

California Environmental Protection Agency

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**ARB Approved**

**Installation, Operation and Maintenance Manual**

**For the CNI Manufacturing Phase I Vapor Recovery System**

**Approved: September 26, 2003**

**Amended: December 13, 2005**

## NOTICE:

The **ARB Approved Installation, Operation and Maintenance Manual for the CNI Phase I EVR System** describes the tools and methods required to install the CNI Phase I EVR System. Unless specified otherwise, only technicians that are trained and certified by CNI (i.e. CNI Certified Technicians) are able to perform installation, maintenance or repairs of components manufactured by CNI or the warranty will be void.

To schedule a training class, CNI can be contacted at the following:

CNI  
15627 Arrow Hwy.  
Irwindale, California 91706  
Phone: (626) 962-6646

CNI's certified training representatives can also be contacted to schedule classes. CNI's representatives can be contacted at the following:

In southern California, contact Tom Goodwin at (818) 519-2910,  
In northern California, contact Ron Trengrove at (800) 758-5882,

It is the responsibility of each CNI Certified Technician to be familiar with the current requirements of state, federal and local codes for installation and repair of gasoline dispensing equipment. It is also the responsibility of the CNI Certified Technician to be aware of all necessary safety precautions and site safety requirements to assure a safe and trouble free installation.

## Summary of Guidelines for Maintenance Activities Required of the CNI Manufacturing Phase I Vapor Recovery System<sup>1</sup>

### COMPONENT

#### **P/V vent valve: Husky 4885**

**Interval: Annual**

Annually inspect the P/V Vent valve for foreign objects without removing the P/V Vent valve from the vent pipe by using the following procedure: 1. Remove screws that hold top cover on. 2. Remove any debris that might be sitting inside the lower cover. 3. Check the drain holes in the lower cover for blockage. 4. Do not remove the two (2) screens. 5. Reinstall the top cover and retaining screws. 6. Tighten the screws firmly.

**Note: Do not alter or cover the P/V Vent**

#### **Spill Containers: XXXX-31103**

**Interval: Annual and after each delivery**

After each delivery, the operator must remove any standing fuel from the container. Annually, clean the interior of the container. Remove accumulated dirt and grit.

#### **Drain Valves: CNI RP12-PUSH**

**Interval: 18 months**

Maintenance must be conducted if the drain valve fails the C.A.R.B. test procedure TP201.1C and (or) once every 18 months regardless.

1. Unscrew the drain valve. 2. Unscrew the cap. 3. Remove the screw and washer. 4. Pull the shaft. 5. Clean and check the screen, replace if it's damaged. 6. The "O"-ring needs to be replaced each time the drain is disassembled. 7. The plunger gasket needs to be replaced each time the drain is disassembled. 8. Clean all parts before assembling. 9. To assemble reverse the procedures 2-7 and screw the cap back on finger tight. 10. Install completely assembled drain hand tight, bottom out, then 1 complete turn. If the valve fails the decay test or C.A.R.B. test procedure TP-201.1C, this valve needs to be removed, disassembled and a new gasket kit will need to be installed. The gasket kit is p/n DVK1 which includes a plunger gasket p/n RP12-9 and an "O"-ring p/n RP12-7.

#### **Dust Caps: CNI 64 and 611-VR-3**

**Interval: Annual**

Annually inspect the gasket in the cap, if the gasket is worn or the cap spins freely on the adaptor, replace the gasket with a new gasket using p/n RP65

#### **Product Adapter: EMCO A0030-124**

**Interval: Annual**

##### **Static torque test**

Annually verify the static torque of the swivel adaptors by performing C.A.R.B. test procedure TP201.1B. If the swivel adaptor fails to meet the static torque test requirements, replace both "O"-rings with the EMCO Wheaton "O"-ring kit p/n 493995.

##### **Leak tightness integrity test**

Annually verify leak tightness integrity of the swivel adaptor by performing C.A.R.B. test procedure TP201.1C. If the swivel adaptor fails to meet the leak tightness integrity test requirements, replace both "O"-rings with the EMCO Wheaton "O"-ring kit p/n 493995 or flat gasket p/n 409628.

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<sup>1</sup> These maintenance requirements shall not circumvent use of the manufacturer's maintenance instructions. Maintenance contractors or owner/operators shall refer to the manufacturers complete installation and maintenance instructions found here for the CNI Manufacturing System to ensure that all maintenance and torque requirements are met.

## Summary of Guidelines for Maintenance Activities Required of the CNI Manufacturing Phase I Vapor Recovery System (continued)<sup>2</sup>

### COMPONENT

**Vapor Adaptor: EMCO A0076-124**                      **Interval: Annual**

#### **Static torque test**

Annually verify the static torque of the swivel adaptors by performing C.A.R.B. test procedure TP201.1B. If the swivel adaptor fails to meet the static torque test requirements, replace both “O”-rings with the EMCO Wheaton “O”-ring kit p/n 493995.

#### **Leak tightness integrity test**

Annually verify leak tightness integrity of the swivel adaptor by performing C.A.R.B. test procedure TP201.3. If the swivel adaptor fails to meet the leak tightness integrity test requirements, replace both “O”-rings with the EMCO Wheaton “O”-ring kit p/n 493995 or flat gasket p/n 409628.

**Extractor Assembly: CNI 118F/M, 119F/M & 121F/M**                      **Interval: None**

No maintenance is required for this product.

**Ball Floats: CNI 123-12C**    **Interval: 3 years**

Visually inspect the valve for damage, contamination, corrosion, freedom of movement of the ball float and check the bleeder orifice for proper airflow. Replace if damaged or corroded.

**Drop Tubes: CNI DT100**    **Interval: Annual**

Annually test the drop tube using C.A.R.B. test procedure TP201.1C. If it fails you need to replace the “O”-ring with a new one using p/n RP101. Next, visually inspect the drop tube to see if it is installed correctly and see if the bottom of the drop tube is a maximum of 6 inches to the bottom of the tank. Do not remove unless it fails C.A.R.B. test procedure TP201.1C.

**Tank Gauge Cap and Adaptor: CNI 613BC**                      **Interval: Annual**

Annually inspect the gasket in the cap, if the gasket is worn or the cap spins freely on the adaptor, replace the gasket with a new one using p/n RP65.

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<sup>2</sup> These maintenance requirements shall not circumvent use of the manufacturer’s maintenance instructions. Maintenance contractors or owner/operators shall refer to the manufacturers complete installation and maintenance instructions found here for the CNI Manufacturing System to ensure that all maintenance and torque requirements are met.

## Phase I EVR Equipment Installation Check List for Installing Products per ARB Executive Order VR-104-B

Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Site Location and name:	Installing Contractor:
Street Address:	Business Address:
City/State:	City/State:
Contact/Phone:	Contact/Phone:
Installing Technician ( <i>name</i> ):	Technician Certification Number:

Tank Number: _____	Product Grade: _____	Capacity: _____
Tank Number: _____	Product Grade: _____	Capacity: _____
Tank Number: _____	Product Grade: _____	Capacity: _____

**Note:** Because this checklist serves a dual purpose as an installation and retrofit checklist, there are some items that will be non-applicable (e.g. cutting riser pipe). The technician should note '**N/A**' for Non-Applicable in the 'Yes/No' box.

Yes/No	Initials	1. Is all of the installed equipment for Phase I EVR listed in ARB Executive Order (E.O.) VR-104-B?  <b>Note: All Phase I EVR installed equipment must be listed in E.O. VR-104-B.</b>
Yes/No	Initials	2. Ball Float Valve and Extractor Assembly (if installed): 2.a. Is the extractor(s) coupling installed into the appropriate tank bung(s) using a Fire Marshall approved thread sealing compound on the male threads of the extractor and torqued to 250-350 foot-pounds?
Yes/No	Initials	2.b. Is the correct size Ball Float Valve assembly(s) installed into the tank extractor coupling(s) using a Fire Marshall approved thread sealing compound (on the male threads of the ball float valve) and torqued to 60 foot-pounds?
Yes/No	Initials	3. Have all the 4 inch tank risers been cut to the correct lengths and have a flat, square cut across the top of the riser, as well as the appropriate threads cut into the ends of each?
Yes/No	Initials	4. Are all 4 inch tank risers correctly installed into the tank bungs and the extractors using a Fire Marshall approved thread sealing compound and torqued to 250-350 foot-pounds?

## Phase I EVR Equipment Installation Check List (continued)

Yes/No	Initials	5. Fill Riser – Is the CNI DT100 drop tube(s) installed correctly with the CNI DT101 (or RP101) O-ring securely in place and the flared end on top of the riser? <b>Note: CNI's drop tube must be cut to the correct length and assembled before installing into the 4 inch tank riser.</b>
Yes/No	Initials	6. Are the Vapor and Fil-Spil Containment Assemblies installed onto the 4 inch tank risers using a Fire Marshall approved thread sealing compound on the upper male threads of the 4 inch riser pipe and torqued to 195-200 foot-pounds?
Yes/No	Initials	7. Is the Jam Nut(s) installed in the lower set of threads of the Fil-Spil oval flange and torqued down on top of the drop tube flare to 45 foot-pounds?
Yes/No	Initials	8. Have the 4 inch Containment Nipple(s) been cut to the correct lengths and have a flat, square cut across the top of each end, as well as the appropriate threads cut into the ends of each?
Yes/No	Initials	8.a. Have the 4 inch Containment Nipple(s) been installed into the appropriate flanges using a Fire Marshall approved thread sealing compound on the lower male threads of the 4 inch Containment Nipple and torqued to 170-175 foot-pounds?
Yes/No	Initials	9. Are the Product A0030-124 and Vapor A0076-124 Swivel Adaptors and installed onto the 4 inch containment nipple(s) with the flat gaskets in place, and torqued to 35 foot-pounds?
Yes/No	Initials	9.a. Are the Product A0030-124 and Vapor A0076-124 Swivel Adaptors set screws installed with LocTite #222MS and torqued to 20 inch-pounds?
Yes/No	Initials	10. Are the CNI Mfg. Dust Caps (64 product, 611-VR-3 vapor) and CNI Mfg. Gasket 65 installed onto the appropriate Swivel Adaptors?
Yes/No	Initials	11. Are the six bolts for the Bellows Hold Down Clamp (STP-33) torqued to 10 inch-pounds?
Yes/No	Initials	Tank Gauge Port Cap and Adaptor: 12. Is the Tank Gauge Adaptor 613BC installed with it's O-ring onto the 4 inch tank riser and torqued to 35 foot-pounds?
Yes/No	Initials	12.a. Are the set screws tightened and the gauge wire installed in to the strain relief cord connector in the cap?
Yes/No	Initials	12.b. Is the metal nut tightened to ensure no vapor leakage?
Yes/No	Initials	12.c. Is the cap handle snapped tight after installing the cap onto the adaptor?
Yes/No	Initials	13. Is there a Husky 4885 Pressure Vacuum Vent Valve installed on the top of each (gasoline) vent pipe (a maximum of three EVR P/V valves per GDF) or manifold?
Yes/No	Initials	13.a. Husky P/V vent valve(s) torqued to 20-50 foot-pounds.

