A1005-517G
Stainless Steel Spill Containment

IMORTANT INFORMATION - FOLLOW ALL INSTRUCTIONS

All sump products should only be installed by qualified persons. Installation by non-qualified persons or any deviations from the recommended procedures could result in damage or leakage.

Required Tools:
9/16” socket
3/8” socket
12” extension & ratchet
Emco A0081-001 Adapter Wrench
Torque wrench
Measuring tape

Sump Products Approved for Assembly and Use with EMCO A1004EVR Fill Sumps

Fill Adapter	A0030
Vapor Adapter	A0076
Fill Cap	A0097
Vapor Cap	A0099
Overfill Prevention Valve	A1100EVR
Drop Tube	A0020EVR

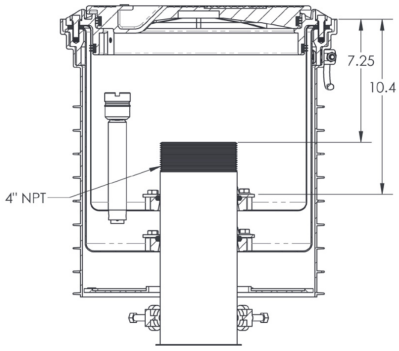
Note: Failure to use recommended comination of sump products in a completed assembly may cause damage or leakage

CAUTION:
1. Always barricade to keep pedestrians and vehicles from accessing the storage tank area during preventive maintenance and/ or compliance testing of the EMCO phase I EVR system.
2. Operation of EMCO fill sumps is intended to be used within the termperature range of -22 to 122 ^{O}F, a max vacuum of 5 in Hg, and a max pressure of 5.0 psig.
3. Use only compatible fuels and fluids with this product. Compatible fuels/fluids include but aren’t limited to commercial diesel, bio-diesel, biodiesel blends, commercial gasoline, oxygenated gas, and ethanol blends.

STORAGE AND TRANSIT:
1. Sump products are not intended for storage in excessive temperature or for below grade use in direct sunlight.
2. Rough handling (drops, impacts, crushing, dragging, etc.) during storage and transit may cause damage or leaking in use. all sumps and related sump products used in assembly should be inspected for any visible damage before installation. A damaged part should not be used.

ASSEMBLY AND INSTALLATION:
1. Use only EMCO recommended sump and accessories, including required EMCO tools (see above), and follow all procedures below for proper assembly and field leak testing. All parts should be inspected during and after installation for any visible damage or damage that causes sump to fail leak test. If a damaged part is found, the part must be replaced with an EMCO replacement part/kit. See the preventative maintenance section on **Page 6** below for replacement kit part numbers.
2. Refer to attached **TP-160** test procedures for instructions on proper field leak testing.
3. Refer to **Page 6** for instructions on proper tank backfill and concrete finish.

INSTALLATION INSTRUCTIONS



Step 1 Sizing the Riser Pipe

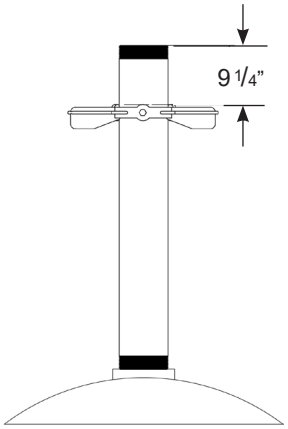
1. Measure the dimension from the top of the tank bung to grade, Dimension A.

2. Pipe cut length = A + 1.0” (crown) - 7.25” (above) + .75” (tank bung thread engagement)
Pipe cut length = A - 5.5”

3. Thread both ends of the riser as 4” NPT.

4. The riser pipe should measure equal to the pipe cut lenth ± 1.0”.

5. Note: These calculations account for a 1” crown and a 4” NPT thread engagement of 3/4” into the tank bung.



Step 2 Install Riser Pipe and Riser Lock

Install riser pipe. Measure from top of riser pipe down 9 1/4” and mark pipe. Position riser lock (p/n A0028-001, fins facing down) so that the top of the riser lock (top of the fins) is on the mark. Torque bolts to 15 ft. lbs. Tighten locking nuts to 10 ft. lbs. to prevent bolts from backing out.

