

## INSTALLATION INSTRUCTIONS

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

### Emco Supplied Parts

Stainless steel bucket  
(2) O-rings  
(3) Split flanges  
(9) Stainless steel bolts & washers  
Offset ring  
Lid w/seal

### Required Kits :

Pipe nipple (see chart below)  
*If existing bucket has a drain...*  
A1005-505DPU Drain Plug Kit

### Required Tools :

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

### Purchased Separately from Emco

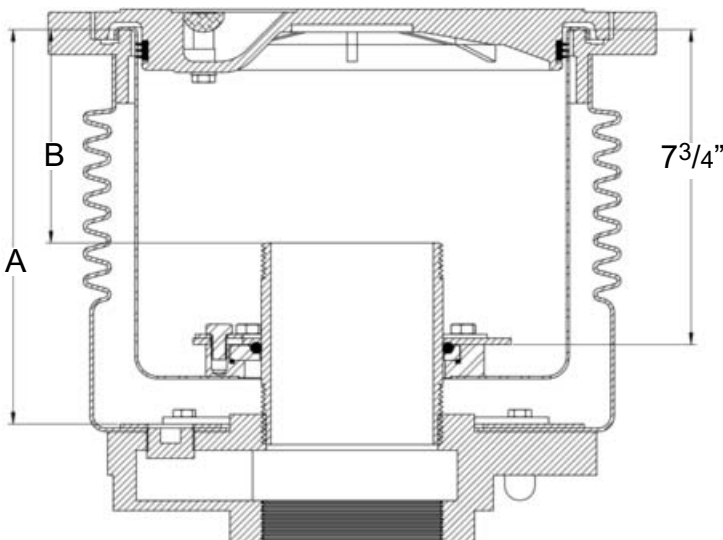
Emco 494833 Test Cover  
Emco A1004-210TEST

**Step 1:** Measure Dimension A as shown on the drawing below. Measure from the existing drain channel to the bottom of the existing bucket. Write the dimension down. *This dimension must be 9 1/4" or greater for the Emco stainless steel liner to work.*

**Step 2:** Measure Dimension B from inside the rim (see drawing below) to the top of the existing nipple. This dimension must be greater than 6 3/4" for a vapor application and 6 1/4" for a fill application. If the dimensions are less than specified, an alternative nipple will be required. The proper nipple can be selected from the table below. The requirements of step 3 must also be met before proceeding with the existing nipple.

**Step 3:** Measure from the drain channel down 7 3/4". At this dimension, you must have a clean pipe surface on the nipple. 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. If you do not have a clean, undamaged, and unthreaded pipe nipple surface at this dimension (7 3/4"), a new clean and undamaged nipple will be required. The proper nipple can be selected from the table below.

**Step 4:** Select proper nipple, if required, from step 2 or 3. Remove existing pipe nipple and install new pipe nipple. Repeat steps 2 and 3 to insure proper nipple selection.



### Pipe Nipple Selection Chart

#### Dimension A, Bucket Depth:

Drain Channel to  
Bottom of Bucket

Nipple  
Requirement

9 1/4" - 9 3/4"

Emco A7901-005

9 3/4" - 10 3/4"

Emco A7901-006

10 3/4" - 11 3/4"

Emco A7901-007

11 3/4" - 12 3/4"

Emco A7901-008

12 3/4" - 13 3/4"

Emco A7901-009



**Step 5:** If necessary, remove existing pipe nipple. Clean with a wire brush. Use a chain wrench to re-install the nipple, or a new nipple if required. Avoid scarring the seal surface. (If seal surface is damaged, the unit will not pass pressure decay test.) Use pipe sealant on the lower threads. Repeat steps 2 & 3 to insure proper nipple selection.



**Step 6:** Remove the drain, if existing. Carefully inspect the drain cavity to ensure there is no damage that could cause the bucket to fail testing requirements. Plug the drain cavity using Emco A1005-505DPU Drain Plug Kit, following instructions included with kit.



**Step 7:** 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 8:** 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 9:** Install the new stainless steel bucket over the nipple, pushing it down completely to ensure that it seats fully on the existing rim.



**Step 10:** 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 11:** Install the offset ring, aligning large section of flange with largest open area around the nipple.



**Step 12:** Install the large cross section o-ring.



**Step 13:** Install the three flanges using the nine supplied stainless steel bolts and washers. Ensure that the flanges are tight against the nipple.



**Step 14:** Hand tighten all nine bolts, ensuring that the bucket is completely down and flat on the rim. 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 15:** Install adapter and cap per instructions included with each.

**Step 16: 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)

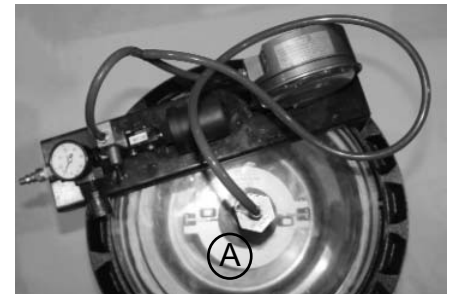
Emco A1004-210TEST Vacuum apparatus w/test adapter 494343

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.