

**State of California
AIR RESOURCES BOARD**

**Executive Order VR-104-E
CNI Manufacturing Phase I Vapor Recovery 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 the filling of underground gasoline storage tanks, 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 and 41954, test procedures for determining the compliance of Phase I vapor recovery systems with emission standards;

WHEREAS, CNI Manufacturing requested and was granted certification of the CNI Manufacturing Phase I Vapor Recovery System (CNI Manufacturing system) pursuant to the Certification Procedure on September 26, 2003 by Executive Order VR-104-A; and last modified on May 30, 2008, by Executive Order VR-104-D;

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, including modifications, 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 (GDF); and

WHEREAS, I, William V. Loscutoff, Chief of the Monitoring and Laboratory Division, find that the CNI Manufacturing Phase I Vapor Recovery System, including modifications, conforms with all of the requirements set forth in the Certification Procedure and results in a vapor recovery system which is at least 98.0 percent efficient as tested in accordance with test procedure **TP-201.1, Volumetric Efficiency for Phase I Systems (October 8, 2003)**.

NOW THEREFORE, IT IS HEREBY ORDERED that the CNI Manufacturing system is certified to be at least 98.0 percent efficient when installed and maintained as specified herein and in the following exhibits. Exhibit 1 contains a list of the certified components. Exhibit 2 contains the performance standards and specifications, typical installation drawings, and maintenance intervals, applicable to the CNI Manufacturing system as installed in a GDF. Exhibit 3 contains the manufacturing specifications.

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 CNI Manufacturing shall provide a warranty for the vapor recovery system and components to the initial purchaser. The warranty shall be passed on to each subsequent purchaser within the warranty period. The manufacturer of components listed in Exhibit 1 not manufactured by CNI Manufacturing shall provide a warranty to each of their components certified herein. 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. CNI Manufacturing or other manufacturers may specify that the warranty is contingent upon the use of trained installers.

IT IS FURTHER ORDERED that the certified CNI Manufacturing System shall be installed, operated, and maintained in accordance with the ***ARB-Approved Installation, Operation and Maintenance Manual for the CNI Manufacturing Phase I Vapor Recovery System*** as certified by Executive Order VR-104-E. A copy of this Executive Order and manual shall be maintained at each GDF where a certified CNI Manufacturing system is installed.

IT IS FURTHER ORDERED that all equipment listed in Exhibit 1, unless exempted in writing by the Executive Officer or Executive Officer delegate, shall be clearly identified with a permanent identification showing the manufacturer's name and model 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's delegate.

IT IS FURTHER ORDERED that the following requirements be made a condition of certification. The owner or operator of the CNI Manufacturing system shall conduct, and pass, the following tests no later than 60 days after startup and at least once every three (3) years after startup testing, 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-201.1B, Static Torque of Rotatable Phase I Adaptors (October 8, 2003)***, and depending on the system configuration, either ***TP-201.1C, Leak Rate of Drop Tube/Drain Valve Assembly (October 8, 2003)*** or ***TP-201.1D, Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves (October 8, 2003)***. Shorter time periods may be specified in accordance with local district requirements. 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. Alternate test procedures, including the most recent versions of the test procedures listed above, may be used if determined

by the Executive Officer or Executive Officer delegate, in writing, to yield comparable results. Testing the pressure/vacuum (P/V) vent valve will be at the option of the local districts. If P/V vent valve testing is required by the district, the test shall be conducted in accordance with TP-201.1E, **Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003)** and Exhibit 2.

IT IS FURTHER ORDERED that the CNI Manufacturing system shall be compatible with gasoline in common use in California at the time of certification and any modifications to comply with future California gasoline requirements shall be approved in writing by the Executive Officer or Executive Officer's delegate.

IT IS FURTHER ORDERED that certification for the Husky Model 4885 Pressure/Vacuum Vent Valve is revoked because it fails to conform to the specifications as described in CP-201 and Exhibit 2. The Husky Model 4885 Pressure/Vacuum Vent Valve shall not remain in use after May 31, 2012.

IT IS FURTHER ORDERED that the certification of the CNI Manufacturing Phase I Vapor Recovery System is valid through May 31, 2012.

IT IS FURTHER ORDERED that Executive Order VR-104-D issued on May 30, 2008, is hereby superseded by this Executive Order. CNI Manufacturing Phase I Vapor Recovery Systems certified under Executive Order VR-104-A to D may remain in use at existing installations. This Executive Order shall apply to new installations or major modification of existing Phase I systems.

Executed at Sacramento, California, this 14th day of September 2009.


William V. Loseutoff, Chief
Monitoring and Laboratory Division

Attachments:

- Exhibit 1 CNI Manufacturing Phase I Vapor Recovery System Equipment List
- Exhibit 2 Installation, Maintenance and Compliance Standards and Specifications
- Exhibit 3 Manufacturing Performance Standards and Specifications

Exhibit 1

CNI Manufacturing Phase I Vapor Recovery System Equipment List

<u>Equipment</u>	<u>Manufacturer/Model Number</u>
Containment Assembly	CNI Manufacturing XXXX-31103 (31103 denotes EVR System) 2 point System Configuration: XXXX (four digit code) indicates: CON1 – Vapor Assembly (5, 10, and 15 gallons) CON2 – Product Assembly (5, 10, and 15 gallons) Stand Alone/Direct Bury Configuration ¹ : XXXX (four digit code) indicates: 205P - Product Assembly 205V - Vapor Assembly (205 series are 5 gallons) 214P - Product Assembly 214V - Vapor Assembly (214 series are 5 gallons)
Pressure/Vacuum Vent Valve	FFS PV-Zero Husky 5885
Gravity Cover	CNI Mfg. GAC (used for CON1, CON2 or 214 Containments)
Snap Tight Cover	CNI Mfg. STP-200 (used for CON1, CON2 or 205 Containments)
Snap Tight Cover Ring	CNI Mfg. STP-39

¹ CNI Mfg. Stand Alone/Direct Bury Configurations 205P, 205V, 214P and 214V are not certified for use in a sump configuration.

Exhibit 1 (continued)

Drain Valve	CNI Mfg. RP12-Push
Dust Caps	CNI Mfg. 64 (product) CNI Mfg. 611-VR-3 (vapor) CompX CSP1-634LPC (product) CompX CSP3-1711LPC (vapor) CompX CSP2-634LPC (product) CompX CSP4-1711LPC (vapor) OPW 634LPC (product) OPW 1711LPC (vapor)
Dust Cap Gasket	CNI Mfg. 65 CNI Mfg. RP65 (replacement)
Product Adaptor	Emco Wheaton Retail A0030-124 Emco Wheaton Retail A0030-124S
Vapor Adaptor	Emco Wheaton Retail A0076-124 Emco Wheaton Retail A0076-124S
Jam Nut	CNI Mfg. 200JN
Tank Gauge Port Components	CNI Mfg. 613BC set (Cap 64, Adaptor 613)
Drop Tube²	CNI Mfg. DT100 (various lengths)
CNI Mfg. Drop Tube O-Ring³	CNI Mfg. DT101 (original) CNI Mfg. RP101 (replacement)
Drop Tube Overfill Prevention Valve²	EMCO Wheaton Retail A1100EVR Guardian
EMCO Wheaton Drop Tube O-Ring⁴	EMCO Wheaton Retail 569461

² If these components are installed or required by regulations of other agencies, only those components and model numbers specified above shall be installed or used.

³ O-Rings used only with the CNI Mfg. DT100 drop configuration.

⁴ O-Ring used only with the EMCO Wheaton Retail A1100EVR Guardian Overfill drop tube configuration.

Exhibit 1 (continued)

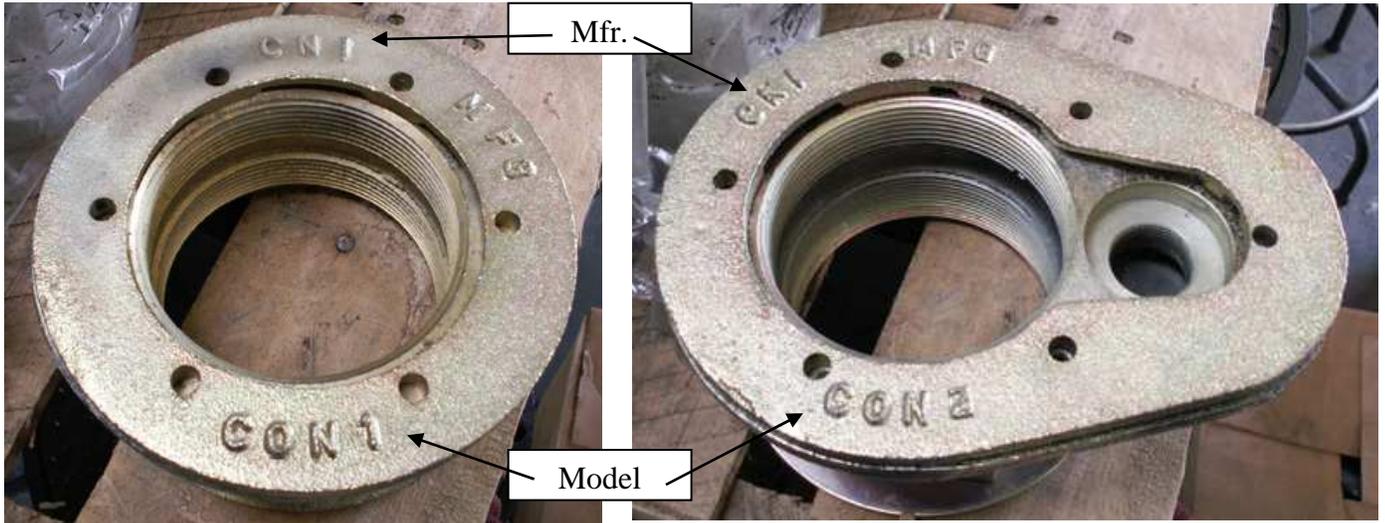
**Table 1
Components Exempt from Identification Requirements**

