Unitary Products Group
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SERVICE INFORMATION

DATE: September 22, 2006

YS-051-06
Fix on Fail Only
Expires 12/31/07

TO: All Coleman Evcon Service Managers
All Coleman Evcon Branch Managers
All Field Service Supervisors

SUBJECT: 2-5 Ton Champion / Echelon Gas heat – Electric Cool Units With ECM (Variable Speed) Motors periodically failing to run on a call for cool.

UNITS: All 2-5 Ton Champion / Echelon Gas Heat – Electric Cool units Packaged Units.

We have received reports of customer complaints that these units could freeze up from time to time. Investigation found that the ECM blower motor used would sometimes not respond to a thermostat requiring call for blower operation. When this happens, the compressor could operate without the blower motor, causing the coil to freeze. The problem reportedly happened at different rates on different applications. Some regularly, some only periodically.

From reports received from the field, the issue seems to be isolated to the Gas/Electric units. No confirmed Heat Pump or Electric/Electric units have been reported. The Gas / Electric units use a Honeywell control center to operate the unit.

A couple of units that experienced this problem, along with the programmable thermostats were returned from the field for testing.

Engineering has spent many hours testing these units and have been unable to find a definitive answer to the problem. What has been learned so far from testing is that there seems to be an issue with a programmable thermostat, the Honeywell control board and the ECM.

It was found that if the heat signal from the Honeywell control going to the ECM is blocked, the motor does not fail to run.
We have multiple units under test with this change and have not had a failure of the coil freezing up. Testing will continue, in an effort to identify the underlying cause of this issue. In the interim, we have come up with a field fix to take care of those units already installed and exhibiting this problem.

The fix uses a pilot relay to break the signal from the Honeywell control going to the 16-pin connector on the ECM. (Wiring diagram attached). Suggested relay part number S1-090-360 or equivalent (24 vac coil, normally open contacts rated 5 amps or greater). This will allow normal operation as the unit was designed.

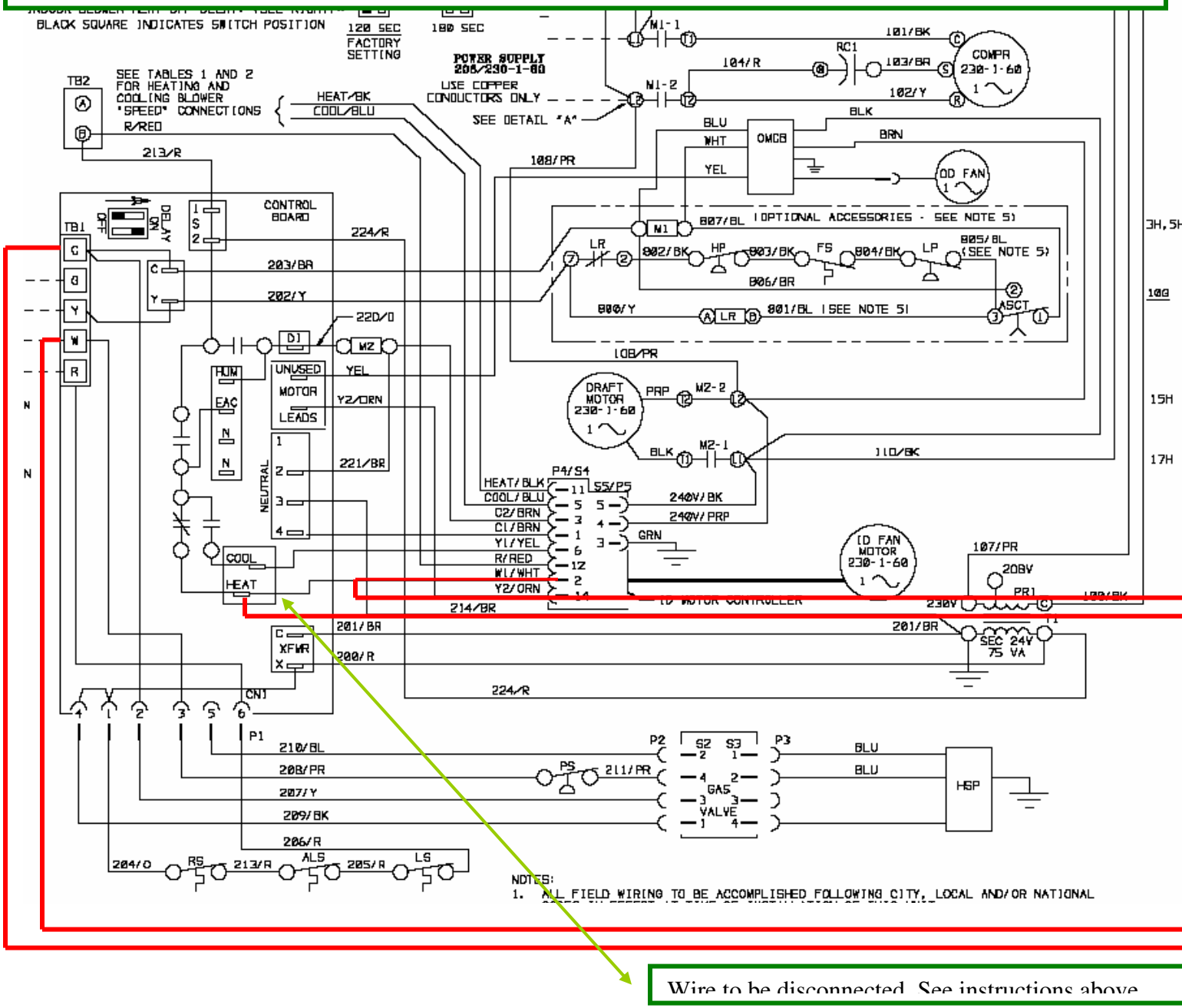
Coleman will allow a credit of $75.00 labor plus $10.00 materials (including field supplied relay) to make this change to those units exhibiting this problem.
File through the standard warranty claim process, referencing this YS letter.

