

General Service Bulletin

CSHB Scroll Compressor Retrofit

with Crankcase Heaters

ORDER No: **RT-SVB010A-EN**

DATE: April 15, 2004

Introduction

The purpose of this bulletin is to recommend the addition of crankcase heaters to a group of light commercial rooftop units using CSHB scroll compressors. This rework affects units using the 9 and 10 scroll compressors. ***This is a recommended retrofit.***

Discussion

The 9 and 10 scroll compressor design has been involved in several upgrades. The original designs (model CSHS) purposely eliminated the use of traditional crankcase heaters, by managing the oil to refrigerant ratio. Today in normal operation there is little benefit from the addition of crankcase heaters. However some equipment applications may create excessive "flooded" starting conditions. Repeat startups with the compressor shell flooded with liquid refrigerant, leads to oil dilution that can reduce the lubricity of the lubrication system. To resolve these flooded starts, crankcase heaters are recommended.

NOTE: Many units will never experience the operating and/or application conditions that cause the flooded starts. To cover all the possible installations, the addition of crankcase heaters to all identified units is being recommended.

Repair Procedure

WARNING

Hazardous Voltage!

Disconnect all electric power, including remote disconnects before servicing. Follow proper lockout/tagout procedures to ensure the power can not be inadvertently energized. Failure to disconnect power before servicing could result in death or serious injury.

Kits are available from the Authorized Trane and American Standard parts outlets, to assist with the crankcase heater work. Each Kit contains 2 crankcase heaters, wiring harness, instruction sheet; and wiring schematic. To cover the different voltages and compressor sizes, 6 kits are available .

KIT 09470	15 and 17-1/2 tons	208-230 volt,
KIT 09471	15 and 17-1/2 tons	460 volt,
KIT 09472	15 and 17-1/2 tons	575 volt,
KIT 09467	20 and 25 tons	208-230 volt,
KIT 09468	20 and 25 tons	460 volt,
KIT 09469	20 and 25 tons	575 volt,

Select the kits needed from the chart above. Each kit will allow 1 unit to be reworked.

Models Identified

Here is a list of all models that may benefit from the additional crankcase heaters. (Note 10th digit may be a letter rather than "0" to indicate a factory installed option.)

15 TON COOLING MODELS

TCD180B300FA	TCD180B400FA	TCD180BW00FA
TCD180B300GA	TCD180B400GA	TCD180BW00GA
TCD180B300HA	TCD180B400HA	TCD180BW00HA
TCD180B300HB	TCD180B400HB	TCD180BW00HB
TCH180B300FA	TCH180B400FA	TCH180BW00FA
TCH180B300GA	TCH180B400GA	TCH180BW00GA
TCH180B300HA	TCH180B400HA	TCH180BW00HA
TCH180B300HB	TCH180B400HB	TCH180BW00HB

17-1/2 TON COOLING MODELS

TCD210C300CA	TCD210C400CA	TCD210CW00CA
TCD210C300DA	TCD210C400DA	TCD210CW00DA
TCD210C300EA	TCD210C400EA	TCD210CW00EA
TCH210C300CA	TCH210C400CA	TCH210CW00CA
TCH210C300DA	TCH210C400DA	TCH210CW00DA
TCH210C300EA	TCH210C400EA	TCH210CW00EA

20 TON COOLING MODELS

TCD240B300GA	TCD240B400GA	TCD240BW00GA
TCD240B300HA	TCD240B400HA	TCD240BW00HA
TCD240B300HB	TCD240B400HB	TCD240BW00HB
TCD240B300JA	TCD240B400JA	TCD240BW00JA
TCD240B300JB	TCD240B400JB	TCD240BW00JB
TCH240B300GA	TCH240B400GA	TCH240BW00GA
TCH240B300HA	TCH240B400HA	TCH240BW00HA
TCH240B300HB	TCH240B400HB	TCH240BW00HB
TCH240B300JA	TCH240B400JA	TCH240BW00JA
TCH240B300JB	TCH240B400JB	TCH240BW00JB
TCD241C300BA	TCD241C400BA	TCD241CW00BA
TCD241C300CA	TCD241C400CA	TCD241CW00CA
TCH241C300BA	TCH241C400BA	TCH241CW00BA
TCH241C300CA	TCH241C400CA	TCH241CW00CA

25 TON COOLING MODELS

TCD300B300GA	TCD300B400GA	TCD300BW00GA
TCD300B300HA	TCD300B400HA	TCD300BW00HA
TCD300B300HB	TCD300B400HB	TCD300BW00HB
TCH300B300GA	TCH300B400GA	TCH300BW00GA
TCH300B300HA	TCH300B400HA	TCH300BW00HA
TCH300B300HB	TCH300B400HB	TCH300BW00HB

15 TON GAS-ELECTRIC MODELS

YCD180B3L0FA	YCD180B4L0FA	YCD180BWL0FA
YCD180B3L0GA	YCD180B4L0GA	YCD180BWL0GA
YCD180B3L0HA	YCD180B4L0HA	YCD180BWL0HA
YCD180B3L0HB	YCD180B4L0HB	YCD180BWL0HB
YCD180B3H0FA	YCD180B4H0FA	YCD180BWH0FA
YCD180B3H0GA	YCD180B4H0GA	YCD180BWH0GA
YCD180B3H0HA	YCD180B4H0HA	YCD180BWH0HA
YCD180B3H0HB	YCD180B4H0HB	YCD180BWH0HB
YCH180B3L0FA	YCH180B4L0FA	YCH180BWL0FA
YCH180B3L0GA	YCH180B4L0GA	YCH180BWL0GA
YCH180B3L0HA	YCH180B4L0HA	YCH180BWL0HA
YCH180B3L0HB	YCH180B4L0HB	YCH180BWL0HB
YCH180B3H0FA	YCH180B4H0FA	YCH180BWH0FA
YCH180B3H0GA	YCH180B4H0GA	YCH180BWH0GA
YCH180B3H0HA	YCH180B4H0HA	YCH180BWH0HA
YCH180B3H0HB	YCH180B4H0HB	YCH180BWH0HB