Component Name	Manufacturer	Model Number
Replacement Drain Valve	CNI Mfg.	RP12-Push
Jam Nut	CNI Mfg.	200JN
Tank Gauge Port Components (Cap and Adaptor)	CNI Mfg.	613BC Cap and Adaptor set; p/n 64 and 613
Dust Cap gaskets	CNI Mfg.	Gasket 65 original, RP65 for replacement
O-Rings and gaskets for product and vapor adaptors	EMCO Wheaton Retail	O-rings in kit 494301, gasket 409628; O-rings in kit 493995
Drop Tube O-Ring	CNI Mfg.	DT101 original, RP101 replacement
	EMCO Wheaton Retail	56941
Drop Tube ²	CNI Mfg.	DT100
Containment Assembly	CNI Mfg.	XXXX-31103*
Gravity Cover	CNI Mfg.	CNI Mfg. GAC
Snap Tight Cover	CNI Mfg.	CNI Mfg. STP-200
Snap Tight Cover Ring	CNI Mfg.	CNI Mfg. STP-39

***CON1, CON2, 205, and 214 shall be marked on each containment assembly.**

² If these components are installed or required by regulations of other agencies, only those components and model numbers specified above shall be installed or used.

Exhibit 1 (continued)
Component Identification & Location

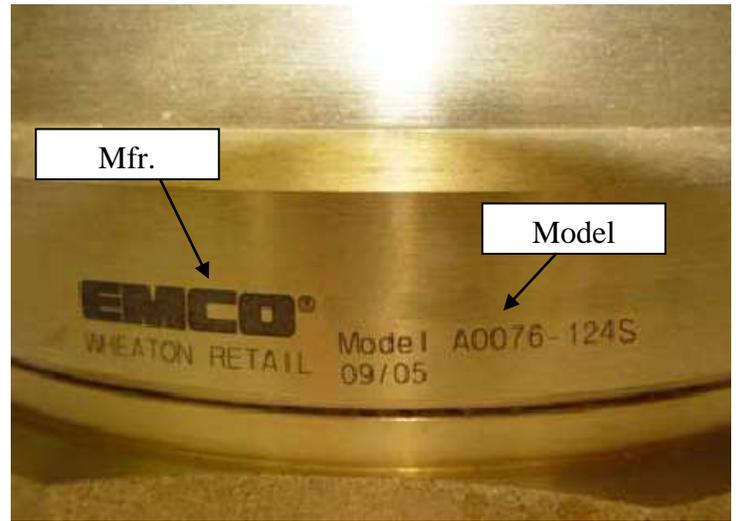
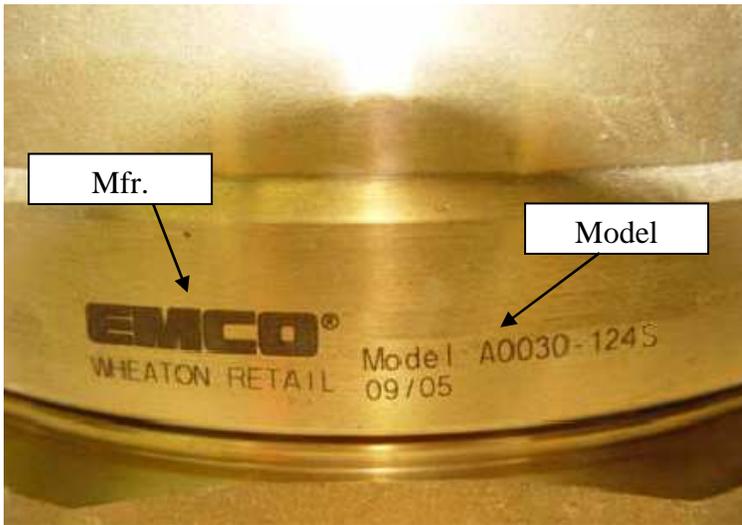


CNI Mfg. CON1 and CON2 Containment Assemblies

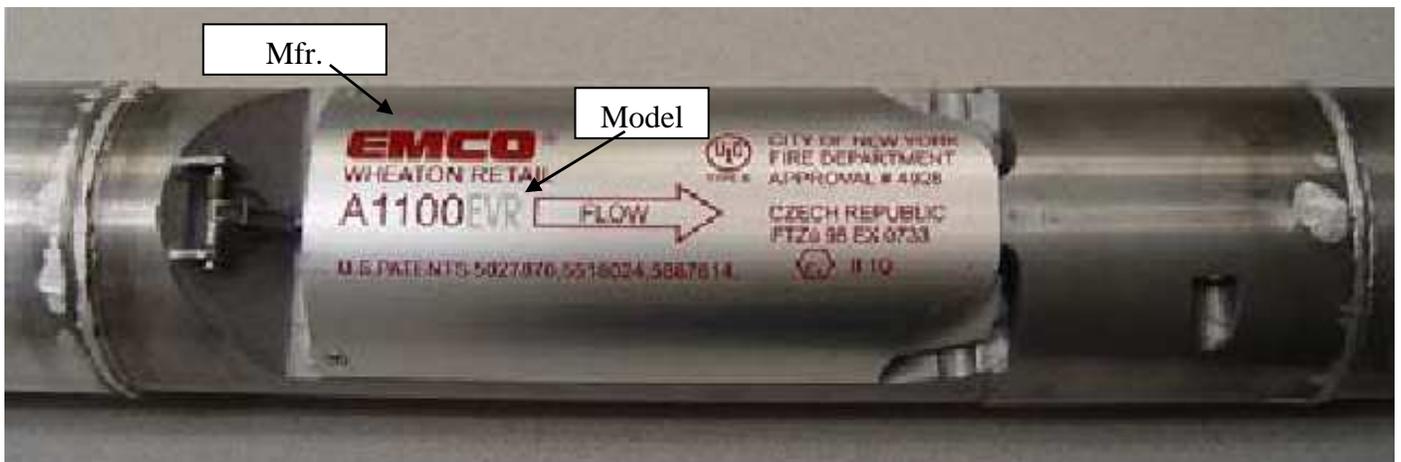


CNI Mfg. Model 205 and 214 Containment Assemblies

Exhibit 1 (continued)
Component Identification & Location

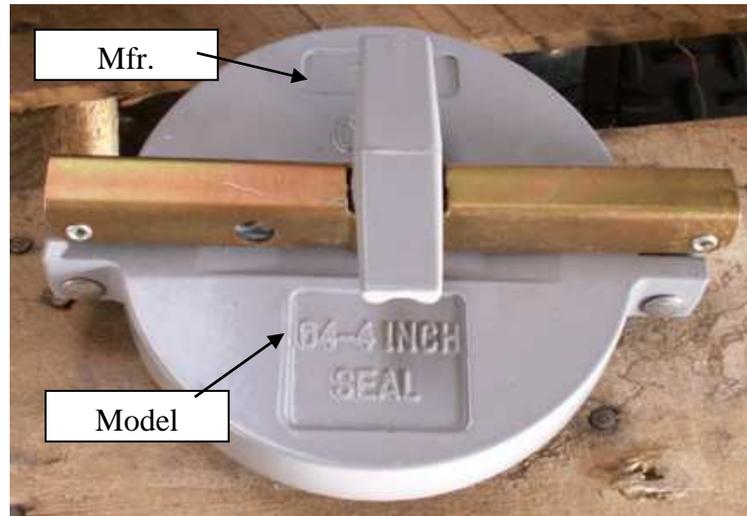


EMCO Wheaton Retail
Model A0030-124S Product Adaptor and Model A0076-124S Vapor Adaptor
(Models A0030-124 and A0076-124 identified in the same location)

