NORITZ®

Descale Procedure
Group B Zone III

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 :

• GQ-2457 Series

• GQ-2857 Series

• GQ-C2857 Series

• GQ-C3257 Series

• GQ-C2859 Series

• GQ-C3259 Series

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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.

Treatment Guidelines

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

* 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 Ⅲ

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 Remote Controller (or Operation Panel**), 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 on the Remote Controller (or Operation Panel**), please contact Noritz America (866-766-7489).

* ∗ = 1, 2, 3, 4, F   /   # = 0, 1, 2, 3, 4, 5, 6, 7, 8, 9

** NR98DVC(GQ-2857WX-FFA US) and NR83DVC(GQ-2457WS-FFA US) only.

*** Connect the "blue connector for flushing" near the Circuit Board when flushing the Heat Exchanger.
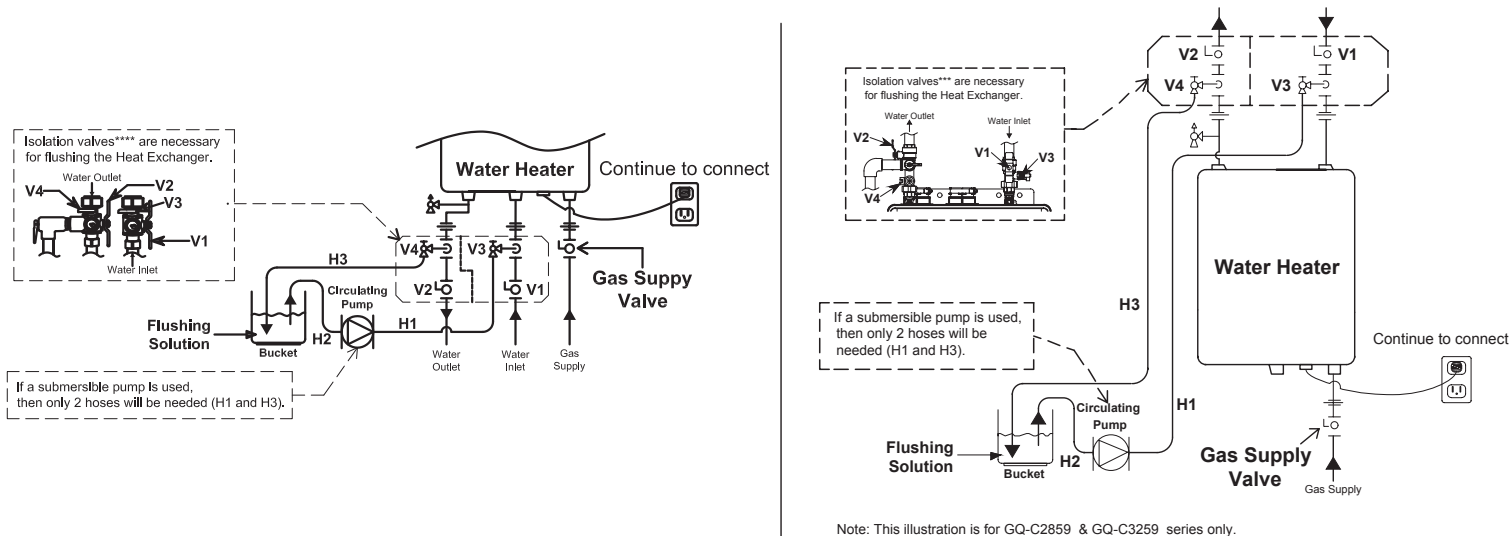   After connecting it, the water heater is set to "Flushing Mode".

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

Basic Procedure

≪Procedure 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.
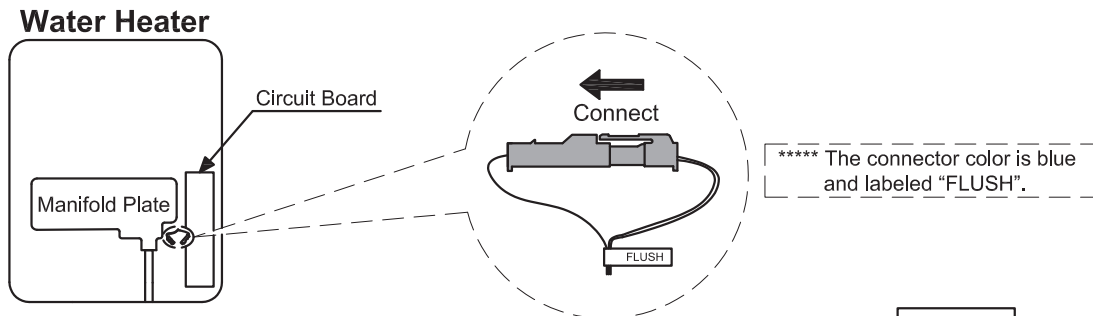8. Open the both drain valves (V3 and V4).

