

SUMP PUMP

MAINTENANCE CHECKLIST

At least twice a year, preferably before the spring snow melts, check your sump pump. A sump pump is a mechanical device, which means that parts can and will wear out. Periodic maintenance can alert you of failing parts before they cause problems.

Always refer to manufacturer instructions as the primary guide for pump installation and maintenance, but following are some general guidelines.



Unplug the sump pump
before performing these tasks



Visual inspection

1. If a Ground Fault Circuit Interrupter (GFCI) is installed at the outlet or in the electric panel, make sure it is working. Use the test button on the unit to confirm proper ground-fault protection.*
2. Remove the sump pump cover. There are 3 common types of lids, each with slightly different removal methods.





SUMP PUMP

MAINTENANCE CHECKLIST



One-piece cover

Remove sump lid by unscrewing the bolts that hold the cover down.

When loosened, slide the lid up the pipes and cords that pass through it. This should allow room to complete the following steps.

If you need more space, rotate the lid around the discharge pipe to provide more room.

Two-piece cover

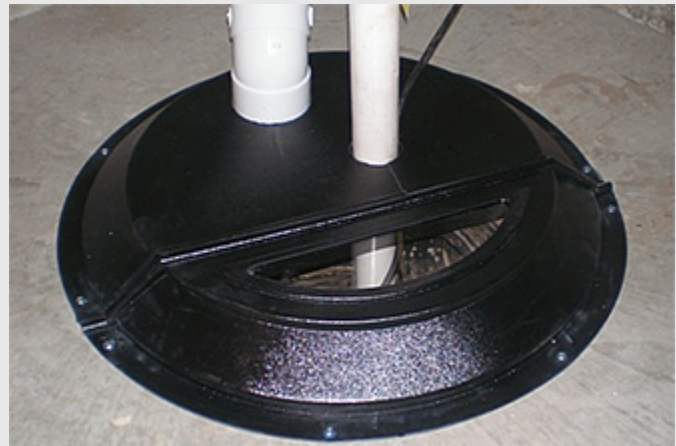
This type of cover has two sections that are either separate or joined with a hinge joint.

One section usually has the discharge pipe from the pump exiting through it. The other section usually has a white round cap plugged into a hole.

Unscrew the bolts that hold down the section that DOESN'T have the discharge pipe through it.

Carefully fold open or remove the section where the bolts were loosened. This should allow for enough room to perform maintenance. Keep the section of the lid with the discharge pipe attached to the sump.

If more space is required then loosen the section with the pipe through it as described above.



Two-piece cover above. The one-piece lid looks similar, without the visible seam.



Clear cover

This is a see-through plexi-glass cover that is sealed to the basement floor, rather than the sump frame. It also requires additional steps to re-seal once opened. The clear lid may or may not be attached with screws that tap into the concrete foundation.

If there are screws, remove and store until you're ready to secure the lid again. Grab an edge or corner of the lid, and carefully lift it up until the sealant or caulk around that edge has loosened from the floor. Put the lid down and lift another area of the cover where the caulk or sealant is still attached to the floor. Continue lifting areas until the entire seal between the lid and floor is loose.

Now slide the lid up, allowing the pipes to pass through it. This should allow for enough room to perform maintenance, otherwise try rotating the lid around the PVC discharge pipe to make more room.





SUMP PUMP

MAINTENANCE CHECKLIST



3. Inspect the sump pit for any silt or debris that might obstruct the float or clog the pump impeller or discharge tube. Debris could include rocks, mud, concrete or pieces of the plastic or tile pipe.

Look for signs of sediment entering the sump from the incoming foundation or footing drain(s). A layer of sand around the sides of the sump and/or at the bottom could be a signal that sediment is entering the sump from the footing drains.

While a small amount of sediment or sand at the bottom of the sump is normal, excessive amounts cause problems. If there is evidence that an excessive amount of sediment is entering the sump contact a qualified contractor to determine if additional action is needed.

4. Make sure the pump is positioned so that the float that turns the pump on and off moves freely and is not obstructed by the walls of the sump, discharge piping or other objects.

5. Check for a small (3/16 to 3/8 inch) weep hole in the discharge pipe directly above the pump. Add, if needed, or clear the hole if blocked. This hole prevents a possible airlock in the discharge lines.

6. Check the drain line from the pump until it meets the air gap for any signs of corrosion, holes, damage or leaks.

7. Visually inspect all alarm mechanisms (if applicable), exposed metal parts and connections for corrosion. You may apply a silicone water repellent spray to deter corrosion. Refer to manufacturer usage instructions to apply silicone spray.