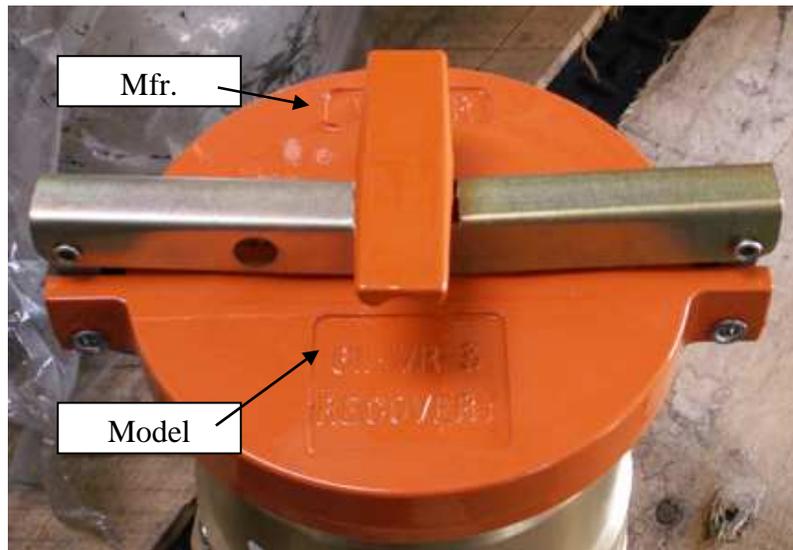


EMCO Wheaton Retail
Model A1100EVR Overfill Prevention Valve

Exhibit 1 (continued)
Component Identification & Location



CNI Mfg. Model 64 Dust Cap



CNI Mfg. Model 611-VR-3 Dust Cap

Exhibit 1 (continued)
Component Identification & Location

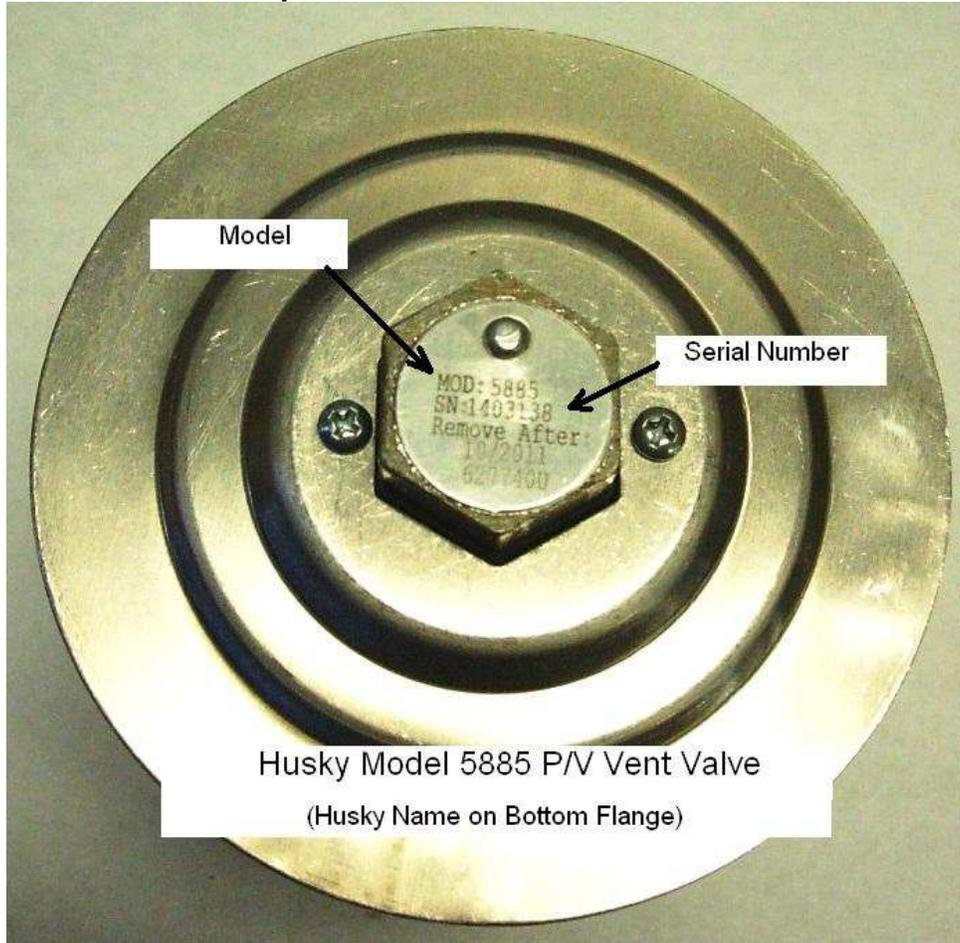


Exhibit 1 (continued)
Component Identification & Location



OPW 634LPC Product Dust



OPW 1711LPC Vapor Dust

Exhibit 1 (continued)
Component Identification and Location

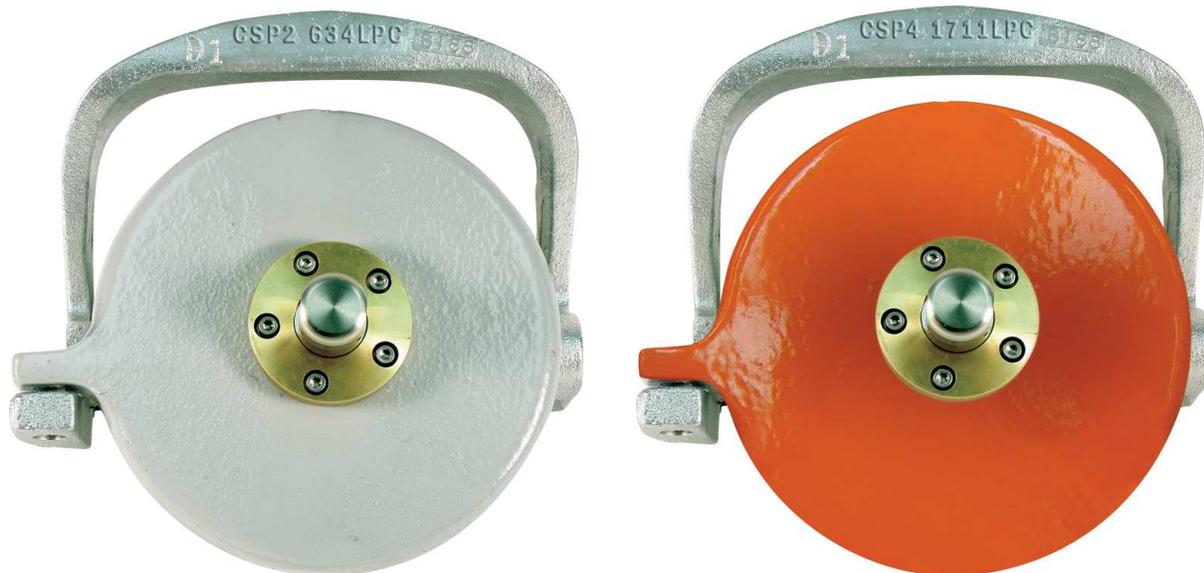


CompX CSP1-634LPC Product Dust Cap CompX CSP3-1711LPC Vapor Dust Cap



CompX Tank Commander Lid
Locks onto CSP1-634LPC and CSP3-1711LPC Dust Caps

Exhibit 1 (continued)
Component Identification and Location



CompX CSP2-634LPC Product Dust Cap CompX CSP4-1711LPC Vapor Dust Cap



CompX Tank Commander Lid
Locks onto CSP2-634LPC and CSP4-1711LPC Dust Caps

Exhibit 1 (continued)
Component Identification and Location



FFS PV-Zero P/V Vent Valve
(Model and Serial Number on White Tag)

Executive Order VR-104-E
CNI Manufacturing Phase I Vapor Recovery System

Exhibit 2
Installation, Maintenance and Compliance Standards and Specifications

This exhibit contains the installation, maintenance and compliance standards and specifications applicable to a CNI Manufacturing Phase I Vapor Recovery System (CNI Manufacturing System) installed in a gasoline dispensing facility (GDF).

General Specifications

1. Typical installations of the CNI Manufacturing System are shown in Figures 2A, 2B, 2C, 2D, 2E, 2F, and 2G.
2. The CNI Manufacturing System shall be installed, operated and maintained in accordance with **ARB Approved Installation, Operation and Maintenance Manual for the CNI Manufacturing Phase I Vapor Recovery System** as certified by Executive Order VR-104-E.
3. Any repair or replacement of system components shall be done in accordance with **ARB Approved Installation, Operation and Maintenance Manual for the CNI Manufacturing Phase I Vapor Recovery System** as certified by Executive Order VR-104-E.
4. The CNI Manufacturing System shall comply with the applicable performance standards and performance specifications in CP-201.
5. Installation, maintenance and repair of system components, including removal and installation of such components in the course of any required tests, shall be performed by CNI Mfg. certified technicians.

Pressure/Vacuum Vent Valves For Storage Tank Vent Pipes¹

1. No more than three certified pressure/vacuum vent valves (P/V Valves) listed in Exhibit 1 shall be installed on any GDF underground storage tank system.
2. Compliance determination of the following P/V valve performance specifications shall be at the option of the districts:
 - a. The leak rate of each P/V valve shall not exceed 0.05 cubic feet per hour (CFH) at 2.0 inches of H₂O positive pressure and 0.21 CFH at 4.0 inches negative pressure as determined by **TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003)**.
 - b. The positive pressure setting is 2.5 to 6.0 inches of H₂O and the negative pressure setting is 6.0 to 10.0 inches of H₂O as determined by **TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves (October 8, 2003)**.
3. Compliance determination of the P/V valve performance specifications in items 2a and 2b

¹ The requirement that the vent pipe manifold be installed at a height not less than 12 feet above the grade stated in Executive Order VR-104-A is rescinded.

for the FFS PV-Zero P/V vent valve shall be conducted with the valve remaining in its installed position on the vent line(s). The PV-Zero section of the **ARB-Approved Installation, Operation and Maintenance Manual for the CNI Phase I Vapor Recovery System** outlines the equipment needed to test the valve in its installed position.

