



OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
CONTINENTAL N415SS
 Component
Piston Aircraft Engine
 Fluid
SHELL AEROSHELL 100 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0674747	WC0674751	---
Sample Date	Client Info			20 Dec 2023	01 May 2023	---
TSN	hrs	Client Info		0	0	---
TSO	hrs	Client Info		0	23	---
Oil Age	hrs	Client Info		50	22	---
Oil Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	SEVERE	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>4.0	<1.0	<1.0	---
Water		WC Method	>0.1	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	10	37	---
Chromium	ppm	ASTM D5185m	>20	12	▲ 48	---
Nickel	ppm	ASTM D5185m	>15	0	1	---
Titanium	ppm	ASTM D5185m		0	1	---
Silver	ppm	ASTM D5185m	>5	0	0	---
Aluminum	ppm	ASTM D5185m	>25	9	● 11	---
Lead	ppm	ASTM D5185m	>20000	181	1052	---
Copper	ppm	ASTM D5185m	>25	10	▲ 65	---
Tin	ppm	ASTM D5185m	>30	1	9	---
Vanadium	ppm	ASTM D5185m		0	<1	---
Cadmium	ppm	ASTM D5185m		1	2	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		0	0	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m		<1	1	---
Calcium	ppm	ASTM D5185m		2	5	---
Phosphorus	ppm	ASTM D5185m		<1	27	---
Zinc	ppm	ASTM D5185m		0	21	---
Sulfur	ppm	ASTM D5185m	4800	1186	1522	---

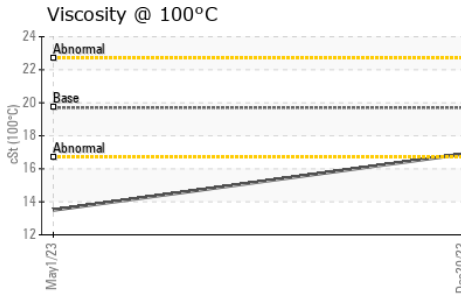
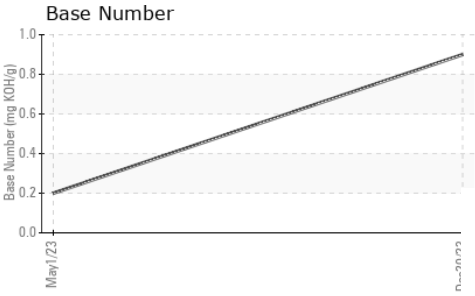
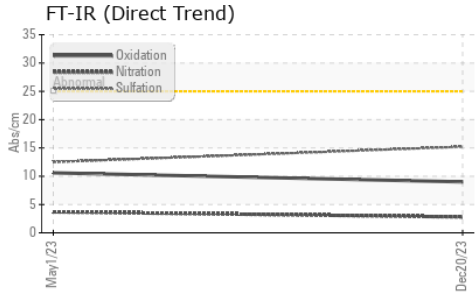
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	11	▲ 39	---
Sodium	ppm	ASTM D5185m		0	6	---
Potassium	ppm	ASTM D5185m	>20	2	<1	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0	0	---
Nitration	Abs/cm	*ASTM D7624	>20	2.8	3.7	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	15.2	12.5	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	9.0	10.6	---
Base Number (BN)	mg KOH/g	ASTM D2896		0.9	0.2	---



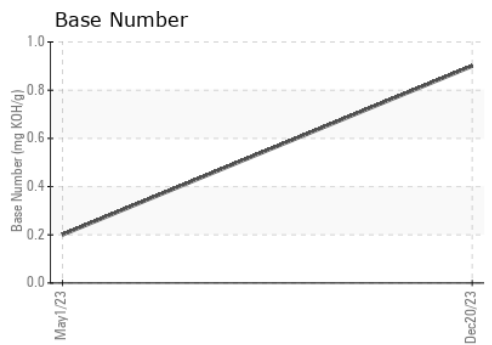
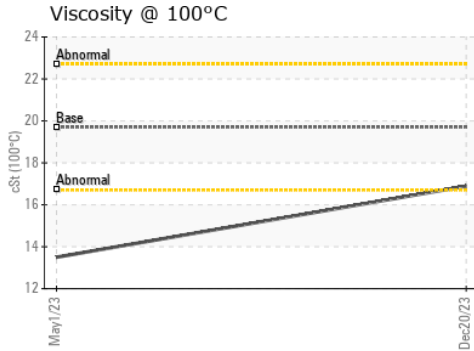
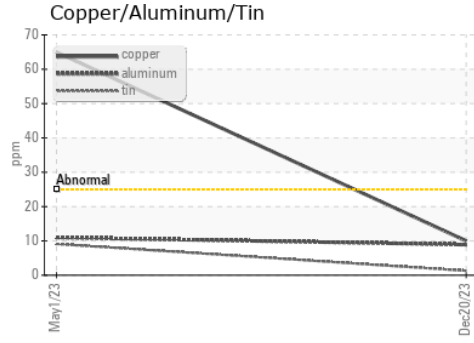
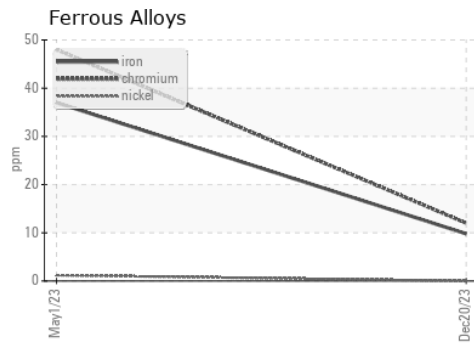
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VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	HAZY	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	19.7	16.89	13.5

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0674747 **Received** : 15 Apr 2024
Lab Number : 06149239 **Tested** : 17 Apr 2024
Unique Number : 10979317 **Diagnosed** : 18 Apr 2024 - Jonathan Hester
Test Package : AVI 1 (Additional Tests: FT-IR, TBN)

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To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)