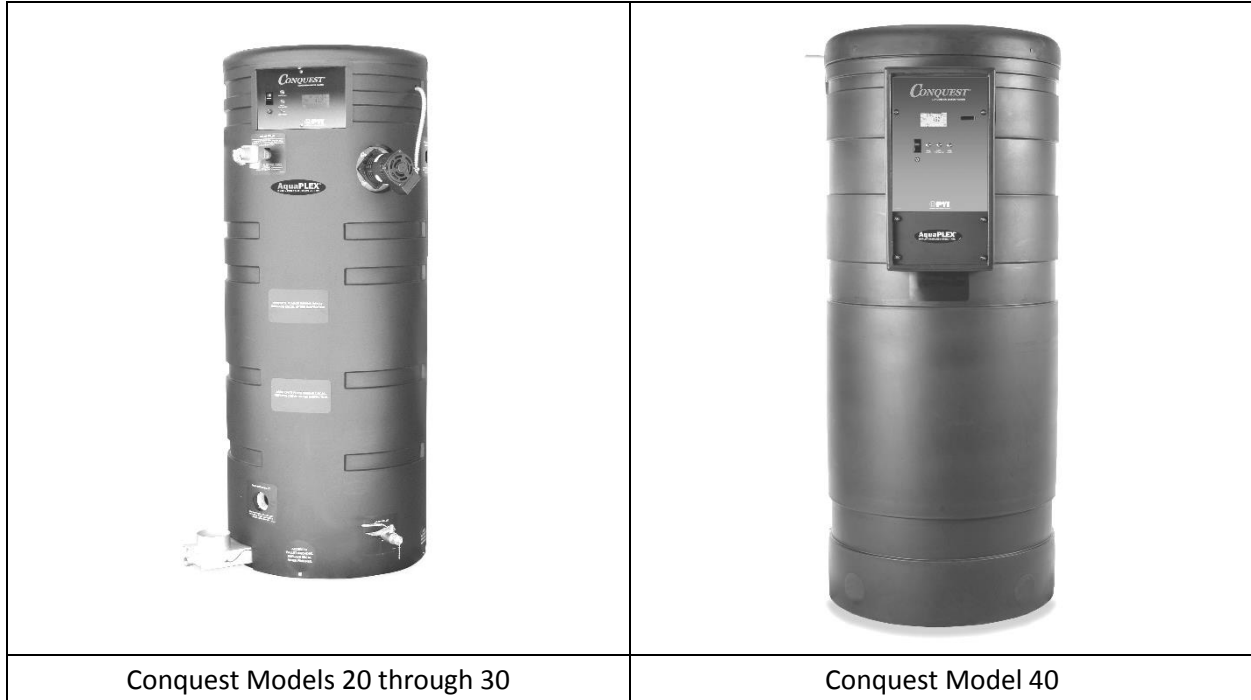


**Installation Instructions - Supplemental**

REPLACING THE EOS BTCII USER INTERFACE on **CONQUEST** Water Heaters

For model prefixes 20 through 40

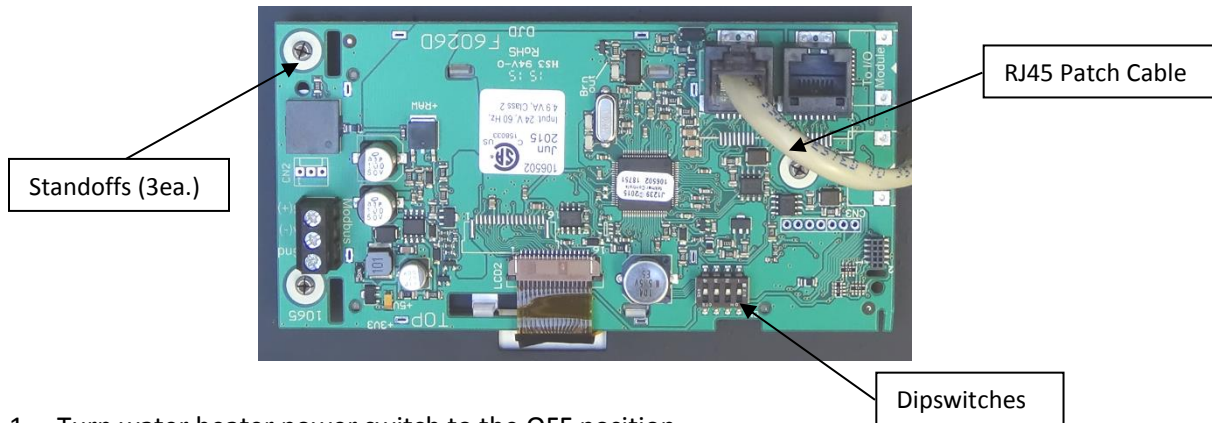


The following instructions are included to assist in the proper replacement of the EOS BTCII User Interface. Refer to the Installation & Maintenance Manual for proper adjustments, settings, startup procedures and safety precautions. Installation and service must be performed by a qualified installer or service agency.

