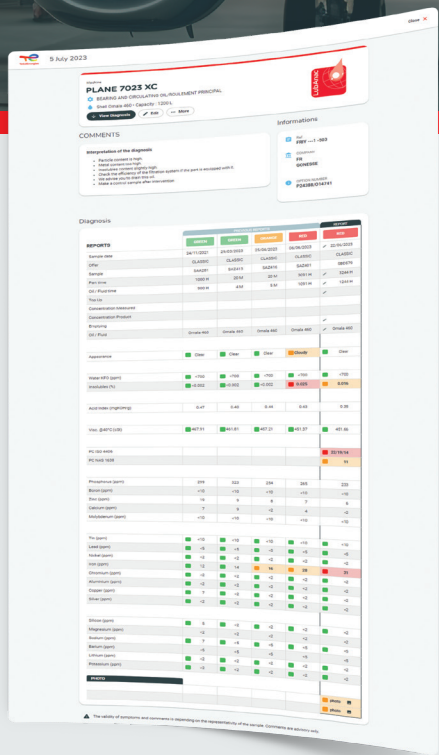


The benefits offered by TotalEnergies Lubrificants



LubAnac expert is our in depth, personalized diagnosis system for aircraft piston engines.

From a sample of oil, you can closely **monitor the natural wear** of your engine and identify the origin of abnormal wear, in order to define actions of preventive maintenance. The diagnosis report is available within 48 hours after the receipt of the oil sample in the lab.

You benefit from a personalized and safe access to your oil analyses results on the Internet. Through its extensive expertise, TotalEnergies has built up a large database with reference data of current aircraft piston engines.

You can have confidence in the diagnosis and comments established by our LubAnac technicians.



More information :
<https://lubricants.totalenergies.com/business/oil-diagnosis-lubanac>



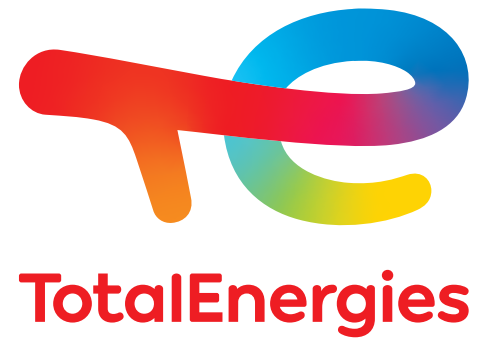
Aviation fuels

TotalEnergies aviation is **a major player in aviation fueling (SAF - Sustainable Aviation Fuel, JET A-1, AVGAS 100LL, AVGAS UL 91)**. TotalEnergies Aviation is also involved in the design and operation of airport facilities, and offers technical assistance agreements. TotalEnergies aviation supplies its customers, including over **250 airlines, at nearly 800 airports and airfields worldwide**. Our diverse customer benefit from a personalized service offering tailored to their needs.

TotalEnergies aviation fuels are manufactured in compliance with the strictest quality controls and international standards. As a founding member of the JIG (Joint Inspection Group), TotalEnergies participates in the development and evolution of industry standards. With over 60 years' experience, TotalEnergies aviation is your local partner.



<https://aviation.totalenergies.com>



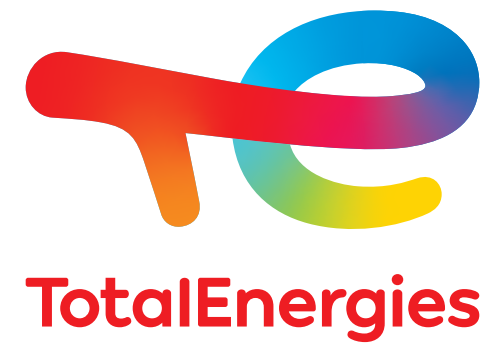
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Safety Data Sheets are available at ms-sds.totalenergies.com



