

PACKAGED UNIT KITS AND ACCESSORIES

©2018

506113-02
09/2018
Supersedes 506113-01, 506427-01,
506623-01, 506807-01

VFD REPLACEMENT KIT

INSTALLATION INSTRUCTIONS FOR VARIABLE FREQUENCY DRIVE (VFD) REPLACEMENT KITS

WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a licensed professional HVAC installer or equivalent, service agency, or the gas supplier.

CAUTION

As with any mechanical equipment, contact with sharp sheet metal edges can result in personal injury. Take care while handling this equipment and wear gloves and protective clothing.

WARNING

ELECTRICAL SHOCK HAZARD.
Failure to follow instructions exactly could result in serious injury or death.
VFD HOLDS A POTENTIALLY LETHAL CHARGE UP TO 10 MINUTES AFTER POWER HAS BEEN DISCONNECTED. Do not open VFD cover until 10 minutes AFTER power source has been disconnected and power lamp has turned off.
Read manual provided by VFD manufacturer. Carefully review and follow all safety warnings in that manual also.



WARNING

ELECTRICAL SHOCK HAZARD.

STOP! Before you continue, make sure that power to the VFD has been off for at least 10 minutes. The capacitor in the VFD holds high voltage power for up to 10 minutes after power has been disconnected.

TABLE 1

HP Rating	Voltage	Kit Number	Catalog Number
2HP	230V	615610-01	15G14
	460V	615610-02	15G16
	575V	615610-03	15G17
3HP	230V	615610-04	15G18
	460V	615610-05	15G19
	575V	615610-06	15G20
5HP	230V	615610-07	15G21
	460V	615610-08	15G22
	575V	615610-09	15G24
7.5HP	230V	615610-10	15G25
	460V	615610-11	15G26
	575V	615610-12	15G27
10HP	230V	615610-13	15G28
	460V	615610-14	15G29
	575V	615610-15	15G30
15HP	230V	615610-16	15G52
	460V	615610-17	15G53
	575V	615610-18	15G69
20HP	230V	615610-19	15G72
	460V	615610-20	15G73
	575V	615610-21	15G74
25HP	230V	615610-22	15G75
	460V	615610-23	15G76
	575V	615610-24	15G77
30HP	230V	615610-25	15G78
	460V	615610-26	15G79
	575V	615610-27	15G80

Shipping and Packing List

Package 1 of 1 contains:

1 – Preprogrammed VFD (A96 or A137)

Application

Kits are used to replace the variable frequency drive (VFD) in LG/LC, SG/SC, KG/KC/KH, TA/EL series units.

See table 1 for usage.

Installation

- 1 - Disconnect all power to the unit and **WAIT AT LEAST 10 MINUTES** before opening the VFD cover. See figures 1 through 4 for location.



