



BENCHMARK BOILER START-UP FORM

Please complete **one (1) form for each UNIT** at the site and return to AERCO for warranty validation within 30 days of start-up. After completion, e-mail this form to: **STARTUP@AERCO.COM**.

Please insure that the Edge Firmware is updated as the first step in the startup process

Form Completed By: _____ Date: _____

Location

Installation Site Name: _____ Company: _____

Street Address: _____ Phone #: _____

City, State, Zip: _____

AERCO Sales Rep: _____ Startup Technician Name: _____

Startup Technician is: ATT Technician AMT Technician Non-AERCO Trained Technician

UNIT SERIAL #: _____

Equipment Classification

Unit Type: BMK750 BMK1000 BMK1500 BMK2000 BMK2500

Number at Site _____

Unit Type: BMK3000 BMK4000 BMK5000N BMK5000 BMK6000

Number at Site _____

Benchmark Models

Please go to the section corresponding to the boiler you are starting up, fill in the combustion calibration values from the unit just started, and the Gateway section. Optionally, add any notes you wish to include on the [Additional Notes](#) page.

Once completed, e-mail this form to: **STARTUP@AERCO.COM**.

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NOTE: For proper oxygen (O₂) and combustion calibration settings, consult the following manuals:

- For all standard (non-Platinum) models, see OMM-0145 (GF-218).
- For all PLATINUM models, see OMM-0137 (GF-211).

Benchmark 750 Single-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@80%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@60%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@45%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 750 Single-Fuel Boiler – PROPANE

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@80%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@60%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@45%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 750 Dual-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 750 Dual-Fuel Boiler – PROPANE

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 1000 Single-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@80%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@60%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@45%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 1000 Single-Fuel Boiler – PROPANE

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@80%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@60%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@45%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 1000 Dual-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 1000 Dual-Fuel Boiler – PROPANE

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 1500 Single-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@16%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 16% valve position: _____

Benchmark 1500 Dual-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@16%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 16% valve position: _____

Benchmark 1500 Single-Fuel and Dual-Fuel Boiler – PROPANE

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 2000 Single-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 2000 Dual-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@16%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 16% valve position: _____

Benchmark 2000 Single-Fuel and Dual-Fuel Boiler –PROPANE

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 2500 Single-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@16%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 16% valve position: _____

Benchmark 2500 Dual-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@45%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@20%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@16%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 16% valve position: _____

Benchmark 2500 Single-Fuel and Dual-Fuel Boiler – PROPANE

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@45%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@22%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 3000 Single-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@14%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 14% valve position: _____

Benchmark 3000 Dual-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@85%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@65%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@45%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@14%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 14% valve position: _____

Benchmark 3000 Single-Fuel and Dual-Fuel Boiler – PROPANE

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@85%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@65%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@45%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 4000 Single-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@23%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 23% valve position: _____

Benchmark 4000 Dual-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 4000 Single-Fuel and Dual-Fuel Boiler – PROPANE

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 5000N Single-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 5000N Dual-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 5000N Single-Fuel and Dual-Fuel Boiler – PROPANE

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 5000 Single-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 5000 Dual-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 5000 Single-Fuel and Dual-Fuel Boiler – PROPANE

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 6000 Single-Fuel – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 6000 Single-Fuel Boiler – PROPANE

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 6000 Dual-Fuel Boiler – NATURAL GAS

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@85%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@65%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@45%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Benchmark 6000 Dual-Fuel Boiler – PROPANE

Combustion air temperature during calibration _____ °F

Gas Pressure downstream of the SSOV at 100% valve position _____ inches W.C.

Valve Position	O ₂	CO	NOx	Drive Voltage To Blower	Supply Gas Pressure	Manifold Gas Pressure
@100%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@70%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@50%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@40%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@30%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.
@18%	_____ %	_____ ppm	_____ ppm	_____ Vdc	_____ in. W.C.	_____ in. W.C.

Vacuum at Blower Proof Switch at 18% valve position: _____

Gateway Configuration

Name: _____

Gateway Model: ProtoNode (Serial)

Phone Number: _____

ProtoNode (Lon)

E-Mail Address: _____

Job Name: _____

Input wiring termination to the Gateway translation device (Check one)

- EIA-485 (2 wire)
- EIA-485 (4 wire)
- EIA-232

Building Automation System (BAS) protocol (Check one)

- BacNet:
 - IP:
 - MS/TP:
- Johnson Controls - N2:
- LonWorks:
- Modbus - IP:

What Baud Rate. (Check One):

- 156,000
- 76,800
- 38,400
- 19,200
- 9,600
- Other _____

BAS Device Address #'s _____

N2 Device Node ID _____

OR:

BACnet Device Instance #'s _____

BACnet Network Number _____

BACnet IP Address _____

OR:

LonWorks Program ID _____

ADDITIONAL NOTES: