

DEALER SERVICE BULLETIN

Number: DSB 10-0007

Date: 3/17/10

Supersedes: New

Title: Infinity Control with Geothermal Split Units

MODELS AFFECTED:

Carrier: Geothermal Splits 50YDS, 50YPS

SITUATION:

We have received inquiries regarding the use of an Infinity Control with two-stage geothermal splits combined with Infinity furnaces or fan coils.

The use of two-stage geothermal split units with the Infinity control, Infinity furnaces or fan coils, and the NIM may not automatically provide the proper airflow required by the geothermal split. When a two-stage geothermal split is used with the Infinity Control, the control will operate under the assumption that the unit's compressor is a Bristol two step 50-50, when in fact, the compressor could be a 70-30 Copeland dual stage. This situation may result in lower than rated efficiency and capacity in low stage operation, the potential of the indoor coil frosting, excessive noise, and compressor failure. The installation manual for the geothermal split system specifies the minimum air flow required. The issue referenced in this bulletin occurs when the installation instructions and specifications regarding airflow have not been followed as part of the installation and configuration – it is not caused by any defect in the equipment itself. Refer to that document when configuring the air flow setting on the Infinity Control. This information must be reviewed before choosing to install a geothermal split unit.

SOLUTION:

For existing installations— Dealers who have already installed a two-stage geothermal split unit with an Infinity Control are strongly advised to arrange for a service call to adjust or verify that the configuration is set to ensure that the minimum fan speed will not cause the problems described above. If the existing CFM meets the minimum requirement for the unit as specified in the installation manual, no change is required. If the existing CFM does not meet the minimum requirement, the CFM setting on the Infinity Control should be changed to "Maximum".

For future installations— When considering the use of a two-stage geothermal split with the Infinity control, (with the NIM) with Infinity furnaces or fan coil, extreme care must be taken to ensure that the lowest fan speed used will not cause the indoor coil to frost, or cause refrigerant management issues. Refer to the unit's installation manual for minimum air flow required. Using "Maximum" CFM setting is recommended on the Infinity Control, rather than the "Comfort" or "Efficiency" setting. To eliminate this potential when using two-stage geothermal splits, it is recommended to use the FV4C fan coils or a furnace capable of the appropriate airflows, and a Carrier thermostat with 3 stages of heating and 2 stages of cooling (Carrier models TP-PRH, TP-PHP, TP-NRH, TP-NHP, TC-PHP, TC-NHP).

<p>Warning: Do not perform any of the servicing instructions provided in this Service Bulletin unless you are a trained and qualified technician. Observe all precautions in the instructions, equipment tags, labels, and observe all other safety precautions that may apply. Failure to follow this warning could result in property damage, personal injury or death.</p>
