Electric Heater Model WGF series 208/240-1-60 208/240-3-60 480-3-60	INSTALLATION INSTRUCTIONS Date: 11/16/2012	TRANE GAF2 series 2 Air Handlers (018-036)

GENERAL

This electric heater series is engineered, designed, and approved to be installed in the Trane / American Standard GAF2 series 2 air handlers. Before proceeding, check the heater label for the correct voltage and KW requirements.

Installation and servicing of this equipment should only be performed by trained and qualified personnel. Before proceeding with the heater installation, inspect thoroughly for shipping damage. Notify the shipper immediately if any damage is found. Check all porcelain insulators for breakage and inspect heater element wire to see that none have been deformed. Clean all dirt, dust and moisture from equipment. **Check for proper clearances of live parts, between phases, and to ground.** Make sure that all required barriers are in place. Check conductors run in multiple to insure that they are properly wired. Refer to base installation instructions for complete unit installation details. **Verify that all elements are properly secure in their ceramic holders.**

HEATER INSTALLATION

1. Refer to the base unit installation instructions as required. Affix Warren Heater installer label to the Coil compartment panel.
2. Remove heater comparment panel of the air handler unit.
3. Remove cover plate from back panel of air handler control and wiring compartment. Retain the (3) screws removed for later use.
4. Remove and discard the factory installed Terminal Block and wire harness assembly.
5. Carefully move factory wiring out of the way and position and slide heater assembly into blower section through the access opening. Secure heater into place with screws removed from cover plate.
6. Remove the plug from the heater compartment panel and apply the heater wiring diagram for future reference (see fig. 2).

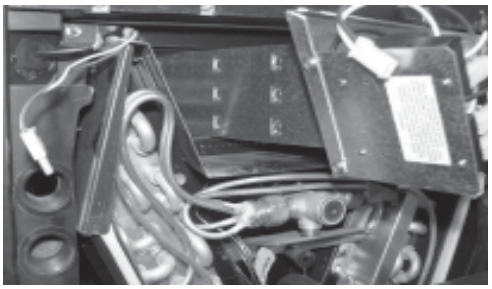

Fig. 1 - Heater frame insertion.

Fig. 2 - Wiring diagram on panel.

ELECTRICAL CONNECTIONS

1. All electrical connections, wire sizes and type and conduit sizes shall meet the National Electric Code, State and Local Codes. Main power supply, minimum wire sizes, circuits, fusing, etc. is shown on schematic wiring diagrams. Use copper wire only.
2. Power may be brought into the unit through the conduit knockout located on the top side of the unit the top..
3. Refer to base unit instructions for recommended wiring procedures.
4. Connect the high voltage 3-pin plug from the heater to the 3-pin receptacle of the air handler (see fig. 3).
5. Connect the Low voltage 2-pin plug from the heater to the 2-pin receptacle of the air handler (see fig. 3)

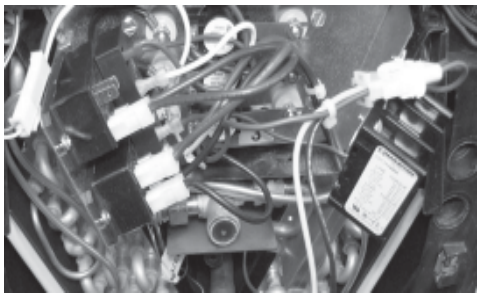

Fig. 3 - Heater connector locations.

WARNING

Before performing service or maintenance operations on system, turn off all main power switches. There may be more than one disconnect. Turn off accessory heater power switch if applicable. Electrical shock can cause personal injury. ***TAG DISCONNECT SWITCH(ES) WITH A SUITABLE WARNING LABEL.*** When installed in a garage, heater elements should have a clearance of 18" from the floor, insure that the area is ventilated.

. 6. **480V "A" models:** The transformer is for use on applications were 480V heaters are being wired into 208/240 volt single phase AHU.The single point transformer must be externally mounted and secured with screws onto the air handler unit. Use the louvered transformer cover (provided) for protection of this part (see fig. 4). For wiring purposes the wiring on the transformer is labeled and color coded (refer to schematic).

7. 480V "non transformer" model: Dual source circuit is required to power the electric heater and unit separately. Connect the high voltage 3-pin plug from the heater to the 3-pin receptacle of the air handler. Connect the Yellow and Red wire leads to the 240V field connection to power the unit.

8. Separate all wires from incoming power leads. Be sure that all electrical terminal connections, clamps, screws, etc. are tight before proceeding. Verify that there are no possible shorts to ground.

9. Check wiring diagram supplied with heater for specific connections and information.

10. Check operation as described in start-up section.

START-UP AND CHECK-OUT

CAUTION: Before proceeding, verify that all wiring is correct per factory approved schematic. Notify factory immediately of any discrepancies.

1. Refer to base unit installation instructions as required.
2. **Check for loose terminal connections.**
3. Check that all fuse and circuit breaker short circuit interrupting ratings are adequate.
4. Turn on unit and heater power.
5. Set thermostat to call for heat.
6. Check operation of heater.
7. **Check that air flow across heater is at or above minimum recommended fan speed. Refer to Tap speed adjustment chart below.**

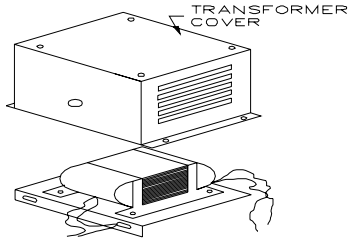

Fig. 4 - Transformer Cover.

	WGF SERIES - TAP SPEED ADJUSTMENT FOR MINIMUM AIRFLOW.					
EQUIPMENT MODEL	WGF0502, WGF0504,WGF0505(A)		WGF0802, WGF0804, WGF0805(A)		WGF0504, WGF1004, WGF1005(A)	
	without HP	with HP	without HP	with HP	without HP	with HP
GAF2A0A18S11SAA	TAP 1	TAP 3	TAP 2	TAP 3	TAP 2	TAP 3
GAF2A0A24S21SAA	TAP 1	TAP 2	TAP 2	TAP 3	TAP 1	TAP 3
GAF2A0A30S21SAA	TAP 1	TAP 1	TAP 2	TAP 2	TAP 1	TAP 3
GAF2A0A36S31SAA	TAP 1	TAP 1	TAP 1	TAP 1	TAP 1	TAP 1
GAF2A0A36M31SAA	TAP 1	TAP 2	TAP 5	TAP 5	TAP 1	TAP 3

CAUTION: When commissioning any AHU with electric heat, **ALWAYS** check to see if the heater is cycling on its automatic reset high temperature limit when the system is producing the highest temperature leaving the AHU coil. **If** the heater is cycling increase the air flow by increasing the fan speed or lowering the ductwork static pressure

HEATER KIT CONTENTS

1. Heater assembly
2. Installation Instructions
3. Installer label
4. Wiring diagram

USER CAUTION: The use of improperly selected air filters/ and or operation with dirty filters may result in insufficient airflow which may result in abnormal operation of electric heaters and tripping of temperature safety limits. Also, insufficient airflow will degrade the efficiency of the system (SEER rating) and excessive wear and premature failure of the system compressor may result. Other conditions, such as undersized or obstructed ductwork, may also cause insufficient airflow. It is recommended that a qualified technician be consulted to ensure proper airflow and air filtration selection and application. See (**www.lowairflow.com**) for more information.