



High Elevation Guideline for Diesel Units

May 2, 2023 Revision 0

The burners used in a DryAir hydronic heater must be adjusted on Diesel units operating at altitudes above 2000' in elevation to obtain the correct air to fuel ratio. Units need to be adjusted to operate efficiently and to avoid smoke and soot build-up which can result in hours of tear down and cleaning of the water heater.

The following adjustments should be made in order:

- a. Open the air damper (when possible).
 - b. Reduce fuel pressure.
 - c. Replace nozzle and adjust pressure.
- Make adjustments as listed in the following settings table. Important - these settings are a guideline, always conduct a smoke test after making an adjustment to verify performance.
 - Refer to the DryAir Altitude Adjustment video for information on how to adjust burner settings.
 - Refer to the DryAir Smoke Test video for more information on conducting a smoke test.

These videos can be found in the DryAir video section of the website (www.dryair.ca)

As the following Settings Table below is a guideline, DryAir is very interested in fielding your elevation questions and feedback. Call the DryAir service team at 1-888-750-1700 to share your real-life experiences, further improving the guidelines.

Need a replacement or different size of nozzle?

The DryAir parts department stocks the following nozzles to help properly set and maintain your hydronic heater.

Nozzle Description	DryAir Part Number	Flow at 100 PSI Operating Pressure
Nozzle Oil Burner 1.20x60 degree type A	011-904275	1.2 gpm
Nozzle Oil Burner 1.75x60 degree type W	011-900507	1.75 gpm
Nozzle Oil Burner 1.75x60 degree type B	011-903805	1.75 gpm
Nozzle Oil Burner 3.50x60 degree type B	011-702966	3.5 gpm
Nozzle Oil Burner 5.00x60 degree type B	011-702728	5.0 gpm



DryAir Diesel Settings Table for High Elevation Use

- 1) The settings below can be used as a starting point for various elevations. March, 2023
- 2) Always conduct a smoke test after adjustments to assure that the unit is burning cleanly.

UNIT MODEL	ELEVATION	PRESSURE	AIR GATE	COMMENTS
	feet	PSI	Position	
200 GTS	0-2000	160	3.75	Factory setting with 1.20x60 A nozzle & F5 Burner
	3000	160	4	
Note: Adjust the air gate to a more open position and conduct a smoke test.	4000	160	4.25	
If the smoke test is not clean repeat the process.	5000	160	4.5	
	6000	160	4.75	
	7000	160	5	
	8000	160	5.25	
	9000	160	5.5	
	10000	160	5.75	
300 GTS	0-2000	145	4	Factory setting with 1.75x60 W nozzle & F10 Burner
	3000	145	4.25	
Note: Adjust the air gate to a more open position and conduct a smoke test.	4000	145	4.5	
If the smoke test is not clean repeat the process.	5000	145	4.75	
	6000	145	5	
	7000	145	5.25	
	8000	145	5.5	
	9000	145	5.75	
	10000	145	6	
400 GTS, 400 CHU	0-2000	200	5.5	Factory setting with 1.75x60 B nozzle & F10 Burner
	3000	200	5.75	
Note: Adjust the air gate to a more open position and conduct a smoke test.	4000	200	6	
If the smoke test is not clean repeat the process.	5000	200	6.25	
	6000	200	6.5	
	7000	200	6.75	
	8000	200	7	
	9000	200	7.25	
	10000	200	7.5	
600 GTS, 650 GTS, 600 CHU	0-2000	160	4	Factory setting with 3.5x60 B nozzle & F20 Burner
	3000	160	4.25	
Note: Adjust the air gate to a more open position and conduct a smoke test.	4000	160	4.5	
If the smoke test is not clean repeat the process.	5000	160	4.75	
	6000	160	5	
	7000	160	5.25	
	8000	160	5.5	
	9000	160	5.75	
	10000	160	6	
900 GTS, 1800 HHP, 900 HCP, 900 CHU, 1800 CHU	0-2000	145	8	Factory setting with 5.0x60 B nozzle & F20 Burner
	3000	140	8	
Note: Adjust the fuel pressure lower when operating at a higher elevation and conduct a smoke test. If the smoke test is not clean repeat the process.	4000	135	8	
If a clean smoke test can not be achieved at 100 psi then a smaller nozzle will be required.	5000	130	8	
	6000	125	8	
	7000	120	8	
	8000	115	8	
	9000	110	8	
(install a smaller 3.5x60 B nozzle starting at 190 psi)	10000	105	8	