



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area

MOUNTAIN AIR HELICOPTERS

Machine Id

CESSNA 414A N414PW (S/N 276667R)

Component

Right Piston Aircraft Engine

Fluid

PHILLIPS 66 AVIATION X/C OIL SAE20W50 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GF0001002	---	---
Sample Date		Client Info		23 Sep 2023	---	---
TSN	hrs	Client Info		0	---	---
TSO	hrs	Client Info		77	---	---
Oil Age	hrs	Client Info		30	---	---
Filter Age	hrs	Client Info		30	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	60	---	---
Chromium	ppm	ASTM D5185m	>20	29	---	---
Nickel	ppm	ASTM D5185m	>15	12	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>5	0	---	---
Aluminum	ppm	ASTM D5185m	>25	10	---	---
Lead	ppm	ASTM D5185m	>20000	2993	---	---
Copper	ppm	ASTM D5185m	>25	7	---	---
Tin	ppm	ASTM D5185m	>30	1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

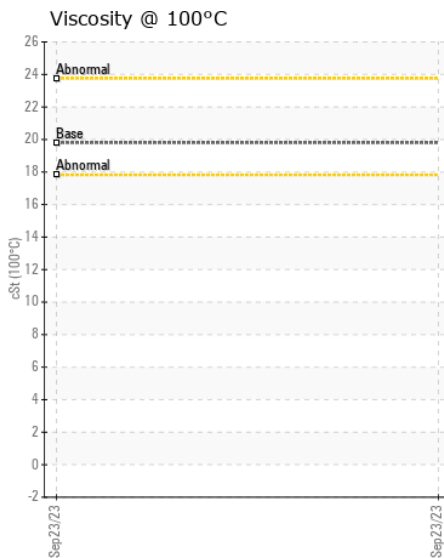
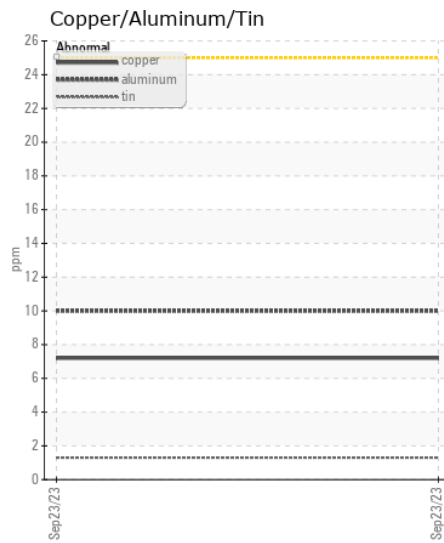
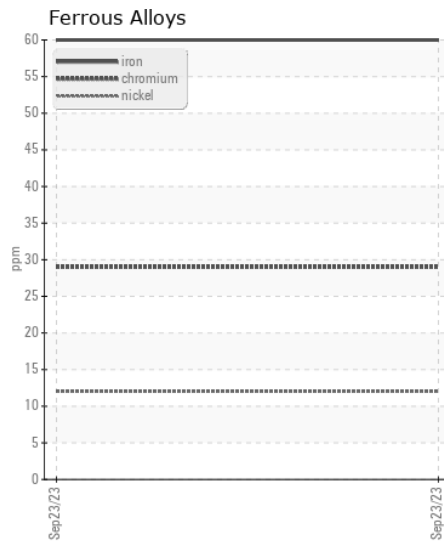
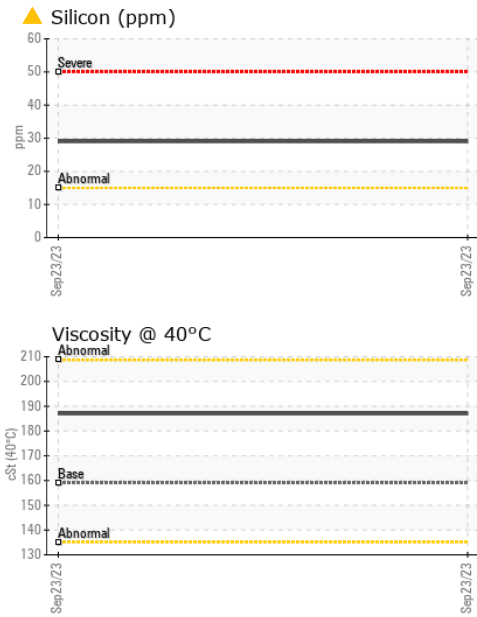
Elemental level of silicon (Si) above normal indicating ingress of seal material.

Silicon	ppm	ASTM D5185m	>15	▲ 29	---	---
Potassium	ppm	ASTM D5185m	>20	1	---	---
Fuel		WC Method	>4.0	<1.0	---	---
Water		WC Method	>0.1	NEG	---	---
Glycol		WC Method		NEG	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---	---

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		3	---	---
Boron	ppm	ASTM D5185m		0	---	---
Barium	ppm	ASTM D5185m		1	---	---
Molybdenum	ppm	ASTM D5185m		10	---	---
Manganese	ppm	ASTM D5185m		1	---	---
Magnesium	ppm	ASTM D5185m		1	---	---
Calcium	ppm	ASTM D5185m		68	---	---
Phosphorus	ppm	ASTM D5185m		43	---	---
Zinc	ppm	ASTM D5185m		8	---	---
Sulfur	ppm	ASTM D5185m		2375	---	---
Visc @ 40°C	cSt	ASTM D445	159	187	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GF0001002
Lab Number : 05976663
Unique Number : 10688613
Test Package : AVI 1 (Additional Tests: KV40)

Received : 11 Oct 2023
Tested : 12 Oct 2023
Diagnosed : 13 Oct 2023 - Don Baldrige

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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)