Step 3 Install Secondary Bucket Assembly

1. Separate the primary and secondary units.

2. Wrap riser threads with duct tape to prevent threads from damaging gasket seal.

3. Drop secondary/gravel guard assembly over riser to rest on riser lock. The gravel pan prevents backfill from entering the spill containment cavity if the spill containment needs to be removed.

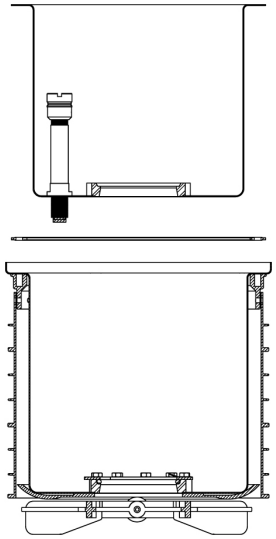
4. Lubricate the o-ring (p/n 570239) with petroleum jelly or suitable lubricant. Install the o-ring.

Step 3, cont.

5. Install the 2 ring flange segments (p/n 570300) with 9 of the 10 3/8”x5/8” bolts (p/n 570447).

6. Use the tenth bolt to install the grounding clip (p/n 570644). The grounding clip must touch the riser pipe. Torque all ten bolts to 15 ft. lbs.

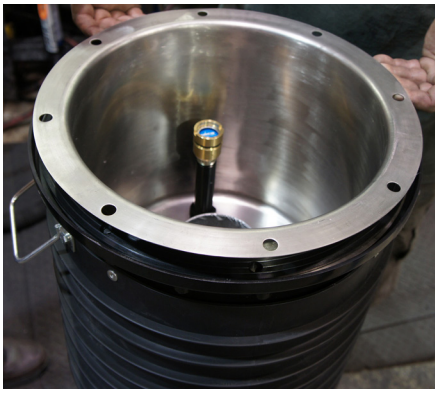
Step 4 Install Primary Bucket



1. Cut plastic ties connecting rim to primary bucket.

2. Separate primary rim, primary bucket and gasket. Be careful not to damage gasket seals.

3. Position gasket seal (p/n 569989) on secondary rim. Align holes in bucket with holes in seal.

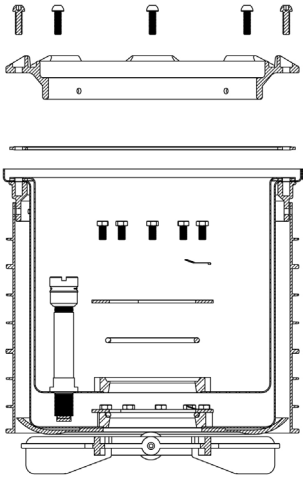


4. Insert primary bucket (p/n 571211CZ). Align holes.

Step 5 Install Primary Rim

1. Install primary rim (p/n 571408) with triple wiper seal (p/n 573812) on top of the liner. Align the bolt holes.

2. Insert the eight 3/8”x1” bolts (p/n 570587B) and tighten to 25 ft. lbs.



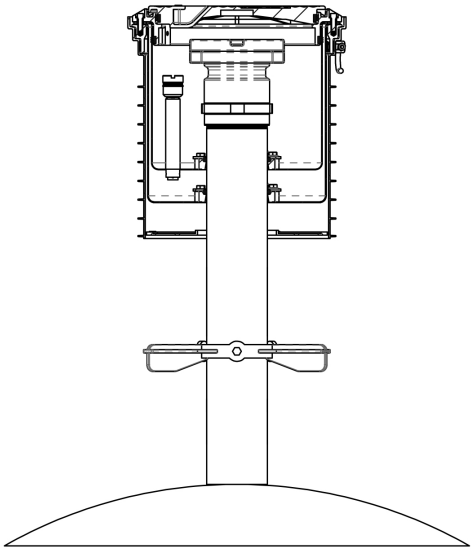
3. Repeat #’s 4-6 of step 3 to install the o-ring and 2 ring flange segments. Remove duct tape from riser.

Step 6 Install Overfill Prevention Value/Drop Tube, Cap, and Adapter

1. Install overfill prevention valve OR drop tube. When installing the A1005 spill containment with an Emco Wheaton overfill prevention valve or drop tube, please refer to the A1100EVR or A0020EVR installation instructions, repectively.

