



**TRANE™**

# General Service Bulletin

YC-SB-10A

Library	Service Literature
Product Section	Unitary
Product	Rooftop - Lt. Comm. Single Zone
Model	YC
Literature Type	General Service Bulletin
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**SUBJECT:** Two (2) Speed Combustion Blower Motor Failures on Mid-Range Voyager Gas/Electrics

**INTRODUCTION:** The 6 1/4 through 20 Ton Voyager gas/electric units, use two (2) speed combustion blower motors. The motors used in the assemblies have had the windings burn out prematurely. The specific part numbers are FAN-1519, FAN-1535, and FAN-1536. These blowers have been redesigned, and new replacement parts are available.

**MODELS AFFECTED:** This covers both the downflow and horizontal configurations and all voltage variations as follows:

<u>Downflow</u>	<u>Horizontal</u>
YCD075 _ H _ B	YCH075 _ H _ B
YCD090 _ H _ B	YCH090 _ H _ B
YCD102 _ L _ _	YCH102 _ L _ _
YCD102 _ H _ _	YCH102 _ H _ _
YCD120 _ L _ _	YCH120 _ L _ _
YCD120 _ H _ _	YCH120 _ H _ _
YCD150 _ L _ _	YCH150 _ L _ _
YCD150 _ H _ _	YCH150 _ H _ _
YCD180 _ L _ _	YCH180 _ L _ _
YCD180 _ H _ _	YCH180 _ H _ _
YCD210 _ L _ _	YCH210 _ L _ _
YCD210 _ H _ _	YCH210 _ H _ _
YCD240 _ L _ _	YCH240 _ L _ _
YCD240 _ H _ _	YCH240 _ H _ _

**DISCUSSION:** The combustion blower motor is a permanent split capacitor type of motor. The low speed operation is achieved by adding more wire turns to the main winding which increases its resistance. When the blower motor operates on high speed, an abnormally high voltage is generated in the extended winding that was added for low speed operation. This will lead to insulation breakdown and motor failures.

These motors were redesigned with an additional motor lead that eliminates this high voltage condition. Additionally, the run capacitor has been changed from a small plastic cased design mounted directly on the blower, to a standard metal can mounted on the heating compartment side panel.

**FIELD CORRECTIVE ACTION:** A rework motor kit is now available that corrects high speed blower operation. The new part numbers are cross referenced below with the original part number and the tonnage size of the unit.

<u>New Rework Kit</u>	<u>Original Part Number</u>	<u>Fits Unit Size</u>
FAN-1670	FAN-1519	6¼ Ton, High Heat 7½ Ton, High Heat 8½ Ton, Low Heat 10 Ton, Low Heat 12½ Ton, Low Heat
FAN-1669	FAN-1535	8½ Ton, High Heat 10 Ton, High Heat 12½ Ton, High Heat 15 Ton, Low Heat 17½ Ton, Low Heat 20 Ton, Low Heat
FAN-1671	FAN-1536	15 Ton, High Heat 17½ Ton, High Heat 20 Ton, High Heat

Each kit contains:

- \* New blower motor assembly
- \* Revised wiring instructions (copy attached)
- \* New run capacitor (must be field mounted)
- \* Replacement gaskets
- \* Replacement sight glass

\* **IMPORTANT** - If a failed motor is being replaced on a 460V or 575V unit, check the power transformer for possible damage (by overloading) during the motor failure.

**FACTORY PRODUCTION/SHIPMENTS:** Models produced with serial number date codes F06 and later have the new blower motor (and will not require rework).

Other models in warehouse stock are being reworked prior to shipment. These can be identified by an "ORANGE" label (approximately 3" x 6") adjacent to the product label on the exterior of the shipping crate. These models do not require rework.

**PARTS RETURN:** All motors removed from equipment must be returned to the factory. This includes motors that failed and motors removed per this bulletin and are still in good working condition:

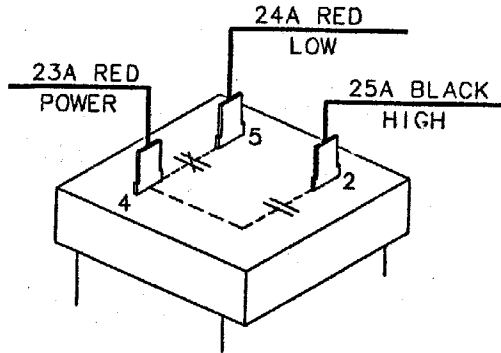
Return to:

The Trane Company  
Highway 79 North  
Clarksville, TN 37040  
Attn: Don Travis

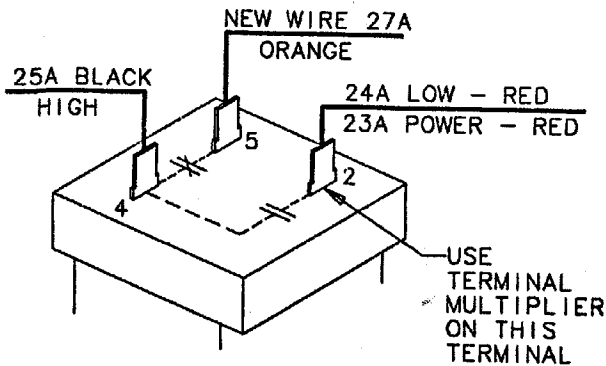
**ISSUED BY:** Product Service, Clarksville, TN (615-648-5149).

# COMBUSTION FAN RELAY (CFR) WIRING CHANGE

6.25 - 7.50 TON UNITS

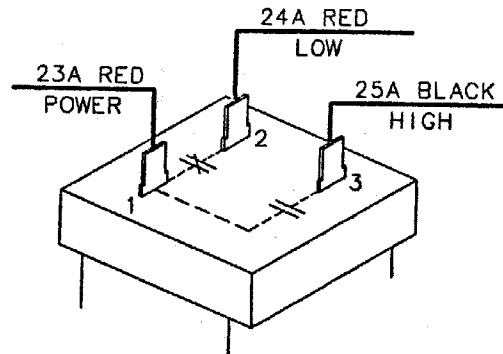


EXISTING WIRING ARRANGEMENT

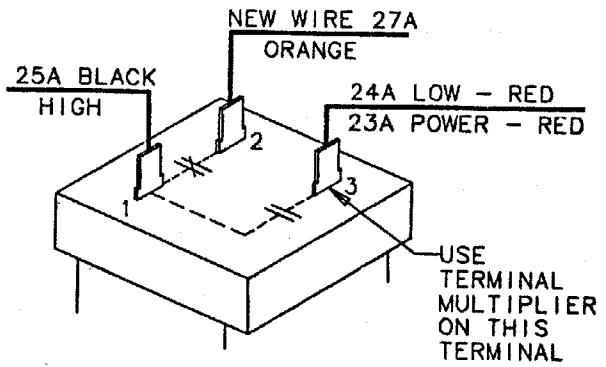


REVISED WIRING ARRANGEMENT

8.5 - 20.0 TON UNITS



EXISTING WIRING ARRANGEMENT



REVISED WIRING ARRANGEMENT