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Figure A-1

Typical Product Side Installation of CNI Manufacturing System

Typical Product side XXXX-31103

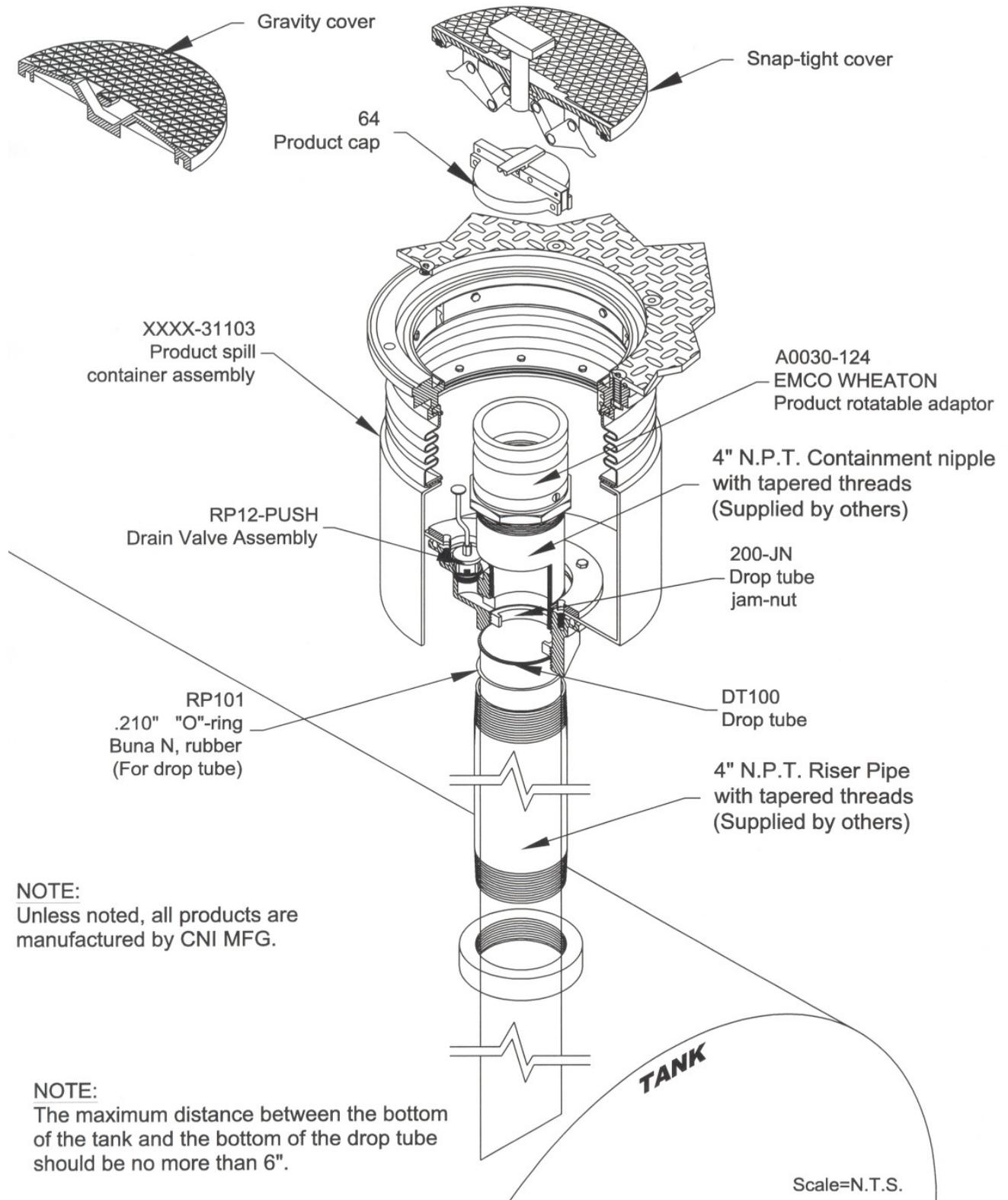


Figure A-2

Typical Vapor Side Installation of CNI Manufacturing System

Typical Vapor Side XXXX-31103

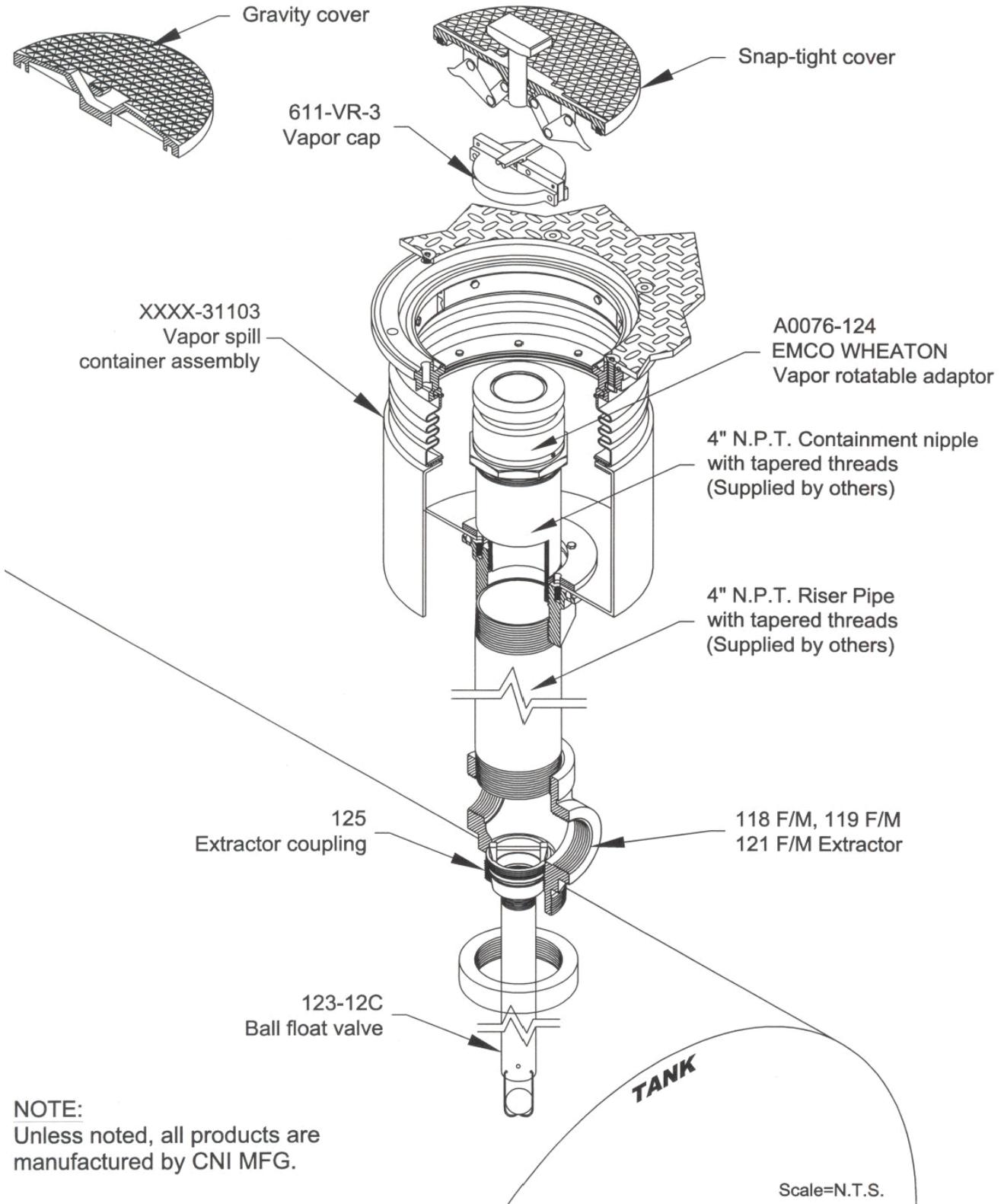


Figure A-3

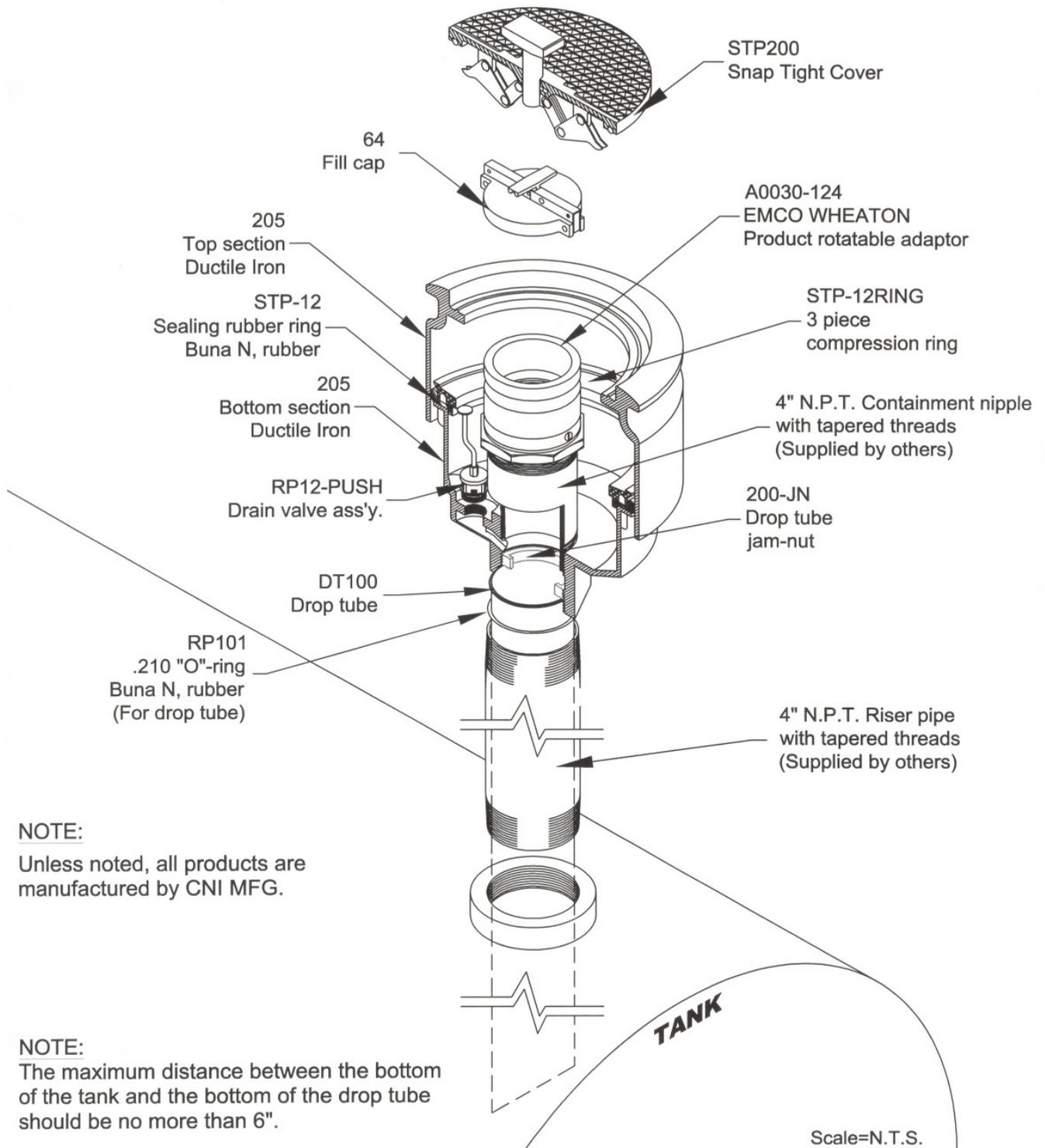
Typical Product Side Installation of CNI Manufacturing System



# STAND ALONE CONTAINMENT

Typical Product side for direct bury

Model No. 205P with Snap-tight Cover XXXX-31103



**NOTE:**

Unless noted, all products are manufactured by CNI MFG.

**NOTE:**

The maximum distance between the bottom of the tank and the bottom of the drop tube should be no more than 6".

Scale=N.T.S.

Figure A-4

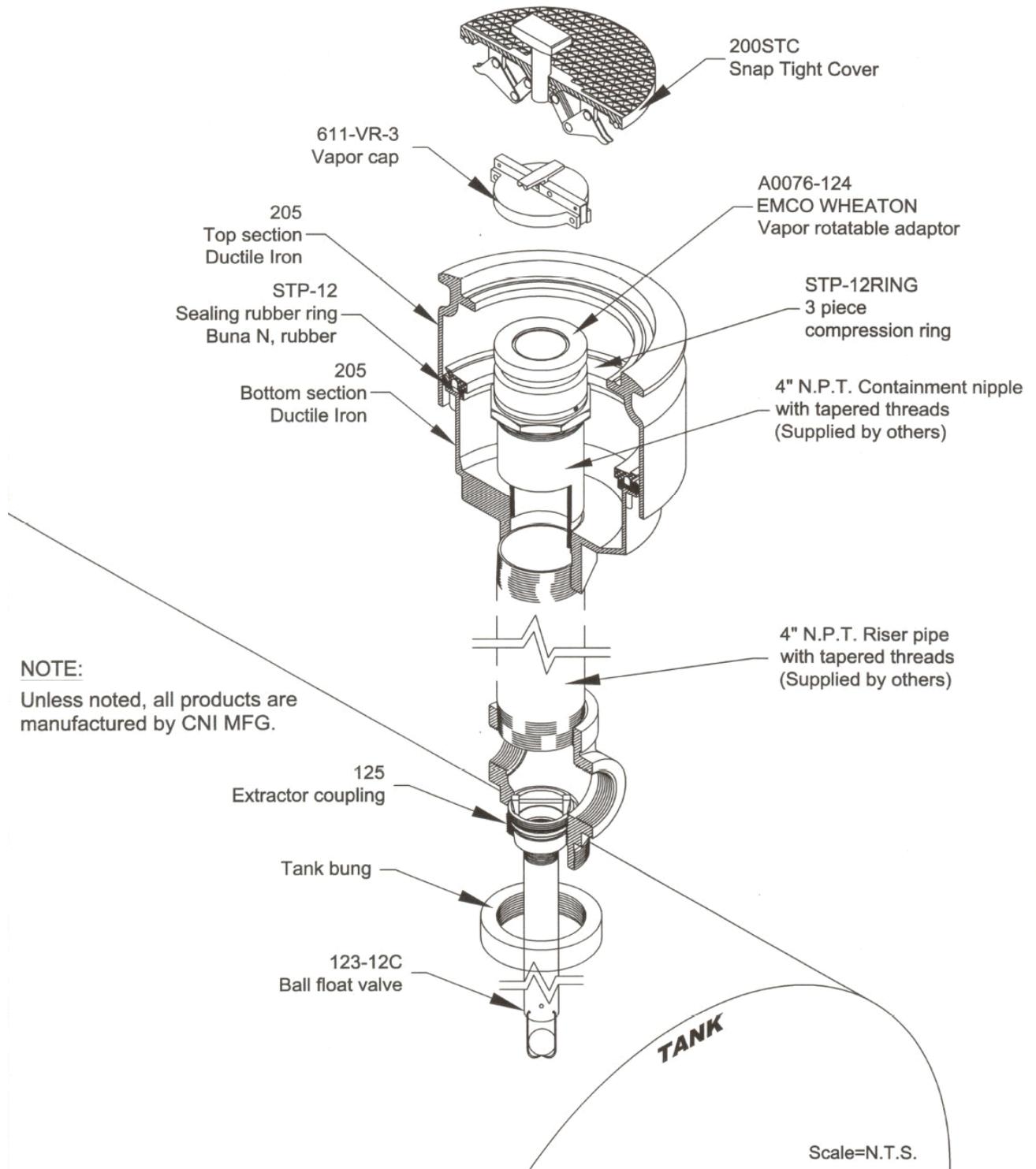
Typical Vapor Side Installation of CNI Manufacturing System



# STAND ALONE CONTAINMENT

Typical Vapor side for direct bury

Model No. 205V with Snap-tight Cover XXXX-31103



**Figure B-1**

**Product Side Installation Instructions**

(COPY MUST BE LEFT WITH OWNER OR OPERATOR)



Add number 31103 to our standard catalog part # for The EVR Certified System, for States that require it.

**PRODUCT SIDE**  
**Installation Instructions For A 2 Point System**

**Torque Specifications for CNI's Spill Container Assembly Installation**

Part Description	Torque Specifications (foot lbs.)	Special Tool Needed
4" Tank Riser	250-350 foot lbs.	No, Standard chain wrench with offset
STP-22, Spill Container Oval Flange	195-200 foot lbs.	No, Standard chain wrench with offset
STP-17, Oval Flange Compression Ring	12 foot lbs.	No, Standard 1/2" socket and torque wrench
200JN, Jam Nut	45 foot lbs.	Yes, CNI Jam Nut Installation Tool P/N #EVRSYS112
4" Containment Nipple	170-175 foot lbs.	No, Standard chain wrench with offset
Product Adaptor	N/A	Yes, CNI MFG Rotatable Adaptor Tool #EVRSYS106
STP-33, Bellows Hold Down Clamps	10 inch lbs.	No, Standard 7/16" socket and torque wrench
RP12-PUSH Drain Valve Assembly	Hand Tight, bottom out then 1 complete turn	No

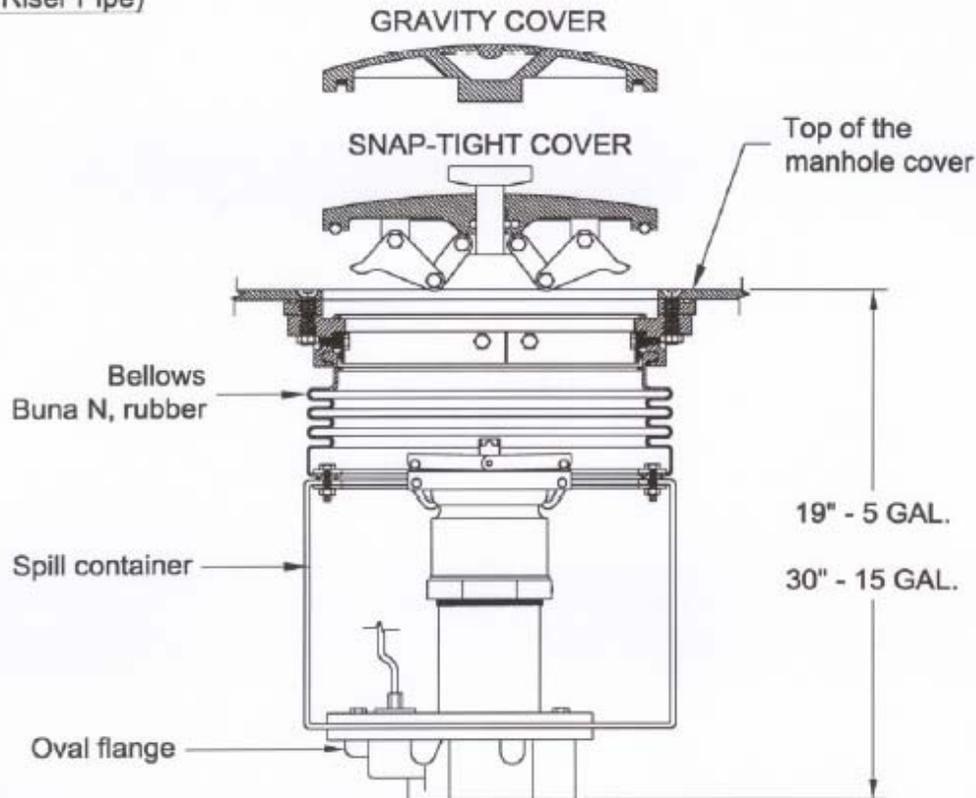
**Pre-Assembly Notes**

- The spill container assembly is pre-assembled at the factory for ease of installation.  
 NOTE: All containments for the State of California, you will add #31103 to our catalog part numbers for our CNI EVR System.  
 EXAMPLE: Catalog part #3605 add #31103 to get part #360531103 for our CNI EVR System.
- #200-JN Jam-Nut is already located in the oval flange for ease of installation.
- Inspect spill container components for damage.
- Use appropriate safety measures, to avoid fire and personal injury.
- Use ONLY the correct tools and torque wrenches for a correct installation.



## Installation Instructions For A 2 Point System, Product Side Spill Container

(4" N.P.T. Riser Pipe)



### Installation Instructions

#### Step 1

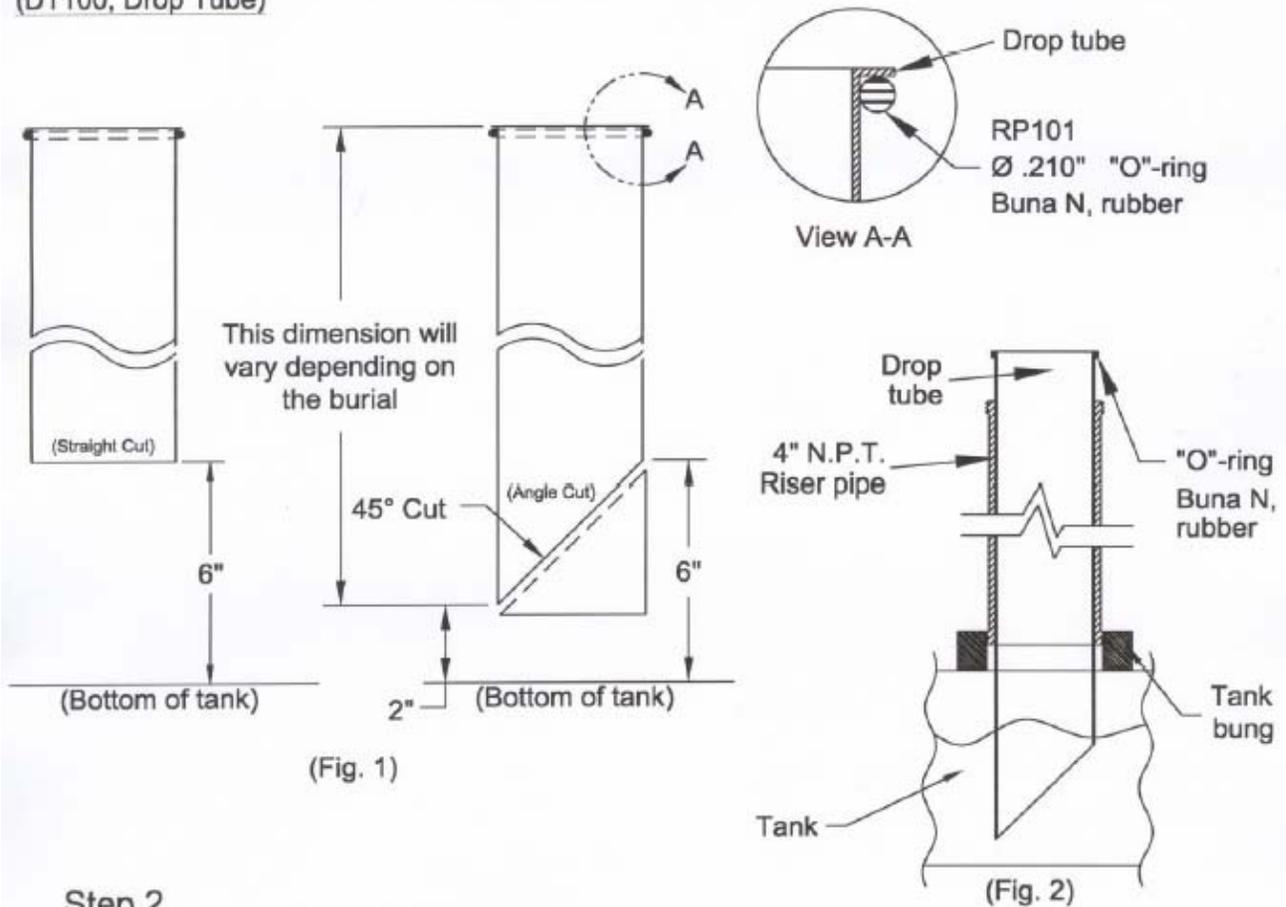
#### Cut the Product Riser to Length and Install

#### DO NOT USE HACKSAW TO CUT RISER PIPE.

1. The length of the riser pipe will vary depending upon the size of the spill container and the depth of the underground storage tank. Regardless of these variables, the riser must be cut such that the distance from the top of the tank riser and the finish grade is 19 inches (plus or minus 1/2 inch) for our 5 gallon spill container. The distance from the top of the tank riser and the finish grade should be 30 inches (plus or minus 1/2 inch) for our 15 gallon spill container.
2. Once the proper riser length is established, use a roller style 2 blade pipe cutter to ensure a flat square cut across the top of the riser. Cut the tapered threads on both ends of the riser. Ensure that a square flush smooth sealing surface is achieved on both sides. De-burr and clean riser threads. Apply a Teflon, Fire Marshall approved thread sealing compound on the lower male threads of the riser pipe.
3. Manually tighten riser pipe into tank bung, then torque to 250-350 foot lbs.



## Installation Instructions For A 2 Point System, Product Side Spill Container (DT100, Drop Tube)



### Step 2

#### Install drop tube

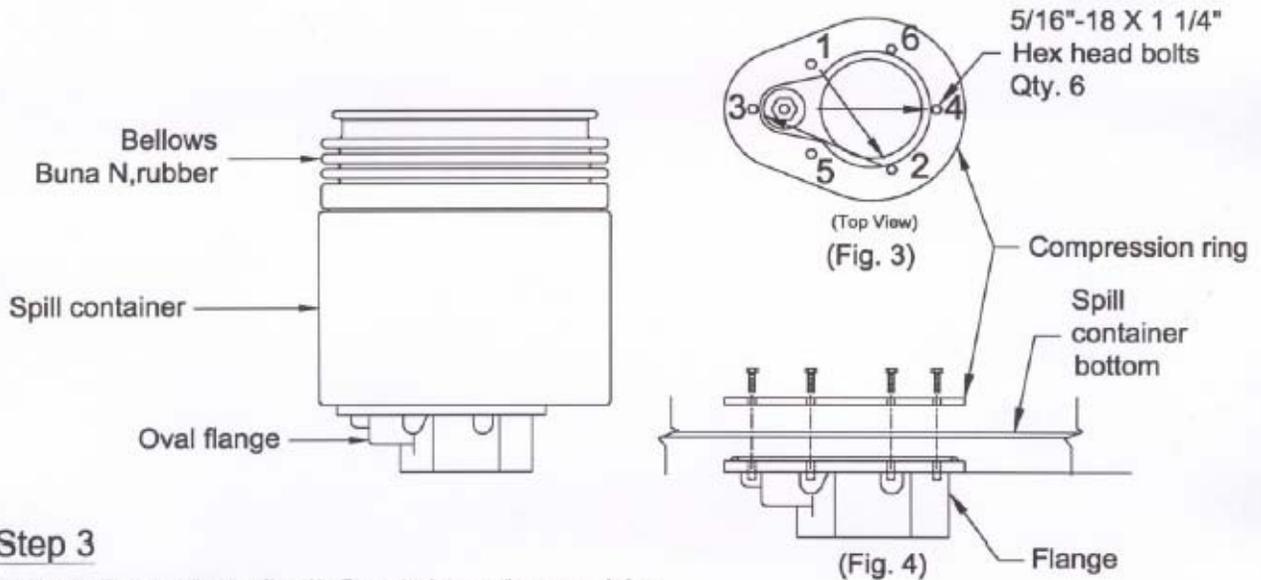
1. Measure the distance between the top of the product riser pipe and the bottom of the tank.
2. Cut the solid drop tube at a 45° angle, 6 inches from the the extreme top cut, to the bottom of the tank. For a straight cut, the dimension should also be 6" from the bottom of the drop tube to the bottom of the tank-(See Fig. 1). Cut the drop tube to the referenced dimension using a hacksaw equipped with a fine tooth blade.

