



# TECHNICAL SERVICE INFORMATION BULLETIN

TSIB 25-01 Rev A		May 21, 2025
<b>TO:</b>	All Operators	
<b>TITLE:</b>	TK QS616 HVAC Screw Compressor Clutch Bearing Replacement Interval	
<b>APPLICABILITY:</b>	All New Flyer XD60, XN60 and XDE60 buses equipped with QS616 TK HVAC screw compressors	

Thermo King has issued a Service Bulletin (SB866-1) related to the clutch bearing maintenance on their QS616 HVAC screw compressor. New Flyer is issuing this Technical Service Information Bulletin to notify New Flyer XD60, XN60 and XDE60 bus operators about this Thermo King Service Bulletin. Please follow the recommendations detailed in the attached Service Bulletin from Thermo King. Contact your local Thermo King dealership for more information and/or parts if required.

**Direct all inquiries regarding this New Flyer bulletin to:**

**Kevin Robinson**

*Manager, Service Engineering*

C 204.430.8826

[kevin\\_robinson@newflyer.com](mailto:kevin_robinson@newflyer.com)

**New Flyer**

**Date:** December 13, 2023  
**Subject:** Bus Screw Compressor Clutch Bearing Replacement Interval  
**Location:** e-Tech Library

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**Units:** All bus units equipped with the QS616 and QS391 screw compressor and High Torque Clutch.

**Description:** Replacement of the clutch bearing is being added to the Bus Maintenance Inspection Schedule for QS391 and QS616 screw compressors equipped with the High Torque Clutch. The new clutch bearing (P/N 773261) has been available since February 1st, 2022).

**- Original Clutch Bearing (P/N 773221):**

Replace every 15,000 engine hours or 2 years (whichever occurs first)

**- New Clutch Bearing (P/N 773261):**

Replace every 45,000 engine hours or 6 years (whichever occurs first)

QS391 and QS616 screw compressors **built on and after February 1st, 2022**, are factory equipped with new clutch bearing 773261. These clutches require bearing replacement every 45,000 engine hours or 6 years (whichever occurs first). **An updated clutch can be identified by visual indicators shown on page 3.**

QS391 and QS616 screw compressors **built before February 1st, 2022**, are originally equipped with clutch bearings that require replacement every 15,000 engine hours or 2 years (whichever occurs first). However, after the original clutch bearings are replaced with new clutch bearings, the replacement interval is extended to 45,000 engine hours or 6 years (whichever occurs first). **An original clutch can be identified shown on page 3.**

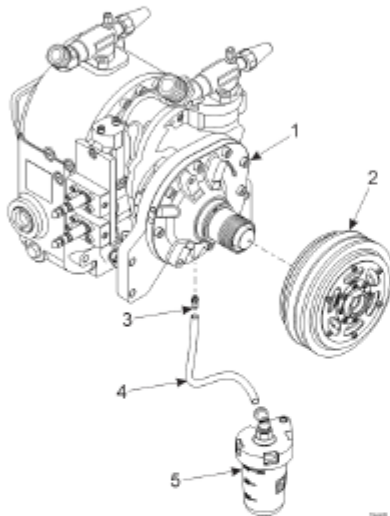
See table on page 2 for list of improved clutch assemblies and components with improved bearings.

**IMPORTANT:** Bearing condition is not always detectable by visual inspection or audible noise. The 2 year or 6 year bearing replacement interval is important to ensure clutch performance is optimal. Sometimes service recommendations are viewed as being overly conservative by customers and/or dealers, this 2 or 6 year replacement interval is not optional.

The procedure for pulley replacement and setting the belt tension is included in this bulletin and found in the unit maintenance manual (See Pages 4-6).

**IMPORTANT:** Do not use 3rd party bearing replacements that have not been approved by Thermo King. The grease used in the new bearing cannot be sourced in the open market and has been selected to meet extreme application requirements defined by Thermo King. The use of non-Thermo King bearings is not optional.

New bearings are recommended to be paired with an Oil Collection Bottle (OCB) upon installation. Compressors built on February 1<sup>st</sup>, 2021, and after are factory equipped with an oil collection bottle. **Universal OCB Kit P/N: 200257** can be applied to any existing compressor not equipped with an OCB.



