

Trane 150-2050, 50M56-495-04, D345780P01

Trane Integrated Furnace Control Board User Manual

Model: 150-2050, 50M56-495-04, D345780P01, 5172C

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, maintenance, and troubleshooting of the Trane 12207310201376, 150-2050, 50M56-495-04, D345780P01 Ignition Control Board. This integrated furnace control board is designed to manage the ignition sequence and overall operation of compatible furnace systems. Please read this manual thoroughly before attempting any procedures.

2. SAFETY INFORMATION

WARNING: Risk of Electric Shock and Fire Hazard.

- Installation and servicing must be performed by a qualified HVAC technician.
- Always disconnect power to the furnace before installing, servicing, or removing the control board.
- Ensure all wiring connections are secure and comply with local electrical codes.
- Do not bypass any safety devices.
- Wear appropriate personal protective equipment (PPE) during installation and servicing.

3. PRODUCT OVERVIEW

The Trane Ignition Control Board is a critical component responsible for controlling the ignition, flame sensing, and blower operations in a furnace. It integrates multiple functions into a single unit, ensuring efficient and safe furnace operation.



Image showing the Trane 12207310201376 Ignition Control Board, a green circuit board with various electronic components, relays, capacitors, and terminal blocks. Key markings like "150-2050" and "5172C" are visible on the board.

4. SETUP AND INSTALLATION

Installation of the control board should only be performed by a qualified HVAC technician. Incorrect installation can lead to equipment damage, personal injury, or fire.

4.1 Pre-Installation Steps

1. Verify that the replacement board matches the original board's specifications and model numbers.
2. Turn off all electrical power to the furnace at the main service panel.
3. Label all wires connected to the existing control board for easy re-connection.

4.2 Installation Procedure

1. Carefully disconnect all wires from the old control board.
2. Remove the old control board from its mounting.
3. Mount the new Trane control board securely in the same location.
4. Connect all wires to the corresponding terminals on the new board, referring to your labels and the furnace wiring diagram. Ensure all connections are tight and secure.
5. Verify all connections before restoring power.

5. OPERATING INSTRUCTIONS

The Trane Ignition Control Board operates automatically once installed correctly and power is restored to the furnace. It manages the sequence of operations for heating and cooling cycles based on thermostat demands.

5.1 Normal Operation Sequence (Heating)

1. Thermostat calls for heat.
2. Control board initiates the inducer motor.
3. Pressure switch closes, signaling safe venting.
4. Igniter is energized (if applicable, depending on ignition type).
5. Gas valve opens, and burners ignite.
6. Flame sensor confirms ignition.
7. After a delay, the circulating blower motor starts.
8. Furnace heats until thermostat setpoint is reached.

The board continuously monitors safety limits during operation.

6. MAINTENANCE

The Trane Ignition Control Board generally requires minimal maintenance. However, periodic inspection of the furnace system is recommended by a qualified technician.

- Ensure the furnace area is clean and free of dust and debris.
- During routine furnace maintenance, have a technician inspect the control board for any signs of wear, corrosion, or loose connections.
- Do not attempt to clean the board with liquids or abrasive materials.

7. TROUBLESHOOTING

Many furnace issues can be complex and require professional diagnosis. The following are general troubleshooting tips. Always disconnect power before inspecting components.

Symptom	Possible Cause	Action
Furnace not starting	No power, thermostat issue, safety limit open, faulty board.	Check power supply, thermostat settings. Consult a technician for limit switch or board diagnosis.
Burners not igniting	No gas, faulty igniter, dirty flame sensor, faulty board.	Ensure gas supply is on. Clean flame sensor. If issues persist, contact a technician.
Blower not running	Faulty blower motor, capacitor, or control board.	Contact a qualified technician for diagnosis and repair.

Many control boards have diagnostic LED lights that flash codes to indicate specific faults. Refer to your furnace's specific manual for interpreting these codes.