VFD LOCATION - TA SPLIT SYSTEM AIR HANDLER

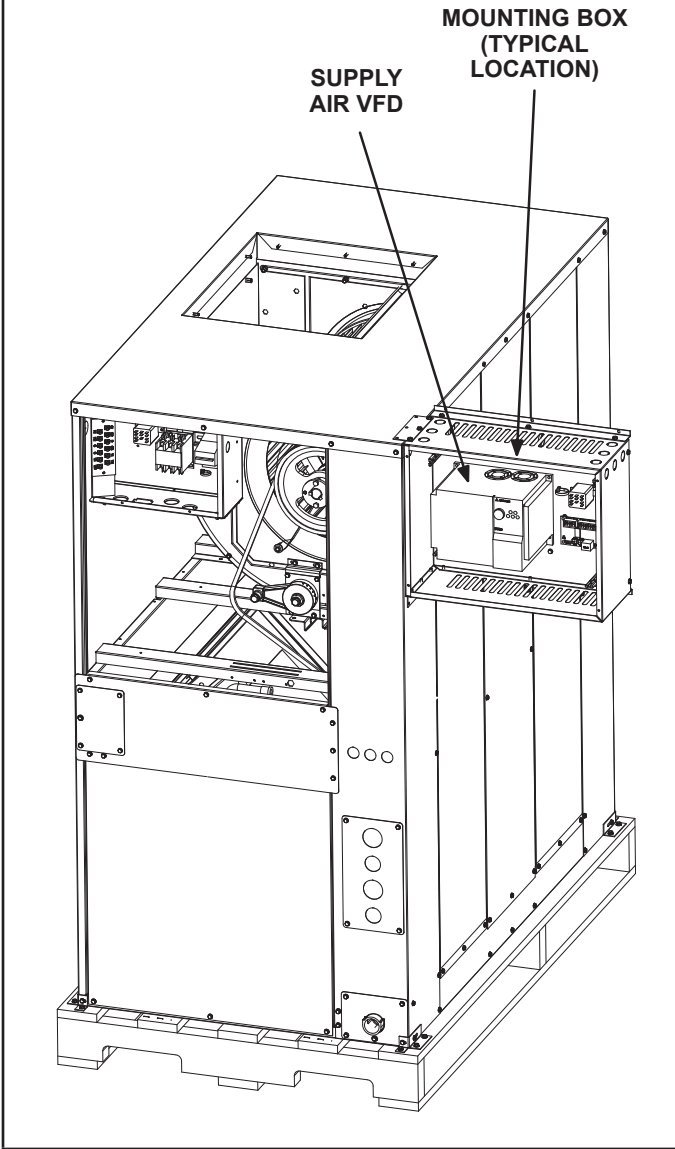


FIGURE 1

VFD LOCATION - EL SPLIT SYSTEM AIR HANDLER

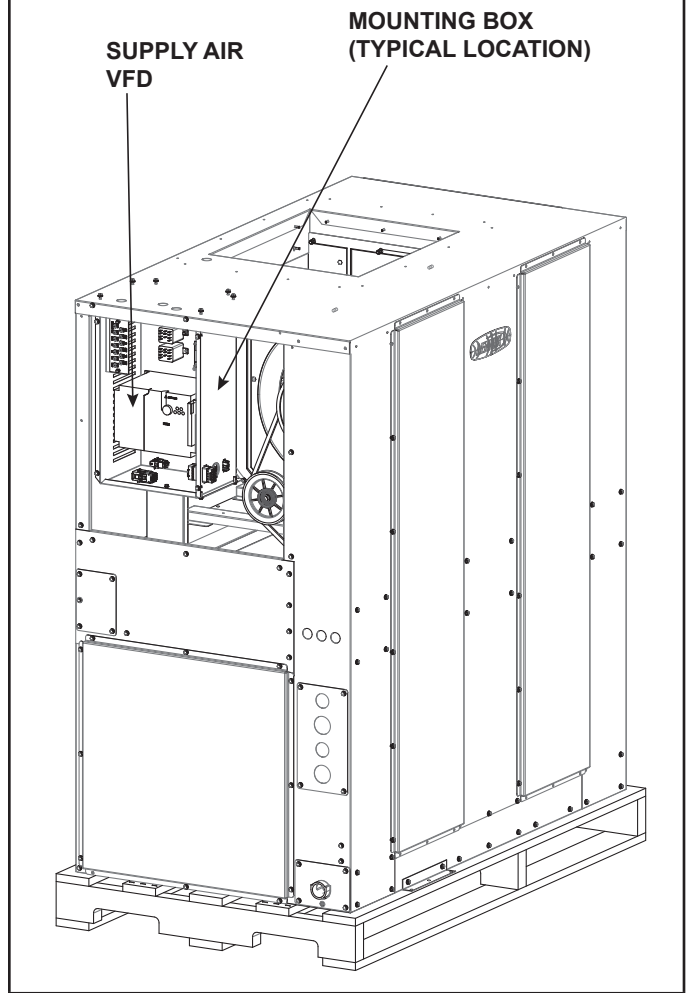
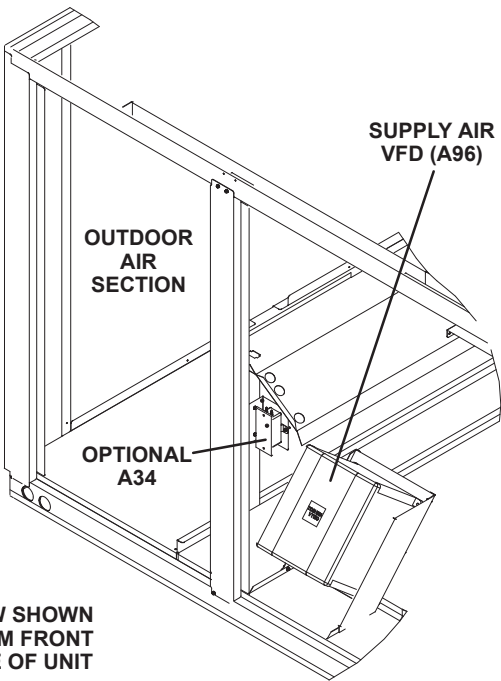


