A1005-505CEW4

Stainless Steel Spill Containment

Replacement Liner for Emco A1003 Series

INSTALLATION INSTRUCTIONS

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

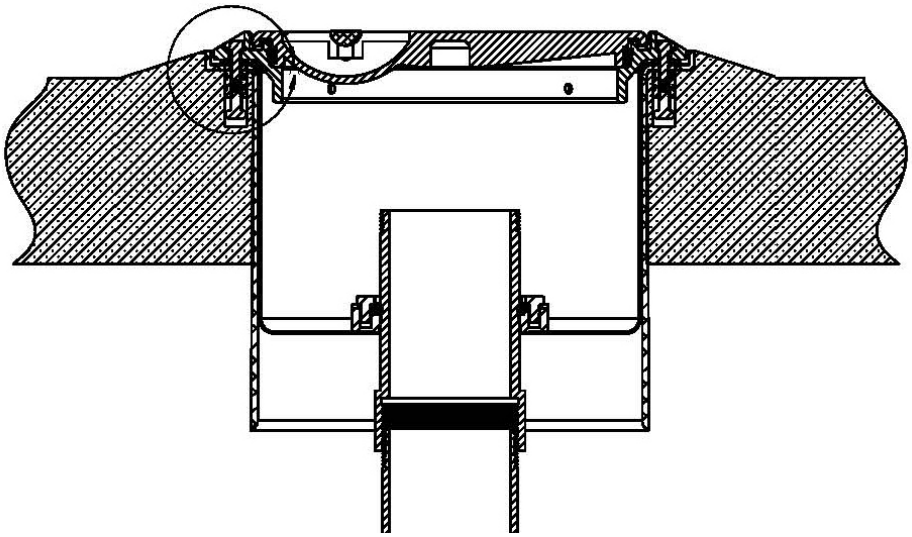
Emco Supplied Parts
Primary rim
Rim gasket
Stainless steel bucket
(2) O-rings
(3) Split flanges
(9) Stainless steel bolts
Offset ring
Lid w/seal
A0031-625 Adapter
(8) 3/8"-16x1" stainless steel bolts
(8) anchor nuts
Epoxy anchoring adhesive

Required Tools
9/16" socket
1/2" socket
7/16" socket
3/8" socket
12" extension and ratchet
Emco A0081-003 Pipe Nipple Extractor or strap wrench
Pipe sealant
Emco A0081-001 Adapter Wrench
Emco A0081-001H Primary Removal Wrench
Plumbers putty or heavy grease
Hammer drill
3/4" masonry bit
1/4" masonry bit
Caulking gun
Torque wrench

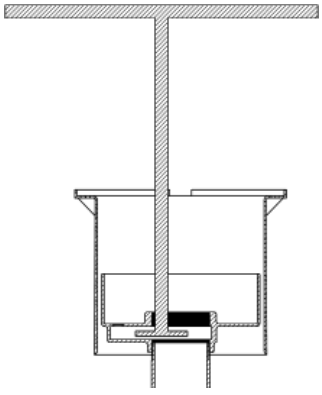
Purchased Separately from Emco
Emco 494833 Test Cover
Emco A1004-210TEST

Refer to your local regulations and AHJ before installation of this product

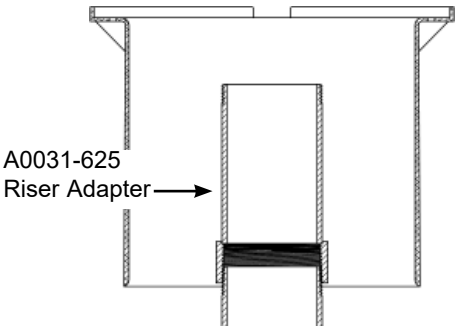
Insure that you read and understand all of these instructions before beginning this installation. Proper procedure is required due to the short working time of the epoxy adhesive.



Step 1: Remove the existing lid, cap and adapter. Remove the 6 rim bolts and then the rim. **Measure from the top of the existing rim to the flat area adjacent to drain base/plug. This dimension must be greater than 10" for the Emco stainless steel liner to work.**



Step 2: Use the Emco A0081-001H Wrench to remove the lower unit and bellows, exposing the tank riser. Be sure that the riser is not turning with the bucket lower unit. In this case, the lower unit may need to be cut off. Insure proper skills and safety precautions before attempting.



Step 3: Clean the riser pipe threads using a wire brush to remove any dirt or rust from the thread area. Apply a non-hardening gasoline resistant pipe sealant to the threads of the A0031-625 adapter, and install onto the tank riser. Measure from grade to the top of riser adapter. If this dim is less than 6 1/4" for fill or 6 3/4" for vapor, a low profile adapter and/or cap must be used.

Step 4: Test fit the new stainless steel bucket to ensure that it sits completely flat on the surface. Position the new rim on the stainless steel bucket.

