

MIL-SPEC LANDING GEAR GREASE

INDUSTRY:
Aviation & Defense

APPLICATION:
Wide-Body Plane

COMPONENT:
Landing Gear

LOCATION:
USA



BACKGROUND

During landings, high loads and impact can damage aircraft trunnion pins in landing gear. The gear is also exposed to extreme environmental conditions such as high and low temperatures, moisture and dirt, that can corrode the gear over time. In 2000, the Wright Patterson Air Force Base was asked to investigate severe wear, rust, and corrosion on one of their landing gear. Shortly after, they contacted Nye to see if we could manufacture a grease that would meet the requirements of MIL-PRF-32014, a specification that calls for a multipurpose grease for aircraft and missile systems such as landing gear.

CHALLENGE

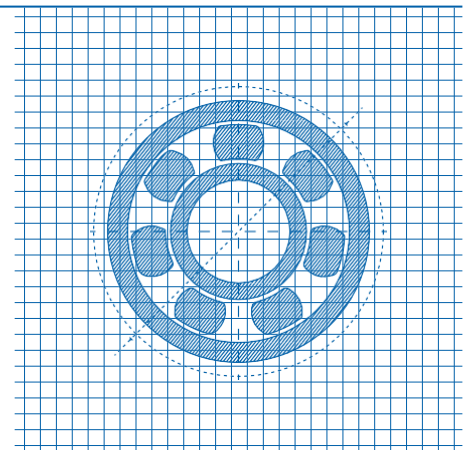
- Can the lubricant protect the gear from extreme environmental conditions and corrosion while meeting the MIL-PRF-32014 specification?

SOLUTION

RHEOLUBE® 374A

A lithium soap thickened, medium viscosity synthetic hydrocarbon grease.

- Excellent wide temperature performance of -54 to 177°C
- Superior wear and corrosion protection
- Great water resistance, including in salt water environments
- High load carrying ability
- Meets MIL-PRF-32014 as specified by Boeing.



RESULTS

After successfully passing independent validation testing by Wright Patterson AFB and several other military agencies, Rheolube® 374A was approved to meet the MIF-PRF-32014 specification. Since then, Rheolube® 374A has been regarded as the industry-standard grease for aviation components.

Base Oil Properties	Conditions	Rheolube® 374A	Test Method
Chemistry		PAO / Lithium Soap	
Temperature Range		-54 to 177°C	
Kinematic Viscosity	40°C	121 cSt	
Viscosity Index		159	ASTM D-2270
Grease Properties			
NLGI Grade		2	ASTM D-217
Oil Separation	24 hrs, 100°C	3.3%	ASTM D-6184
Evaporation	24 hrs, 100°C	.29%	
Copper Corrosion	24 hrs, 100°C	1B, Slight tarnish	ASTM D-4048

Since 1844: Our performance is reflected in the value we bring to our customers.

Nye Lubricants is a leader in the innovation, formulation and provision of synthetic lubricants, enabling and improving breakthrough products and critical new technologies. We bring proven experience, deep technical knowledge and customer focus to solve our customers' toughest challenges, adding tangible value to products in a wide range of industries and applications.

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