FIGURE 2

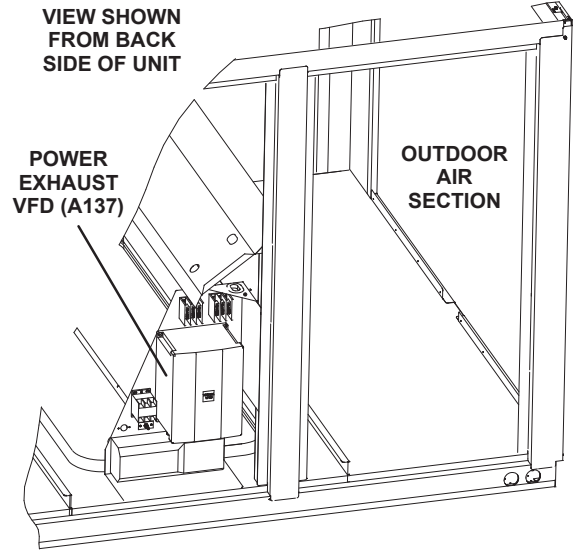
**SUPPLY AIR VARIABLE FREQUENCY DRIVE
420, 480, 540, & 600 UNITS**



VIEW SHOWN
FROM FRONT
SIDE OF UNIT

FIGURE 3

**POWER EXHAUST VARIABLE FREQUENCY DRIVE
420, 480, 540, & 600 UNITS**

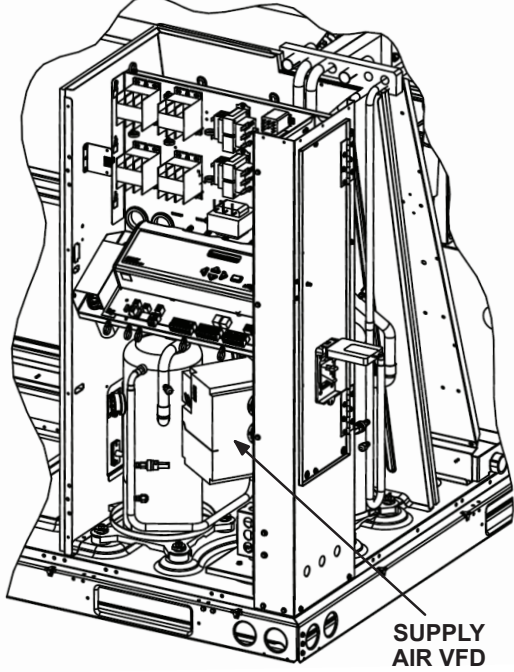


VIEW SHOWN
FROM BACK
SIDE OF UNIT

FIGURE 4

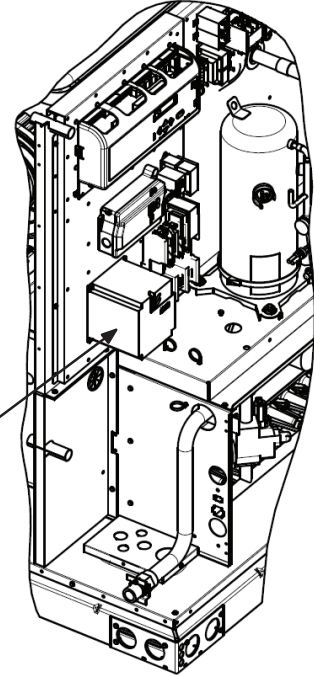
VFD LOCATION

LGH/LCH092-150
KG/KC/KH 092-150

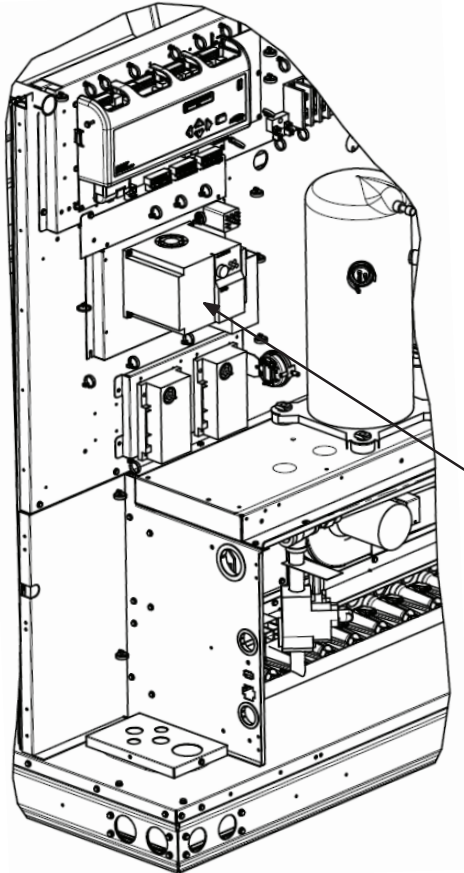


SGC/SCC120

SUPPLY
AIR VFD



LGH/LCH156-300S
KG/KC/KH 180-300



SUPPLY
AIR VFD