**NOTE:** For an angle cut, the drop tube may not exceed 2 inches from the bottom of the tank.

3. Carefully remove all cutting burrs from the edge of the drop tube.
4. Insert the drop tube on to the tank riser-(See Fig. 2). Carefully lower the drop tube into the tank, until the drop tube collar rests on the edge of the product riser pipe. Verify the drop tube "O"-ring is installed and properly secured.



## Installation Instructions For A 2 Point System, Product Side Spill Container (XXXX-31103, Spill Container Assembly)



### Step 3

#### Install Complete Spill Container Assembly

Note: The spill container is pre-assembled for ease of installation as shown above.

1. Apply a Teflon, Fire Marshall approved thread sealing compound on the upper male threads of the riser pipe.
2. Manually tighten the complete spill container assembly onto the riser pipe.
3. Using a chain wrench, wrap it around the hexed bottom of the flange and torque to 195-200 foot lbs.
  - A. If a chain wrench is not available, the spill container must be removed from the oval flange to be able to properly torque the flange onto the tank riser. Then proceed to steps B, C & D.
  - B. Inside the container there are 6 hex head bolts and a compression ring that must be removed-(See Figure 3). Once removed, lift the spill container to expose the oval flange.
  - C. Use an appropriate sized torque wrench and torque the oval flange to 195-200 foot lbs.
  - D. Line up the spill container on the oval flange, then align the compression rin and manually tighten the hex head bolts-(See Figure 4). Torque a little at a time in a cross over pattern for a correct seal, until you achieve 15 foot lbs.-(See Figure 3).

#### Maintenance

After each delivery, the operator must remove any standing fuel from the container. Annually, clean the interior of the container. Remove, accumulated dirt and grit.



## Installation Instructions For A 2 Point System, Product Side Spill Container (200JN, Jam Nut)

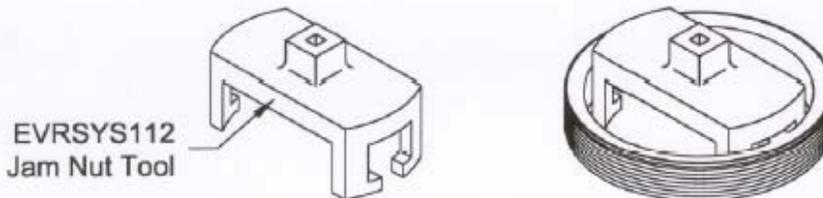
### Step 4

#### Install Jam Nut (For Product Side Only)

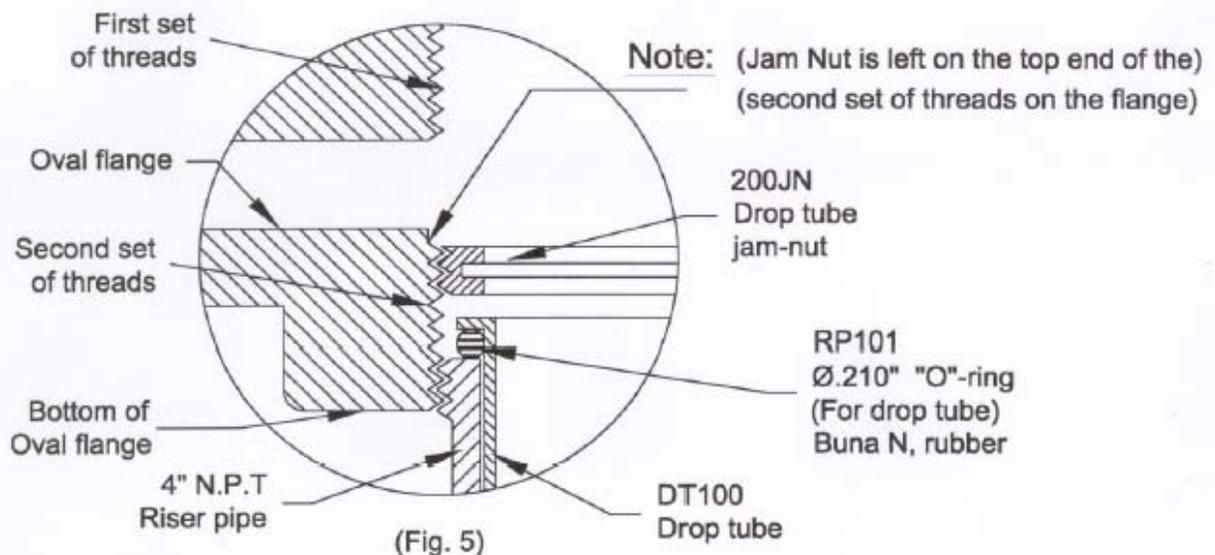
**Note:** The jam nut is included in the container pre-assembly. It's located on the second set of threads, on the bottom half of the flange, for ease of installation-(See Fig. 5) below.

1. Screw jam nut by hand until it sets against the drop tube.
2. Using jam nut installation/removal tool #EVRSYS112-(see example below), tighten jam nut to 45 foot lbs. The jam nut must be in contact with the drop tube flange.

**Note:** Tool #EVRSYS112 must be ordered separately.

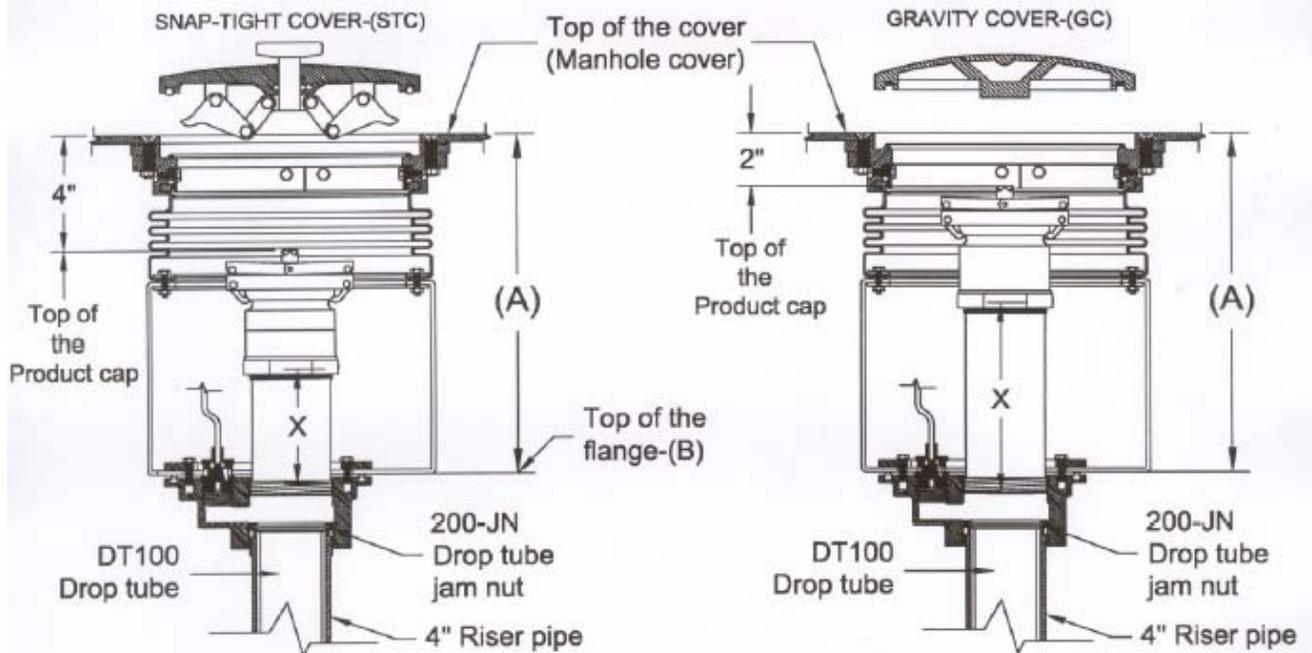


(Example)





## Installation Instructions For A 2 Point System, Product Side Spill Container (4" N.P.T. Containment Nipple)



### Step 5

#### Cut the Containment Nipple to Length

1. Snap Tight Cover Nipple Length Formula - (STC):  $X = ((A - 4") - 6 \frac{9}{16} ") + 1 \frac{1}{4} "$       Gravity Cover Nipple Length Formula - (GC):  $X = ((A - 2") - 6 \frac{9}{16} ") + 1 \frac{1}{4} "$
2. X = nipple length (inches)  
 A = distance from top of round flange to top of manhole cover (inches)  
 6 9/16 = product rotatable adaptor and cap length (inches)  
 1 1/4 = thread length (inches)
3. Following the formula above, measure the distance from the top of the manhole cover to the top of the flange-(A). Deduct 4 inches for the Snap-tight cover or 2 inches for the Gravity cover. Next, deduct 6 9/16 inches for the product rotatable adaptor and cap. Finally you add 1 1/4 inches for the threads.



## Installation Instructions For A 2 Point System, Product Side Spill Container (4" N.P.T. Containment Nipple, Rotatable Adaptor, Bellows Hold Down Clamp)

### Step 6

#### Install the 4" N.P.T. Containment Nipple

**DO NOT USE HACKSAW TO CUT CONTAINMENT NIPPLE.**

1. Once the proper nipple length is established, use a roller style 2 blade pipe cutter to ensure a flat square cut across the top of the nipple.
2. Cut the tapered threads on both ends of the nipple.
3. Ensure that a square flush smooth sealing surface is achieved on both sides. De-burr and clean nipple threads.
4. Apply a Teflon, Fire Marshall approved thread sealing compound on lower nipple threads.
5. Manually tighten the containment nipple into oval flange, then torque to 170-175 foot lbs.

### Step 7

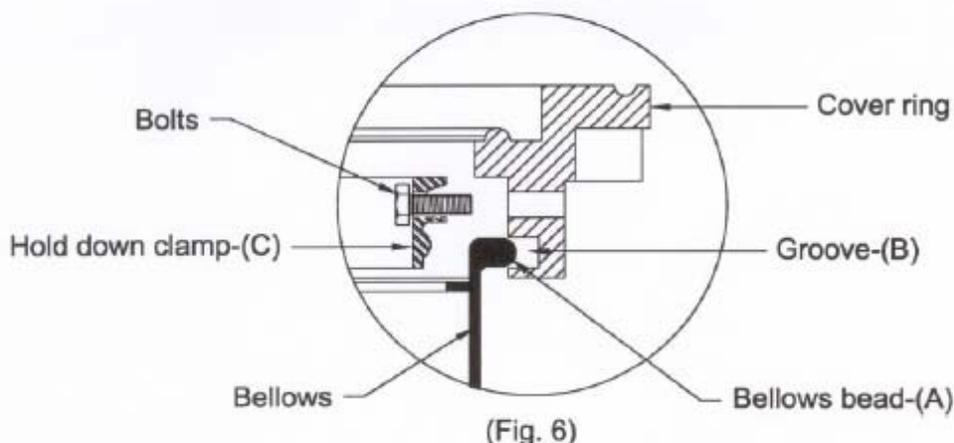
#### Install Product Rotatable Adaptor

Install product rotatable adaptor, according to manufacturers installation instructions.

### Step 8

#### Install the manhole cover

1. Use two men to pick up the floor plate cover and align with containment area.
2. Reach in and work the bellows bead-(A) into the groove-(B) of the cover ring.-(See Fig. 6)
3. Line up the bellows 3 piece hold down clamp-(C), screw on the bolts and tighten. Using a 7/16 inch socket, torque to 10 inch-lbs.-(See Fig. 6)



**Figure B-2**

**Vapor Side Installation Instructions**



(COPY MUST BE LEFT WITH OWNER OR OPERATOR)



Add number 31103 to our standard catalog part # for The EVR Certified System, for States that require it.

**VAPOR SIDE**  
**Installation Instructions For A 2 Point System**

**Torque Specifications for CNI's Spill Container Assembly Installation**

Part Description	Torque Specifications (foot lbs.)	Special Tool Needed
118 F/M, 119 F/M & 121-F/M Extractor	250-350 foot lbs.	No, Standard chain wrench with offset
125, Extractor Coupling	80 foot lbs.	No, Standard chain wrench with offset
123-12C, Ball Float Valve	60 foot lbs.	No, Standard chain wrench with offset
4" Tank Riser	250-350 foot lbs.	No, Standard chain wrench with offset
STP-24, Spill Container Round Flange	195-200 foot lbs.	No, Standard chain wrench with offset
STP-18, Round Flange Compression Ring	15 foot lbs.	No, Standard 1/2" socket and torque wrench
4" Containment Nipple	170-175 foot lbs.	No, Standard chain wrench with offset
A0076-124, EMCO Wheaton Rotatable Vapor Adaptor	35 foot lbs.	Yes, CNI MFG Rotatable Adaptor Tool #EVRSYS106
STP-33, Bellows Hold Down Clamps	10 foot lbs.	No, Standard 7/16" socket and torque wrench

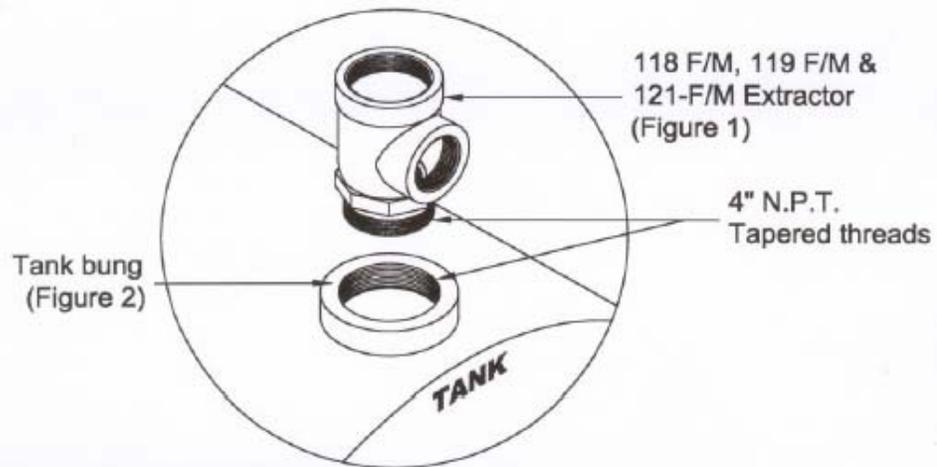
**Pre-Assembly Notes**

- The spill container assembly is pre-assembled at the factory for ease of installation.  
**NOTE:** All containments for the State of California, you will add #31103 to our catalog part numbers for our CNI EVR System.  
**EXAMPLE:** Catalog part #3605 add #31103 to get part #360531103 for our CNI EVR System.
- Inspect spill container components for damage.
- Use appropriate safety measures, to avoid fire and personal injury.
- Use ONLY the correct tools and torque wrenches for a correct installation.



## Installation Instructions For A 2 Point System, Vapor Side Spill Container

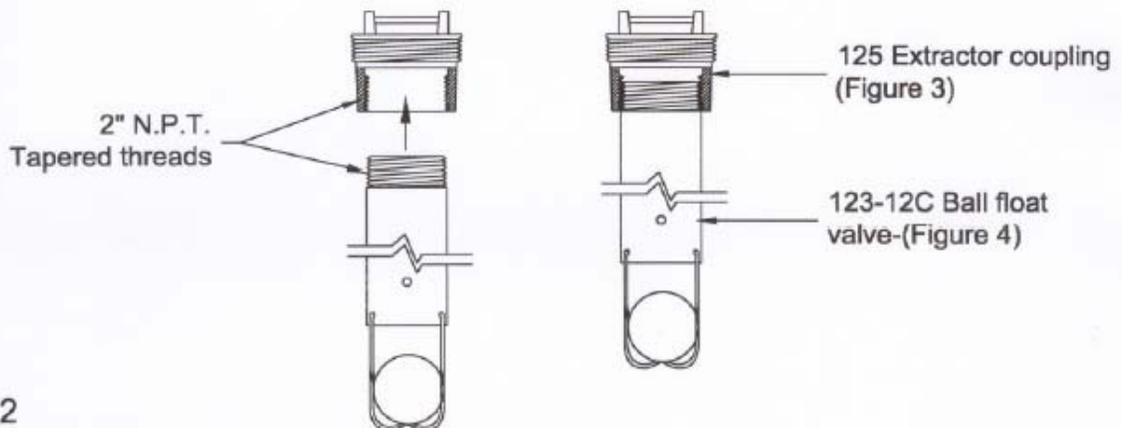
(118 F/M, 119 F/M & 121 F/M Extractor, 125 Extractor Coupling and 123-12C Float Ball Valve)



### Step 1

#### Install The Extractor Into Tank Bung

1. Apply a Teflon, Fire Marshall approved thread sealing compound on the male extractor threads.
2. Manually tighten the extractor-(Figure 1) into the tank bung-(Figure 2), then torque to 250-350 foot lbs.



### Step 2

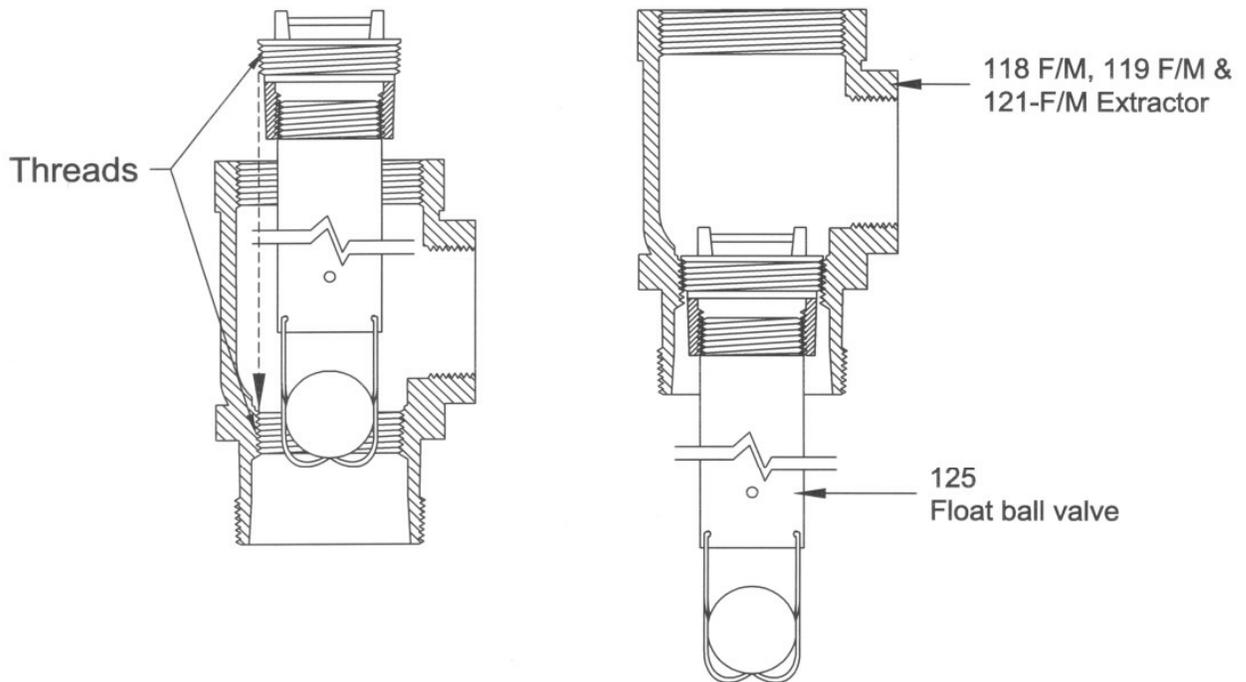
#### Install Ball Float Valve Into Extractor Coupling

1. Apply a Teflon, Fire Marshall approved thread sealing compound on the male threads of the ball float valve.
2. Manually tighten the ball float ball valve-(Figure 3) into the extractor coupling-(Figure 4), then torque to 60 foot lbs.



