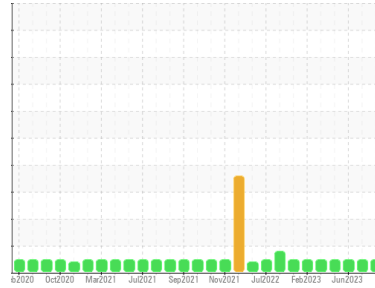




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**(C-FLPH)**  
Machine Id  
**[C-FLPH] CESSNA 172N RL-2124-76T**  
Component  
**Piston Aircraft Engine**  
Fluid  
**SHELL AEROSHELL W 15W50 MGR (6 QTS)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

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

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0643577</b>	WC0643579	WC0643576
Sample Date	Client Info		<b>18 Dec 2023</b>	09 Aug 2023	01 Jun 2023
TSN	hrs	Client Info	<b>0</b>	0	0
TSO	hrs	Client Info	<b>836</b>	737	642
Oil Age	hrs	Client Info	<b>50</b>	50	50
Oil Changed		Client Info	<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>90	<b>15</b>	8	9
Chromium	ppm	ASTM D5185(m)	>20	<b>5</b>	1	2
Nickel	ppm	ASTM D5185(m)	>15	<b>3</b>	2	1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<b>9</b>	5	5
Lead	ppm	ASTM D5185(m)	>20000	<b>4967</b>	4762	4861
Copper	ppm	ASTM D5185(m)	>25	<b>9</b>	8	7
Tin	ppm	ASTM D5185(m)	>30	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>1</b>	<1	<1

## ADDITIVES

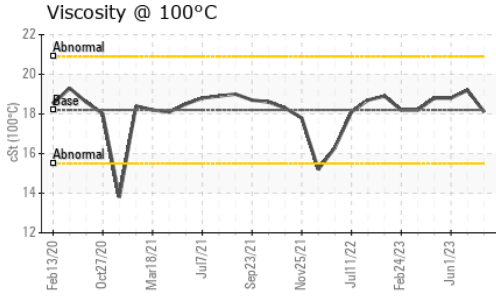
	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	0
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	5	<b>&lt;1</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	10	<b>3</b>	2	<1
Calcium	ppm	ASTM D5185(m)	10	<b>7</b>	5	0
Phosphorus	ppm	ASTM D5185(m)	1280	<b>1172</b>	1181	1223
Zinc	ppm	ASTM D5185(m)	10	<b>7</b>	7	4
Sulfur	ppm	ASTM D5185(m)	1800	<b>1167</b>	1146	1187
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>15	<b>5</b>	4	5
Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1



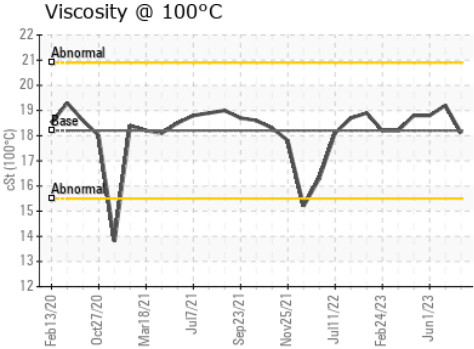
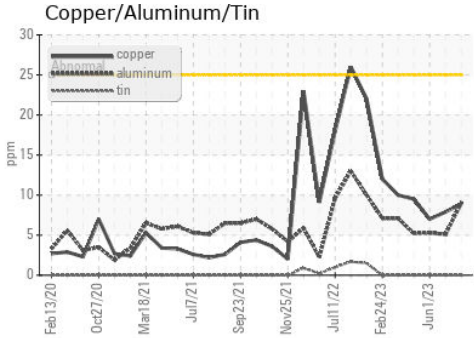
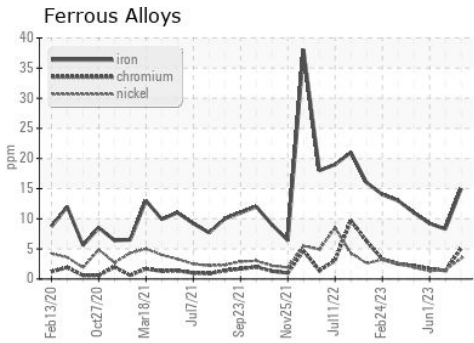
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D7279(m)	18.2	<b>18.1</b>	19.2	18.8

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **HUMPHREY AIRCRAFT SERVICES**  
**Sample No.** : WC0643577 **Received** : 20 Dec 2023 #10 - 475 AIRPORT ROAD  
**Lab Number** : **02604405** **Diagnosed** : 20 Dec 2023 SAULT STE. MARIE, ON  
**Unique Number** : 5697490 **Diagnostician** : Kevin Marson CA P6A 5K6  
**Test Package** : AVI 1

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.

Contact: Larry Humphrey  
 admin@humphreyaircraft.com  
 T: (709)759-2074  
 F: