Washing Machine Not Draining

Bill Gilbert and 1 contributor
Last updated on March 26, 2025

First Steps

Your first move is to try to run a drain and spin cycle. If you don't know how, now's the time to get acquainted with your owner's manual. If you don't have one, you can usually go to the manufacturer's website and download one. Now some steps:

- Once the machine is trying to drain, check the following items:
  - Is water coming out of the drain hose? Is it flowing fully or just a little trickle. Is there no water?
  - If there's no water, can you hear the pump running? If so, is it noisy? A running pump with no water coming out points to a clog or an impeller problem.
  - Keep in mind that many older top loaders use only one motor so the pump may be driven by the same motor that drives the basket. If the machine spins, but won't pump out, it points to the pump having failed. Many machines won't spin if they aren't empty or nearly so.
- Is there a leak anywhere? This might be a symptom of a cracked pressure hose or air dome. Sometimes the tube that connects to the water level sensing device can fall off or crack and that will cause a leak.

- Get the items you will need to drain the machine.
  - You will need a bucket, a shallow pan that you can pour from and some rags. You may need to drain the machine more than once, so keep these items handy.
  - For top load machines, you should first bail out the machine.
    - You may be able to use a wet or dry vacuum to pull most of the water out of the tub. Otherwise, any small container and a large bucket to dump it into is essential.
    - After bailing, you will need to open up the machine cabinet, get to the pump, and disconnect the hose running from the tub to the pump.
      - Be ready for some water with a container to catch it and towels or rags.
    - In some cases, the pump is mounted on the tub, and you may be able to disconnect the drain hose from the pump to drain the machine.
    - Have a bucket and lots of towels or rags, as you might just have to let the water go onto the floor.
- If the machine didn't pump out (very likely), you need to drain it. Here is a guide for a front load machine that will show you an example of how. You will need more than a bowl for the water in this case!

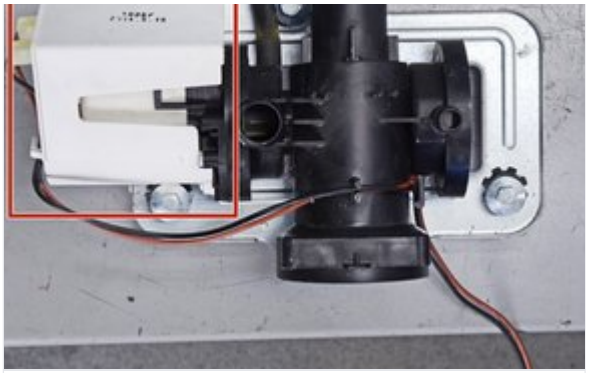
Now we look at the causes! There are two main systems involved when your machine will not pump out. One is the pump system, the other is the water level sensing system. We will start with the pump system and its components.

Causes

1 Failed Pump

The most obvious problem. It doesn't pump out because the pump doesn't work. There are two main points of failure for the pump. On most front loaders, it is the motor and the impeller. This applies to many newer top loaders as well, but some older models will have a pump either driven directly by the basket drive motor or driven by a belt from the drive motor.

For a front loader, we will start by removing the pump. Here's a guide to that on a typical front load machine. There might be some differences, model to model, but the basic idea is the same.



Pump Motor (red) on Pump Body

Impeller on Pump Motor

Start by checking the pump motor. This is a likely failure when you don't hear the pump run at all.

- Inspect the pump power connectors and make sure they are seated properly.
- Use a multimeter to measure the resistance of the winding. It should be between 10-40Ω.
    - If it is outside of this range, replace the pump motor.
    - If OK, remember to seat the connectors fully when you reinstall the pump, then go to the next item.
- You can also check the bearings to see if the motor moves freely,
    - This is more difficult because the permanent magnet motor turns by hand in impulses or steps, so it is harder to judge the condition of the bearings.
    - If you hear grinding noises when you turn the motor, you should replace the pump motor.
    - If it just spins freely with little resistance to turning or turns with a mix of free spinning and impulses, it's defective and should be replaced. Contrary to what you might expect, such free spinning means the impeller has come loose on the shaft or the drive magnet has come loose.

Next, check the impeller. If you can hear the pump running, but no water is being pumped, you may have either a loose impeller (mentioned above), a broken impeller, or a clog. We will look for clogs later.

- Inspect the impeller for damage like chipped or missing blades.
- Remove any lint or other debris that is on the impeller or wrapped around it.
- Check the pump body for clogs or debris. Small laundry items can become lodged in

the pump body and block flow. If you find any such items, remove them. We will want to check for other clogs as well. (One clog often leads to another.)

- Check the wiring to the pump. There are connectors in that wiring path that should be disconnected and reconnected to make sure they are fully engaged. If possible, trace the wires back to the main control board and check for continuity.