4. At least one pressure/vacuum (P/V) vent valve shall be installed on each tank vent. If two or more P/V vent valves are used, they shall be installed in parallel, so that each can serve as a backup to the other if one should fail to open properly. A manifold may be installed on the vent pipes to reduce the number of potential leak sources and P/V valves installed. Vent pipe manifolds shall be constructed of steel pipe or an equivalent material that has been listed for use with gasoline. If a material other than steel is used, GDF operator shall make available information demonstrating that the material is compatible for use with gasoline. One example of a typical vent pipe manifold is shown in Figure 2H. This shows only one typical configuration: other manifold configurations may be used. For example, a tee may be located in a different position, or fewer vent pipes may be connected, or more than one P/V valve may be installed on the manifold.
5. Each P/V valve shall have permanently affixed to it a yellow or gold-colored label with black lettering stating the following specifications:

Positive pressure setting: 2.5 to 6 inches H₂O
Negative pressure setting: 6.0 to 10.0 inches H₂O
Positive Leak rate: 0.05 CFH at 2.0 inches H₂O
Negative Leak rate: 0.21 CFH at 4.0 inches H₂O

Rotatable Product and Vapor Recovery Adaptors

1. Rotatable product and vapor recovery adaptors shall be capable of at least 360-degree rotation and have an average static torque not to exceed 108 pound-inch (9 pound-foot). Compliance with this requirement shall be demonstrated in accordance with **TP-201.1B, Static Torque of Rotatable Phase I Adaptors (October 8, 2003)**.

Use CNI Manufacturing Torque Test Tool Part Number EVRSYS100, as an equivalent Torque Test Tool per section 5.2 of TP-201.1B, rather than Phil-Tite Torque Test Tool Part Number 6004. The Phil-Tite tool is not compatible with CNI Manufacturing dust caps.

2. The vapor adaptor poppet shall not leak when closed. Compliance with this requirement shall be verified by the use of commercial liquid leak detection solution, or by bagging, when the vapor containment space of the underground storage tank is subjected to a non-zero gauge pressure. (Note: leak detection solution will detect leaks only when positive gauge pressure exists).

Vapor Recovery and Product Adaptor Dust Caps

1. Dust caps with intact gaskets shall be installed on all Phase I tank adaptors.

Spill Container Drain Valve

1. The spill container drain valve shall be configured to drain liquid directly into the drop tube and shall be isolated from the underground storage tank ullage space. The leak rate of the drain valve shall not exceed 0.17 CFH at 2.00 inches H₂O. Depending on the presence of the drop tube overflow prevention device, compliance with this requirement shall be demonstrated in accordance with either **TP-201.1C, *Leak Rate of Drop Tube/Drain Valve Assembly*** or **TP-201.1D (October 8, 2003), *Leak Rate of Drop Tube Overflow Prevention Devices and Spill Container Drain Valves (October 8, 2003)***.

Phase I Drop-Tubes with Over-Fill Prevention Devices

1. The leak rate of Phase I drop-tube overflow prevention devices shall not exceed 0.17 cubic feet per hour (0.17 CFH) at a pressure of two inches water column (2.0" H₂O). The leak rate shall be determined in accordance with **TP-201.1D, *Leak Rate of Drop Tube Overflow Prevention Devices and Spill Container Drain Valves (October 8, 2003)***.
2. The discharge opening of the fill-pipe must be entirely submerged when the liquid level is six inches above the bottom of the tank.

Phase I Drop-Tubes without Over-Fill Prevention Devices

1. Drop tubes that do not have an over-fill prevention device shall not leak and shall be tested in accordance with **TP-201.1C, *Leak Rate of Drop Tube/Drain Valve Assembly (October 8, 2003)***.
2. The discharge opening of the fill-pipe must be entirely submerged when the liquid level is six inches above the bottom of the tank.

Vapor Recovery Riser Offset

1. The vapor recovery tank riser may be offset from the tank connection to the vapor recovery Spill Container provided that the maximum horizontal distance (offset distance) does not exceed twenty (20) inches. One example of an offset is shown in Figure 2I .
2. The vapor recovery riser shall be offset using commercially available, four (4) inch diameter steel pipe fittings.

Tank Gauge Port Components

1. The tank gauge adaptor and cap are paired. Therefore, an adaptor manufactured by one company shall be used only with a cap manufactured by the same company.

Connections and Fittings

1. All connections and fittings not specifically certified with an allowable leak rate shall not leak. The absence of vapor leaks shall be verified with the use of commercial liquid leak detection solution, or by bagging, when the vapor containment space of the underground storage tank is subjected to a non-zero gauge pressure. (Note: leak detection solution will detect leaks only when positive gauge pressure exists.)

Maintenance Records

1. Each GDF operator/owner shall keep records of maintenance performed at the facility. Such record shall be maintained on site or in accordance with district requirements or policies. Additional information may be required in accordance with district requirement or policies. The records shall include the maintenance or test date, repair date to correct test failure, maintenance or test performed, affiliation, telephone number, name and Certified Technician Identification Number, of individual conducting maintenance or test. An example of a GDF Maintenance Record is shown in Figure 2J.

**Table 2-1
Gasoline Dispensing Facility Compliance Standards and Specifications**

Component/System	Test Method	Standard or Specification
Rotatable Phase I Adaptors	TP-201.1B	Minimum, 360-degree rotation Maximum, 108 pound-inch average static torque
Overfill Prevention Device	TP-201.1D	Leak rate ≤ 0.17 CFH at 2.00 inches H ₂ O
Spill Container Drain Valve	TP-201.1C or TP-201.1D	≤ 0.17 CFH at 2.00 inches H ₂ O
P/V Vent Valve ¹	TP-201.1E	Positive pressure setting: 2.5 to 6.0 inches H ₂ O Negative pressure setting: 6.0 to 100 inches H ₂ O Positive Leak rate: 0.05 CFH at 2.0 inches H ₂ O Negative Leak rate: 0.21 CFH at -4.0 inches H ₂ O
Gasoline Dispensing Facility	TP-201.3	As specified in TP-201.3 and/or CP-201
All connections and fittings certified without an allowable leak rate	Leak Detection Solution or bagging	No Leaks

**Table 2-2
Maintenance Intervals for System Components²**

Manufacturer	Component	Maintenance Interval
Husky	Pressure/Vacuum Vent Valve	Annual
FFS	Pressure/Vacuum Vent Valve	Annual
CNI Manufacturing	Tank Gauge Port Components	Annual Inspection
CNI Manufacturing	Dust Caps	Annual Inspection
CompX	Dust Caps	Annual Inspection
OPW	Dust Caps	Annual Inspection
CNI Manufacturing	Drop Tube	Annual Test
EMCO Wheaton Retail	Drop Tube Overfill Prevention Valve	Annual Tests
EMCO Wheaton Retail	Rotatable Phase I Product and Vapor Adaptors	Annual Tests
CNI Manufacturing	Spill Container Drain Valve	18 Months
CNI Manufacturing	Spill Containment	Annual Inspection

¹ Compliance determination at the option of the district.

² Maintenance must be conducted within the interval specified from the date of installation and at least within the specified interval thereafter.

Figure 2A
Typical Product Side Installation of CNI Manufacturing 2 Point System
Model CON2 using DT100 Drop Tube

