

Service Instructions

GAS WATER HEATERS

HEAT ENGINE REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

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Remove panels to gain access:

Door opening

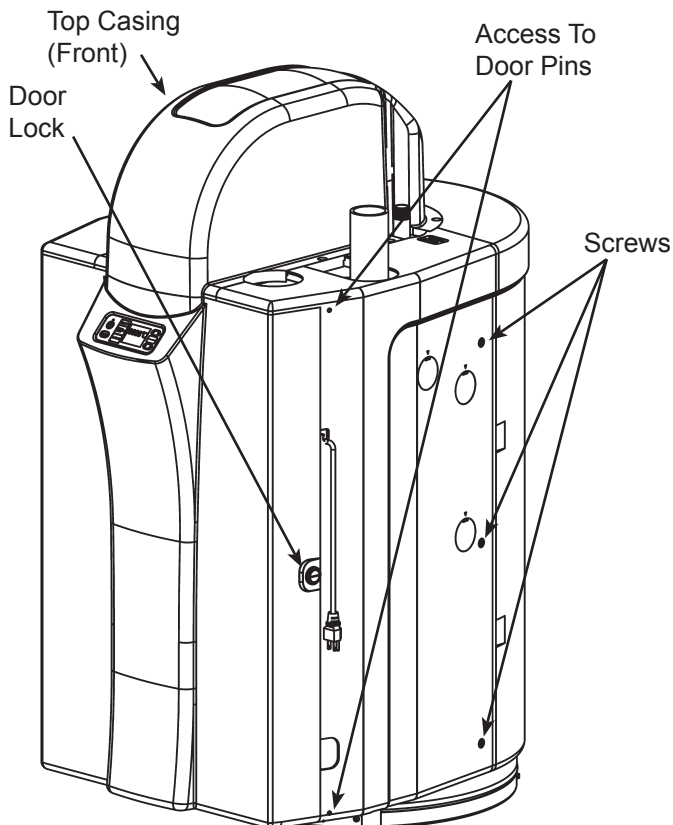
1. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
2. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
3. Open the door (the door remains fastened to the left side panel).

Remove the top casing (front)

1. Use a screwdriver to remove the six screws securing the top casing.
2. Lift up and remove casing top (front).

Remove the flexible venting

1. Unwrap the insulation covering to expose the front elbow of the venting.
2. Loosen the gear clamps securing the venting.



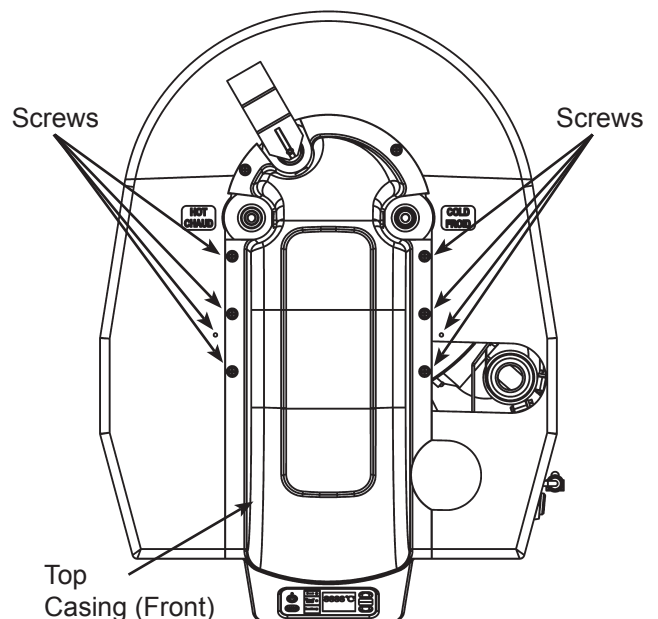
3. Remove the flexible elbow from the top of the heat engine.

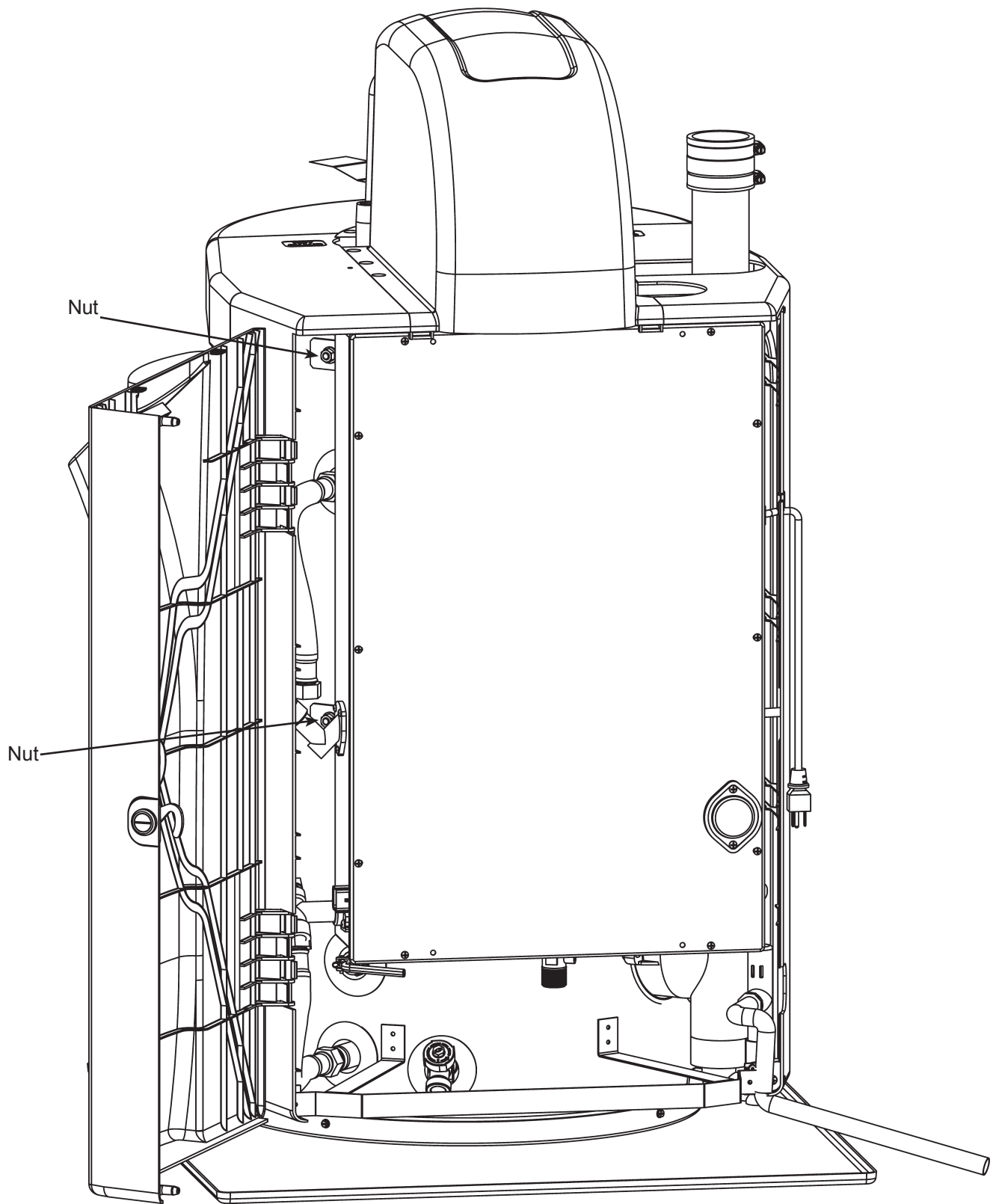
Remove the right side panel

1. Use a screwdriver to remove the screw from the bottom, front of the right side panel.
2. Remove the three screws from the right side panel towards the rear of the unit.
3. Remove the screw from the top of the unit.
4. Push the panel back and lift out.

To Remove:

1. Disconnect the electrical power to the water heater.
2. Close the shutoff valve on the gas supply line to the water heater.
3. Close the shutoff valves on both the hot-water and cold-water lines.
4. Drain the tank following the instructions in the "Draining The Tank" section in the Operating Manual.
5. Disconnect the hoses from the heat engine (top is water outlet and bottom is water inlet).
6. Disconnect the gas line from the heat engine.
7. Carefully disconnect the wire harnesses from the heat engine.

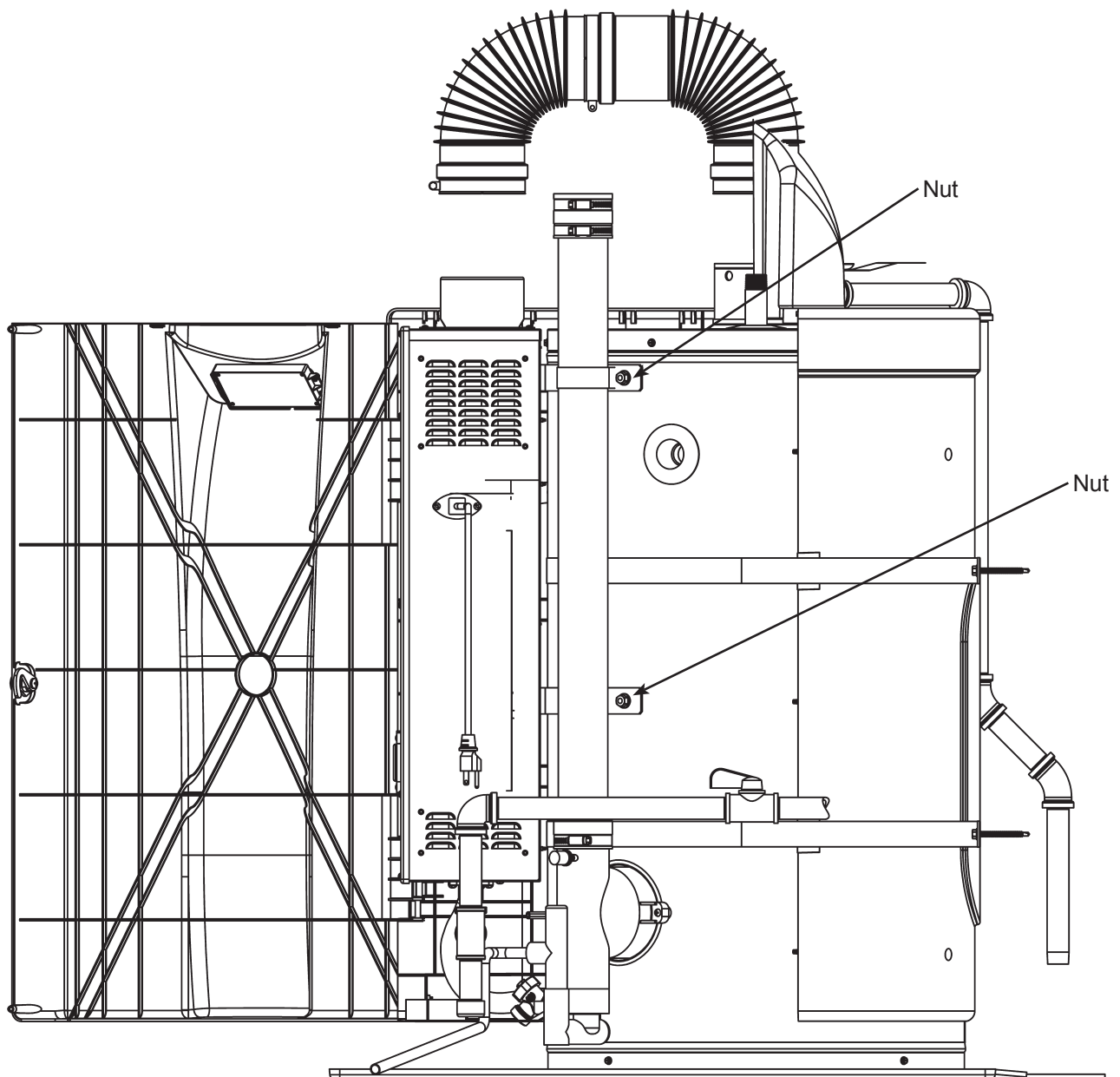




8. Remove the 4 nuts holding the heat engine to the tank. (Requires 1/2" wrench, socket or nut-driver.) It may be necessary to remove part of the venting system to access some nuts.
9. Remove the heat engine.
9. Reassemble the flexible venting in the reverse order.
10. Re-fit the insulation around the exhaust elbows.
11. Reassemble the top casing in the reverse order.
12. Reconnect the electrical power to the water heater.
13. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.

To Install:

1. Assemble the new heat engine to the tank.
2. Reconnect the hoses to the heat engine.
3. Reconnect the gas line.
4. Open the shutoff valves on both the hot-water and cold-water lines.
5. Open the shutoff valve on the gas supply line.
6. Fill the tank following the instructions in the "Filling The Water Heater" section in the Operating Manual.
7. Carefully reconnect the wire harnesses.
8. Reassemble the side panel in the reverse order.



GAS WATER HEATERS

CIRCULATION PUMP REPLACEMENT

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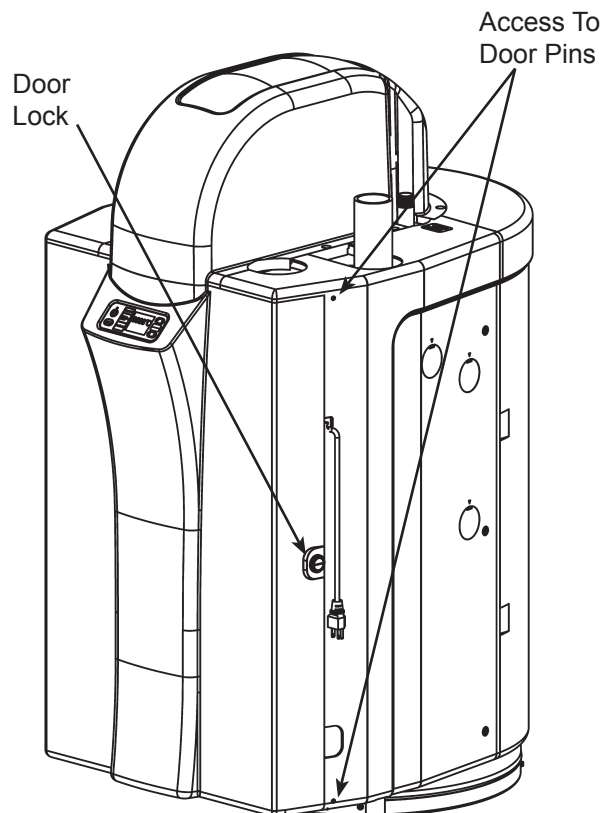
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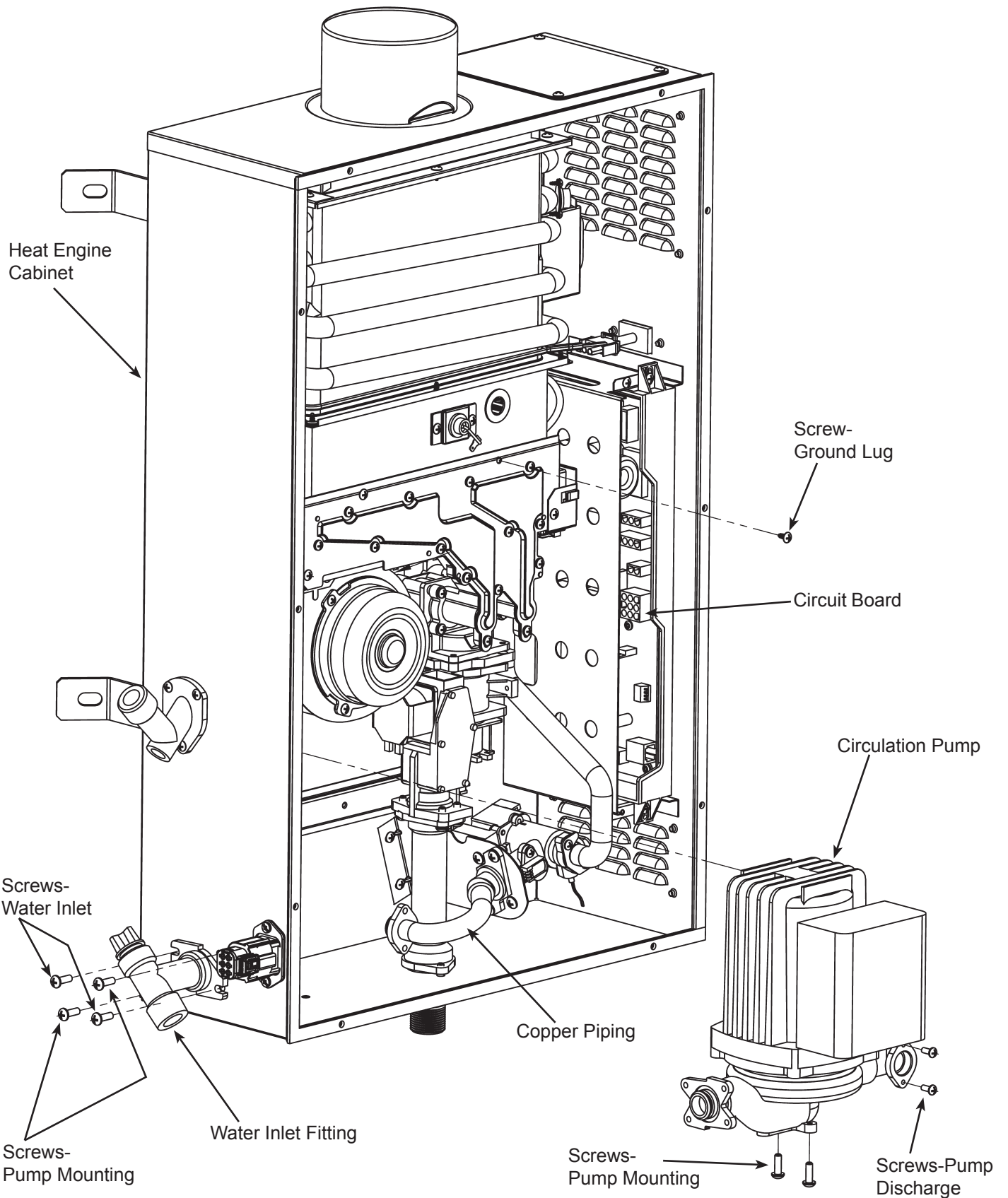
To Remove:

1. Disconnect the electrical power to the water heater.
 2. Close the shutoff valves on both the hot-water and cold-water lines.
 3. Close the shutoff valve on the gas supply line to the water heater.
 4. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
 5. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
 6. Open the door (the door remains fastened to the left side panel).
 7. Remove the ten screws that secure the front cover of the heat engine. Remove the front cover of the Heat Engine.
 8. Remove the two screws securing the circuit board and partially extract it.
 9. Carefully disconnect the Circulating Pump wiring harness plug from the circuit board.
 10. Drain the tank following the instructions in the "Draining The Tank" section in the Operating Manual.
 11. Disconnect the lower hose from the Water Inlet fitting on the left hand side of the Heat Engine Cabinet.
 12. Remove the two mounting screws for Water Inlet (suction side) of the pump.
 13. Remove the two screws on the discharge side (copper piping) of the pump.
 14. Remove the remaining four Circulating Pump mounting screws; two located at the bottom of the Heat Engine Cabinet, and two located at the Water Inlet.
 15. Remove the pump.
7. Secure the Ground Lug with the screw.
 8. Carefully reconnect the wiring harness plug to the circuit board.
 9. Slide the circuit board into its proper position and secure using the two screws.
 10. Reassemble the front cover of the Heat Engine.
 11. Close and lock the door.
 12. Open the shutoff valve on the gas supply line to the water heater.
 13. Reconnect the electrical power to the water heater.
 14. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.

To Install:

1. Assemble the new pump to the Heat Engine Cabinet using the four screws.
2. Reassemble the copper piping to the pump (discharge side).
3. Reassemble the Water Inlet fitting to the Heat Engine Cabinet.
4. Reconnect the lower hose to the Water Inlet fitting.
5. Open the shutoff valves on both the hot-water and cold-water lines.
6. Fill the tank following the instructions in the "Filling The Water Heater" section in the Operating Manual.





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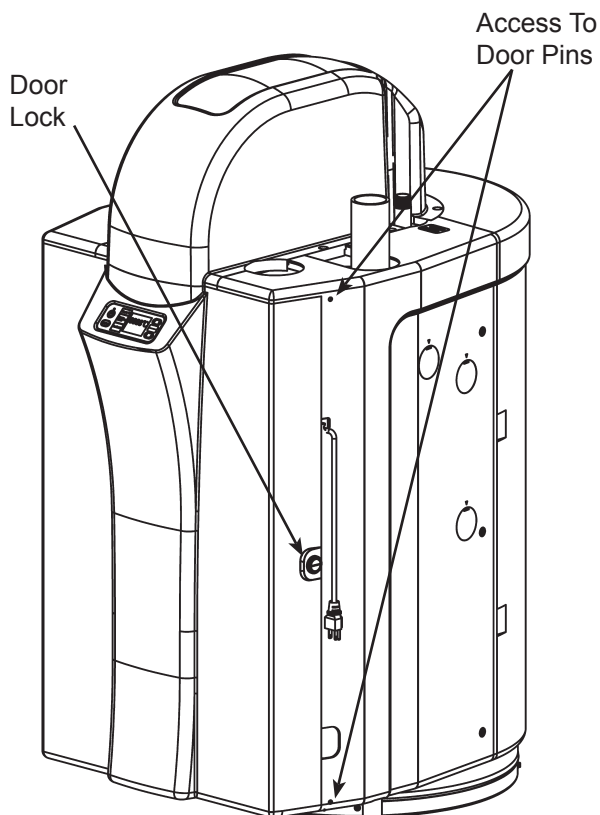
BLOWER MOTOR REPLACEMENT

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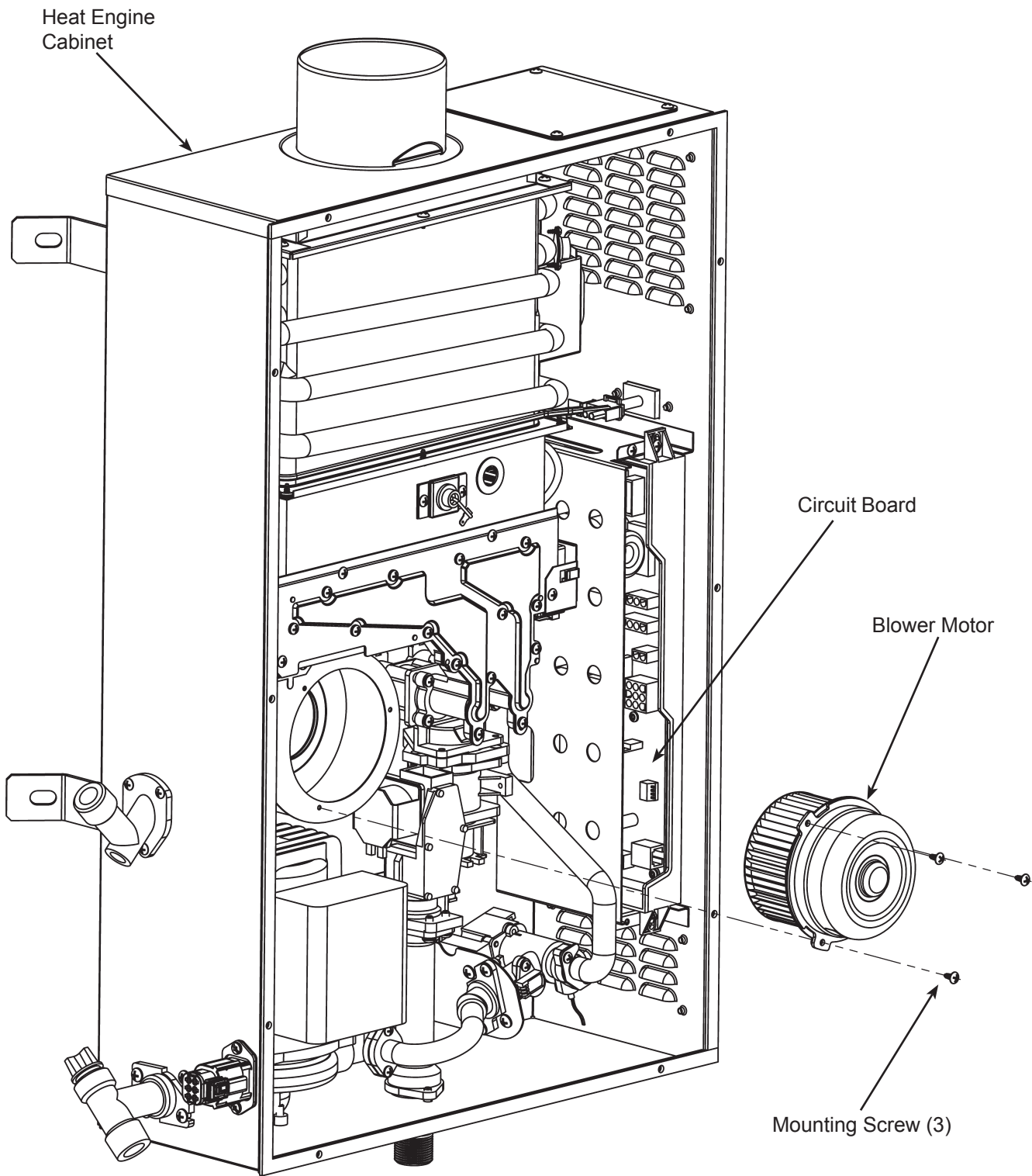
To Remove:

1. Disconnect the electrical power to the water heater.
2. Close the shutoff valve on the gas supply line to the water heater.
3. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
4. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
5. Open the door (the door remains fastened to the left side panel).
6. Remove the ten screws that secure the front cover of the heat engine. Remove the front cover of the Heat Engine.
7. Remove the two screws securing the circuit board and partially extract it.
8. Carefully disconnect the Blower Motor wiring harness plug from the circuit board.
9. Remove the three screws securing the Blower Motor.
10. Remove the Blower Motor.



