



# OIL ANALYSIS REPORT

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

Area  
**(CGUPI)**  
Machine Id  
**[CGUPI] DIAMOND DA-40 L-33061-51A**  
Component  
**Piston Aircraft Engine**  
Fluid  
**SHELL AEROSHELL W 15W50 MGR (8 LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0921428</b>	WC0820325	WC0708380
Sample Date		Client Info		<b>28 May 2024</b>	01 Jun 2023	08 Jun 2022
TSN	hrs	Client Info		<b>2423</b>	2345	2222
TSO	hrs	Client Info		<b>2423</b>	2345	2222
Oil Age	hrs	Client Info		<b>35</b>	46	44
Filter Age	hrs	Client Info		<b>35</b>	46	44
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>90	<b>21</b>	25	30
Chromium	ppm	ASTM D5185(m)	>20	<b>2</b>	3	3
Nickel	ppm	ASTM D5185(m)	>15	<b>1</b>	2	2
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>	5	6
Lead	ppm	ASTM D5185(m)	>20000	<b>4719</b>	4576	5065
Copper	ppm	ASTM D5185(m)	>25	<b>10</b>	13	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

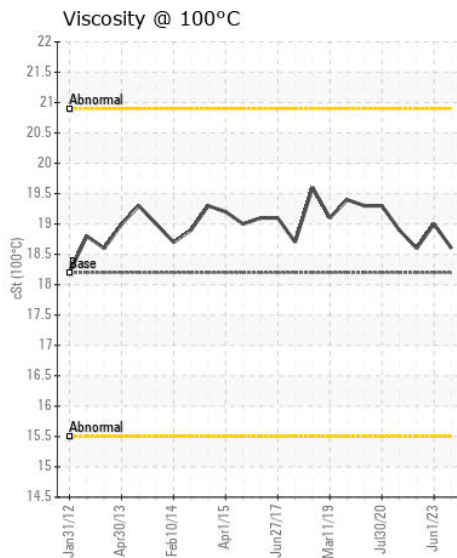
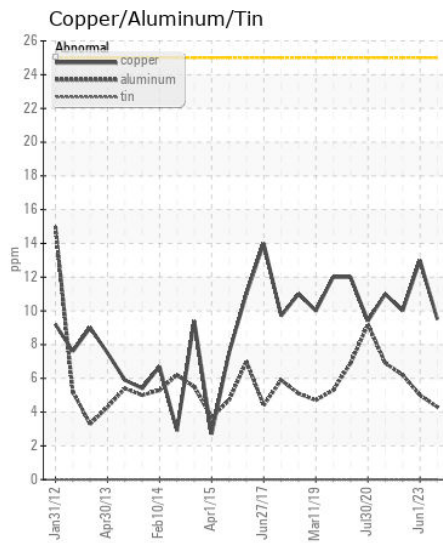
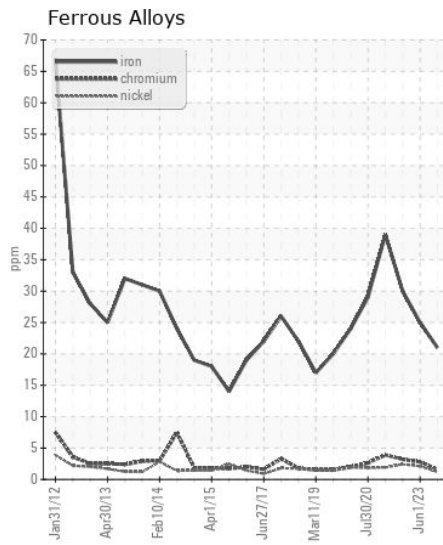
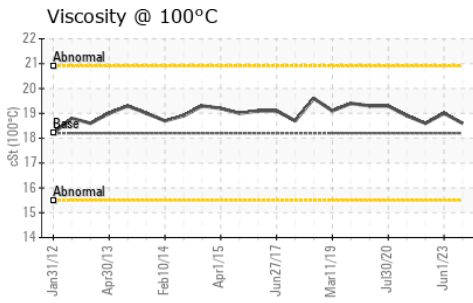
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	<b>3</b>	4	3
Potassium	ppm	ASTM D5185(m)	>20	<b>0</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>	NONE	NONE
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>	.2%	NEG

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Boron	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	1
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	5	<b>0</b>	0	<1
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	10	<b>1</b>	0	1
Calcium	ppm	ASTM D5185(m)	10	<b>2</b>	0	5
Phosphorus	ppm	ASTM D5185(m)	1280	<b>1162</b>	1304	1212
Zinc	ppm	ASTM D5185(m)	10	<b>18</b>	18	24
Sulfur	ppm	ASTM D5185(m)	1800	<b>1326</b>	1292	1104
Visc @ 100°C	cSt	ASTM D7279(m)	18.2	<b>18.6</b>	19.0	18.6



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0921428  
**Lab Number** : 02638841  
**Unique Number** : 5788003  
**Test Package** : AVI 1  
**Received** : 30 May 2024  
**Tested** : 30 May 2024  
**Diagnosed** : 30 May 2024 - Kevin Marson

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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.