



Technical Service Department

Technical Service Bulletin

1-800-432-8373



PCB Replacement Procedure (For models with 2-42, 53, 74 within the model number)

WARNING: You will need to perform this procedure when you replace the PCB. Without this adjustment, the water heater may not function properly.

Note: During the adjustment procedure if [EE] is displayed on the display of remote control, adjust again with caution. This means there was an error in the adjustment sequence.

Note: Read these entire instructions before starting this procedure.

When replacing the printed circuit board, perform the following sequence of steps:

1. Turn off power at remote.
2. Disconnect electric power from water heater.
3. Turn off gas supply to the water heater.
4. Turn off water supply to the water heater.
5. Remove the front cover.
6. Reconnect electric power to the water heater (**no need to turn on power at the remote**).
7. With old PCB installed verify minimum manifold pressure settings. The setting value will be displayed on the remote.
 - a. Press and hold down the adjusting button (**SW3**)
 - b. While holding adjusting button (**SW3**), momentarily press (tap) the minimum button (**SW1**)
 - c. Record the number that displays on the remote _____
 - d. Release the adjusting button (**SW3**)
8. Verify maximum manifold setting. The setting value will be displayed on the remote.
 - a. Press and hold down the adjusting button (**SW3**).
 - b. While holding the adjusting button (**SW3**) momentarily press (tap) the maximum button (**SW2**).
 - c. Record the number displayed on the remote _____
 - d. Release the adjusting button (**SW3**).
9. Disconnect electric power.
10. Remove old PCB.
11. Install new PCB.
12. Program chip adjustment
 - a. Verify you have the correct program chip for your model, gas type, and altitude. See attached PCB and Program Chip Matrix.
 - b. Place Program Chip in connector.
Note: Only plugs in one way.
 - c. Reconnect electric power to the water heater.
Note: Do not turn on the remote.
 - d. Find the DIP Switch #1 and #2 located at the top left hand side of the PCB.
 - e. Change the DIP Switch #1 and #2 setting to the "ON" position. DO NOT alter any other DIP Switch.
 - f. The display on the PCB will be flashing. At the same time, the display of the remote control will start to flash.





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- g. Find the adjusting button (**SW3**) located at the top left hand side of the PCB.
- h. Press and hold down the adjusting button (**SW3**) on the PCB until the LED on the PCB changes from "Flashing" to "Illuminating (solid light)".
- i. Release the adjusting button (**SW3**)
- j. Change the Dip Switch **#1** and **#2** setting to the "OFF" position. DO NOT alter any other dip switch.
- k. Disconnect the electric power from the water heater and remove the program chip from the PCB. Then reconnect electric power to the water heater for the next step.

Adjustment of Burner Manifold settings on new board:

NOTE: Always start from "Minimum" when adjusting the burner manifold pressure setting. The display is on remote control. Always connect the remote control to monitor this procedure.

13. Adjustment of minimum manifold setting.

- a. Repeat steps 7.a. and 7.b. from above procedure. If the recorded value does not agree with current value then proceed to next step. If the value does agree then move onto step 13.d.
- b. Press and hold down the adjusting button (**SW3**)
- c. While holding the Adjusting Button; momentarily push (tap) the minimum button (**SW1**) on the PC Board. The current number [01 - 39] is displayed on the display of remote control. Continue to momentarily press (tap) the minimum button (**SW1**) until you get to the value recorded in step 7.c.

NOTE: Every time you press the MINIMUM (SW1) button, the display will cycle up to the number 39. Once it reaches 39, it will automatically reverse and cycle back down to 01.

- d. Release the adjusting button (**SW3**).

14. Adjustment of maximum manifold setting

- a. Repeat steps 8.a. and 8.b. from above procedure. If recorded value does not agree with the current value then proceed to next step. If the value does agree then move onto step 14.d.
- b. Press and hold down the adjusting button (**SW3**)
- c. While holding the Adjusting Button; momentarily push (tap) the maximum button (**SW2**) on the PC Board. The current number [01 - 39] is displayed on the display of remote control. Continue to momentarily press (tap) the maximum button (**SW2**) until you get to the value recorded in step 8.c.

NOTE: Every time you press the MAXIMUM (SW2) button, the display will cycle up to the number 39. Once it reaches 39, it will automatically reverse and cycle back down to 01.