To Install:

1. Assemble the new Blower Motor using the three screws.
2. Carefully reconnect the wiring harness plug to the circuit board.
3. Slide the circuit board into its proper position and secure using the two screws.
4. Reassemble the front cover of the Heat Engine.
5. Close and lock the door.
6. Open the shutoff valve on the gas supply line to the water heater.
7. Reconnect the electrical power to the water heater.
8. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.



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GAS WATER HEATERS

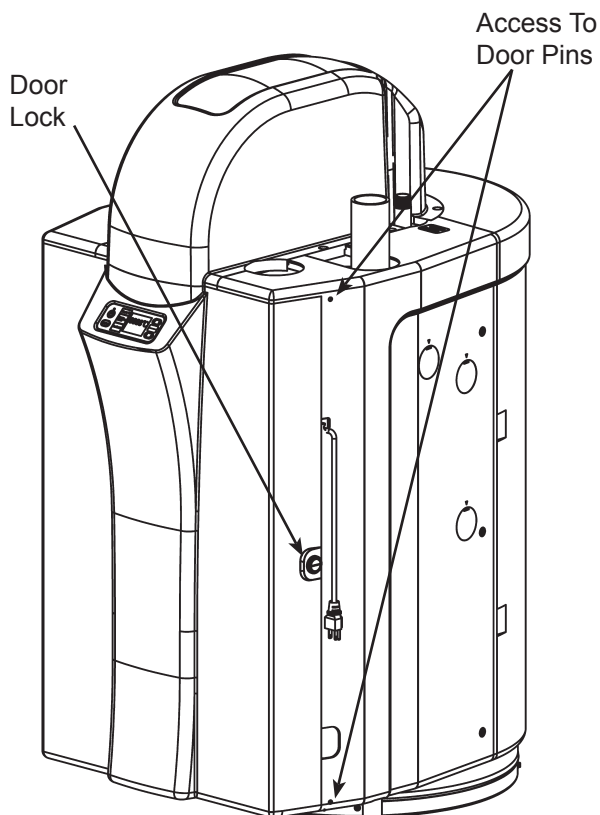
CIRCUIT BOARD REPLACEMENT

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To Remove:

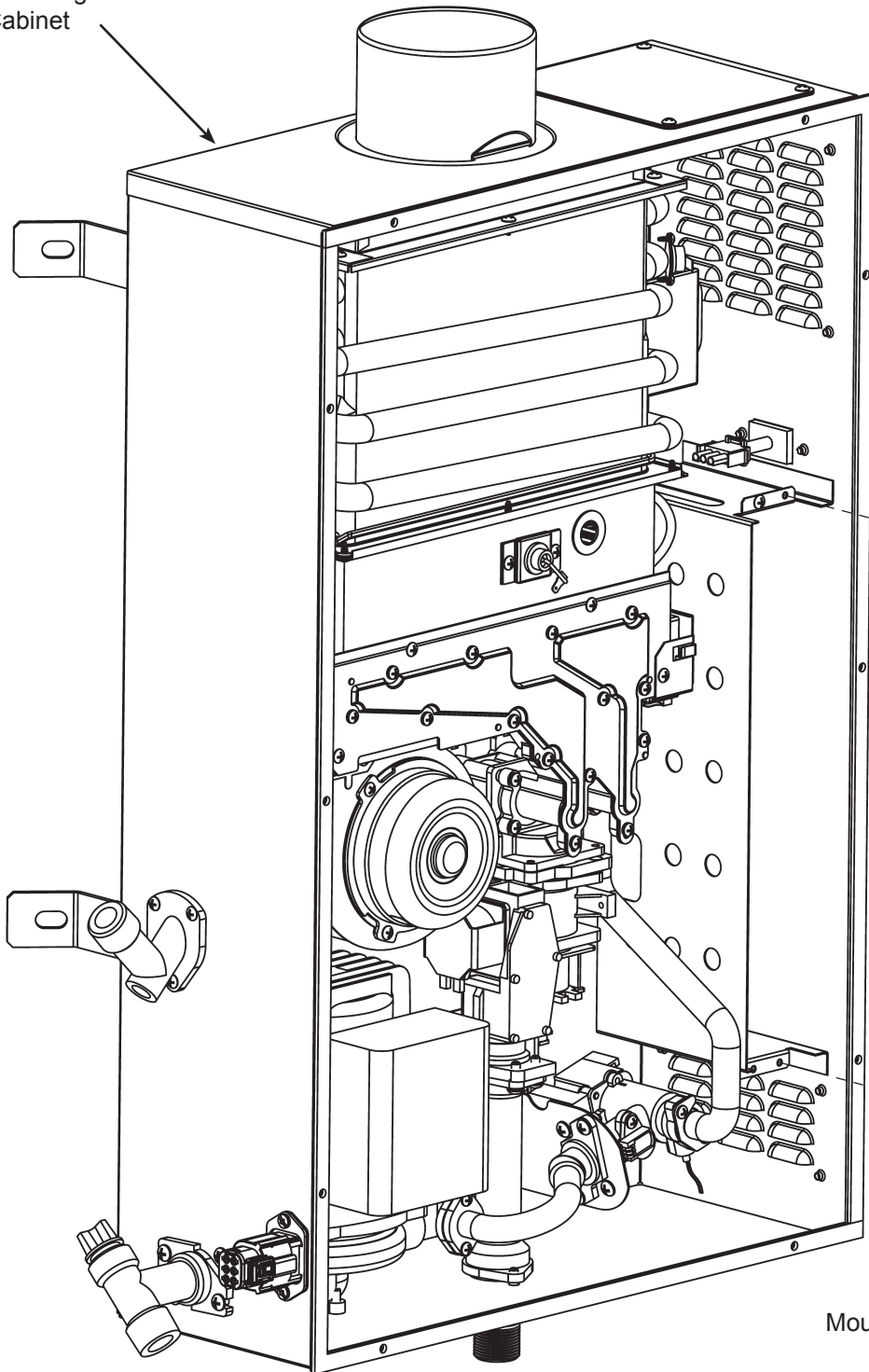
1. Disconnect the electrical power to the water heater.
2. Close the shutoff valve on the gas supply line to the water heater.
3. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
4. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
5. Open the door (the door remains fastened to the left side panel).
6. Remove the ten screws that secure the front cover of the heat engine. Remove the front cover of the Heat Engine.
7. Remove the two screws securing the circuit board.
8. Carefully disconnect all the wiring harness plugs from the circuit board.
9. Remove the circuit board.



To Install:

1. Carefully reconnect the wiring harness plugs to the circuit board.
2. Assemble the new circuit board to the Heat Engine Cabinet and secure using the two screws.
3. Reassemble the front cover of the Heat Engine.
4. Close and lock the door.
5. Open the shutoff valve on the gas supply line to the water heater.
6. Reconnect the electrical power to the water heater.
7. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.

Heat Engine Cabinet



Circuit Board

Mounting Screw (2)

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DISPLAY PANEL REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

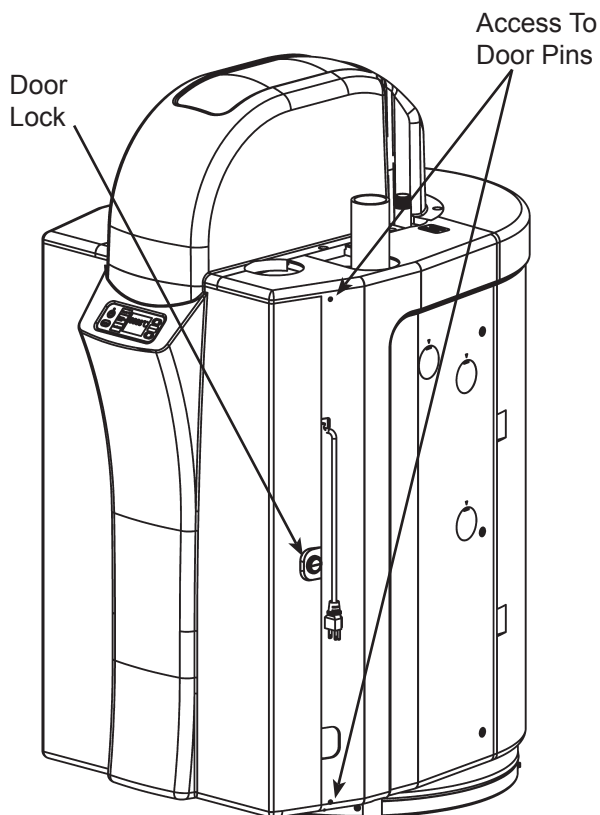
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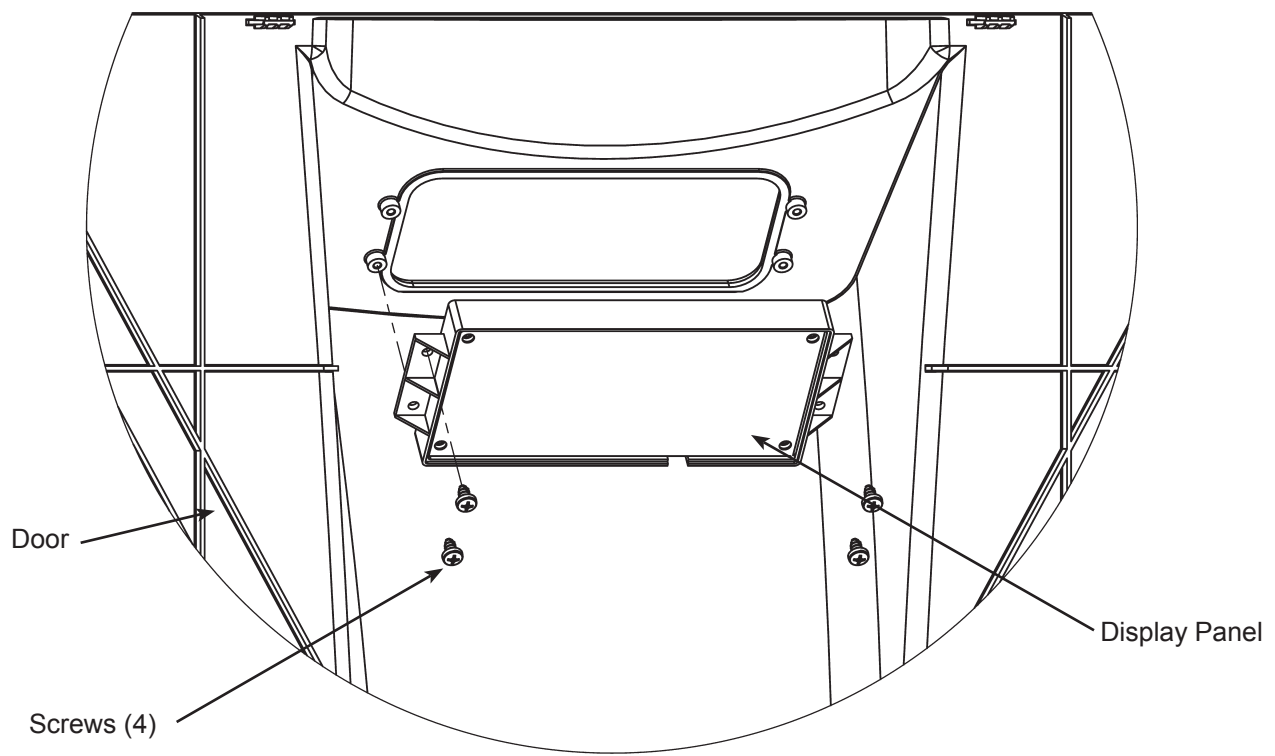
To Remove:

1. Disconnect the electrical power to the water heater.
2. Close the shutoff valve on the gas supply line to the water heater.
3. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
4. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
5. Open the door (the door remains fastened to the left side panel).
6. Carefully disconnect all the wiring harness plugs from the Display Panel.
7. Remove the four screws securing the Display Panel.
8. Remove the Display Panel.

To Install:

1. Assemble the new Display Panel to the door using the four screws.
2. Carefully reconnect the wiring harness plugs to the Display Panel.
3. Close and lock the door.
4. Open the shutoff valve on the gas supply line to the water heater.
5. Reconnect the electrical power to the water heater.
6. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.





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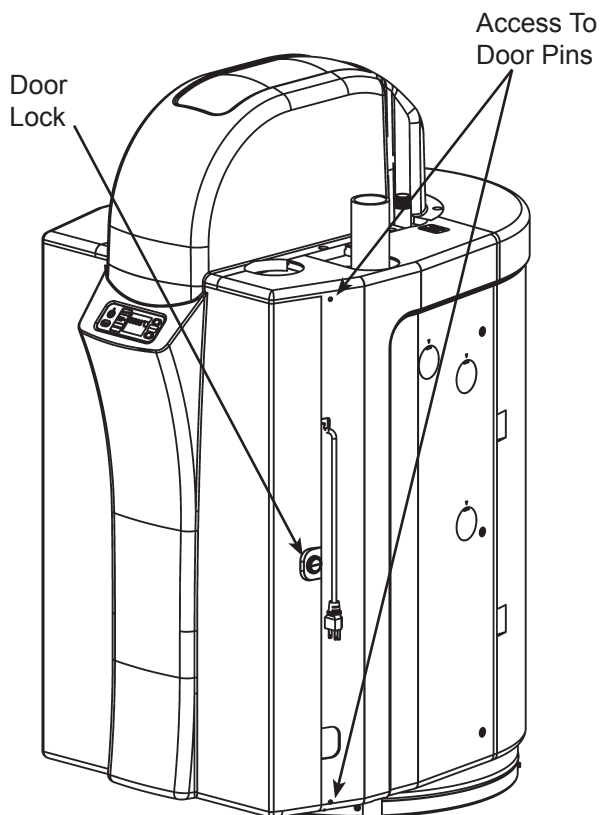
INLET THERMISTOR REPLACEMENT

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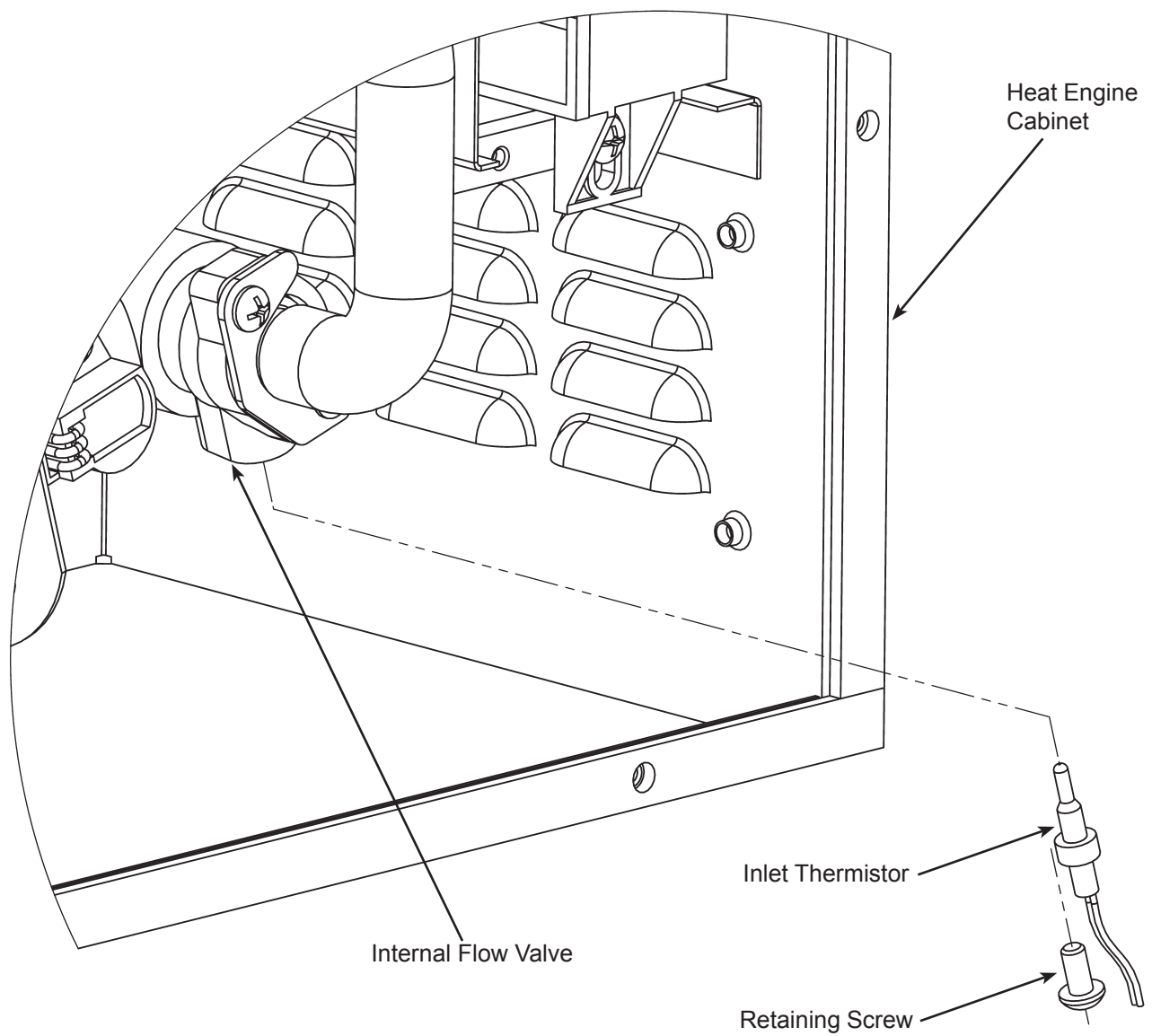
To Remove:

1. Disconnect the electrical power to the water heater.
2. Close the shutoff valve on the gas supply line to the water heater.
3. Close the shutoff valves on both the hot-water and cold-water lines.
4. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
5. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
6. Open the door (the door remains fastened to the left side panel).
7. Remove the ten screws that secure the front cover of the heat engine. Remove the front cover of the Heat Engine.
8. Carefully disconnect the wire harness plug leading to thermistor.
9. Drain the tank following the instructions in the “Draining The Tank” section in the Operating Manual.
10. Remove the retaining screw for the inlet thermistor “(using an offset right angle Phillips screwdriver)”.
11. Remove the thermistor.



To Install:

1. Secure the new thermistor in place with the retaining screw.
2. Open the shutoff valves on both the hot-water and cold-water lines.
3. Fill the tank with water. Check for leaks and repair as required.
4. Carefully reconnect the wiring harness plug to the thermistor.
5. Reassemble the front cover of the Heat Engine.
6. Close and lock the door.
7. Open the shutoff valve on the gas supply line to the water heater.
8. Reconnect the electrical power to the water heater.
9. Restart the water heater following the “Lighting Instructions” found in the Operating Manual.



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GAS WATER HEATERS

INTERNAL FLOW VALVE REPLACEMENT

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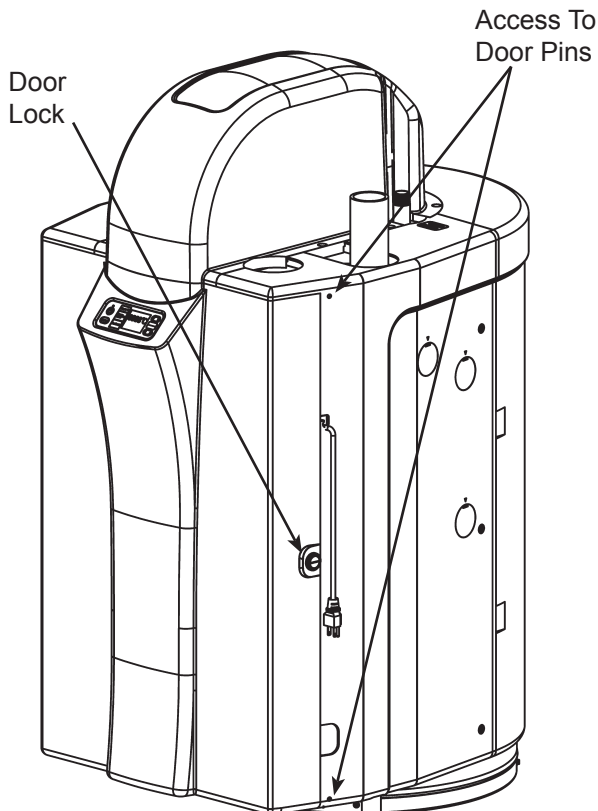
To Remove:

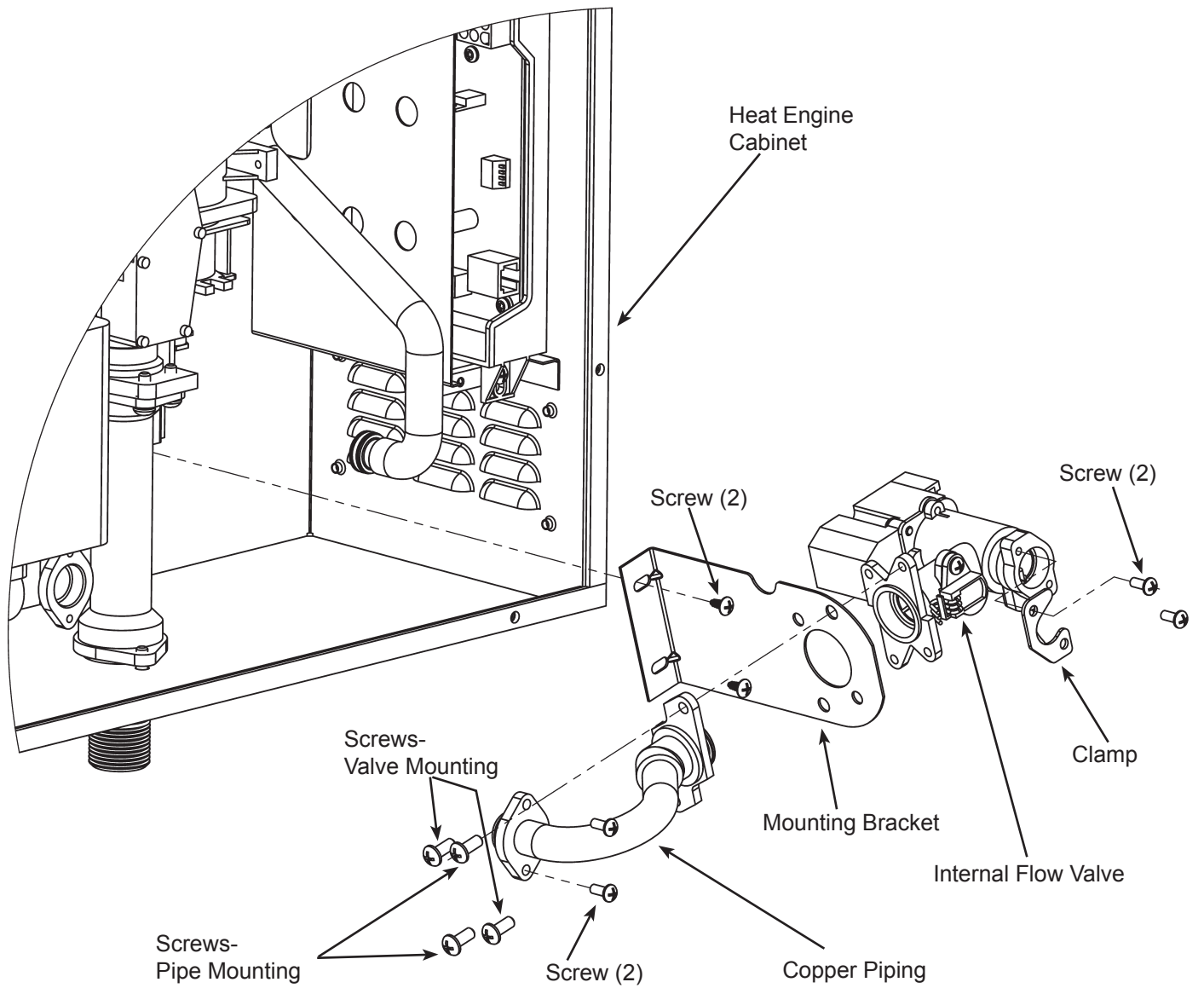
1. Disconnect the electrical power to the water heater.
2. Close the shutoff valve on the gas supply line to the water heater.
3. Close the shutoff valves on both the hot-water and cold-water lines.
4. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
5. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
6. Open the door (the door remains fastened to the left side panel).
7. Remove the ten screws that secure the front cover of the heat engine. Remove the front cover of the Heat Engine.
8. Carefully disconnect the three wire harness plugs leading to flow valve. Two are for Flow Valve control, one is for the Inlet Thermistor.

