

## High Altitude Installation of R/C53i (2520FFU Series) using Propane Gas

Proper operation of the Rinnai R/C53i (2520FFU) water heater at high altitudes may require changing the manifold pressure settings and limiting the vent length. Refer to Table 1 for allowable vent lengths and possible changes to the dip switch settings. Table 1 covers horizontal and vertical installations. Refer to Table 2 to determine the high fire and low fire manifold pressures. If the pressure required is different than the factory setting then follow the procedure below.

**Table 1 Maximum Vent Length (feet)**

Number of 90° Elbows							Altitude ft
0	1	2	3	4	5	6	
41 ①	35 ②	29 ③	23	17	11	5	0 - 5000
34	28	22	16	10	4	NA	5000-10000

NA - Not Allowed  
 Two 45° elbows are considered equivalent to one 90° elbow.  
 Include termination elbows when using this table.  
 ① If the length is less than 22' then move dip switch no. 1 to ON  
 ② If the length is less than 16' then move dip switch no. 1 to ON  
 ③ If the length is less than 10' then move dip switch no. 1 to ON

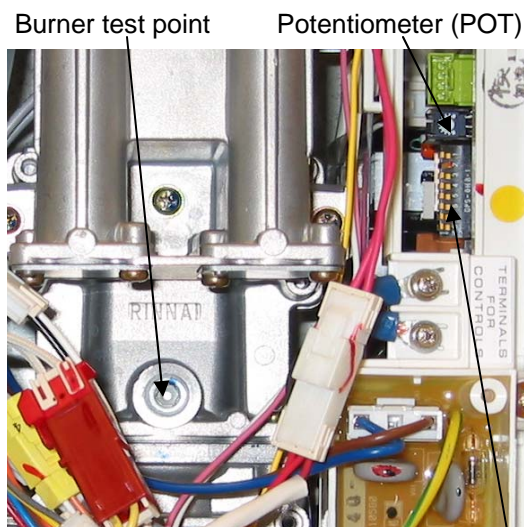
### Changing Manifold Pressure Settings

1. Remove the front panel by removing four screws.
2. Turn off the gas and the 120 V power supply.
3. Remove the allen head plug and attach the manometer to the burner test point located on the gas control. Ensure manometer is properly calibrated.
4. Turn on the gas and 120 V power supply.
5. Flow water through the water heater at the maximum flow rate obtainable. (At least 3 gallons per minute is recommended.)
6. Move No. 7 dip switch of the SW1 bank to the ON position to calibrate "Forced Low" combustion.
7. Check the burner test point pressure. Remove the rubber access plug and adjust the regulator screw on the modulating valve to obtain the low fire pressure in Table 2. Install rubber access plug.
8. Move No. 7 and No. 8 dip switches of the SW1 bank to the ON position to calibrate "Forced High" combustion.
9. Check the burner test point pressure. Adjust the high pressure Potentiometer (POT) on the PC Board to obtain the high fire pressure in Table 2.
10. Move No. 7 and No. 8 back to the OFF position to return the appliance to "Normal" combustion.
11. Close hot water taps.
12. Turn off gas supply and 120 V power supply. Remove manometer and re-install allen head plug.
13. Turn on the gas supply and 120 V power supply. Operate the unit and check for gas leaks at the test point. Install front panel.

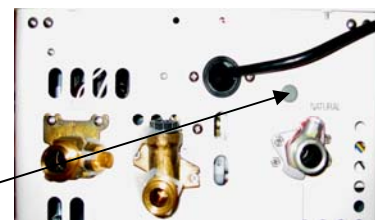
**Table 2 Manifold Pressure Setting**

Altitude (feet)	High Fire	Low Fire
less than 2000	4.2 *	0.93 *
3000	4.0	0.90
4000	3.9	0.86
5000	3.7	0.82
6000	3.7	0.82
7000	3.6	0.80
8000	3.6	0.80
9000	3.4	0.79
10000	3.2	0.75

\* Factory setting



Dip switches (SW1)



Regulator screw access