Descale Procedure
Group A Zone II

This instructional manual is only intended for use by a qualified service professional or authorized Noritz Service Representative. Any unauthorized use of this manual may result in voiding the warranty.

Please contact Noritz Technical Support (866-766-7489) for additional support.

Applicable Models:
- NR501-OD
- NR662-OD
- NRC661A-OD
- NRC661A-DV
- NRC711-OD
- NRC711-DV
- NRC663-FSV (EZTR40)
Damage to the water heater as a result of the items below is not covered by the Noritz America Limited Warranty.

- Water in excess of 12 gpg (200mg/L) of hardness.
- Poor water quality
- The water heater has displayed a "C*#" error code indicating Scale Build-up, but the heat exchanger has not been flushed.

Note: Water softeners may be regulated by the local water jurisdiction, consult with the manufacturer for code, sizing, and installation guidelines; the below diagram is for reference only. For more information about H2Flow and ScaleShield, contact Noritz America at http://support.noritz.com/ or 866-766-7489.

<table>
<thead>
<tr>
<th>Type of Water</th>
<th>Hardness Level</th>
<th>Treatment Device*</th>
<th>Flush Frequency**</th>
<th>Residential Use</th>
<th>Commercial Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft</td>
<td>0-1 gpg</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>(0-17 mg/L)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slightly Hard</td>
<td>1-3 gpg</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>(17-51 mg/L)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderately Hard</td>
<td>3-7 gpg</td>
<td>H2Flow or ScaleShield</td>
<td>Once a Year*** or Flashing the error code****</td>
<td>Once a Year*** or Flashing the error code****</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>(51-120 mg/L)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hard</td>
<td>7-10 gpg</td>
<td>H2Flow or ScaleShield</td>
<td>Once a Year*** or Flashing the error code****</td>
<td>Twice a Year*** or Flashing the error code****</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>(120-171 mg/L)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Hard</td>
<td>10-12 gpg</td>
<td>H2Flow or Water Softener</td>
<td>Once a Year*** or Flashing the error code****</td>
<td>Twice a Year*** or Flashing the error code****</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>(171-200 mg/L)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extremely Hard</td>
<td>&gt; 12 gpg</td>
<td>H2Flow or Water Softener</td>
<td>Once a Year*** or Flashing the error code****</td>
<td>Twice a Year*** or Flashing the error code****</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>(&gt; 200 mg/L)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* When selecting a treatment device, you must consult with the device’s spec sheet and installation manual for guidelines and limitations. Not all water supplies are compatible - a water test may be required.

** Install Noritz Isolation Valves to allow for flushing.

*** Flushing is required if a water treatment device is not installed.

**** The error code "C###" will be flashing in the Display Window.

*= 1, 2, 3, 4, F

#= 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
Procedure for Flushing the Heat Exchanger - ZONE II

This procedure is only intended for use by a qualified service professional or authorized Noritz Service Representative. Any unauthorized use of this procedure may result in voiding the warranty. Please contact Noritz America (866-766-7489) for additional support.

If the error code “C*#~C*#*” is flashing on the Display Window, it means there is Scale Build-up in the Heat Exchanger. The Heat Exchanger needs to be flushed** to remove the Scale Build-up. Damage to the water heater due to Scale Build-up is not covered by the water heater’s warranty. To clear the error code “C*#~C*#*”, the Heat Exchanger must be flushed.

If the error code “C*#*” is displayed and flashing in the Display Window, please contact Noritz America (866-766-7489).

** = 1, 2, 3, 4, F
# = 1, 2, 3, 4, 5, 6, 7, 8, 9, A, b, C, d, E, F
** Connect the “blue connector” for flushing on the Circuit Board when flushing the Heat Exchanger.
After connecting it, the water heater is set to “Flushing Mode”.

The water heater must remain connected to electrical power when flushing the Heat Exchanger.

1. The preparation of the flushing system

1. Close the gas supply valve.
2. Close the water inlet valve (V1) and the water outlet valve (V2).
3. Connect the one drain hose (H1) to the drain valve (V3), and then the other to the circulating pump.
4. Connect the drain hose (H2) to the circulating pump.
5. Connect the drain hose (H3) to the drain valve (V4).
6. Pour 1 gallon of “Calcium, Lime and Rust Removal Product” and 1 gallon water into the bucket.
   Noritz recommends “Calcium, Lime and Rust Removal Product” for flushing.
7. Place the both drain hoses (H2 and H3) into the bucket filled with the flushing solution.
8. Open the both drain valves (V3 and V4).

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** Isolation valves**** are necessary for flushing the Heat Exchanger.

If a submersible pump is used, then only 2 hoses will be needed (H1 and H3).

**** Isolation valves may be purchased as an accessory from an authorized Noritz wholesaler. They allow for full diagnostic testing and easy flushing of the system. Contact Noritz America for more information (866-766-7489).
2. Flushing the Heat Exchanger

1. Open the Front Cover.
2. Connect the "blue connector" for flushing on the Circuit Board.

3. Then the code “CCC” is displayed on the Data Display.

4. Turn on the circulating pump to circulate the flushing solution through the water heater for 1 hour at a rate of 1.5 gallons per minute or more.
5. The code “C60” is displayed on the Data Display when the water heater detects the flow of the flushing solution.
   When 1 minute passes, the code “C60” will change to “C59” on the Data Display.
   
   Detects the flow
   
   1 minute passes

   Please check whether the reverse connection of the hose (H1) and (H3) if the display number will not change.
   In that case, the flow rate of the flushing solution may be under 1.5 gallons per minute.

6. When 1 hour passes, the code “C00” is flashing on the Data Display.
   Do not disconnect the “blue connector for flushing” on the Circuit Board.
7. Turn off the circulating pump.

3. Cleaning the Heat Exchanger

The flushing solution needs to be rinsed and cleaned out of the water heater. Below is the way to rinse and clean the flushing solution.

1. Remove both drain hoses (H2 and H3) from the bucket. And then place the drain hose (H3) into the sink or outside to drain.
2. Close the drain valve (V3) and then open the water inlet valve (V1).
   Do not open the fresh water outlet valve (V2).
3. Clean the water heater with fresh water for 3 minutes or more.
   (Needs to have enough time to clean the water heater.)

   NRC653-FSV (EZTR40) has a “Water Drain Valve” on the bottom of the water heater. Place the bucket under the water heater to drain water from the Water Drain Valve. Carefully unscrew the “Water Drain Valve” to rinse flushing solution out of the water heater for about 10 seconds, then close the “Water Drain Valve”.

4. Close the drain valve (V4) and then remove the drain hose (H3) from the drain valve (V4).
5. Remove the drain hose (H1) from the drain valve (V3).
6. Disconnect the “blue connector for flushing” on the Circuit Board.
   The code “C00” goes out on the Data Display.
7. Close the Front Cover.
8. Open the gas supply valve and water outlet valve (V2).
9. Check for correct operation of the water heater.

Please contact Noritz America if more information is needed for flushing.
(Phone #: 866-766-7489)