9. Drain the tank following the instructions in the "Draining The Tank" section in the Operating Manual.
10. Remove the two screws that fasten the copper piping to the Circulation Pump (discharge side).
11. Remove the two screws from the flange on the outlet side of the flow valve and remove the clamp.
12. Remove the two screws fastening the flow valve mounting bracket to the Heat Engine Cabinet.
13. Remove the two screws fastening the copper piping to the flow valve mounting bracket.
14. Remove the two screws fastening the flow valve to the mounting bracket.
15. Remove the Internal Flow Valve.

To Install:

1. Secure the new Internal Flow Valve to the mounting bracket with the two flow valve mounting screws.
2. Secure the copper piping to the flow valve mounting bracket using the two copper piping mounting screws.
3. Secure the mounting bracket with two screws.
4. Secure the piping for the outlet side of the flow valve with the clamp and two screws.
5. Secure the copper piping to the Circulation Pump (discharge side) with two screws.
6. Carefully reconnect the three wire harness plugs.
7. Open the shutoff valves on both the hot-water and cold-water lines.
8. Fill the tank following the instructions in the "Filling The Water Heater" section in the Operating Manual.
9. Reassemble the front cover of the Heat Engine.
10. Close and lock the door.
11. Open the shutoff valve on the gas supply line to the water heater.
12. Reconnect the electrical power to the water heater.
13. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.





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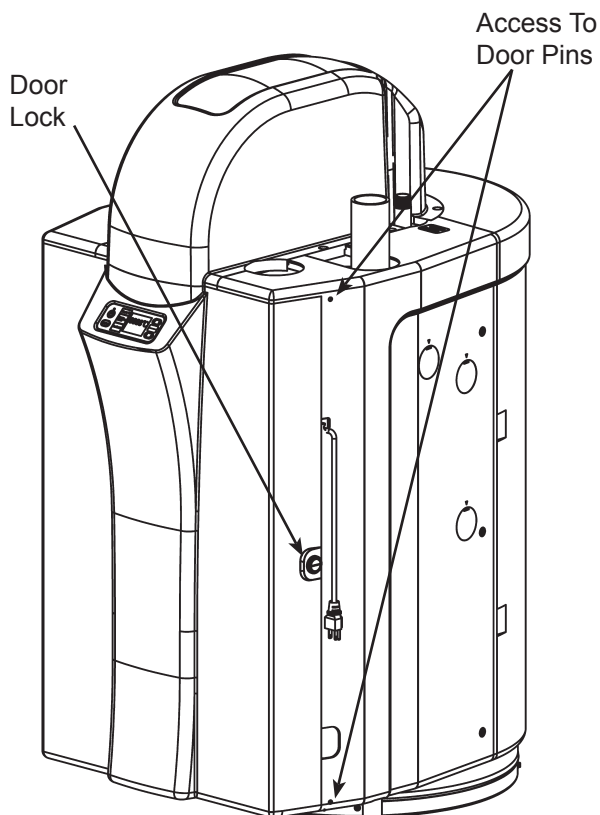
OUTLET THERMISTOR REPLACEMENT

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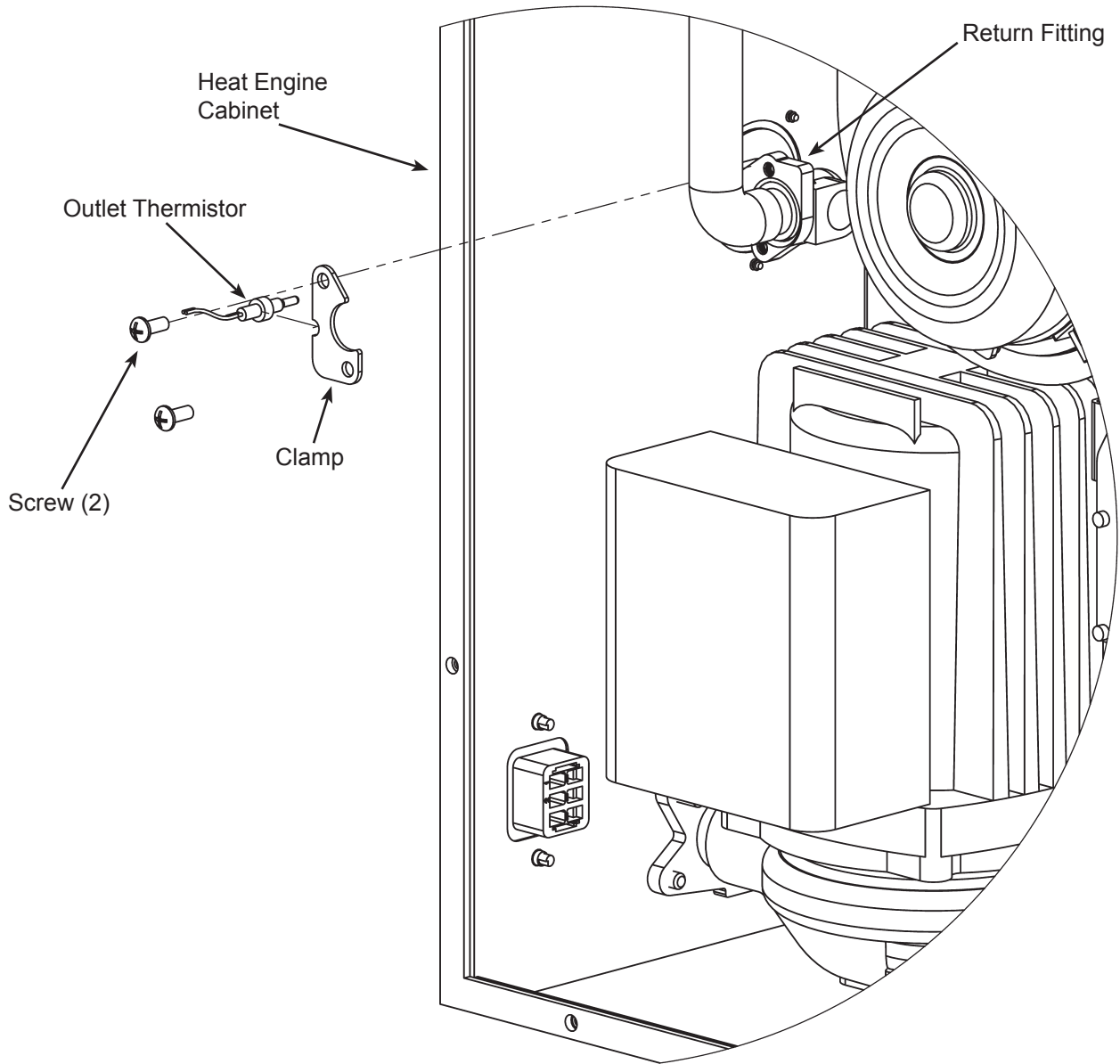
To Remove:

1. Disconnect the electrical power to the water heater.
2. Close the shutoff valve on the gas supply line to the water heater.
3. Close the shutoff valves on both the hot-water and cold-water lines.
4. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
5. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
6. Open the door (the door remains fastened to the left side panel).
7. Remove the ten screws that secure the front cover of the heat engine. Remove the front cover of the Heat Engine.
8. Carefully disconnect the wire harness plug leading to thermistor.
9. Drain the tank following the instructions in the “Draining The Tank” section in the Operating Manual.
10. Remove the two screws from the flange on the return fitting and remove the clamp.
11. Remove the thermistor.



To Install:

1. Secure the new thermistor in place with the clamp and two screws.
2. Open the shutoff valves on both the hot-water and cold-water lines.
3. Fill the tank with water. Check for leaks and repair as required.
4. Carefully reconnect the wiring harness plug to the thermistor.
5. Reassemble the front cover of the Heat Engine.
6. Close and lock the door.
7. Open the shutoff valve on the gas supply line to the water heater.
8. Reconnect the electrical power to the water heater.
9. Restart the water heater following the “Lighting Instructions” found in the Operating Manual.



GAS WATER HEATERS

GAS VALVE REPLACEMENT

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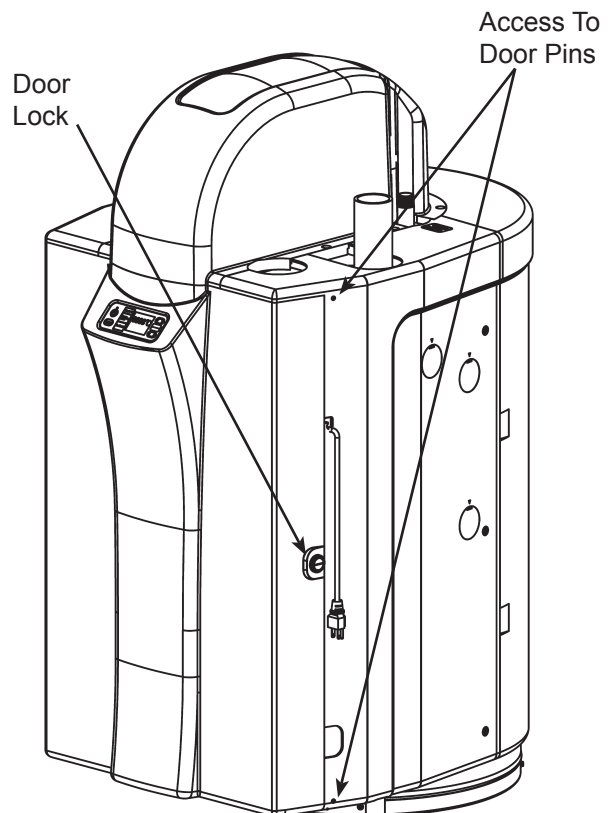
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To Remove:

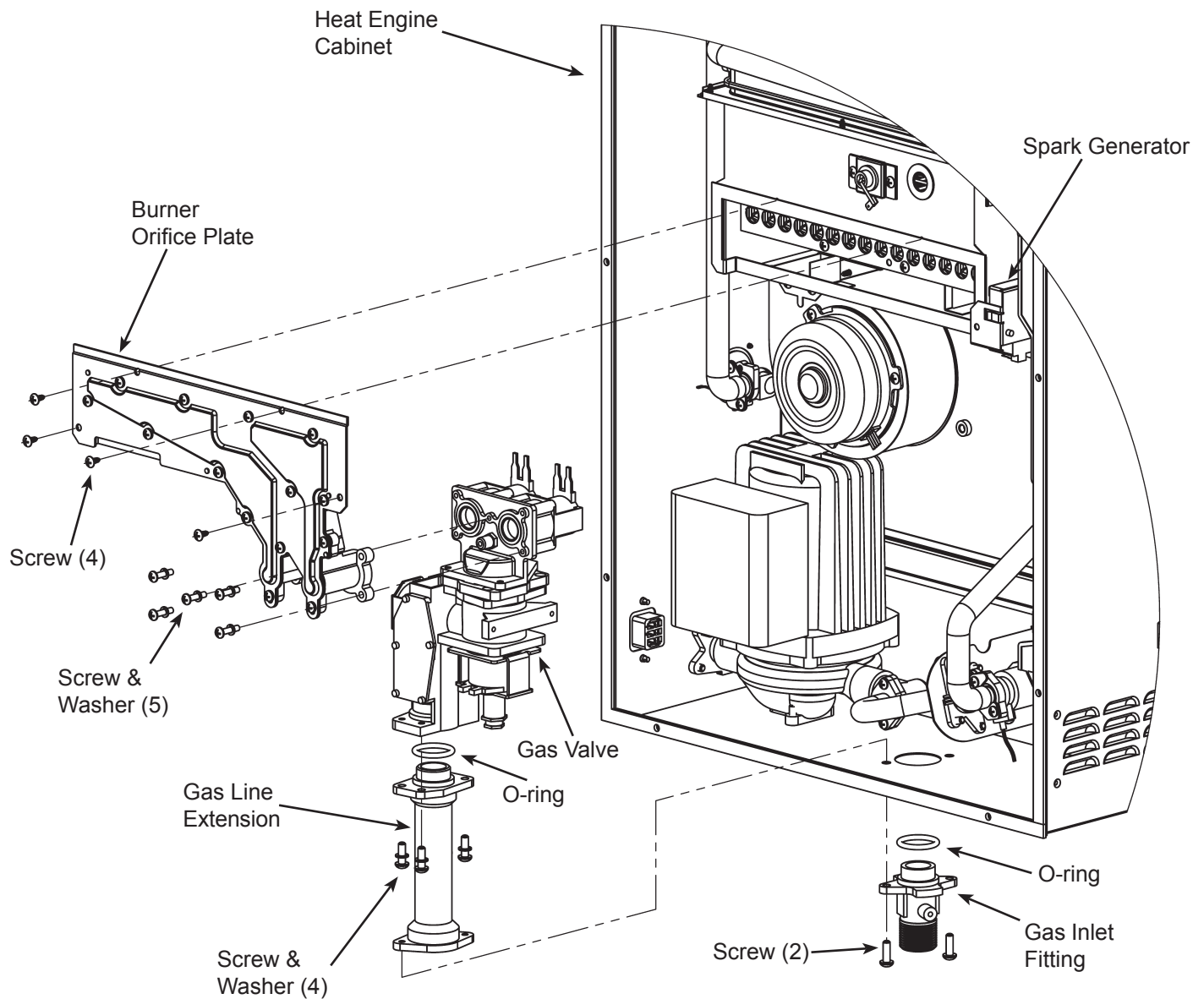
1. Disconnect the electrical power to the water heater.
2. Close the shutoff valve on the gas supply line to the water heater.
3. Close the shutoff valves on both the hot-water and cold-water lines.
4. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
5. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
6. Open the door (the door remains fastened to the left side panel).
7. Remove the ten screws that secure the front cover of the heat engine. Remove the front cover of the Heat Engine.
8. Remove the two screws securing the circuit board and partially extract it.
9. Carefully disconnect the Gas Valve wiring harness plug from the circuit board.
10. Disconnect the gas line from the heat engine.
11. Remove the two screws that secure the Gas Inlet Fitting.
12. Remove the four screws that secure the Burner Orifice Plate. One of these screws also secures the Spark Generator.
13. Pull the Gas Valve Assembly away from the heat engine.
14. Carefully disconnect the wire harness from the Gas Valve Assembly.
15. Remove the five screws and washers securing the Burner Orifice Plate to the Gas Valve.
16. Remove the four screws and washers that secure the Gas Line Extension to the Gas Valve.
17. Remove the Gas Valve.

To Install:

1. Fasten the Gas Line Extension to the new Gas Valve with the four screws and washers. Ensure the O-ring is undamaged and properly positioned.
2. Secure the Burner Orifice Plate to the Gas Valve with five screws and washers.
3. Carefully reconnect the wire harness to the Gas Valve Assembly (green wire pair to the lower right solenoid, yellow & black pair wire to the lower left solenoid, black & white pair to the top right side solenoid and black & brown pair to the top left side solenoid).
4. Install the Gas Valve Assembly into the heat engine, ensuring the Assembly is seated properly between the Orifice Plate and the heat engine.
5. Secure the Orifice Plate with four screws. Ensure the Spark Generator is properly secured.
6. Secure the Gas Inlet Fitting with two screws. Ensure the O-ring is undamaged and properly positioned.



7. Carefully reconnect the Gas Valve wiring harness plug to the circuit board.
8. Slide the circuit board into its proper position and secure using the two screws.
9. Open the shutoff valves on both the hot-water and cold-water lines.
10. Fill the tank with water.
11. Reconnect the gas line.
12. Reconnect the electrical power to the water heater.
13. Open the shutoff valve on the gas supply line to the water heater.
14. Use a approved water and soap solution to check the for gas leaks. Repair as required.
15. Reassemble the front cover of the Heat Engine.
16. Close and lock the door.
17. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.



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GAS WATER HEATERS

ECO SWITCH REPLACEMENT

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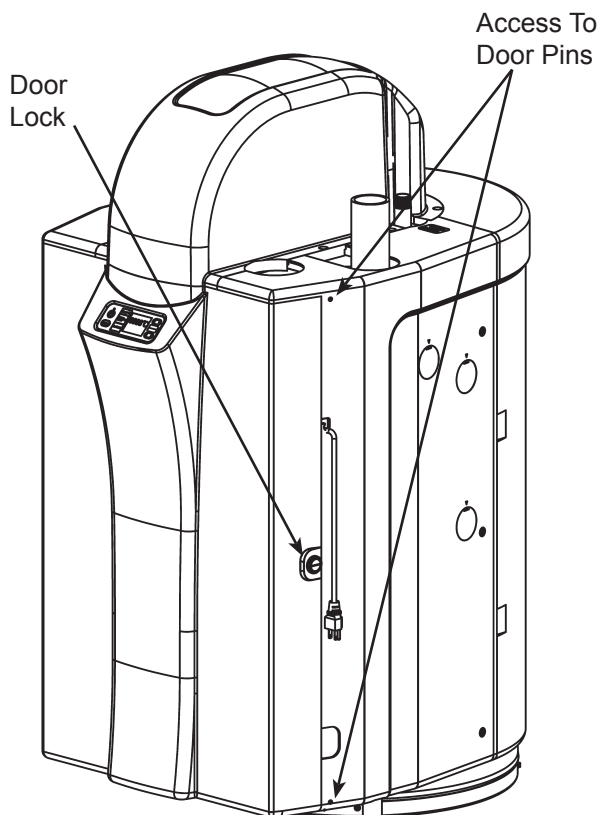
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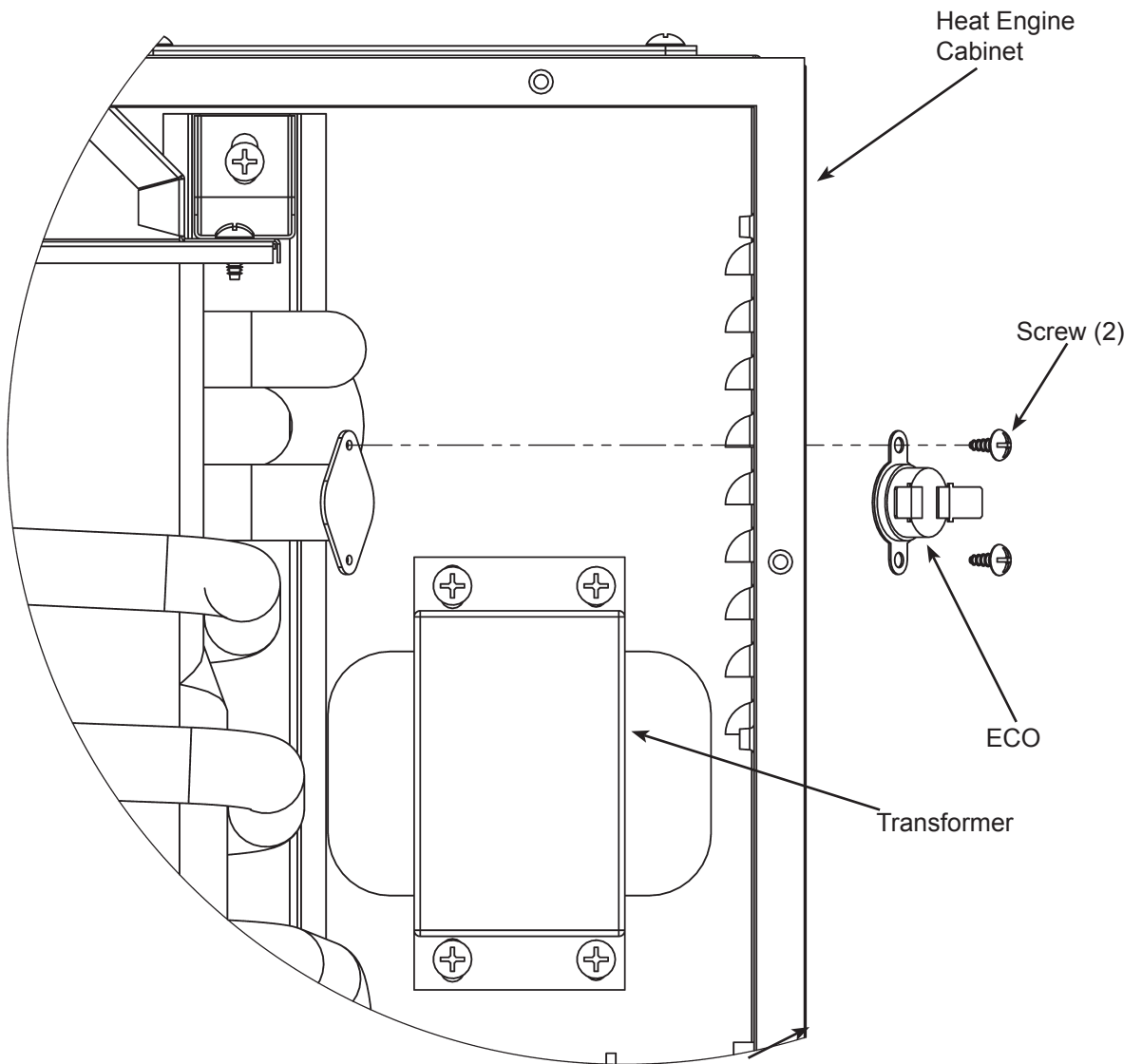
To Remove:

1. Disconnect the electrical power to the water heater.
2. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
3. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
4. Open the door (the door remains fastened to the left side panel).
5. Remove the ten screws that secure the front cover of the heat engine. Remove the front cover of the Heat Engine.
6. Carefully disconnect the two wire leads to the ECO switch.
7. Remove the two screws securing the ECO switch.
8. Remove the ECO switch.

To Install:

1. Secure the new ECO switch using the two screws.
2. Carefully reconnect the two wire leads to the ECO switch.
3. Reassemble the front cover of the Heat Engine.
4. Close and lock the door.
5. Reconnect the electrical power to the water heater.
6. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.





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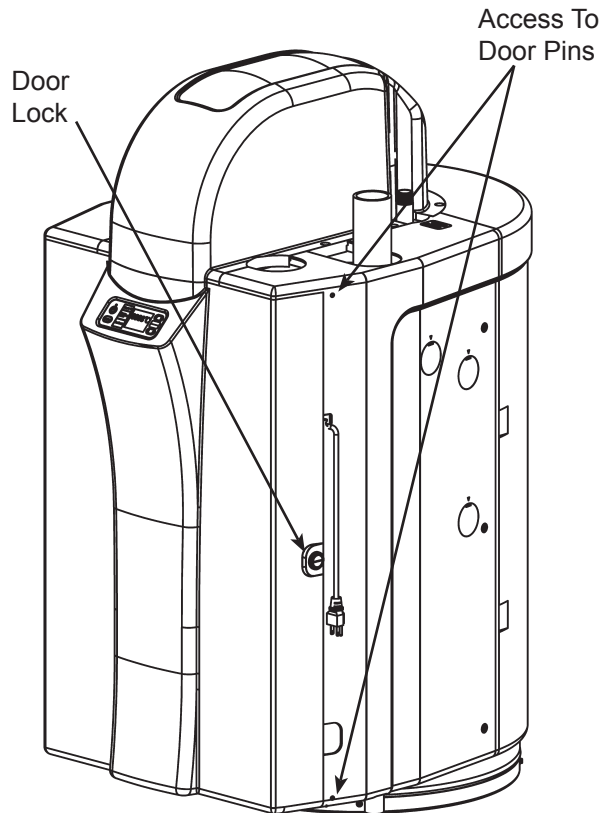
POWER CORD REPLACEMENT

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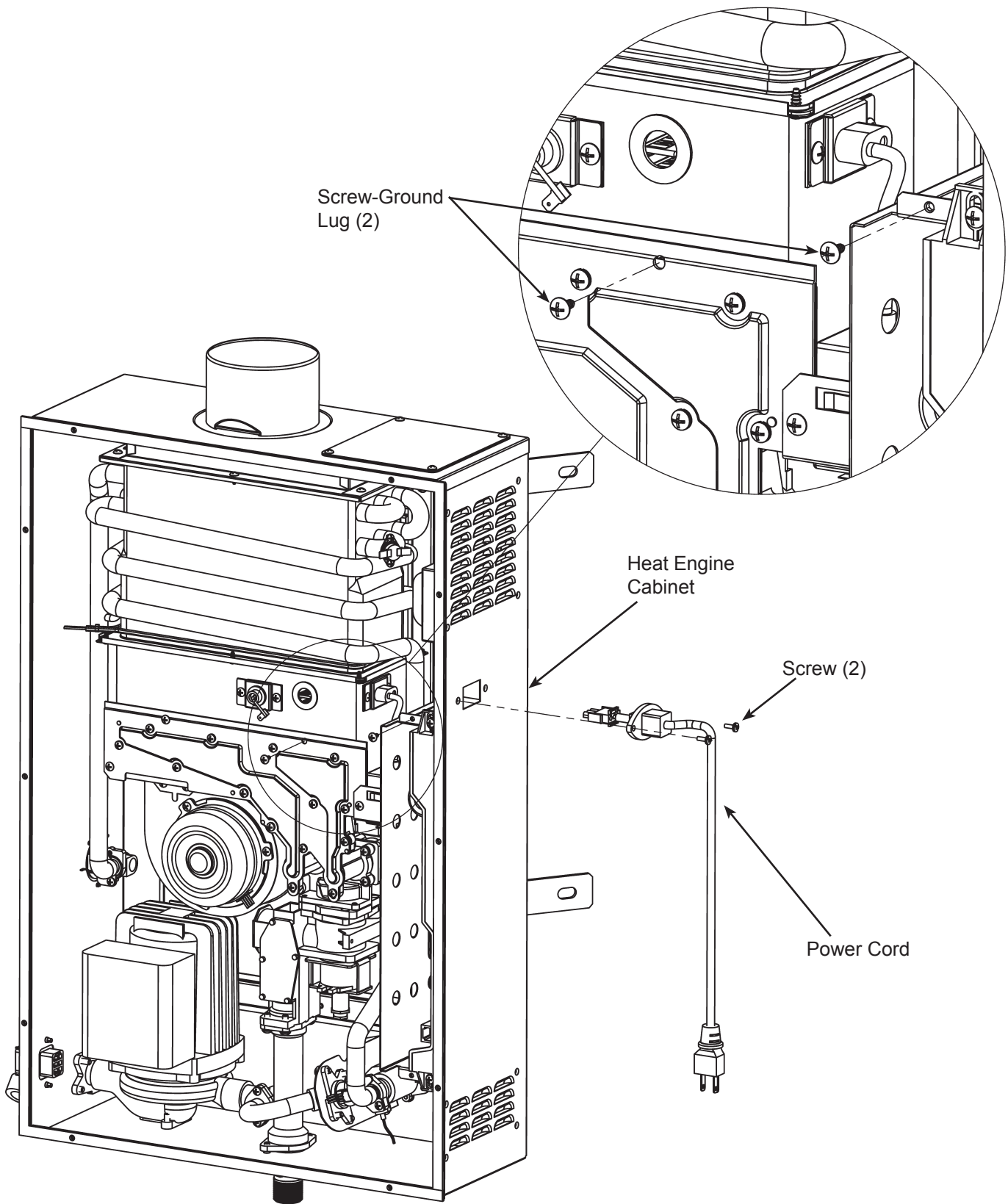
To Remove:

1. Disconnect the electrical power to the water heater.
2. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
3. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
4. Open the door (the door remains fastened to the left side panel).
5. Remove the ten screws that secure the front cover of the heat engine. Remove the front cover of the Heat Engine.
6. Remove the two screws securing the circuit board and partially extract it.
7. Carefully disconnect the Power Cord wiring harness plug from the circuit board.
8. Remove the two screws securing the Ground Lugs.
9. Remove the two screws securing the Power Cord to the Heat Engine Cabinet.
10. Remove the Power Cord.