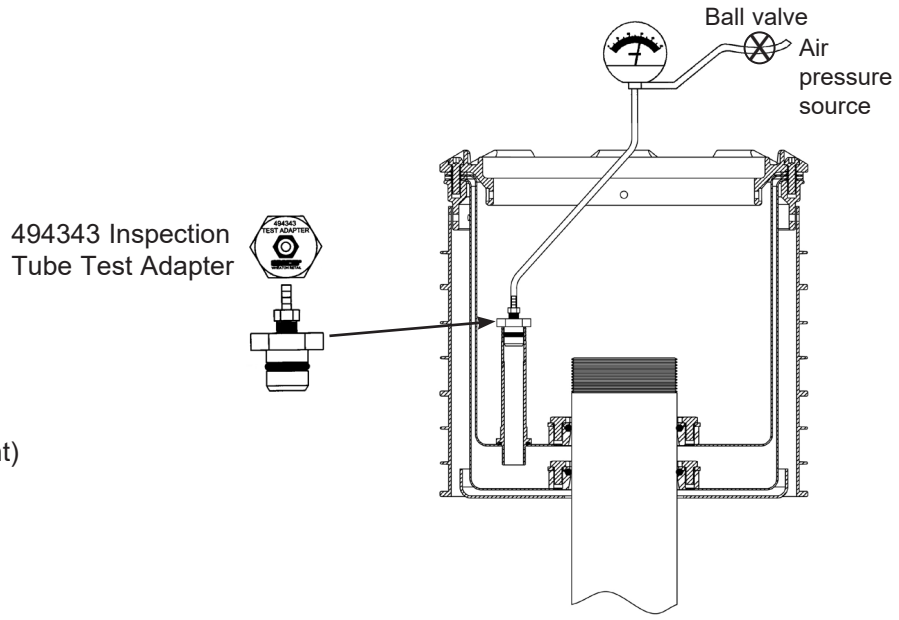
Important: The tank fill riser installation will only allow for one type of EVR drop tube configuration.

2. Install Adapter and cap. When installing the A1005 spill containment with an Emco Wheaton swivel fill adapter and fill cap, please refer to the A0030-124S and A0097-005 installation instructions, respectively.
3. Move the riser lock halfway between the spill container and the tank. Resecure in place per Step 2.
4. Perform integrity test per step 7 or attached **TP-160** test procedures.



Step 7 Integrity Testing Options

A) Pressure Test
B) Vacuum Test
C) Hydrostatic Test



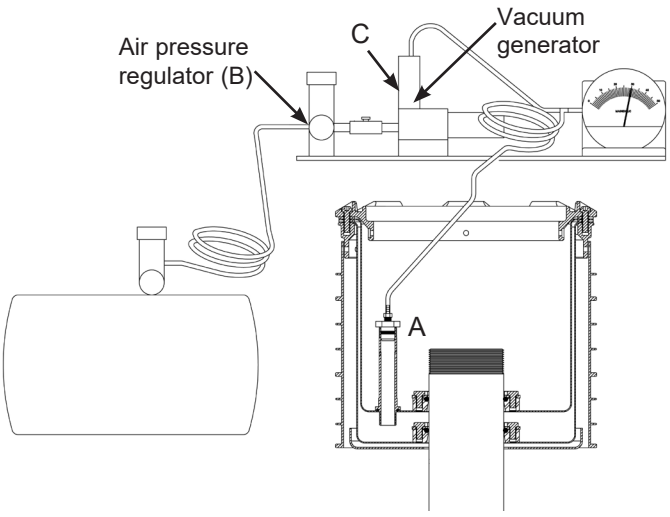
Step 7A Pressure Test

Equipment

Emco 494343 Inspection Tube Test Adapter
(Procured separately from spill containment)
Air pressure gauge, scale 0-10 psi
Air pressure gauge, scale 0-50” water column
Soap & water solution

Procedure

1. Attach Emco Wheaton 494343 Inspection Tube Test Adapter in inspection port.
2. Pressurize the secondary containment interstitial space to 30” WC. Wait 30 seconds for the pressure to stabilize. The pressure supply must then be turned off (using a ball valve) to isolate the pressurized interstitial space. Record the pressure, then wait one minute and record the pressure again. The pressure decay should be less than 4” WC in one minute.
3. If the unit does not pass the pressure decay test, pressurize the interstitial space to 30” WC in order to assist in locating the problem area.
4. Apply soap solution to rim and bolts, around base of gauge tube and flange base. Observe for leakage.
5. If leakage/bubbles appear in any of these areas, check the torque value on bolts and retest. If leaks persist, remove gaskets. Clean, reassemble and retest.