## Installation Instructions For A 2 Point System, Vapor Side Spill Container

(118 F/M, 119 F/M & 121 F/M Extractor, 125 Extractor Coupling and 123-12C Ball Float Valve)



### Step 3

#### Install the Ball Float Valve and Extractor Coupling Assembly into Extractor

1. Apply a Teflon, Fire Marshall approved thread sealing compound on the male threads of the extractor coupling
2. Manually install the ball float ball and extractor coupling assembly into the extractor fitting then torque to 80 foot lbs.

### Maintenance

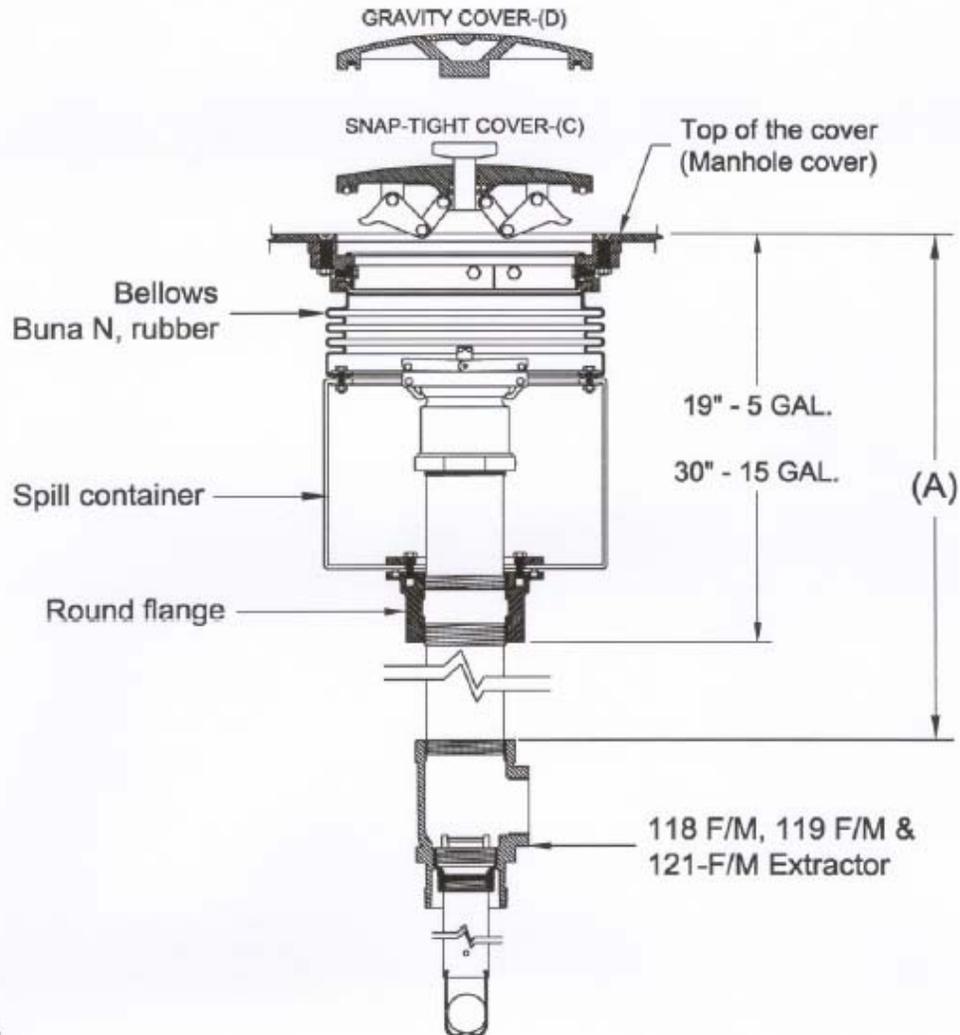
Visually inspect the valve for damage, contamination, corrosion, freedom of movement of the ball float and check the bleeder orifice for proper airflow. Replace if damaged or corroded.

Maintenance interval: Every 3 years



## Installation Instructions For A 2 Point System, Vapor Side Spill Container

(4" N.P.T. Riser Pipe)



### Step 4

#### Cut the Vapor Riser to Length and Install

**DO NOT USE HACKSAW TO CUT RISER PIPE.**

1. The length of the riser pipe will vary depending upon the size of the spill container and the depth of the underground storage tank. To determine the length of the riser pipe, measure the distance (A) from the top of the manhole cover to the top of the extractor. Deduct 19 inches (plus or minus 1/2 inch) for 5 gallon spill containers. Deduct 30 inches (plus or minus 1/2 inch) for 15 gallon spill containers.

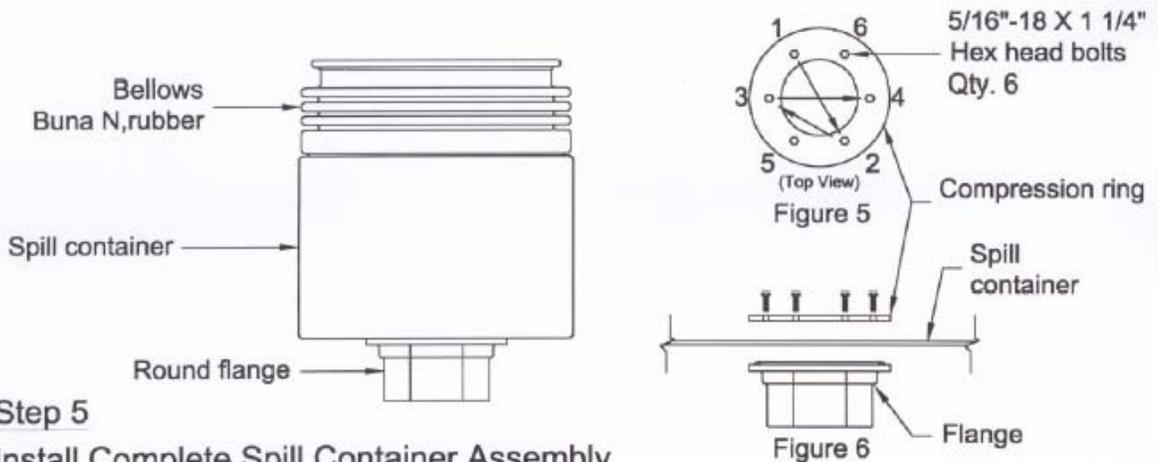


## Installation Instructions For A 2 Point System, Vapor Side Spill Container

(4" N.P.T. Riser Pipe and XXXX-31103, Spill Container Assembly)

### Step 4.....continued

2. Once the proper riser length is established, use a roller style 2 blade pipe cutter to ensure a flat square cut across the top of the riser. Cut the tapered threads on both ends of the riser. Ensure that a square flush smooth sealing surface is achieved on both sides. De-burr and clean riser threads. Apply a Teflon, Fire Marshall approved thread sealing compound on the lower male threads of the riser pipe.
3. Manually tighten riser pipe into extractor fitting, then torque to 250-350 foot lbs.



### Step 5

#### Install Complete Spill Container Assembly

Note: The spill container is pre-assembled for ease of installation as shown above.

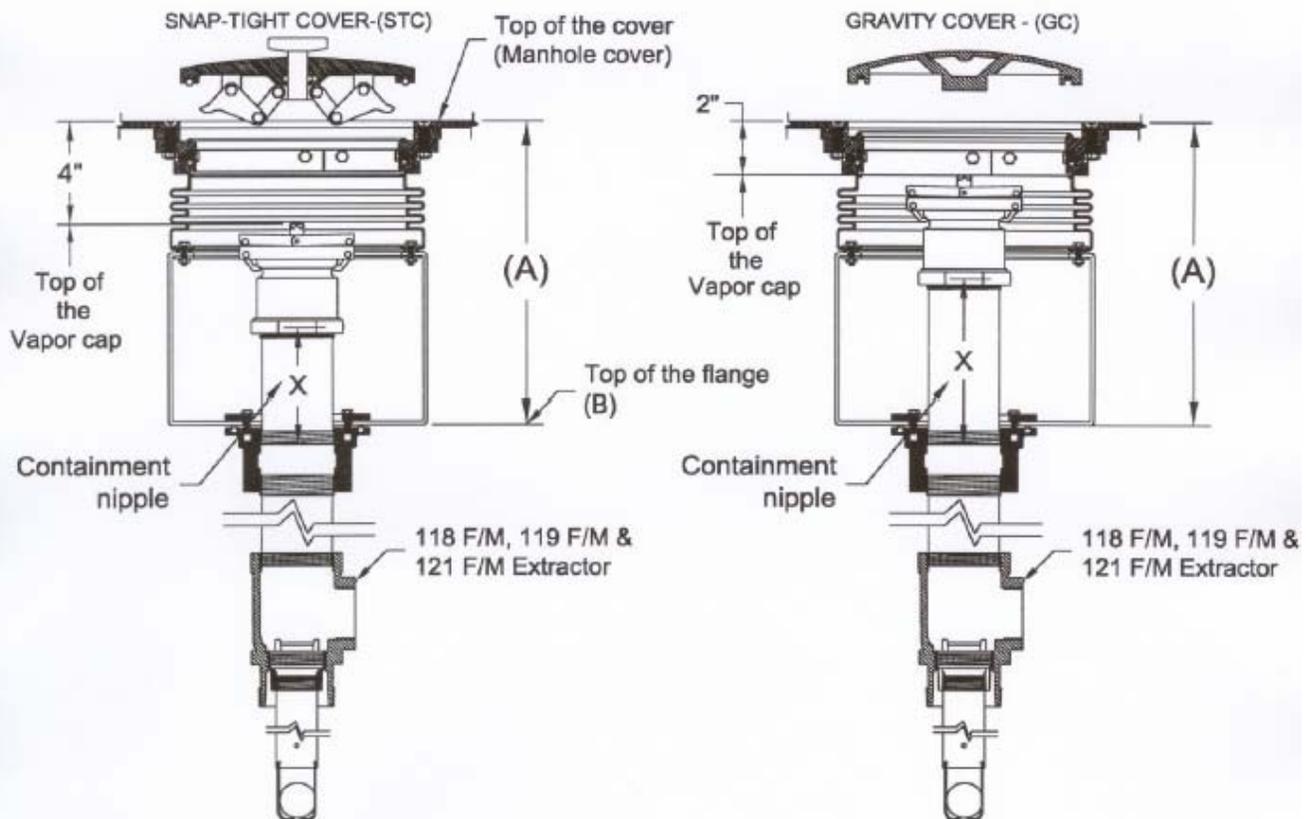
1. Apply a Teflon, Fire Marshall approved thread sealing compound on the upper male threads of the riser pipe.
2. Manually tighten the complete spill container assembly onto the riser pipe.
3. Using a chain wrench, wrap it around the hexed bottom of the flange and torque to 195-200 foot lbs.
  - A. If a chain wrench is not available, the spill container must be removed from the oval flange to be able to properly torque the flange onto the tank riser. Then proceed to steps B, C & D.
  - B. Inside the container there are 6 hex head bolts and a compression ring that must be removed-(See Figure 5). Once removed, lift the spill container to expose the oval flange.
  - C. Use an appropriate sized torque wrench and torque the oval flange to 195-200 foot lbs.
  - D. Line up the spill container on the oval flange, then align the compression ring and manually tighten the hex head bolts-(See Figure 6). Torque a little at a time in a cross over pattern for a correct seal, until you achieve 15 foot lbs.-(See Figure 5).

## Maintenance

After each delivery, the operator must remove any standing fuel from the container. Annually, clean the interior of the container. Remove, accumulated dirt and grit.



## Installation Instructions For A 2 Point System, Vapor Side Spill Container (4" N.P.T. Containment Nipple)



### Step 6

#### Cut the Containment Nipple to Length

1. Snap Tight Cover Nipple Length Formula - (STC):  $X = ((A - 4") - 6 \frac{5}{16} ") + 1 \frac{1}{4} "$       Gravity Cover Nipple Length Formula - (GC):  $X = ((A - 2") - 6 \frac{5}{16} ") + 1 \frac{1}{4} "$
2. X = nipple length (inches)  
 A = distance from top of round flange to top of manhole cover (inches)  
 6 5/16 = vapor rotatable adaptor and cap length (inches)  
 1 1/4 = thread length (inches)
3. Following the formula above, measure the distance from the top of the manhole cover to the top of the flange-(A). Deduct 4 inches for the Snap-tight cover or 2 inches for the Gravity cover. Next, deduct 6 5/16 inches for the vapor rotatable adaptor and cap. Finally you add 1 1/4 inches for the threads.



## Installation Instructions For A 2 Point System, Vapor Side Spill Container (4" N.P.T. Containment Nipple, Rotatable Adaptor, Bellows Hold Down Clamp)

### Step 7

#### Install the 4" N.P.T. Containment Nipple

**DO NOT USE HACKSAW TO CUT CONTAINMENT NIPPLE.**

1. Once the proper nipple length is established, use a roller style 2 blade pipe cutter to ensure a flat square cut across the top of the nipple.
2. Cut the tapered threads on both ends of the nipple.
3. Ensure that a square flush smooth sealing surface is achieved on both sides. De-burr and clean nipple threads.
4. Apply a Teflon, Fire Marshall approved thread sealing compound on lower nipple threads.
5. Manually tighten the containment nipple into round flange, then torque to 170-175 foot lbs.

### Step 8

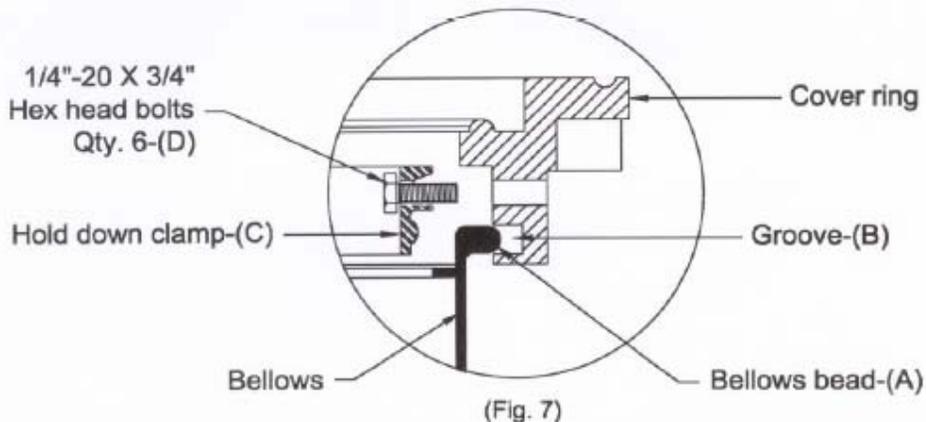
#### Install Vapor Rotatable Adaptor

Install Vapor Rotatable Adaptor, according to manufacturers installation instructions.

### Step 9

#### Install The Manhole Cover

1. Use two men to pick up the floor plate cover and align with containment area.
2. Reach in and work the bellows bead-(A) into the groove-(B) of the cover ring.-(See Fig. 1)
3. Line up the bellows 3 piece hold down clamp-(C), screw on the bolts-(D) and tighten. Using a 7/16 inch socket, torque to 10 inch lbs.-(See Fig. 7)



**Figure B-3**

**Direct Bury Product Side Installation Instructions**

(COPY MUST BE LEFT WITH OWNER OR OPERATOR)



# EVR STAND ALONE, PRODUCT SIDE, SYSTEM Installation Instructions For Stand Alone Containments

Model No's: 205P & 214P

**Torque Specifications for CNI's Stand Alone Assembly Installation**

Part Description	Torque Specifications (foot lbs.)	Special Tool Needed
4" Tank Riser	250-350 foot lbs.	Standard chain wrench with offset / torque wrench
Stand alone Bottom section	195-200 foot lbs.	Standard chain wrench with offset / torque wrench
3 Piece compression ring	3 foot lbs.	No, Standard ratchet and socket / torque wrench
200JN, Jam Nut	45 foot lbs.	Yes, CNI Jam Nut Installation Tool P/N #EVRSYS112
4" Containment Nipple	170-175 foot lbs.	Standard chain wrench with offset / torque wrench
A0030-124, EMCO Wheaton Rotatable Product Adaptor	35 foot lbs.	Yes, CNI MFG Rotatable Adaptor Tool #EVRSYS106
RP12-PUSH Drain Valve Assembly	Hand Tight, bottom out then 1 complete turn	No

**Pre-Assembly Notes**

- The stand alone containment assembly is pre-assembled at the factory for ease of installation.

**DO NOT DISASSEMBLE THE STAND ALONE CONTAINMENT IN THE FIELD**

**NOTE:** All containments for the State of California, you will add #31103 to our catalog part numbers for our CNI EVR System.