Note: This illustration is for GQ-C2859 & GQ-C3259 series only.

**** 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)

≪Procedure 2. Flushing the Heat Exchanger − For Single Unit≫

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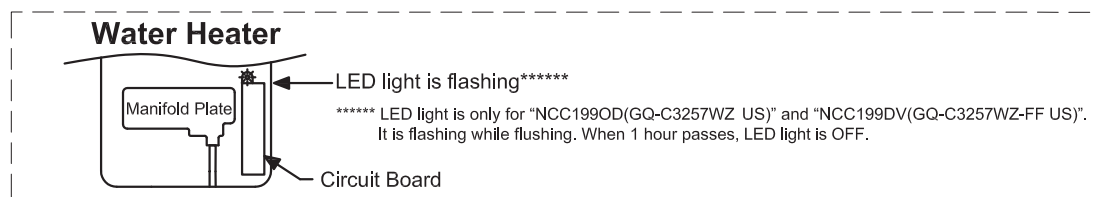2. Connect the "blue connector*****" for flushing" near the Circuit Board.

Water Heater

Circuit Board

Manifold Plate

Connect

***** The connector color is blue
and labeled "FLUSH".

FLUSH

3. Then the code "CCC" is displayed on the Remote Controller.   **CCC**
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 Remote Controller when the water heater detects the flow
   of the flushing solution.
   When 1 minute passes, the code "C60" will change to "C59" on the Remote Controller.

CCC →(Detects the flow) **C60** →(1 minute passes) **C59**

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.

Water Heater

Manifold Plate

LED light is flashing******

****** LED light is only for "NCC199OD(GQ-C3257WZ US)" and "NCC199DV(GQ-C3257WZ-FF US)".
It is flashing while flushing. When 1 hour passes, LED light is OFF.

Circuit Board

6. When 1 hour passes, the code "C00" is flashing on the Remote Controller.   **C00** – Flashing
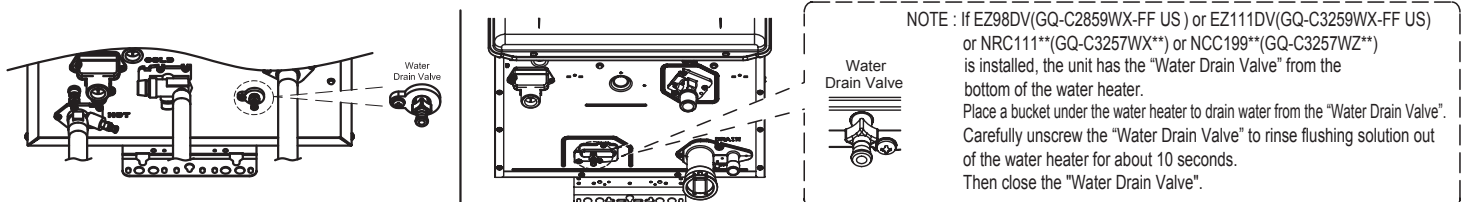   Do not disconnect the "blue connector for flushing" .
7. Turn off the circulating pump.

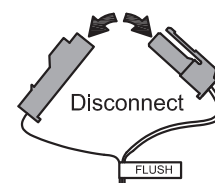## ≪Procedure 3. Cleaning the Heat Exchanger≫

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.)

Water
Drain Valve

Water
Drain Valve

NOTE : If EZ98DV(GQ-C2859WX-FF US) or EZ111DV(GQ-C3259WX-FF US)
or NRC111**(GQ-C3257WX**) or NCC199**(GQ-C3257WZ**)
is installed, the unit has the "Water Drain Valve" from the
bottom of the water heater.
Place a 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".

