



3 Installation Mistakes That Lead to Gas Equipment Callbacks

And How to Avoid Them Starting Now

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Callbacks

Callbacks for gas-burning appliances can be frustrating. For many service technicians, callbacks can be costly, time-consuming, and bad for your reputation. Installing gas burning appliances in a home may seem straightforward, but oftentimes, key steps can be overlooked or missed. Down the line, this can lead to equipment operation issues and costly callbacks for you.



Did You Know?

Over **90%** of appliance operating issues are related to improper gas equipment installations. The three most common mistakes are:

- 1. Failure to Check the Gas Supply Line Size and Regulator Size**
- 2. Not Verifying the Appliance is Operating to Manufacturer's Specifications**
- 3. Using Inadequate Diagnostic Tools**



Failure to Check the Gas Supply Line Size and Regulator Size

Gas supply line size and regulator size are often the cause of appliance performance issues.

Whether you're installing a range, furnace, dryer, or other gas appliance, you should always perform a thorough review of the regulator and gas supply line size.

Without checking both upfront, it's possible that issues could occur in the future, resulting in callbacks from the homeowner and wasted time and money out of your pocket.

1



Before You Begin Your Installation....

Check the Gas Line

The gas line should be large enough to meet the maximum demand of all connected appliances in the home. The line should be adequately sized to ensure it will deliver the minimum inlet pressure for each appliance per manufacturer's specifications.

To determine proper line size, you first need to understand the full load requirements from all appliances connected to the supply line. Depending on your geographical region, the capacity in cubic feet of gas per hour (CFH) could vary depending on the length and diameter of the gas line.

Check the Regulator Size

The gas pressure regulator should deliver enough gas volume to operate multiple appliances at once. If your new installation significantly increases the demand for gas flow, you might need a larger regulator.

To determine appropriate regulator size, it's important to consider the type of gas, your inlet pressure, outlet pressure, max capacity, and supply line. Your regulator is working properly if it feeds propane to the appliance at the low pressure the appliance requires for correct operation.

Indications of a Faulty Regulator or Gas Line Include:

- *Yellow flames*
- *Heavy deposits of soot*
- *Popping noises or hissing*
- *Propane smell*

With a proper line size and working regulator, your gas-burning appliance should have strong blue flames that burn cleanly and quietly.

2

Not Verifying the Appliance is Operating to Manufacturer's Specifications

No matter what type of gas appliance you're installing, **all equipment should come with recommended manufacturer's specifications**. This is typically expressed with a minimum and maximum operating range in the appropriate measurement, such as BTU/hr.

Test the Equipment

Always test your newly installed equipment at both minimum and maximum operating capacity and measure the energy output.



For Example, if you installed a gas range in a kitchen, measure your BTU/hr with each burner turned on individually (minimum capacity), then measure again with all burners on simultaneously (maximum capacity).

* Your BTU/hr output should never fall outside of the recommended specifications range. If the appliance isn't reaching the rated BTU/hr with all burners fully open, there's a good chance that the gas line size is too small.

* If the appliance performance falls outside of its specified operating range, assuming installation was done correctly, it could be a sign of an underlying issue with the regulator size. This information should be shared with the homeowner and/or appropriate utility provider.

Using Inadequate Diagnostic Tools

There are a few diagnostic tools you can use to measure gas flow and pressure during equipment start-up or troubleshooting. Most service technicians will use a flow meter or manometer. While both tools can be useful for measuring gas flow or pressure, they also have their limitations.

Flow Meter

Pros:

- High accuracy
- Measures gas flow in therms or cubic feet per hour
- Wide operating range
- Can be outfitted with a flange kit for multiple applications

Cons:

- Expensive and laborious
- Big, bulky, and heavy – not ideal for troubleshooting
- Stationary - often located outside of a home
- Calculations must be made by hand for analog flow meters



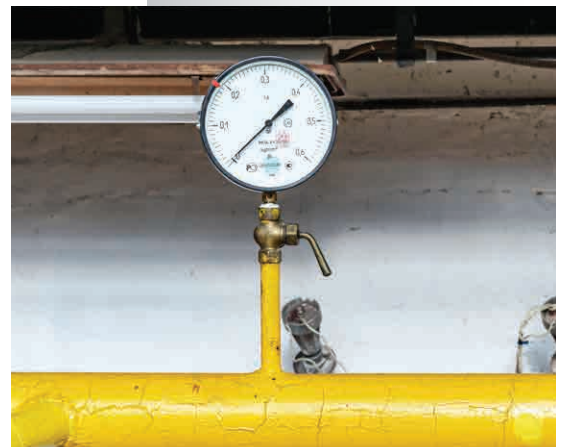
Manometer

Pros:

- Portable
- Measures gas pressure
- Available in digital
- Can be used for many applications

Cons:

- Typically, does not measure flow or provide BTU/hr
- Saving data can be a hassle
- Cannot time stamp the data or adjust the calorific value based on the type of gas used
- Difficult to provide proof to your customer of the source of the issue



When choosing a gas diagnostic tool, consider its capabilities such as type of data collected, available calculations, data collection intervals, communication methods, and export options.



The Best Way to **REDUCE CALLBACKS**

FloPro[™]MD 3-in-1

Gas Measurement
Diagnostic System

Pressure

Flow

BTU

So you've checked that your installation is correct, your regulator and gas line are properly sized, everything is working to manufacturer's spec. But still, there's an inadequate gas flow issue.

Now what?

Instead of limiting yourself with a typical flow meter or manometer, consider using **FloPro-MD[™]**, the 3-in-1 diagnostic gas measurement tool that helps you troubleshoot and diagnose gas-related issues with ease.

What is FloPro-MD?

FloPro-MD measures gas pressure, gas flow, and automatically calculates BTU/hr so you can troubleshoot with confidence, reduce callbacks, and provide solid service your customers can count on.

Plus, you can leave FloPro-MD on-site to collect and log data via Bluetooth® to a free mobile app. Instantly view data via your mobile device and provide customers with a solid report of any underlying gas-related issues.



Real-Time Data via
Free User Friendly
Bluetooth app



Calculates
Everything for You



Flowmeter,
Manometer, &
Calculator in One Tool



Compatible with
Natural Gas (NG) &
Propane



Say Goodbye to **CALLBACKS**

Now that you know the top three gas installation mistakes to look out for and the best ways to avoid them, feel confident in your next installation and relax knowing your work is solid.

- ✓ No more callbacks
- ✓ Create happy customers
- ✓ Boost your reputation
- ✓ Get more referrals to new customers
- ✓ Make your workflow more efficient
- ✓ Provide proof when you need it



“With FloPro-MD, there’s no ambiguity and no waiting to crunch data. That’s value! FloPro-MD is one of the best diagnostic, testing, and product performance tools I’ve ever seen and had the pleasure to use.”

—Patrick Schatz, Product Engineer, Hearth Products Control Company

Gas Appliance Installation Checklist:

- Check the Gas Line
- Check the Regulator Size
- Verify Manufacturer’s Specifications
- Test Equipment at the Minimum and Maximum Operating Capacity & Measure the Energy Output
- Use FloPro-MD to Measure Pressure, Flow, and BTU/Hr
- Feel Confident that Your Installation is Solid!

Scan to learn more
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Start Reducing Callbacks Now!

Get FloPro-MD Today! Available on Amazon.com.

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