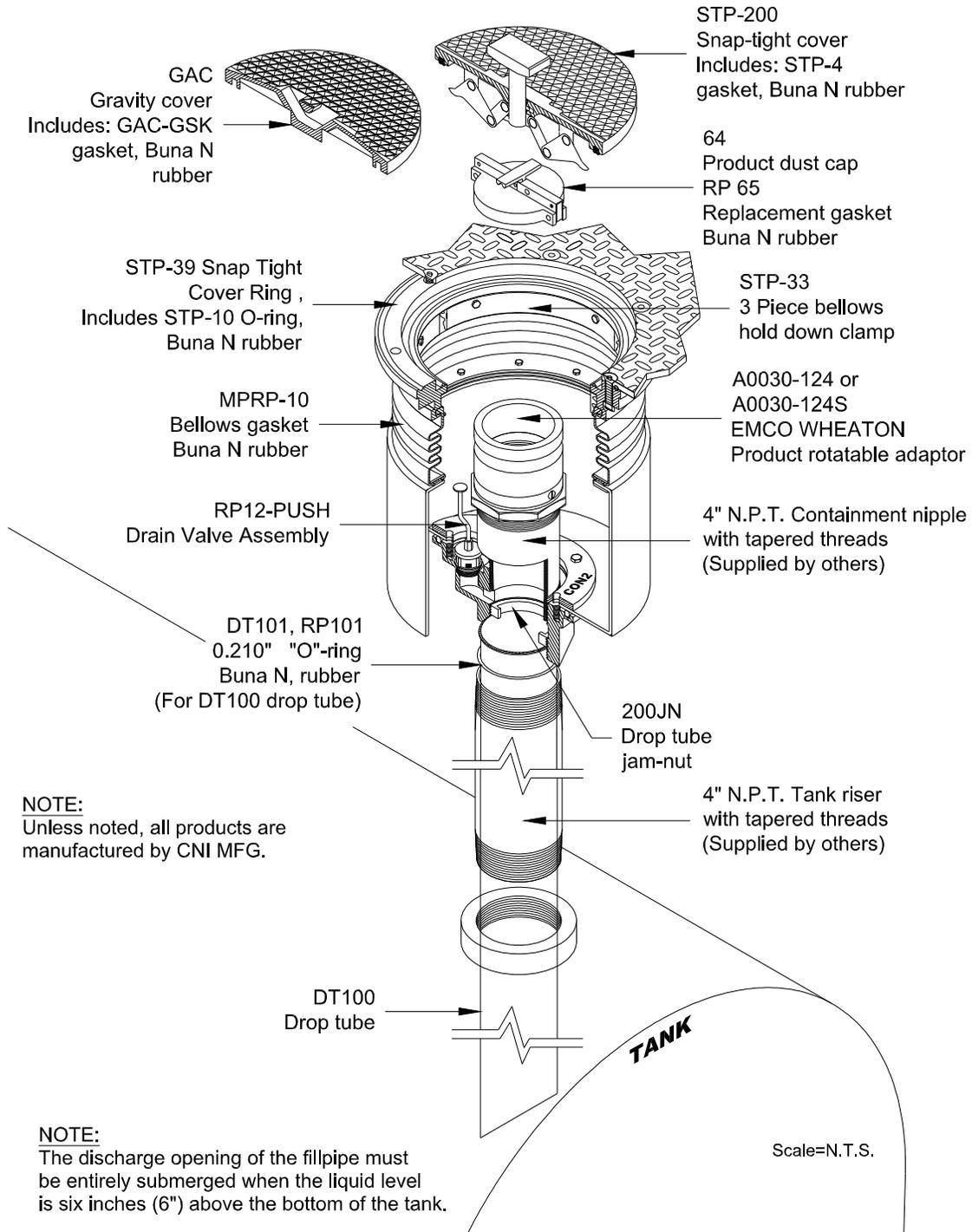


Figure 2B
Typical Product Side Installation of CNI Manufacturing 2 Point System
Model CON2 using EMCO Wheaton A1100EVR Guardian Overfill Prevention

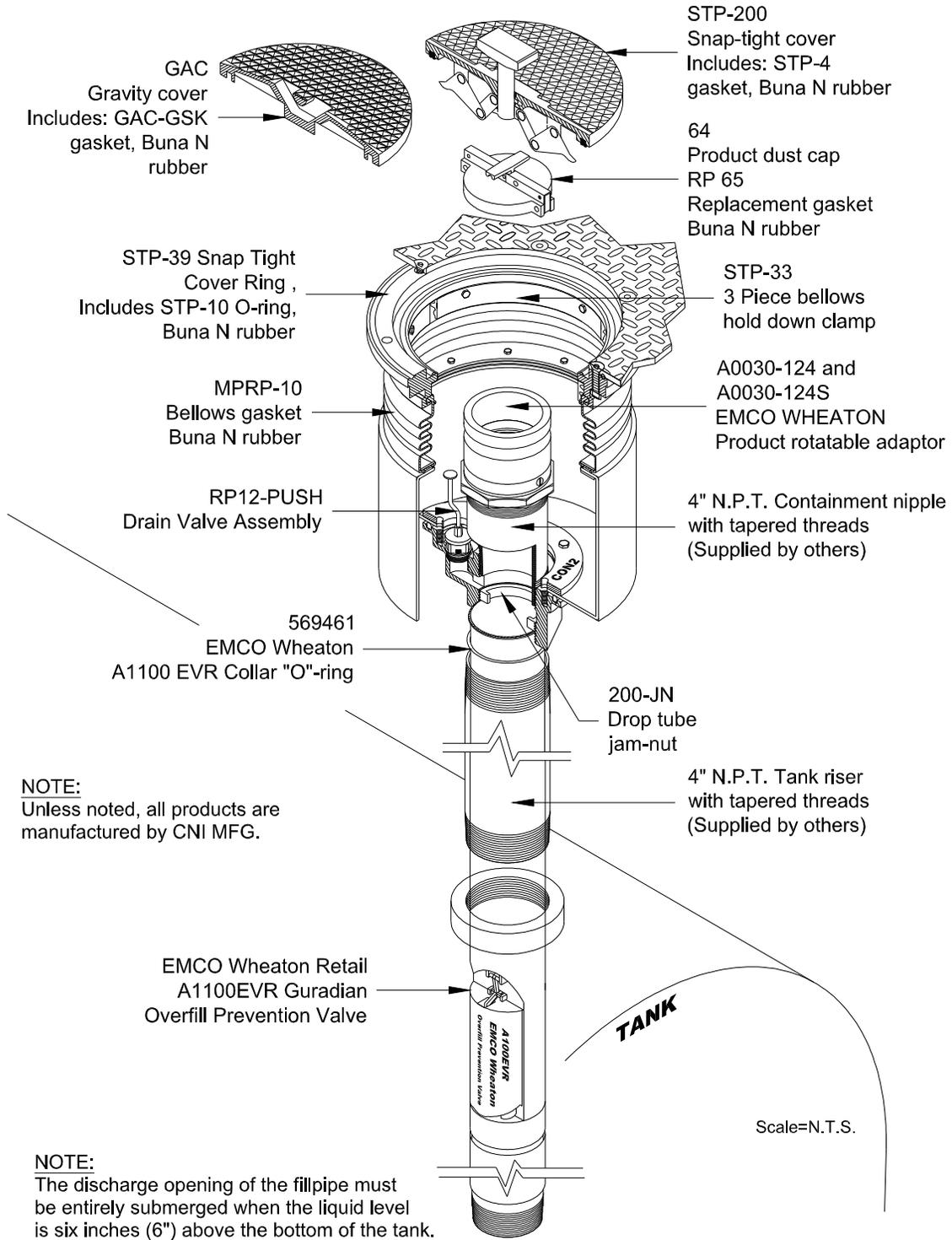


Figure 2C
Typical Vapor Side Installation of CNI Manufacturing 2 Point System
Model CON1