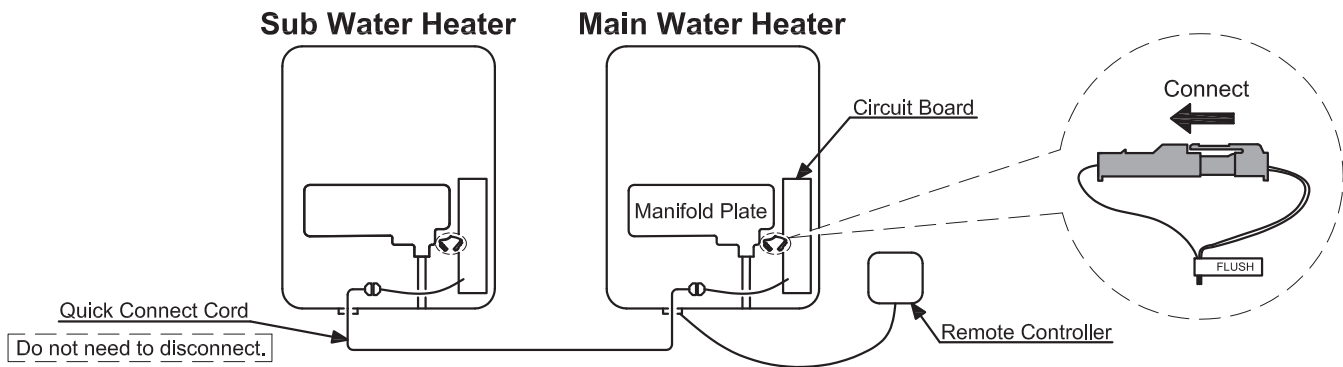4. Close the drain valve (V4) and then remove the drain hose (H3) from the drain valve (V4).
5. Remove the drain hose (H1) from the drain valve (V3).
6. Disconnect the "blue connector for flushing" near the Circuit Board.
   The code "C00" goes out on the Remote Controller.
7. Close the Front Cover.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

Disconnect

FLUSH

In case of the "Quick Connect Multi System Procedure"

1. Connect the "blue connector for flushing" of need to be flushed.
   (The water heater is isolated from Quick Connect Multi system when the "blue connector for flushing" is connected. No need to disconnect the Quick Connect Cord.)

Sub Water Heater   **Main Water Heater**

Circuit Board

Manifold Plate

Connect

FLUSH

Quick Connect Cord
Do not need to disconnect.

Remote Controller

2. Then the code "CCC" or "FCC" is displayed on the Remote Controller.

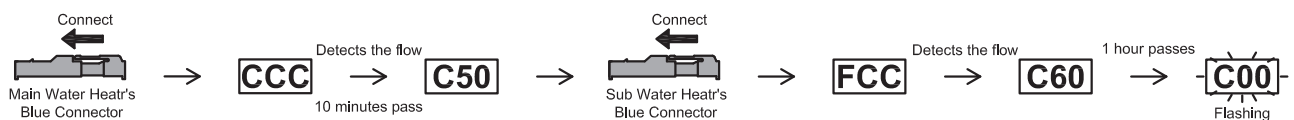**CCC** is displayed when the Main Water Heater's bule connector is connected.

FCC is displayed when the Sub Water Heater's bule connector is connected.

3. Turn on the circulating pump to circulate the flushing solution through the water heaters for 1 hour at a rate of 1.5 gallons per minute or more.
   (LED light is flashing while flushing the heat exchanger. See the "Procedure 2.5".)

4. When 1 hour passes, the code "C00" is flashing on the Remote Controller.
   Do not disconnect the "blue connector for flushing".

CCC — Detects the flow → **C60** → **C59** · · · → **C00** — Flashing

FCC — Detects the flow → **C60** → **C59** · · · → **C00** — Flashing

(Ex. : The display when the both water heaters are flushed at the same time.)

Connect
Main Water Heatr's Blue Connector → **CCC** — Detects the flow / 10 minutes pass → **C50** →
Connect
Sub Water Heatr's Blue Connector → **FCC** — Detects the flow → **C60** — 1 hour passes → **C00** — Flashing

The remaining time of flushing gives indication priority to the connector which is connected later.

