



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

(C-GTJF)

Machine Id

[C-GTJF] PIPER PA31-350 RL-1372-68A

Component

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. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0886719	WC0886704	WC0838447
Sample Date		Client Info		26 Apr 2024	05 Feb 2024	02 Feb 2024
TSN	hrs	Client Info		0	10323	0
TSO	hrs	Client Info		3460	3285	3281
Oil Age	hrs	Client Info		48	4	13
Filter Age	hrs	Client Info		48	17	13
Oil Changed		Client Info		Changed	Not Changed	Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

## WEAR

An increase in the nickel level is noted. All other component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>90	30	10	23
Chromium	ppm	ASTM D5185(m)	>20	7	2	6
Nickel	ppm	ASTM D5185(m)	>15	12	4	10
Titanium	ppm	ASTM D5185(m)		<1	0	0
Silver	ppm	ASTM D5185(m)	>5	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>25	5	3	6
Lead	ppm	ASTM D5185(m)	>20000	7679	1547	3945
Copper	ppm	ASTM D5185(m)	>25	4	2	4
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

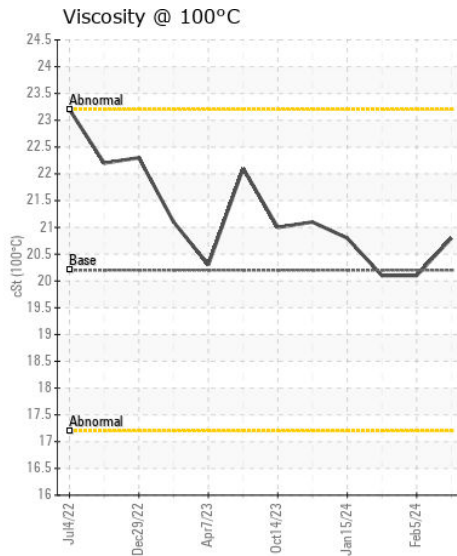
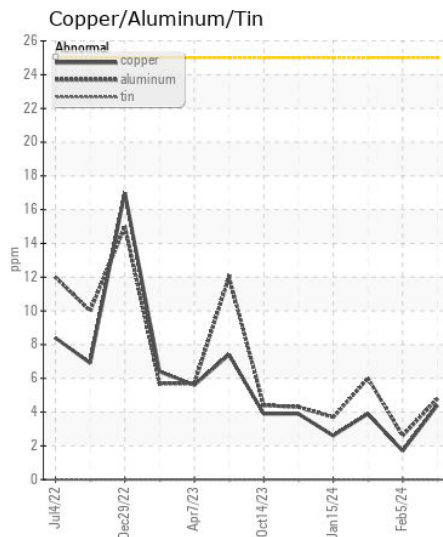
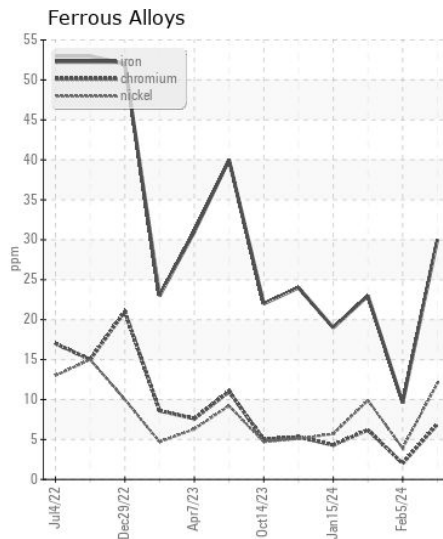
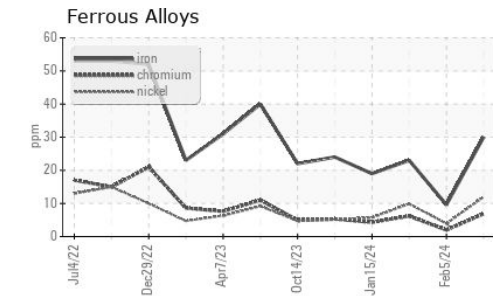
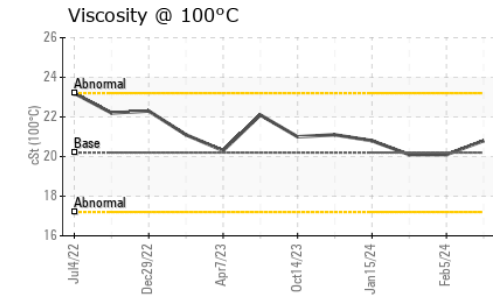
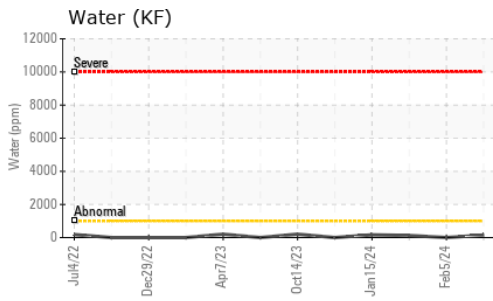
The water content is negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	4	11	12
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	0.015	---	0.012
ppm Water	ppm	ASTM D6304*	>1000	151	---	128
Glycol		WC Method		NEG	NEG	NEG
Silt	scalar	Visual*	NONE	VLITE	VLITE	LIGHT
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	.2%	NEG	.2%

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		<1	0	0
Boron	ppm	ASTM D5185(m)	0.0	0	0	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	1	3
Calcium	ppm	ASTM D5185(m)	4.7	<1	5	1
Phosphorus	ppm	ASTM D5185(m)	0.0	2	2	1
Zinc	ppm	ASTM D5185(m)	0.1	3	3	2
Sulfur	ppm	ASTM D5185(m)	848	949	1009	1027
Visc @ 100°C	cSt	ASTM D7279(m)	20.2	20.8	20.1	20.1



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0886719  
**Lab Number** : 02633096  
**Unique Number** : 5774249  
**Test Package** : AVI 1 ( Additional Tests: KF )  
**Received** : 03 May 2024  
**Tested** : 06 May 2024  
**Diagnosed** : 06 May 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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