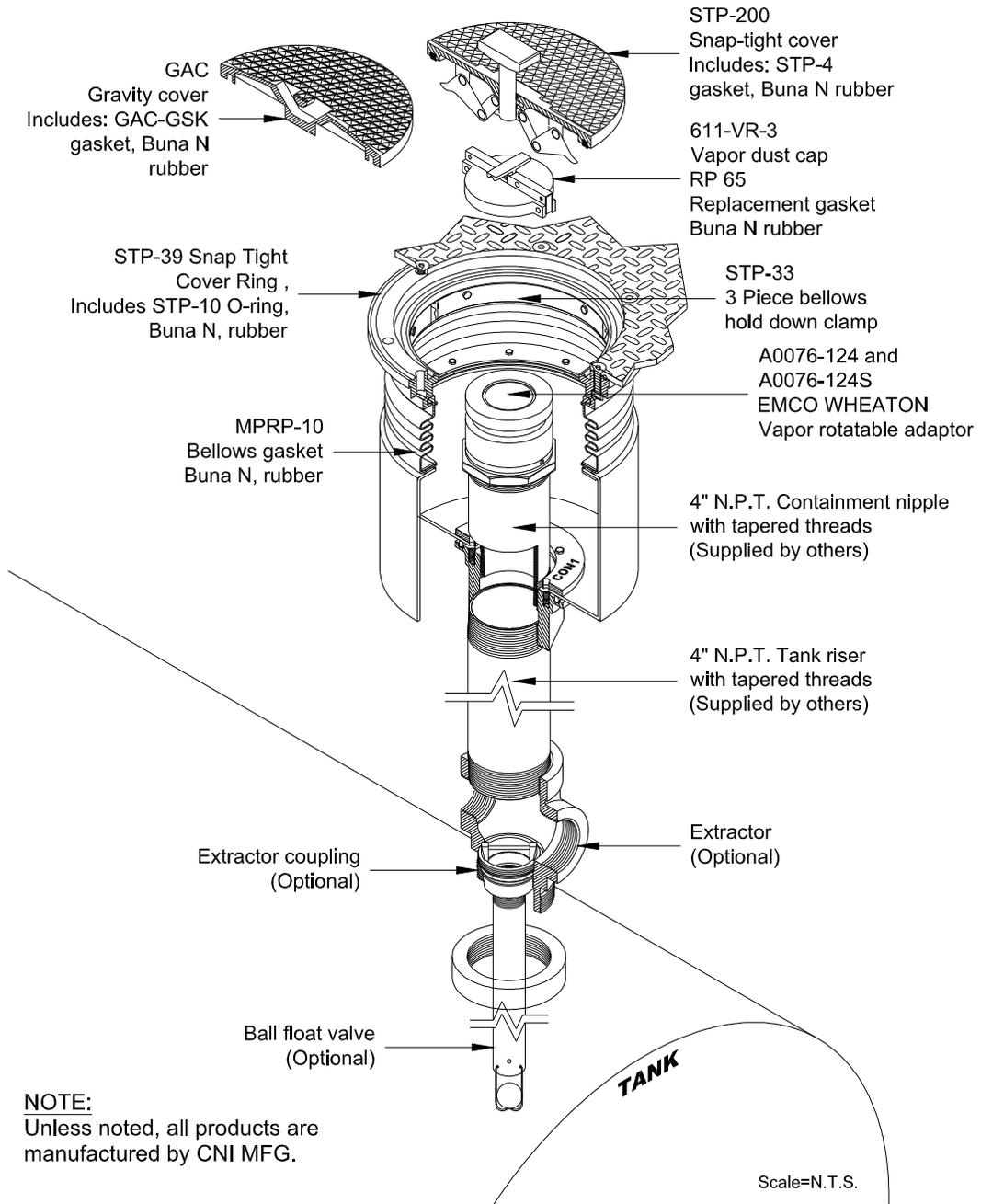
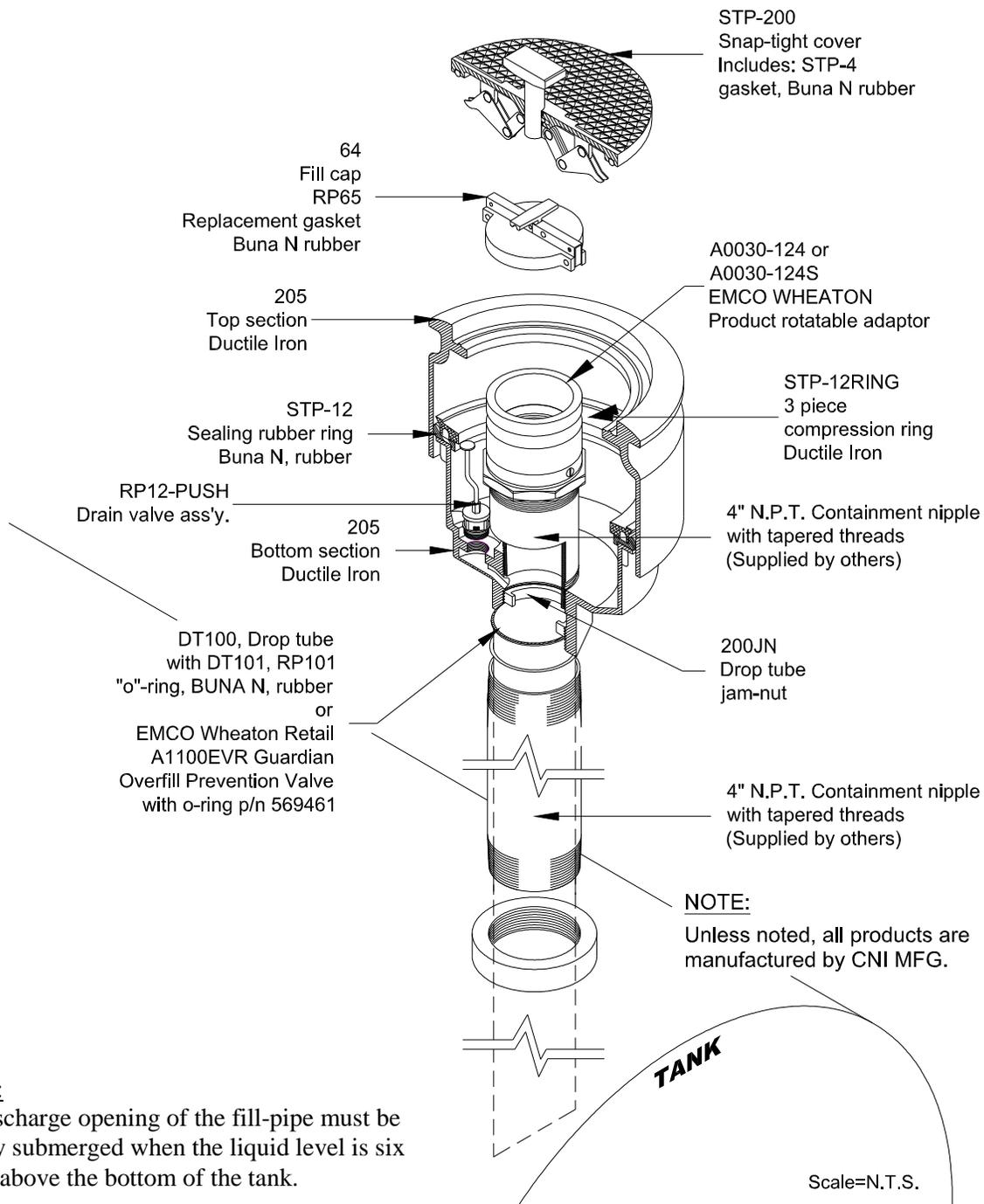


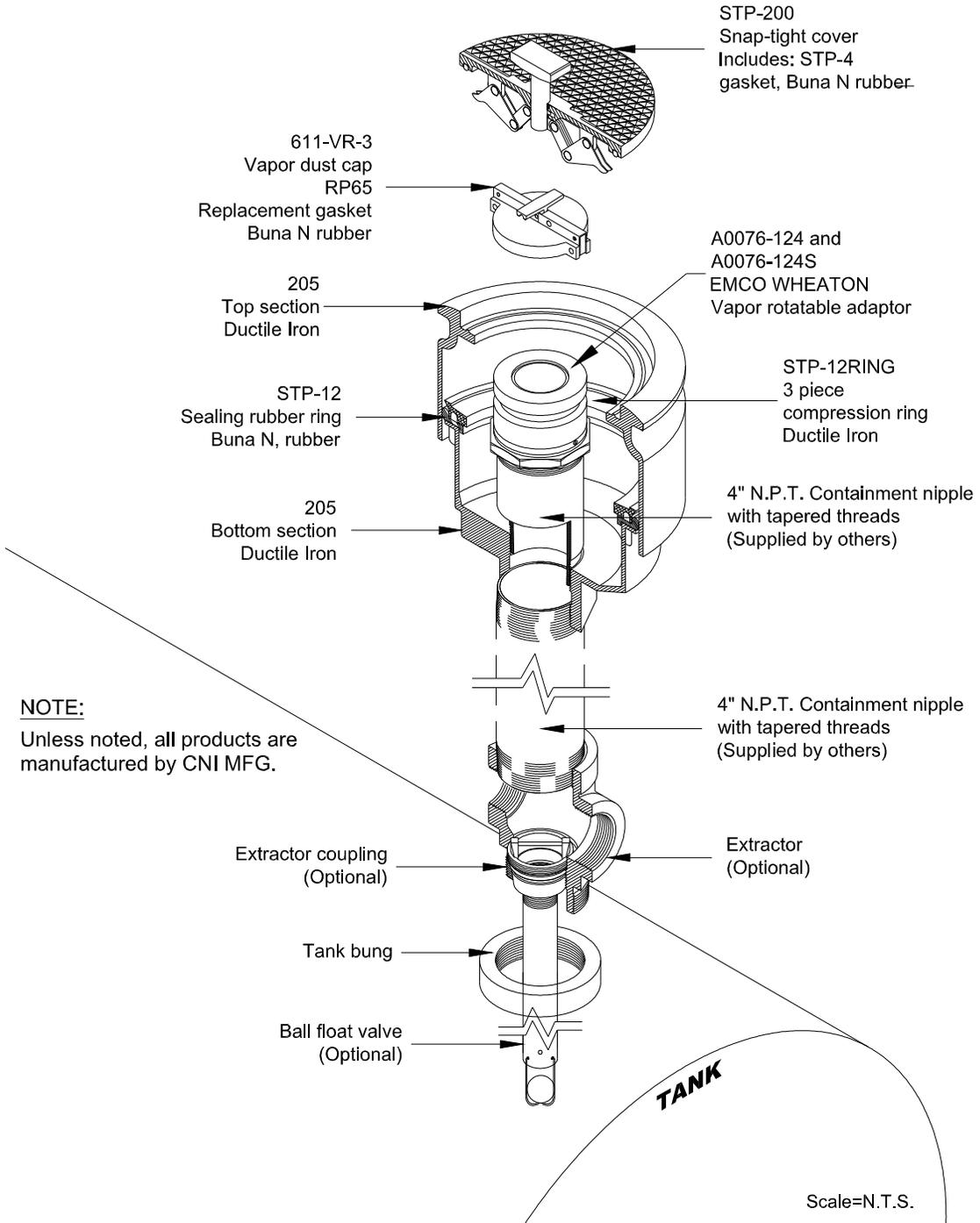
Figure 2D
Typical Product Side Installation of
CNI Manufacturing Stand Alone/Direct Bury System



NOTE:

The discharge opening of the fill-pipe must be entirely submerged when the liquid level is six inches above the bottom of the tank.

Figure 2E
Typical Vapor Side Installation of
CNI Manufacturing Stand Alone/Direct Bury System



NOTE:
 Unless noted, all products are
 manufactured by CNI MFG.