5. Turn off the circulation pump.

6. Rinse and clean the flushing solution out of the water heaters in accordance with "Procedure 3".
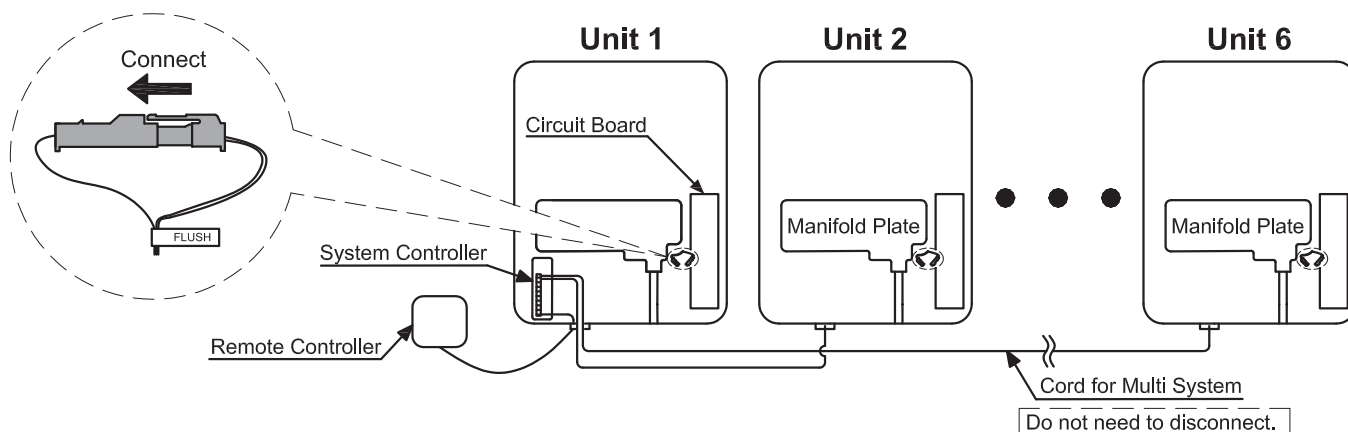   (See the "Procedure 3.1−3.5".)

Water Drain Valve

NOTE : Place a 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".

7. Disconnect the "blue connector for flushing". The Code "C00" goes out on the Remote Controller.

8. Close the Front Covers.

9. Open the gas supply valves and water out let valves.

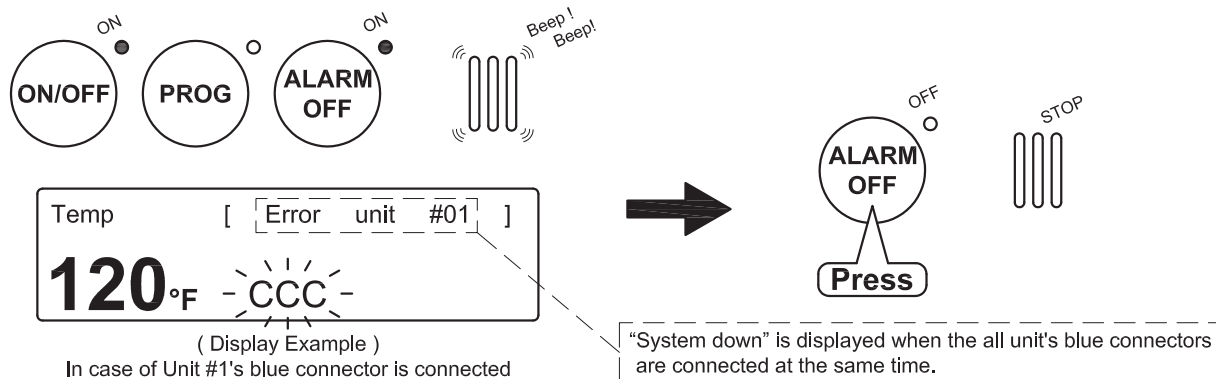10. Check for correct operation of the water heaters.

In case of the "Multi System Procedure"

1. Connect the "blue connector for flushing" of need to be flushed.
   (The water heater is isolated from Multi System when the "blue connector for flushing" is connected. Not need to disconnect the "Cord for the Multi System" .)

Connect

FLUSH

Unit 1

Unit 2

Unit 6

Circuit Board

Manifold Plate

Manifold Plate

System Controller

Remote Controller

Cord for Multi System

Do not need to disconnect.

2. Then the code "CCC" is displayed on the Remote Controller and the error alarm continuously sounds. Press the "ALARM OFF" button to stop the error alarm.

ON

ON/OFF

PROG

ON

ALARM OFF

Beep! Beep!

Temp   [Error   unit   #01]

