
Tech sheet

CeramicSpeed Bearing Cleaning & Maintenance



CERAMICSPEED

Introduction

To preserve the highest levels of efficiency and prolong the life of your CeramicSpeed bearings, preventative maintenance is required.

Depending on climate and normal riding conditions*, you may need to maintain your CeramicSpeed bearings more often or select a different grease. The below recommendations are based on using CeramicSpeed All Round blue grease.

CeramicSpeed bottom bracket and wheel bearings should be maintained every 5,000-8,000 km or 3,000-5,000 miles. CeramicSpeed headset bearings can be maintained once per year for most riders.

*Hot regions (average at or above 35°C/95°F), high humidity climates, riding in extremely sandy/desert like conditions or riding in constant rainy/wet conditions will result in more frequent maintenance needs. CeramicSpeed Long Life grease will also hold up for longer intervals in any of these conditions.

Preparation

When possible, standard maintenance can and should be done without removing the bearings from their cup, frame bore, or hub shell. This will limit potential stress or impact damage from knocking out the bearings and reinstalling.

For cranks, remove the cranks, any spacers, and dust covers.

For hubs, follow the hub/wheel manufactures instructions for removing axel end caps and/or dust covers to access the face of the bearings.

With the face of the bearing visible, use a knife edge or flat pick to lift off the bearing seal starting on the inner lip (at the inner race) and carefully lifting up. Small, smooth movements will help prevent damaging the seal during removal. Once the seal is removed, wipe both sides clean, ensure it is completely flat, and set aside. You should now have access to the individual balls inside of the bearing. Using a cloth or shop rag, wipe away grease on the face of the bearing, revealing the balls. If you see a solid ring, you are looking at the back of the bearing. There is no direction to the performance of the bearing, but cleaning and maintenance are easier and more efficient when performed from the face/front of the bearing. You may choose to turn the bearing around at this time to allow adequate cleaning and ease of future maintenance.

Normal cleaning

To flush and clean CeramicSpeed bearings, the best commonly available solvent to use is isopropyl alcohol (normal alcohol, rubbing alcohol, isopropanol). Utilizing a spray bottle, soak the inside of the bearings to be cleaned and rotate inner race to cause an 'agitation' effect inside the bearing. After 20-25 seconds, use compressed air to flush out the grease, contamination, and residual alcohol. It is helpful to soak and agitate one bearing at a time, allowing to soak while cleaning the next prior to flushing out the first bearing. Repeat this process with more alcohol and agitation to continue removing contamination and cleaning the bearing. This process should be done three to four times (3-4) depending on how much grease and contamination has built up inside the bearing. Once the bearing is visually cleaned out and rotates smoothly, spray a final light coating of alcohol and allow the bearing to air dry prior to applying fresh grease. Follow grease selection and application guide at the bottom of this document for best performance and longevity. Once grease is applied, reinstall the face seal by laying it on the bearing (the all rubber side should face out) and evenly pressing it into the groove on the outer race. The seal should sit flat and even on the bearing. Be sure to take careful note of the direction on any dust covers when reassembling the parts.

Deep cleaning

In the event that normal cleaning is not providing an adequate cleaning level, or if the bearings have been neglected well outside of the suggested service intervals, you may need to perform a deeper cleaning process to achieve a smooth functioning bearing again. Carefully remove the bottom bracket cups from the frame, or remove the bearings from the hubs or from the frame if there are no cups and remove all accessible seals (following the above method of seal removal). Place the bearings into a chemical safe container and submerge in Naptha (white gas, renebenzin, similar heptane solvent). Agitate the bearings in the solvent (if possible, using a container such as a 'shaker' to flush the solvent throughout the bearing), and let sit for 2-3 minutes. It is suggested to use protective gloves and eyewear, as well as working in a well-ventilated area following the safety guidelines on the specific solvent you are using. Remove the bearings from the solvent and dry with compressed air. If fully cleaned and not permanently damaged the bearings should spin freely and smoothly now. Apply the rear seal and follow the below grease selection and application charts based on your intended use. Once the face seal is reinstalled apply a thin layer of protective oil on the outside of the bearing using CeramicSpeed pulley wheel oil or a similar light mineral oil compound. Using the correct bearing press and drifts, carefully reinstall the bearings into your frame or hubs, or install the cups into the frame and reassemble remaining parts per original manufactures specifications.

Application and product		Riding conditions	
Discipline	CeramicSpeed Components	Dry and sunny conditions	Wet and harsh conditions
Road	Bottom Brackets & Wheel Kits	All Round Grease	All Round / Long Life Grease
	Pulley Wheels & OSPW Systems	CeramicSpeed Oil	All Round Grease / CeramicSpeed Oil
	Headsets	Long Life Grease	Long Life Grease
Off-road	Bottom Brackets, Wheel Kits & Headsets	All Round / Long Life Grease	Long Life Grease
	Pulley Wheels & OSPW Systems	All Round Grease / CeramicSpeed Oil	All Round Grease
TT/Track	Bottom Brackets & Wheel Kits	TT + Track Grease	All Round / TT + Track Grease
	Pulley Wheels & OSPW Systems	CeramicSpeed Oil	All Round Grease / CeramicSpeed Oil
	Headsets	Long Life Grease	Long Life Grease

CeramicSpeed All Round Grease	CeramicSpeed TT + Track Grease	CeramicSpeed Long Life Grease
		
Race conditions: all-round Low friction	Dry race condition (only short distances!) TT grease – extremely low friction	All training conditions
Standard, all conditions grease for any/all CeramicSpeed bearings	Short service interval (re-lubrication) Always lubricate before / after use	Long service interval High protection of the bearings
		
Recommended 60-80% filling rate	Recommended 30-50% filling rate	Recommended 70-100% filling rate