



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
(CGJRH)
Machine Id
[CGJRH] PIPER PA31-350 L-2779-68A
Component
Right Piston Aircraft Engine
Fluid
PHILLIPS 66 AVIATION X/C OIL SAE20W50 (14 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0886705	WC0838462	WC0838465
Sample Date		Client Info		10 Feb 2024	23 Jan 2024	12 Jan 2024
TSN	hrs	Client Info		8318	0	0
TSO	hrs	Client Info		4210	4190	0
Oil Age	hrs	Client Info		9	25	49
Filter Age	hrs	Client Info		9	25	49
Oil Changed		Client Info		Changed	Not Changed	Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>90	15	24	38
Chromium	ppm	ASTM D5185(m)	>20	4	6	9
Nickel	ppm	ASTM D5185(m)	>15	4	6	10
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>5	<1	<1	<1
Aluminum	ppm	ASTM D5185(m)	>25	3	5	7
Lead	ppm	ASTM D5185(m)	>20000	2695	4342	7016
Copper	ppm	ASTM D5185(m)	>25	3	5	5
Tin	ppm	ASTM D5185(m)	>30	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

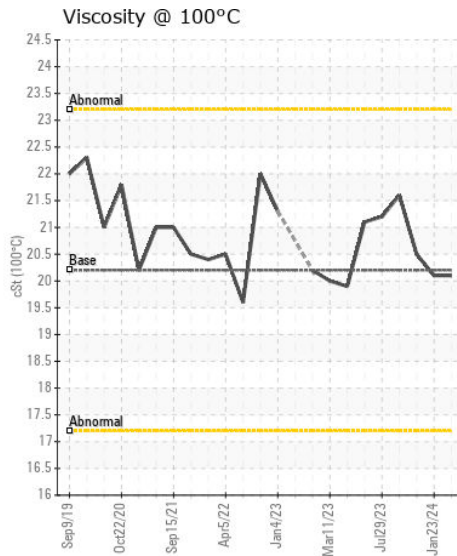
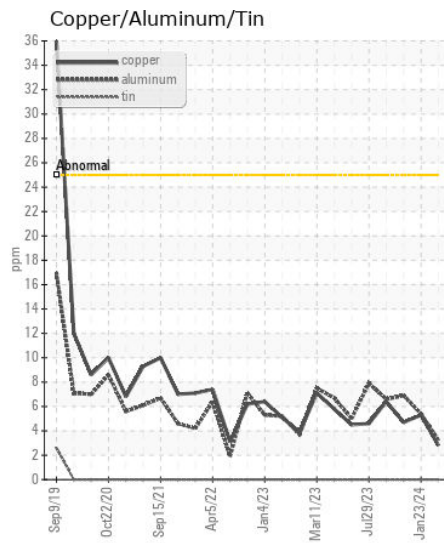
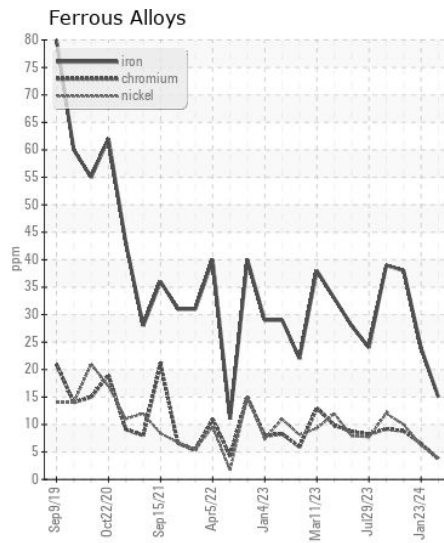
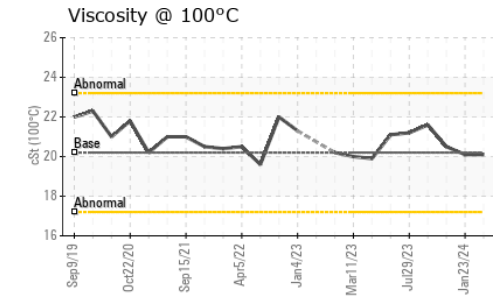
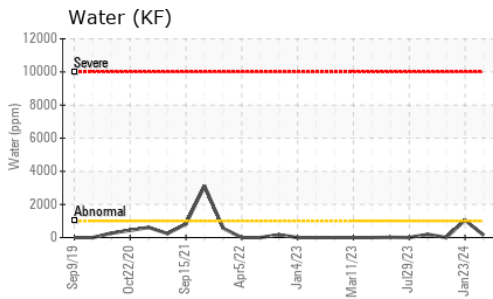
The water content is negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	10	7	6
Potassium	ppm	ASTM D5185(m)	>20	1	<1	1
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water	%	ASTM D6304*	>0.1	0.014	▲ 0.105	---
ppm Water	ppm	ASTM D6304*	>1000	143	▲ 1052	---
Glycol		WC Method		NEG	NEG	NEG
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	▲ WGOIL	▲ WGOIL
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	.2%	.2%	.2%

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		<1	<1	<1
Boron	ppm	ASTM D5185(m)	0.0	0	<1	0
Barium	ppm	ASTM D5185(m)	0.0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0.0	0	0	0
Manganese	ppm	ASTM D5185(m)	0.0	0	0	0
Magnesium	ppm	ASTM D5185(m)	0.0	4	5	6
Calcium	ppm	ASTM D5185(m)	4.7	4	36	3
Phosphorus	ppm	ASTM D5185(m)	0.0	<1	6	<1
Zinc	ppm	ASTM D5185(m)	0.1	3	9	4
Sulfur	ppm	ASTM D5185(m)	848	978	1084	1033
Visc @ 100°C	cSt	ASTM D7279(m)	20.2	20.1	20.1	20.5



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0886705
Lab Number : 02616209
Unique Number : 5733319
Test Package : AVI 1 (Additional Tests: KF)

Received : 16 Feb 2024
Tested : 20 Feb 2024
Diagnosed : 20 Feb 2024 - Kevin Marson

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.

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