



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area  
**(CFAXJ)**  
Machine Id  
**[CFAXJ] CESSNA C182 203118-9-R**  
Component  
**Front Piston Aircraft Engine**  
Fluid  
**SHELL AEROSHELL W 100 (12 LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0871916</b>	WC0413778	WC0413782
Sample Date		Client Info		<b>13 Oct 2023</b>	31 May 2023	22 Aug 2022
TSN	hrs	Client Info		<b>0</b>	0	1769
TSO	hrs	Client Info		<b>1982</b>	1825	1769
Oil Age	hrs	Client Info		<b>48</b>	48	45
Filter Age	hrs	Client Info		<b>48</b>	41	45
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>80	<b>33</b>	32	57
Chromium	ppm	ASTM D5185(m)	>40	<b>45</b>	37	▲ 49
Nickel	ppm	ASTM D5185(m)	>15	<b>2</b>	6	3
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<b>15</b>	30	20
Lead	ppm	ASTM D5185(m)	>20000	<b>6111</b>	2605	5838
Copper	ppm	ASTM D5185(m)	>25	<b>9</b>	12	12
Tin	ppm	ASTM D5185(m)	>30	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

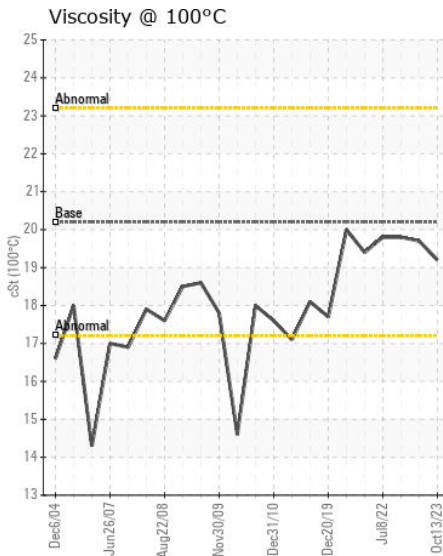
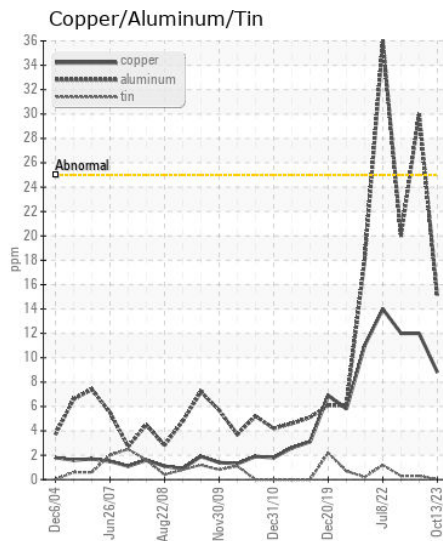
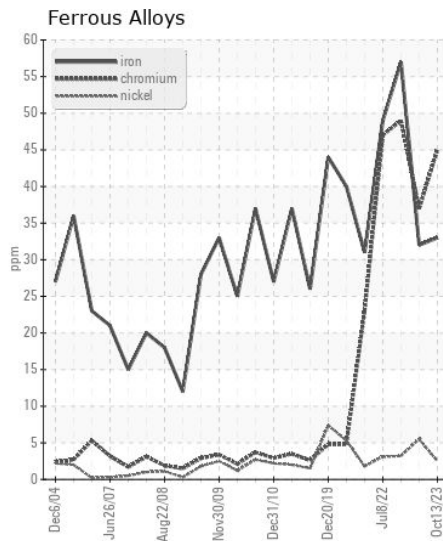
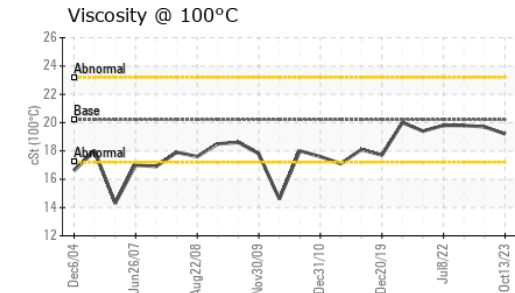
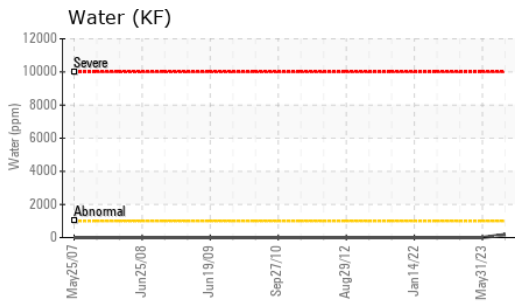
The water content is negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	<b>8</b>	23	13
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	<1
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water	%	ASTM D6304*	>0.1	<b>0.017</b>	---	---
ppm Water	ppm	ASTM D6304*	>1000	<b>178</b>	---	---
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>MILKY</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Boron	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Manganese	ppm	ASTM D5185(m)		<b>0</b>	1	<1
Magnesium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	2	<1
Calcium	ppm	ASTM D5185(m)	0	<b>1</b>	6	2
Phosphorus	ppm	ASTM D5185(m)	0	<b>874</b>	23	800
Zinc	ppm	ASTM D5185(m)	0	<b>3</b>	4	4
Sulfur	ppm	ASTM D5185(m)	3800	<b>3176</b>	2700	3248
Visc @ 100°C	cSt	ASTM D7279(m)	20.2	<b>19.2</b>	19.7	19.8



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0871916 **Received** : 09 Jan 2024  
**Lab Number** : **02607485** **Diagnosed** : 10 Jan 2024  
**Unique Number** : 5708571 **Diagnostician** : Kevin Marson  
**Test Package** : AVI 1 ( Additional Tests: KF )

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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