Part Number **138397 KIT, HMI BTCII REPLACEMENT FOR AGC, PVX WH** is required. Kit includes:

PART NBR	DESCRIPTION	QTY	UM
126070	HMI,BTCII #106502 TEKMAR REV102915	1	EA
138403	SHEET,INSTRUCTION HMI BTCII REPLACEMENT FOR CONQUEST 20 thru 40	1	EA

## I. REPLACING THE BTCII DISPLAY BOARD



1. Turn water heater power switch to the OFF position.
2. Shut OFF electrical service to the unit.
3. Remove the panel screws and open the hinged upper enclosure panel (Conquest Model 40). Remove the panel screws securing the enclosure faceplate (Models 20 thru 30).
4. Unplug the RJ45 patch cable from the back of the BTCII display board.
5. There are three spring action metal standoffs that hold the PC board to the panel:
  - a. Use a needle-nose plier to pinch each standoff to loosen the PC board.
  - b. Lightly press the display face from the front of the panel and separate the BTCII User Interface from the panel. (The edges of the display face may stick slightly to the window in the front panel overlay.)
6. Position the replacement BTCII display board over standoffs and lightly press into place. To prevent bending damage to the board, use a nut driver or similar hand tool to isolate the force around the standoffs.
7. Plug in the RJ45 patch cable. Verify the dipswitch settings on the new board are set the same as the existing board.
8. Turn ON electrical service to the unit.
9. Turn water heater power switch to ON position. Note, you may have to cycle power off and on again to fully initialize with the PIM control.

## II. BTCII CONTROL PARAMETERS

Replacement controls must be programmed prior to operating the water heater. The parameters and values for each Conquest model are listed below.

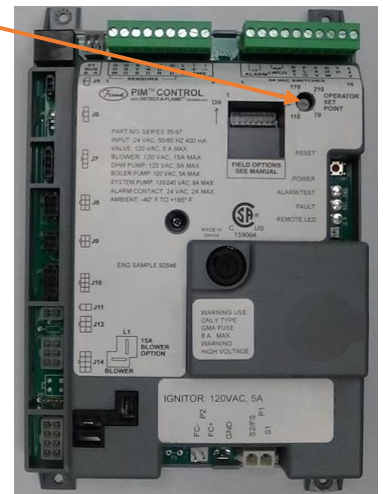
Parameter	Menu	Conquest Model			
		20	25	30	40
SETPOINT	SETUP	120	120	120	120
HTR DIFF	SETUP	4	4	4	4
HTR OFFSET	SETUP	5	5	5	5
HTR RANGE	SETUP	6	6	6	6
START MOD	SOURCE	N/A	N/A	N/A	N/A
MIN MOD	SOURCE	N/A	N/A	N/A	N/A
MAX MOD	SOURCE	N/A	N/A	N/A	N/A
OPERATOR	SOURCE	120	120	120	120

### III. ADJUSTING THE CONTROL PARAMETERS

1. To Change The Water Heater **SET POINT** value:
  - a. From the normal View Menu, press and hold the **Home Button** for 3 seconds to enter the Control System Menu.
  - b. The first menu displayed is the **SETUP** Menu. Press **ENTER** to enter the **SETUP** Menu.
  - c. The first parameter is the **SETPOINT**. Use the arrow buttons to adjust the set point value as per the parameter table shown.
  - d. To exit and return to normal View Menu, press the **Home Button** 2 times or wait 60 seconds.
2. The remaining parameters require **ACCESS** to be set to **ADV** before you can edit them:
  - a. Enter Control System Menu (press and hold the **Home Button** for 3 seconds).
  - b. Press **NEXT ITEM** or **ITEM BACK** buttons to navigate to the **TOOL BOX** menu.
  - c. Press the **ENTER** button.
  - d. The first parameter in the **TOOL BOX** menu is the **ACCESS** level screen.
  - e. Adjust the **ACCESS** level using the arrow buttons to select the **ADV**anced value. If the highest value is **INST**, then press and hold the **#4 button** for 3 seconds.
  - f. To exit and return to normal View Menu, press the **Home Button** 2 times or wait 60 seconds.
3. To change the **DIFF, OFFSET** or **RANGE** values while in **ADV ACCESS**:
  - a. Enter Control System Menu (press and hold the **Home Button** for 3 seconds).
  - b. Press the **NEXT ITEM** until you see the **SETUP** menu.
  - c. Press **ENTER** to enter the **SETUP** Menu.
  - d. Once in the **SETUP** menu, use the **NEXT ITEM** button to move to the **DIFF, OFFSET, and RANGE** menus. Using the arrow buttons in each parameter, enter the value as per the corresponding parameter for the model heater as per the table shown.
  - e. To exit and return to normal View Menu, press the **Home Button** 2 times or wait 60 seconds.
4. To Change the **OPERATOR, MIN MOD, START MOD, and MAX MOD** values:
  - a. Enter Control System Menu (press and hold the **Home Button** for 3 seconds).
  - b. Press **NEXT ITEM** or **ITEM BACK** buttons to navigate to the **SOURCE MENU**.
  - c. Press **ENTER** to enter the **SOURCE MENU**.
  - d. Once in the **SOURCE MENU**, use the **NEXT ITEM** button to move to **OPERATOR**.



STAND ALONE  
OPERATOR  
ADJUSTMENT.  
Adjust screw until  
parameter reading  
matches the  
operating set  
point.



- (a) This is adjusted with a small flat head screwdriver on the FENWAL PIM ignition module labeled "**OPERATOR SET POINT**". Adjust with screwdriver and note the setting in the display. Do not reference the index printed on the PIM module.

- e. Press **NEXT ITEM** to the **MIN MOD**, **START MOD**, and **MAX MOD** parameters. Using the arrow buttons, enter the values as per the parameter table shown.  
Note: If the arrow buttons are not be visible, push and hold the **#4 button** at the bottom right of the screen until the **UP** and **DOWN** arrows appear.
  - f. To exit and return to normal View Menu, press the **Home Button** 2 times or wait 60 seconds.
5. Return BTCII control to the **USER** access level (refer previous instructions for setting **ACCESS** to **ADV**, but change to **USER**).