To Install:

1. Secure the new Power Cord to the Heat Engine Cabinet with the two screws.
2. Secure the Ground Lugs with the two screws.
3. Carefully reconnect the Power Cord wiring harness plug to the circuit board.
4. Slide the circuit board into its proper position and secure using the two screws.
5. Reassemble the front cover of the Heat Engine.
6. Close and lock the door.
7. Reconnect the electrical power to the water heater.
8. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.
- 9.



Service Instructions

GAS WATER HEATERS

TRANSFORMER REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

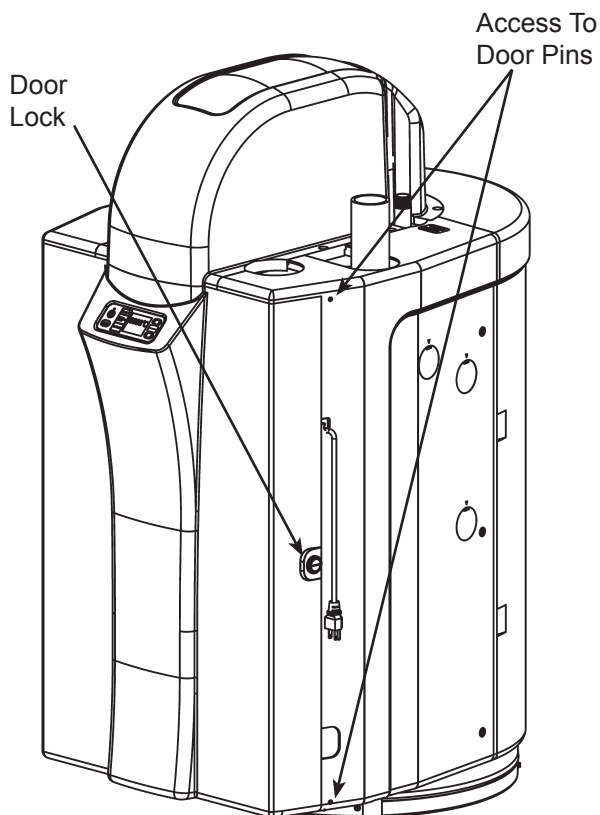
Failure to follow the instructions in this service instruction sheet may result in serious bodily injury and/or property damage. Thoroughly read and understand all instructions before you attempt to install, operate or service this heater. Maintenance and service requires trade knowledge in the areas of plumbing, electricity and gas. If you lack these skills or have difficulty understanding these instructions you should not proceed. Enlist the help of a qualified service technician to service this water heater.

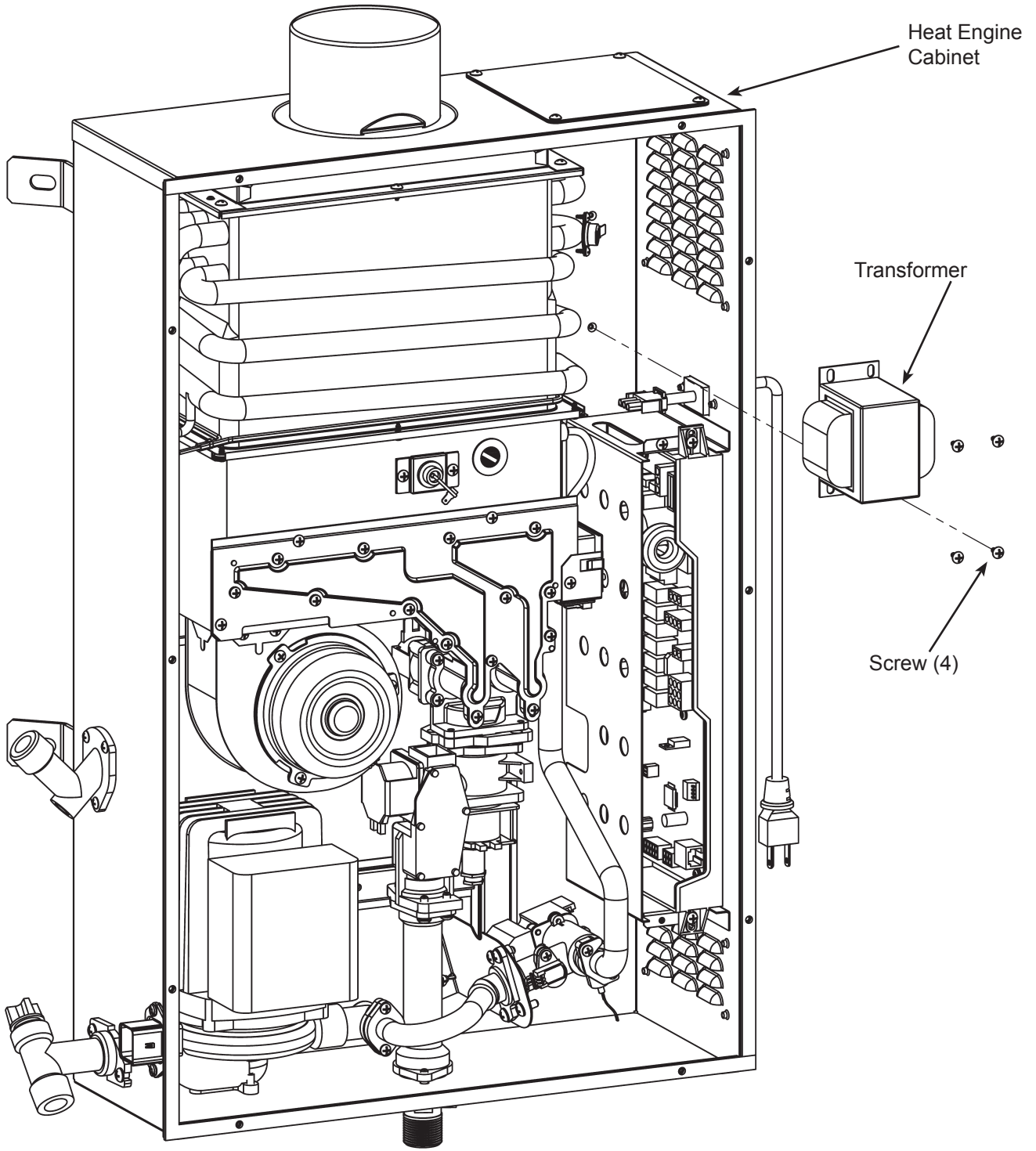
To Remove:

1. Disconnect the electrical power to the water heater.
2. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
3. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
4. Open the door (the door remains fastened to the left side panel).
5. Remove the ten screws that secure the front cover of the heat engine. Remove the front cover of the Heat Engine.
6. Remove the two screws securing the circuit board and partially extract it.
7. Carefully disconnect the Transformer wiring harness plugs from the circuit board.
8. Remove the four screws securing the Transformer to the Heat Engine Cabinet.
9. Remove the Transformer.

To Install:

1. Secure the new Transformer to the Heat Engine Cabinet with the four screws.
2. Carefully reconnect the Transformer wiring harness plugs to the circuit board.
3. Slide the circuit board into its proper position and secure using the two screws.
4. Reassemble the front cover of the Heat Engine.
5. Close and lock the door.
6. Reconnect the electrical power to the water heater.
7. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.
- 8.





Service Instructions

GAS WATER HEATERS

FLAME ROD REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

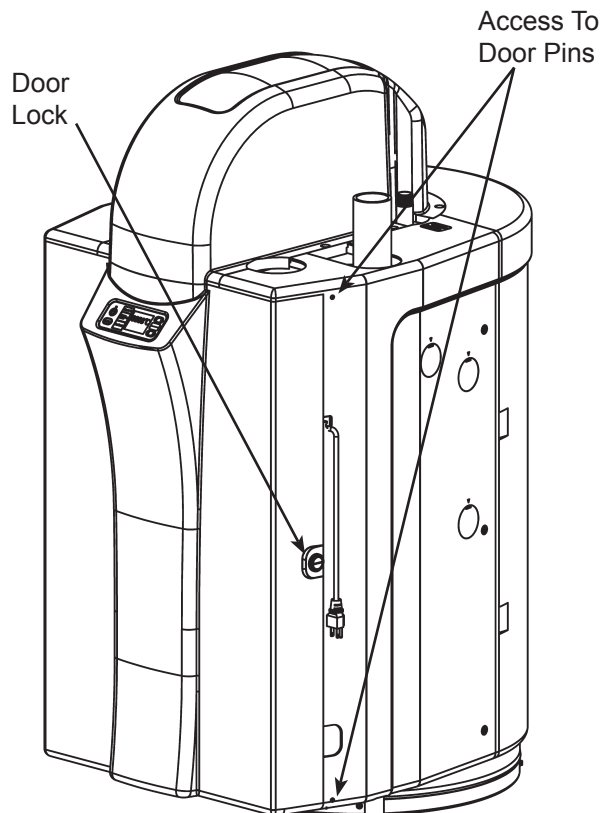
Failure to follow the instructions in this service instruction sheet may result in serious bodily injury and/or property damage. Thoroughly read and understand all instructions before you attempt to install, operate or service this heater. Maintenance and service requires trade knowledge in the areas of plumbing, electricity and gas. If you lack these skills or have difficulty understanding these instructions you should not proceed. Enlist the help of a qualified service technician to service this water heater.

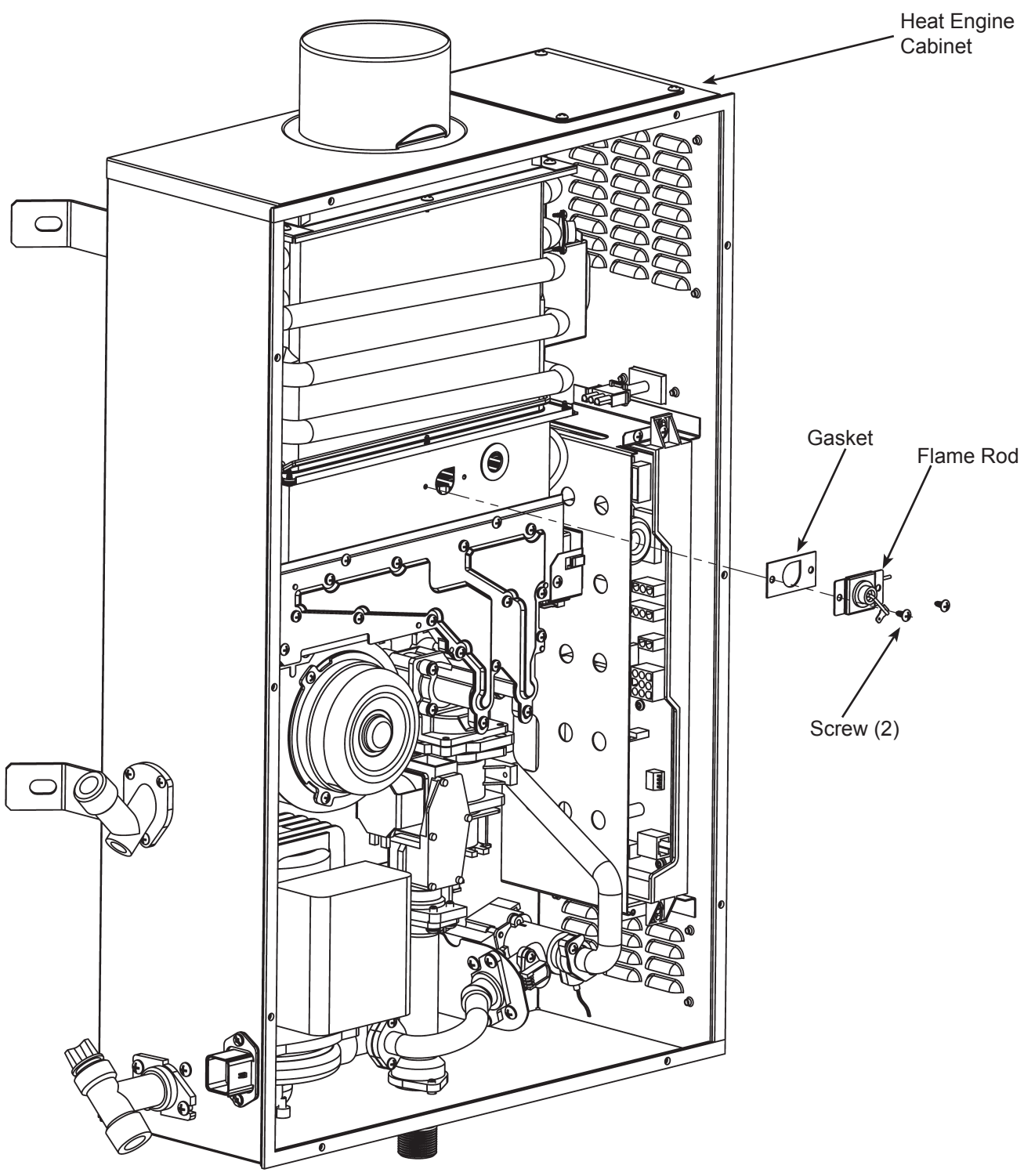
To Remove:

1. Disconnect the electrical power to the water heater.
2. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
3. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
4. Open the door (the door remains fastened to the left side panel).
5. Remove the ten screws that secure the front cover of the heat engine. Remove the front cover of the Heat Engine.
6. Carefully disconnect the wire leading to the Flame Rod.
7. Remove the two screws securing the Flame Rod.
8. Remove the Flame Rod and Gasket. Ensure old gasket is completely removed and no material remains.

To Install:

1. Secure the new Flame Rod and Gasket with the two screws.
2. Carefully reconnect the wire leading to the Flame Rod.
3. Reassemble the front cover of the Heat Engine.
4. Close and lock the door.
5. Reconnect the electrical power to the water heater.
6. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.





Service Instructions

GAS WATER HEATERS

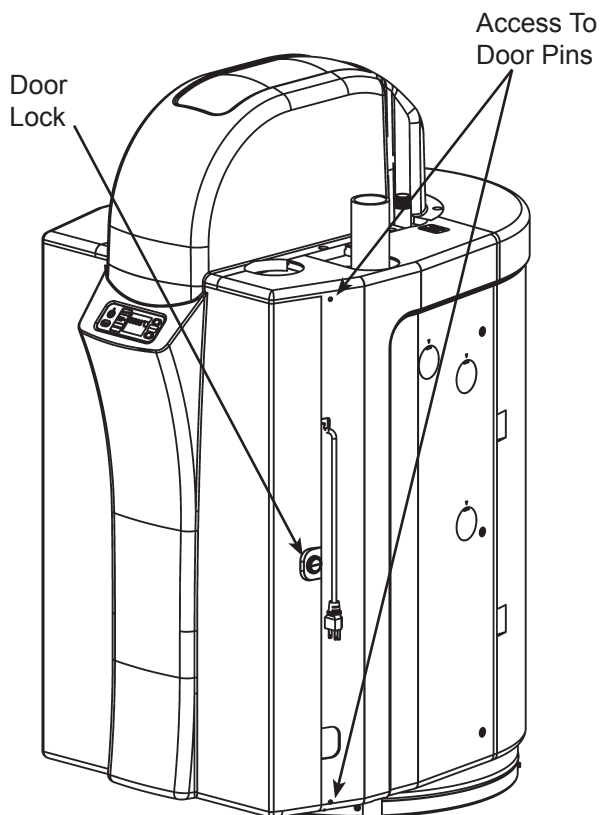
SPARK GENERATOR REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

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To Remove:

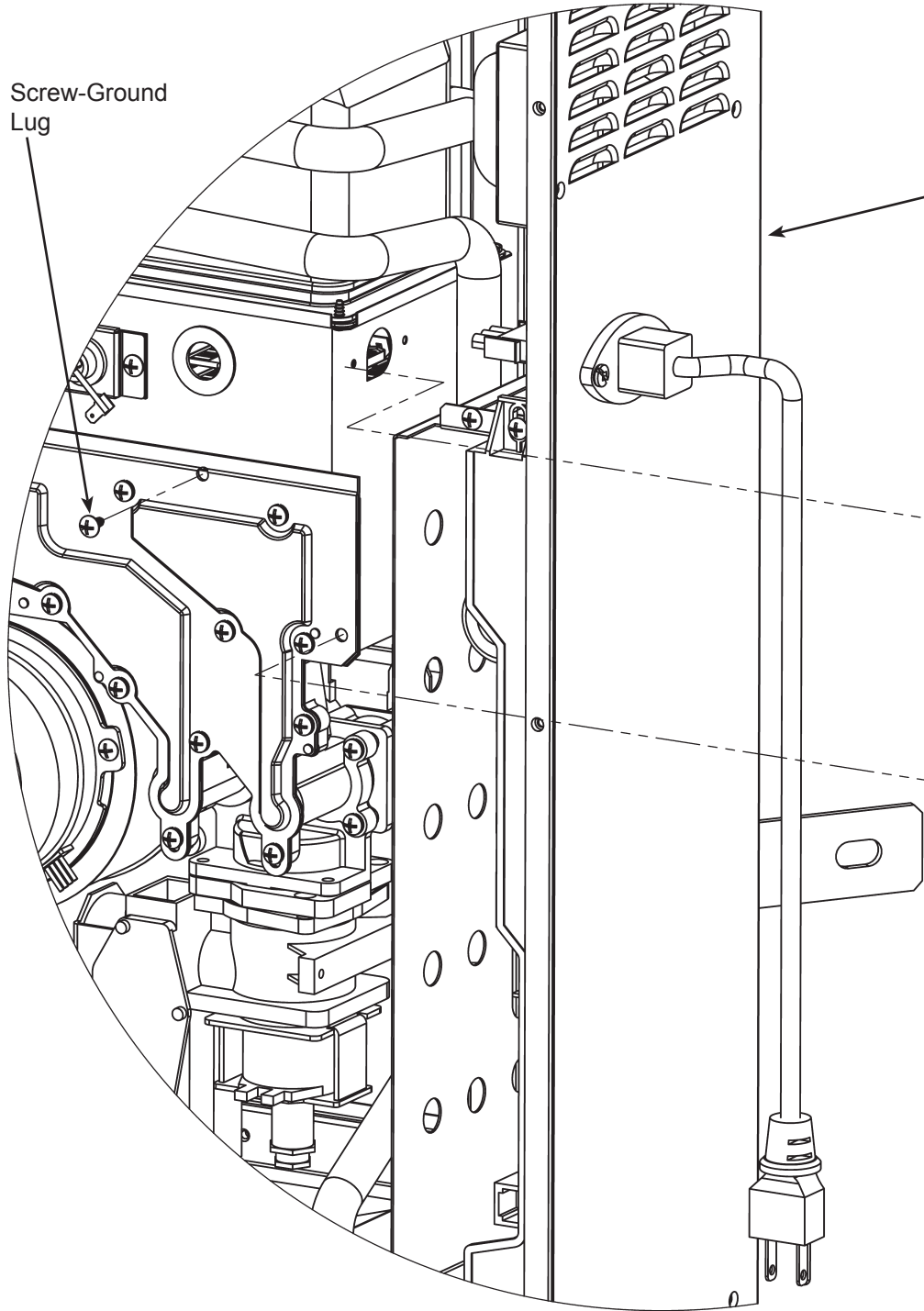
1. Disconnect the electrical power to the water heater.
2. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
3. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
4. Open the door (the door remains fastened to the left side panel).
5. Remove the ten screws that secure the front cover of the heat engine. Remove the front cover of the Heat Engine.
6. Remove the two screws securing the circuit board and partially extract it.
7. Carefully disconnect the Spark Generator wiring harness plug from the circuit board.
8. Remove the screw securing the Ground Lugs.
9. Remove the screw securing the Spark Generator.
10. Remove the two screws securing the Electrode assembly. It may be necessary to remove the Power Cord to gain access to the two screws.
11. Carefully disconnect the wire harness from the Spark Generator.
12. Remove the Spark Generator, Electrode assembly and Gasket. Ensure old gasket is completely removed and no material remains.



To Install:

1. Carefully reconnect the wire harness to the new Spark Generator.
2. Secure the Electrode assembly and Gasket with the two screws.
3. Secure the Spark Generator with the screw.
4. Secure the Ground Lugs with the screw.
5. Carefully reconnect the Spark Generator wiring harness plug to the circuit board.
6. Slide the circuit board into its proper position and secure using the two screws.
7. Reassemble the front cover of the Heat Engine.
8. Close and lock the door.
9. Reconnect the electrical power to the water heater.
10. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.

Screw-Ground
Lug

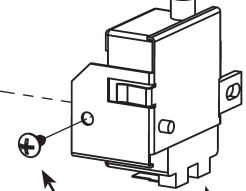
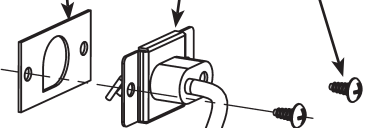


Heat Engine
Cabinet

Gasket

Electrode

Screw (2)



Screw

Spark
Generator

Service Instructions

GAS WATER HEATERS

HILIMIT TEMPERATURE SWITCH REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

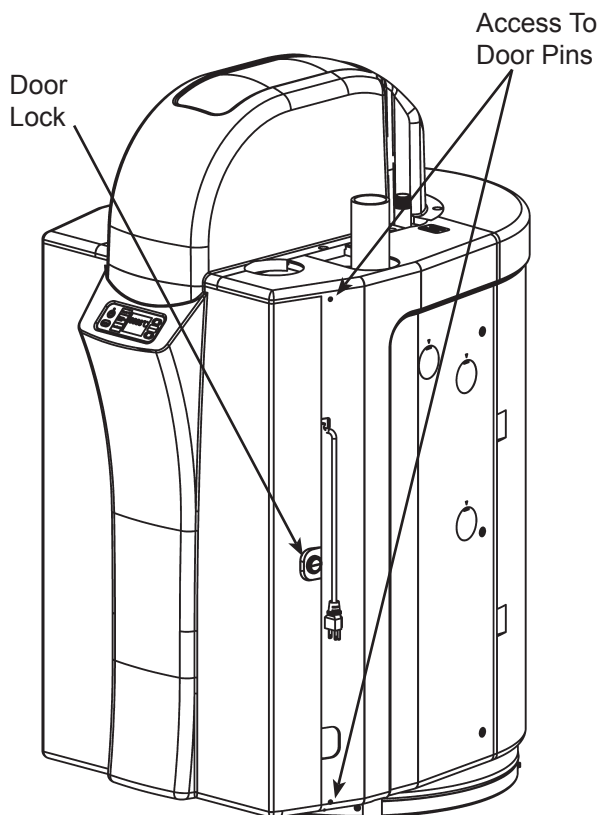
Failure to follow the instructions in this service instruction sheet may result in serious bodily injury and/or property damage. Thoroughly read and understand all instructions before you attempt to install, operate or service this heater. Maintenance and service requires trade knowledge in the areas of plumbing, electricity and gas. If you lack these skills or have difficulty understanding these instructions you should not proceed. Enlist the help of a qualified service technician to service this water heater.

