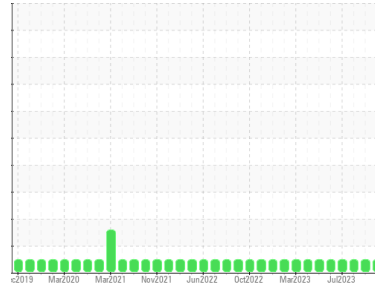




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**(C-FECP)**  
Machine Id  
**[C-FECP] DIAMOND DA20 650000**  
Component  
**Piston Aircraft Engine**  
Fluid  
**SHELL AEROSHELL W 80 (6 LTR)**

## 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>WC0869659</b>	WC0849569	WC0849563
Sample Date	Client Info		<b>07 Nov 2023</b>	10 Oct 2023	12 Sep 2023
TSN	hrs	Client Info	<b>0</b>	0	0
TSO	hrs	Client Info	<b>1948</b>	1901	1858
Oil Age	hrs	Client Info	<b>47</b>	43	45
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>	20	17
Chromium	ppm	ASTM D5185(m)	>20	<b>2</b>	5	4
Nickel	ppm	ASTM D5185(m)	>15	<b>2</b>	2	2
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<b>4</b>	4	5
Lead	ppm	ASTM D5185(m)	>20000	<b>5476</b>	5165	5735
Copper	ppm	ASTM D5185(m)	>25	<b>4</b>	5	3
Tin	ppm	ASTM D5185(m)	>30	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	0
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>&lt;1</b>	2	<1

## ADDITIVES

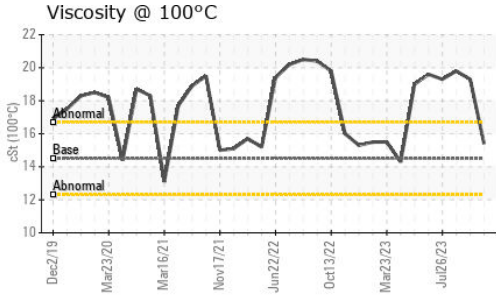
	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)		<b>&lt;1</b>	1	2
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	<1
Calcium	ppm	ASTM D5185(m)		<b>2</b>	1	2
Phosphorus	ppm	ASTM D5185(m)		<b>1076</b>	1301	1275
Zinc	ppm	ASTM D5185(m)		<b>5</b>	5	6
Sulfur	ppm	ASTM D5185(m)	3000	<b>1907</b>	2896	2711
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>7</b>	6	6
Sodium	ppm	ASTM D5185(m)		<b>1</b>	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	<1



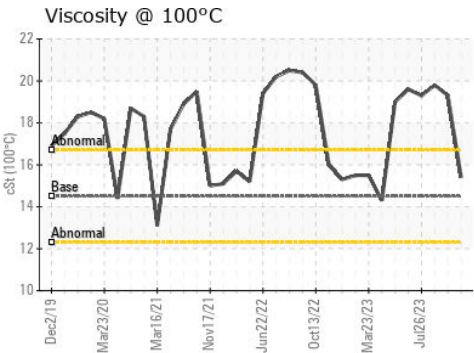
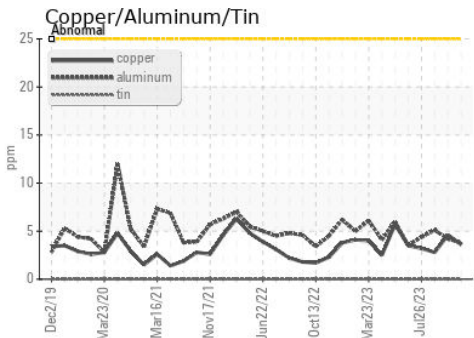
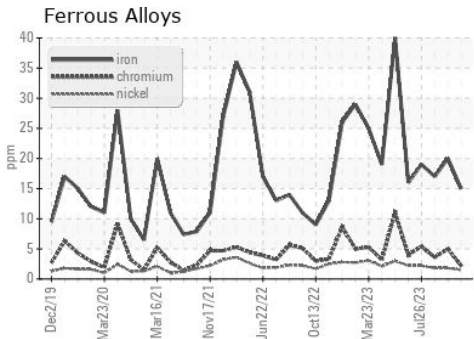
# OIL ANALYSIS REPORT



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)	14.5	<b>15.4</b>	19.3	19.8

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0869659  
**Lab Number** : **02600952**      **Received** : 05 Dec 2023  
**Unique Number** : 5694037      **Diagnosed** : 06 Dec 2023  
**Test Package** : AVI 1      **Diagnostician** : Kevin Marson

**W.C.S. AVIATION LTD.**  
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 F: (519)972-8355

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.