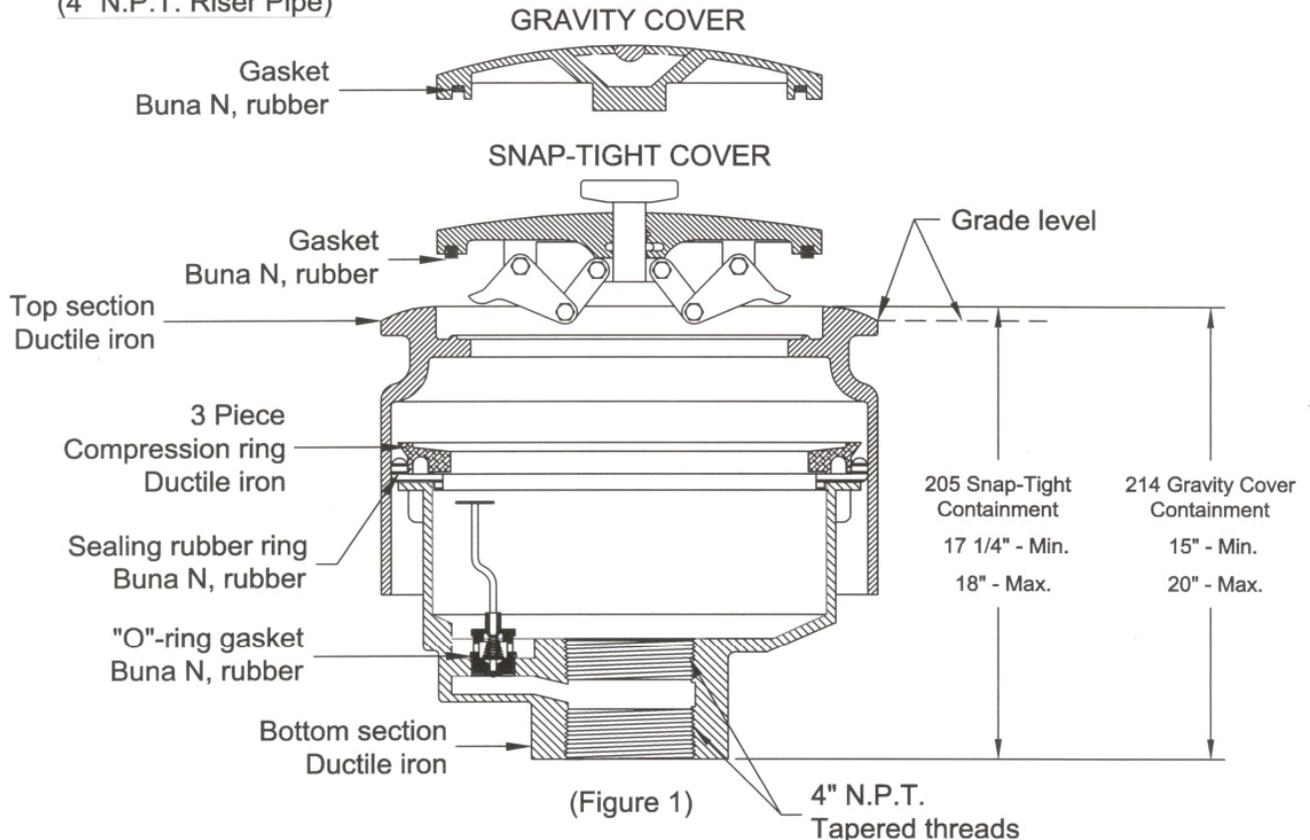
**EXAMPLE:** Catalog part #205P add #31103 to get part #205P31103 for our CNI EVR System.

- Inspect components for damage.
- Use appropriate safety measures, to avoid fire and personal injury.
- Use ONLY the correct tools and torque wrenches for a correct installation.



## Installation Instructions for Product Side, Stand Alone Containment

(4" N.P.T. Riser Pipe)



### Step 1

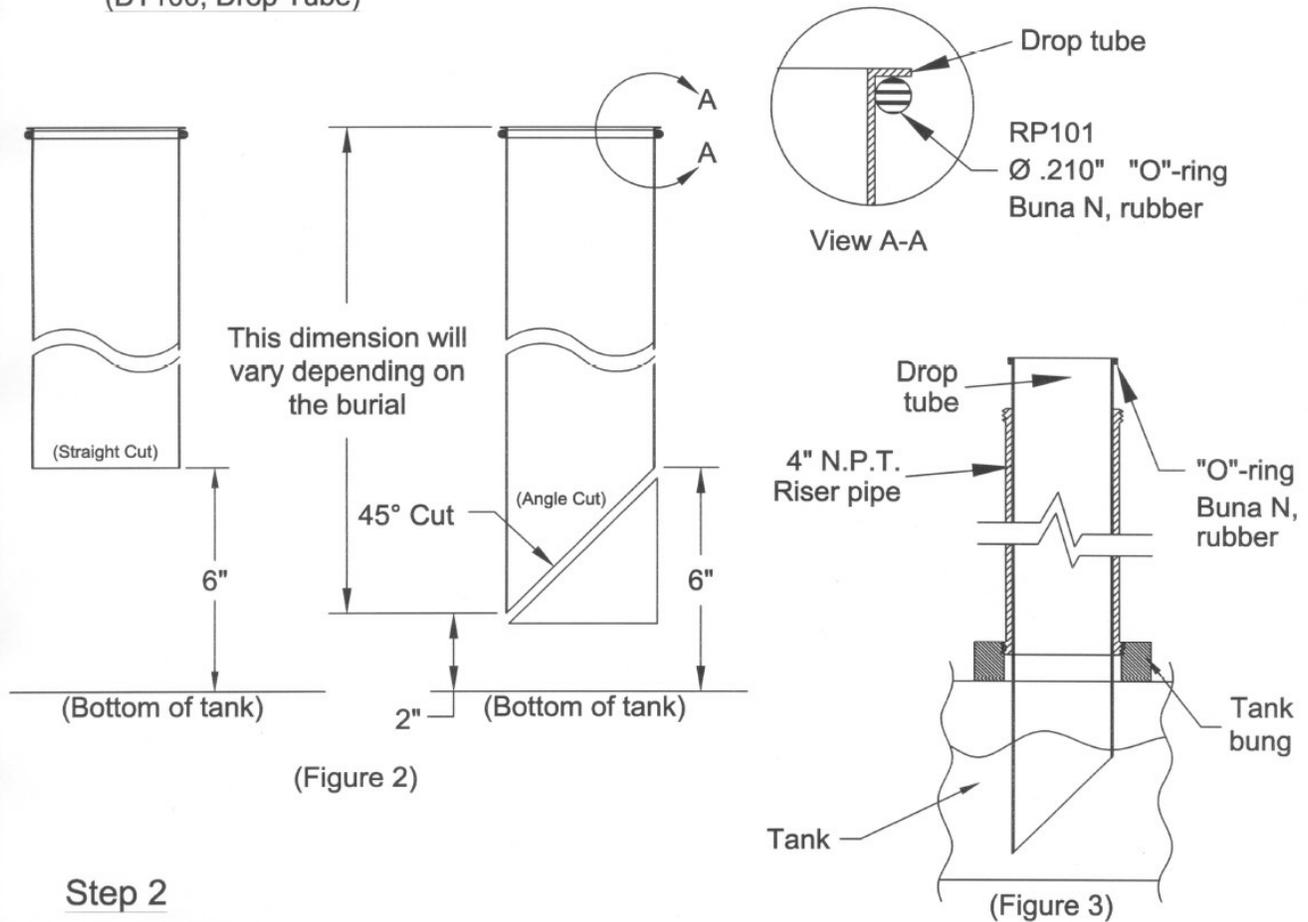
#### Cut the Product Riser to Length and Install

**DO NOT USE HACKSAW TO CUT RISER PIPE.**

1. The length of the riser pipe will vary depending upon, height dimension of the 2 piece ductile iron containment and the depth of the underground storage tank. Regardless of these variables keep in mind that the 205 and 214 have an adjustable height. (See figure 1), above for the 205 and 214 minimum and maximum dimensions.
2. Once the proper riser length is established, use a roller style 2 blade pipe cutter to ensure a flat square cut across the top of the riser. Cut the tapered threads on both ends of the riser. Ensure that a square flush smooth sealing surface is achieved on both sides. De-burr and clean riser threads. Apply a Teflon, Fire Marshall approved thread sealing compound on the lower male threads of the riser pipe.
3. Manually tighten riser pipe into tank bung, then torque to 250-350 foot lbs.



## Installation Instructions for Product Side, Stand Alone Containment (DT100, Drop Tube)



### Step 2

#### Install drop tube

1. Measure the distance between the top of the product riser pipe and the bottom of the tank.
2. Cut the solid drop tube at a 45° angle, 6 inches from the the extreme top cut, to the bottom of the tank. For a straight cut, the dimension should also be 6" from the bottom of the drop tube to the bottom of the tank-(See Figure 2). Cut the drop tube to the referenced dimension using a hacksaw equipped with a fine tooth blade.

**NOTE:** For an angle cut, the drop tube may not exceed 2 inches from the bottom of the tank.

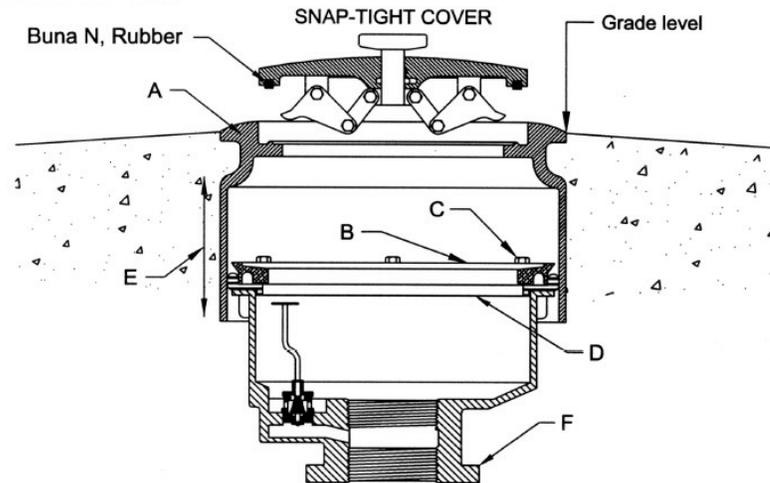
3. Carefully remove all cutting burs from the edge of the drop tube.
4. Insert the drop tube on to the tank riser-(See Figure 3). Carefully lower the drop tube into the tank, until the drop tube collar rests on the edge of the product riser pipe. Verify the drop tube "O"-ring is installed and properly secured.



## Installation Instructions for Product Side, Stand Alone Containment

(205 & 214 Model, Stand Alone Containments)

- (A) Top Section
- (B) 3 Piece Compression Ring
- (C) 6 S.S. 1/4"-20 X 1 1/2" bolts
- (D) Buna N, Sealing Rubber Ring
- (E) Height Adjustment
- (F) Bottom Section

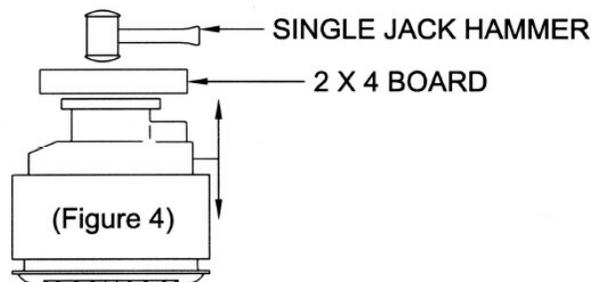


### Step 3

#### Installing the Stand-Alone Containment

THE 205 AND 214 CAN BE INSTALLED AS IT COMES OUT OF THE BOX, BUT IF NEEDED, CNI RECOMMENDS THE FOLLOWING FOR EASIER INSTALLATION, AS FOLLOWS:

1. To adjust for grade - loosen the six 1/4-20 screws-(C), DO NOT REMOVE COMPLETELY.
2. Turn the unit upside down, use a 2 X 4 piece of board and lay over the bottom of the unit and hit with a single jack hammer for the desired adjustment.-(See Figure 4)



3. Take the containment and mount on the tank riser and tighten. Torque 195-200 foot lbs.
4. Depending on your area, make sure you allow for the frost rise when shooting your grade there should be a 1" crown of concrete around the lid to prevent water entry upon opening the lid. Lay a level across the top and plumb.
5. Take care when tightening the six 1/4-20 screws-(C). At this point adjust the top section-(A) to get the grade level needed. Rotate by alternating back and forth, tightening a little bit more each time, do not apply more than 3 foot lbs. torque.



## Installation Instructions for Product Side, Stand Alone Containment (200JN, Jam Nut)

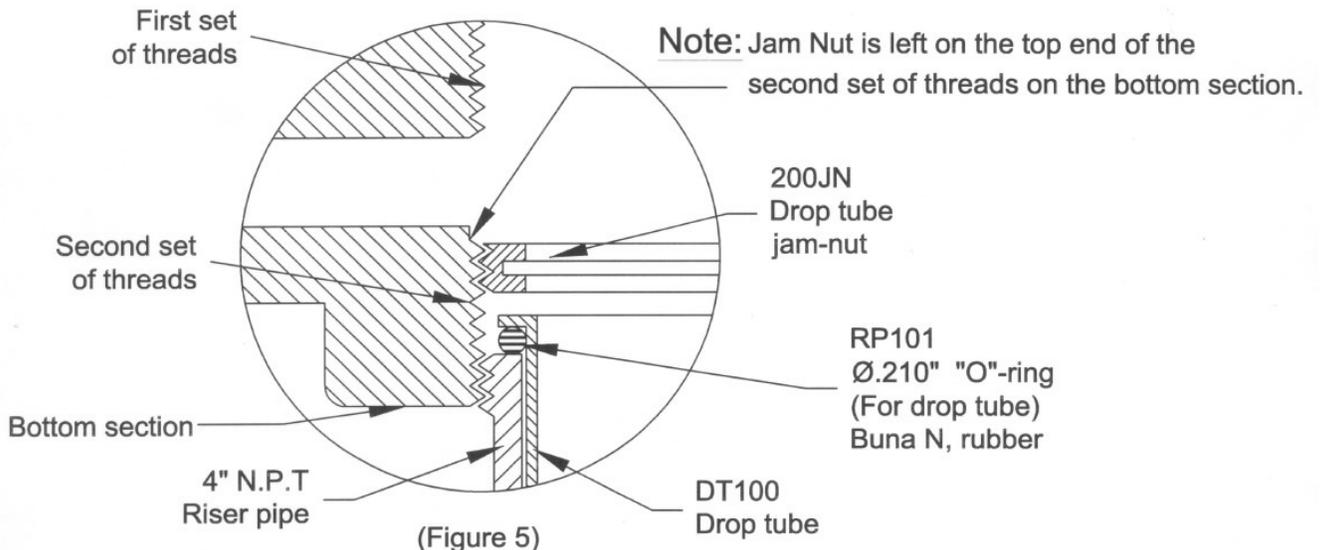
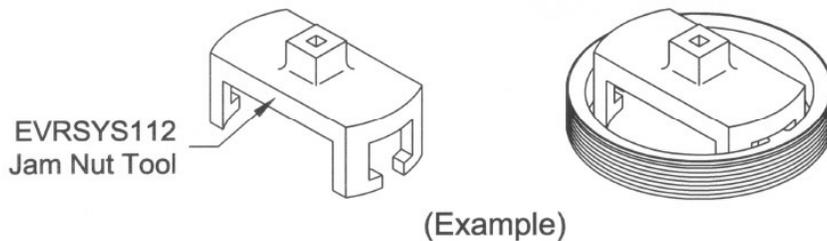
### Step 4

#### Install Jam Nut (For Product Side Only)

**Note:** The jam nut is included in the containment pre-assembly. It's located on the second set of threads, on the bottom section, for ease of installation-(See Figure 5) below.

1. Screw jam nut by hand until it sets against the drop tube.
2. Using jam nut installation/removal tool #EVRSYS112-(see example below), tighten jam nut to 45 foot lbs. The jam nut must be in contact with the drop tube flange.

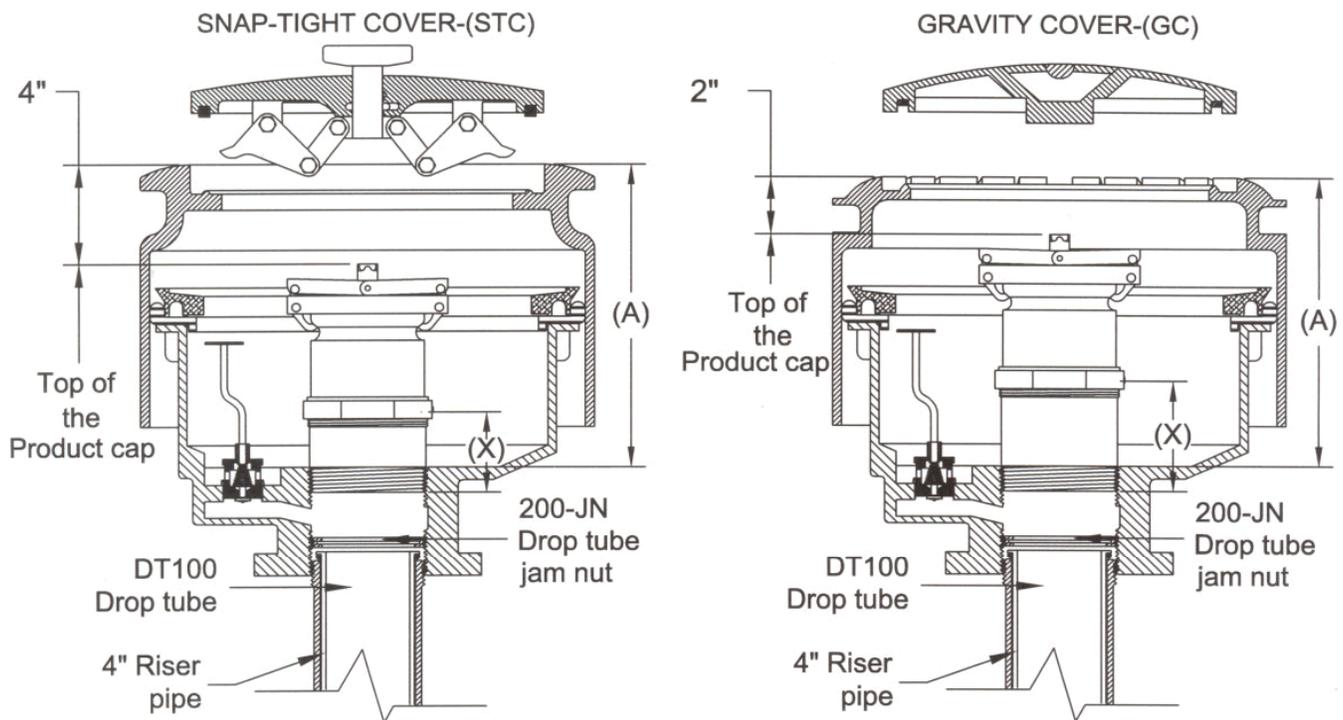
**Note:** Tool #EVRSYS112 must be ordered separately.





## Installation Instructions for Product Side, Stand Alone Containment

(4" N.P.T. Containment Nipple)



### Step 5

#### Cut the Containment Nipple to Length

1. Snap Tight Cover Nipple Length Formula - (STC):      Gravity Cover Nipple Length Formula - (GC):  

$$X = ((A - 4") - 6 \frac{9}{16} ") + 1 \frac{1}{4} "$$

$$X = ((A - 2") - 6 \frac{9}{16} ") + 1 \frac{1}{4} "$$

2. X = containment nipple length (inches)

A = distance from top of the containment to the inside bottom of the containment.

6 9/16 = product rotatable adaptor and cap length (inches)

1 1/4 = thread length (inches)

3. Following the formula above, measure the distance from top of the containment to the inside bottom of the containment-(A). Deduct 4 inches for the Snap-tight cover or 2 inches for the Gravity cover. Next, deduct 6 9/16 inches for the product rotatable adaptor and cap. Finally, you add 1 1/4 inches for the threads.



