

US Patents 8,425,145 B2  
and 8,425,145 B

## INSTALLATION INSTRUCTIONS

### Emco Supplied Parts:

Stainless steel bucket  
(2) O-rings  
(3) split flanges  
(9) stainless steel bolts  
Lid w/seal

### Required Tools:

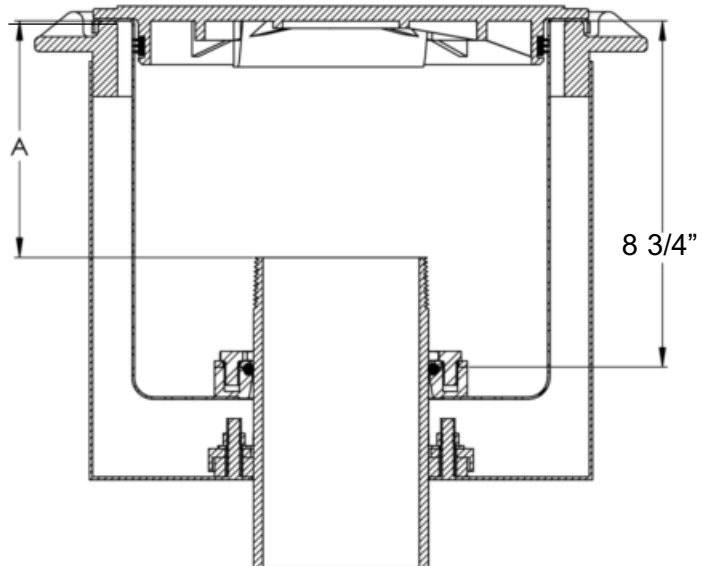
9/16" socket  
12" extension and ratchet  
Urethane sealant  
(such as Emco Z0839-001)  
Adapter wrench  
Wire brush  
Plumbers putty or heavy grease

### Purchased Separately from Emco

Emco 494833 Test Cover  
Emco A1004-210TEST

**Step 1:** Measure Dimension A as shown on the drawing below. Measure from the existing drain channel to the top of the riser pipe. Write the dimension down. ***This dimension must be greater than 6 3/4" (if using a vapor swivel adapter) or 6 1/4" (if using a fill swivel adapter). If dimension is less than stated, a low profile adapter and/or cap will be required. Dimension A must also be 6 3/4" or less for the Emco stainless steel liner to work.***

**Step 2:** Measure from the drain channel down 9". At this dimension, you must have a clean pipe surface on the riser. You can not have threads in this area. This is where the o-ring will seal, and the o-ring will not seal on pipe threads.



**Step 3:** Test fit the new stainless steel bucket to ensure that it sits completely flat on the top of the rim surface, then remove the stainless steel bucket.



**Step 4:** Thoroughly clean the existing rim surface with a wire brush, then with a solvent such as lacquer thinner to ensure there is no oily residue on the rim. A bead of urethane sealant, placed on the underside cavity of the new bucket, may be used to prevent groundwater from entering the existing containment.



**Step 5:** Install the new stainless steel bucket over the nipple, pushing it down completely to ensure that it seats fully on the existing rim.



**Step 6:** Install the small cross section o-ring in the groove of the lower flange. Make certain o-ring groove is clean and free of debris.



**Step 7:** Install the offset ring, aligning large section of flange with largest open area around the nipple.



**Step 8:** Install the large cross section o-ring.



**Step 9:** Install the three flanges using the nine supplied stainless steel bolts and washers. Ensure that the flanges are tight against the nipple.



**Step 10:** Hand tighten all nine bolts, ensuring that the bucket is completely down and flat on the rim.



**Step 11:** Using a 9/16" socket, tighten each of the nine bolts to 15 ft. lbs. Pressure may need to be applied to ensure the liner does not shift while tightening bolts.



**Step 12:** Install adapter and cap per instructions included with each.

**Step 13: Testing** - Perform one of the following test procedures as specified by customer:

**Integrity Test** - perform per following procedure, with customer specified cap and adapter.

**Hydrostatic Test** - perform if specified per customer or local regulations. Perform per local guidelines.

## Integrity Test Procedure

### Equipment (not supplied)

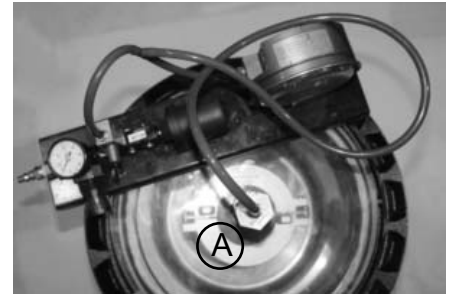
Emco A1004-210TEST Vacuum apparatus w/test adapter 494343

Timer

Air supply

### Procedure

1. Line top surface of stainless steel bucket with plumbers putty.  
(Heavy grease may be used, but may not work properly on rough surfaces.)
2. Place test cover over plumbers putty or heavy grease.
3. Insert brass plug from test unit into opening in test cover (A).
4. Attach air pressure source to air pressure regulator on vacuum apparatus.
5. Slowly apply vacuum of 30" water column (2.2" mercury) to the interstitial space, by moving the toggle switch. Wait 30 seconds. Reapply 30" water column.
6. Ensure switch is in off (center) position, start timer and record remaining vacuum after 1 minute.
7. If the remaining vacuum after 1 minute is 26" water column (1.9" mercury) or greater, the containment is tight.
8. If the test fails, determine if leak point is at test cover seal, cap or adapter, or base flange o-ring by spraying a soap solution to each area and watching for bubbles. Repair as required and retest.
9. Replace components.



## Follow-Up Testing

If follow-up or annual retesting is required by local/state regulation, use the above procedure.

### 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.