



It's time to get comfortable.

A Johnson Controls Company

Unitary Products Group

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SERVICE INFORMATION

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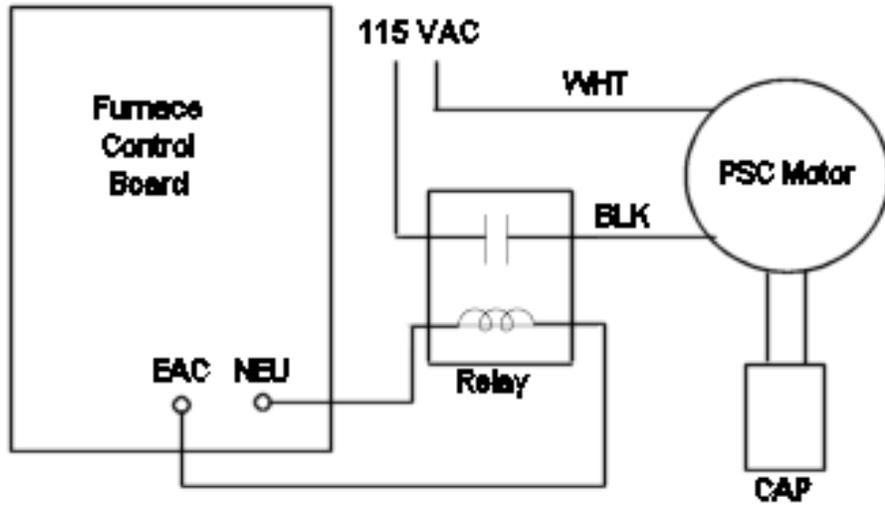
TO: All York Distributors
All Field Service Supervisors

SUBJECT: PV9, GM9V, P8V, GM8V and PC9 Variable Speed Furnaces Emergency Motor Replacement With PSC Motor

Upon failure of the ECM motor in two-stage or modulating furnaces, the servicer may not have a properly programmed replacement motor on hand. So it may be necessary to use a PSC motor as a temporary replacement, to allow heating or cooling airflow to be maintained while the proper replacement ECM motor is obtained. This is permissible, as long as the following instructions are followed:

1. Use a fan SPST or SPDT relay with a 120 volt coil and connect the wiring to the EAC terminals on the furnace control board as shown in the diagram below. **DO NOT** power the motor directly from the EAC terminals. Only the relay coil should be wired to the EAC terminals.
2. The fan relay must have normally-open contacts rated for at least 12 amps at 120 VAC
3. The fan relay must have a 120 VAC coil
4. The load from the coil of the relay must not exceed 1 amp.
Such as: S1-90-341, S1-90-362 or S1-90-372
5. The PSC motor chosen as the temporary replacement must have the same horsepower rating as the ECM motor being replaced (1/2 HP for 1,200 cfm, 3/4 HP for 1,600 cfm or 1 HP for 2,000 cfm units).
6. The motor speed tap chosen should be one that will deliver enough air for the application. To ensure that there is enough air, it is recommended that the high or medium-high speed tap be used.

Since the EAC terminals are energized at any time that the fan would normally be running, the temporary motor will run in heating mode, cooling mode or continuous fan mode. But since only one motor speed can be used, the airflow will not change speeds as a two-stage furnace switches between low and high fire. Likewise, the airflow will not modulate along with the input rate in a modulating furnace. Heating (or cooling) will be maintained, but the temperature rise will not necessarily be correct. So it is important that this condition be corrected by installing the proper ECM replacement motor **AS SOON AS POSSIBLE**.



Regards,

Ron Butcher

Ron Butcher
Field Service Supervisor

Tom Chase

Tom Chase
Senior Principal Engineer