

THE BENEFITS OF CHANGING TO AEROSHELL GREASE 58



Are you still using AeroShell Grease 22?
Now is the time to change!



WHY MOVE AWAY FROM CLAY-BASED GREASES?

Clay-based thickeners, such as Microgel® in AeroShell Grease 22, have been used in aircraft since the 1960s owing to their good water-resistance and high-temperature properties. There is nothing wrong with using a clay-based grease. They perform well, but there is a better-performing alternative.

Today's aircraft place increased demands on their wheel bearings and wheel bearing grease when landing, taking off and especially during a heavy landing or aborted take-off. Bearings also need to be protected from corrosion during prolonged inactivity.

Wheel bearings need a grease that can protect against extreme multi directional loads, rapid heating, particulate contamination, intense runway and jet-wash spray, and corrosive runway de-icing fluids. Extended tyre life means the grease must also protect the bearings for longer.



WHAT ADVANTAGES DO LITHIUM-COMPLEX GREASES OFFER?

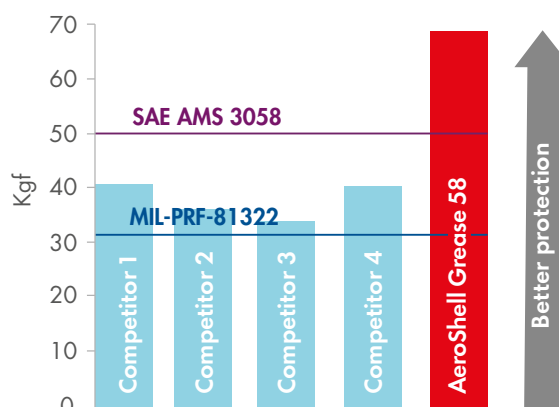
- **They stay where you need them through superior**
 - mechanical stability
 - water and washout resistance.
- **They perform for longer through enhanced**
 - shear and oxidation stability
 - high- and low-temperature performance.

Lithium-complex thickener is also compatible with a wider range of high-performance additives, which means that the grease can offer superior oxidation and corrosion control, wear protection and extreme pressure load carrying performance. Switching to lithium-complex greases across all applications helps to improve safety by reducing incompatibility risks.

SURPASSING THE LATEST SPECIFICATIONS




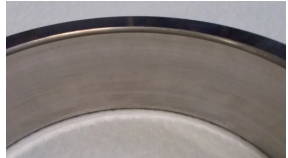






AeroShell grease 58 exceeds the latest SAE AMS 3058 specification for wheel bearings that requires the use of lithium-complex technology. But beware, not all commercially available lithium-complex thickened wheel-bearing greases meet these minimum requirements.

PERFORMANCE UNDER EXTREME PRESSURE



A step change in extreme-pressure protection. AeroShell Grease 58 has **better load wear protection** compared with MIL-PRF-81322 greases in ASTM D2596 tests.

SUPERIOR CORROSION CONTROL



	AeroShell Grease 58	Competitor A	Competitor B	Competitor C
3% salt solution (EMCOR test ¹ required to meet the AMS 3058 specification)	 NO VISIBLE CORROSION	 >10% CORROSION (FAILS TO MEET THE SAE AMS 3058 SPECIFICATION)	 1-5% CORROSION (FAILS TO MEET THE SAE AMS 3058 SPECIFICATION)	
De-icer 1	 NO VISIBLE CORROSION	 UP TO 1% CORROSION	 NO VISIBLE CORROSION	 NO VISIBLE CORROSION
De-icer 2	 NO VISIBLE CORROSION	 1-5% CORROSION	 UP TO 1% CORROSION	 5-10% CORROSION

Meeting the specifications where others fail: AeroShell Grease 58 exceeds SAE AMS 3058 corrosion requirements. Not all the popular, lithium-complex wheel-bearing greases meet these specifications or protect against the effects of the latest runway de-icing fluids. Two other greases that were tested failed: a popular red lithium-complex grease received the worst possible rating. AeroShell Grease 58 is also better than or equals competitors' products in EMCOR tests with corrosive runway de-icing fluids, thereby offering the best overall corrosion protection.

IS AEROSHELL GREASE 58 APPROVED FOR MY AIRCRAFT?

AeroShell Grease 58 meets the SAE AMS3058 specification and has the following manufacturer approvals: Airbus (all carriage systems for civil A320, A330, S340, S350 and A380 family aircraft, and all wheels on A318, A319 and A320, including neo, and A350-900 and -1000 models); Boeing (Collins wheels on most aircraft with the remaining approvals in 2022); ATR 42 (Collins wheels); all Parker Hannifin non-amphibious wheel applications; and Pilatus first fill. Please refer to your equipment manufacturer for the latest approval status.



	AerosShell Grease 22	AerosShell Grease 58
		
Thickener type	Clay based	Lithium complex
MIL-PRF-81322/DOD-G-24508	✓	
SAE AMS 3058		✓
COMAC: QPL-CMS-OL-301	✓	✓
Operating temperature	-54 to 177°C (-65 to 347°F)	-54 to 175°C (-65 to 351°F)

IS CHANGEOVER EASY?

Airframe and grease manufacturers do not recommend mixing different grease types as they are not always compatible, but changeover is straightforward:

- Remove all the old grease from the bearing surfaces and internal cavities of the lubricated mechanism before applying the new grease.
- If this is not practicable, then purge the system by injecting the new grease until it has displaced the old product and only new grease is returned.

Please consult your aircraft manufacturer's maintenance manual for its recommended purging or changeover procedure.

CONTACT US

For more information, contact your Shell representative or visit www.aeroshell.com.

¹Industry standard EMCOR dynamic rust-prevention tests expose grease-lubricated moving bearings to water/sodium chloride solution for one week at room temperature with the bearings being partially immersed in the water/solution. The bearing rings are then examined for corrosion. The results are expressed from 0 to 5, with 0 showing no corrosion and 5 showing up to 10% of the inside surface of the bearing ring being corroded. Tests conducted by Shell scientists.