



## Residential Case Study with *HydroFLOW* - Jacksonville, Florida

**Application:** Residential scale prevention and removal.

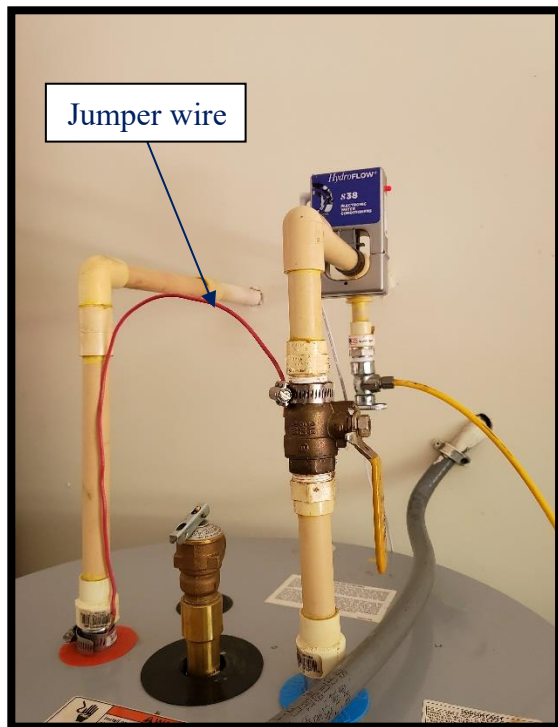
**Model:** *HydroFLOW* s38

**Install Date:** May 3, 2021

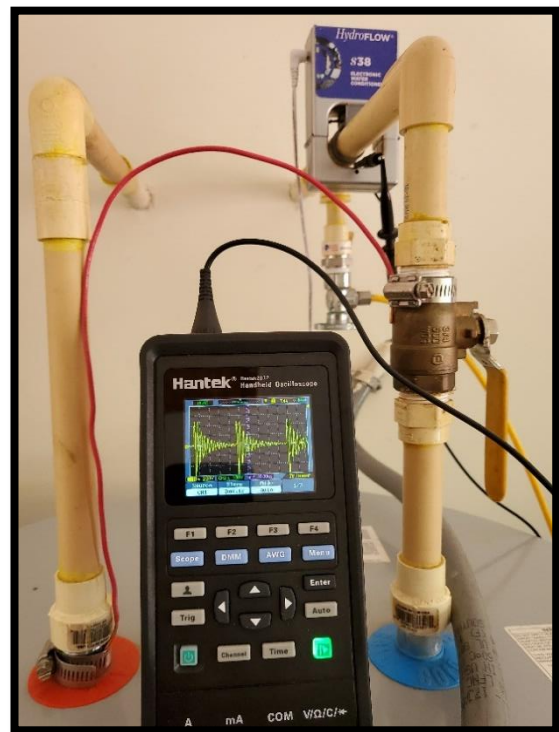
**Home Details:** Single level - 1,200 sq ft (112 sq m), 3 bedrooms and 2 bathrooms.

**Water Heater:** A.O. Smith 55-gallon electric water heater - four years old. The temperature is set at 140 degrees F (60 degrees C).

**Installed on Cold Water Line with Jumper**



**Hydropath Signal Verification**



**Note:** In homes with non-conductive piping (PVC, PEX, etc.), *HydroFLOW* solely relies on the water inside the pipe to propagate the Hydropath signal throughout the house. It is recommended to boost the Hydropath signal, which is induced by the *HydroFLOW* device, with an electrical wire jumper. Adding a jumper ensures the signal propagates beyond the water heater and throughout the home, for optimal scale protection.



**Day 1 with *HydroFLOW***

Eight hours after installation the water heater was drained. The drain valve was clogged with scale, but when it was cleared a significant amount of scale was removed.



