

**Lubrication
Solutions:**

HELICOPTERS

**AERIOL
AVIATION GREASES**



Aeriol 



BETTER GREASE FOR MORE RELIABLE PERFORMANCE.

Not all greases are created equal. High demands on components in the aviation industry require unique technology which can outperform traditional options. Grease technology is now available that greatly improves reliability of greased components.

For almost 30 years, there has been little change to traditional greases commonly used in helicopters. Surprisingly, little regard has been given to new technologies that have been developing in grease and lubrication industries world wide, including staple chemistries that have proven themselves for years. Maryn International has developed alternatives to traditional greases that reduce wear, increase component life, and protect equipment better than ever before. The acceptance of this technology by major helicopter manufacturers is resulting in longer lasting components and better lubrication.

Maryn invested 20 years developing components and chemistries for grease; experimenting with variations on the types of synthetic base oils used, the selection of the thickening

system and the right concentration of our proprietary additive package.

This unique combination greatly improves the overall properties of a grease producing:

- Exceptional corrosion prevention in humid and wet environments
- Thixotropic properties that reduce oil leakage and separation (enhancing its ability to tenaciously remain in bearings)
- High resistance to shear forces
- Excellent water washout performance demonstrated by years of testing and real-world application

The Result: Grease products that can be used in a wide range of helicopter applications. Bell Helicopter is at the forefront of these new developments and has accepted these products into their approved consumable listing in their Standard Practices Manual.

C-172* AERIOL THIXO SYN AVIATION GREASE

Developed with the assistance of Bell Helicopter, Aeriol ThixO SYN Aviation Grease is approved for specific applications as an alternative to traditional greases (C-001) on a range of models.

Additionally, there are many other areas where Aeriol ThixO SYN has been used to improve component life, and to preserve the integrity of yokes, splines and other components which in turn reduce long term maintenance and repair costs.

Some of the key advantages for using AeriolThixO SYN, are related to its long term stability, wide operating temperature range and powerful EP/AW chemistry. When compared to the leading aviation greases used by helicopters,

AeriolThixO SYN is more stable in long term use, prevents damage in humid and wet environments and has a tenacious ability to remain in bearings under a wide range of stresses and conditions.

Aeriol ThixO SYN is versatile, effective and proving itself to be superior to other greases in numerous applications.

C-172*
BELL SPEC 299-947-554



C-561* AERIOL THIXO #2 AVIATION GREASE

Introduced to Aviation in 1997, AeriolThixO #2 Aviation Grease replaces corrosion preventative compounds (CPC's) in many areas on rotor hub assemblies and is used on swashplate drive hub sets, splines and mast poles on various models as directed by the OEM.

Aeriol ThixO #2 has received many regional approvals by the Civil Aviation Authority in New Zealand, Transport Canada, and other countries worldwide. Aeriol ThixO #2 is also approved and recommended for use in a wide range of Bell Helicopter models for specific applications - primarily to prevent rust, corrosion and seizing of

critical components in drives, hub sets and splines.

When using Aeriol ThixO #2, it is important to note that it is NOT considered an alternate for other greases in all applications. Be sure to carefully read and apply all instructions found in the maintenance manuals and technical service bulletins published by the OEM.



NOTICE: ALWAYS FOLLOW APPLICATION DIRECTIONS AS OUTLINED BY OEM.

FOR BELL HELICOPTER MODELS

Each grease (C-172, C-561 and C-001) has their own properties and their use must be in accordance with Bell Helicopter's requirements. Any deviation from the related Chapter 12 approved greases should not be made without the expressed agreement of Bell Helicopter. Please contact Bell Helicopter Product Support Engineering or MARYN International Technical Services if you have specific application inquiries.

FOR OTHER MANUFACTURERS

The use of Aeriol ThixO SYN Aviation grease and ThixO #2 Aviation Grease has been reviewed by other helicopter manufacturers for additional applications. Consult with the Product Support Engineering departments of your manufacturer prior to using these products on your models. MARYN International Technical Services can also assist with obtaining approvals for other manufacturers.

