

431 Dispenser Sump

Installation & Maintenance Instructions

The Fig. 431DS Series Dispenser Sumps are designed to provide secondary containment for plumbing and piping connections located beneath the dispenser. They also provide access to those connections for future service and maintenance.



Failure to follow any or all of the warnings and instructions in this document could result in a hazardous liquid spill, which could result in property damage, environmental contamination, fire, explosion, serious injury or death.

Installation



Warnings

- **Fire Hazard** – Death or serious injury could result from spilled liquids or vapors that catch fire or cause an explosion.
- Fuel and vapors from fuel may be present in and all around the work area. Make certain that all electric power is disabled. Only use power tools with explosion proof ratings. Avoid sparks, open flame, or hot tools when working on, in, or around the sump.
- Install in accordance with all applicable local, state, and federal laws.
- For your safety, it is important to follow local, state, federal and/or OSHA rules that apply to working inside, above, or around the sump area. Use all personal protective equipment required for working in the specific environment.

Steps

1. Sumps are designed to be installed level. The steel frame surrounding the sump top should be flush with the finished grade on the top of the dispenser island.
2. If the sump is being installed within a steel island form, make certain that the sump is leveled before fastening the outside steel frame of the sump to the island form. Permanently installed, spot welded steel angles or bars can be used to fasten the sump frame to the island form.
3. Make sure to use a hacksaw, jigsaw, hole saw dies or similar tool to make entry boot holes. If using power tools in the presence of fuel or fuel vapors make certain the tools have an explosion proof rating.
4. All sump penetration fittings **must** be UL Listed.
5. It is recommended that all openings for piping entering or crossing the walls of the sump be checked before cutting to make certain to match the required slopes between the pumps and dispensers. **Reconfirm location of the sump cutouts making sure they are aligned internally to the correspondent dispenser pipeline. Also bear in mind at all times the required slopes between the dispenser sump and the tank.**
6. Install all piping and entry boots per the manufacturer's specifications.
7. Once piping and entry boots are installed perform a hydrostatic tightness test by filling the sump with water to a minimum of 1" above the highest penetration. Mark the level with a permanent marker and monitor the level for a period of 1 hour or per all applicable regulations.
8. If the water level drops during the test, visually identify the leak source and double check the seal at that penetration. Make repairs to the seal per manufacturer's specifications and repeat the test. If repairs do not correct the leak, replace the seal.
9. Be certain to properly dispose of the water used during this testing process.
10. Use only the approved backfilling material to support and level the sump and also to backfill until the level where the finished grade starts. Backfill should be compacted with moderate force so that the walls of the sump do not show deformation internally. The use of water to help moisten the backfill is acceptable.
11. Approved backfill is to be clean, debris-free pea or river gravel with a diameter between 3 and 20mm.
12. Use the dispenser and concrete fastening bolt and nuts by installing them in the required dispenser steel frame penetration in accordance with the brand and model of the dispensers being installed. Before pouring concrete, double check the location of these bolts using the actual template from the bottom of the dispensers.
13. Carefully pour concrete around the steel dispenser frame and close to the anchors in order for the anchor

system to perform correctly.

14. Insert the provided spring nuts into the channel inside the sump. Screw in the stabilizer bar mounting screw without completely tightening.

15. Mount the UL Listed emergency shear valve to the shut-off plate using the three allen head screws provided. Tighten completely.

16. Mount the valve and shut-off plate to the stabilizer bar using the supplied mounting plate u-bolts, washers, lock washers and nuts. The u-bolt will go around the stabilizer bar, then pass through the mounting plate and the shut-off plate. Loosely thread the nuts on top of the washers and lock washers.

17. The shear valve must be aligned vertically such that the center of the shear groove is flush with the level of the frame surrounding the outside of the sump and the finished grade on the top of the dispenser island.

18. Use only the supplied UL Listed mounting frames, stabilizer bars, mounting plates, shut-off plates and hardware, supplied with this sump, for mounting the shear valves. The UL Listing requires that only compatible hardware be used for installation.

19. Once dispenser piping is attached to the shear valve make adjustments to the valve position. Make certain that piping is not abnormally stressed. Make certain that the center of the shear groove on the shear valve is still level with the top of frame surrounding the outside of the sump and the finished grade on the top of the dispenser island. Once these criteria are met, tighten the stabilizer bar mounting screws into the spring nuts and the nuts on the u-bolts.

20. Repeat steps 14 thru 19 for each emergency valve being installed.

21. A liquid sensor or some type of alarm system must be present in each sump to reliably indicate the presence of liquid in the sump by alerting the owner/operator of the problem.

Maintenance



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WARNINGS

- **Fire Hazard** – Death or serious injury could result from spilled liquids or vapors that catch fire or cause an explosion.
- Fuel and vapors from fuel may be present in and all around the work area at a fueling station. Make certain that all electric power is disabled. Only use power tools with explosion proof ratings. Avoid sparks, open flame, or hot tools when working on, in, or around the sump.
- Install in accordance with all applicable local, state, and federal laws.
- For your safety, it is important to follow local, state, federal and/or OSHA rules that apply to working inside, above, or around the sump area. Use all personal protective equipment required for working in the specific environment.

Steps

1. Visual inspection of the sumps and attached components must be performed on a monthly basis or in accordance with any applicable codes.
2. Any leaks or damage found during inspection must be repaired per the manufacturer's specifications or the component must be replaced.
3. These sumps are not intended for long term storage of petroleum products. Liquids that accumulate in the sump must be promptly removed and disposed of properly.