



Installer's Guide

Thrust Bearing Assembly

CVHE, CVHF, CVHG – Non-Extended Capacity Compressors

ATTENTION: Warnings, Cautions and Notices appear at appropriate sections throughout this literature. Read these carefully.

WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION: Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.

NOTICE: Indicates a situation that could result in equipment or property-damage-only accidents.

This document provides a description of the bearing parts and tools required for field service replacement of the thrust ball bearing assembly for certain CVHE, CVHF, and CVHG CenTraVac™ chillers.

NOTICE:

Equipment Failure!

Refer to the bearing part number and size information to confirm that it matches with the chiller design. Using the wrong bearing or installing it without proper tools and techniques could result in premature equipment failure. Take the time to confirm correct parts and procedures are used.

Thrust Bearing Part Information

Non-“K4” Marked Shaft

The following bearings are required for a non-“K4” marked shaft (used in production machines prior to 1995): CVHE (design sequence before 2B), CVHF (design sequence before J0), and CVHG (design sequence before C0). These bearings have an undersized bore to obtain the new press fit.

Note: Some machines with older serial numbers may have had the shaft re-worked at Trane Charlotte to make it a “K4”. If an older machine has a “K4” marked shaft, follow the procedure for “K4” marked shafts: non-center feed design.

Shaft Size	Part No.		Non-“K4” Shaft Journal Dimensions
	with Brass Cage	with Peek Cage	
7311 Small Diameter (2.16” Bore)	BRG01637 ^(a)	BRG01721 ^(a)	2.1650” to 2.1655”
7318 Large Diameter (3.54” Bore)	BRG01638 ^(a)	BRG01722 ^(a)	3.5429” to 3.5434”

(a) These bearings come from Trane Parts with a new self locking six shoe locknut. If a new self locking locknut is required by itself, the Trane part numbers are as follows: 7311 size bearing uses NUT01071, 7318 size bearing uses NUT01072.

"K4" Marked Shaft—Non-Center Feed Design

Non-center feed design (axial or end feed), approximate build dates from January 1995 through December 1999. All "K4" marked shafts with the following design sequence number (10th and 11th digits of the model number) ranges will require these bearings: CVHE (design sequence 2B–3A), CVHF (design sequence J0–1H), CVHG (design sequence C0–1A), CDHF (duplex; design sequence A0–H0), and CDHG (duplex; design sequence A0–G0).

Shaft Size	Part No. with Peek Cage	"K4" Shaft Journal Dimensions
7311 Small Diameter (2.16" Bore)	BRG01723 ^(a)	2.1656" to 2.1661"
7318 Large Diameter (3.54" Bore)	BRG01724 ^(a)	3.5435" to 3.5440"

(a) These bearings come from Trane Parts with a new self locking six shoe locknut. If a new self locking locknut is required by itself, the Trane part numbers are as follows: 7311 size bearing uses NUT01071, 7318 size bearing uses NUT01072.

"K4" Marked Shaft—Center Feed Design

Center feed design, approximate build dates of January 2000 to present. Any design sequence number (10th and 11th digits of the model number) beginning with or after the following values will have a center feed design: CVHE (design sequence 3B and after), CVHF (design sequence 1J and after), CVHG (design sequence 1B and after), CDHF (duplex; design sequence J0 and after), and CDHG (design sequence H0 and after).

Shaft Size	Part No.	"K4" Shaft Journal Dimensions
Standard Steel Bearings		
7311 Small Diameter (2.16" Bore)	BRG01639 ^(a)	2.1656" to 2.1661"
7318 Large Diameter (3.54" Bore)	BRG01640 ^(a)	3.5435" to 3.5440"
Special Ceramic Bearings (see Note)		
7311 Small Diameter (2.16" Bore)	BRG01641 ^(a)	2.1656" to 2.1661"
7318 Large Diameter (3.54" Bore)	BRG01642 ^(a)	3.5435" to 3.5440"

Note: These ceramic bearings are only used on the AFDE (LF2.0) Adaptive Frequency Drive equipped machines to prevent EDM (electrical discharge machining) failure to the bearings.

(a) These bearings come from Trane Parts with a new self locking six shoe locknut. If a new self locking locknut is required by itself, the Trane part numbers are as follows: 7311 size bearing uses NUT01071, 7318 size bearing uses NUT01072.

Tool Information

The following tools are required to allow a duplex ball (thrust) bearing set to be installed.

Qty	Description	Manufacturer/Part No.	Trane Part No.
1	Hydraulic Hose 6' Long - 10,000 psi 3/8" NPT Male x 1/4" NPT Male	ENERPAC H870	HSE00363
2	Coupler - Female Hydraulic, 1/4" NPT M	ENERPAC 3050-2	CPL00392
1	Coupler - Male Hydraulic, 1/4" NPT F	ENERPAC 3010-1	CPL00393
2	Adaptor - 1/4" NPT, Female x 0.25" BSAT Male	ENERPAC F3HG	ADP00371
1	Hydraulic Assembly Nut - Small Bearing	SKF HMVC-11	NUT00729
1	Hydraulic Assembly Nut - Large Bearing	SKF HMVC-18	NUT00730
1	Socket for Small Locknut, 1/2" Drive	WHITTET-HIGGINS BAS-11	TOL00194
1	Socket for Large Locknut, 3/4" Drive	WHITTET-HIGGINS BAS-18	TOL00193
1	Self Locking Locknut Socket Tool - Small Nut		TOL02826
1	Self Locking Locknut Socket Tool - Large Nut		TOL02827
1	Hydraulic Hand Pump Assembly		
1	Threadless Shaft Installation Tools		TOL01550
1	Threadless Shaft Bolt and Belleville Washer KIT		KIT09598

Questions

Contact your local Trane service organization for assistance with questions regarding thrust bearing assembly installation.



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

Trane has a policy of continuous product and product data 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 literature.