LGH/LCH242H-360H
SGC/SCC240 & 288

SUPPLY
AIR VFD

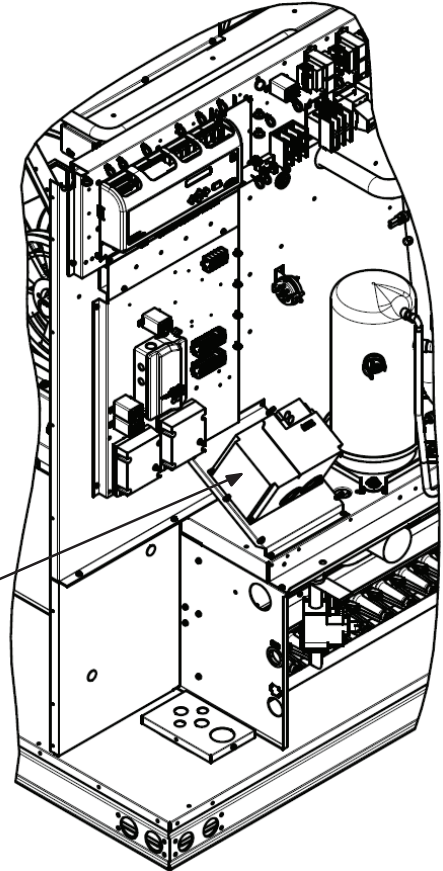


FIGURE 5

Installation – continued

- 2 - Open the lower cover on the VFD to access wire connections. Disconnect the wires from the terminals, making special note of the wire color and stamping that was connected to each terminal. See figures 6 through 10.
- 3 - Remove the top two screws which secure the existing VFD to the mounting bracket. Loosen the lower two securing screws and remove the existing VFD from the controls compartment.

