

COMMUNICATION ON

Increased lifetime bearings – ceramic technology

As part of our goal to achieve **superior reliability and durability** for our components; from April 2020 Thermo King has implemented a new technology: **Ceramic Bearings.**

Ceramic ball bearings have been introduced into the pulleys of **the clutch tensioner system**.

The life of a normal steel bearing can vary considerably depending upon the operation and application such as road conditions, run time, off time and varying environmental conditions experienced during the lifetime of the Thermo King unit.

As part of our validation process we have carried out extensive field testing, and have proven that Ceramic Technology can **deliver triple the bearing life** over the steel equivalent, **resulting in increased uptime for our customers.**



CERAMIC TECHNOLOGY



— THE ADVANTAGES

Ceramic bearing Technology offers a reliable solution to extreme conditions, with these advantages:

- High resistance against static loading
- Higher resistance to electric static discharge
- Lower operating temperatures
- Better grease retention and coverage
- Improved surface wear of the rotating balls
- Reduced dynamic loading due to lighter weight



UPTIME BEARING & IDLER KIT FOR SLX

Thermo King has developed an Uptime Bearing & Idler Kit for SLX customers for the SLX range of units to further **enhance unit reliability**. This kit consists of the **new ceramic bearing technology** for the compressor drive and includes all other standard bearings for the main drive system.

Under standard maintenance, preventative measures are not always adopted. Relying on the competent wear out, mostly driven by cost, can be considered as a false economy and may lead to unscheduled events, downtime and additional unplanned costs. The Uptime Bearing & Idler Kit for SLX can help by providing a more **proactive maintenance plan** to provide further **peace of mind, minimise downtime** and **avoid unexpected breakdowns**.

Along with the normal inspection and service C kit maintenance, the Uptime Bearing & Idler Kit for SLX may be considered as **an additional preventive measure** at the 6000h interval (equivalent to 360.000km of road driving distance).

- FAQ

QUESTION	ANSWER
Why is Thermo King not changing all the bearings used in the SLXi unit to ceramic technology?	This technology comes at a cost. After evaluating all the bearings used in the unit, it has been decided that the main benefit for increased uptime was to adopt ceramic technology for the compressor drive as these are operating in the most demanding conditions.
Is Thermo King moving to ceramic technology in other product ranges (T-Series, VP Truck,)?	Not at this moment in time, but this technology will be evaluated in all the applications that may require it for superior uptime.
One pulley has failed in my SLX unit. Why is my Thermo King dealer replacing both pulleys?	The ceramic solution offers a life expectation three times longer. If only one is replaced, the other steel bearing will end its life at different time, creating the need for a repair that can be avoided. It is therefore important to replace both steel bearing pulleys at the same time when moving from steel to ceramic.
Can the bearing be replaced without changing the pulley?	No. The pulley assembly is manufactured with special tolerances and industrial tooling, so replacing only the bearing is not an option.
How can I see if my unit has ceramic or steel bearing?	The bearing is internal so it cannot be seen. The ceramic bearing pulleys are marked as 773216 (smooth) and 773217 (grooved).
Why is the pulley with ceramic bearing more expensive than the old one with steel bearing?	The materials and manufacturing processes used for ceramic bearings have increased costs in the supply chain. However, from a Total Cost of Ownership perspective, this will deliver value to our Thermo King customers due to an increased life cycle.
Should I purchase the Uptime Bearing & Idler Kit for SLX, or only replace the pulleys with ceramic technology?	In case you have not recently replaced any bearings and idlers in your SLX unit, we suggest to purchase the Uptime Bearing & Idler Kit for SLX to achieve maximum uptime. If you already had some of the pulleys replaced in your unit recently but not switched to the ceramic technology for the compressor drive, it is recommended that you purchase the bearings with ceramic technology.



THERMO KING

Thermo King – by Trane Technologies (NYSE: TT), a global climate innovator – is a worldwide leader in sustainable transport temperature control solutions. Thermo King has been providing transport temperature control solutions for a variety of applications, including trailers, truck bodies, buses, air, shipboard containers and railway cars since 1938.

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