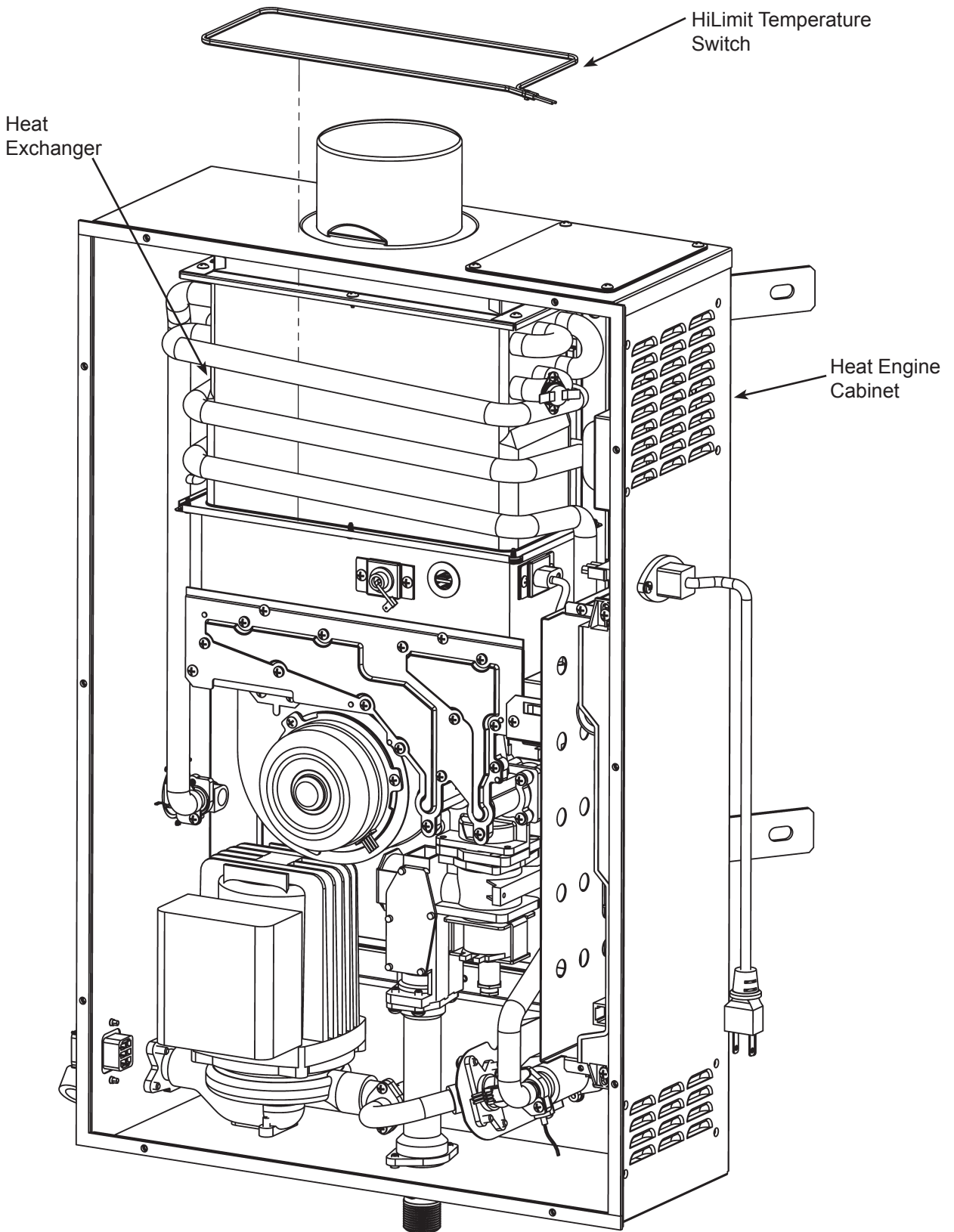
To Remove:

1. Disconnect the electrical power to the water heater.
2. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
3. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
4. Open the door (the door remains fastened to the left side panel).
5. Remove the ten screws that secure the front cover of the heat engine. Remove the front cover of the Heat Engine.
6. Remove the two screws securing the circuit board and partially extract it.
7. Carefully disconnect the HiLimit wiring harness plug from the circuit board.
8. Cut the plug off.
9. Remove the HiLimit Temperature Switch.

To Install:

1. Extract one pin from the new plug, feed the new HiLimit Temperature Switch around the heat exchanger and re-insert the pin into the plug.
2. Carefully reconnect the HiLimit wiring harness plug to the circuit board.
3. Slide the circuit board into its proper position and secure using the two screws.
4. Reassemble the front cover of the Heat Engine.
5. Close and lock the door.
6. Reconnect the electrical power to the water heater.
7. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.





Service Instructions

GAS WATER HEATERS

INLET WATER FILTER REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

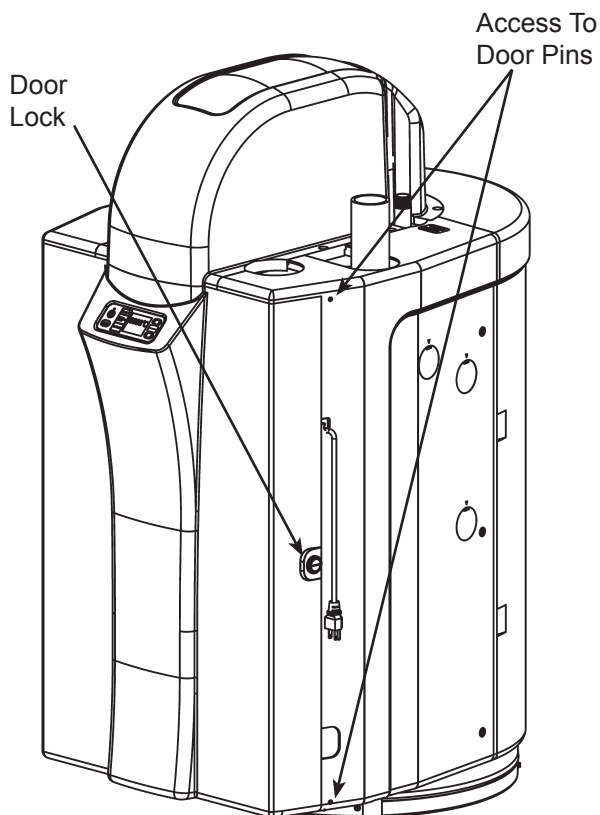
Failure to follow the instructions in this service instruction sheet may result in serious bodily injury and/or property damage. Thoroughly read and understand all instructions before you attempt to install, operate or service this heater. Maintenance and service requires trade knowledge in the areas of plumbing, electricity and gas. If you lack these skills or have difficulty understanding these instructions you should not proceed. Enlist the help of a qualified service technician to service this water heater.

To Remove:

1. Disconnect the electrical power to the water heater.
2. Close the shutoff valves on both the hot-water and cold-water lines.
3. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
4. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
5. Open the door (the door remains fastened to the left side panel).
6. Drain the tank following the instructions in the “Draining The Tank” section in the Operating Manual.
7. Unscrew the Water Inlet Filter.

To Install:

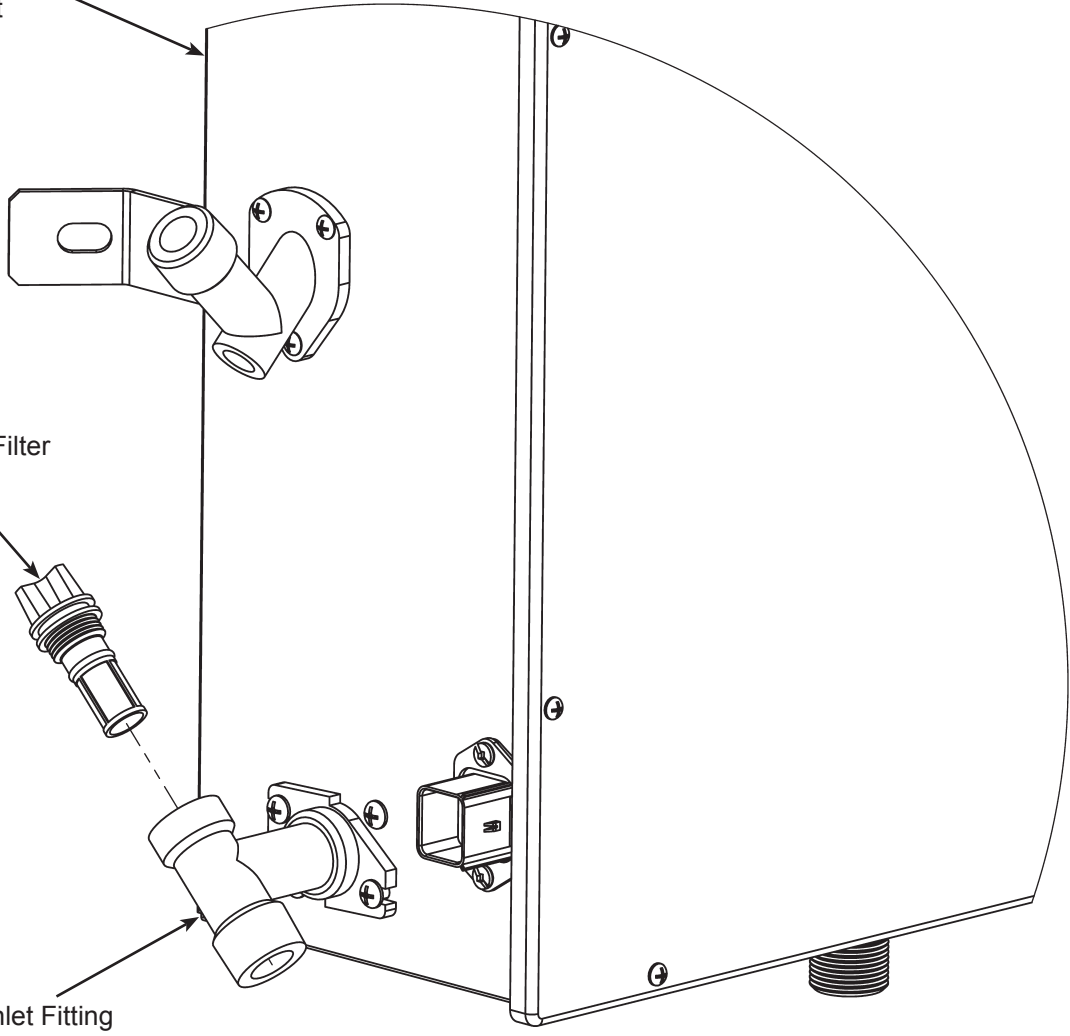
1. Install the new Water Inlet Filter.
2. Close the drain valve.
3. Open the shutoff valves on both the hot-water and cold-water lines.
4. Fill the tank following the instructions in the “Filling The Water Heater” section in the Operating Manual.
5. Close and lock the door.
6. Reconnect the electrical power to the water heater.
7. Restart the water heater following the “Lighting Instructions” found in the Operating Manual.



Heat Engine Cabinet

Water Inlet Filter

Water Inlet Fitting



HOSE (HEAT ENGINE TO STORAGE TANK) REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

Failure to follow the instructions in this service instruction sheet may result in serious bodily injury and/or property damage. Thoroughly read and understand all instructions before you attempt to install, operate or service this heater. Maintenance and service requires trade knowledge in the areas of plumbing, electricity and gas. If you lack these skills or have difficulty understanding these instructions you should not proceed. Enlist the help of a qualified service technician to service this water heater.

Remove panels to gain access:

Remove Door

1. Disconnect the electrical power to the water heater.
2. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
3. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
4. Open the door (the door remains fastened to the left side panel).
5. Carefully disconnect all the wiring harness plugs from the Display Panel.
6. Carefully remove the door hinge pins from their retaining fingers.

Remove the top casing (front)

1. Use a screwdriver to remove the six screws securing the top casing.
2. Lift up and remove casing top (front).

Remove the left side panel

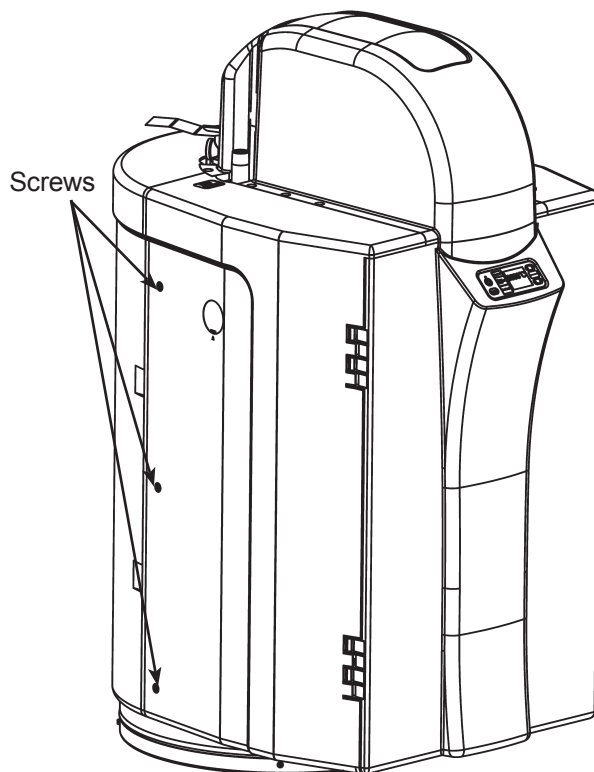
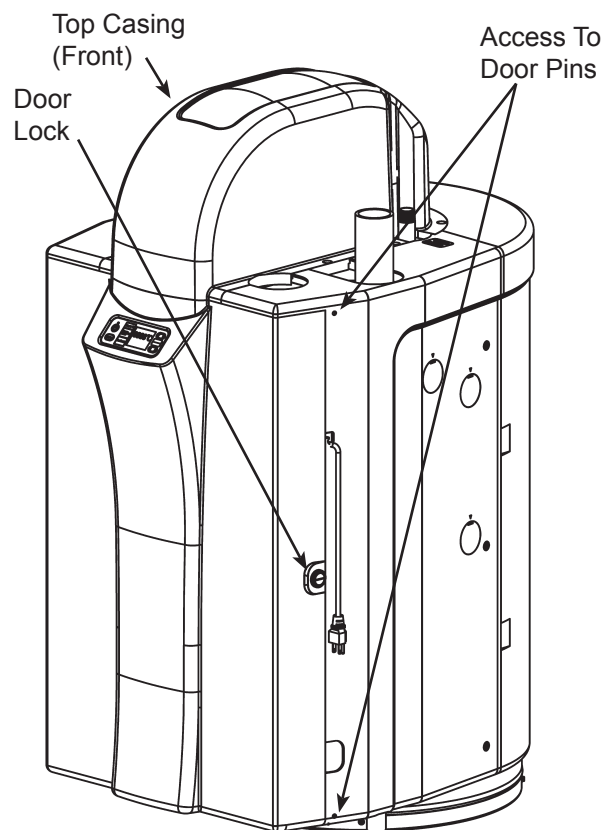
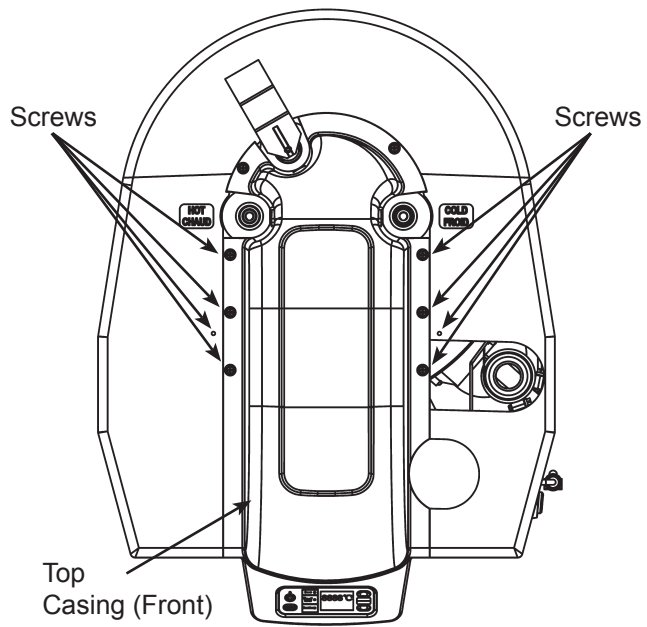
1. Use a screwdriver to remove the screw from the bottom, front of the left side panel.
2. Remove the three screws from the left side panel towards the rear of the unit.
3. Remove the screw from the top of the unit.
4. Push the panel back and lift out.

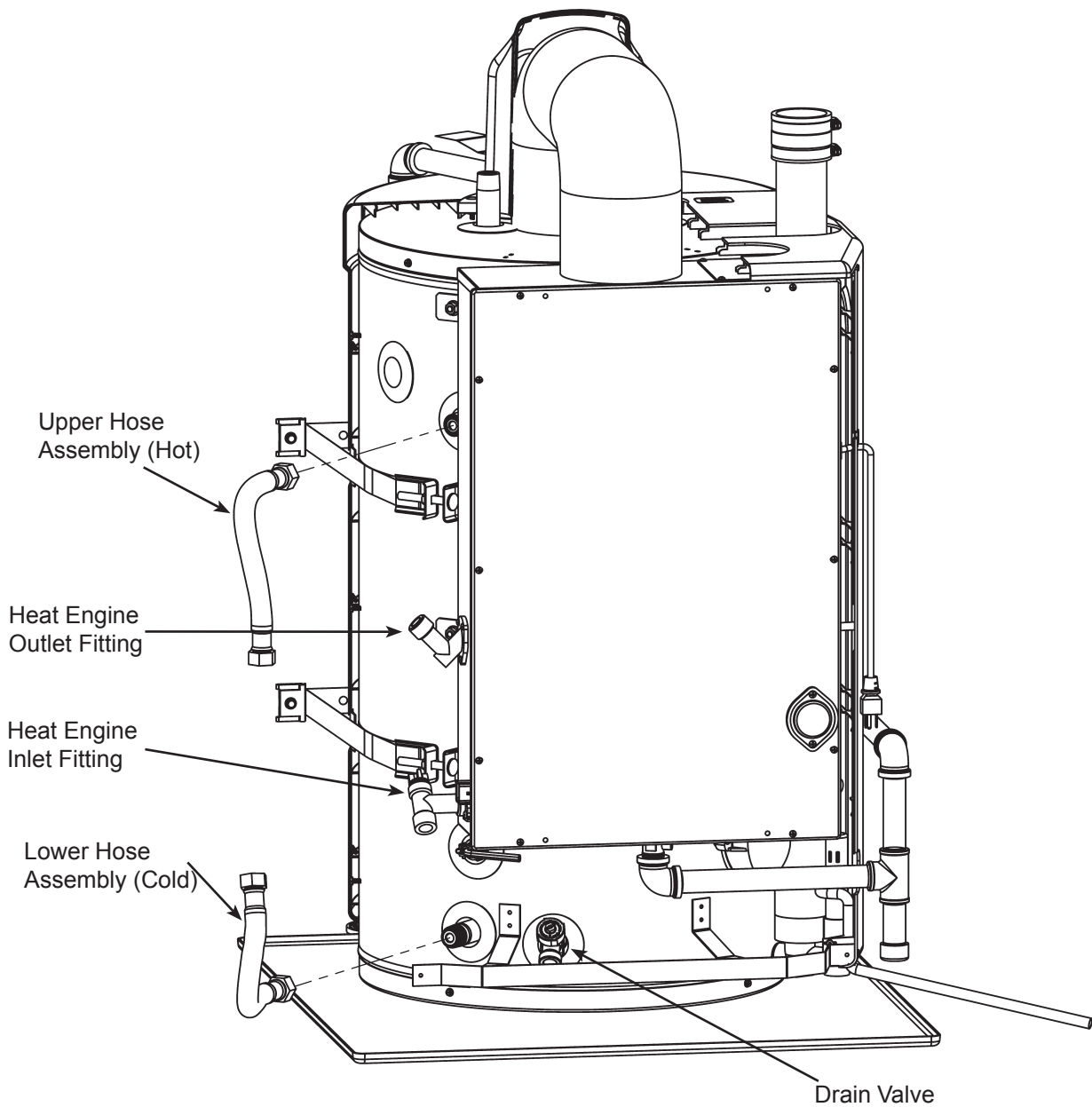
To Remove:

1. Close the shutoff valves on both the hot-water and cold-water lines.
2. Drain the tank following the instructions in the “Draining The Tank” section in the Operating Manual.
3. Unscrew the fitting at both ends of the hose assembly(s). The upper hose is the (hot) water outlet from the heat engine. The lower hose is the (cold) water inlet to the heat engine.
4. Remove the hose assembly(s).

To Install:

1. Install the new hose assembly(s).
2. Tighten the fitting at both ends of the hose assembly(s).
3. Close the drain valve.
4. Open the shutoff valves on both the hot-water and cold-water lines.
5. Fill the tank following the instructions in the “Filling The Water Heater” section in the Operating Manual.
6. Check for leaks and repair as required.
7. Reassemble the side panel in the reverse order.
8. Reassemble the door in the reverse order.
9. Carefully reconnect the wiring harness plugs to the Display Panel.
10. Reassemble the top casing in the reverse order.
11. Reconnect the electrical power to the water heater.
12. Restart the water heater following the “Lighting Instructions” found in the Operating Manual.





Service Instructions

GAS WATER HEATERS

TANK THERMISTOR REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

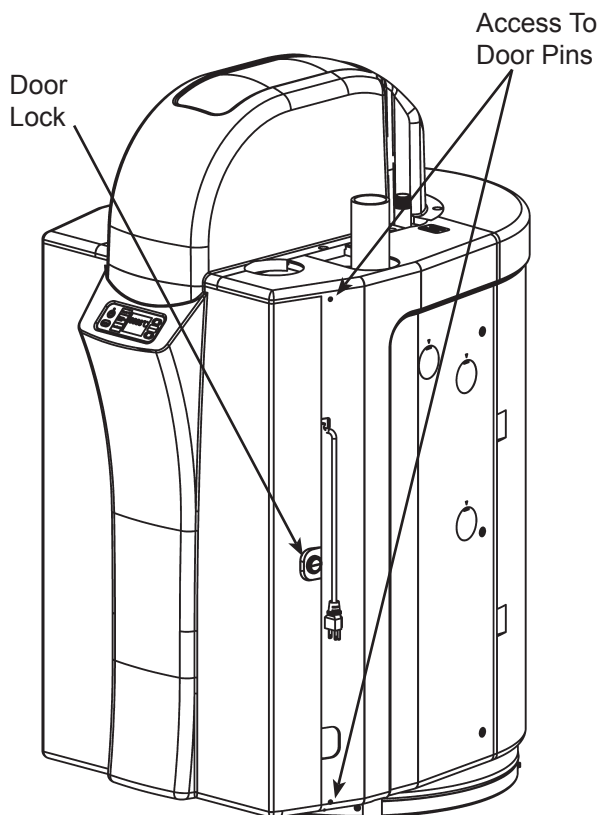
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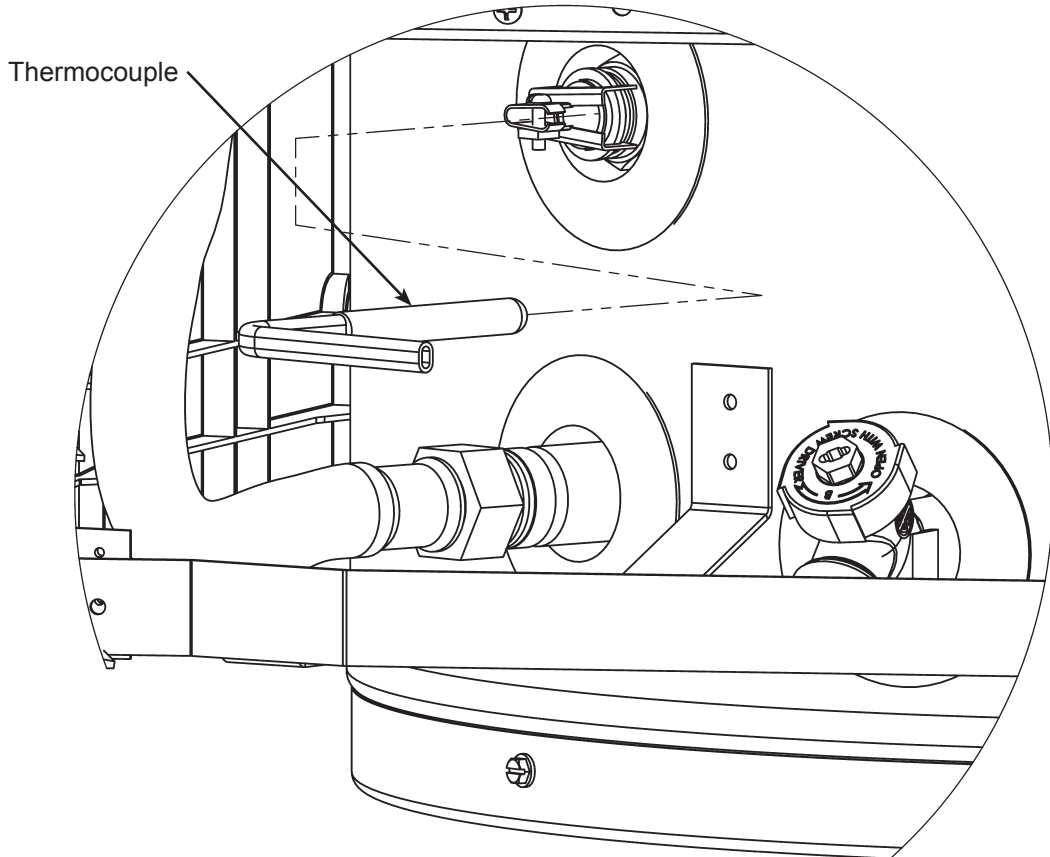
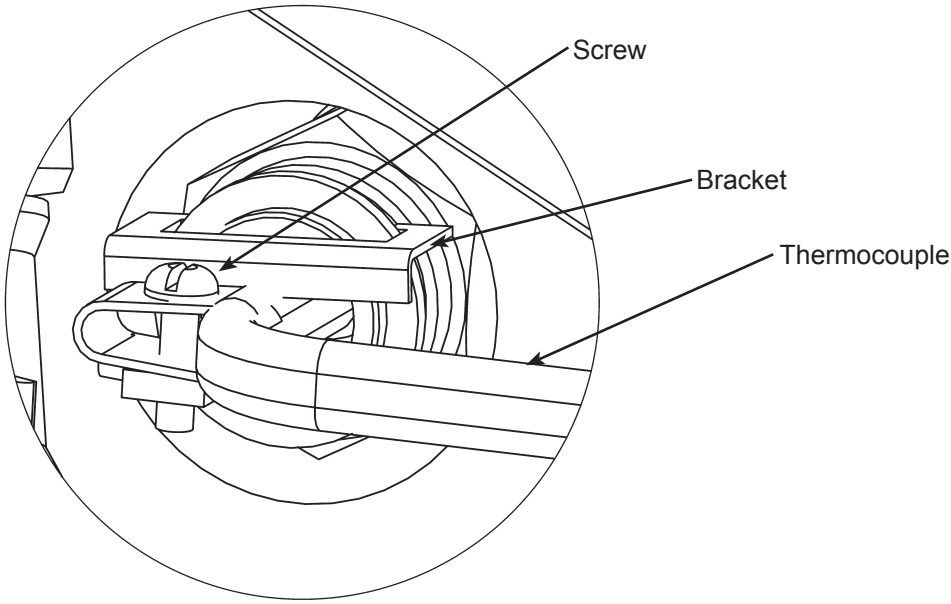
To Remove:

1. Disconnect the electrical power to the water heater.
2. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
3. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
4. Open the door (the door remains fastened to the left side panel).
5. Carefully disconnect the Tank Thermistor wiring harness plug from the Display Panel located on the door.
6. Carefully disconnect the Tank Thermistor wiring harness plug from the Heat Engine Cabinet.
7. Loosen the screw on the Tank Thermistor bracket and remove the bracket.
8. Remove the Tank Thermistor.

