



OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
(C-GDBX) AKELA AIRCRAFT INC
Machine Id
[C-GDBX] DE HAVILLAND DHC-2 JP204689
Component
Piston Aircraft Engine
Fluid
PHILLIPS 66 AVIATION X/C SAE 25W60 (5 GAL)

RECOMMENDATION

We advise that you check the engine magneto timing. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0346961	---	---
Sample Date		Client Info		02 Feb 2024	---	---
TSN	hrs	Client Info		0	---	---
TSO	hrs	Client Info		200	---	---
Oil Age	hrs	Client Info		50	---	---
Filter Age	hrs	Client Info		50	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				SEVERE	---	---

WEAR

Chromium ppm levels are severe. Ring wear is indicated.

Iron	ppm	ASTM D5185(m)	>90	45	---	---
Chromium	ppm	ASTM D5185(m)	>20	▲ 67	---	---
Nickel	ppm	ASTM D5185(m)	>15	2	---	---
Titanium	ppm	ASTM D5185(m)		0	---	---
Silver	ppm	ASTM D5185(m)	>5	<1	---	---
Aluminum	ppm	ASTM D5185(m)	>25	19	---	---
Lead	ppm	ASTM D5185(m)	>20000	4182	---	---
Copper	ppm	ASTM D5185(m)	>25	8	---	---
Tin	ppm	ASTM D5185(m)	>30	0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	6	---	---
Potassium	ppm	ASTM D5185(m)	>20	<1	---	---
Fuel		WC Method	>4.0	<1.0	---	---
Water		WC Method	>0.1	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	ASTM D7844*		0	---	---
Nitration	Abs/cm	ASTM D7624*	>20	4.1	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	16.6	---	---
Silt	scalar	Visual*	NONE	VLITE	---	---
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 oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		<1	---	---
Boron	ppm	ASTM D5185(m)		0	---	---
Barium	ppm	ASTM D5185(m)		0	---	---
Molybdenum	ppm	ASTM D5185(m)		0	---	---
Manganese	ppm	ASTM D5185(m)		0	---	---
Magnesium	ppm	ASTM D5185(m)		4	---	---
Calcium	ppm	ASTM D5185(m)		3	---	---
Phosphorus	ppm	ASTM D5185(m)		2	---	---
Zinc	ppm	ASTM D5185(m)		3	---	---
Sulfur	ppm	ASTM D5185(m)		1339	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	11.0	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	24.8	24.8	---	---

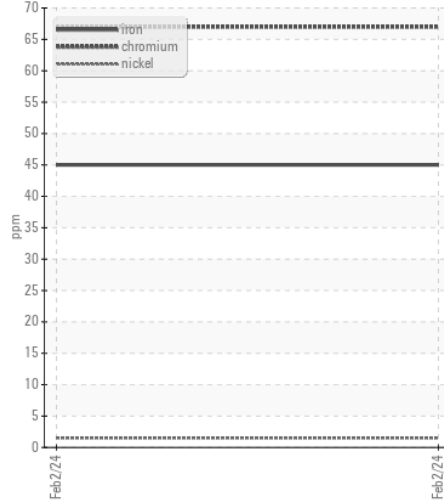
▲ Ferrous Alloys



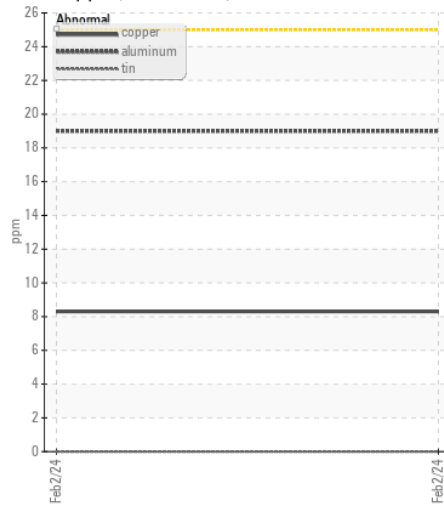
Viscosity @ 100°C



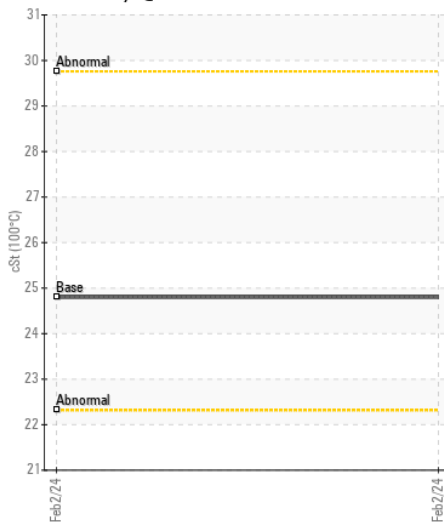
▲ Ferrous Alloys



Copper/Aluminum/Tin



Viscosity @ 100°C



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0346961 **Received** : 06 Mar 2024
Lab Number : 02620182 **Tested** : 06 Mar 2024
Unique Number : 5737292 **Diagnosed** : 06 Mar 2024 - Kevin Marson
Test Package : AVI 1 (Additional Tests: FT-IR)

ORILLIA AVIATION LTD.
 3449C AIRPORT RD., ORILLIA RAMA REGIONAL AIRPORT
 RAMARA, ON
 CA L3V 0K6
 Contact: Brenda McGuire
 parts@orilliaaviation.com
 T: (705)325-6153
 F: (705)325-6377

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.