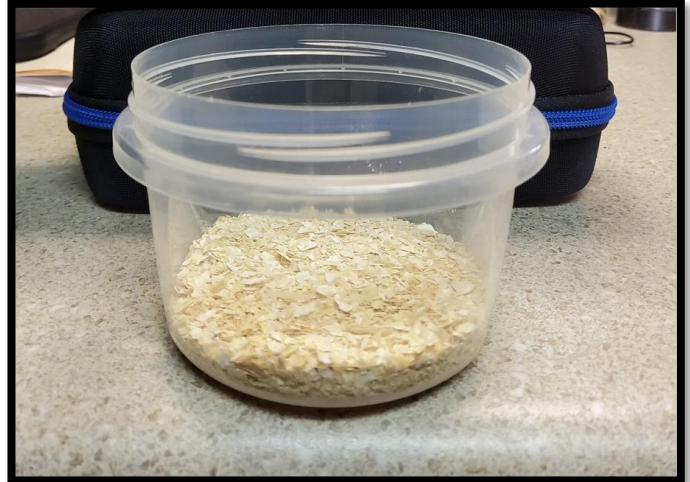
**2 Weeks After Installing *HydroFLOW***

The tank was drained again and a significant amount of scale was removed.



### 1 Month After Installing *HydroFLOW*

On the third flushing of the water heater there was very little scale removed. The water heater is now free of limescale buildup.



### Water Heater Element

Unfortunately, no before picture was taken of the heating element but you can see how well *HydroFLOW* is cleaning up the old limescale in this “after” photo.



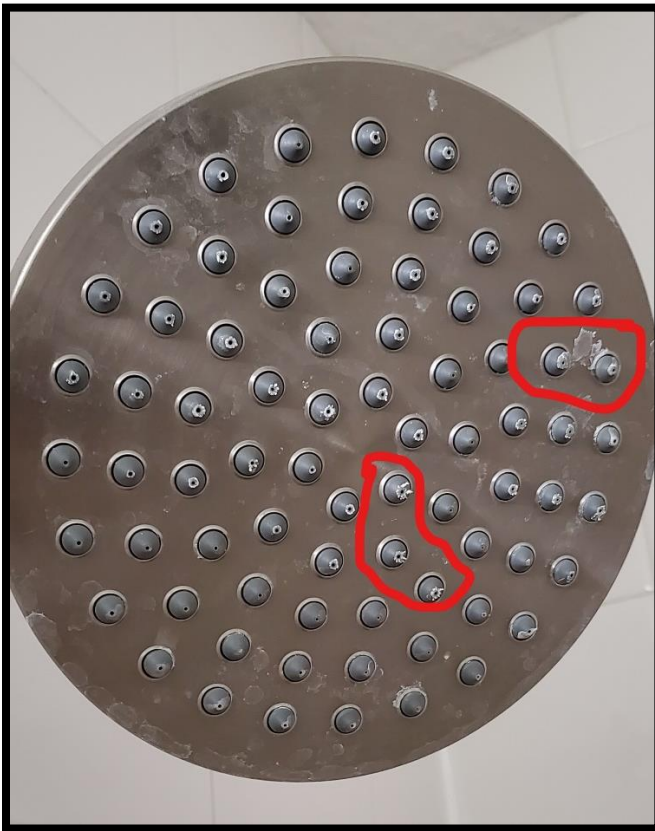
A few weeks after the installation of the *HydroFLOW* s38, the homeowners noticed they had to use less hot water while taking a shower due to the improved efficiency of the water heater. It’s important to mention that 1/16” (4.2 mm) of scale buildup will reduce heat transfer by 11%, 3/8” (9.5 mm) reduces heat transfer up to 20%, which equates to spending 20% more on your electric bill to heat your water.

**Note:** The water heater should be purged occasionally in order to remove loose scale.

## Shower Heads

The s38 unit also cleaned up the shower heads over the first two weeks without any manual cleaning, while continuing routine shower usage after installing *HydroFLOW*.

**Before *HydroFLOW***



**After 2 Weeks with *HydroFLOW***





## Conclusion

The *HydroFLOW s38* was not only able to stop new scale from forming but also cleaned up the existing scale buildup from the water heater and shower heads. This also led to improved efficiency of the hot water heater and longer expected life of the heating element. In addition, *HydroFLOW* reduced the frequency of cleaning faucets and shower heads around the home.

However, the *s38* was not able to keep glassware in the dishwasher completely spot-free; an eco-friendly product called Lemi Shine (<https://lemishine.com/>) has been proven to effectively work with *HydroFLOW* to maximize the performance of dishwashers.

### Scale Removed from Water Heater

