



# OIL ANALYSIS REPORT

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

Area  
**(CFRMD)**  
Machine Id  
**[CFRMD] DIAMOND DA40-180 40-559/L3217551A**  
Component  
**Piston Aircraft Engine**  
Fluid  
**SHELL AEROSHELL W 15W50 MGR (8 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0778526</b>	WC0778525	WC0778522
Sample Date		Client Info		<b>02 Jan 2024</b>	02 Oct 2023	03 Aug 2023
TSN	hrs	Client Info		<b>2401</b>	2375	2333
TSO	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>26</b>	43	45
Filter Age	hrs	Client Info		<b>26</b>	43	45
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>90	<b>17</b>	27	22
Chromium	ppm	ASTM D5185(m)	>20	<b>3</b>	4	4
Nickel	ppm	ASTM D5185(m)	>15	<b>2</b>	3	2
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>25	<b>4</b>	6	5
Lead	ppm	ASTM D5185(m)	>20000	<b>3734</b>	5347	5203
Copper	ppm	ASTM D5185(m)	>25	<b>8</b>	11	10
Tin	ppm	ASTM D5185(m)	>30	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

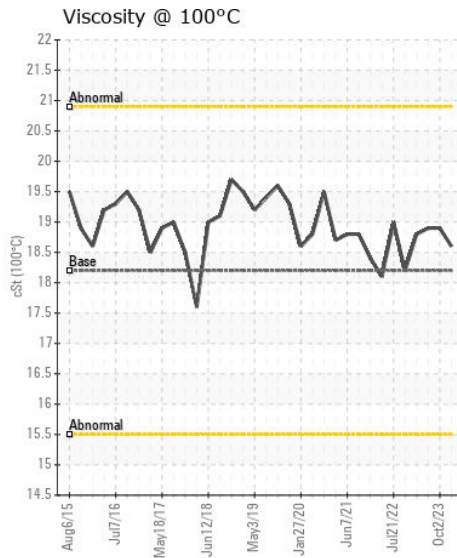
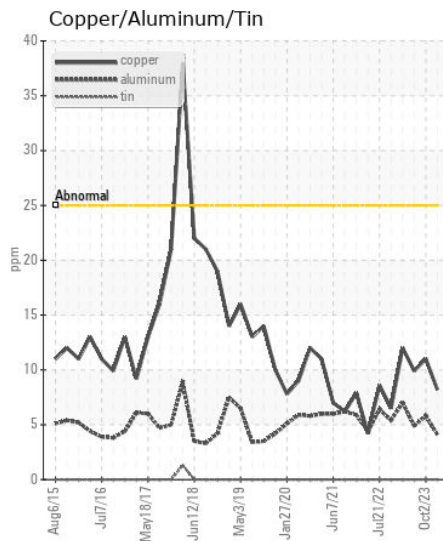
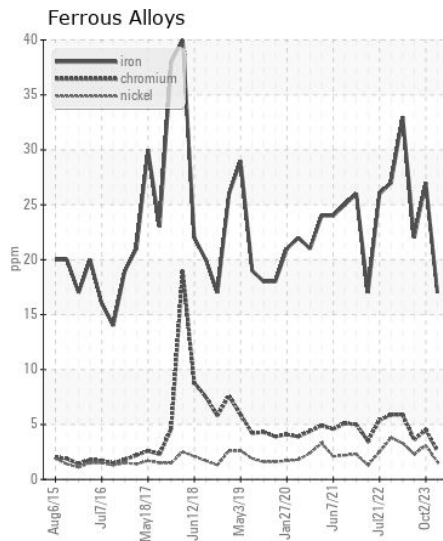
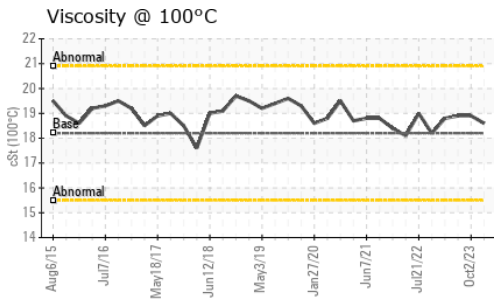
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	<b>3</b>	4	4
Potassium	ppm	ASTM D5185(m)	>20	<b>1</b>	0	<1
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
Silt	scalar	Visual*	NONE	<b>VLITE</b>	VLITE	VLITE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</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>1</b>	<1	<1
Boron	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	5	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	10	<b>&lt;1</b>	0	0
Calcium	ppm	ASTM D5185(m)	10	<b>&lt;1</b>	1	4
Phosphorus	ppm	ASTM D5185(m)	1280	<b>1102</b>	1167	1152
Zinc	ppm	ASTM D5185(m)	10	<b>11</b>	17	16
Sulfur	ppm	ASTM D5185(m)	1800	<b>1116</b>	1076	1066
Visc @ 100°C	cSt	ASTM D7279(m)	18.2	<b>18.6</b>	18.9	18.9



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0778526 **Received** : 08 Jan 2024  
**Lab Number** : **02607008** **Diagnosed** : 08 Jan 2024  
**Unique Number** : 5708094 **Diagnostician** : Kevin Marson  
**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.

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