To Install:

1. Install the new Tank Thermistor.
2. Reinstall the Tank Thermistor bracket around the thermistor and tighten the screw.
3. Carefully reconnect the Tank Thermistor wiring harness plug to the Heat Engine Cabinet.
4. Carefully reconnect the Tank Thermistor wiring harness plug to the Display Panel.
5. Close and lock the door.
6. Reconnect the electrical power to the water heater.
7. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.





Service Instructions

GAS WATER HEATERS

EXHAUST VENT HIGH-TEMPERATURE SWITCH REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

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Remove panels to gain access:

Door opening

1. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
2. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
3. Open the door (the door remains fastened to the left side panel).

Remove the top casing (front)

1. Use a screwdriver to remove the six screws securing the top casing.
2. Lift up and remove casing top (front).

Remove the right side panel

1. Use a screwdriver to remove the screw from the bottom, front of the right side panel.

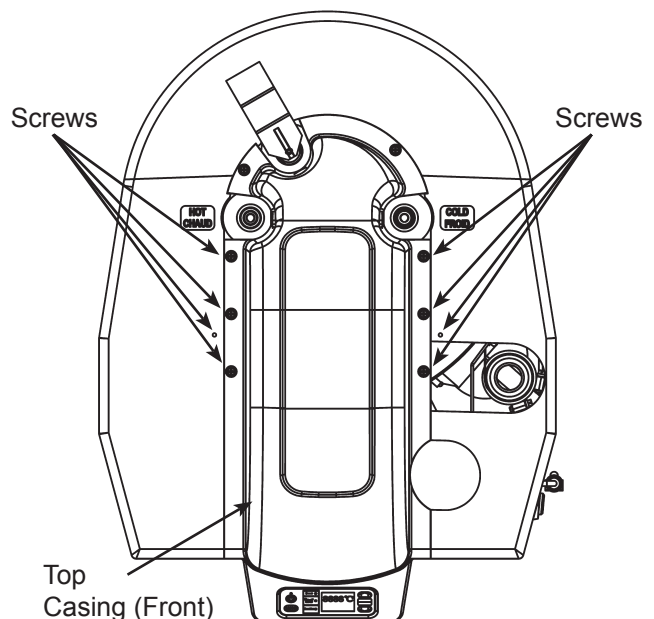
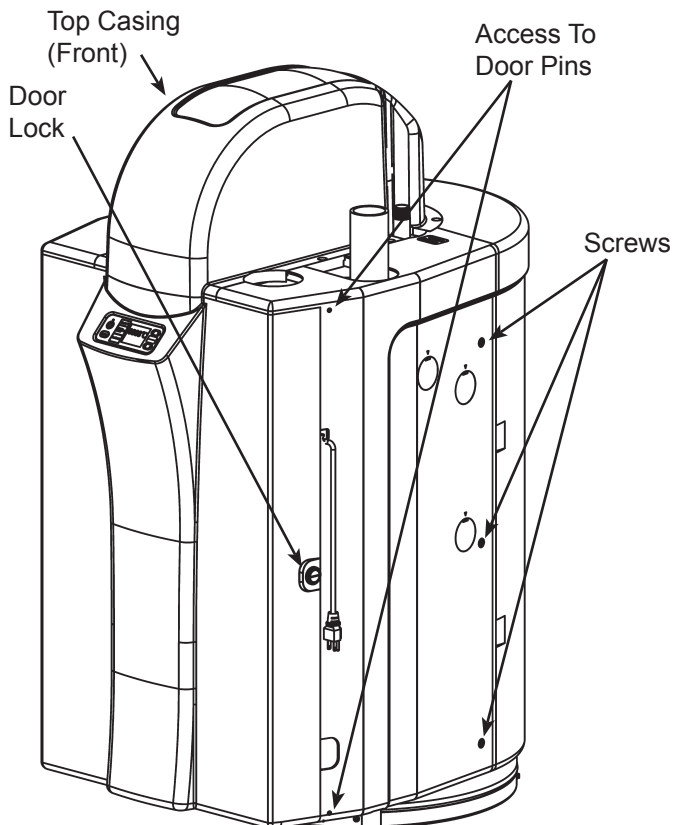
2. Remove the three screws from the right side panel towards the rear of the unit.
3. Remove the screw from the top of the unit.
4. Push the panel back and lift out.

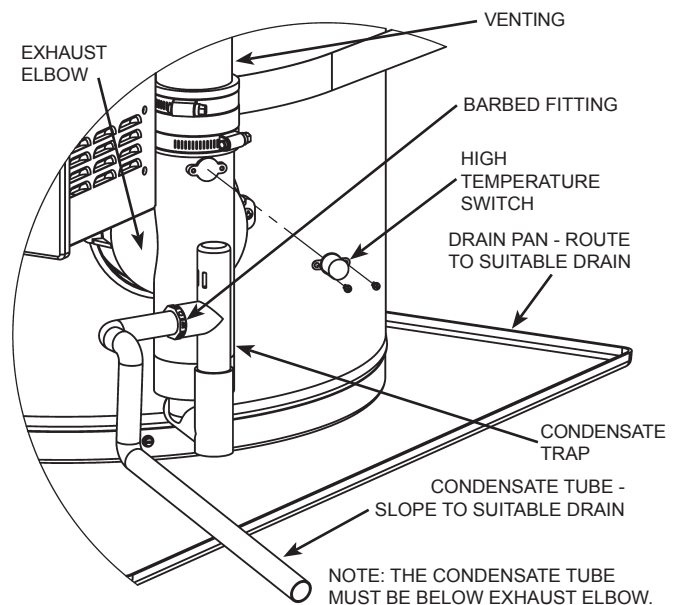
To Remove:

1. Disconnect the electrical power to the water heater.
2. Carefully disconnect the two wires from the High-temperature Switch.
3. Remove the two screws securing the High-temperature Switch to the Condensate Trap.
4. Remove the High-temperature Switch.

To Install:

1. Secure the new High-temperature Switch with the two screws.
2. Carefully reconnect the two wires to the High-temperature Switch.
3. Reassemble all the casing panels in the reverse order.
4. Close and lock the door.
5. Reconnect the electrical power to the water heater.
6. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.





Service Instructions

GAS WATER HEATERS

DRAIN VALVE REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

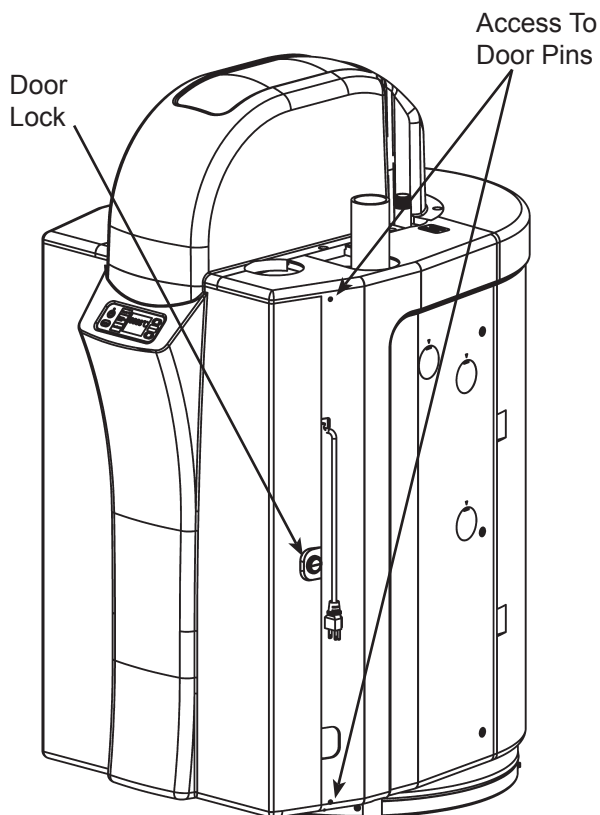
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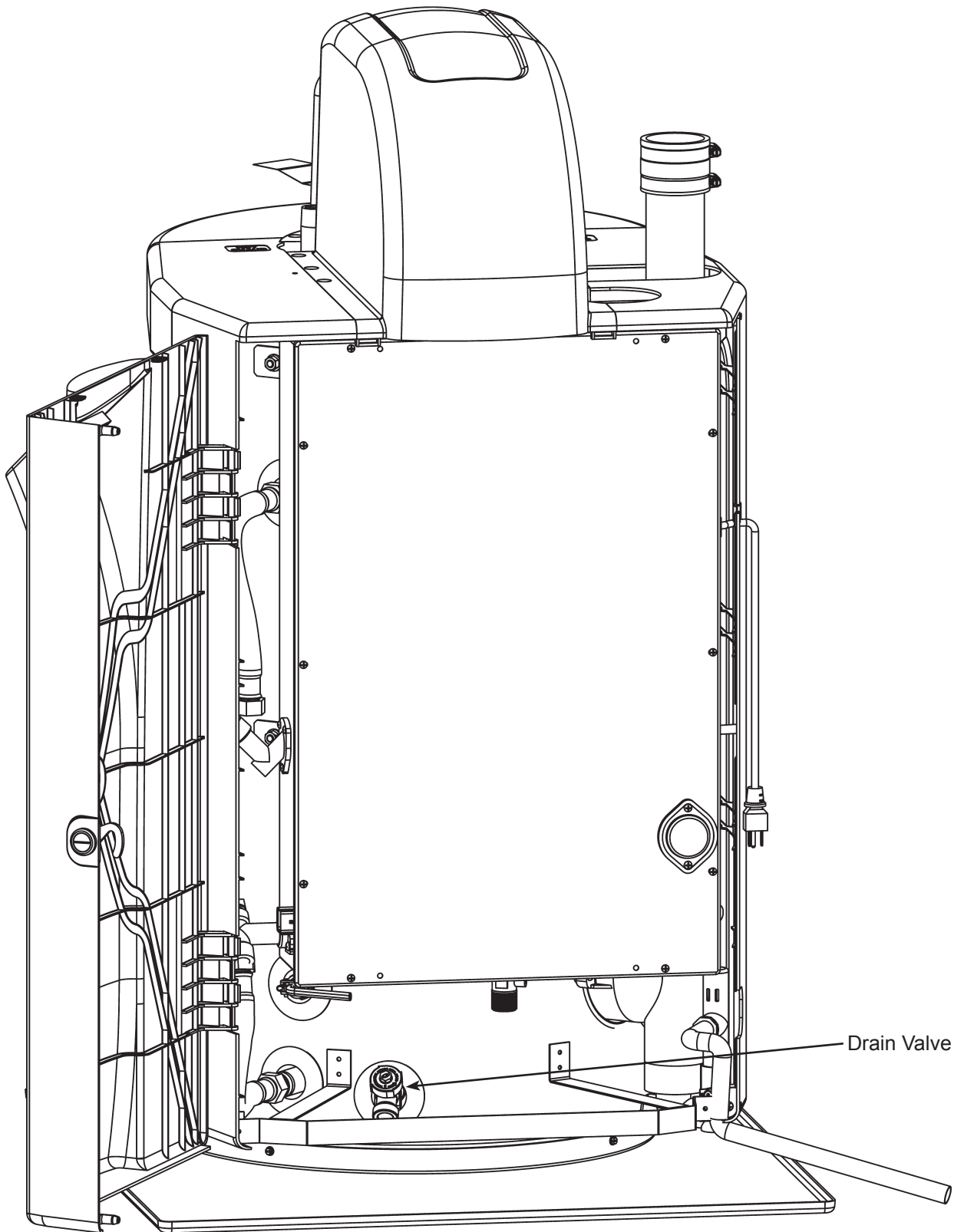
To Remove:

1. Disconnect the electrical power to the water heater.
2. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
3. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
4. Open the door (the door remains fastened to the left side panel).
5. Close the shutoff valves on both the hot-water and cold-water lines.
6. Drain the tank following the instructions in the “Draining The Tank” section in the Operating Manual.
7. Remove the Drain Valve.

To Install:

1. Use only Teflon tape or an approved pipe sealant on the threads.
2. Install the new Drain Valve.
3. Open the shutoff valves on both the hot-water and cold-water lines.
4. Fill the tank following the instructions in the “Filling The Water Heater” section in the Operating Manual.
5. Check for leaks and repair as required.
6. Close and lock the door.
7. Reconnect the electrical power to the water heater.
8. Restart the water heater following the “Lighting Instructions” found in the Operating Manual.





Drain Valve

GAS WATER HEATERS

TEMPERATURE & PRESSURE RELIEF VALVE REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

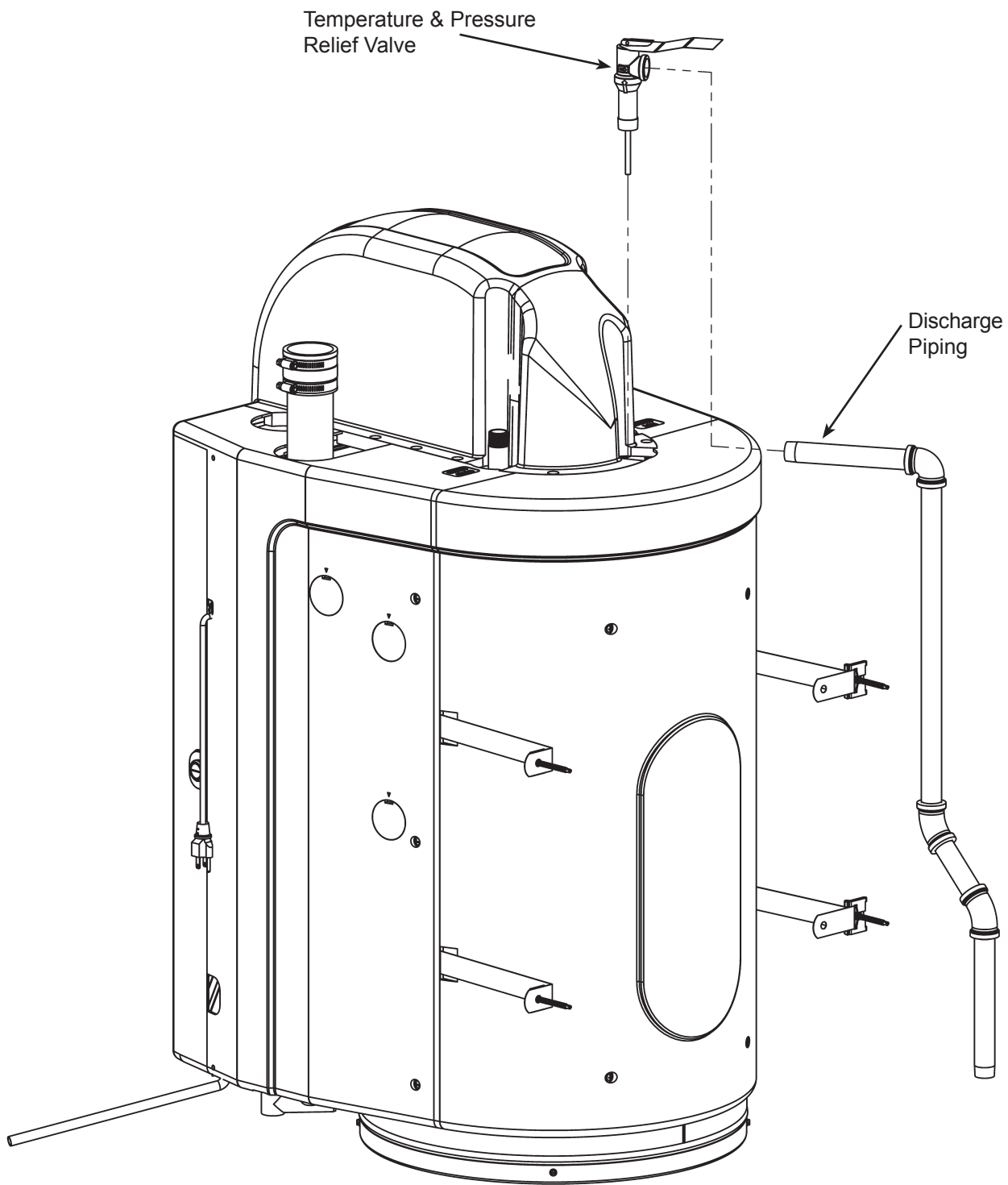
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To Remove:

1. Disconnect the electrical power to the water heater.
2. Close the shutoff valves on both the hot-water and cold-water lines.
3. Drain the tank following the instructions in the “Draining The Tank” section in the Operating Manual.
4. Disconnect the discharge piping from the Temperature & Pressure Relief Valve.
5. Remove the Temperature & Pressure Relief Valve.

To Install:

1. Use only Teflon tape or an approved pipe sealant on the threads.
2. Install the new Temperature & Pressure Relief Valve.
3. Open the shutoff valves on both the hot-water and cold-water lines.
4. Fill the tank following the instructions in the “Filling The Water Heater” section in the Operating Manual.
5. Check for leaks and repair as required.
6. Close and lock the door.
7. Reconnect the electrical power to the water heater.
8. Restart the water heater following the “Lighting Instructions” found in the Operating Manual.



CONDENSATE TRAP REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

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Remove panels to gain access:

Door opening

1. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
2. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
3. Open the door (the door remains fastened to the left side panel).

Remove the top casing (front)

1. Use a screwdriver to remove the six screws securing the top casing.
2. Lift up and remove casing top (front).

Remove the right side panel

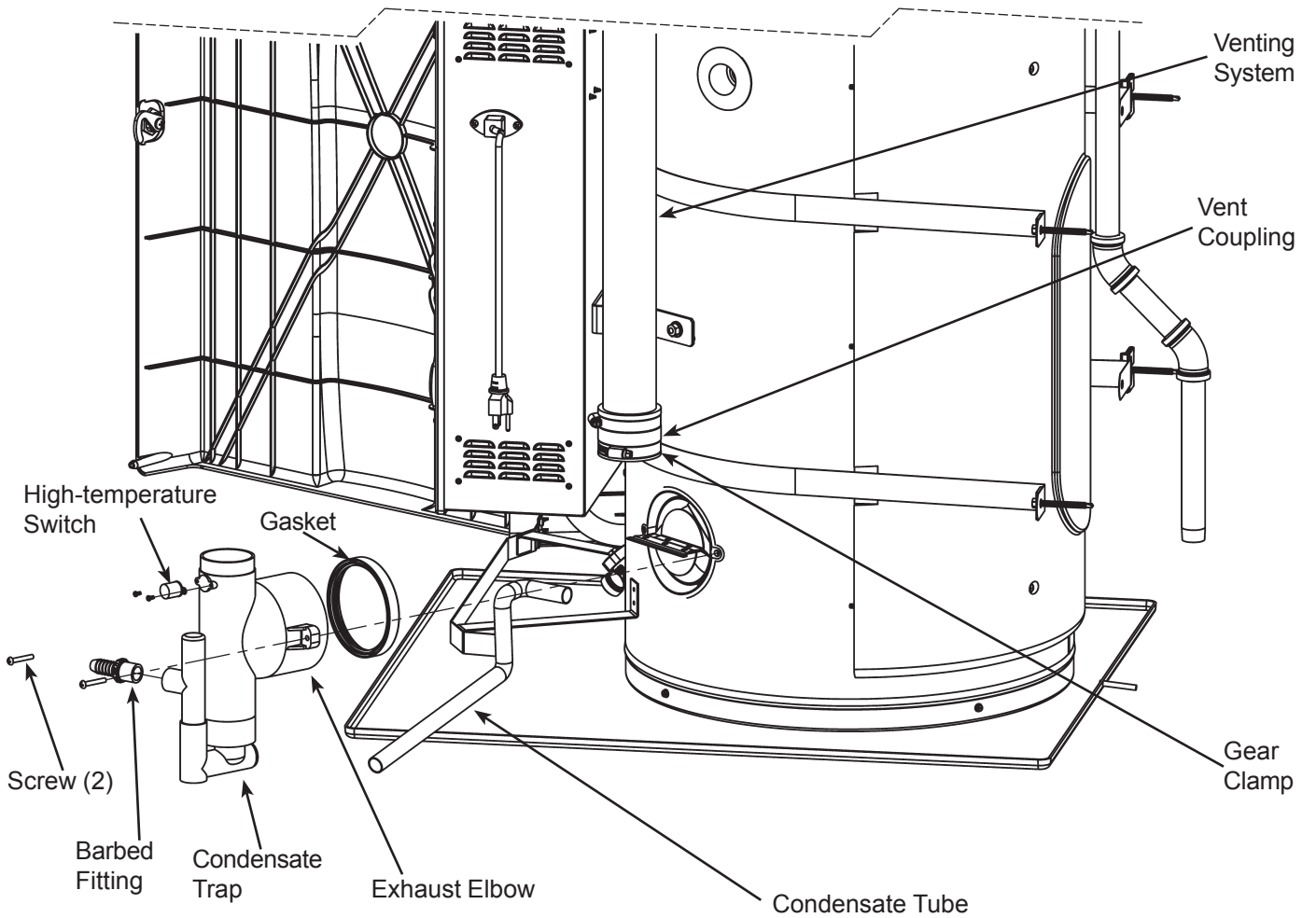
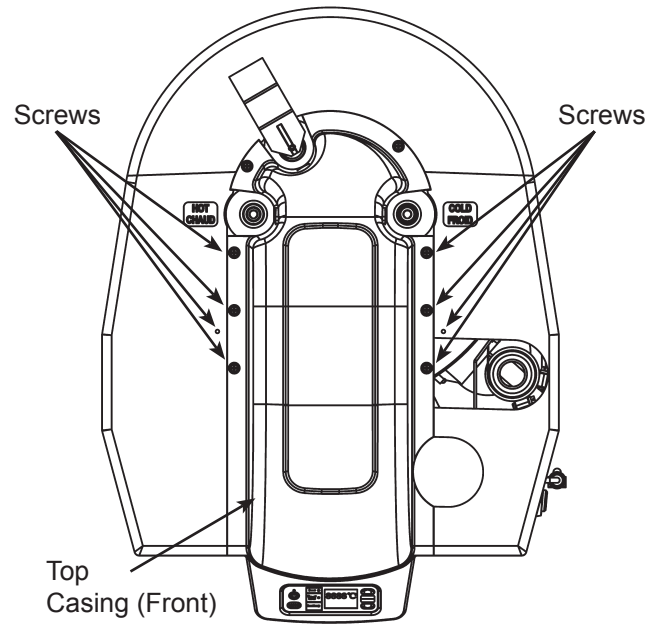
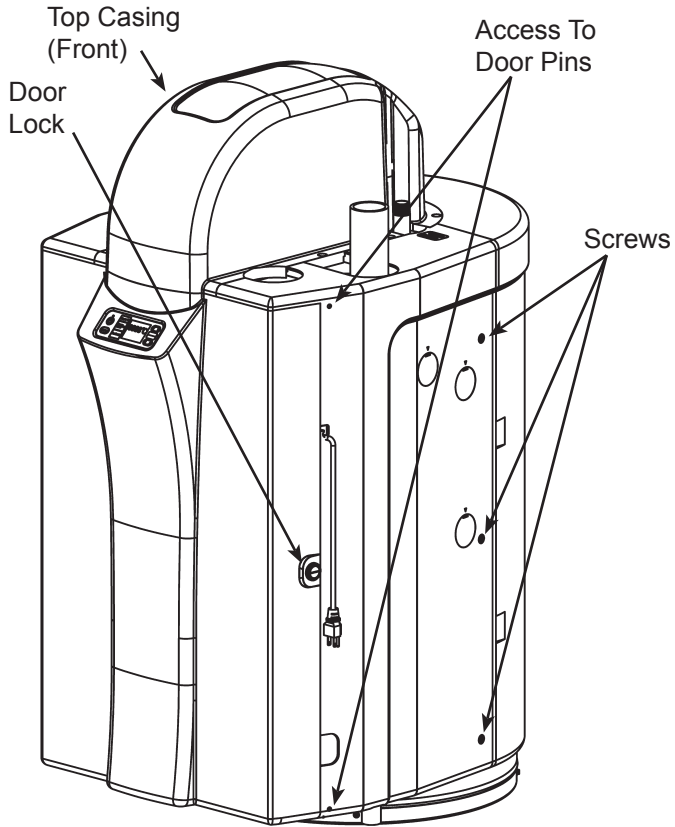
1. Use a screwdriver to remove the screw from the bottom, front of the right side panel.
2. Remove the three screws from the right side panel towards the rear of the unit.
3. Remove the screw from the top of the unit.
4. Push the panel back and lift out.

