



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area  
**(C-GZSU)**  
Machine Id  
**[C-GZSU] CESSNA 152 L-22876-15**  
Component  
**Front Piston Aircraft Engine**  
Fluid  
**SHELL AEROSHELL W 15W50 MGR (6 LTR)**

## RECOMMENDATION

We advise that you check for the source of water entry. We advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0858923</b>	WC0743835	---
Sample Date		Client Info		<b>14 Feb 2024</b>	13 Sep 2023	---
TSN	hrs	Client Info		<b>0</b>	0	---
TSO	hrs	Client Info		<b>2266</b>	2220	---
Oil Age	hrs	Client Info		<b>46</b>	56	---
Filter Age	hrs	Client Info		<b>46</b>	56	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>ABNORMAL</b>	ABNORMAL	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>90	<b>49</b>	60	---
Chromium	ppm	ASTM D5185(m)	>20	<b>10</b>	13	---
Nickel	ppm	ASTM D5185(m)	>15	<b>3</b>	4	---
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Silver	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	---
Aluminum	ppm	ASTM D5185(m)	>25	<b>18</b>	▲ 35	---
Lead	ppm	ASTM D5185(m)	>20000	<b>3407</b>	3713	---
Copper	ppm	ASTM D5185(m)	>25	<b>17</b>	23	---
Tin	ppm	ASTM D5185(m)	>30	<b>0</b>	<1	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	---
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	---

## CONTAMINATION

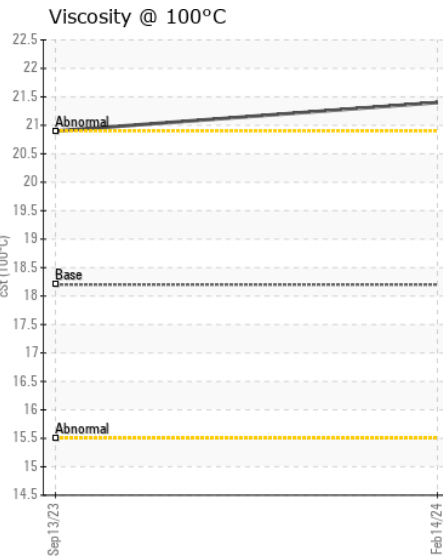
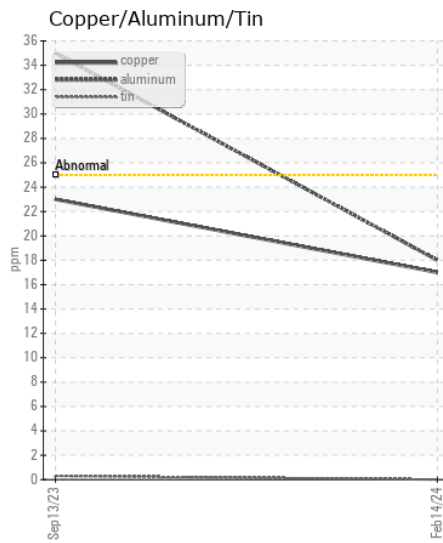
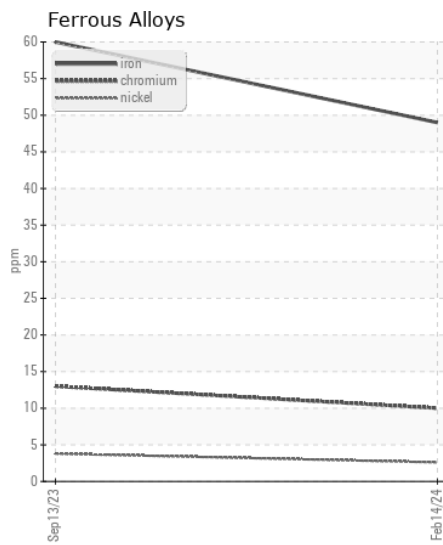
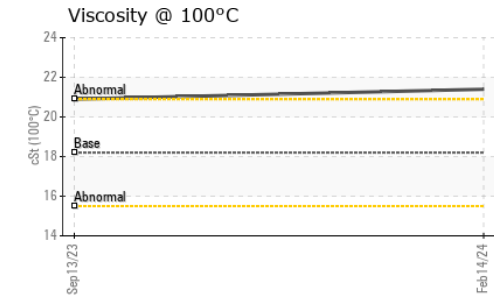
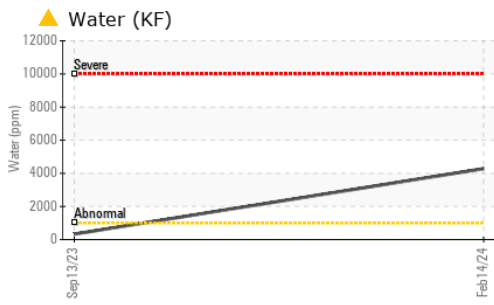
There is a moderate concentration of water present in the oil.

Silicon	ppm	ASTM D5185(m)	>15	<b>7</b>	5	---
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	---
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	---
Water	%	ASTM D6304*	>0.1	▲ <b>0.428</b>	0.033	---
ppm Water	ppm	ASTM D6304*	>1000	▲ <b>4282</b>	331.0	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Silt	scalar	Visual*	NONE	<b>LIGHT</b>	NONE	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	Visual*	>0.1	▲ <b>.2%</b>	.2%	---

## FLUID CONDITION

The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185(m)		<b>2</b>	2	---
Boron	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	---
Barium	ppm	ASTM D5185(m)		<b>0</b>	<1	---
Molybdenum	ppm	ASTM D5185(m)	5	<b>0</b>	0	---
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	---
Magnesium	ppm	ASTM D5185(m)	10	<b>&lt;1</b>	<1	---
Calcium	ppm	ASTM D5185(m)	10	<b>2</b>	2	---
Phosphorus	ppm	ASTM D5185(m)	1280	<b>1152</b>	1087	---
Zinc	ppm	ASTM D5185(m)	10	<b>8</b>	6	---
Sulfur	ppm	ASTM D5185(m)	1800	<b>1541</b>	2484	---
Visc @ 100°C	cSt	ASTM D7279(m)	18.2	<b>21.4</b>	20.9	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0858923 **Received** : 21 Feb 2024  
**Lab Number** : 02617010 **Tested** : 22 Feb 2024  
**Unique Number** : 5734120 **Diagnosed** : 22 Feb 2024 - Kevin Marson  
**Test Package** : AVI 1 ( Additional Tests: KF )

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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.