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DATE: August 31, 2010

YS-039-10 Revised 11-18-10

TO: Select York Branch Service Managers Select York Distribution Service Managers All Regional Managers

SUBJECT: Condensate in Intake Pipe

PRODUCT MODELS: All 33" Gas Furnaces with 2 Pipe Vent System in Conditioned Space

This summer, reports were received of condensate forming in the intake pipe of installations with a 2 pipe vent system running through a conditioned space. If condensate forms in a horizontal portion of the intake pipe, the optional tee with drain installed at the beginning of the horizontal run will drain condensate away prior to cabinet entry. However, if the condensate forms in the vertical portion of the intake where it enters the top panel, it will enter the furnace and can drip onto the gas valve, burner assembly, blower shelf and furnace controls.

Preliminary investigation has revealed the following. Conditions that contribute to issue:

- Furnace and intake pipe located in conditioned space
- Hot, humid weather for several days in a row
- Extended run time on AC

Other installation-related contributors:

- High return static
- Improper vent termination (both intake and exhaust)
- Cooling of intake pipe (exit in front of evaporator coil, evaporator coil not sealed to furnace and supply air blowing on intake pipe, registers blowing on intake pipe, intake pipe in contact with supply duct)
- Excessive air leakage in unit between doors/door bracket/casing
- Running system on continuous fan

Based on these observations, we recommend the following:

- Use side air intake with tee when possible Reference Figure 1
- For top panel intakes install drain tee right at top panel or use the S1-02815229000 rain gutter Reference Figure 1
- Seal all supply air leaks that would blow on or near the air intake pipe
- Seal any noticeable leaks in the corners of the blower deck, casing gasket, or door bracket
- Ensure the intake and vent terminations are as described in the installation instructions

Longer term investigation/changes:

- Improve sealing of doors, door bracket, and blower deck
- Design system for directing and/or trapping the condensation options include but are not limited to:
 - Diverter to direct water away from components
 - Relocation of intake away from components

If addressing the issues noted above does not stop the formation of condensate in the intake pipe, this YS letter provides a one hour labor allowance for the installation of the S1-02815229000 rain gutter. More information will follow when investigation is complete.

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Installation - Use Side Intake

Do not use top intake



use side intake with drain tee here instead of in horizontal intake pipe or install a rain gutter on top of the furnace

