

PTC Blackhawk™ Premium Hub Assemblies

How Blackhawk Hub Assemblies Help Overcome Common Installation Issues in the Shop



Hub assembly replacement is one of the most common undercar repairs, and one of the most frequent sources of installation headaches and comebacks. Corrosion-seized hubs, damaged ABS sensor cables, contaminated bearings, and poor fitment cost technicians time on the lift and shops money in warranty claims. PTC Blackhawk Premium Hub Assemblies are engineered with features that directly address these shop-floor problems.

Rust Buildup on Mating Surfaces



1

Corrosion Seizure and Poor Fitment

Standard hub assemblies corrode into the knuckle bore, making future service a battle of penetrating oil, heat, and hammers. Rust buildup on mating surfaces can also cause improper seating during installation, leading to runout, vibration, and premature bearing wear.

The Blackhawk Solution:

Special electrophoretic e-coating provides uniform, durable corrosion protection across the entire assembly while maintaining tight dimensional control on critical interfaces. The hub seats correctly in the knuckle at installation, resists rust bonding over its service life, and preserves long-term performance in demanding under-vehicle conditions, meaning the next tech to service the vehicle won't be fighting a seized unit.

Inadequate Waterproofing on Sensors



2

ABS Cable and Connector Damage

ABS sensor cables and connectors are a leading cause of hub-related comebacks. Connectors crack during handling or removal, and marginal sensor sealing lets moisture in, triggering intermittent ABS/traction control lights weeks after the repair.

The Blackhawk Solution:

The upgraded ABS cord features double O-rings that improve the waterproof performance of the sensor, plus an upgraded molded ABS connector designed to prevent cable breakage. Fewer damaged connectors at install, fewer moisture-related ABS codes after the vehicle leaves the bay.



Power Train Components

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Poor Seals Causing Bearing Failure



3

Bearing Contamination and Grease Failure

Water intrusion, road salt, and grease washout are the top killers of replacement hub bearings, especially in severe climates and on off-road vehicles. A failed seal turns a “lifetime” bearing into a 12-month comeback.

The Blackhawk Solution:

A premium quad lip seal design uses four distinct sealing lips, versus standard single- or dual-lip seals, for enhanced protection, durability, and contamination control. Benefits include extended bearing life, improved protection against water and road salt intrusion, reduced risk of grease leakage, and improved performance in severe climates and off-road conditions.

Poor Quality Grease Thermal Breakdown



4

Fretting, Rust, and Heat Degradation

Bearing grease that can’t handle micro-movement (fretting), moisture, or brake heat breaks down early, causing noise complaints and repeat repairs.

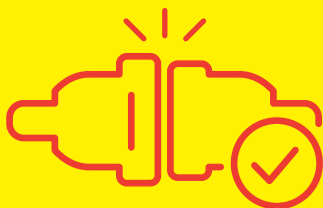
The Blackhawk Solution:

Blackhawk hubs are filled with premium quality grease engineered for fretting resistance, rust prevention, and heat resistance - protecting the bearing through real-world duty cycles.

The Bottom Line Following Proper Installation Practices Assures:



Cleaner, Faster Installs with Proper First-Time Fitment



Fewer ABS Cable / Connector Failures During and After Installation



Lower Warranty Risk and Fewer Comebacks



Easier Future Serviceability Thanks to Corrosion-Resistant E-Coating

Install with confidence. Install PTC Blackhawk.