Figure 2F
Typical Product Side Installation of CNI Manufacturing Stand Alone/ Direct Bury/ System
Model No. 214P with Gravity Cover

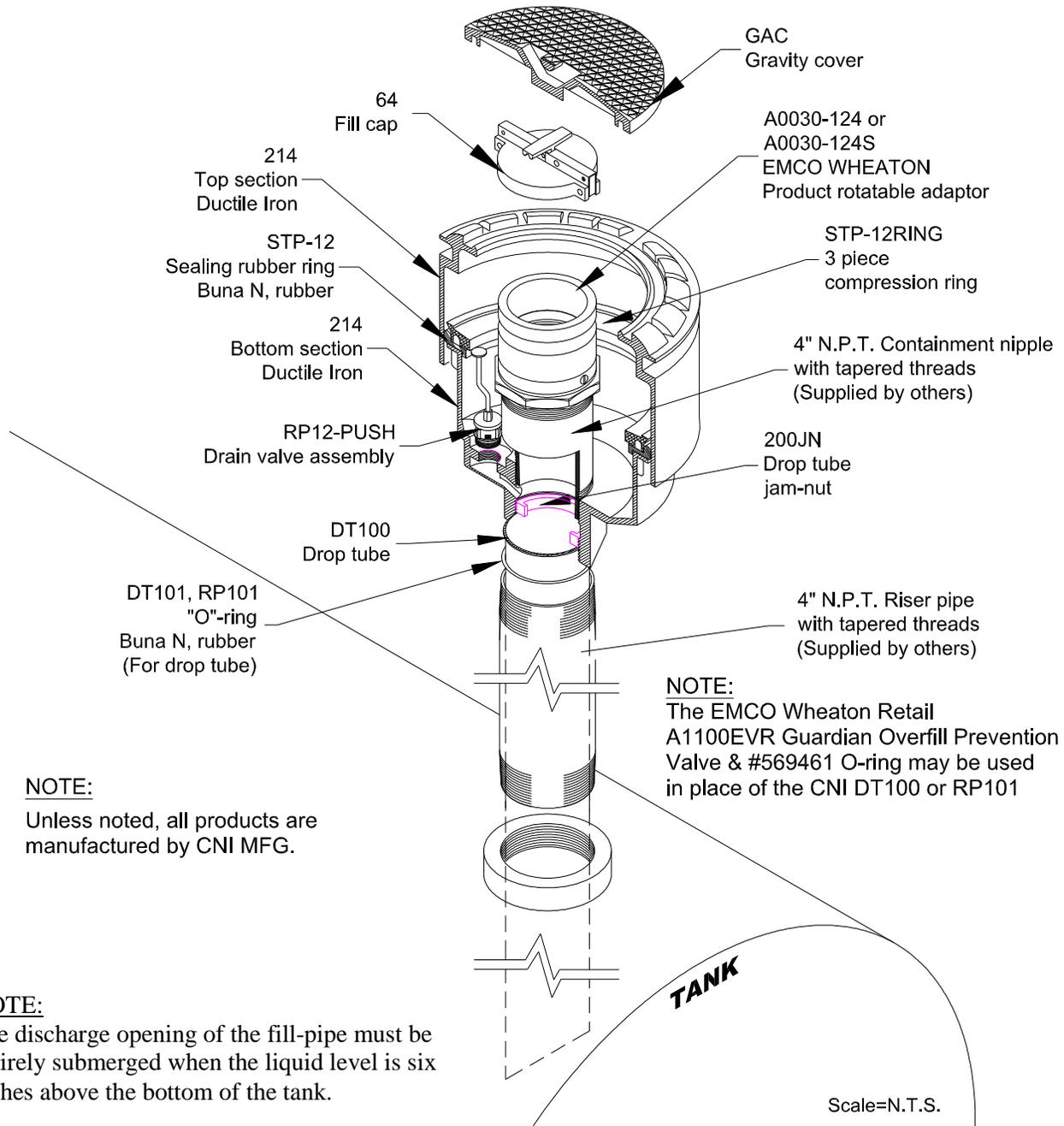


Figure 2G
Typical Vapor Side Installation of CNI Manufacturing Stand Alone/Direct Bury System
Model No. 214V with Gravity Cover

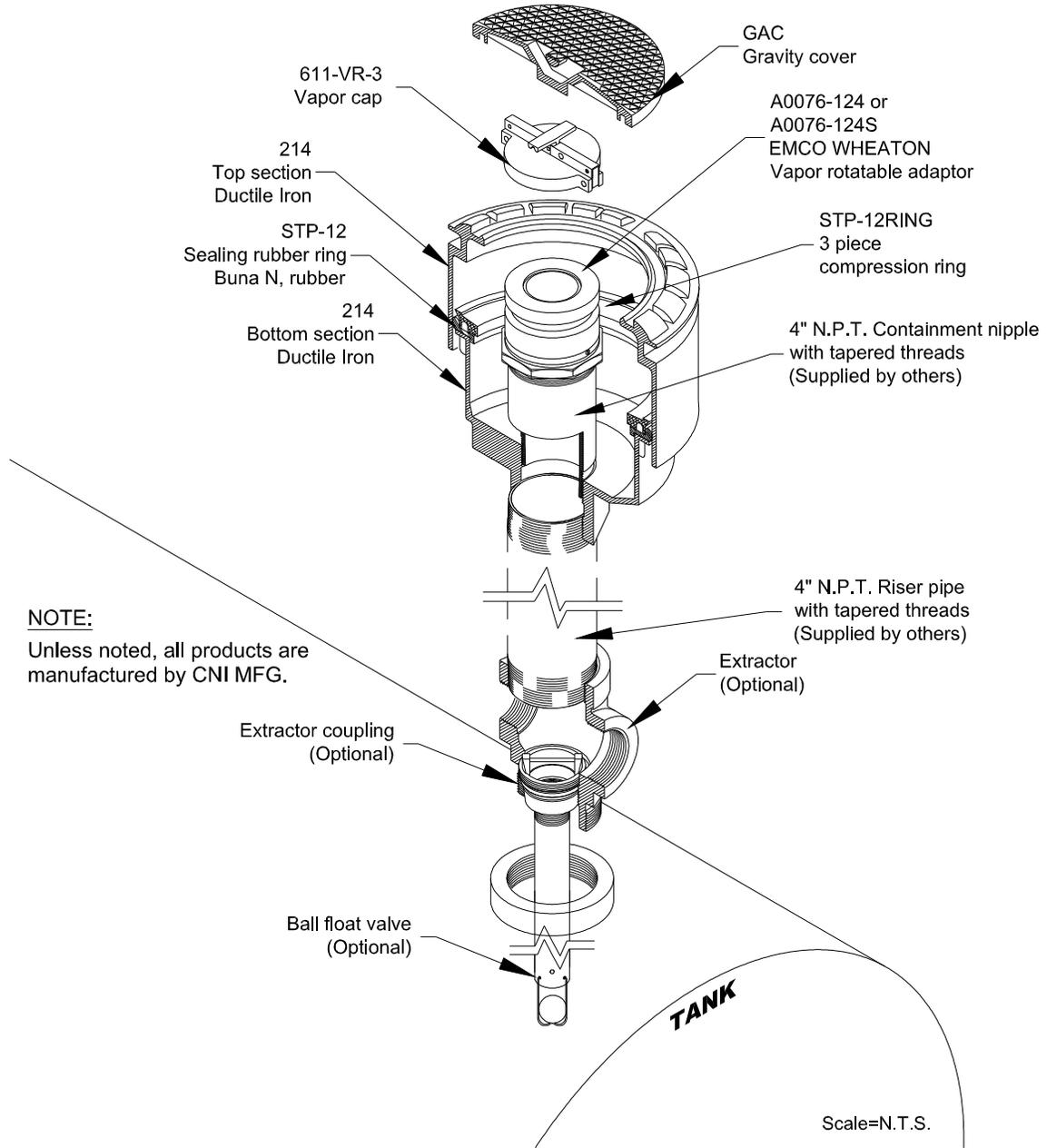
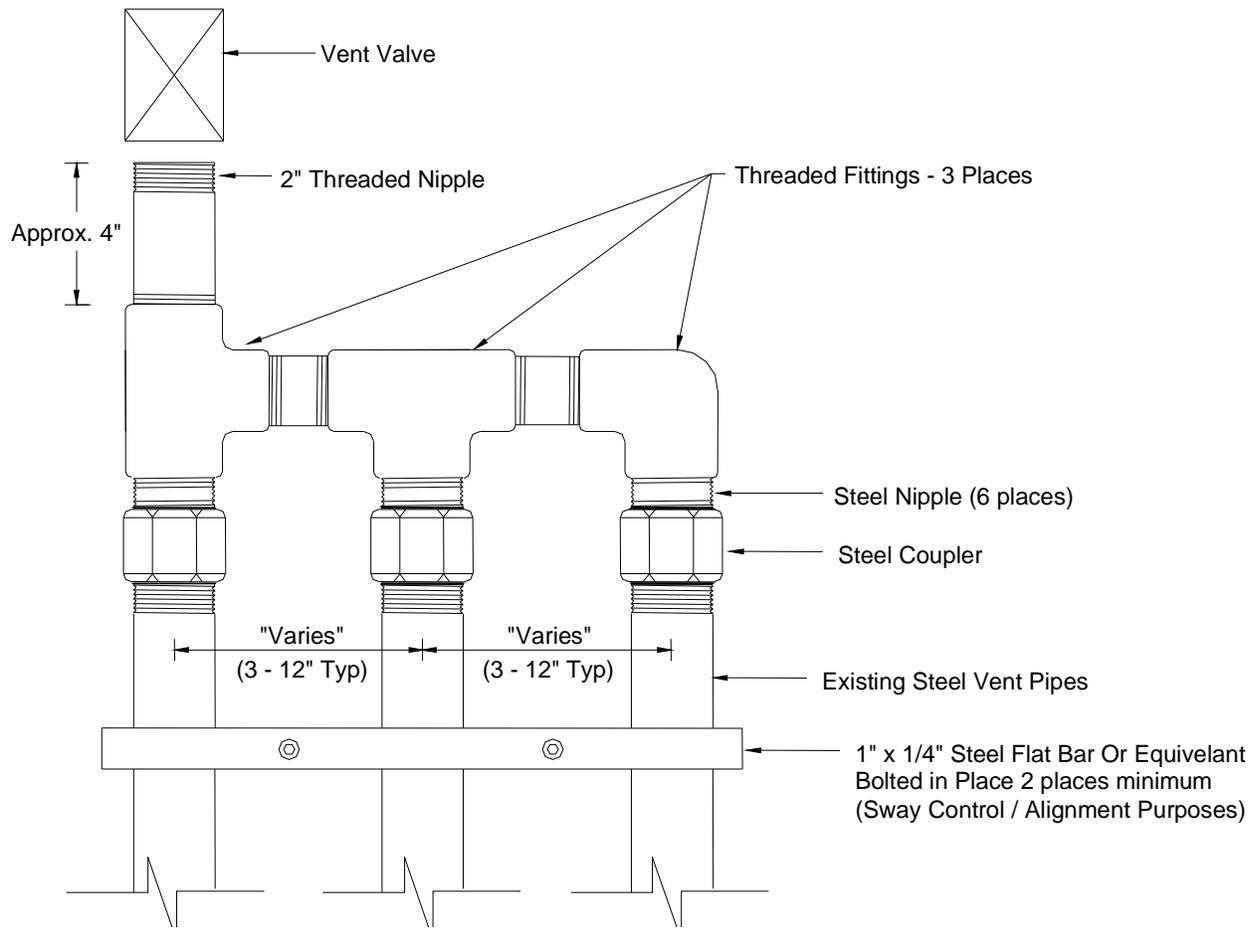
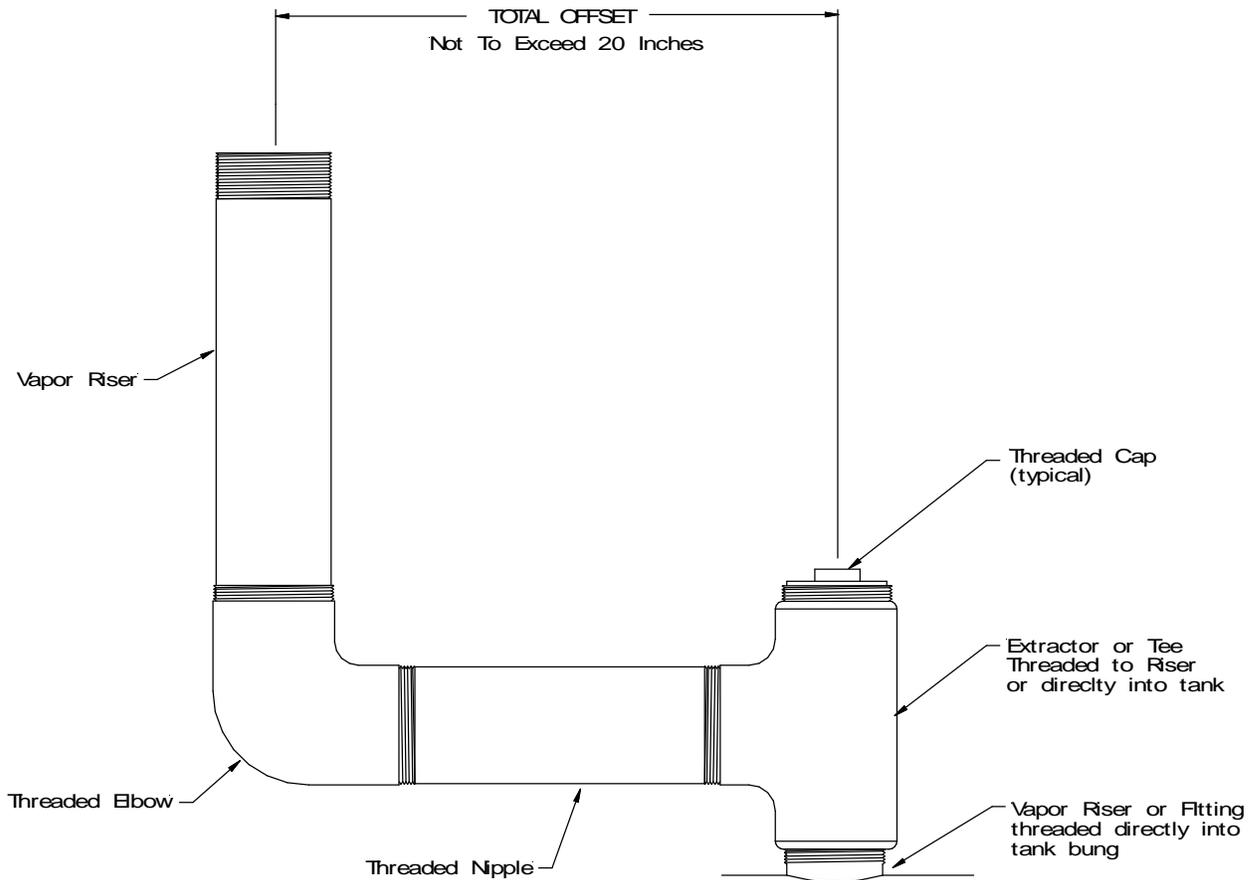