8. SPECIFICATIONS

- **Manufacturer:** Trane

- **Model Numbers:** 150-2050, 50M56-495-04, D345780P01
- **Part Number:** 12207310201376, 5172C
- **Type:** Integrated Furnace Control Board
- **Compatibility:** Designed for specific Trane furnace models. Verify compatibility with your furnace before purchase and installation.

9. WARRANTY AND SUPPORT

For warranty information regarding your Trane Ignition Control Board, please refer to the documentation provided at the time of purchase or contact the seller/manufacturer directly. Warranty terms and conditions may vary. For technical support, installation assistance, or complex troubleshooting, it is highly recommended to contact a certified HVAC professional or the official Trane customer support.

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This manual is for informational purposes only. Specifications are subject to change without notice.

Documents - Trane – 150-2050, 50M56-495-04, D345780P01

SERVICE INSTALLER'S GUIDE

18-CH93D1-1A-EN

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

KIT 18110

80 Volt Igniter Conversion to 120 Volt Igniter

IMPORTANT! — This document contains procedures for the installation of the 18-CH93D1-1A-EN Igniter Conversion Kit. Please read this document carefully before installation.

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Assembly Drawing No. D343813G12, KIT COMPONENTS -- APPLICATION

REMOVING THE EXISTING CONTROL AND IGNITER

Use these instructions when replacing the following Igniter Conversion Kit (IC):

Igniter Conversion Kit (IC) Description Qty

WARNING

Caution: Do not touch the igniter assembly while the furnace is powered on. The igniter assembly is hot and may cause injury. Wait until the igniter assembly has cooled before touching it.

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INSTALLING THE NEW IGNITER

1) Disconnect all wires from the IFC and remove the IFC from the platform.

General Service Bulletin

IFC Board Failures

Models: Phase 1

AUC1, AUD1, AUE1, AUH1, ADC1, ADD1, ADE1, TUC1, TUD1, TUE1, TUH1, TDC1, TDD1, TDE1, MDS1P, MDS1P

Serial Numbers: 17371XXXXG through 17434XXXXG (Phase 1)

Models: Phase 2

AUC1, AUD1, AUE1, AUH1, ADC1, ADD1, ADE1, TUC1, TUD1, TUE1, TUH1, TDC1, TDD1, TDE1, MDS1P, MDS1P

Serial Numbers: 17382XXXXG through 17462XXXXG (Phase 2)

ORDER No. FURN-SVB061B-EN DATE: December 6, 2017

Introduction

We have received field reports of early Integrated Furnace Control (IFC) board failures on these furnace models. See pages 4-11 for a complete model number list. The reported failure is a persistent (S) flash error code. When no flame is detected, the IFC board will enter into a hard lockout sequence (gas operation terminated) and the inducer motor and indoor blower motor will continue to operate.

Discussion

A component within the flame sensing circuit on the IFC board has been identified as the root cause of these failures. The boards are failing with a persistent (S) flash code. (S) flash code is identified as "flame sensed, when no flame should be present." With this failure mode, the IFC board will enter into a hard lockout sequence (gas operation terminated) and the inducer motor and indoor blower motor will continue to operate.

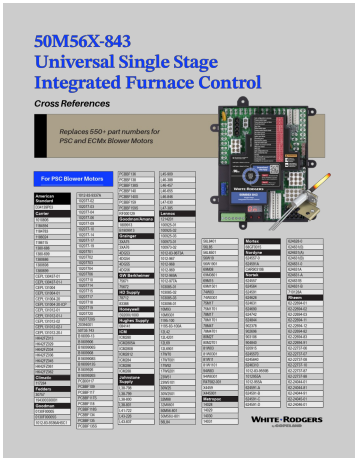
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Installer s Guide 80 Volt Igniter Conversion to 120 KIT18110 American Standard Trane 14468 S G Torrice
TRANE Instruction Installation Manual assets unilogcorp 267 ITEM DOC |||
SERVICE INSTALLER S 18-CH93D1-1A-EN GUIDE ALL phases of this installation must comply with NATIONA ... Drawing No. D343813G12, KIT COMPONENTS -- APPLICATION: Item No. Drawing No. Description Qty 1 **D345780P01** IFC 1-STG SINI 1 2 D343723P01 HARNESS-ADAPTER 1 3 D156805P01 SILICON NITRIDE IG...
lang:en score:52 filesize: 202.22 K page_count: 2 document date: 2020-09-17