1.	Screw Compressor
2.	High Torque Clutch Assembly
3.	Oil Collection Fitting
4.	Oil Collection Hose
5.	Oil Collection Bottle
6.	Oil Collection Bottle Bracket (Not Shown)

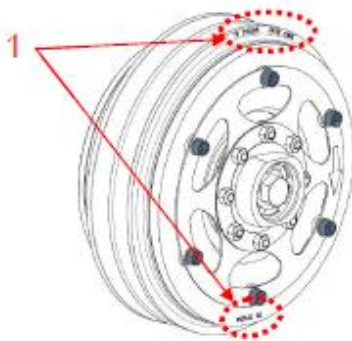
Related Part Numbers	
New Clutch Bearing	773261
New Clutch Assemblies (Equipped with new bearing 773261)	1070502
	1070503
	1070504
	1070506
	1070507
	1070509
	1070510
	1070511
New Pulley/Bearing Assemblies (Equipped with new bearing 773261)	1070512
	1070513
	773265
	773266
	773267
Universal Oil Collection Bottle Kit	773268
	773261
	200257

**Clutch and Bearing Identification:**

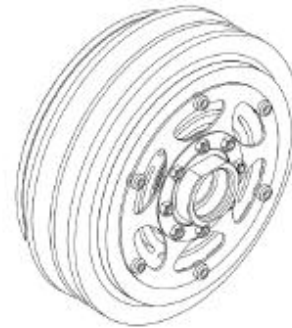
A clutch originally built with the new bearing 773261 can be identified by:

1. The clutch assembly with new bearing 773261 has part numbers etched in the armature plate, pulley, and coil (no disassembly required to view).
2. The new clutch bearing 773261 has "454" etched onto the inner bearing race (disassembly required to view).

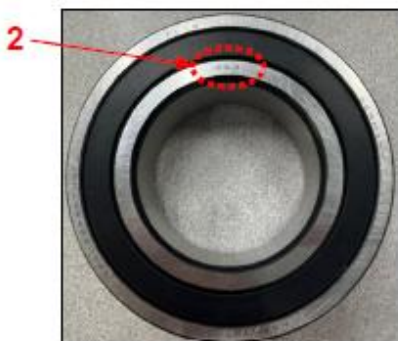
**New Clutch with Bearing P/N 773261**



**Original Clutch (No Markings)**



**New Bearing P/N 773261 ("454")**

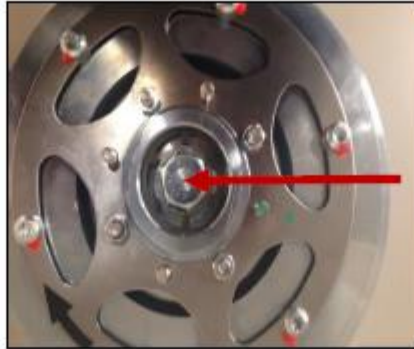


**Original Bearing 773221 (No Markings)**



**Clutch Bearing Replacement Service Procedure:**

1. Loosen hold-down bolt in hub. Remove hub/armature.



2. Remove clamping sleeve/nut which holds the pulley onto the compressor housing.



3. Remove pulley from the coil.



4. Remove bearing snap ring from the back side of pulley. Press out bearing. Use the inner race lip to press in the new bearing until fully seated. Reinstall the snap ring.

**NOTE:** Use outer edge of bearing race to press new bearing in place.



5. Re-install pulley on coil. Torque the clamping nut to 37 ft-lbs (50 Nm). Pulley should turn free and not contact the coil.

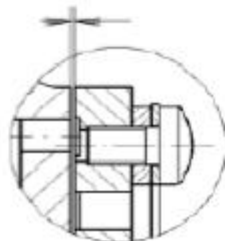


6. Install hub/armature plate hold-down bolt and torque to 63 ft-lbs (85 Nm).



7. Check the air gap after assembly and adjust if needed.

**Specification:** 0.0197 to 0.0315 in. (0.5 to 0.8 mm).



**Belt Tension Procedure and Specifications:**

Used Belts: If below 180 lbs. (800 N) or above 200 lbs. (890 N), readjust to 190 lbs. (845 N).

New Belts:

1. Set belt tension to 220 lbs. (979 N).
2. Run the bus engine and air conditioner for 30 minutes.
3. Re-tension belt to 200 lbs. (890 N).
4. Run the bus for 8-14 hours on route with air conditioning on.
5. Set belt tension to 190 lbs. (845 N).

**Maintenance Inspection Schedule Update**

The maintenance inspection schedule for all bus units equipped with the QS616 and QS391 screw compressor and High Torque Clutch are currently being updated. The new inspection item with the information below will be live in e-Tech Library and in all maintenance manuals published after March 1, 2023:

Monthly 6,000 Miles (10000 km)	Quarterly 18,000 Miles (30000 km)	Annually	Check condition of or service the following:
N/A	N/A	N/A	Replace clutch bearing. See Service Bulletin SB866 - Bus Screw Compressor Clutch Bearing Replacement Interval  Original Clutch Bearing (P/N 773221): Replace every 15,000 engine hours or 2 years (whichever occurs first)  New Clutch Bearing (P/N 773261): Replace every 45,000 engine hours or 6 years (whichever occurs first)