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Documenting Compliant Propane Installations

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The CSA **B149.1 Natural Gas & Propane Installation Code** requires that a propane technician must ensure that appliances, accessories, components, or equipment installed by him/her are installed in compliance with the Code. The person initially activating the appliance must also validate that the appliance is left in safe working order.

One issue not spelled out in the Codes is: “How do you prove years later, that you left a compliant safe operating propane installation?” Companies that operate under a due diligence umbrella have processes in place that include documenting the installation to show that, at the time of installation, the installation was completed by a qualified employee, it was done so in compliance with the Code, and the appliances were left in safe operating condition.

Personal due diligence refers to actions that are reasonable under the circumstances and that would be expected from a reasonable person. In other words, it means taking responsibility for your actions, making your own decisions, and being able to explain logically your actions and decisions. The role of the propane technician in the due diligence process is to make the decision to use approved materials to install the appliances, piping, tubing, fittings, regulators, venting systems, etc., and to install only approved appliances for the purpose for which they were designed.

The Code defines “**approved**” as being acceptable to the authority having jurisdiction (AHJ). The Code identifies which materials are acceptable with respect to piping, tubing, fittings and venting systems.

These materials are acceptable to the AHJ when the Code is adopted by provincial or territory regulation. An appliance, equipment, a component or an accessory is acceptable to the AHJ if it bears the label or symbol of a designated testing organization or a label or symbol authorized by the AHJ certifying that it complies with an approved standard or laboratory test report. Designated testing organizations are identified in the provincial or territory regulations that adopt the Codes.

You should be familiar with the labels and symbols of the designated testing organizations authorized by your provincial or territory AHJ. Designated testing organizations that certify appliances and components are:

- Canadian Standards Association (CSA)
- Intertek
- Underwriters Laboratories of Canada (ULC)
- Underwriter Laboratories Inc. (ULI), which is US based. The ULI label must bear a small “c” to show that the approval designation is acceptable in Canada.



The use of approved materials, appliances and components, and installing them in compliance with the Code and manufacturers’ installation instructions, shows that due diligence has been applied in the physical aspects of the installation.

Written documentation, supported by digital photographs is a good way to record that the physical aspects of the installation complied with the Code and manufacturer’s installation Instructions. A propane technician needs to verify that the propane supply pressures are correct and that the appliances operate as designed. Cycle the appliances several times to make sure the operating and safety controls are functioning properly.

The weak link in proving that a propane installation was compliant and that the appliances were left in a safe operating condition is the failure to complete the documentation in a manner that accurately records the essential elements of the installation’s operating characteristics. Even though the physical aspects of an installation may have been completed to Code, the lack of accurate documentation can, at a later date, bring the integrity of the entire installation into question.

Questions that are often raised after an incident, in cases where documentation is inaccurate or lacking, is if the propane technician, in fact, completed the pressure test of the piping or tubing system, or if the installer actually verified the propane supply pressures and confirmed the operating and safety controls functioned as intended, etc.

To prove that an installation was compliant and appliances were left in safe operating condition, my advice to propane technicians is to take a few photographs and to apply as much due diligence in completing the written documentation as in performing the physical aspects of the installation.

While certified propane technicians know how to install appliances they must be properly trained on the company's documentation which records the installation and setup of the appliances. Most companies use a checklist type of form to record the installation and appliance setup.

A checklist is a greatly condensed way of identifying the items that must be checked. However, a checklist that lists "yes", "no" or "n/a" as the answer to specific questions about the appliance installation can lead to misunderstandings if the technician is not trained on the use of

the particular form. The checklist form needs to be supported by a document that speaks to all of the questions on the form. The support document is used to identify specific code sections, provide guidance when assessing an installation, and provides triggers for the technician to investigate further.

Appliances that use interior air for combustion present one of the most complicated issues a propane technician must address; is there sufficient combustion and ventilation air in the space the appliance is installed?

The checklist supporting document can provide guidelines, examples, and references which the propane technician can use to determine if, indeed, the space provides sufficient air to meet the needs of the appliance.

From a corporate perspective, it is important that the documentation your company uses to document appliance installations is adequate to prove that a compliant installation was completed and the appliance was left in safe operating condition.

The propane technician needs to complete the documentation accurately addressing all questions. Checkboxes left empty leave one wondering if the technician addressed the question. If the question is not applicable to the particular installation then indicate as so, rather than leaving a blank. Finally, take a few digital photographs and put them in the customer file.

About the Author

David Stainrod provides technical fuel and investigative consultation to the public and governments in both Canada and the United States. He is an active member of numerous provincial regulatory committees as well as CSA Codes and Strategic Steering committees. David is President of the Fuels Learning Centre and can be reached by email at david.stainrod@fuelslc.com.