NOTE - It is not necessary to completely remove the two lower screws to remove the VFD.

NOTE - If the existing VFD is model E520 or E540 it may be necessary to drill new mounting holes in the VFD mounting plate. The model number is located on the VFD nameplate.

- 4 - Slide keyholes on replacement VFD over lower securing screws. Reinsert and tighten two upper screws, then tighten lower screws.

⚠ WARNING

Power wiring must be connected properly. Improperly connected power wiring may result in damage to the VFD.

- 5 - Carefully connect existing wires to the replacement VFD. On units without harnesses, take care to properly connect the power wiring going into and out of the VFD.
- 6 - Close access panel and restore power to the unit.

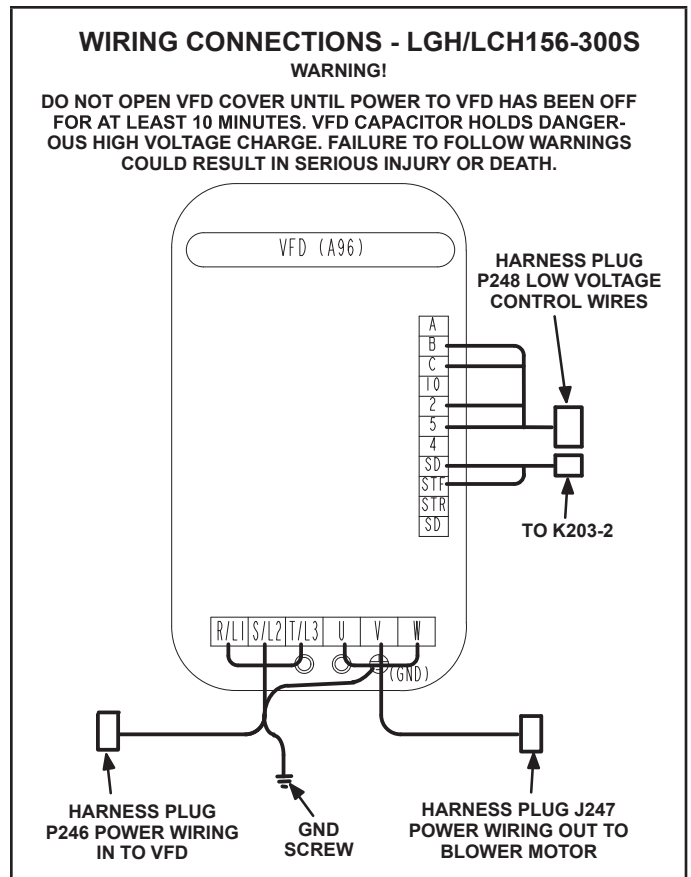


FIGURE 6

**WIRING CONNECTIONS -
LGH/LCH092-150 & 242H-360H; SGC/SCC120-288;
LGH/LCH420-600**

WARNING!

DO NOT OPEN VFD COVER UNTIL POWER TO VFD HAS BEEN OFF FOR AT LEAST 10 MINUTES. VFD CAPACITOR HOLDS DANGEROUS HIGH VOLTAGE CHARGE. FAILURE TO FOLLOW WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