* C-XXX refers to the consumable list in the BHT-ALL-SPM Standard Practices Manual (Bell Helicopter)

Aeriol ThixO SYN Aviation Grease and ThixO #2 Aviation Grease have been engineered with the unique properties of an advanced thickening agent, high viscosity index quality base oils and advanced lubricant chemistry.

These greases are compatible with many grease types, have broad operating temperature ranges, high shear stability and exceptionally low oil separation. They do not bleed or age harden under normal operating conditions, are highly resistant to

shock loading and up to 20X more resistant to water washout when compared to competitive greases.

Aeriol ThixO SYN meets or exceeds the MIL PRF 24139 specification for multipurpose, water resistant grease and provides improved performance vs traditional aviation grease formulas.

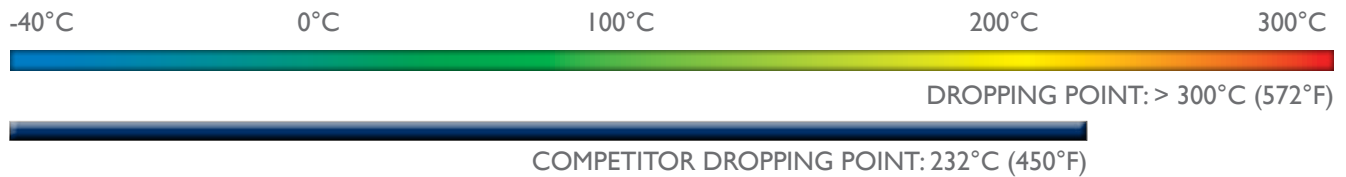
When selecting a grease, always consult the maintenance requirements set forth by the OEM.

The technical data for Aeriol ThixO #2 and ThixO SYN is available for download from our website.

The data shown in the following charts relates to Aeriol ThixO SYN Aviation Grease.

OPERATING RANGE

High dropping points combined with excellent results on the low temperature torque test demonstrates that the grease remains functional in a wide range of temperature extremes.



RUST & CORROSION PREVENTION

ASTM D1743
Greased bearings are exposed to water for 48 hrs. To pass there should be no visible corrosion spots greater than 1 mm in diameter.



ASTM D1743
Coated metal surfaces are sprayed with a saltwater fog over the duration of the test.

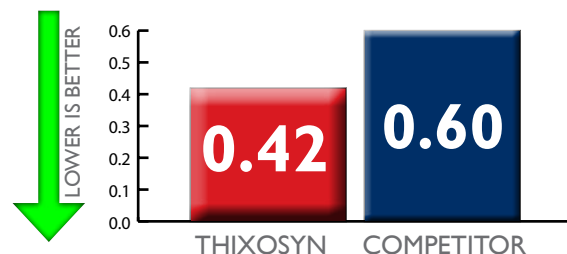
>300 hrs

EXTREME PRESSURE & WEAR PROTECTION

LOAD WEAR INDEX
A measurement of the kgf relative to the applied loads preceding the weld point of the 4 ball wear test. MIL PRF 81322 requires a minimum LWI of 30.



WEAR SCAR SIZE
An average of the wear scar dimensions (measured in mm) on the 4 balls used in the ASTM D2266 test.

