

The purpose of this bulletin is to clarify when and how to perform the gas pressure setting procedure for the VA (LS) models. On these models, the SW1 dip switches #2 and #3 must be adjusted before performing the gas pressure setting procedure. This differs from the V series models is that (1) altitude switches did not exist, and (2) the rating plate manifold pressures were used for calibrating low fire and high fire settings.

### Appliance Installation

When a Rinnai water heater (VA/LS model) is installed, SW1 dip switches #2 and #3 need to be adjusted for altitude. (Refer to the Owners / Operation Manual). The gas pressure setting procedure does not need to be accomplished.

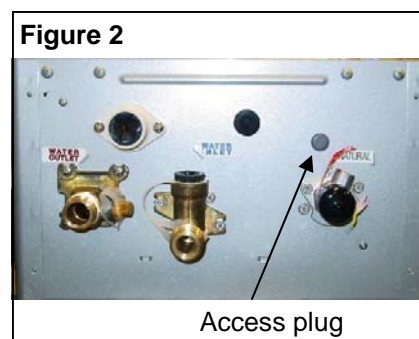
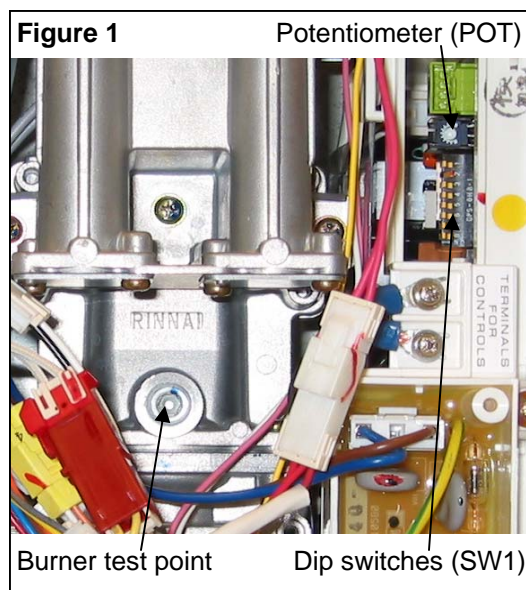
### Replacement Parts

When a PC board or gas valve is replaced in a VA/LS model, the gas pressure setting procedure needs to be done with SW1 dip switches #2 and #3 in the adjusted position for the altitude.

### Gas Pressure Setting Procedure

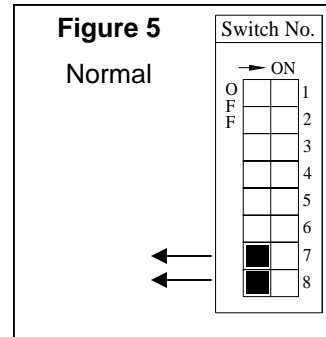
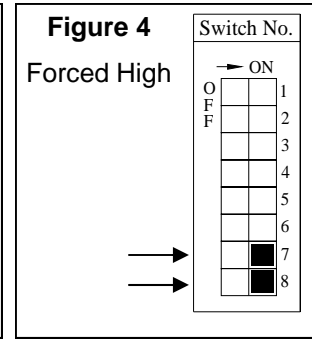
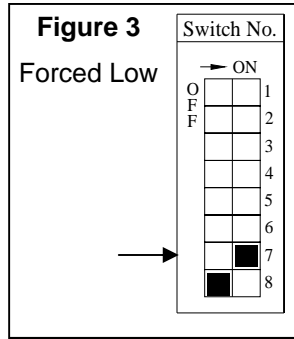
NOTE: Adjust SW1 dip switches #2 and #3 for altitude before performing this procedure.