Many older top loaders will have a pump that is driven by the main motor. In one very popular and long-lasting design, the pump is driven by the main motor and is connected to one end of it. Further, this sort of pump has to be replaced as a unit, the impeller is sealed in. Sometimes the connection between the motor and the pump breaks, and the motor will spin, but the pump won't. You will want to do the following:

- Remove the hose that connects the tub to the pump (you may have had to do this already to drain the machine).
- Check the pump inlet for clogs, Small items can occasionally make their way down the hose and lodge in the pump..
- Remove the pump and check to see if the impeller is jammed or broken by attempting to turn the pump.
    - Also, check to see if the drive portion has been broken, sometimes, the portion where the motor shaft enters the pump can crack and cause the pump not to turn.
    - If the pump is belt-driven, make sure the pulley is on tightly

If everything now looks good on the pump, move on to the next step.

GE Front Load Washing Machine Not Draining - Drain Pump Replacement

No estimate | Moderate

View Guide

LG Front Load Washing Machine Pump Assembly Replacement

1 - 2 hours | Difficult

View Guide

2 Clogged Hoses

If the hoses are clogged, little or no water will be pumped out of your machine. Clogs can happen either upstream or downstream of the pump or sometimes in the pump body itself. We have already checked the pump body, so the next check is the drain hose.

- Remove the drain hose from the wall drain or standpipe.
- Note if the hose has been put more than 4 inches (10 CM) into the drain pipe or if the hose outlet is over 8 feet in elevation. Correct either of these issues if you find them, as many washers will not pump out properly if they are present..
- It may be easiest to remove the drain hose from the washing machine entirely so you can check the whole length for clogs. The linked guide will give you an idea of how to do this on many front load machines (it's from an LG machine).
    - Use a dowel or a wire with the end folded over to run through the hose to make sure there are no clogs.
    - Rinsing out the hose, if possible, after you do this is a good idea as you may have dislodged debris as you checked for clogs.
    - If you find a clog, remove it.
    - Go on to the next step.

The above steps also apply to the drain hose on most top load machines. In some cases, the drain hose will be attached to the back of the machine,+ and the machine will have an internal hose that runs from the pump to the back of the machine. Check both. Some will have a preformed hose with a bend that makes it more difficult to push a stick or wire through the hose. A flexible plumber's snake can be used, but you can also try a garden hose outside.

The other place for hose clogs is the tub to pump hose. Once the pump is removed, this hose is already disconnected at one end, so it is not too hard to check. The following guide shows an example of such for a front load machine.

- Here is a guide for removing the tub to pump hose.
- Once the hose is removed, check for obstructions, especially things like small hair accessories, small socks, etc. Look through the hose. Also, if possible, look at the outlet from the tub where the hose was installed.

Top load machines are less likely to suffer from these clogs, but small items like hairpins can work their way through the basket and lodge in the hose or pump and cause lint to accumulate and clog the hose.

If you have found one or more clogs, you can choose to reassemble your machine at this point and test it. Given that the machine takes time to reassemble and disassemble, you may find it worthwhile to check the water level sensing system. But this is a lower priority if you have found substantial clogs.

LG Front Load Washing Machine Drain Hose Replacement

30 - 45 minutes Moderate

30 - 45 minutes | Moderate

View Guide

LG Front Load Washing Machine Pump Hose Replacement

1 - 2 hours | Moderate

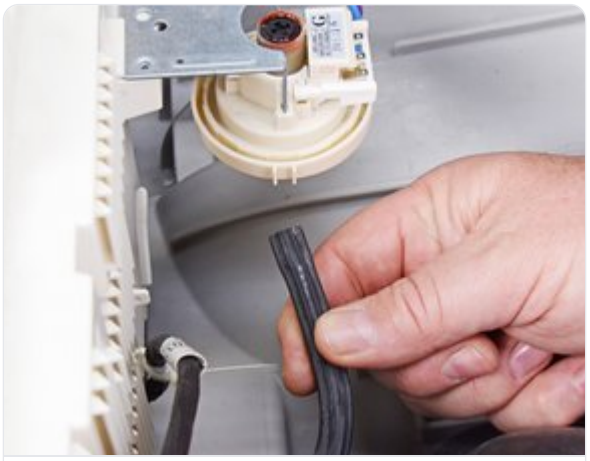
View Guide

3 Water Level Sensing System Malfunction

We look at these items next because if there is a problem with them, the system is likely to cause the machine to display an error code on newer machines, so you probably would already be alerted to them. Since your problem is a failure to drain, it is less likely that the washer will indicate a failure to fill.

Pressure Hose

The main culprit in these malfunctions is the pressure hose.



Pressure Sensor and Pressure Hose

Air Dome and Pressure Hose

Any air leak, either at the fittings or in the hose itself, will cause problems. As the air pressure from the air trapped by the water bleeds off, the machine will eventually think it is empty (no pressure = no water). It may try to top itself off with additional water and could overflow.

