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Technical Bulletin

TB08.002-Rev. 2

Hot Water stages in the Combination units

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Bulletin's Scope:

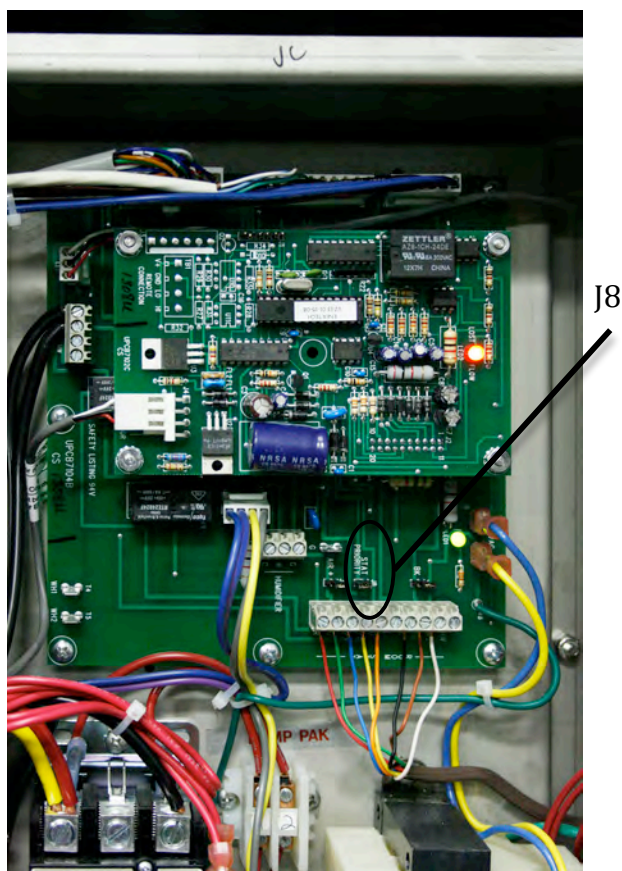
In the current control board (01CB30) there are multiple settings and wiring configurations, which can change priority and staging of the hot water heating function for combination units. Many contractors have different applications for the units, so there are many ways to setup these units. All of the possible combinations of hot water heating in the combination units will be explained in more detail throughout this tech bulletin.

Hot Water Operation – Air Priority

In many cases, the combination units will be setup for air priority. The J8 Stat Priority is installed to be setup for air priority (this jumper is installed for air priority at the factory). Hot water heating can only be utilized without “Y” calls from the room thermostat. After the “Y” calls are satisfied, the aquastat is checked for a hot water heating call. Once the water temperature of the buffer tank drops below the set point, minus the differential, the geothermal unit’s HW terminal energizes through the aquastat’s N.O. contacts. **The energizing of HW by itself will only run the compressor in first stage (67% of capacity).**

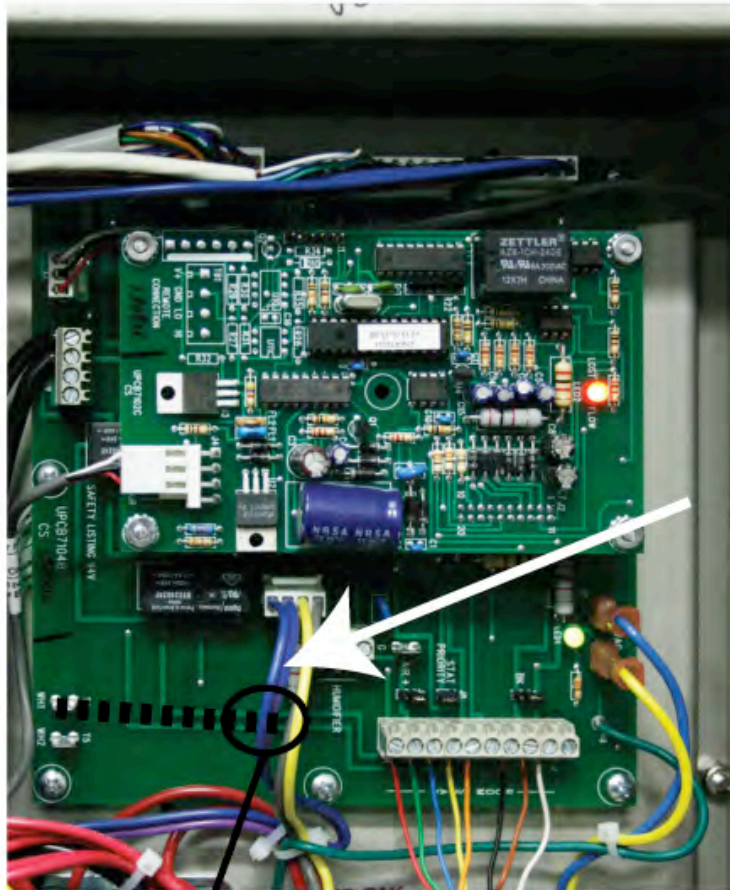
Hot Water Operation – Hot Water Priority

The J8 Stat Priority jumper will have to be removed to setup the unit for hot water priority. Hot water heating will be utilized any time there is a call from the aquastat. HW will be powered by R through the aquastat’s N.O. contacts. The energizing of HW by itself will only run the compressor in first stage (67% of capacity). The “Y” calls will only be initiated when the aquastat’s set point is reached at the buffer tank.



Changing Hot Water Mode to Full Load Operation

The energizing of HW by itself will only run the compressor in first stage (67% of capacity). The combo unit is designed to allow part or full load in forced air mode, but as noted above, only part load in hot water mode. If the application requires full load operation in hot water mode, a jumper wire may be added to the control box as shown below.



Cut the second blue wire from the left (may be purple in some models) going to the compressor solenoid valve. Run a wire (dashed line, above) from terminal WH1. Using a wire nut, connect both cut wires and the new wire from WH1.