there is a defect in the nozzle.

2.3.33.2 With dispenser OFF engage the nozzle trigger, place finger securely over the pressure tap and use a squeeze bulb to induce a vacuum. If the nozzle trigger does not release, the automatic shut off mechanism is malfunctioning.

2.3.34 Comments. Enter any appropriate comments regarding compliance status of vapor recovery equipment.

2.3.35 After completing the inspection, give the pink copy of Form I-27-79 to the station contact along with the Violation Notice, if one is issued.

Vapor Recovery Inspection Sheet

939 Ellis Street ♦ San Francisco, California 94109 ♦ (415) 771-6000

Station: _____ PO Exp Date: _____
 Address _____ City: _____ Zip: _____
 Phone: (____) _____ Owner/Operator _____
 Contact _____ System Type _____
 No. of Nozzles (Gasoline) _____ (Methanol) _____ (Diesel) _____ Maintenance Log
 Tank Size (gals): Reg: _____ Mid: _____ Prm: _____ (grade): _____
 Permit Condition #: _____ Limit: _____ Actual: _____

Page of _____
 G#: _____
 Date: _____
 S/U App #: _____
 Compl. #: _____
 Insp. #: _____
 # Minors: #Tags: _____
 NOV #: _____
 NTC #: _____
 Partial Inspection

Phase I: 2-Point Coaxial PV Subfill Anti-Roational Couplings
 Source Test Dates: Drop Tube Integrity _____ ST-27 _____ ST-30/38 _____ ST-39 _____
 System Pressure Check (+, -, 0) Regular _____ Mid _____ Premium _____ (grade) _____
 Torque Tests (Average inch-lb) Regular _____ Mid _____ Premium _____ (grade) _____

Phase II: Instruction Signs Posted with 1-800-334-Odor or 1-800-952-5588 Yes No

Nozzles Numbered <u>Yes / No</u>	Nozzle No.																			
	Nozzle Type																			
	Gas Grade																			
<input type="checkbox"/> Cabinet(s) Checked																				
Nozzle	1. Nozzle																			
	2. Vapor Check Valve																			
	3. Bellows																			
	4. Face Seal																			
	5. Ring, rivet, spring																			
	6. Swivels (Multiplane where applicable)																			
Hose	7. Configuration, Length, Condition																			
	8. Liquid Retention mls (Balance)																			
	9. Retractor																			
Other	10. Pressure Drop (Δ P Balance)																			
	11. Squeeze Bulb																			
	12. Ring Test																			
	13. Others _____																			
	14. Tag Number																			

Remarks: _____

T = Tag M = Minor (Repair within 7 Days, complete by Date _____) Operator **X** _____

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