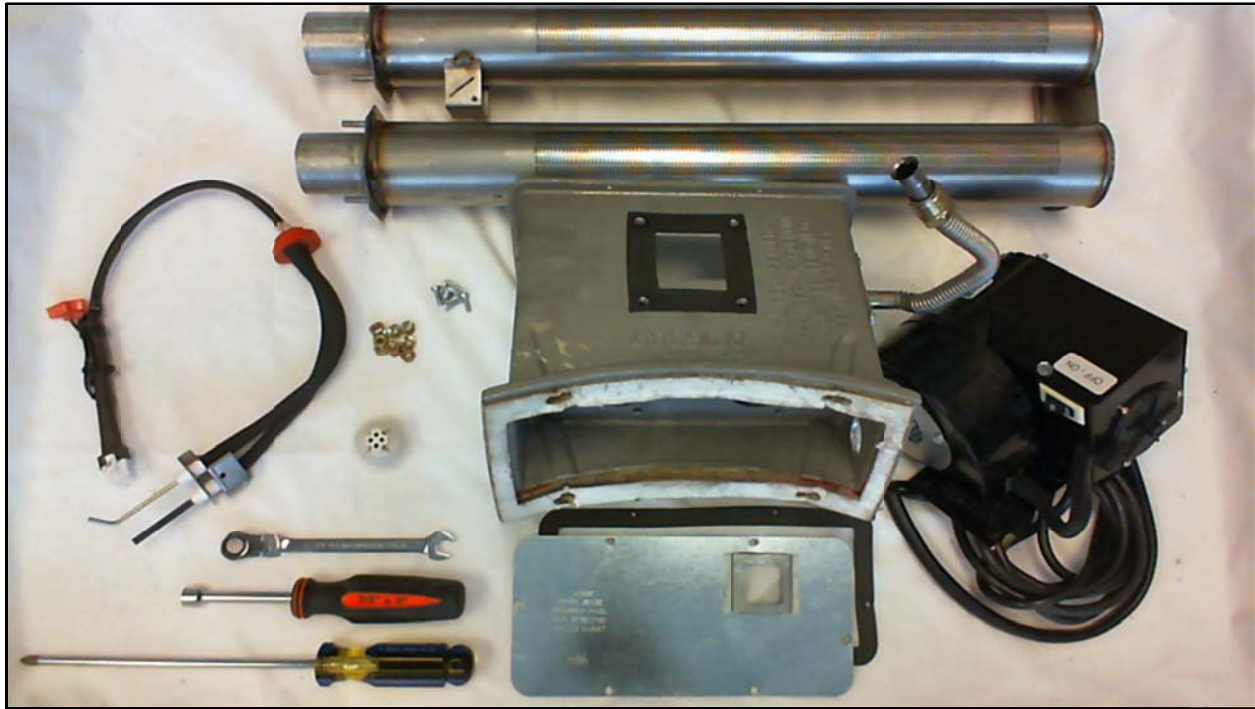




How to replace the Hot Surface Igniter; Pressure Switch or the Blower Motor 75 & 98 gallon ULN Residential or Commercial

The picture below shows the extent the burner assembly may be disassembled. It is highly recommended to have a 3/8 inch deep well nut driver and a 3/8 inch open end with a swivel box end. It makes the repair process much easier.



Pressure Switch

Remove outer door to combustion assembly.



Turn OFF water heater and unplug electrical cord.





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Using #2 Phillips, remove the 3 screws holding the pressure switch on the blower housing.



Turn pressure switch on its side and remove. It may be easier to remove the air tubing first.



Remove Red and Blue connectors.



Replace with new switch in reverse order. Reattach the red and blue connectors to either pin.

Reattach rubber tube before all three screws are tightened.





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Plug heater in, turn on and test for safe operation.



▲ DANGER: Hot water increases the potential for Hot Water SCALDS.

Temperature Setting for 100°F Thermostat	Flame	Flame on (Idle) Time
	▼ A B C	
WARM = approx. 70°F (21°C)	●○○○○○	
▼ = approx. 120°F (49°C)	○○●○○○	More than 5 minutes
A = approx. 130°F (54°C)	○○○●○○	About 30 seconds
B = approx. 140°F (60°C)	○○○○●○	Less than 5 seconds
C = approx. 150°F (66°C)	○○○○○●	About 1-12 seconds
C-Flashing = approx. 160°F (71°C)	○○○○○●	About 1/2 seconds

Blower Motor

Remove outer door to combustion assembly.



Turn OFF water heater and unplug electrical cord.