Figure 2H
Typical Vent Pipe Manifold



Note: This shows only one typical configuration; other manifold configurations may be used. For example, a tee may be located in a different position, or fewer vent pipes may be connected, or more than one P/V valve may be installed on the manifold.

Figure 2I
Typical Vapor Recovery Riser Offset



Note: This Figure represents one instance where a vapor recovery riser has been offset in order to construct a two-point Phase I vapor recovery system. The above Figure illustrates an offset using a 90-degree elbow. However, in some instances, elbows less than 90 degrees may be used. All fittings and pipe nipples shall be 4-inch diameter similar to those of the spill container and rotatable Phase I adaptors in order to reduce back pressure during a gasoline delivery.

Executive Order VR-104-E
CNI Manufacturing Phase I Vapor Recovery System

Exhibit 3
Manufacturing Performance Standards and Specifications

The CNI Manufacturing System and all components shall be manufactured in compliance with the applicable Phase I performance standards and specifications in CP-201, as well as the requirements specified in this Executive Order. All components shall be manufactured as certified; no change to the equipment, parts, design, materials or manufacturing process shall be made unless approved in writing by the Executive Officer. Unless specified in Exhibit 2 or in ARB Approved Installation, Operation and Maintenance Manual for the CNI Manufacturing Phase I Vapor Recovery System, the requirements of this section apply to the manufacturing process and are not appropriate for determining the compliance status of a GDF.

Pressure/Vacuum Vent Valves for Storage Tank Vent Pipes

1. Each pressure/vacuum vent valve (P/V valve) shall be tested at the factory for cracking pressure and leak rate at each specified pressure setting and shall be done in accordance with **TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves** (October 8, 2003).
2. Each P/V valve shall be shipped with a card or label stating the performance specifications listed in Table 3-1, and a statement that the valve was tested to, and met, these specifications.
3. Each P/V valve shall have permanently affixed to it a yellow or gold label with black lettering listing the positive and negative pressure settings and leak rate standards listed in Table 3-1. The lettering of the positive and negative pressure settings and leak rate standards on the label shall have a minimum font size of 20.

Rotatable Product and Vapor Recovery Adaptors

1. The rotatable product and vapor recovery adaptors shall not leak.
2. The product adaptor cam and groove shall be manufactured in accordance with the cam and groove specifications shown in Figure 3A of CP-201.
3. The vapor recovery adaptor cam and groove shall be manufactured in accordance with the cam and groove specifications shown in Figure 3B of CP-201.
4. Each product and vapor recovery adaptor shall be tested at the factory to, and met, the specifications listed in Table 3-1 and shall have affixed to it a card or label listing these performance specifications and a statement that the adaptor was tested to, and met, such performance specifications.

Spill Container and Drain Valves

1. Each spill container drain valve shall be tested at the factory to, and met, the specification listed in Table 3-1 and shall have affixed to it a card or label listing the performance specification and a statement that the drain valve was tested to, and met, such performance specifications.

Drop Tube Overfill Prevention Device

1. Each Drop Tube Overfill Prevention Device shall be tested at the factory to, and met, the specification listed in Table 3-1 and shall have affixed to it a card or label stating the performance specification listed in Table 3-1 and a statement that the device was tested to, and met, such performance specification.

**Table 3-1
Manufacturing Component Standards and Specifications**

Component	Test Method	Standard or Specification
Rotatable Phase I Adaptors	TP-201.1B	Minimum, 360-degree rotation Maximum, 108 lb-inch average static torque
Rotatable Phase I Adaptors	Micrometer	Cam and Groove Standard (CP-201)
Drop Tube Overfill Prevention Device	TP-201.1D	≤0.17 CFH at 2.00 inches H ₂ O
Spill Container Drain Valve	TP-201.1C or TP-201.1D	≤0.17 CFH at 2.00 inches H ₂ O
Pressure/Vacuum Vent Valve	TP-201.1E	Positive Pressure: 2.5 to 6.0 inches H ₂ O Negative Pressure: -6.0 to 10.0 inches H ₂ O Leak rate: ≤ 0.05 CFH at +2.0 inches H ₂ O ≤ 0.21 CFH at -4.0 inches H ₂ O