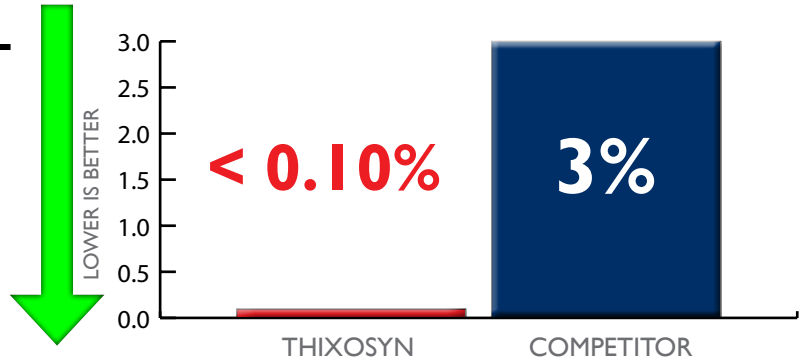


STABILITY

UP TO 20X MORE RESISTANT TO WATER WASHOUT

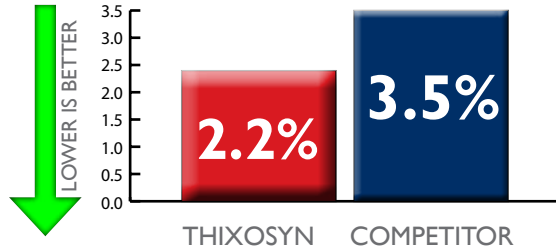
WATER WASHOUT RESISTANCE

Measured as a percentage of how easily grease washes out under direct water contact this can be an indicator of how the grease will perform in wet, and humid environments. This test is performed by running water for 1 hour over a ball bearing apparatus in a controlled stream. Grease that is washed away is measured by weight.



CHANGE IN WORKED PENETRATION

Mechanical stability requires the grease to remain close to the same consistency in all working conditions. A lower change in the result of ASTM D217 over an extended duration of the test (from 60 strokes to 10 000 strokes or higher) demonstrates that a grease maintains its consistency better over time.



BOMB OXIDATION

Grease is placed within the ASTM D942 testing apparatus (oxidation bomb), filled with oxygen and charged to 100 psi. The test is run to 100 and 500 hrs with the pressure drop in psi reported. MIL PRF 81322 limits the maximum psi drop to 12.0 at 100 hrs and 24.0 at 500 hrs. The lower the result, the better the grease resists breakdown because of oxidation.



COMPATIBILITY

Aerial ThixO SYN Aviation grease has been tested and is compatible with other aviation greases commonly used on helicopter applications.

Thickening Agent	ThixO SYN	ThixOgrease
Aluminum Complex	□	□
Barium Complex	✓	✓
Calcium Stearate	✓	✓
Calcium 12-Hydroxy	□	□
Calcium Complex	✗	✗
Calcium Sulphonate	✓	✓
Clay (Non-Soap)	✓	□
Lithium Stearate	□	□
Lithium 12-Hydroxy	□	□
Lithium Complex	✓	✓
Polyurea	✗	✗
Polyurea (microgel)	✓	✓

- ✓ GOOD COMPATIBILITY
- FAIR COMPATIBILITY
- ✗ POOR COMPATIBILITY

MOBILGREASE 28 & AEROSHELL PRODUCTS

Specific compatibility testing for Mobilgrease 28 and Aeroshell products were performed to ensure no detrimental effects in purging seals and bearings. NOTE: Aerial ThixO SYN Aviation Grease may not be an alternative for these greases in all applications. Always refer to Technical Bulletins or Maintenance Manuals prior to making a substitution.

Special care should be taken if purging bearings designed to be purged by the seals; progressive introduction of grease while rotating the bearing will protect their integrity.



JOIN IN THE CONVERSATION

Get connected to the technical services team, ask questions, share stories and be involved with future innovations in aviation grease technology by connecting with us online, in person or by phone.

Online: www.maryngroup.com
Facebook @flywithaerial

Email: helicoptersupport@maryngroup.com

By Phone: 1-800-661-7777

In Person: 4216 54th Ave SE
Calgary AB T2C 2E3

ORDERING INFORMATION

GREASE

Aeriol ThixO SYN Aviation Grease (C-172*)



400g Tube	3820-0
17 kg	3821-0
55 kg Keg	3822-0
180 kg Drum	3823-0

Aeriol ThixO #2 Aviation Grease (C-561)



425g Tube	3810-0
17 kg	3811-0
55 kg Keg	3812-0
180 kg Drum	3813-0

To order Aeriol Aviation Greases please contact:

Factory Direct (FOB Calgary AB CANADA)

MARYN International
4216 54th Ave SE, Calgary AB T2C 2E3

Local: +1-403-252-2239
Toll Free: +1-800-661-7777
web: www.maryninternational.com

OR

Contact your authorized OEM Helicopter Supply Center

C-172*
BELL SPEC 299-947-554

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