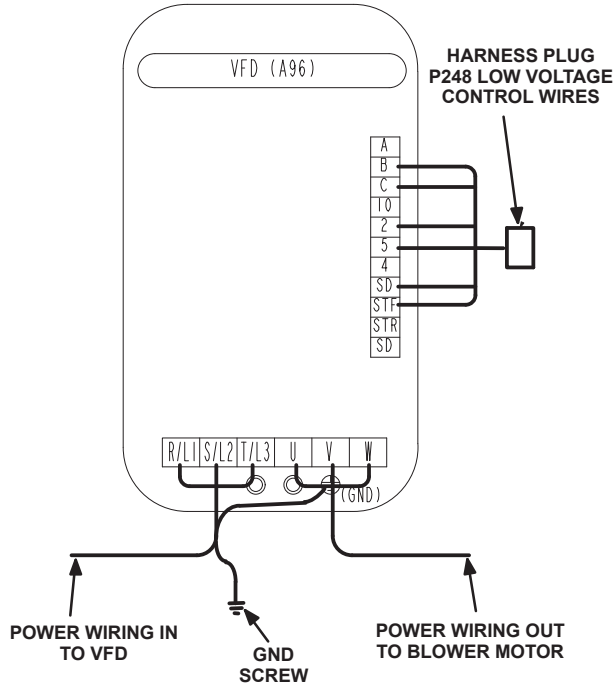


FIGURE 7

WIRING CONNECTIONS - KG/KC/KH 180-300

WARNING!

DO NOT OPEN VFD COVER UNTIL POWER TO VFD HAS BEEN OFF FOR AT LEAST 10 MINUTES. VFD CAPACITOR HOLDS DANGEROUS HIGH VOLTAGE CHARGE. FAILURE TO FOLLOW WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