Step 7B VacuumTest

Equipment

Emco A1004-210TEST Vacuum apparatus w/test adapter, 494343, (or supplied by other)
Timer
Air supply

Procedure

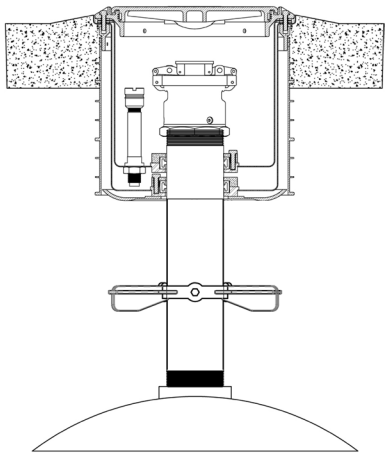
1. Remove the gauge from the inspection port and install the test adapter p/n 494343 (A, included with the vacuum apparatus), otherwise purchase separately.
2. Attach air pressure source to air pressure regulator (B) on vacuum apparatus.
3. Slowly apply vacuum of 30” water column (2.2” mercury) to the interstitial space. (On the Emco tester, this is accomplished by moving the toggle switch, C). Wait 30 seconds for the vacuum reading to stabilize, then reapply 30” water column as required.
4. Ensure that the vacuum source is off (C switch on Emco tester to center position), and start timer. Record vacuum after 1 minute.
5. If the vacuum after 1 minute is 26” water column (1.9” mercury) or greater, both the primary and the secondary containment vessels are tight.
6. If test fails, perform Pressure Test (Step 7A) for confirmation.
7. Replace components or repair as necessary.
8. Reinstall gauge.

Step 7C Hydrostatic Test

Many local regulators require a hydrostatic test. If required, perform per state or local requirements.

Step 8 Backfill and Finish

1. Replace lid. Finish back filling over tank and around manhole to depth required for concrete pad.
2. Concrete must completely fill around and under manhole rim to insure proper anchoring. Be sure to allow a 1” crown above grade to manhole rim for water run-off.
3. After concrete has set, remove excess concrete from inside of rim and the runoff channels.
4. Paint lid as required by product color code.



Preventive Maintenance

1. Quarterly verify that the inside of the A1005 spill containment is free of all dirt, gravel, debris, etc. Should cleaning be required, wipe the inside wall and bottom of the A1005 spill containment using soapy water and disposable towels.
2. Refer to TP-160 test procedures for instructions on proper field leak testing
3. After each delivery, the station operator must remove any standing fuel from the inside of the A1005 spill containment.
4. If serious issues arrise, such as loss of sump/frame structural integrity, leakage, and/or material deterioration, immediately alert the proper authorities and contact EMCO for repair and/or replacement recommendaiton

Sevice Repair Kits

Part Number	Description
494836	Primary Rim Kit
573812	Triple Wiper Rim Seal
495075	Mounting kit
569989	Flat Rim Gasket
570012	Triple Wiper Lid Seal
A1004-316CLID	Lid and Seal; Cast Iron
496067K	Vent Valve Replacement Kit
495370X	Primary Repalcement Kit
496348	Secondary Replacement Kit
A1004-210TEST	Vacuum Test Apparatus
494343	Test Adapter
A0081-13TEST	Test Cover

Tank Operator Responsibilities

- Tank operator must ensure that all Federal, Provincial and local codes are being met during the filling of the tank.
- All operators must be familiar with proper filling procedures.
- The operator responsible for transferring product to an above ground storage tank must take all reasonable steps to prevent spillage.
- The delivery hose from the tank's fill pipe must not be disconnected before the hose has been drained completely.
- When tank vehicles are being unloaded, the vehicle operators must remain:
  (a) in constant view of the transfer nozzle and fill pipe; and
  (b) in constant attendance at the discharge control valve.
- If serious issues arise, such as loss of sump/frame integrity, leakage, and/or material deterioration, immediately alert the proper authorities and contact EMCO for repair and/or replacement recommendations.

PERFORMANCE SPECIFICATIONS

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

1. TP-201.1D - Complies with the allowable maximum leakrate of 0.17 CFH @ 2.00 inches of water.

IMPORTANT: Leave these installation instructions, product warranty registration card and the warranty tag with the station owner and/or operator.

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