To Remove:

1. Disconnect the electrical power to the water heater.
2. Loosen the lower gear clamp that secures the venting system to the exhaust elbow.
3. Lift the venting system away from the exhaust elbow.
4. Remove the condensate tube from the condensate trap.
5. Remove the two screws that secure the High-temperature Switch.
6. Remove the two screws that secure the Condensate Trap Assembly.
7. Remove the Condensate Trap Assembly (it could be a snug fit).
8. Remove the exhaust elbow gasket.
9. Remove the barbed fitting (if installed).

To Install:

1. Re-install the barbed fitting (if required).
2. Ensure the gasket is placed correctly onto the exhaust elbow prior to assembly.
3. Install the new Condensate Trap Assembly.
4. Secure the Condensate Trap Assembly with the two screws.
5. Secure the High-temperature Switch with the two screws.
6. Connect the condensate tube to the condensate trap.
7. Reposition the venting into the vent coupler.
8. Tighten the lower gear clamp to secure the venting system to the exhaust elbow.
9. Reassemble the right side panel.
10. Reassemble the casing top (front).
11. Close and lock the door.
12. Reconnect the electrical power to the water heater.
13. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.



Service Instructions

GAS WATER HEATERS

ANODE REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

Failure to follow the instructions in this service instruction sheet may result in serious bodily injury and/or property damage. Thoroughly read and understand all instructions before you attempt to install, operate or service this heater. Maintenance and service requires trade knowledge in the areas of plumbing, electricity and gas. If you lack these skills or have difficulty understanding these instructions you should not proceed. Enlist the help of a qualified service technician to service this water heater.

Remove panels to gain access:

Remove the top casing (front).

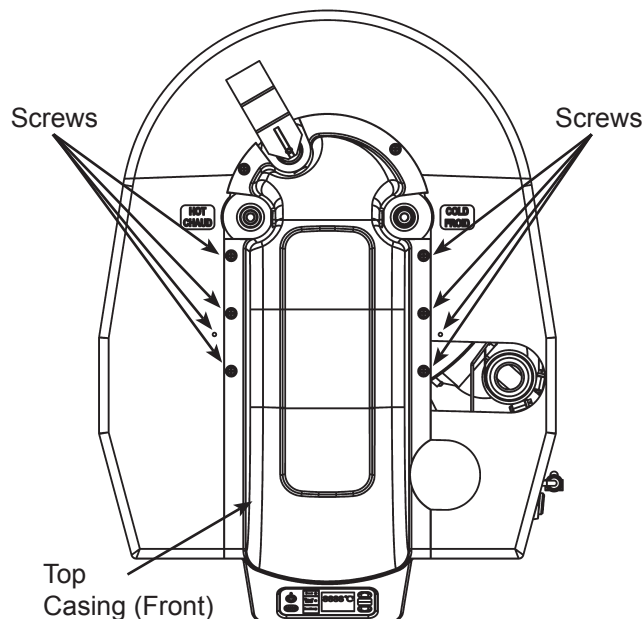
1. Use a screwdriver to remove the six screws securing the top casing.
2. Lift up and remove casing top (front).

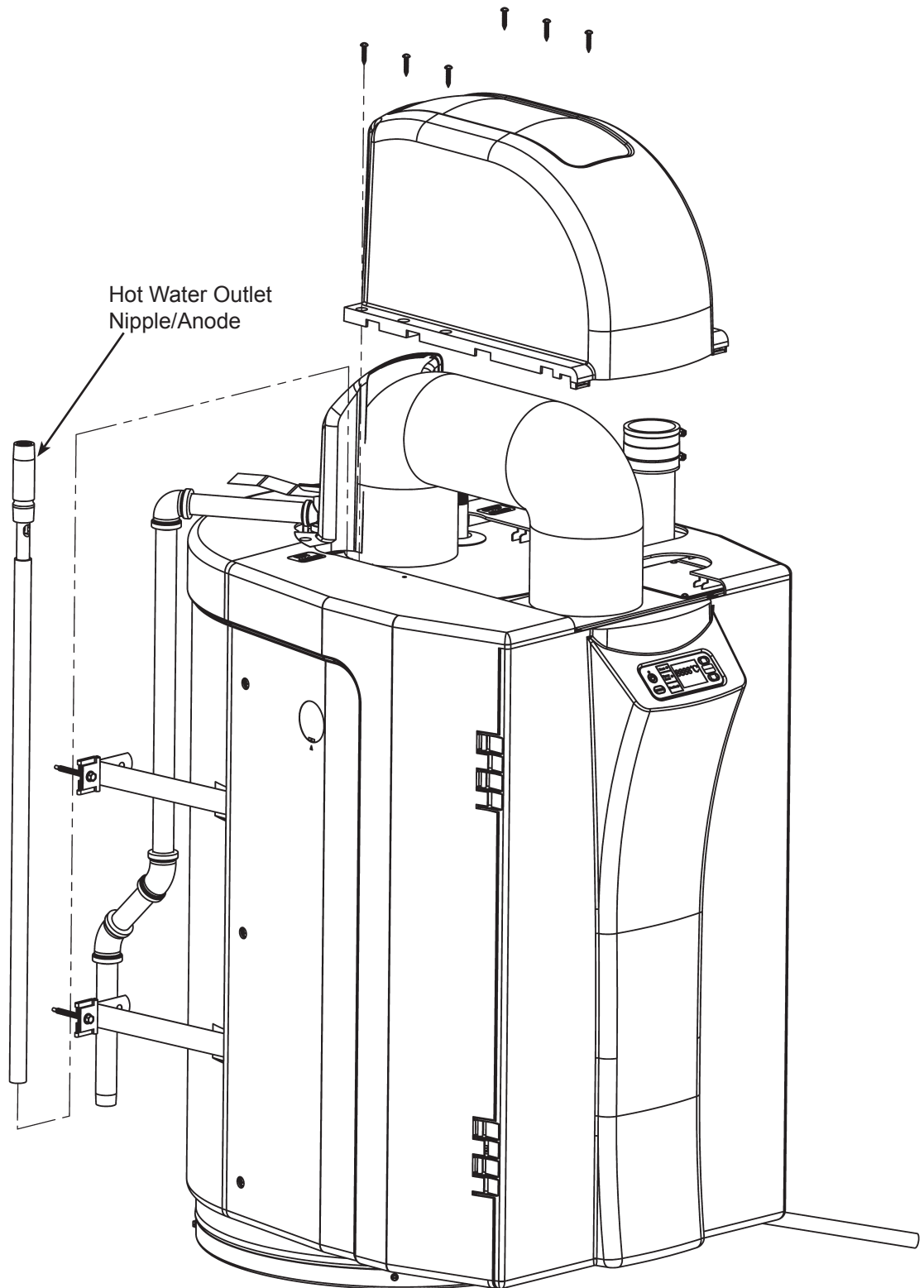
To Remove:

1. Disconnect the electrical power to the water heater.
2. Close the shutoff valve on the cold-water line.
3. Follow the instructions in the “Draining The Tank” section in the Operating Manual to drain approximately 5 gallons (20 litres) of water from the tank.
4. Close the drain valve.
5. Disconnect the hot-water piping from the Hot Water Outlet Nipple/Anode.
6. Remove the Hot Water Outlet Nipple/Anode.

To Install:

1. Use only Teflon tape or an approved pipe sealant on the threads.
2. Install the new Hot Water Outlet Nipple/Anode.
3. Reconnect the hot-water piping to the Hot Water Outlet Nipple/Anode.
4. Open the shutoff valve on the cold-water line.
5. Fill the tank following the instructions in the “Filling The Water Heater” section in the Operating Manual.
6. Check for leaks and repair as required.
7. Reassemble the casing top (front).
8. Close and lock the door.
9. Reconnect the electrical power to the water heater.
10. Restart the water heater following the “Lighting Instructions” found in the Operating Manual.





Service Instructions

GAS WATER HEATERS

DIP TUBE REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

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Remove panels to gain access:

Remove the top casing (front)

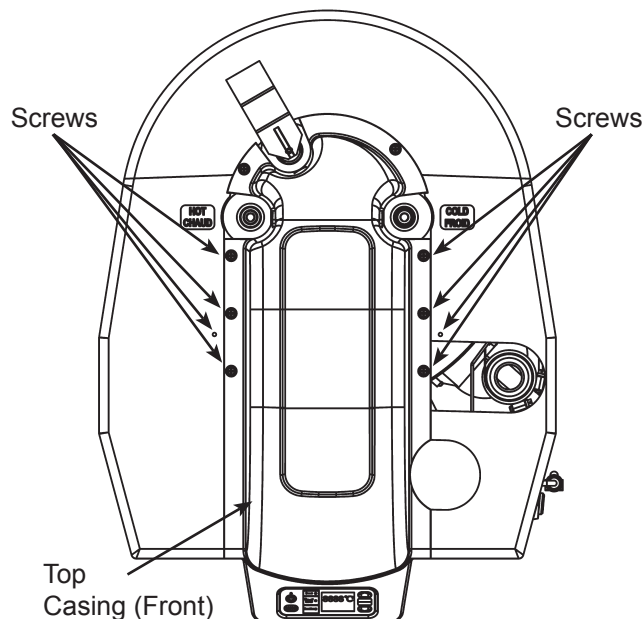
1. Use a screwdriver to remove the six screws securing the top casing.
2. Lift up and remove casing top (front).

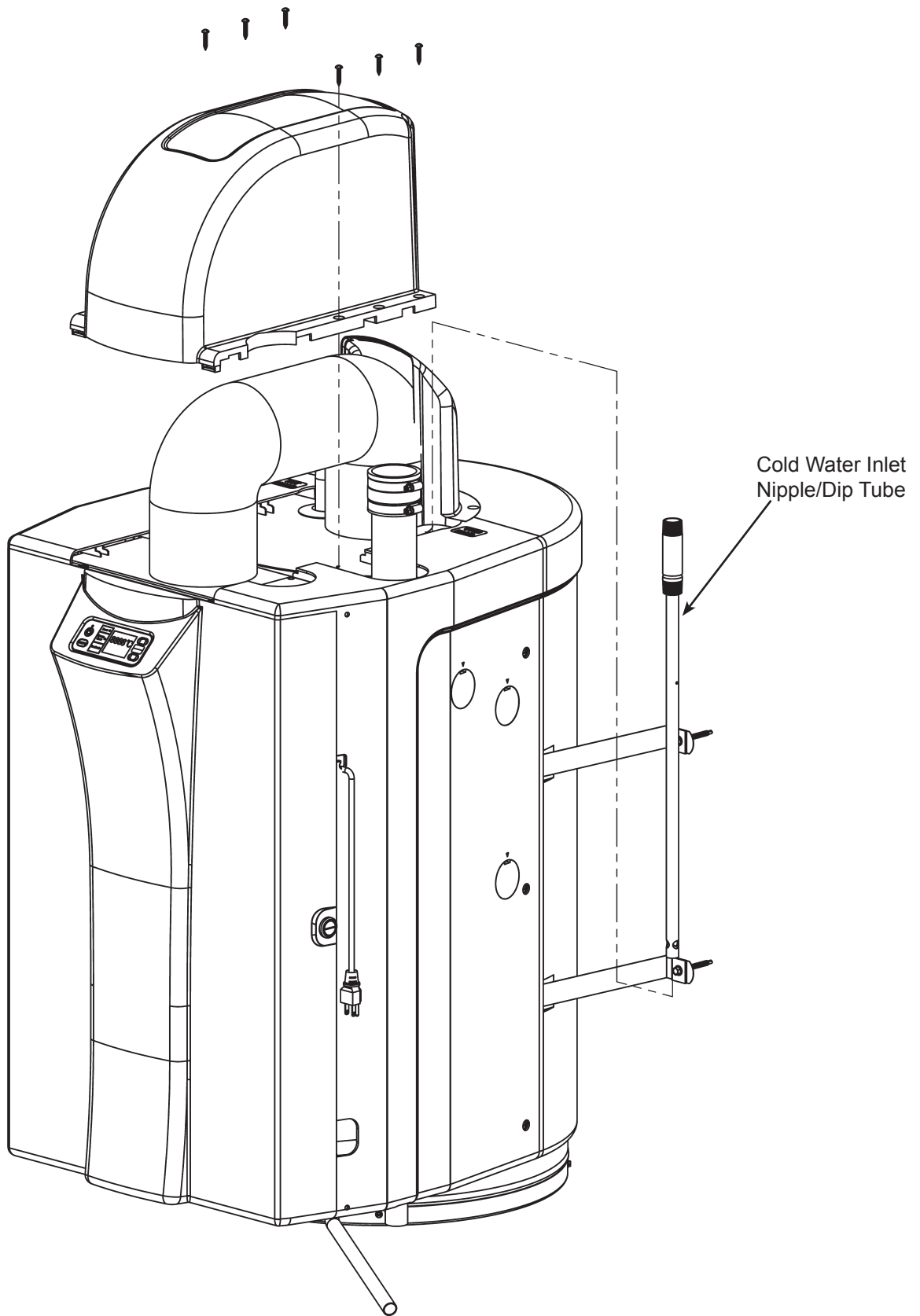
To Remove:

1. Disconnect the electrical power to the water heater.
2. Close the shutoff valve on the cold-water line.
3. Follow the instructions in the "Draining The Tank" section in the Operating Manual to drain approximately 5 gallons (20 litres) of water from the tank.
4. Close the drain valve.
5. Disconnect the cold-water piping from the Cold Water Inlet Nipple/Dip Tube.
6. Remove the Cold Water Inlet Nipple/Dip Tube.

To Install:

1. Use only Teflon tape or an approved pipe sealant on the threads.
2. Install the new Cold Water Inlet Nipple/Dip Tube.
3. Reconnect the cold-water piping to the Cold Water Inlet Nipple/Dip Tube.
4. Open the shutoff valve on the cold-water line.
5. Fill the tank following the instructions in the "Filling The Water Heater" section in the Operating Manual.
6. Check for leaks and repair as required.
7. Reassemble the casing top (front).
8. Close and lock the door.
9. Reconnect the electrical power to the water heater.
10. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.





Service Instructions

GAS WATER HEATERS

MAIN BAFFLE REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

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Remove panels to gain access:

Remove the top casing (front)

1. Use a screwdriver to remove the six screws securing the top casing.
2. Lift up and remove casing top (front).

Remove the top casing (rear).

1. Use a screwdriver to remove the two screws securing the top casing.
2. Lift up and remove casing top (rear).

Remove the flexible venting

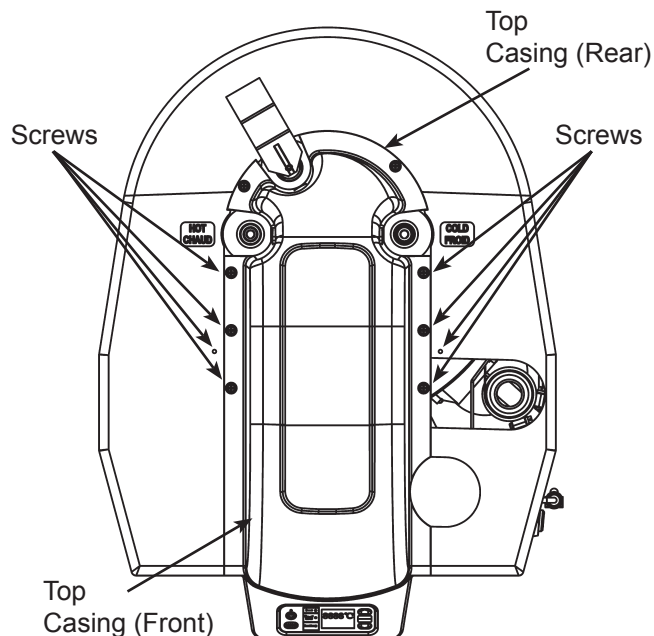
1. Unwrap the insulation covering the venting.
2. Loosen the gear clamps securing the venting.
3. Remove the flexible venting.

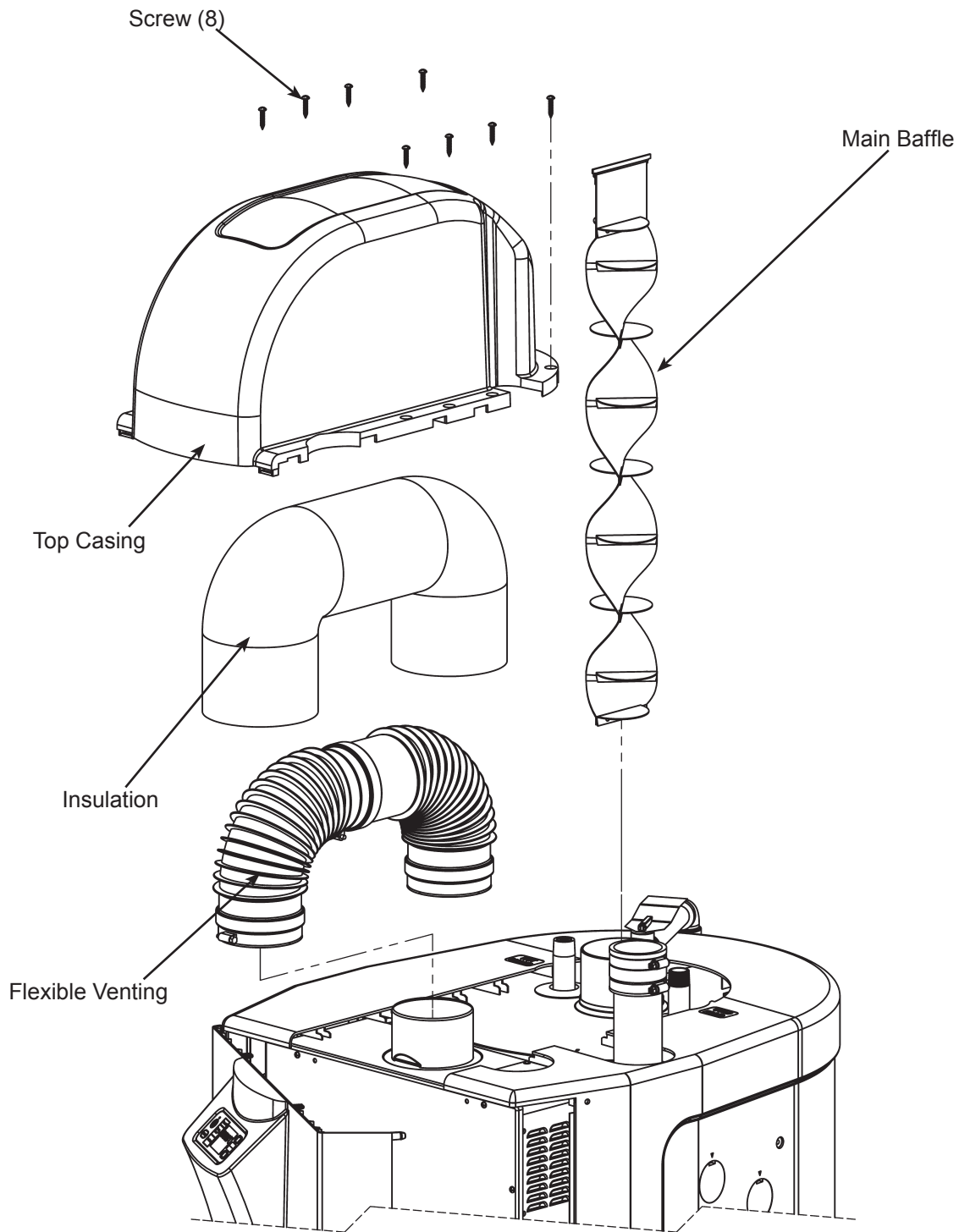
To Remove:

1. Disconnect the electrical power to the water heater.
2. Remove the main baffle.

To Install:

1. Install the new main baffle.
2. Reassemble the flexible venting to the heat engine and the storage tank.
3. Re-fit the insulation around the exhaust elbows.
4. Reassemble the top casing.
5. Reconnect the electrical power to the water heater.
6. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.





Service Instructions

GAS WATER HEATERS

CONDENSATION BAFFLE REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

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Remove panels to gain access:

Door opening

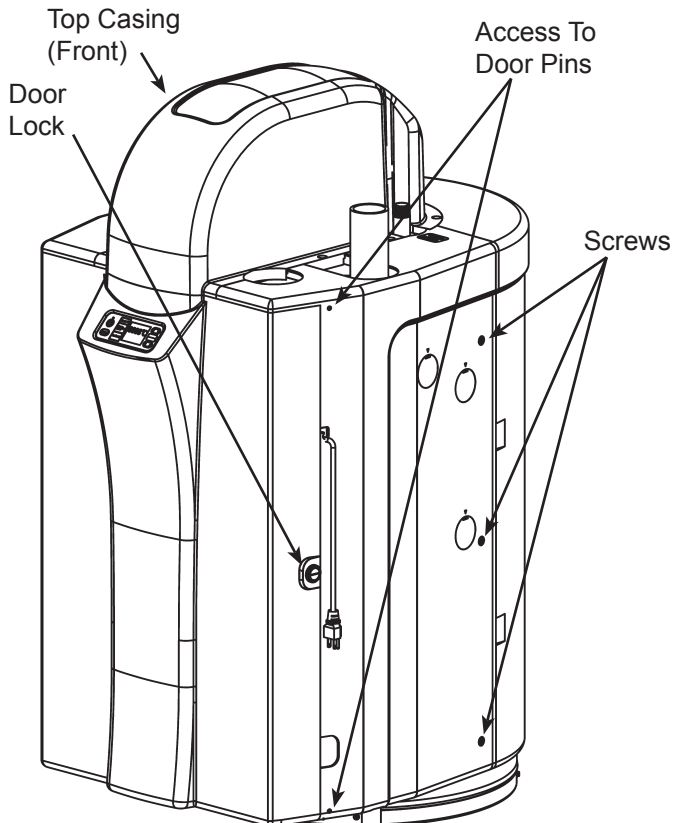
1. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
2. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
3. Open the door (the door remains fastened to the left side panel).

Remove the top casing (front)

1. Use a screwdriver to remove the six screws securing the top casing.
2. Lift up and remove casing top (front).

Remove the right side panel

1. Use a screwdriver to remove the screw from the bottom, front of the right side panel.



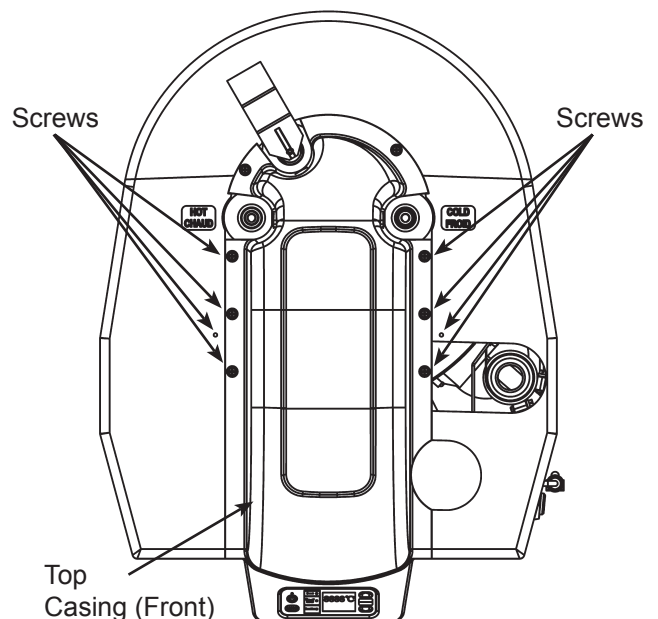
2. Remove the three screws from the right side panel towards the rear of the unit.
3. Remove the screw from the top of the unit.
4. Push the panel back and lift out.