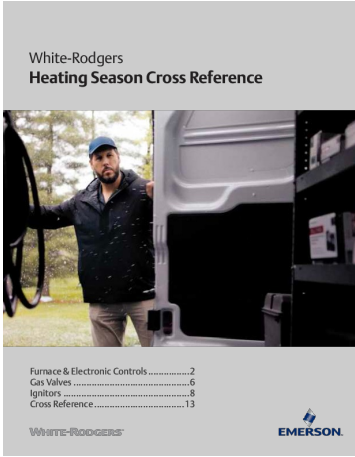
[pdf] Service Bulletin

FURN SVB061B EN IFC Board Failures pub tyzu General Service Bulletin 2017 Ingersoll Rand All rights reserved Model Number List Phase 1 M801P040AU24AAD D345780P01 CNT07541
TUH1B040A9241CB Query ASSET ID 4534037 USE TYPE PARTS PRODUCT 4108350 api ferguson dar step service
General Service Bulletin IFC Board Failures Models: Phase 1 AUC1, AUD1, AUE1, AUH1, ADC1, ADD1, ADE1 ... ghts reserved Model Number List: Phase 1 Model Number Part Number Model Number AUC1B040A9241AG **D345780P01** CNT07541
TUC1B040A9241AG Part Number **D345780P01** CNT07541 AUC1B060A9361AG **D345780P01** CN...
lang:en score:27 filesize: 3.75 M page_count: 11 document date: 2017-12-13



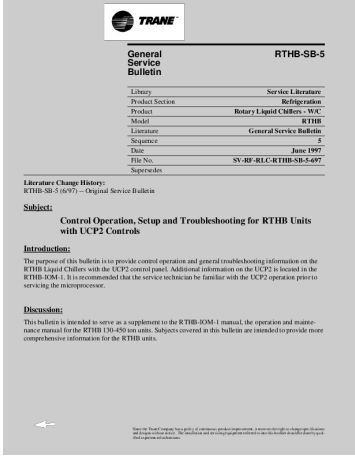
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50M56X 843 Cross References Copeland Products and Solutions Global Apr 26 2024 — PCBBF136
PCBBF138 PCBBF138S PCBBF140 PCBBF140S PCBBF159 PCBBF159S RF000129 Goodman Amana
1809913 B1809913 Grainger 2 pages 50m56x cross references en 10286960 copeland documents |||
50M56X-843 Universal Single Stage Integrated Furnace Control Cross References
Replaces 550 part num ... 1 D341122P01 D341213P01 D341235P01 D341235P02
D341235P03 D341396P01 D341396P03 D341396P04 D341396P05 **D345780P01**
D345780P02 D345780P03 X13120666010 X13130436-01 X13130436010
X13130436-02 X13130436-04 X...
lang:de score:15 filesize: 514.41 K page_count: 2 document date: 2024-04-26



[White-Rodgers Heating Season Cross Reference Guide for HVAC Components](#)

A comprehensive cross-reference guide from White-Rodgers detailing model numbers and suggested replacements for various HVAC components, including furnace controls, gas valves, and ignitors.
lang:en score:15 filesize: 6.6 M page_count: 67 document date: 2021-07-20



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User Manual Troubleshooting Guide Specifications Service Bulletin
rthb sb 5 Troubleshooting UCP2 Winding Temperature Sensor CHHA Trane Commercial HVAC Help
Center support trane hc en us article attachments 23858254499725 |||
General Service Bulletin RTHB-SB-5 Library Product Section Product Model
Literature Sequence Date File No. Supersedes Literature Change History: RTHB-SB-
5 6/97 -- Original Service Bulletin Service Literature Refrigeration Rotary Liquid
Chillers - W/C RTHB General Service Bulletin 5 June 1997 SV...
lang:en score:10 filesize: 321.41 K page_count: 66 document date: 2002-07-10