17-1/2 TON GAS-ELECTRIC MODELS

YCD210C3L0CA	YCD210C4L0CA	YCD210CWL0CA
YCD210C3L0DA	YCD210C4L0DA	YCD210CWL0DA
YCD210C3L0EA	YCD210C4L0EA	YCD210CWL0EA
YCD210C3H0CA	YCD210C4H0CA	YCD210CWH0CA
YCD210C3H0DA	YCD210C4H0DA	YCD210CWH0DA
YCD210C3H0EA	YCD210C4H0EA	YCD210CWH0EA
YCH210C3L0CA	YCH210C4L0CA	YCH210CWL0CA
YCH210C3L0DA	YCH210C4L0DA	YCH210CWL0DA
YCH210C3L0EA	YCH210C4L0EA	YCH210CWL0EA
YCH210C3H0CA	YCH210C4H0CA	YCH210CWH0CA
YCH210C3H0DA	YCH210C4H0DA	YCH210CWH0DA
YCH210C3H0EA	YCH210C4H0EA	YCH210CWH0EA

20 TON GAS-ELECTRIC MODELS

YCD240B3L0GA	YCD240B4L0GA	YCD240BWL0GA
YCD240B3L0HA	YCD240B4L0HA	YCD240BWL0HA
YCD240B3L0JA	YCD240B4L0JA	YCD240BWL0JA
YCD240B3L0JB	YCD240B4L0JB	YCD240BWL0JB
YCD240B3H0GA	YCD240B4H0GA	YCD240BWH0GA
YCD240B3H0HA	YCD240B4H0HA	YCD240BWH0HA
YCD240B3H0JA	YCD240B4H0JA	YCD240BWH0JA
YCD240B3H0JB	YCD240B4H0JB	YCD240BWH0JB
YCH240B3L0GA	YCH240B4L0GA	YCH240BWL0GA
YCH240B3L0HA	YCH240B4L0HA	YCH240BWL0HA
YCH240B3L0JA	YCH240B4L0JA	YCH240BWL0JA
YCH240B3L0JB	YCH240B4L0JB	YCH240BWL0JB
YCH240B3H0GA	YCH240B4H0GA	YCH240BWH0GA
YCH240B3H0HA	YCH240B4H0HA	YCH240BWH0HA
YCH240B3H0JA	YCH240B4H0JA	YCH240BWH0JA
YCH240B3H0JB	YCH240B4H0JB	YCH240BWH0JB
YCD241C3L0BA	YCD241C4L0BA	YCD241CWL0BA
YCD241C3L0CA	YCD241C4L0CA	YCD241CWL0CA
YCD241C3H0BA	YCD241C4H0BA	YCD241CWH0BA
YCD241C3H0CA	YCD241C4H0CA	YCD241CWH0CA
YCH241C3L0BA	YCH241C4L0BA	YCH241CWL0BA
YCH241C3L0CA	YCH241C4L0CA	YCH241CWL0CA
YCH241C3H0BA	YCH241C4H0BA	YCH241CWH0BA
YCH241C3H0CA	YCH241C4H0CA	YCH241CWH0CA

25TON GAS-ELECTRIC MODELS

YCD300B3L0GA	YCD300B4L0GA	YCD300BWL0GA
YCD300B3L0HA	YCD300B4L0HA	YCD300BWL0HA
YCD300B3L0HB	YCD300B4L0HB	YCD300BWL0HB
YCD300B3H0GA	YCD300B4H0GA	YCD300BWH0GA
YCD300B3H0HA	YCD300B4H0HA	YCD300BWH0HA
YCD300B3H0HB	YCD300B4H0HB	YCD300BWH0HB
YCH300B3L0GA	YCH300B4L0GA	YCH300BWL0GA
YCH300B3L0HA	YCH300B4L0HA	YCH300BWL0HA
YCH300B3L0HB	YCH300B4L0HB	YCH300BWL0HB
YCH300B3H0GA	YCH300B4H0GA	YCH300BWH0GA
YCH300B3H0HA	YCH300B4H0HA	YCH300BWH0HA
YCH300B3H0HB	YCH300B4H0HB	YCH300BWH0HB

Serial Number Range Identified

The units produced Between June 26, 2000 through Sept 29, 2003 are covered by this bulletin. The first 3 digits of the serial number will be –

R27_____ to R52_____ for year 2000
 Z01_____ to Z52_____ for year 2001
 201_____ to 252_____ for year 2002
 301_____ to 340_____ for year 2003

Questions

If you have questions and are a Trane/American Standard distributor or a commercial sales office, contact light commercial technical service in Clarksville, if you are not a Trane/American Standard distributor or a commercial sales office, contact the local Trane/American Standard distributor or a commercial sales office.

www.trane.com
www.americanstandardair.com

For more information, contact your local district office
 or e-mail us at comfort@trane.com

Literature Order Number	RT-SVB010A-EN
File Number	SV-UN-RT-SVB-010A-EN-041504
Supersedes	New
Stocking Location	Electronic Only

Trane/American Standard has a policy of continuous product data and product improvement and reserves the right to change design and specifications without notice. Only qualified technicians should perform the installation and servicing of equipment referred to in this bulletin.