1. Calibrate the low fire and high fire settings as follows:
  - A. Remove the allen head plug and attach the manometer to the burner test point located on the gas control. (Figure 1)
  - B. Turn on the gas supply.
  - C. Turn on the power supply.
  - D. Flow water through the water heater at the maximum flow rate obtainable. (At least 3 gallons per minute is recommended.)
  - E. Move No. 7 dip switch of the SW1 bank to the ON position to calibrate "Forced Low" combustion. (Figure 3)
  - F. Check the burner test point pressure.
  - G. Remove the rubber access plug (Figure 2) and adjust the regulator screw on the modulating valve to obtain the correct low fire manifold pressure. Refer to the table for your gas type, model, and altitude. Install rubber access plug.
  - H. Move No. 7 and No. 8 dip switches of the SW1 bank to the ON position to calibrate "Forced High" combustion. (Figure 4)
  - I. Check the burner test point pressure.



## Gas Pressure Setting Procedure for VA (LS) Models

- J. Adjust the high pressure Potentiometer (POT) (Figure 1) on the PC Board to obtain the correct high fire manifold pressure. Refer to the table for your gas type, model, and altitude.
- K. Move No. 7 and No. 8 back to the OFF position to return the appliance to "Normal" combustion. (Figure 5)
- L. Close hot water taps.
- M. Turn off gas supply and 120 V power supply.
- N. Remove manometer and re-install allen head plug.
- O. Turn on the gas supply and 120 V power supply.
- P. Operate the unit and check for gas leaks.



V53e (REU-VAM1620W) using NATURAL GAS			
Dip Switch Setting	Altitude	Max Rate inches W.C.	Min Rate inches W.C.
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	2.5	0.73
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	2.4	0.7
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	2.4	0.7
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	2.4	0.9

V53e (REU-VAM1620W) using PROPANE GAS			
Dip Switch Setting	Altitude	Max Rate inches W.C.	Min Rate inches W.C.
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	2.4	0.75
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	2.2	0.9
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	2.0	0.8
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	2.0	0.7

## Gas Pressure Setting Procedure for VA (LS) Models

<b>R63LSe (REU-VA2024W) using NATURAL GAS</b>			
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	1.7	0.53
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	1.6	0.4
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	1.5	0.5
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	1.5	0.5

<b>R63LSe (REU-VA2024W) using PROPANE GAS</b>			
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	2.4	0.61
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	2.0	0.7
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	2.0	0.7
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	1.8	0.8

<b>R63LSe2 - REU-VA2024W(A) using NATURAL GAS</b>			
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	2.0	0.56
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	1.7	0.55
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	1.7	0.70
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	1.5	0.70

<b>R63LSe2 - REU-VA2024W(A) using PROPANE GAS</b>			
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	3.0	0.88
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	2.8	0.90
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	2.7	1.00
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	2.7	0.80

## Gas Pressure Setting Procedure for VA (LS) Models

<b>R98LSi (REU-VA3237FFU) using NATURAL GAS</b>		<b>MAX VENT (Dip Switch #1 is OFF)</b>		<b>MIN VENT (Dip Switch #1 is ON)</b>	
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	3.0	0.67	3.0	0.67
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	2.7	0.7	2.7	0.7
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	2.7	0.8	2.7	0.8
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	2.5	1.7	2.5	1.2

<b>R98LSe (REU-VA3237W) using NATURAL GAS</b>			
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	2.8	0.65
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	2.5	0.7
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	2.5	0.7
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	2.5	0.7

<b>R98LSi (REU-VA3237FFU) using PROPANE GAS</b>		<b>MAX VENT (Dip Switch #1 is OFF)</b>		<b>MIN VENT (Dip Switch #1 is ON)</b>	
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	3.7	0.83	3.7	0.83
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	2.9	0.83	2.9	0.83
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	3.0	0.83	3.0	0.9
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	2.8	0.83	2.8	1.2

<b>R98LSe (REU-VA3237W) using PROPANE GAS</b>			
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	3.8	0.80
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	3.0	0.80
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	3.0	0.80
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	3.0	0.80