120°F -CCC-

(Display Example)
In case of Unit #1's blue connector is connected

OFF

ALARM OFF

STOP

Press

"System down" is displayed when the all unit's blue connectors are connected at the same time.
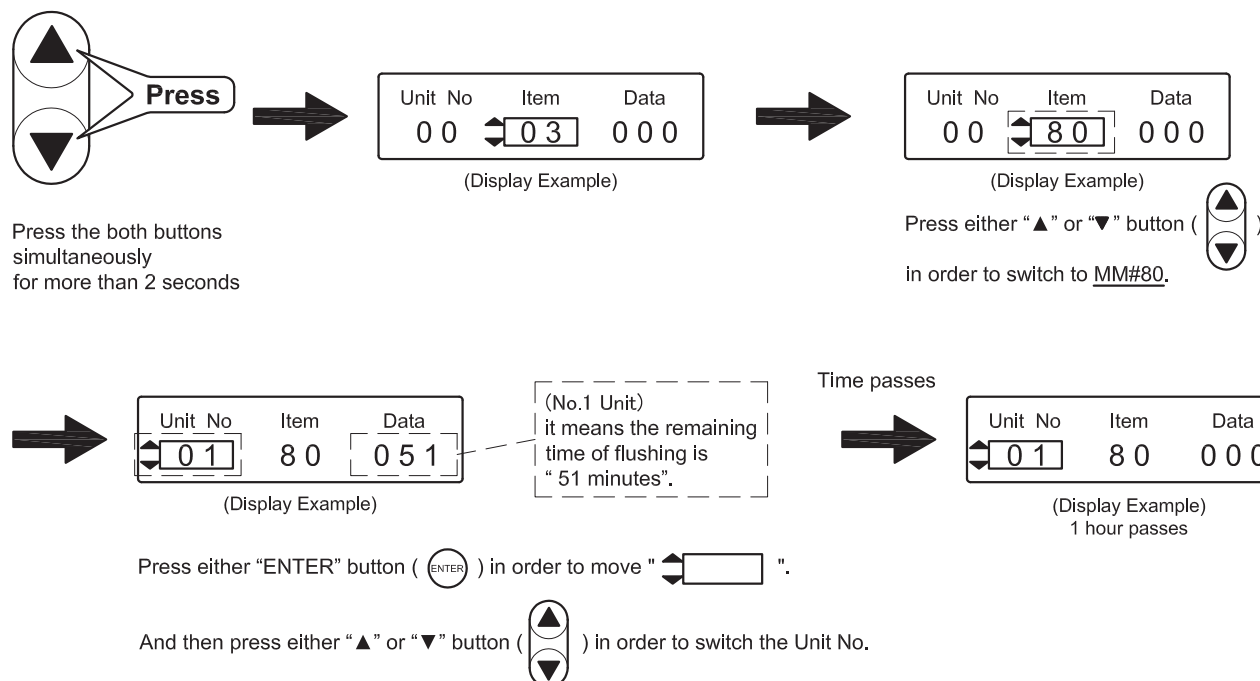
3. Turn on the circulating pump to circulate the flushing solution through the water heaters for 1 hour at a rate of 1.5 gallons per minute or more.
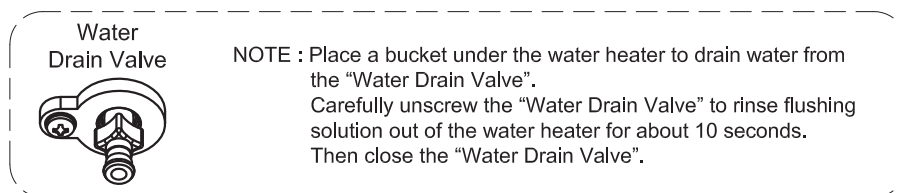   Note : The code "CCC" does not change when Multi System mode. The display does not show the remaining time of flushing.

4. Check for the remaining time of flushing to see the Maintenance Monitor #80 (MM #80).

≪How to check the remaining time of flushing≫

Press

Press the both buttons simultaneously for more than 2 seconds

Unit No   Item   Data
00   03   000

(Display Example)

Unit No   Item   Data
00   80   000

(Display Example)

Press either "▲" or "▼" button (   )

in order to switch to MM#80.

Unit No   Item   Data
01   80   051

(Display Example)

(No.1 Unit)
it means the remaining time of flushing is " 51 minutes".

Time passes

Unit No   Item   Data
01   80   000

(Display Example)
1 hour passes

Press either "ENTER" button (ENTER) in order to move "   ".

And then press either "▲" or "▼" button (   ) in order to switch the Unit No.

5. When 1 hour passes, turn off the circulation pump.
   (LED light is flashing while flushing the heat exchanger. See the "Procedure 2.5".)
6. Rinse and clean the flushing solution out of the water heaters in accordance with "Procedure 3".
   (See the Procedure 3.1~3.5.)

Water
Drain Valve

NOTE : Place a 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".

7. Disconnect the "blue connector for flushing". The Code "CCC" goes out on the Remote Controller.
8. Close the Front Covers.
9. Open the gas supply valves and water outlet valves.
10. Check for correct operation of the water heaters.

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