- d. Release the adjusting button (**SW3**).

15. Replace front cover.

16. Turn on gas supply (**Note: ensure there are no gas leaks**).

17. Turn on water supply (**Note: ensure there are no water leaks**).

18. Turn on remote and adjust to desired temperature.



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Base Model Number	PC Board Part #	Fuel Type	Program Chip			
			0 to 3280	3281 to 6560	6561 to 9840	
74XN	RTG20006JC	N	RTG20006EN	RTG20006EK	RTG20006EL	
74PVN		N	RTG20006DG	RTG20006DM	RTG20006DN-1	
74DVN		N	RTG20006MY	RTG20006MZ	RTG20006NA	
74XP		LP	RTG20006EM	RTG20006EH	RTG20006EJ	
74PVP		LP	RTG20006DF-1	RTG20006DK-1	RTG20006DL-1	
74DVP		LP	RTG20006MV	RTG20006MW	RTG20006MX	
199XN		N	RTG20006JL	RTG20006JN	RTG20006JR	
199PVN		N	RTG20006JE	RTG20006JG	RTG20006JJ	
199DVN		N	RTG20006PM	RTG20006PN	RTG20006PP	
199XP		LP	RTG20006JK	RTG20006JM	RTG20006JP	
199PVP		LP	RTG20006JD	RTG20006JF	RTG20006JH	
199DVP		LP	RTG20006PR	RTG20006PS	RTG20006PT	
74XN-1		RTG20006PG	N	RTG20006RV	RTG20006RW	RTG20006RX
74PVN-1			N	RTG20006RG	RTG20006RH	RTG20006RJ
74DVN-1			N	RTG20006PU	RTG20006PV	RTG20006PW
74XP-1	LP		RTG20006RY	RTG20006RZ	RTG20006SA	
74PVP-1	LP		RTG20006RK	RTG20006RL	RTG20006RM	
74DVP-1	LP		RTG20006PX	RTG20006PY	RTG20006PZ	
199XN-1	N		RTG20006SB	RTG20006SC	RTG20006SD	
199PVN-1	N		RTG20006RN	RTG20006RP	RTG20006RR	
199DVN-1	N		RTG20006RA	RTG20006RB	RTG20006RC	
199XP-1	LP		RTG20006SE	RTG20006SF	RTG20006SG	
199PVP-1	LP		RTG20006RS	RTG20006RT	RTG20006RU	
199DVP-1	LP		RTG20006RD	RTG20006RE	RTG20006RF	
74XN-2	RTG20006PG		N	RTG20006TN	RTG20006TP	RTG20006TR
74PVN-2			N	RTG20006TA	RTG20006TB	RTG20006TC
74DVN-2			N	RTG20006SM	RTG20006SN	RTG20006SP
74XP-2		LP	RTG20006TS	RTG20006TT	RTG20006TU	
74PVP-2		LP	RTG20006TD	RTG20006TE	RTG20006TF	
74DVP-2		LP	RTG20006SR	RTG20006SS	RTG20006ST	
199XN-2		N	RTG20006TV	RTG20006TW	RTG20006TX	
199PVN-2		N	RTG20006TG	RTG20006TH	RTG20006TJ	
199DVN-2		N	RTG20006SU	RTG20006SV	RTG20006SW	
199XP-2		LP	RTG20006TY	RTG20006TZ	RTG20006UA	
199PVP-2		LP	RTG20006TK	RTG20006TL	RTG20006TM	
199DVP-2		LP	RTG20006SX	RTG20006SY	RTG20006SZ	
2-42PVN		RTG20074DU	N	RTG20074GE	RTG20074GF	RTG20074GG
2-42PVP			LP	RTG20074GB	RTG20074GC	RTG20074GD
53XN			N	RTG20074FY	RTG20074FZ	RTG20074GA
53PVN	N		RTG20074FK	RTG20074FL	N/A	
53DVN	N		RTG20074FS	RTG20074FT	N/A	
53XP	LP		RTG20074FV	RTG20074FW	RTG20074FX	
53PVP	LP		RTG20074FG	RTG20074FH	N/A	
53DVP	LP		RTG20074FN	RTG20074FP	N/A	