To Remove:

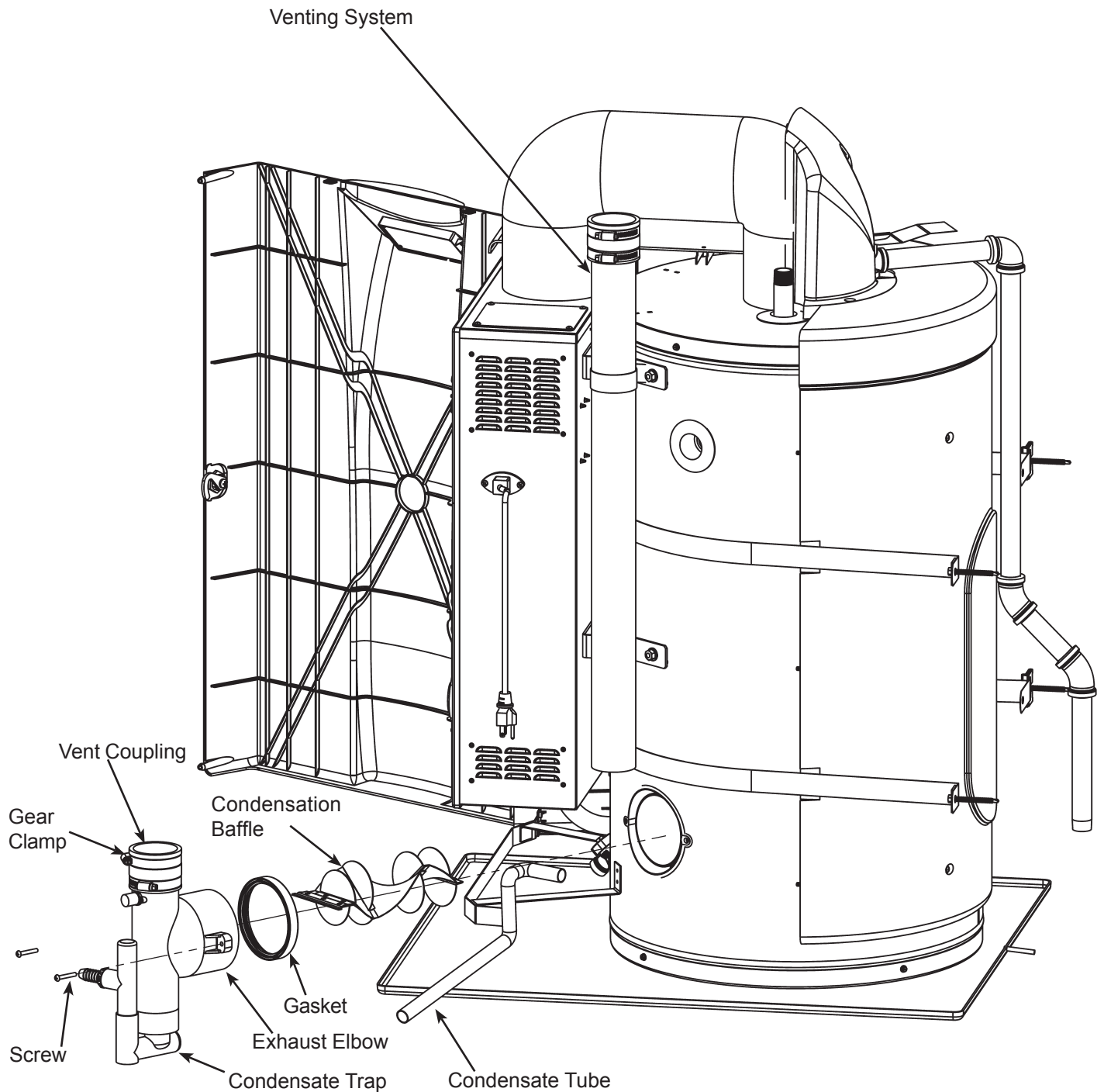
1. Disconnect the electrical power to the water heater.
2. Loosen the upper gear clamp that secures the venting system to the vent coupler.
3. Lift the venting system out of the vent coupler.
4. Remove the drain tubing from the condensate trap.
5. Carefully disconnect the two wires from the High-temperature Switch.
6. Remove the two screws that secure the exhaust elbow.
7. Remove the exhaust elbow (it could be a snug fit).
8. Remove the exhaust elbow gasket.
9. Remove the Condensation Baffle.

To Install:

1. Install the new Condensation Baffle.
2. Ensure the gasket is placed correctly onto the exhaust elbow prior to assembly.



3. Secure the exhaust elbow with the two screws.
 4. Carefully reconnect the two wires to the High-temperature Switch.
 5. Connect the drain tubing to the condensate trap.
 6. Reposition the venting into the vent coupler.
 7. Tighten the upper gear clamp to secure the venting system to the vent coupler.
 8. Reassemble the right side panel.
 9. Reassemble the casing top (front).
 10. Close and lock the door.
 11. Reconnect the electrical power to the water heater.
12. Restart the water heater following the "Lighting Instructions" found in the Operating Manual.



Service Instructions

GAS WATER HEATERS

TANK REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

Failure to follow the instructions in this service instruction sheet may result in serious bodily injury and/or property damage. Thoroughly read and understand all instructions before you attempt to install, operate or service this heater. Maintenance and service requires trade knowledge in the areas of plumbing, electricity and gas. If you lack these skills or have difficulty understanding these instructions you should not proceed. Enlist the help of a qualified service technician to service this water heater.

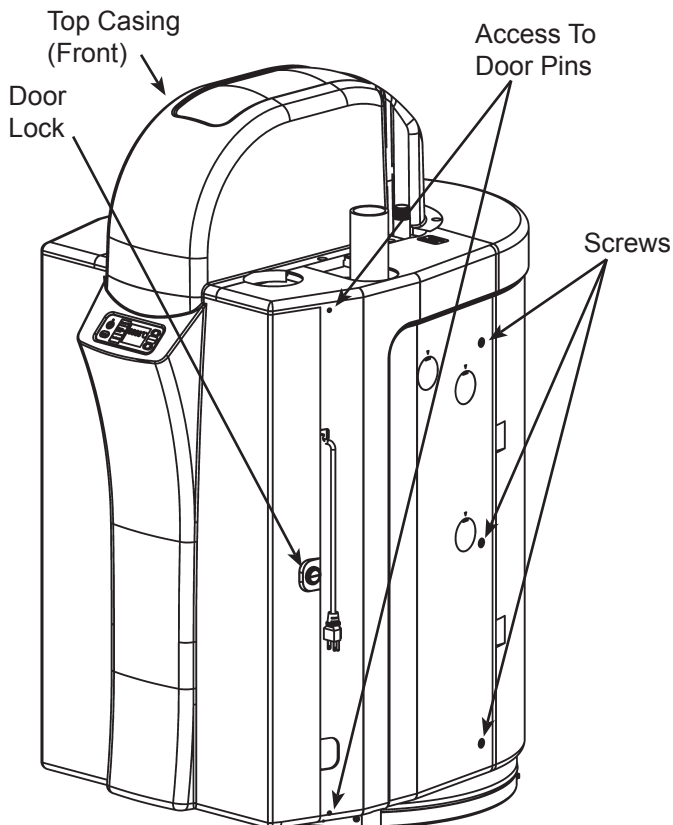
Remove panels to gain access:

Remove Door

1. Disconnect the electrical power to the water heater.
2. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
3. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
4. Open the door (the door remains fastened to the left side panel).
5. Carefully disconnect all the wiring harness plugs from the Display Panel.
6. Carefully remove the door hinge pins from their retaining fingers.

Remove the top casing (front)

1. Use a screwdriver to remove the six screws securing the top casing.
2. Lift up and remove casing top (front).



Remove the top casing (rear)

1. Use a screwdriver to remove the two screws securing the top casing.
2. Lift up and remove casing top (rear).

Remove the right side panel

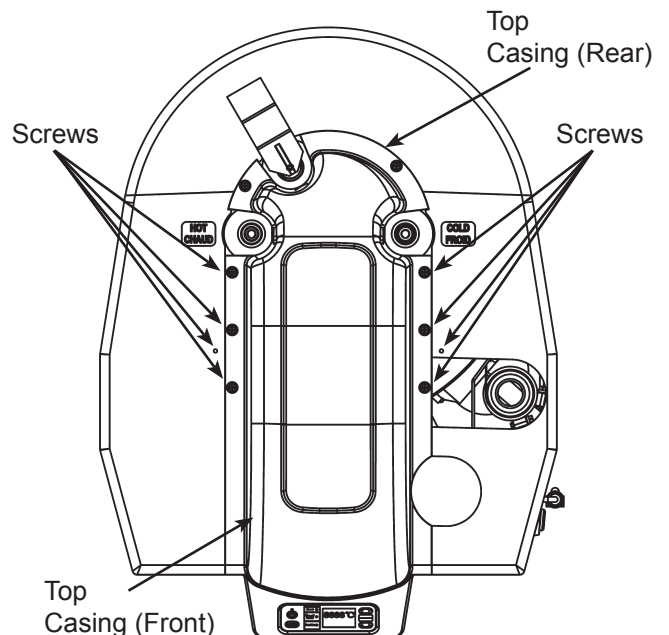
1. Use a screwdriver to remove the screw from the bottom, front of the right side panel.
2. Remove the three screws from the right side panel towards the rear of the unit.
3. Remove the screw from the top of the unit.
4. Push the panel back and lift out.

Remove the left side panel

1. Use a screwdriver to remove the screw from the bottom, front of the left side panel.
2. Remove the three screws from the left side panel towards the rear of the unit.
3. Remove the screw from the top of the unit.
4. Push the panel back and lift out.

Remove the rear panel

1. Use a screwdriver to remove the four screws on the back side
2. Lift off the panel.



Remove additional components:

Remove the casing bracket

1. Use a Phillips screwdriver to remove the four screws holding the casing bracket to the tank.

Remove the flexible venting

1. Unwrap the insulation covering the venting.
2. Loosen the gear clamps securing the venting.
3. Remove the flexible venting.

Remove the Heat Engine

1. Close the shutoff valves on both the hot-water and cold-water lines.
2. Close the shutoff valve on the gas supply line to the water heater.
3. Drain the tank following the instructions in the “Draining The Tank” section in the Operating Manual.
4. Disconnect the hoses from the heat engine (top is water outlet and bottom is water inlet).
5. Disconnect the gas line from the heat engine.
6. Remove the 4 nuts holding the heat engine to the tank. (Requires 1/2” wrench, socket or nut-driver.) It may be necessary to remove part of the venting system to access some nuts.
7. Remove the heat engine.

Remove the water lines

Disconnect the hot-water and the cold-water lines from the tank.

Remove the condensation trap

1. Remove the venting to the unit.
2. Use a Phillips screwdriver to remove the two screws holding the condensation trap to the tank.
3. Remove the condensation trap by pulling it straight out.

Remove the baffles

1. Remove the large baffle by pulling it straight up out of the top of the flue tube.
2. Remove the small baffle by pulling it straight out of the side of the flue tube.

Remove the tank temperature sensor

1. Remove the clip and slide the sensor out.

Remove the earthquake straps

1. Remove the bolts at the clamp that hold the two halves of the earthquake strap.

To Remove:

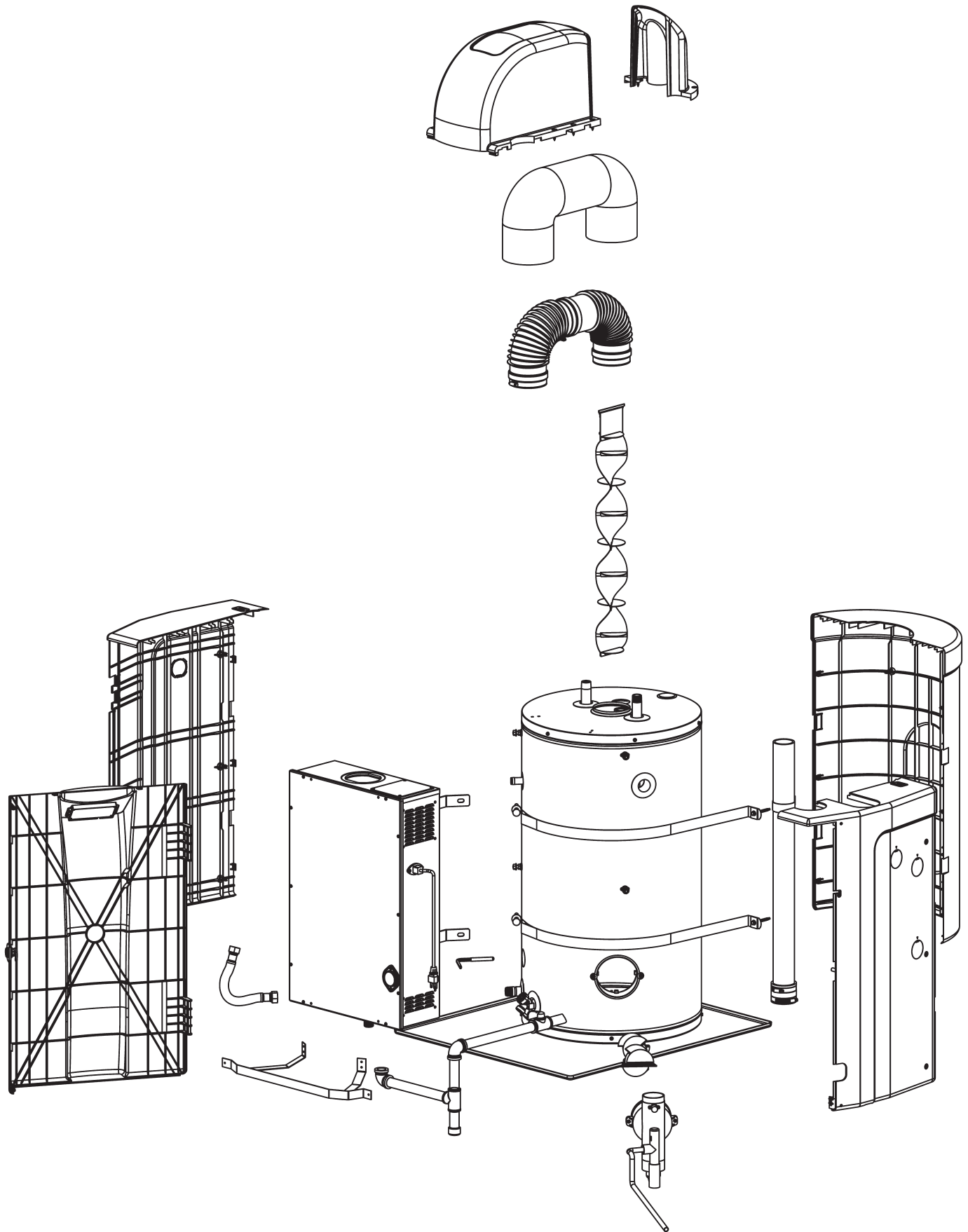
1. Lift tank out of position. Hint: Screw a short length of 3/4” NPT pipe into the sides of the water heater to use as handles to move the water heater.

To Install:

1. Fit the new tank in position. Hint: Screw a short length of 3/4” NPT pipe into the sides of the water heater to use as handles to move the water heater.

To Reassemble:

1. Reinstall the earthquake straps in the reverse order.
2. Reinstall the tank temperature sensor and clip in reverse order.
3. Install the large baffle.
4. Install the small baffle into the condensation trap by fitting the tabs into the slots inside the condensation trap and then install condensation trap and small baffle into tank in reverse order.
5. Reinstall the venting.
6. Connect the hot-water and cold-water lines to the tank.
7. Assemble heat engine to the tank.
8. Reconnect the gas line.
9. Reconnect the hoses to the tank.
10. Open the shutoff valves on both the hot-water and the cold-water lines.
11. Fill the tank following the instructions in the “Filling The Water Heater” section of the Operating Manual.
12. Carefully reconnect the wire harnesses.
13. Reinstall the flexible venting in reverse order.
14. Re-fit the insulation around the exhaust elbows.
15. Reinstall the casing bracket in reverse order.
16. Reassemble the rear panel in reverse order.
17. Reassemble the left side panel in reverse order.
18. Reassemble the right side panel in reverse order.
19. Reassemble the top casing (front and back) in reverse order.
20. Close and lock the door.
21. Open the shutoff valve on the gas supply line to the water heater.
22. Reconnect the electrical power to the water heater.
23. Restart the water heater following the “Lighting Instructions” found in the Operating Manual.



HEAT EXCHANGER REPLACEMENT

This instruction has been prepared to acquaint you with the service of your gas-fired water heater. It is your responsibility to ensure that your water heater is properly installed and maintained.

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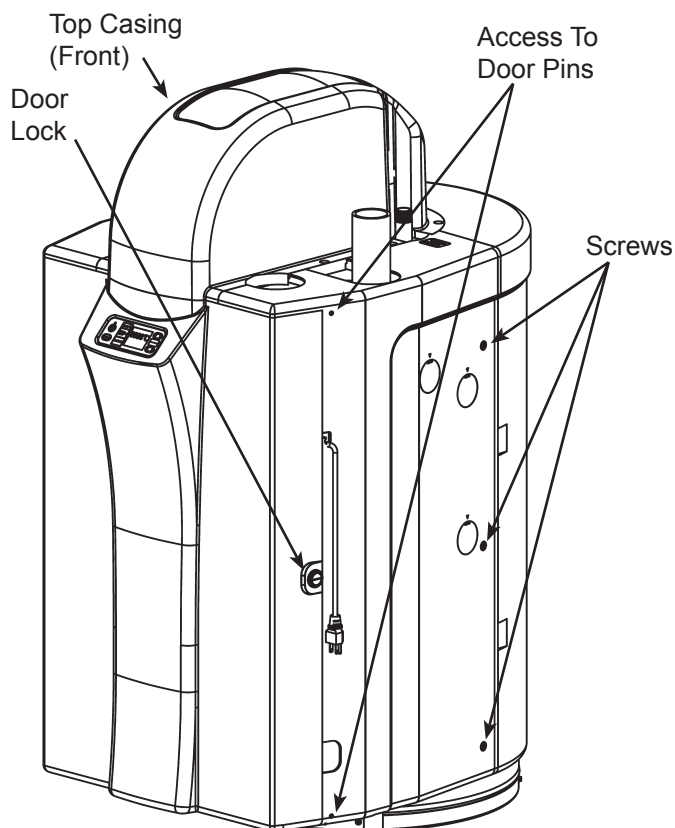
Remove panels to gain access:

Door opening

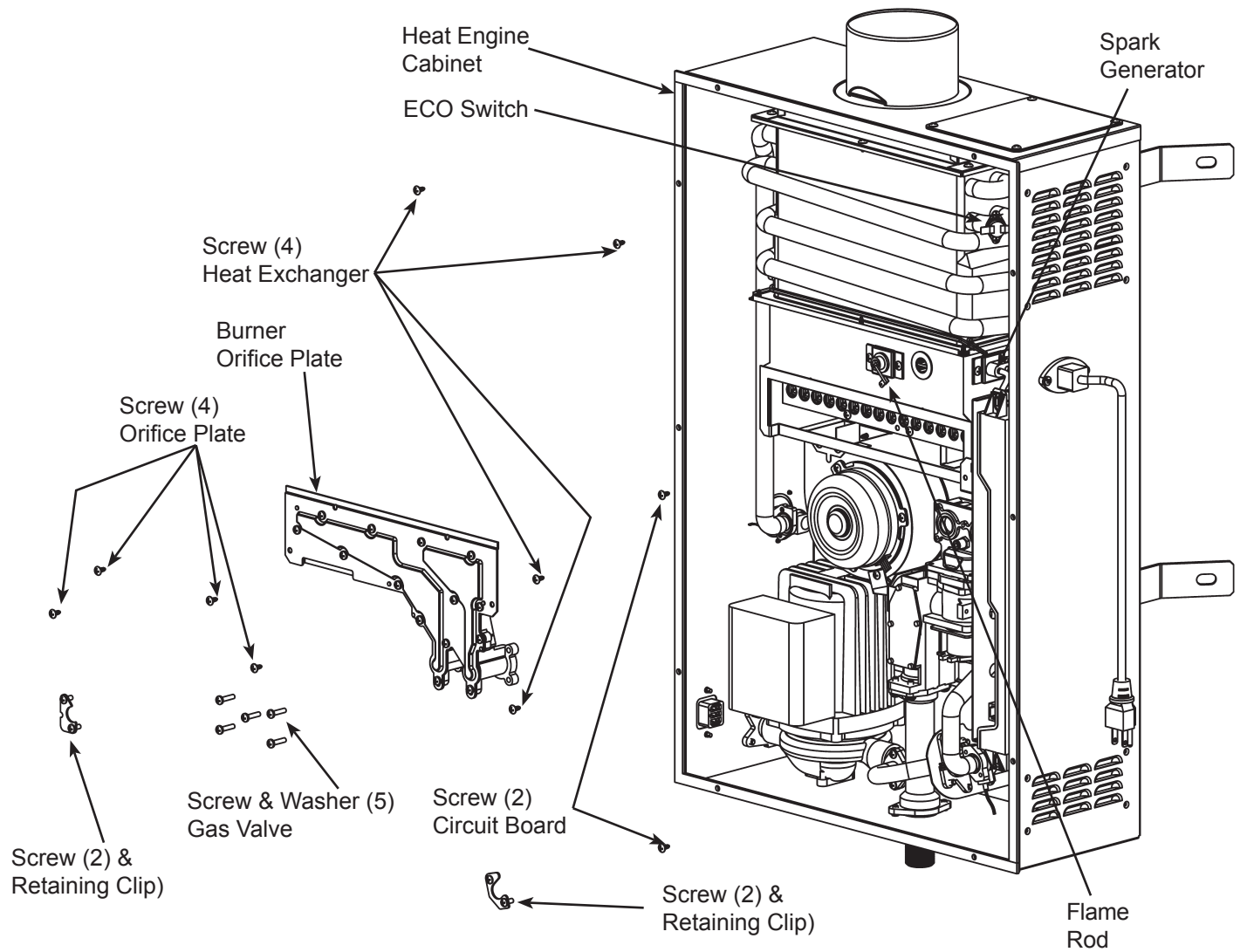
1. Unlock the door by rotating the lock counter-clockwise with a wide, slot screwdriver.
2. Release the top and bottom door pins by prying the pins out, using a small screwdriver.
3. Open the door (the door remains fastened to the left side panel).

To Remove:

1. Disconnect the electrical power to the water heater.
2. Close the shutoff valve on the gas supply line to the water heater.
3. Close the shutoff valves on both the hot-water and cold-water lines.
4. Drain the tank following the instructions in the "Draining The Tank" section in the Operating Manual.



5. Remove the ten screws that secure the front cover of the heat engine. Remove the front cover of the Heat Engine.
6. Remove the two screws securing the circuit board and partially extract it.
7. Carefully disconnect the HiLimit temperature switch (2 thin red wires) and the Blower motor wiring harness plug from the circuit board.
8. Carefully disconnect the (black) wire from the Spark generator to the electrode.
9. Remove the two screws securing the retaining clip that holds in the copper tube to the fitting on the left side of the heat engine.
10. Remove the retaining clip.
11. Remove the two screws securing the retaining clip that holds in the copper tube to the internal flow valve at the lower right side of the heat engine.
12. Remove the retaining clip.
13. Carefully disconnect the blue wire from the Flame sensor.
14. Remove the two screws securing the ECO switch.
15. Remove the ECO switch.
16. Remove the four screws around the outside of the orifice plate. One of these screws also secures the Spark generator, another one secures a ground lug.
17. Remove the five screws that secure the top portion of the Gas valve to the burner chamber.
18. Remove the four retaining screws that secure the heating core to the Heat Engine Cabinet. There is one under the blower, one under the combustion chamber and one on each side at the top. **Note:** When removing the upper two screws support the core so that it will not drop.
19. Remove the Heat exchanger assembly from the Heat engine.
20. Remove the exhaust gasket and ring.
21. Remove six screws securing the Combustion chamber to the lower portion of Heat exchanger.
22. Remove the Combustion chamber.
23. Remove the six screws securing the Draft hood to the upper portion of Heat exchanger.
24. Remove the Draft hood.
25. Carefully remove and retain (but do NOT cut!) the HiLimit temperature switch from the heat exchanger.
26. Ensure old (white) gasket is completely removed and no material remains on the Draft Hood and Combustion chamber.



To Install:

1. Re-install the original HiLimit temperature switch.
2. Secure a new (white) gaskets in place on the Draft Hood and Combustion Chamber.
3. Reassemble the Draft Hood to the upper portion of heat engine.
4. Reassemble the Combustion chamber to the heat exchanger.
5. Reassemble the exhaust gasket and ring over the exhaust vent.
6. Re-install the Heat exchanger assembly to the Heat Engine Cabinet.
7. Carefully reconnect the HiLimit temperature switch (2 thin red wires) and the Blower motor wiring harness plug to the circuit board.
8. Carefully reconnect the (black) wire from the Spark generator to the electrode.
9. Slide the circuit board into its proper position and secure using the two screws.
10. Reassemble the orifice plate to the combustion chamber. One of these screws also secures the Spark generator, another one secures a ground lug.
11. Reassemble the top portion of the Gas valve to the burner chamber.
12. Re-install the ECO switch.
13. Carefully reconnect the blue wire to the Flame sensor.
14. Reassemble the retaining clip that holds in the copper tube to the internal flow valve at the lower right hand side of the heat engine.
15. Reassemble the retaining clip that holds in the copper tube to the fitting on the left hand side of the heat engine.
16. Open the shutoff valves on both the hot-water and cold-water lines.
17. Fill the tank following the instructions in the “Filling The Water Heater” section in the Operating Manual.
18. Check for leaks and repair as required.
19. Reassemble the front cover of the Heat Engine.
20. Close and lock the door.
21. Open the shutoff valve on the gas supply line to the water heater.
22. Reconnect the electrical power to the water heater.
23. Restart the water heater following the “Lighting Instructions” found in the Operating Manual.