## Installation Instructions for Product Side, Stand Alone Containment (4" N.P.T. Containment Nipple and Product Rotatable Adaptor)

### Step 6

#### Install the 4" N.P.T. Containment Nipple

**DO NOT USE HACKSAW TO CUT CONTAINMENT NIPPLE.**

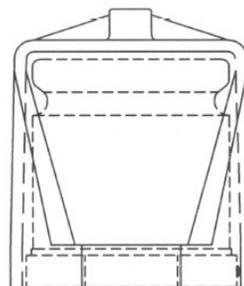
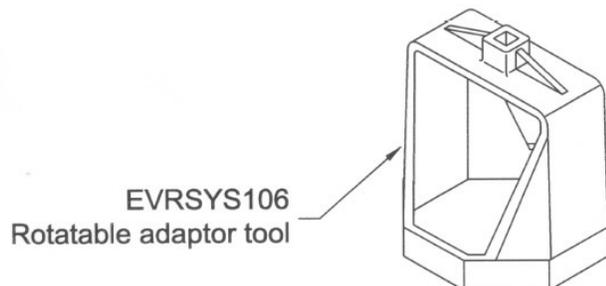
1. Once the proper nipple length is established, use a roller style 2 blade pipe cutter to ensure a flat square cut across the top of the nipple.
2. Cut the tapered threads on both ends of the nipple.
3. Ensure that a square flush smooth sealing surface is achieved on both sides. De-burr and clean nipple threads.
4. Apply a Teflon, Fire Marshall approved thread sealing compound on lower nipple threads.
5. Manually tighten the containment nipple into the inside bottom section of the containment, then torque to 170-175 foot lbs.

### Step 7

#### Install Product Rotatable Adaptor

Install product rotatable adaptor, according to manufacturers installation instructions.

**Note:** Tool #EVRSYS106 must be used to get the correct torque when installing rotatable adaptor on the containment nipple. Must be ordered separately.



(Example)

**Figure B-4**

**Direct Bury Vapor Side Installation Instructions**

(COPY MUST BE LEFT WITH OWNER OR OPERATOR)



**EVR STAND ALONE, VAPOR SIDE, SYSTEM**

**Installation Instructions For Stand Alone Containments**

Model No's: 205V & 214V

**Torque Specifications for CNI's Stand Alone Assembly Installation**

Part Description	Torque Range (foot lbs.)	Special Tool Needed
121-F/M Extractor	250-350 foot lbs.	Standard chain wrench with offset / torque wrench
125 Extractor Coupling	80 foot lbs.	Standard chain wrench with offset / torque wrench
123-12C Ball Float Valve	60 foot lbs.	Standard chain wrench with offset / torque wrench
4" Tank Riser	250-350 foot lbs.	Standard chain wrench with offset / torque wrench
Stand Alone Bottom Section	195-200 foot lbs.	Standard chain wrench with offset / torque wrench
3 Piece compression ring	3 foot lbs.	No, Standard ratchet and socket / torque wrench
4" Containment Nipple	170-175 foot lbs.	Standard chain wrench with offset / torque wrench
A0076-124, EMCO Wheaton Rotatable Vapor Adaptor	35 foot lbs.	Yes, CNI MFG Rotatable Adaptor Tool #EVRSYS106

**Pre-Assembly Notes**

- The stand alone containment assembly is pre-assembled at the factory for ease of installation.

**DO NOT DISASSEMBLE THE STAND ALONE CONTAINMENT IN THE FIELD**

**NOTE:** All containments for the State of California, you will add #31103 to our catalog part numbers for our CNI EVR System.

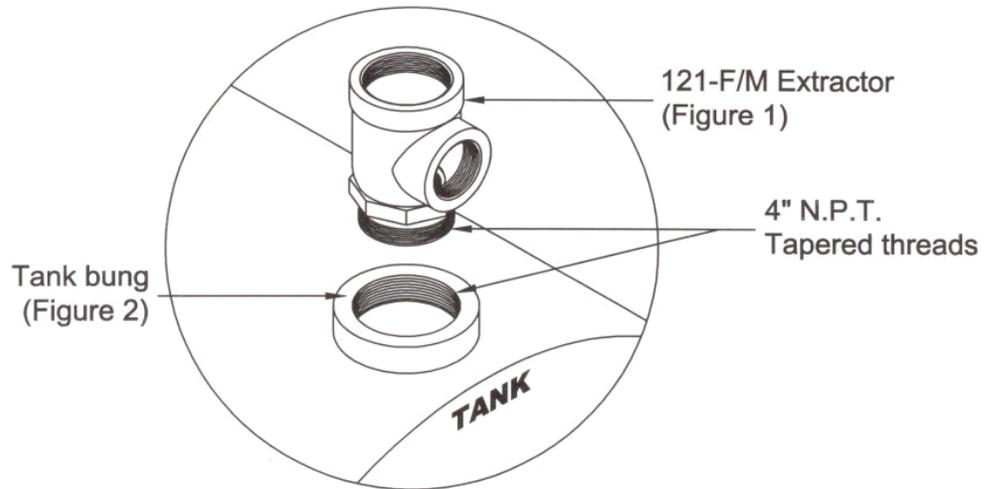
**EXAMPLE:** Catalog part #214P add #31103 to get part #214P31103 for our CNI EVR System.

- Inspect components for damage.
- Use appropriate safety measures, to avoid fire and personal injury.
- Use ONLY the correct tools and torque wrenches for a correct installation.



## Installation Instructions for Vapor Side, Stand Alone Containment

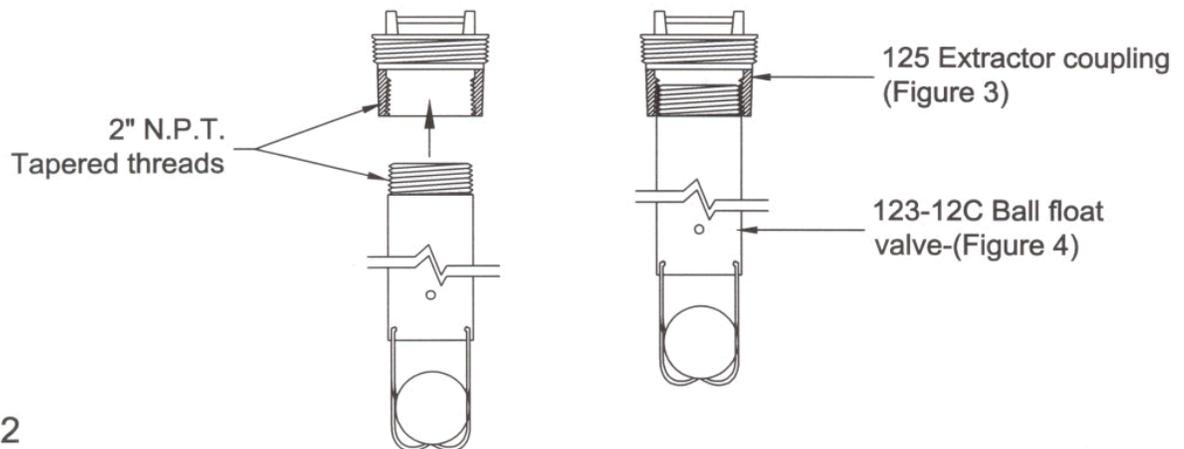
(121-F/M Extractor, 125 Extractor Coupling and 123-12C Ball Float Valve)



### Step 1

#### Install The Extractor Into Tank Bung

1. Apply a Teflon, Fire Marshall approved thread sealing compound on the male extractor threads.
2. Manually tighten the extractor-(Figure 1) into the tank bung-(Figure 2), then torque to 250-350 foot lbs.



### Step 2

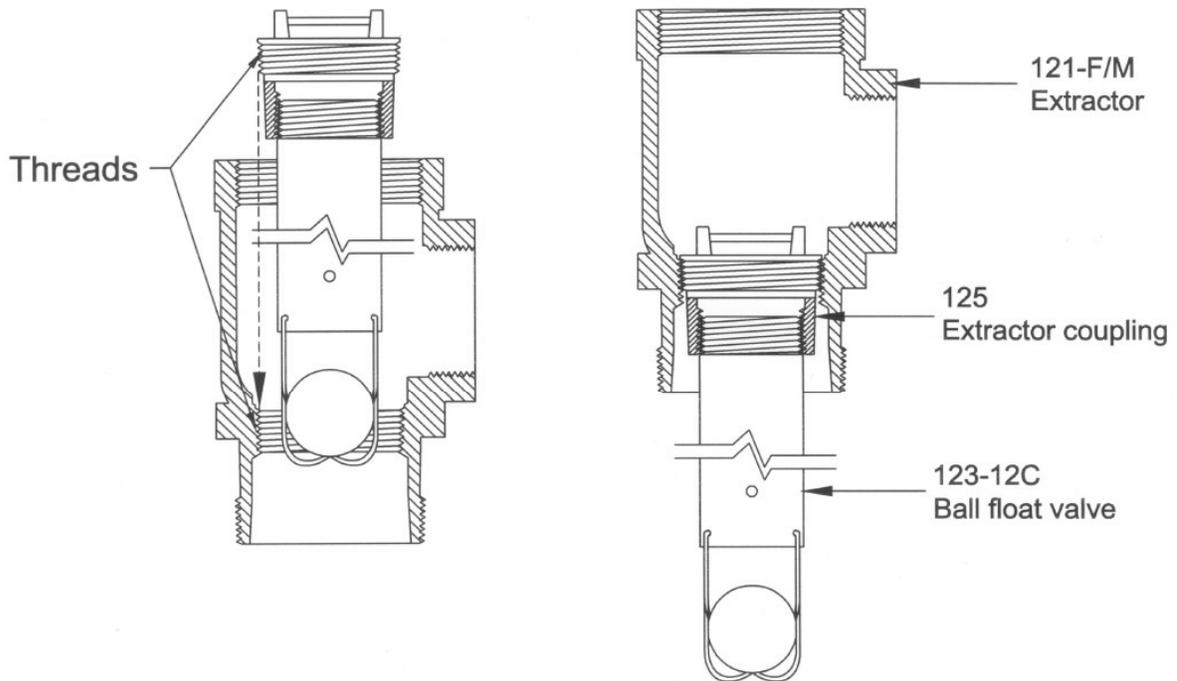
#### Install Ball Float Valve Into Extractor Coupling

1. Apply a Teflon, Fire Marshall approved thread sealing compound on the male threads of the ball float valve.
2. Manually tighten the ball float valve-(Figure 4) into the extractor coupling-(Figure 3), then torque to 60 foot lbs.



## Installation Instructions for Vapor Side, Stand Alone Containment

(121-F/M Extractor, 125 Extractor Coupling and 123-12C Ball Float Valve)



### Step 3

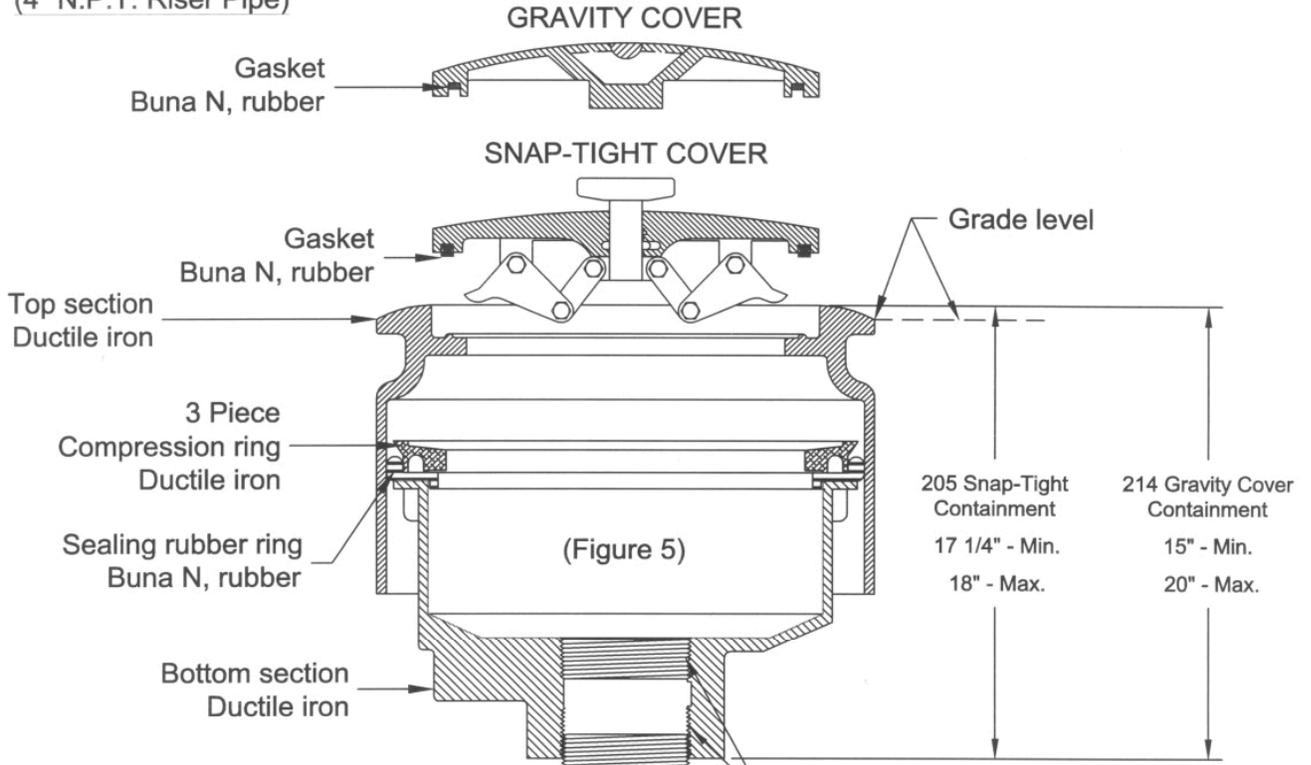
#### Install the Ball Float Valve and Extractor Coupling Assembly into Extractor

1. Apply a Teflon, Fire Marshall approved thread sealing compound on the male threads of the extractor coupling.
2. Manually install the ball float valve and extractor coupling assembly into the extractor fitting then torque to 80 foot lbs.



## Installation Instructions for Vapor Side, Stand Alone Containment

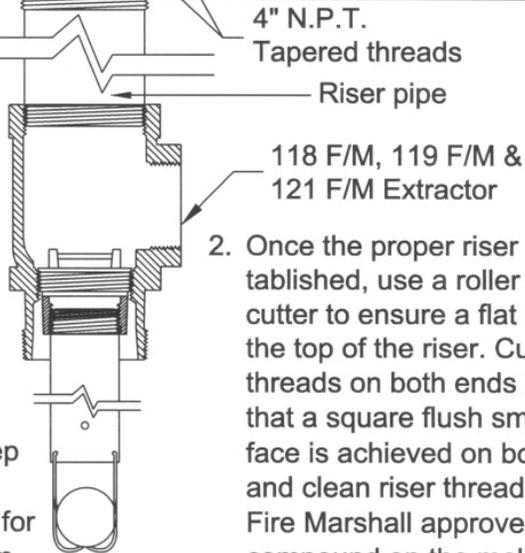
(4" N.P.T. Riser Pipe)



### Step 4 Cut the Vapor Riser to Length And Install

**DO NOT USE HACKSAW  
 TO CUT RISER PIPE.**

1. The length of the riser pipe will vary depending upon, height dimension of the 2 piece ductile iron containment and the depth of the underground storage tank. Regardless of these variables, keep in mind that the 205 and 214 have an adjustable height. (See figure 5), above for the 205 and 214 minimum and maximum dimensions.



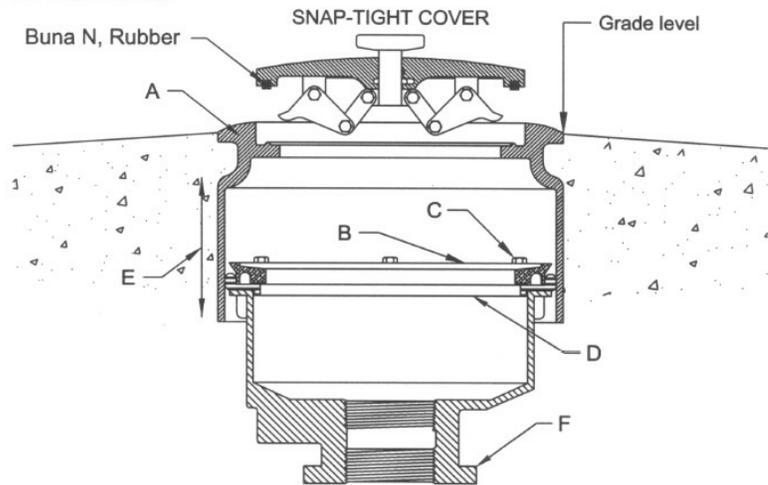
2. Once the proper riser length is established, use a roller style 2 blade pipe cutter to ensure a flat square cut across the top of the riser. Cut the tapered threads on both ends of the riser. Ensure that a square flush smooth sealing surface is achieved on both sides. De-burr and clean riser threads. Apply a Teflon, Fire Marshall approved thread sealing compound on the male threads of the riser pipe.

3. Manually tighten riser pipe into extractor, then torque to 250-350 foot lbs.



## Installation Instructions for Vapor Side, Stand Alone Containment (205 & 214 Model, Stand Alone Containments)

- (A) Top Section
- (B) 3 Piece Compression Ring
- (C) 6 S.S. 1/4"-20 X 1 1/2" bolts
- (D) Buna N, Sealing Rubber Ring
- (E) Height Adjustment
- (F) Bottom Section

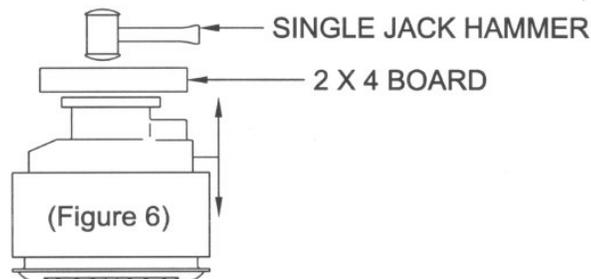


### Step 5

#### Installing the Stand-Alone Containment

THE 205 AND 214 CAN BE INSTALLED AS IT COMES OUT OF THE BOX, BUT IF NEEDED, CNI RECOMMENDS THE FOLLOWING FOR EASIER INSTALLATION, AS FOLLOWS:

1. To adjust for grade - loosen the six 1/4-20 screws-(C), DO NOT REMOVE COMPLETELY.
2. Turn the unit upside down, use a 2 X 4 piece of board and lay over the bottom of the unit and hit with a single jack hammer for the desired adjustment.-(See Figure 6)

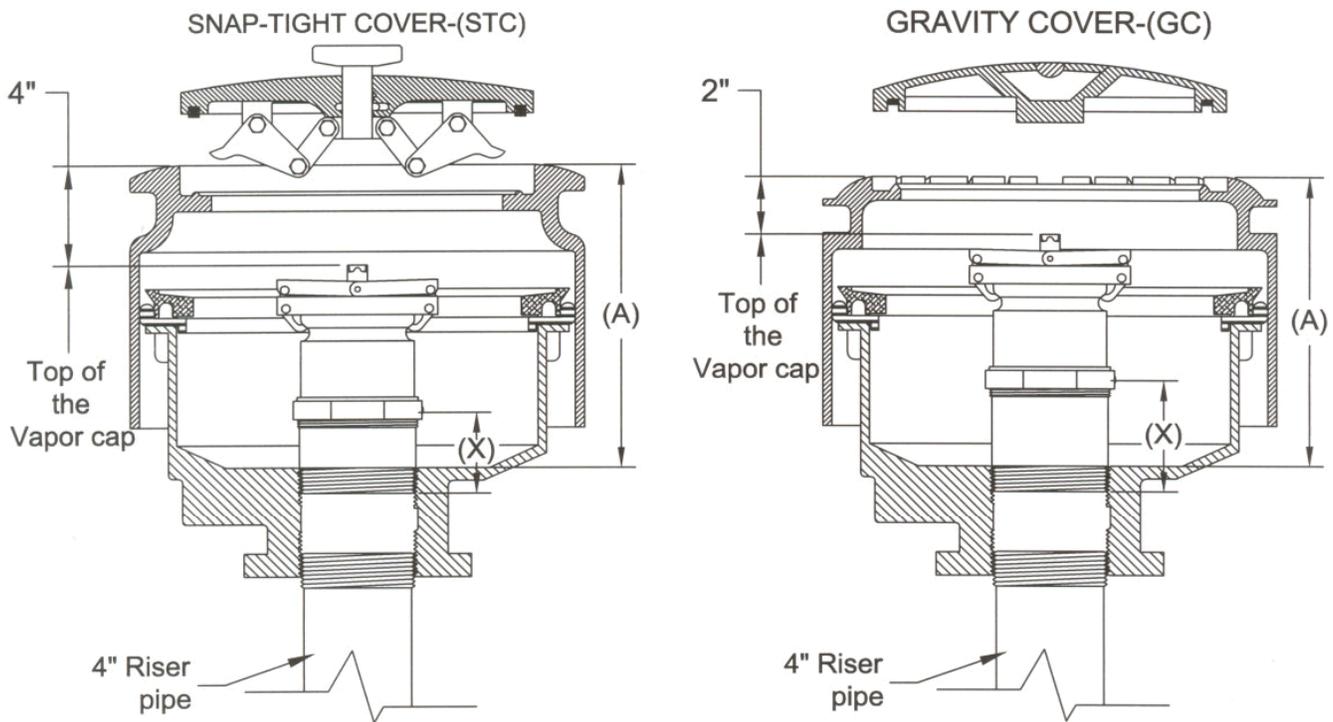


3. Take the containment and mount on the tank riser and tighten. Torque 195-200 foot lbs.
4. Depending on your area, make sure you allow for the frost rise when shooting your grade there should be a 1" crown of concrete around the lid to prevent water entry upon opening the lid. Lay a level across the top and plumb.
5. Take care when tightening the six 1/4-20 screws-(C). At this point adjust the top section-(A) to get the grade level needed. Rotate by alternating back and forth, tightening a little bit more each time, do not apply more than 3 foot lbs. torque.