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Aviation industry

Discover our complete range of aviation lubricants and services operations



PISTON ENGINES LUBRICANTS

	PRODUCTS	SPECIFICATIONS*	APPLICATIONS
NON DISPERSIVE	Aero 80	<ul style="list-style-type: none">FRANCE: AIR 3560/D grade SAE 40US, UK: SAE J 1966 SAE grade 40	Pure mineral oils for the lubrication of piston engines operating under average conditions.
	Aero 100	<ul style="list-style-type: none">FRANCE: AIR 3560/D grade SAE 50US, UK: SAE J 1966 SAE grade 50	Lubrication of vintage aeroplanes (WWI and WWII warplanes).
	Aero 120	<ul style="list-style-type: none">US: SAE J 1966 grade SAE 60	
DISPERSIVE	Aero D 80	<ul style="list-style-type: none">FRANCE: AIR 3570 grade SAE 40US, UK: SAE J 1899 SAE grade 40	Ashless dispersive monograde mineral oils for the lubrication of piston engines operating under severe and very severe conditions.
	Aero D 100	<ul style="list-style-type: none">FRANCE: AIR 3570 grade SAE 50US, UK: SAE J 1899 SAE grade 50	
	Aero D 120	<ul style="list-style-type: none">FRANCE: AIR 3570 grade SAE 60US, UK: SAE J 1899 SAE grade 60	
	Aero XPD 80	<ul style="list-style-type: none">FRANCE: AIR 3570 grade SAE 40US, UK: SAE J 1899 SAE grade 40FAA approved AD 80-04-03R2 paragraph b.1AVCO LYCOMING (310F) approved	New generation ashless dispersive monograde mineral lubricants, specially developed to improve anti-wear and corrosion protection of your highly valued piston aviation engine.
	Aero XPD 100	<ul style="list-style-type: none">FRANCE: AIR 3570 grade SAE 50US, UK: SAE J 1899 SAE grade 50FAA approved AD 80-04-03R2 paragraph b.1AVCO LYCOMING (310F) approved	
	Aero XPD 120	<ul style="list-style-type: none">FRANCE: AIR 3570 grade SAE 60US, UK: SAE J 1899 SAE grade 60FAA approved AD 80-04-03R2 paragraph b.1AVCO LYCOMING (301F) approved.	These oils already contain an anti-wear additive similar to TEXTRON Lycoming LW 16702.
	Aero DM 15W-50	<ul style="list-style-type: none">French Air Force approved (n°30330 STPA/MA)SAE J 1899FAA approved AD 80-04-03R2 paragraph b.1AVCO LYCOMING (310F) and TELEDYNE CONTINENTAL (MHS-24) approved	Ashless dispersive multigrade oils for the lubrication of piston engines operating under severe and very severe conditions.
			Can be used throughout the year in any climate.
	Aero DM 20W-60	<ul style="list-style-type: none">SAE J 1899Meets the requirements of FAA AD 80-04-03R2 paragraph b.1 from FAAConform to 301F AVCO LYCOMING specification	These oils already contain an anti-wear additive similar to TEXTRON Lycoming LW 16702.

TURBINE ENGINES LUBRICANTS

	PRODUCTS	SPECIFICATIONS*	APPLICATIONS
	Aeroturbine 331	<ul style="list-style-type: none">FRANCE: AIR 3515/B Iss.3UK: DEF-STAN 91-99 Iss. 2Joint Service Designation: OM-11NATO code: O-135Turbomeca approved	Mineral oil for lubrication of aviation turbine engines.
			Bearings and gearboxes.
	Turbonycoil 3516	<ul style="list-style-type: none">FRANCE: AIR 3516/A Iss. 2US: MIL-PRF-6081 D Grade 1010NATO code: O-133	Mineral based turbine engine oil.
	Turbonycoil 600	<ul style="list-style-type: none">FRANCE: DCSEA 299/AUS: MIL-PRF-23699 F-STDUK: DEF STAN 91-101 Iss. 3Joint Service Designation: OX-27 / OX-28NATO code: O-156SAE-AS 5780-SPC	Synthetic lubrication oil for lubrication of gas turbine (type 5 cSt).
	Turbonycoil 699	<ul style="list-style-type: none">UK: DEF STAN 91-100 Iss. 3 Amd.1Joint Service Designation: OX-26NATO code: O-160	Synthetic helicopter gearbox, transmission and turbine engine oil.