8. Make sure the drain line is secured every three feet or so.



SUMP PUMP

MAINTENANCE CHECKLIST



9. Verify that there is a check valve in place on the drain line just above the sump cover. Contact a licensed plumber to add a check valve if one is not present.

10. Check to make sure that the air gap in between the interior and exterior discharge pipes should be open and clear of debris.

* A GFCI is a safety device. It is generally not required on dedicated single receptacles used for sump pumps. GFCI could trip for various reasons, rendering the sump pump inoperative. If a GFCI is present, check before storms to make sure the GFCI is turned on and sump pump is operational.



Operational Check

1. Confirm the pump is securely plugged directly into the outlet.
2. If the sump pit is empty, add water to confirm that the pump turns on and off properly. Three to four gallons is usually enough to activate the pump.
3. With a sump pump with automatic preset sensor switches, if water exceeds the top of the pump before turning on, or if the pump does not shut off when water drops again, there may be a defective sensor or other problem. Refer to the manufacturer's set-up instructions.
4. If the pump uses an adjustable float switch, the pump should turn on at the set-on level and off when the water level drops.
5. A small stream of water should spray out of the weep hole in the discharge near the pump to prevent air lock. If the weep hole is blocked, **UNPLUG THE SUMP PUMP** and clear the blockage.



SUMP PUMP

MAINTENANCE CHECKLIST



6. The pump should not have to run all the time. If it does, try setting the float or pump higher in the pit. If this doesn't help keep the water from reaching the top of the sump, a larger pump may be needed.
7. Check the discharge or drain line for any leakage.
8. If you have unplugged the sump pump, make sure to plug the sump pump in again after this step. Check that the circuit breaker is in the ON position.

If you do not have a backup, consider adding one, especially if your pump runs regularly or there is a high flood potential.

Battery backup pumps and alarms

1. If your sump system is equipped with battery backup, check the manufacturer's maintenance instructions. Check the battery water level to make sure it covers the cells.
2. Inspect the backup pump setup in the pit for obstructions and debris as you did for the primary pump. Be sure to unplug the pump before attempting to remove debris.
3. The float should be set or the pump positioned so that it only activates if the primary pump does not.
4. Unplug the primary pump and add water to the pit, if possible, so that the backup runs.
5. Plug the primary cord back in after the backup test is complete.
6. If you have a high water alarm, it should activate when the float is raised, or if using a sensor type, when water hits the sensor.
7. Depending on the set up, an alarm may sound when the primary is unplugged or when the backup activates.

★ Water-powered backup pumps

1. Check to make sure that the water supply valve is in the ON position. For a handle-operated ball valve, the handle is parallel to the pipe when open (on) and perpendicular to the pipe when closed (off).
2. Inspect the sump for debris that may obstruct the on/off float. Be sure to unplug the pump before removing any obstructions.
3. Unplug the primary sump pump (if not already) and make sure that the water supply valve is in the on position. Add water until the back up pump operates (note: this pump may not have a weep hole).
4. Have the backflow preventers inspected by a licensed certified plumber every 3 years.
5. Replace the sump cover, reconnect all pump electrical plugs back into the sockets and check that all power sources for the primary and backup system are in the “ON” position to be sure the entire system is operational.

If the sump has a clear plexi-glass cover make sure that the cover is sealed to the basement floor with new sealant (and concrete screws if needed) to prevent radon from entering the basement through the footing drains and unsealed sump.



Remember, these tips are general guidelines.
Each situation is different.

Contact a professional if you have questions about
a specific issue.

Maintenance wrap up

Replace the sump cover, reconnect all pump electrical plugs back into the wall sockets and check that all power sources for the primary and backup system are in the “ON” position to be sure the entire system is operational.

If the sump has a clear plexi-glass cover make sure that the cover is sealed to the basement floor with new sealant (and concrete screws if needed) to prevent radon from entering the basement through the footing drains and unsealed sump.

Outside your house

If your sump discharges to your yard, check the discharge point. Make sure that water can flow freely from the discharge point. If there is any debris in the area, clear it.

If the sump pump discharges to an underground pipe that connects to the storm sewer system or an infiltrator check the air gap and cleanout assembly at the exterior wall of house.

Clear the discharge pipe of any obstructions. Make sure that the air gap by the house wall where the smaller 2-inch pipe drops into the larger 4-inch diameter cleanout assembly is free of debris such as twigs, leaves, mulch, gravel or topsoil.

Next, open up the cleanout cap of the assembly with a large adjustable wrench or a pipe wrench and check the interior of the cleanout assembly. Once done put the cleanout cap back on.

OTHER RESOURCES

The Sump and Sewage Pump Manufacturers Association has free guides on its website:

 [Homeowners Guide to the Domestic Sump Pump](#)

 [Sump Pump Trouble Shooting Chart](#)