SERVICE INSTALLER'S GUIDE

18–CH61D1–4A–EN

KIT 15943

ALL phases of this installation must comply with NATIONAL, STATE AND LOCAL CODES

Models:	***UD2C100A9602A**	***DD2B080A9362A**	***UD060R937****	***UD120R960****	***DD100R960****
***UD2A040A9242A**	***UD2D100A9602A**	***DD2B100A9482A**	***UD080R936****	***UD140R960****	***DD120R960****
***UD2A060A9362A**	***UD2C120A9542A**	***UD2C100A9482A**	***UD080R948****	***DD040R924****	***DD140R960****
***UD2B060A9362A**	***UD2D120A9602A**	***UD2C100A9602A**	***UD100R936****	***DD060R936****	
***UD2B080A9362A**	***UD2D140A9602A**	***UD2D120A9602A**	***UD100R948****	***DD060R937****	
***UD2B080A9482A**	***DD2A040A9242A**	***UD2D140A9602A**	***UD100R960****	***DD080R936****	*** May be "A" or "T"**
***UD2B100A9362A**	***DD2A060A9362A**	***UD040R924****	***UD100R961****	***DD100R945****	**** May be "A" - "Z"**
***UD2C100A9482A**	***DD2B060A9362A**	***UD060R936****	***UD120R954****	***DD100R948****	

IMPORTANT—This document is customer property and is to remain with this unit.
Please return to service information pack upon completion of work.

Assembly Drawing No. D343813G04,
KIT COMPONENTS — APPLICATION:

Item No.	Drawing No.	Description	Qty
1	D156805P01	SILICON NITRIDE IGNITER (SiNi)	1
2	D343723P01	HARNESS-ADAPTER	1
3	D344301P01	IFC	1
4	D344427P01	MNEMONIC LABEL	1
5	D344429P01	WIRING DIAGRAM-UD	1
6	D344430P02	WIRING DIAGRAM-DD	1
7	N156P1506B	SCR 8-18 AB HXW 3/8 S	3
8	A138030P01	TIE-CABLE	4
9	A341948P02	IGNITER BRACKET	1

Use these instructions when replacing the following Integrated Furnace Controls (IFC):

White-Rodgers Dwg. No.	Trane Dwg. No.	Replacement Part No.	Description
50M61-495-05	**D341418P01**	**CNT03077**	**SiNi**
50M61-495-06	**D341418P02**	**CNT05122**	**SiNi**

⚠ WARNING

Disconnect power to the unit before removing the blower door. Failure to follow this warning could result in personal injury from moving parts.

⚠ WARNING

The cabinet must have an uninterrupted or unbroken ground according to National Electrical Code, ANSI/NFPA 70 – "lat–est edition" and Canadian Electrical Code, CSA C22.1 or local codes to minimize personal injury if an electrical fault should occur. A failure to follow this warning could result in an electrical shock, fire, injury, or death.

REMOVING THE EXISTING CONTROL AND IGNITER:

A) Turn the thermostat to the off position.

B) Disconnect all electric power and shut off the gas supply to the furnace.

C) Remove the burner door and blower door.

⚠ WARNING

Do not touch igniter. It is extremely hot. Failure to follow this warning could result in severe burns.

D) Disconnect the igniter wire harness and remove the igniter and bracket from the burner assembly. Discard the igniter and bracket.

⚠ CAUTION

Label all wires prior to disconnecting controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

E) Disconnect all the wires from the IFC and remove the IFC.

INSTALLING THE NEW SILICON NITRIDE (SiNi) IGNITER:

A) Install the igniter (item 1) to the igniter bracket (item 9) using the screw provided in the kit (item 7).

B) Attach the harness adapter (item 2) to the plug on the new igniter.

INSTALLING THE NEW SiNi CONTROL:

A) Set dip switches per Table 1.

B) Install the new IFC in the same location of the previous control.

C) Reconnect the wires to the IFC. Refer to the wiring diagram on the blower door for proper connection of wires.

D) Secure the harness wiring with the cable ties provided in the kit (item 8).

E) Reinstall the burner and blower doors.

F) Reconnect all electric power and turn on the gas supply to the unit.

VERIFICATION OF PROPER OPERATION:

⚠ CAUTION

The integrated furnace control is polarity sensitive. The hot leg of the 115 VAC power must be connected to the BLACK field lead.

A) Place the thermostat in the heating mode.

B) Initiate a call for heat by raising the thermostat setting 5 degrees above the room temperature.

C) Observe the furnace: The following start-up sequence should be observed:

- The draft inducer should energize, then the igniter should start to glow.

- After the igniter heat up time has expired, the gas valve will energize and the gas will ignite.

- After 45 seconds the main blower will turn on.

When proper operation has been verified, set the thermostat back to the desired comfort set point.

D) Attach the mnemonic label (item 4) to the front of the blower door.

E) Attach wiring diagram D344429P01 for upflow furnace models or D344430P02 for downflow furnace models to the inside of the blower door.

Table 1

Dip Switches			
W2 Delay S1-1, S1-2	S1-1	S1-2	Time
	Off	Off	Off*
	On	Off	10 Minutes
	Off	On	Auto
	On	On	20 Minutes
Heat Off Delay S1-3, S1-4	S1-3	S1-4	Time
	Off	Off	90 Secs*
	Off	On	120 Secs
	On	Off	150 Secs
	On	On	180 Secs
Cool Off Delay S2-3	On		60 Secs
	Off		0 Secs
* Factory Setting			

Table 2

Integrated Furnace Control Error Flash Codes

Green LED Flash	Amber LED Flash	Red LED Flash	ERROR
		1	FLAME SENSED WHEN NO FLAME SHOULD BE PRESENT
		2	PRESSURE SWITCH STUCK CLOSED / INDUCER ERROR
		3	1ST-STAGE PRESSURE SWITCH STUCK OPEN / INDUCER ERROR
		4	OPEN LIMIT SWITCH
		5	OPEN ROLLOUT / OPEN FUSE DETECT
		6	PRESSURE SWITCH CYCLE LOCKOUT
		7	EXTERNAL LOCKOUT (RETRIES)
		8	EXTERNAL LOCKOUT (RECYCLES)
		9	GROUNDING OR REVERSED POLARITY
		10	GAS FLOW WITH NO CALL FOR HEAT
		11	LIMIT SWITCH OPEN – BLOWER FAILURE
		12	IGNITER FAILURE
		Solid	INTERNAL GV ERROR, MICRO, AND FREQUENCY CHECK
		RAPID	TWINNING ERROR, INCORRECT 24V PHASING
		3 Double	2ND-STAGE PRESSURE SWITCH STUCK OPEN / INDUCER ERROR
	1		NORMAL OPERATION WITH CALL FOR FIRST STAGE HEAT
	2		NORMAL OPERATION WITH CALL FOR SECOND STAGE HEAT
	3		W2 PRESENT WITH NO W1
	4		Y PRESENT WITH NO G CALL, Y1 PRESENT WITH NO G CALL
	Rapid		RAPID LOW FLAME SENSE CURRENT
1			STANDBY, COOL CALL

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