- Examine the entire hose, especially where it is clipped to the machine for breaks or cuts or to see if it has become disconnected or loosened at either end.
- On front-load machines, leave the hose connected to the pressure sensor, disconnect it from the air dome, blow into it, and see if you find an air leak.

    - There could be a loose connection to the pressure sensor, so remove the hose there and inspect it for cracks or for an enlarged opening.
    - Then reconnect the connector at the air dome and then remove the connection at the pressure sensor, and blow to check the air dome for clogs.
- On top load machines, disconnect the hose from the pressure sensor (usually located higher up in the machine; on older models, it is in the console). Blow into it and see if the tube is clogged.
    - If possible, remove the tube and inspect it for cracks or a worn end where it connects to the air dome or chamber on the side of the tub. Any leaks in this hose are a big problem.
    - You can usually blow directly into the pressure sensor, but on machines with a sensor, the machine will give an error code if the sensor has gone bad.

A clogged hose will also cause problems because sometimes it may detect the water filling the tub, but it can't detect when it empties, as the clog won't let the trapped air out. You have checked for clogs in the above steps. If the hose checks out, move to the next step.

- Any problems:
    - If the hose is cracked, replace it
    - If the hose fits loosely on the connector at each end, you can try hose clamps, but replacement is wise because the hose has probably stretched.
    - If the air dome has cracked, replace it.
    - If the hose is clogged, clear it or replace it.

Note: some GE top load washers had a problem with the connection for the pressure hose on the air dome on the side of the machine clogging because it was improperly molded. They issued a Service Bulletin (HL 01-17) and a Training Bulletin (TB 10-17) for it.

Pressure Sensor

The Pressure sensor can fail and usually will cause an error code on the display of your front load machine and those top load machines that use one.

Check the resistance of the sensor, a common value is between 21 and 23 Ω. If it's shorted (0Ω) or far outside this range, replace it. The sensor uses a coil that changes the resonant frequency of a circuit as the diaphragm in the sensor moves. It's not actually a switch.

Pressure Switch

Generally, pressure switches are found on older machines. You can tell if you have a pressure switch because if you blow into it, it should make an audible click. Frequently, the water level control will be a pressure switch with a know that adjusts when the switch triggers.

You can use a multimeter to test your pressure switch to see if it functions properly. You will likely find two contacts on the switch that will show <1Ω on your meter and will show ***OL*** on the meter when you blow in the switch. If blowing doesn't work or the switch shows ***OL*** all the time on the meter, replace the switch.

4 Wiring Harness and Connector Problems

This is the last stop before the control board. Testing the wiring harness to see if all of the components are testing good, before replacing the control board is a wise precaution, as control boards are expensive and wiring does fail.

Check especially at places where the wires may flex with the movement of the machine, at the place where the wire is secured at each end. Breakage will likely occur there.

- Before replacing the control board, you may want to try disconnecting and reconnecting all of the cables that are connected to the control board.
- Then, test the function of the washing machine.
- If you have a service manual or tech bulletin, you can check the connections that have to do with the drain pump and the pressure sensor.
- If the harness doesn't check out for continuity, replace or repair it if possible.
- If the harness checks out, then go to the next step.

5 Timer Failure

On older machines, the timer may fail, either the motor driving the timer or contacts within the timer. This is a less likely failure but one that you may encounter when everything else checks out. The motor failure will probably result in the washing machine stopping in mid-cycle.

You might find that by manually advancing the timer a tiny bit, the machine will continue to complete the cycle. In other instances, you may discover that the contacts in the timer have failed, and the timer will not allow the machine to pump out. You will need to understand both the timer chart and the machine schematic, so you might need to consult a repair professional.

consult a repair professional.

6 Main Control Board

The end of the line. You have tested the other components, and they check out. Replace the control board.

You're seeing solutions for **Washing Machine**. Select your model to find parts for your device.

Select my model

Related Problems

Washing Machine
Washing Machine Shaking

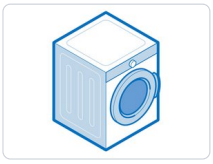
Washing Machine
Washing Machine Not Spinning

Washing Machine
Washing Machine Won't Turn On

Washing Machine
Washing Machine Troubleshooting

Washing Machine
Washing Machine Is Leaking

Washing Machine
Washing Machine Has No Water



Washing Machine

8 common problems View all

Haven't found the solution to your problem? **Browse our forum**

View statistics:

Past 24 Hours:	**49**	Past 7 Days:	**277**
Past 30 Days:	**1,300**	All Time:	**24,781**

iFixit

About us

Customer Support

Discuss iFixit

Careers

API

Resources

Community

Pro Wholesale

Retail Locator

For Manufacturers

Press

News

Legal

Accessibility

Privacy

Terms

Cookie Consent

Download the app

Download on the App Store

Learn something new every month!

Enter your email

Subscribe

Let me read it first!

Help translate

Licensed under Creative Commons