Disconnect the Molex from the blower to the gas control.



Using #2 Phillips, remove the 6 screws holding the plenum back plate on the plenum housing.





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Clean any remaining rubber gasket material from the back plate and the plenum housing.



Using a 3/8 inch open end or box wrench, remove the four nuts holding the blower motor on the plenum housing. Save the nuts.



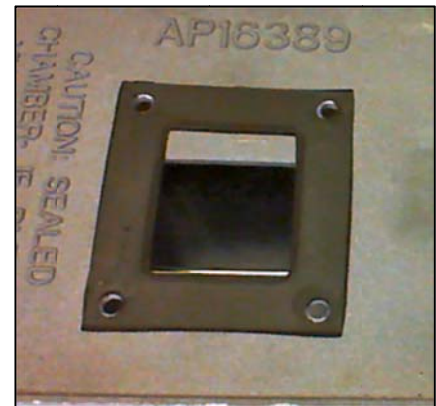
In this photo, I have removed the entire plenum and burner tubes for another reason. By removing the entire burner assembly and turning it upside down, this job is much easier. Just remember to replace both the plenum gasket and the plenum back plate.



Lift the blower up to remove. Use a flat blade screwdriver if necessary.

Using a new gasket from the replacement kit, place the gasket on the mounting pins of the new blower and set on top of the plenum housing.

Replace nuts and tighten snug. You want to make sure the gasket and the blower are air tight to the plenum housing.




Using a new plenum back plate gasket, reinstall the back plate and tighten the 6 screws. Alternate screws for final tightening. You want to make sure the plenum back plate is air tight.





**How to replace the Hot Surface Igniter; Pressure Switch or the Blower Motor
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Reconnect Molex to gas control. Plug in heater; turn unit ON and check for safe operation.



Temperature Setting for DWP Thermostat	Water ▼ A B C	Flame on Light Burn
WARM = approx. 70°F (21°C)	● ○ ○ ○ ○ ○
▼ = approx. 120°F (49°C)	○ ○ ● ○ ○ ○	More than 5 minutes
A = approx. 130°F (54°C)	○ ○ ○ ● ○ ○	About 30 seconds
B = approx. 140°F (60°C)	○ ○ ○ ○ ● ○	Less than 5 seconds
C = approx. 150°F (66°C)	○ ○ ○ ○ ○ ●	About 1-1/2 seconds
C-Flashing = approx. 160°F (71°C)	○ ○ ○ ○ ○ ●	About 1/2 seconds

Hot Surface Igniter / Flame Rod

Remove outer door to combustion assembly.



Turn OFF water heater and unplug electrical cord.



Disconnect both Molex connections to the gas control. Disconnect the wiring harness to the flammable vapor sensor. Disconnect the main burner supply tube from the gas control.





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Using a Torx #20 screwdriver, remove the bottom two screws on the plenum housing. Using a 3/8 inch wrench or nut driver, remove the top 2 nuts holding the plenum housing on the combustion chamber. It is recommended you remove the bottom two screws first; then the top two. The burner is a little heavy towards the blower end. The mounting studs on the top of the plenum assembly make this easier.



Carefully pull the burner assembly away from the water heater. Clean any remaining gasket material from the combustion chamber. You will be using a new gasket when replacing the burner assembly.



Locate and remove the single #2 Phillips screw holding the HS Igniter on the burner tube. Save the screw.



Pull the HIS wiring harness – from the inside of the plenum – to remove the wiring harness and igniter. The orange grommet cannot be removed from outside the plenum. Use a screwdriver or sharp knife to make this easier. You may also use wire cutters help remove the orange grommet



Making sure the hole for the orange grommet is clean of debris, insert the new HS igniter from the inside of the plenum by threading the Molex connector to the gas valve first thru the mounting hole.





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NOTE: If this process is not possible, you will need to remove the Plenum back plate and then remove the burner tube closest to the orange grommet before attempting to reinstall the repair part. A 3/8 inch nut driver makes easy work of this.

Once the new igniter is threaded and seated thru the mounting hole, reinstall the burner tubes.



Screw the HS Igniter in place on the mounting flange of the burner with the #2 Phillips screw. Make sure the wiring harness is routed below the burner tubes.



Position the igniter and flame rod as shown.

Gauge the flame rod to about 3/16 inch above the burner tube surface. A quarter will get you very close to the proper gap.



Pull any excess wiring slack to the outside of the plenum assembly.



Reinstall plenum with new gasket; connect wiring harnesses to control valve and connect main burner supply tube. Test heater for safe operation.

