

TECHNICAL INFORMATION COMMUNICATION



**United
Technologies**

Building & Industrial Systems

Quality and Continuous Improvement

Number: TIC2014-0004

Date: 5/22/2014

Title: Residential Condensing Furnace Unauthorized Installation Practices

Product Category: Gas Furnaces

Products Affected

35" residential condensing gas furnaces

Situation

The factory has become aware of three (3) unauthorized installation practices that may result in a hazardous condition to the resident in the event of a flue gas passage blockage. The following installation practices are not approved on the 35" condensing furnaces:

- 1) Unauthorized holes in the blower shelf
- 2) Unauthorized installation of a vent drain or trap on the vent pipe
- 3) Installation of an inducer assembly not intended for that specific model.

Technical Information

Unauthorized Holes in Blower Shelf: Holes in the blower shelf are strictly prohibited with one exception; the vent and combustion air pipes can pass through the blower shelf provided it is installed with the Internal Vent Kit KGADC0101BVC which provides a seal. The blower will pull combustion air away from the burners, resulting in elevated CO production. The flue products, which may contain elevated CO levels, are also pulled into the circulating air stream.

Unauthorized Trap/Drain on Vent Pipe: Unlike prior condensing furnace platforms, vent drains and traps are prohibited on the vent pipe unless constructing a vent system that is positioned below the level of the furnace. In this case, the External Vent Trap Kit KGAET0201ETK is used and all vent pipe is sloped to the trap ensuring it remains primed. When installing trap on a vent system that is located at or above the furnace, there may not be enough condensate in the vent to maintain a primed trap. An unauthorized drain or trap on a vent may allow flue products to enter the living space.

Application of Stronger Inducer Assembly: Use of an inducer assembly that is stronger, and moves more air, than the original assembly may result in furnace operation during a blocked vent, heat exchanger, or drain. In the event of a blockage, the pressure switches shut down the furnace before it produces 400 ppm CO (air free) or greater in the exhaust vent.

Field Corrective Action

Only trained and qualified personnel should design, install, repair and service HVAC systems and equipment. All national standards and safety codes must be followed when designing, installing, repairing and servicing HVAC systems and equipment. It is the responsibility of the Dealer to ensure local codes, standards, and ordinances are met.

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All installations with unauthorized product and vent modifications MUST be corrected immediately.

Unauthorized Holes in Blower Shelf: Seal the hole by applying a sheet metal patch with RTV.

Unauthorized Trap/Drain on Vent Pipe: Remove unauthorized trap or drains from the vent pipe and seal the vent pipe.

Application of Stronger Inducer Assembly: Remove the inducer assembly and replace with the assembly replacement designated for that condensing furnace model. Note: The replacement inducer assembly for a single stage model uses a 2-stage inducer motor. All other assembly components are identical. High stage of the 2-stage motor is the same as the single stage motor performance.

References

Condensing Gas Furnace Installation Instructions

Internal Vent Kit KGADC0101BVC Installation Instructions

External Vent Trap Kit KGAET0201ETK Installation Instructions

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