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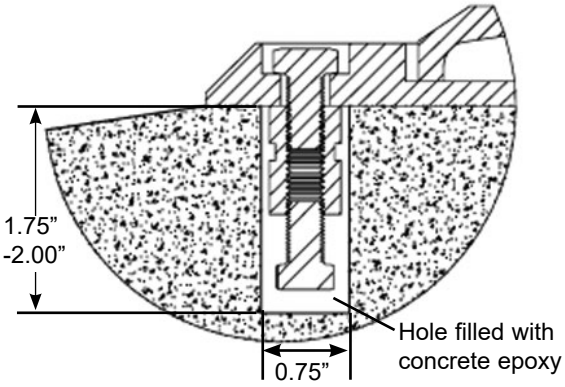
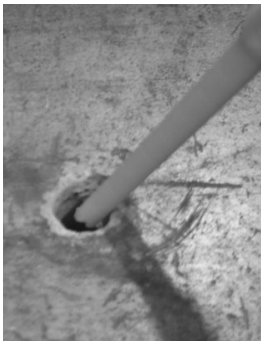
Step 5: Mark the 8 rim hole locations on the concrete using the rim bolt holes as a pattern. Be careful not to move the rim as the holes are marked. Insure that the marked holes have “good” concrete beneath for the new bolt holes. Reposition the rim and bucket and mark again if required to insure good hole locations.

Step 6: Remove the rim and bucket and drill ¼” diameter pilot holes to locate each bolt. Drill ¾” diameter holes 1¾” - 2” inches deep. The hole depth is important, so mark the depth on the drill bit. The holes must be straight up and down. Clean the holes out with a vacuum or compressed air (use eye protection).

Step 7: Assemble the rim, gasket, bucket, bolts and anchor nuts as shown and test fit in the drilled holes. The bolts must be tightened **by hand only. Do not use a ratchet or leverage at this point.**

The dry fitting is critical as the epoxy adhesive cures rapidly and there is no time to correct problems after the epoxy is put in the holes.





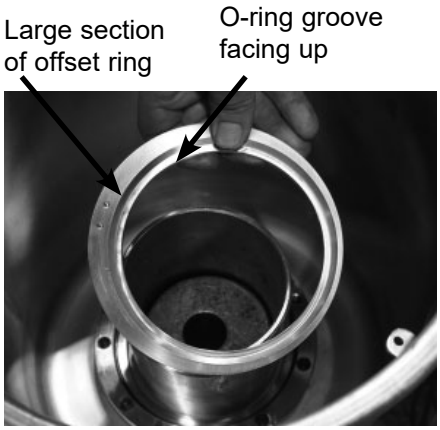
Step 8: After successful dry fitting, read the instructions for proper use of the epoxy adhesive. The supplied mixing nozzle **must** be used. Fill the holes to 3/4” - 7/8” from the surface. Do not overfill! Overfilling will cause excess epoxy to come out of the hole and may cause problems with rim/bucket sealing.

Step 9: Position the Rim/Bucket/Bolt assembly in place quickly as the usable epoxy life is approximately 5 minutes.

Step 10: Push evenly around the rim assembly to insure that unit is flush with the concrete. Note the time.

Step 11: 45 minutes after the rim assembly is installed, tighten the 8 rim bolts to 20 ft lbs (max). Do not tighten the bolts before 45 minutes has passed, or the installation could be ruined and have to be repeated with new hardware, holes etc.

Step 12: 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 13: Install the aluminum offset ring, with o-ring groove facing up. Align the large section of the ring with largest open area around the nipple as shown.

Step 14: Install the large cross section o-ring.

Step 15: Install the three flanges using the nine supplied stainless steel bolts. Ensure that the flanges are tight against the nipple.

Step 16: Hand tighten all nine bolts, ensuring that the bucket is completely down and flat on the rim.

Step 17: 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 18: Install adapter and cap per instructions included with each.

Step 19: Testing
Perform one of the following test procedures as specified by customer.
Integrity Test - perform per procedure on following page, with customer specified cap and adapter.
Hydrostatic Test - perform if specified per customer or local regulations. Perform per local guidelines.

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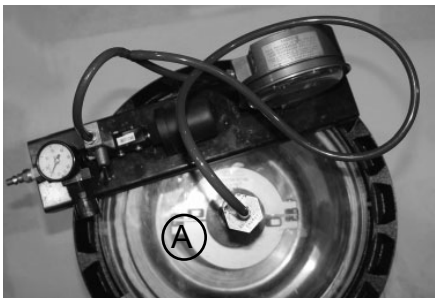
Integrity Test Procedure

Equipment (not supplied)
Emco A1004-210TEST Vacuum Apparatus w/test adapter 494343
Emco 494833 Test Cover
Timer
Air supply



Procedure

1. Line top surface of stainless steel bucket with plumbers putty as shown. (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.

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