## Installation Instructions for Vapor Side, Stand Alone Containment

(4" N.P.T. Containment Nipple)



### Step 6

#### Cut the Containment Nipple to Length

1. Snap Tight Cover Nipple Length Formula - (STC):  $X = ((A - 4") - 6 \frac{5}{16} ") + 1 \frac{1}{4} "$       Gravity Cover Nipple Length Formula - (GC):  $X = ((A - 2") - 6 \frac{5}{16} ") + 1 \frac{1}{4} "$
2. X = containment nipple length (inches)  
 A = distance from top of the containment to the inside bottom of the containment (inches)  
 6 5/16 = vapor rotatable adaptor and cap length (inches)  
 1 1/4 = thread length (inches)
3. Following the formula above, measure the distance from the top of the containment to the inside bottom of the containment-(A). Deduct 4 inches for the Snap-tight cover or 2 inches for the Gravity cover. Next, deduct 6 5/16 inches for the vapor rotatable adaptor and cap. Finally you add 1 1/4 inches for the threads.



## Installation Instructions for Vapor Side, Stand Alone Containment (4" N.P.T. Containment Nipple and Vapor Rotatable Adaptor)

### Step 7

#### Install the 4" N.P.T. Containment Nipple

**DO NOT USE HACKSAW TO CUT CONTAINMENT NIPPLE.**

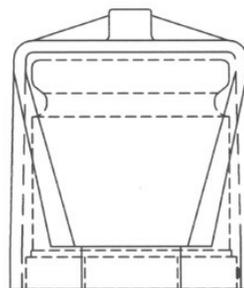
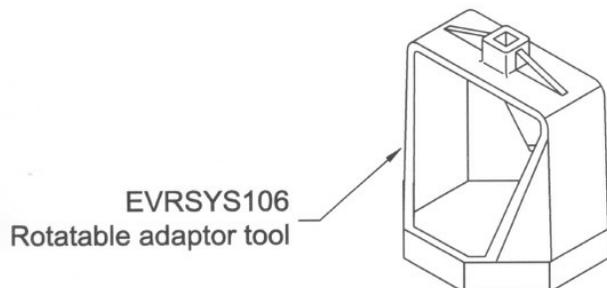
1. Once the proper nipple length is established, use a roller style 2 blade pipe cutter to ensure a flat square cut across the top of the nipple.
2. Cut the tapered threads on both ends of the nipple.
3. Ensure that a square flush smooth sealing surface is achieved on both sides. De-burr and clean nipple threads.
4. Apply a Teflon, Fire Marshall approved thread sealing compound on lower nipple threads.
5. Manually tighten the containment nipple into the inside bottom section of the containment, then torque to 170-175 foot lbs.

### Step 8

#### Install Vapor Rotatable Adaptor

Install vapor rotatable adaptor, according to manufacturers installation instructions.

Note: Tool #EVRSYS106 must be used to get the correct torque when installing rotatable adaptor on the containment nipple. Must be ordered separately.



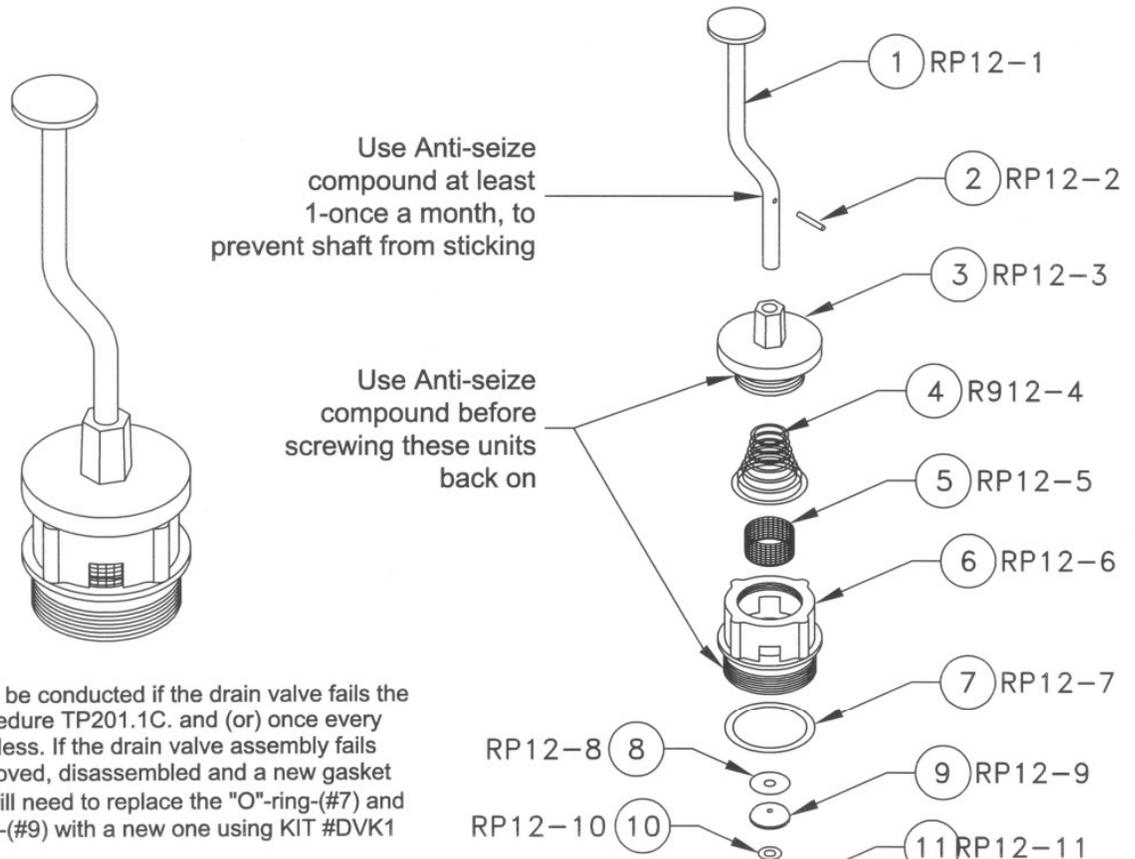
(Example)

Figure C-1

Drain Valve Maintenance Instructions



Maintenance Instructions for  
 Drain Valve Assembly

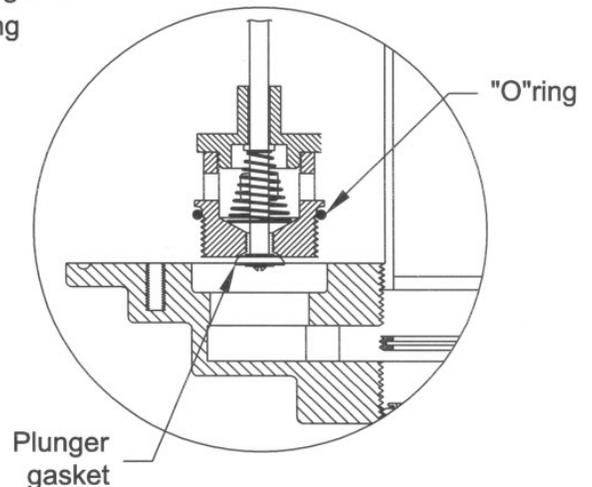


**NOTE:**

Maintenance must be conducted if the drain valve fails the C.A.R.B. test procedure TP201.1C. and (or) once every 18 months, regardless. If the drain valve assembly fails it needs to be removed, disassembled and a new gasket kit installed. You will need to replace the "O"-ring-(#7) and the plunger gasket-(#9) with a new one using KIT #DVK1

**Maintenance steps:**

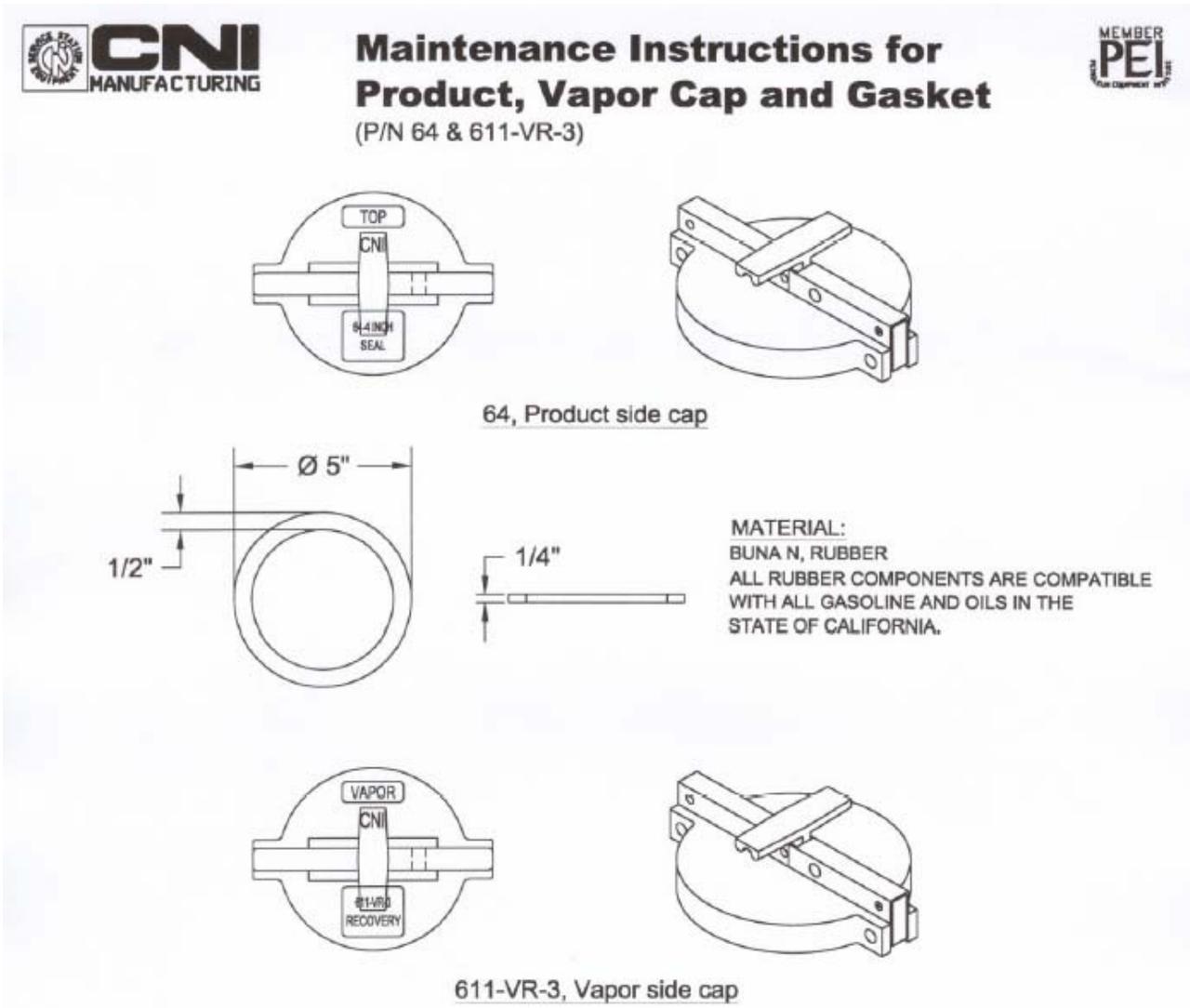
1. Unscrew the drain valve.
2. Unscrew cap-( #3).
3. Remove screw and washer #10 & #11.
4. Pull the shaft-(#1).
5. Clean and check the screen-(#5), replace it if it's damaged.
6. The "O"-ring-(#7), needs to be replaced each time the drain valve is removed.
7. The plunger gasket-(#9) needs to be replaced each time the drain valve is disassembled.
8. Clean all parts before assembling.
9. To assemble reverse procedures 2-7 and screw the cap back on finger tight.
10. Install completely assembled drain valve hand tight, bottom out then 1 complete turn.



**Performance Specification:** Drain Valve leak rate is not to exceed 0.17 CFH at 2.0 inches of water column pressure.

Figure D-1

CNI Manufacturing Dust Caps



Warranty and Maintenance.

- \* CNI warrants that products sold by it are free from defects in material and workmanship for a period of one year from the date of manufacture by CNI. Proof of purchase may be required. As the exclusive remedy under this limited warranty, CNI will at its sole discretion, repair, replace, or issue credit for future orders for any product that may prove defective within the one year date of manufacture period (repairs, replacements, or credits may be subject to prorated warranty for remainder of the original warranty period, complete proper warranty claim documentation required.) This warranty shall not apply to any product that has been altered in any way, which has been repaired by any party other than a service representative authorized by CNI, or when failure is due to misuse, or improper installation or maintenance. CNI shall have no liability whatsoever for special, incidental or consequential damages to any party, and shall have no liability for the cost of labor, freight, excavation, clean up, downtime, removal, installation, loss of profit, or any other cost or charges.

For any product certified to California 2001 standards, CNI warrants that product sold by it are free from defects in material and workmanship for a period of one year from date of manufacture or one year from date of registration of installation not to exceed 15 months from date of manufacture by CNI.

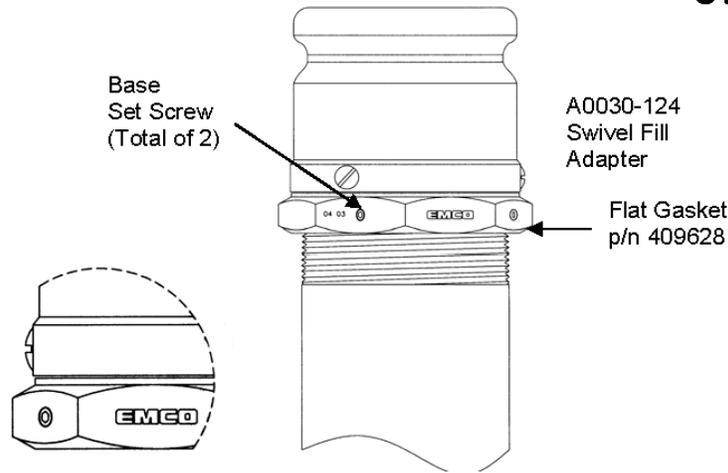
- \* Annually inspect the gasket in the cap, if the gasket is worn or the cap spins freely on the adaptor, replace the gasket with a new gasket using p/n RP65.

Figure E-1

EMCO Wheaton Fill Adaptor



**A0030-124**  
Swivel Fill Adapter



**INSTALLATION INSTRUCTIONS**

1. Using a 5/32" Allen wrench, remove both set screws from the base of the swivel adapter.
2. The top edge of the top riser nipple must be filed flat and square, with threads free of all debris to insure a proper sealing surface between the riser nipple and the base of the swivel adapter.
3. Before installing the swivel adapter, verify that the flat gasket is properly in place. Manually tighten the swivel adapter on to the top riser nipple to avoid cross threading. Using CNI's #EVRSYS106 rotatable adaptor tool, torque the swivel adapter to 35 ft-lbs.  
**IMPORTANT:** Do not use pipe thread sealant compound when installing the swivel adapter.
4. Apply lock-tite model #222MS on both set screws. Re-install and torque to 20 in-lbs.

**PREVENTIVE MAINTENANCE**

Static Torque Test

1. Annually verify the static torque of the swivel adapter by performing CARB test procedure TP-201.1B. Use CNI Manufacturing Torque Test Tool Part Number EVRSYS100 rather than Phil-Tite Torque Test Tool Part Number 6004 as specified in Section 5.2 of TP-201.1B. The Phil-Tite tool is not compatible with CNI Manufacturing dust caps.
2. If the swivel adapter fails to meet the static torque test requirements, replace both o-rings with the Emco Wheaton o-ring kit p/n 493995.

Leak Tightness Integrity Test

1. Annually verify leak tightness integrity of the swivel adapter by performing CARB test procedure TP-201.1C.
2. If the swivel adapter fails to meet the leak tightness integrity test requirements, replace both o-rings with the Emco Wheaton o-ring kit p/n 493995 or flat gasket p/n 409628.

**Figure E-1 (continued)**

**PERFORMANCE SPECIFICATIONS**

This component was factory tested to, and met, the following specifications.

1. TP-201.1B - Complies with the allowable maximum: 108 in-lbs. average static torque and 360 degrees rotation.
2. Meets CARB Cam and Groove Standard CID.

**WARRANTY POLICY**

Emco Wheaton Retail Corporation products are warranted to be free from defects in material and workmanship under normal use and service for a period of twelve (12) months from the date of manufacture.

Emco Wheaton Retail Corporation shall, at its option, repair or replace that part which proves to be defective. This warranty is void unless the original purchaser returns the claimed defective item to Emco Wheaton Retail Corporation for inspection to determine whether the claimed defect is covered by this warranty.

The exclusive and sole remedy under this warranty is repair or replacement of the defective part. Emco is not responsible for claims for damage caused by improper installation or maintenance; corrosive fluids; misuse of the product or use of the product for other than its intended purpose; or accident, acts of God, or natural phenomena. Emco will not pay for labor or related expenses, nor shall Emco be liable for any incidental, consequential or exemplary damages. This warranty is void if the Emco Wheaton Retail Corporation product has been previously repaired with parts not approved by Emco Wheaton Retail Corporation.