## Gas Pressure Setting Procedure for VA (LS) Models

<b>R50LSi (REU-VA2019FFU) using NATURAL GAS</b>		<b>MAX VENT (Dip Switch #1 is OFF)</b>		<b>MIN VENT (Dip Switch #1 is ON)</b>	
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	2.0	0.52	2.0	0.52
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	1.7	0.7	1.8	0.7
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	1.7	0.7	1.7	0.7
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	1.8	0.9	1.8	0.9
<b>R75LSi (REU-VA2528FFU), R94LSi (REU-VA2535FFU) using NATURAL GAS</b>		<b>MAX VENT (Dip Switch #1 is OFF)</b>		<b>MIN VENT (Dip Switch #1 is ON)</b>	
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	3.3	0.52	3.3	0.52
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	2.8	0.5	2.8	0.6
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	2.4	0.5	2.4	0.5
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	2.1	0.5	2.1	0.5
<b>R75LSi(A) (REU-VA2528FFU(A)) using NATURAL GAS</b>		<b>MAX VENT (Dip Switch #1 is OFF)</b>		<b>MIN VENT (Dip Switch #1 is ON)</b>	
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	2.7	0.52	2.7	0.52
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	2.8	0.5	2.8	0.5
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	2.4	0.5	2.4	0.5
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	2.1	0.5	2.1	0.5

<b>R75LSe (REU-VA2528W), R94LSe (REU-VA2535W) using NATURAL GAS</b>			
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	3.3	0.56
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	3.3	0.7
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	3.3	0.9
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	3.1	0.7
<b>R75LSe(A) (REU-VA2528W(A)) using NATURAL GAS</b>			
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	2.9	0.56
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	3.3	0.7
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	3.3	0.9
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	3.1	0.7

## Gas Pressure Setting Procedure for VA (LS) Models

<b>R50LSi (REU-VA2019FFU) using PROPANE GAS</b>		<b>MAX VENT (Dip Switch #1 is OFF)</b>		<b>MIN VENT (Dip Switch #1 is ON)</b>	
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	3.2	0.92	3.2	0.92
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	3.1	1.0	3.0	1.1
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	2.8	0.9	2.8	1.1
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	2.8	1.1	2.8	1.4
<b>R75LSi (REU-VA2528FFU), R94LSi (REU-VA2535FFU) using PROPANE GAS</b>		<b>MAX VENT (Dip Switch #1 is OFF)</b>		<b>MIN VENT (Dip Switch #1 is ON)</b>	
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	5.0	0.92	5.0	0.92
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	3.3	1.0	3.4	1.0
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	3.4	1.1	3.4	1.2
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	3.2	1.1	3.2	1.1
<b>R75LSi(A) (REU-VA2528FFU(A)) using PROPANE GAS</b>		<b>MAX VENT (Dip Switch #1 is OFF)</b>		<b>MIN VENT (Dip Switch #1 is ON)</b>	
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	4.4	0.92	4.4	0.92
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	3.3	1.0	3.4	1.0
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	3.4	1.1	3.4	1.2
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	3.2	1.1	3.2	1.1

<b>R75LSe (REU-VA2528W), R94LSe (REU-VA2535W) using PROPANE GAS</b>			
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	5.1	0.88
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	4.0	1.1
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	4.0	0.9
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	4.0	0.9
<b>R75LSe(A) (REU-VA2528W(A)) using PROPANE GAS</b>			
<b>Dip Switch Setting</b>	<b>Altitude</b>	<b>Max Rate inches W.C.</b>	<b>Min Rate inches W.C.</b>
#2 OFF, #3 OFF	0-2000 ft (0-610 m)	4.2	0.88
#2 OFF, #3 ON	2001-5200 ft (610-1585 m)	4.0	1.1
#2 ON, #3 OFF	5201-7700 ft (1585-2277 m)	4.0	0.9
#2 ON, #3 ON	7701-10200 ft (2277-3109 m)	4.0	0.9