GEAR OILS

	PRODUCTS	SPECIFICATIONS*	APPLICATIONS
	Aerogear 823	<ul style="list-style-type: none">FRANCE: DCSEA 255/AUS: MIL-PRF-6086E (medium grade)UK: DEF STAN 91-112/1Joint Service Designation: OEP-70NATO code: O-155EUROCOPTER approved	Mineral oil for highly stressed gearboxes such as helicopter gearboxes.
	Aerogear 1032	<ul style="list-style-type: none">AIR 3525/B approvedUS: MIL-PRF-6086E (medium grade)UK: DTD 581 C grade OEP-70Joint Service Designation: OEP-70NATO code: O-155EUROCOPTER ECS 2199 approved	Mineral oil for highly stressed gearboxes such as the latest generation of Eurocopter helicopter gearboxes.

TotalEnergies Lubrifiants reserves the right to modify the formulation of its products without prior notice in order to improve their performance or comply with changing regulations.

TotalEnergies Lubrifiants is non exclusive distributor of NYCO Aviation lubricants and greases: Turbonycoil, Nycoprotec, Hydraunycoil et Nyco grease.

*performs to

ENGINES PROTECTION LUBRICANT

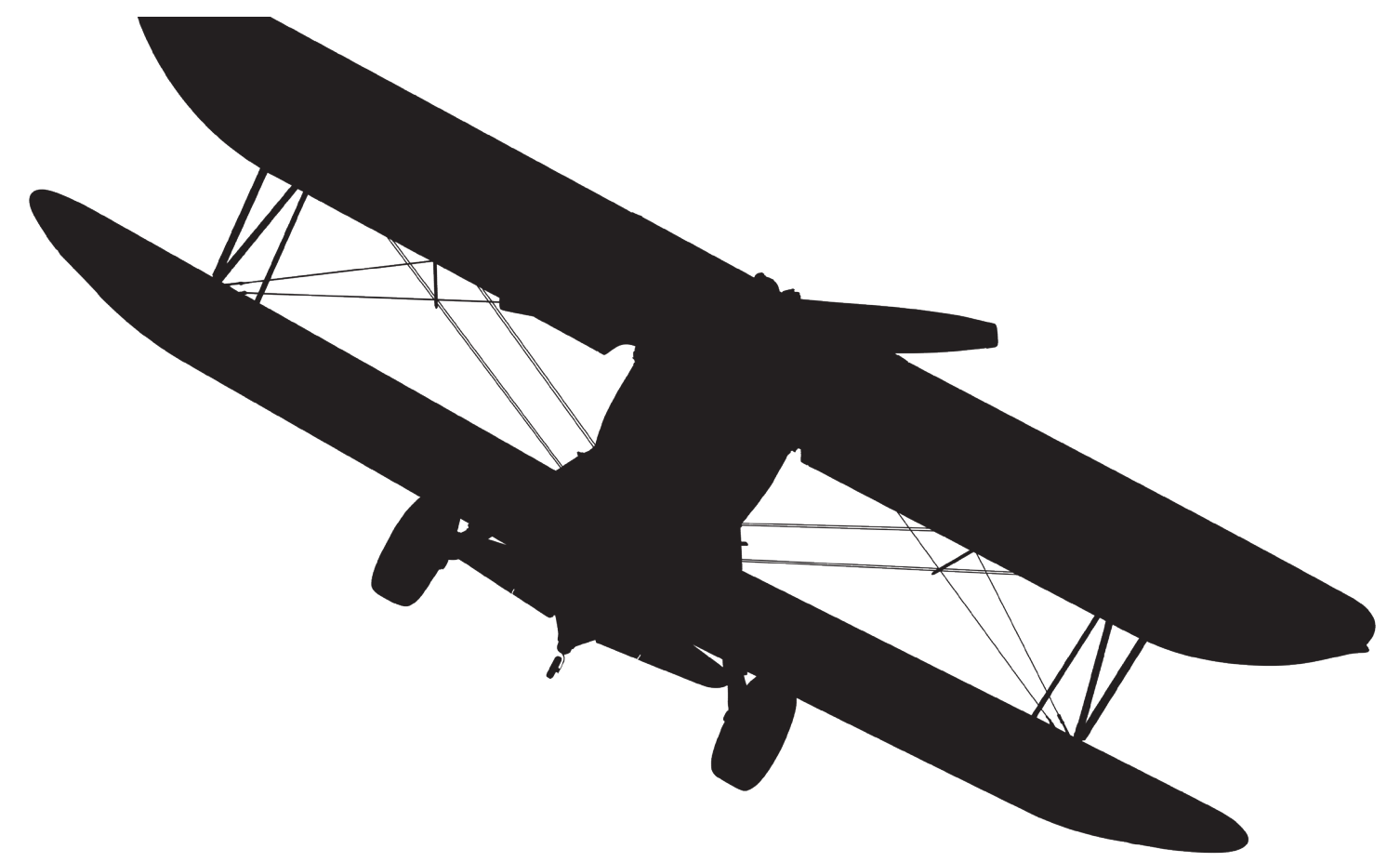
	PRODUCTS	SPECIFICATIONS*	APPLICATIONS
	Aeroprotective 219	<ul style="list-style-type: none">FRANCE: AIR 1503/B type AUK: DEF STAN 91-40/2Joint Service Designation: PX-27NATO code: C-615	Internal protective mineral oil for piston engines.

