



INFORMATIONAL BULLETIN

PARTS & SERVICE DEPARTMENT

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Date: 2/15/06

Bulletin Number: 2006-02I

TO: Manufacturers' Representatives, District Sales Managers, Regional Managers, Technical & Customer Service Personnel, Service Agents, Sales & Marketing Personnel and UK Personnel

SUBJECT: High Gas Pressure Regulators – Distance from Gas Appliance

Any Lochinvar gas fired boiler, water heater or pool heater installed on a gas supply system utilizing a 2 psi or 5 psi supply gas pressure will require a regulator to reduce the supply pressure. A properly sized lock-up type high gas pressure regulator (HGPR) should be used to reduce the gas pressure at the unit inlet to a maximum of 10.5" water column.

In order for any low gas pressure appliance to operate properly, the lock-up type high gas pressure regulator (HGPR) must be properly installed. Consult the HGPR manufacturer's recommendations, all local requirements and applicable ordinances or codes, Standard for Line Pressure Regulators ANSI Z21.80/CSA 6.22-M97 (2001), National Fuel Gas Code NFPA 54/ANSI Z223.1

Lochinvar recommends that any required line lock-up type high gas pressure regulator be installed as far as possible from the gas appliance. The regulator should be installed with a minimum of eight to ten feet of pipe from its discharge to the unit's gas inlet. If a straight distance of gas pipe is not available in the mechanical room, the addition of a vertical 'U' in the gas piping down stream of the HGPR can be used to install the required eight to ten feet of distance between regulators.

As with all low gas pressure appliances, there are two reasons for this requirement:

1. *All low pressure gas appliances have internal gas pressure regulators. These regulators are an integral part of a combination gas valve(s). If the piping distance is less than the specified minimum you may experience constant fluctuations in the supply pressure to the unit. As one regulator opens the other regulator closes because the volume of gas contained between the two regulators is too small. This results in the constantly varying the pressure that causes nuisance operational problems.*
2. *If the piping distance between the two regulators is less than the minimum specified above you may also experience spikes in gas pressure. When the appliance operation is satisfied and the unit cycles off and the gas valve closes, a spike and slow decrease in inlet gas pressure will occur. This is due to the low volume between the two regulators.*

If the minimum piping distance is not observed, the result will be flame failure lock-outs; erratic inlet gas pressures resulting in high and / low gas pressure switch lock-outs; spikes in pressure in excess of 22" water column have been observed. High gas pressure could damage the unit's gas valves/regulators or lock the gas valve so it will not operate. Remember, the nameplate maximum inlet gas pressure where operation of the appliance has been tested is noted on the appliance rating plate as 10.5" water column.