Emco Wheaton Retail Corporation products certified to California 2001 standards are warranted to be free from defects in material and workmanship under normal use and service for a period of fifteen (15) months from the date of manufacture. EMCO WHEATON RETAIL CORPORATION MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, (WHETHER WRITTEN OR ORAL), INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

Emco Wheaton Retail Corp.  
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252-243-0150 • 252-243-4759 (fax)  
619-421-1743 (Technical Services, California)

p/n 568679  
Rev. A, 09/03

**Laser Etched Identification Label**

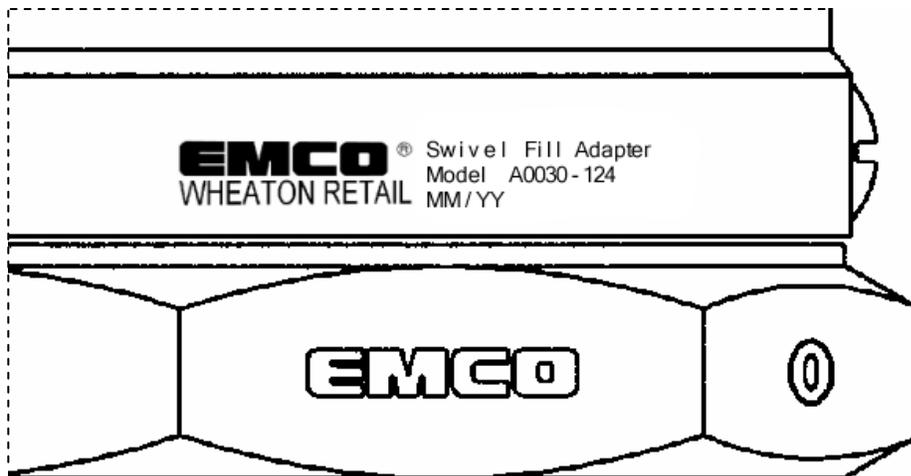
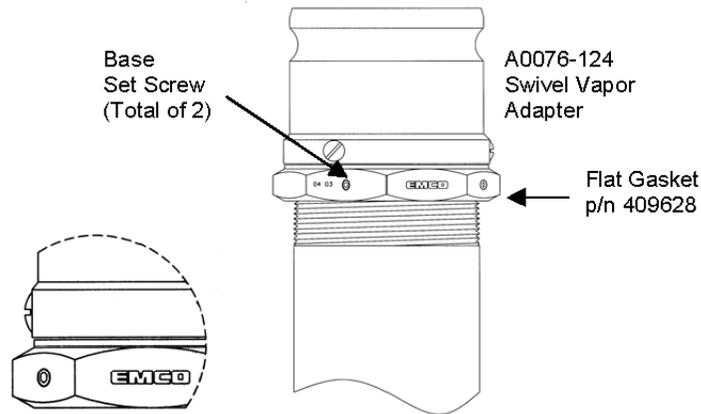


Figure E-2

EMCO Wheaton Vapor Adaptor

**EMCO**<sup>®</sup>  
WHEATON RETAIL

**A0076-124**  
Swivel Vapor Adapter



**INSTALLATION INSTRUCTIONS**

1. Using a 5/32" Allen wrench, remove both set screws from the base of the swivel adapter.
2. The top edge of the top riser nipple must be filed flat and square, with threads free of all debris to insure a proper sealing surface between the riser nipple and the base of the swivel adapter.
3. Before installing the swivel adapter, verify that the flat gasket is properly in place. Manually tighten the swivel adapter on to the top riser nipple to avoid cross threading. Using CNI's #EVRSYS106 rotatable adaptor tool, torque the swivel adapter to 35 ft-lbs.

**IMPORTANT:** Do not use pipe thread sealant compound when installing the swivel adapter.

4. Apply lock-tite model #222MS on both set screws. Re-install and torque to 20 in-lbs.

**PREVENTIVE MAINTENANCE**

Static Torque Test

1. Annually verify the static torque of the swivel adapter by performing CARB test procedure TP-201.1B. Use CNI Manufacturing Torque Test Tool Part Number EVRSYS100 rather than Phil-Tite Torque Test Tool Part Number 6004 as specified in Section 5.2 of TP-201.1B. The Phil-Tite tool is not compatible with CNI Manufacturing dust caps.
2. If the swivel adapter fails to meet the static torque test requirements, replace both o-rings with the Emco Wheaton o-ring kit p/n 493995.

Leak Tightness Integrity Test

1. Annually verify leak tightness integrity of the swivel adapter by performing CARB test procedure TP-201.3.
2. If the swivel adapter fails to meet the leak tightness integrity test requirements, replace both o-rings with the Emco Wheaton o-ring kit p/n 493995 or flat gasket p/n 409628.

**Figure E-2 (continued)**

**PERFORMANCE SPECIFICATIONS**

This component was factory tested to, and met, the following specifications.

1. TP-201.1B - Complies with the allowable maximum: 108 in-lbs. average static torque and 360 degrees rotation.
2. Meets CARB Cam and Groove Standard CID A-A-59326.

**WARRANTY POLICY**

Emco Wheaton Retail Corporation products are warranted to be free from defects in material and workmanship under normal use and service for a period of twelve (12) months from the date of manufacture.

Emco Wheaton Retail Corporation shall, at its option, repair or replace that part which proves to be defective. This warranty is void unless the original purchaser returns the claimed defective item to Emco Wheaton Retail Corporation for inspection to determine whether the claimed defect is covered by this warranty.

The exclusive and sole remedy under this warranty is repair or replacement of the defective part. Emco is not responsible for claims for damage caused by improper installation or maintenance; corrosive fluids; misuse of the product or use the product for other than its intended purpose; or accident, acts of God, or natural phenomena. Emco will not pay for labor or related expenses, nor shall Emco be liable for any incidental, consequential or exemplary damages. This warranty is void if the Emco Wheaton Retail Corporation product has been previously repaired with parts not approved by Emco Wheaton Retail Corporation.

Emco Wheaton Retail Corporation products certified to California 2001 standards are warranted to be free from defects in material and workmanship under normal use and service for a period of fifteen (15) months from the date of manufacture. EMCO WHEATON RETAIL CORPORATION MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, (WHETHER WRITTEN OR ORAL), INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

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p/n 568680  
Rev. A, 09/03

**Laser Etched Identification Label**

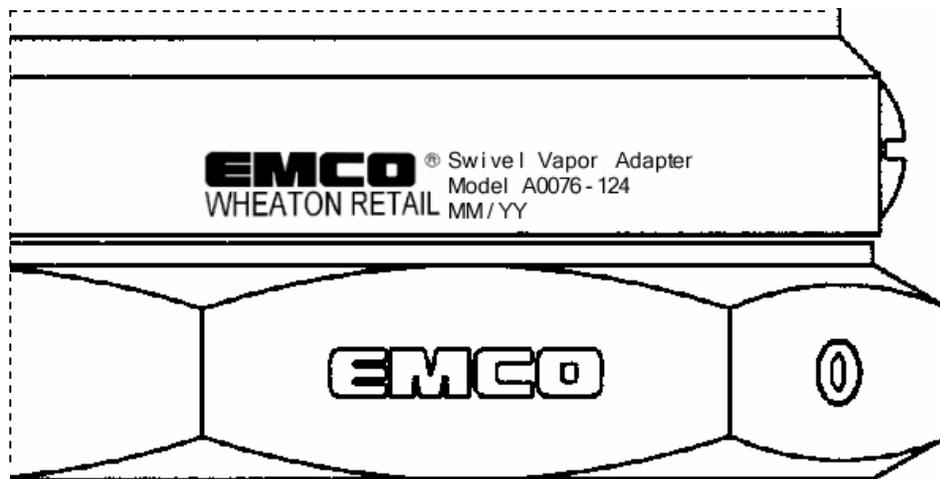


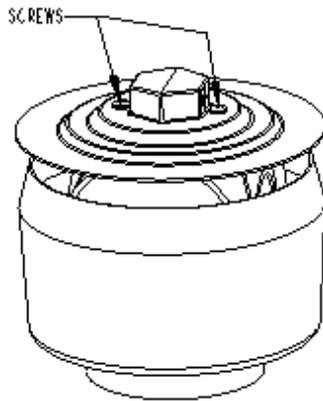
Figure F-1

### Husky Model 4885 2-Inch Threaded Pressure/Vacuum Vent Valve

#### PRESSURE/VACUUM VENT MODEL 4885 INSTALLATION AND MAINTENANCE INSTRUCTIONS

##### INSTALLATION

The P/V Vent is designed to fit on top of a 2" vent pipe. Remove the P/V Vent from the carton and visually inspect for any shipping damage.



##### Model 4885 Thread-On P/V Vent

Apply fuel resistant pipe sealant to the threads on the 2" vent stack. Screw the P/V Vent onto the vent stack and tighten to a range of 20 to 50 ft-lbs with a suitable wrench. DO NOT OVER-TIGHTEN. Periodic maintenance is recommended (see below).

##### MAINTENANCE

Annually inspect the P/V Vent valve for foreign objects without removing the P/V Vent valve from the vent pipe by using the following procedure:

1. Remove the screws that hold the top cover on.
2. Remove any debris that might be sitting inside the lower cover.
3. Check the drain holes in the lower cover for blockage.
4. The two (2) screens should not be removed.
5. Reinstall the top cover and retaining screws.
6. Tighten the screws firmly.

**NOTE: DO NOT ALTER OR COVER THE P/V VENT**



##### TESTING CRITERIA

Leak rate: Pressure = .05 CFH at 2" WC,  
Vacuum = .21 CFH at -4" WC.

Cracking Pressure: 2 1/2" to 3 1/2" WC,  
Vacuum = -6" to -10" WC.

Per ARB procedure TP-201.1E or the applicable ARB Executive Order.

#### PRESSURE VACUUM VENT WARRANTY INFORMATION

Husky Corporation will, at its option, repair, replace, or credit the purchase price of any Husky manufactured Pressure Vacuum Vent which proves upon examination by Husky, to be defective in material and/or workmanship within EIGHTEEN (18) MONTHS from the date of shipment for any Husky Pressure Vacuum Vent, except as otherwise provided herein. For all other Husky manufactured product, see Husky Form No. PS2002-Term (4/15/02) at [www.husky.com](http://www.husky.com).

The warranty period on repaired or replacement product is only for the remainder of the warranty period. Buyer must return the products to Husky, transportation charges prepaid. This Warranty does not apply to equipment or parts which have been installed improperly, damaged by misuse, improper operation or maintenance, or which are altered or repaired in any way other than by Husky.

The Warranty provisions contained herein apply ONLY to original purchasers and subsequent commercial purchasers within the warranty period who use the equipment for commercial or industrial purposes. THERE ARE NO OTHER WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE, AND ANY OTHER SUCH WARRANTIES ARE HEREBY SPECIFICALLY DISCLAIMED.

Husky assumes NO LIABILITY for labor charges or other costs incurred by Buyer incidental to the service, adjustment, repair, return, removal or replacement of products. HUSKY ASSUMES NO LIABILITY FOR ANY INCIDENTAL, CONSEQUENTIAL, OR OTHER DAMAGES UNDER ANY WARRANTY, EXPRESS OR IMPLIED, AND ALL SUCH LIABILITY IS HEREBY EXPRESSLY EXCLUDED.

Husky reserves the right to change or improve the design of any Husky fuel dispensing equipment without assuming any obligations to modify any fuel dispensing equipment previously manufactured.



**HUSKY CORPORATION ● 2325 HUSKY WAY ●  
PACIFIC, MO 63069  
[www.husky.com](http://www.husky.com) PHONE: 800-325-3558  
009063- 0 6/5/02**

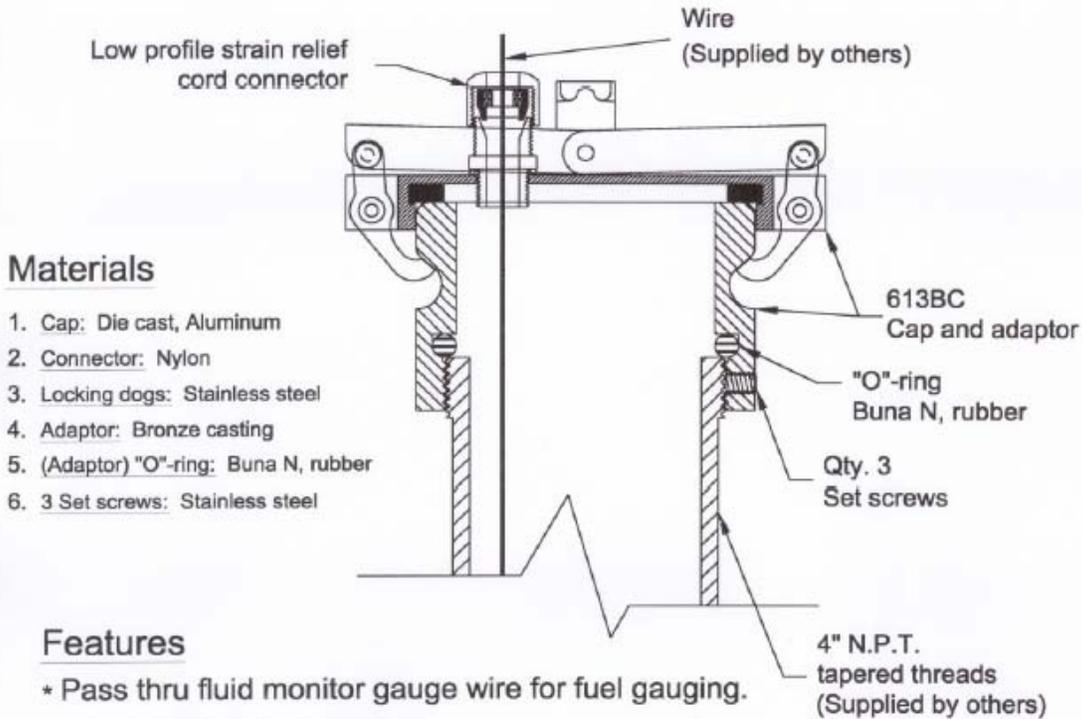
Figure G-1

CNI Manufacturing Tank Gauge Port Components



Installation Instructions

For the 613BCC Tank Gauge Cap And Adaptor



Materials

1. Cap: Die cast, Aluminum
2. Connector: Nylon
3. Locking dogs: Stainless steel
4. Adaptor: Bronze casting
5. (Adaptor) "O"-ring: Buna N, rubber
6. 3 Set screws: Stainless steel

Features

- \* Pass thru fluid monitor gauge wire for fuel gauging.

Installation Instructions

1. Install adaptor onto a 4" N.P.T. tank riser. Manually tighten the adaptor then, torque it to 35 ft-lbs.

Note: Ensure that the "O"-ring is present and properly installed in the lower portion of the adaptor.

2. Using a 5/32" allen wrench, tighten each set screw a little at a time, until fully tightened.
3. Pass the gauge wire thru the strain relief cord connector and manually tighten the plastic nut. Ensure the connector is adequately tightened in order to avoid any vapor leakage.
4. Pass the gauge wire thru the wire compression plastic connector and hand tighten the plastic nut by hand.
5. Lay the cap on the adaptor and snap tight the cap handle.

Maintenance

Annually inspect the gasket in the cap, if the gasket is worn or the cap spins freely on the adaptor, replace the gasket with a new gasket using p/n RP65.

15627 ARROW HWY. IRWINDALE, CA. 91708 (626)962-8646 FAX (626)962-4854 OUT OF STATE: (800)4-CNI-MFG  
WEB SITE: HTTP://WWW.CNI-MFG.COM EMAIL: INFO@CNI-MFG.COM

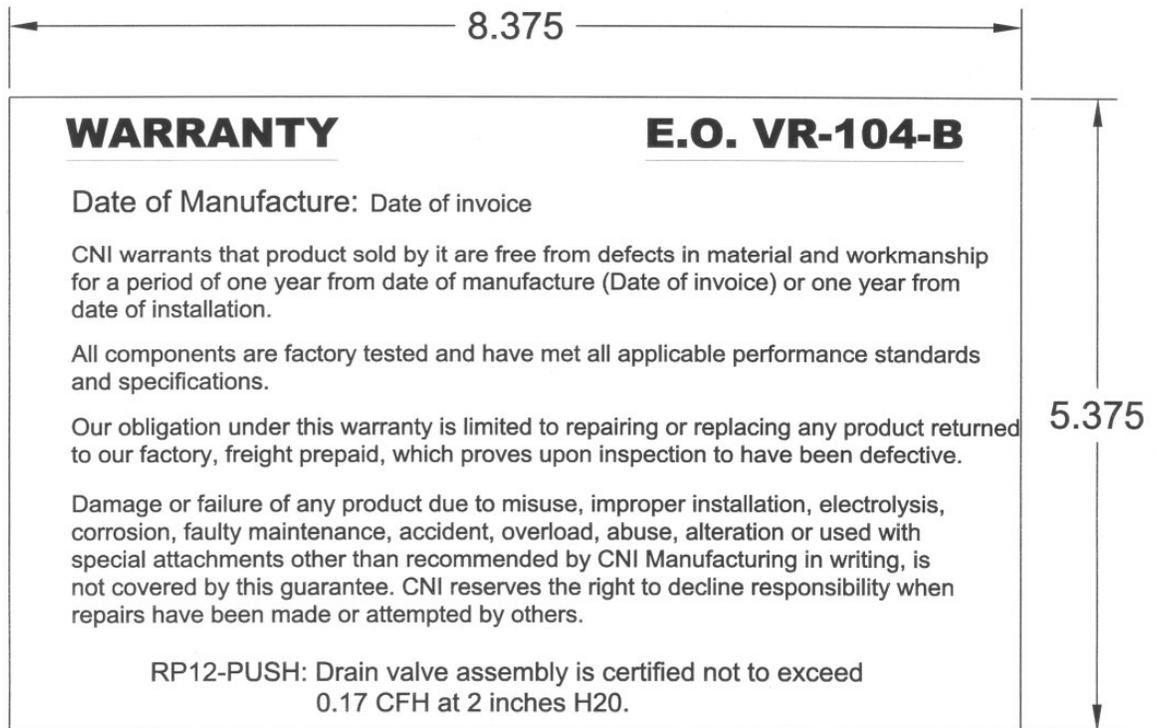
Revision: 091903

Figure H-1

CNI Manufacturing Warranty Card



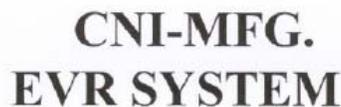
# CNI's Warranty Card



Revision: 081805

Figure J-1

CNI Manufacturing Drop Tube Maintenance



**Drop Tubes:** CNI DT100

**Interval:** Annual

Annually test the drop tube using C.A.R.B test procedure TP201.1C. If it fails you need to replace the "O"-ring with a new one using p/n RP101 Next, visually inspect the drop tube to see if it is installed correctly and see if the bottom of the drop tube is a maximum of 6 inches to the bottom of the tank. Do not remove unless it fails C.A.R.B. test procedure TP201.1C.