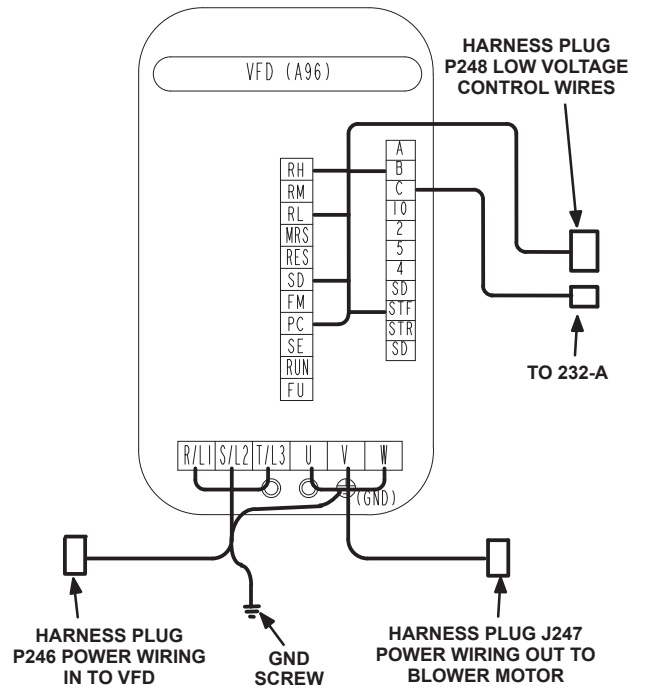
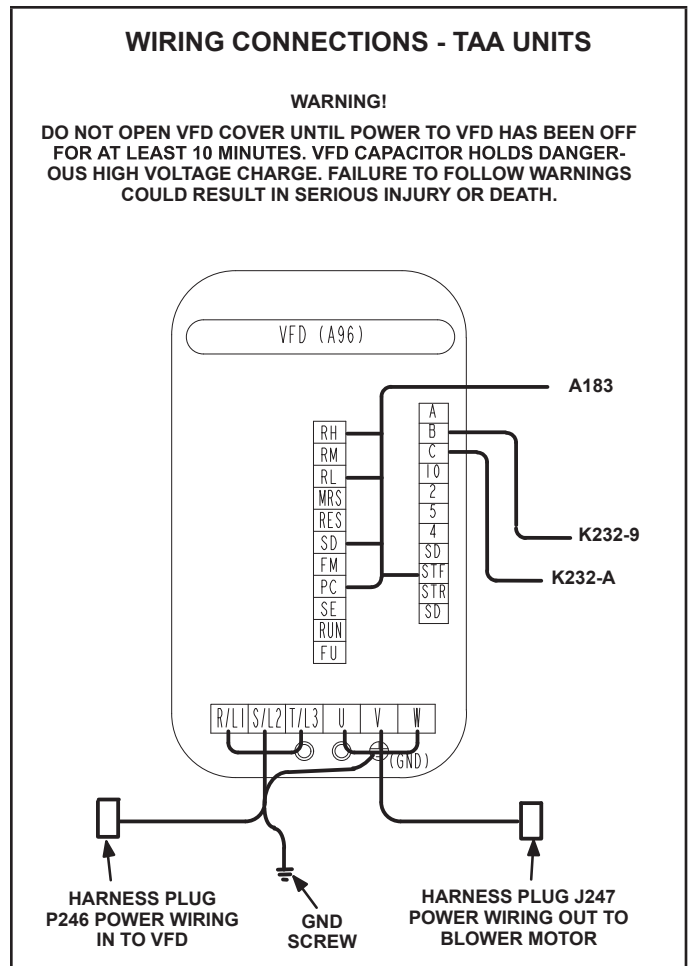
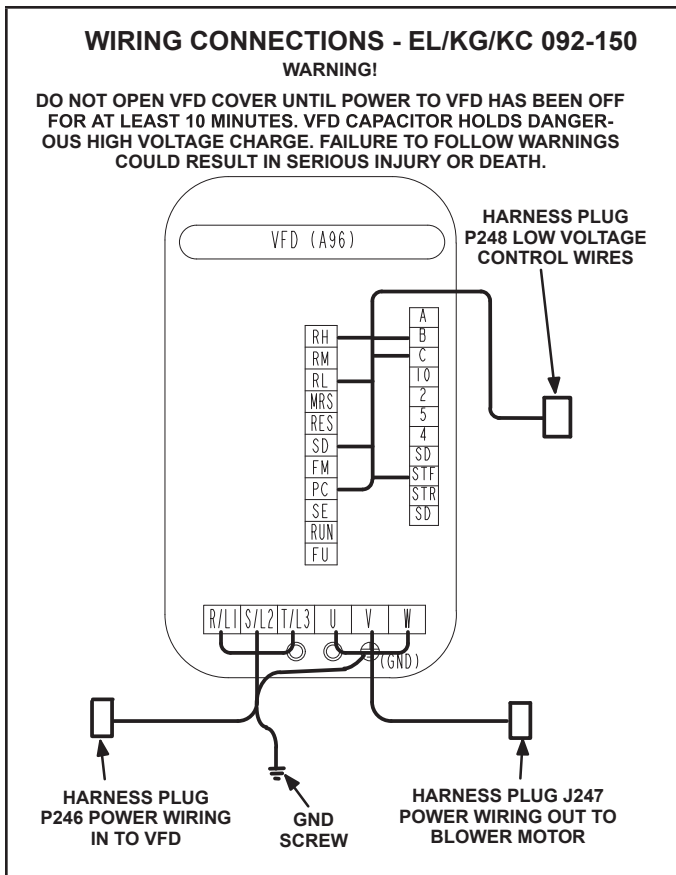


FIGURE 8



Verify Proper Operation

- If the blower is not rotating in the proper direction:**
- 1 - Disconnect all power to the unit and open the compressor / controls compartment access panel.
 - 2 - Reverse any two power wires going from the VFD to the blower motor.
 - 3 - Check all field wiring to the VFD. No wires should be connected to TB2-STR.
 - 4 - Check to ensure that wiring connections are secure.
 - 5 - Close access panel and restore power to unit.

- Verify proper operation of VFD:**
- Refer to staged supply air blower unit start-up instructions in unit installation instructions.
- NOTE - Operate unit in the heating mode or mode which operates at the highest blower speed. Measure amp draw to blower motor between the VFD and blower motor. Verify that the amperage does not exceed the FLA value listed on the motor nameplate.*