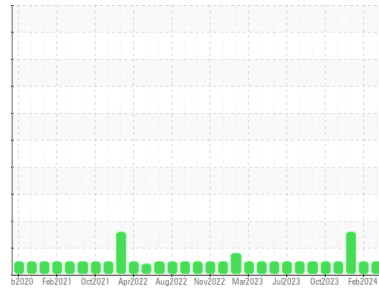




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area

**(C-GLFC)**

Machine Id

**[C-GLFC] DIAMOND DA-20 650249**

Component

**Center 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>WC0918426</b>	WC0901552	WC0882499
Sample Date	Client Info		<b>15 Mar 2024</b>	16 Feb 2024	22 Dec 2023
TSN	hrs	Client Info	<b>2437</b>	2390	2344
TSO	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>47</b>	46	59
Oil Changed		Client Info	<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	ABNORMAL

## 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>23</b>	36	▲ 113
Chromium	ppm	ASTM D5185(m)	>20	<b>5</b>	6	▲ 22
Nickel	ppm	ASTM D5185(m)	>15	<b>1</b>	2	5
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>4</b>	6	8
Lead	ppm	ASTM D5185(m)	>20000	<b>5768</b>	5312	7352
Copper	ppm	ASTM D5185(m)	>25	<b>5</b>	7	7
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>0</b>	<1	<1

## ADDITIVES

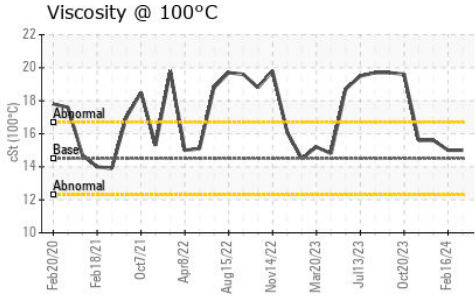
	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	<1
Barium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Molybdenum	ppm	ASTM D5185(m)		<b>2</b>	7	10
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)		<b>1</b>	<1	<1
Calcium	ppm	ASTM D5185(m)		<b>4</b>	8	2
Phosphorus	ppm	ASTM D5185(m)		<b>1121</b>	1087	1103
Zinc	ppm	ASTM D5185(m)		<b>10</b>	15	10
Sulfur	ppm	ASTM D5185(m)	3000	<b>2224</b>	2273	2287
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>	11	11
Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	1	<1
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	16



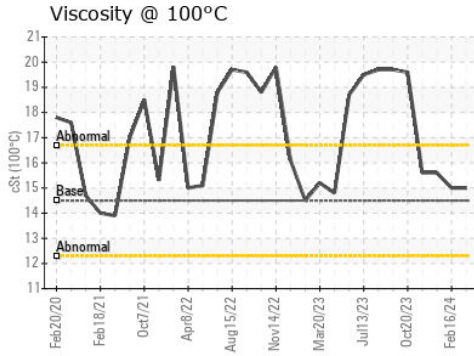
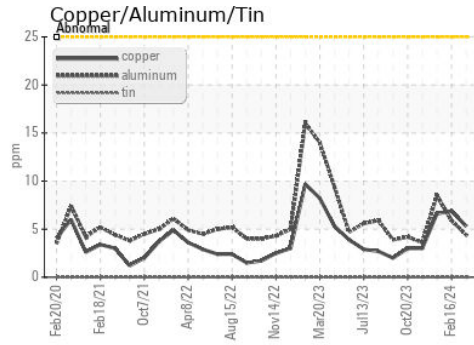
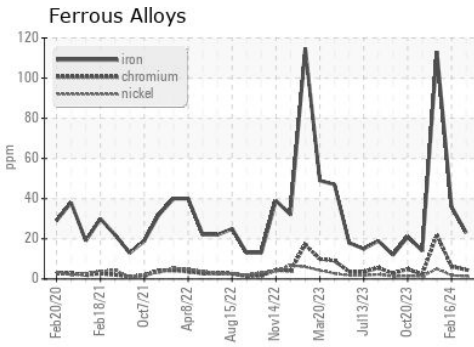
# OIL ANALYSIS REPORT



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	VLITE	NONE
Debris	scalar	Visual*	NONE	VLITE	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>15.0</b>	15.0	15.6

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0918426      **Received** : 16 Apr 2024  
**Lab Number** : **02629187**      **Tested** : 17 Apr 2024  
**Unique Number** : 5762319      **Diagnosed** : 17 Apr 2024 - Kevin Marson  
**Test Package** : AVI 1

**W.C.S. AVIATION LTD.**  
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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.