

L. P. G.

Regulators

Question: When inspecting a LPG second-stage regulator, and its associated pressure-relief device, what are the clearance requirements as they relate to openings into a building?



Answer: The *Oregon Residential Specialty Code*, Section G2408.1 says that a piece of equipment and/or an appliance must be installed per the conditions of its listing, the manufacturer's instructions and the code. The manufacturer's installation instructions leads the installer/inspector to NFPA 58. Since the code does not specifically address this issue, NFPA 58 would be the appropriate standard to regulate this issue. (For similar requirements in commercial applications see Section C305.1 in the 2007 *Oregon Mechanical Specialty Code*.)

2008 Oregon Residential Specialty Code states;

SECTION G2408 INSTALLATION

G2408.1 General. Equipment and appliances *shall be installed as required by the terms of their approval, in accordance with the conditions of listing, the manufacturer's instructions and this code.* Manufacturers' installation instructions shall be available on the job site at the time of inspection. *Where a code provision is less restrictive than the conditions of the listing of the equipment or appliance or the manufacturer's installation instructions, the conditions of the listing and the manufacturer's installation instructions shall apply.*

Unlisted appliances approved in accordance with Section G2404.3 shall be limited to uses recommended by the manufacturer and shall be installed in accordance with the manufacturer's instructions, the provisions of this code and the requirements determined by the code official. (*emphasis added*)

NFPA 58 - 6.8.1.6 and .7 (2008 edition) states;

6.8.1.6 The point of discharge from the required pressure relief device on regulating equipment installed outside of buildings or occupiable structures in fixed piping systems shall be located *not less than 3 ft horizontally* away from any building or occupiable structure opening below the level of such discharge, and not beneath any building or occupiable structure unless this space is well ventilated to the outside and is not enclosed for more than 50 percent of its perimeter.

6.8.1.7 The point of discharge shall also be located *not less than 5 ft in any direction* away from any source of ignition, openings into direct-vent (sealed combustion system) appliances, or mechanical ventilation air intakes. (*emphasis added*)

Commentary on Section G2408.1:

Manufacturers' installation instructions are an enforceable extension of the code and must be in the hands of the code official when an inspection takes place. The listing and labeling process assures that the appliance and its installation instructions are in compliance with applicable standards. An inspector must carefully and completely read and comprehend the manufacturer's instructions and the code to properly perform an installation inspection.

In some cases, the code will specifically address an installation requirement that is also addressed in the manufacturer's installation instructions. The code requirements may be the same or may exceed the requirements in the manufacturer's installation instructions, or the manufacturer's installation instructions could contain requirements that are not addressed in the code or exceed those in the code. In all such cases, the more restrictive requirements would apply. Where differences or conflicts occur, the requirements that provide the greatest level of safety always apply.

If a LPG regulator is not installed according to the manufacturer's installation instructions the appropriate cite-it and write-it code reference would be Section G2408.1.

Questions concerning the installation of LPG systems from the point-of-delivery to the appliance contact your local jurisdiction, and for further clarification of this commentary contact **Micheal D Ewert** at mike.d.ewert@state.or.us or 503.373.7529. Questions concerning LPG installer licensing, tank installation permits or first-stage regulator installations contact **Jay Hardwick** at jay.hardwick@state.or.us or 503.373.1540 ext. 278.