We apologize for any inconvenience this may have caused.
Sincerely,

Len Renfro
Len Renfro
Field Service Supervisor

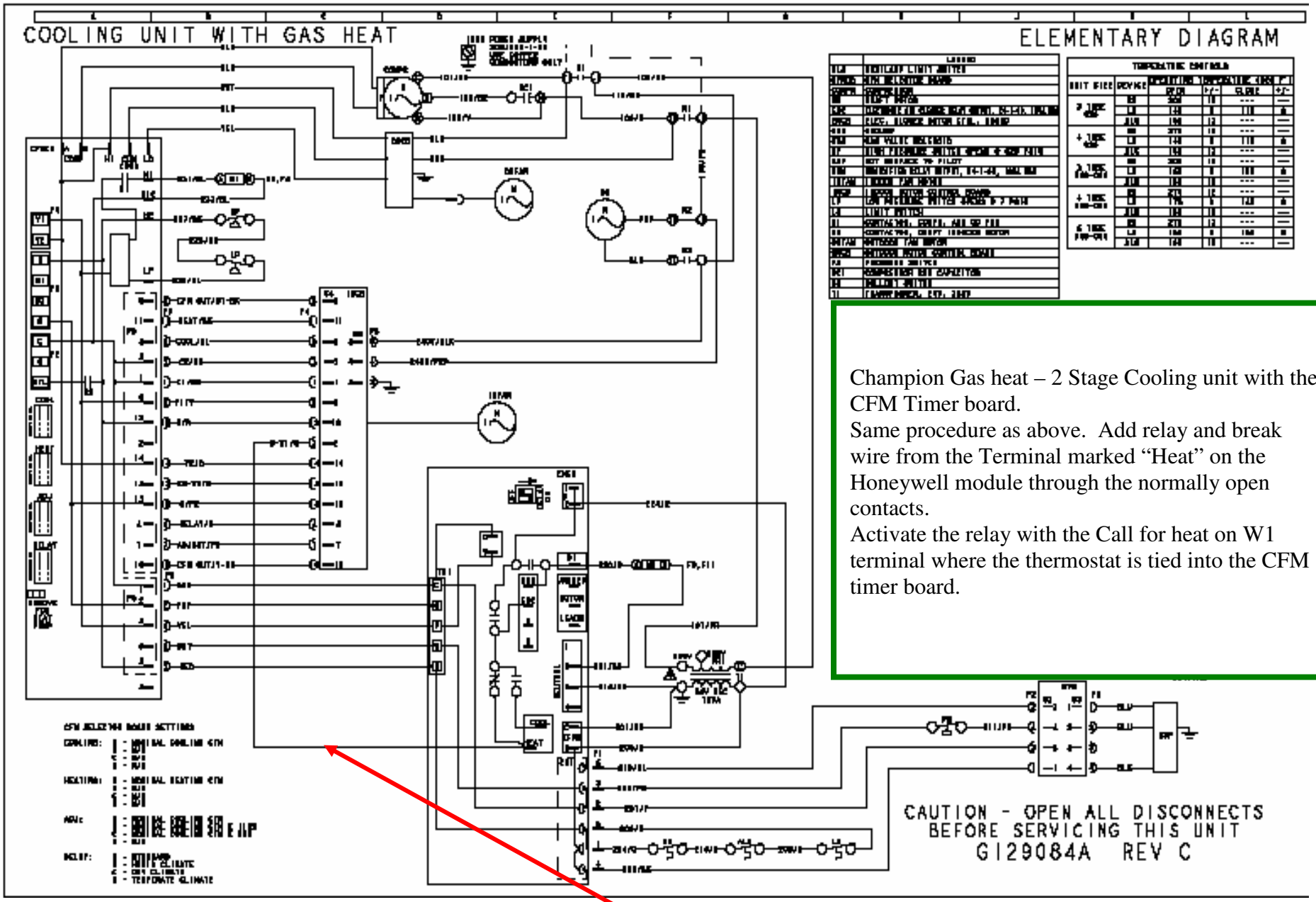
Bernie Warning
Bernie Warning
Engineering Manager II

Gas / Electric Champion packaged units with ECM motors. Single Stage.
Field fix for motor not running in cool mode.
Use relay with NO contacts with 24 vac coil. S1-090-360 or equivalent.



Mount field supplied relay with 24 vac coil, and normally open contacts.
Remove wire from heat tap on the HW control board going to the ecm module.
Connect to one side of the field relay contacts.
Connect the other side of the relay contacts back to the heat tap on the HW control.
Wire one side of the relay coil to the low voltage "C" terminal and the other side of the relay coil to the W or W1 terminal.
Effectively you have broken the heat feed from the HW control to the ECM motor module.
Upon receiving a call for heat, the relay will close and allow fan operation in the heat mode.

Wire to be disconnected. See instructions above



Champion Gas heat – 2 Stage Cooling unit with the CFM Timer board.
Same procedure as above. Add relay and break wire from the Terminal marked "Heat" on the Honeywell module through the normally open contacts.
Activate the relay with the Call for heat on W1 terminal where the thermostat is tied into the CFM timer board.

Break this wire with the Field installed relay. Normally Open Contacts.