HYDRAULIC FLUIDS

	PRODUCTS	SPECIFICATIONS*	APPLICATIONS
	Aerohydraulic 520	<ul style="list-style-type: none">FRANCE: DCSEA 415/A (H-520)US: MIL-PRF-5606HUK: DEF STAN 91-48/1, standard gradeJoint Service Designation: OM-18NATO Code: H-520	Mineral hydraulic oil for systems operating under: <ul style="list-style-type: none">high pressure,low and extremely low temperatures.
	Hydraunycoil FH 51	<ul style="list-style-type: none">FRANCE: DCSEA 415/A (H-515)US: MIL-PRF-5606H Amd.3UK: DEF STAN 91-48 Iss. 2Joint Service Designation: OM-15NATO Code: H-515Airbus CML ref. 02BBB9	Microfiltered mineral hydraulic fluid operating under: <ul style="list-style-type: none">high pressure,low and extremely low temperatures.
	Hydraunycoil FH 42	<ul style="list-style-type: none">US: MIL-PRF-87257BNATO Code: H-538OX-538Airbus CML ref. 02EBA1	Synthetic fire resistant low temperature hydraulic fluid.
	Hydraunycoil FH 2	<ul style="list-style-type: none">FRANCE: DCSEA 437/BUS: MIL-PRF-83282 D Amd. 1Joint Service Designation: OX-19NATO Code: H-537	Synthetic microfiltered fire resistant hydraulic fluid.

GREASES

	PRODUCTS	SPECIFICATIONS*	APPLICATIONS
	Ceran XM 220	<ul style="list-style-type: none">ISO6743-9: L-XCFIB1/2DIN 51 502: KP1/2R-30DCSEA 360 A specification related to sea water resistant grease codified NATO G-460	General purpose complex calcium sulphonate grease for high shocks loads, extreme pressures, high speeds, wide temperatures as well as excellent water wash out capabilities.
	Nycogrease GN 22	<ul style="list-style-type: none">FRANCE: DCSEA 395/BUS: MIL-PRF-81322GUK: DEF STAN 91-52 Iss. 1 Amd. 2Joint Service Designation: XG-293NATO Code: G-395	General purpose wide temperature range synthetic based grease.



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