



OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

(C-GPBN)

Machine Id

RL-5406-61A

Component

Left Piston Aircraft Engine

Fluid

SHELL AEROSHELL W 15W50 MGR (10 LTR)

RECOMMENDATION

We advise that you check the engine magneto timing. We advise that you monitor for an abnormal oil pressure drop and noise. We advise that you perform a compression test, and a borescope exam. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Provided compression test checks O.K., resample in 20 to 25 hours to monitor.

WEAR

Copper ppm levels are severe. Iron ppm levels are abnormal. Cylinder wear is indicated. Bearing and/or bushing wear is indicated.

CONTAMINATION

There is no indication of any contamination in the oil.

FLUID CONDITION

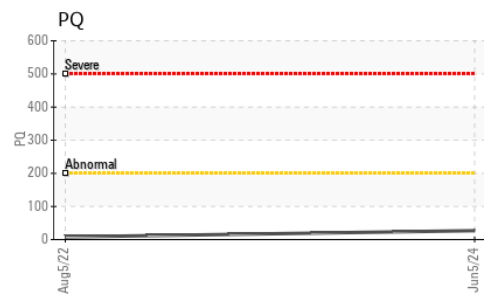
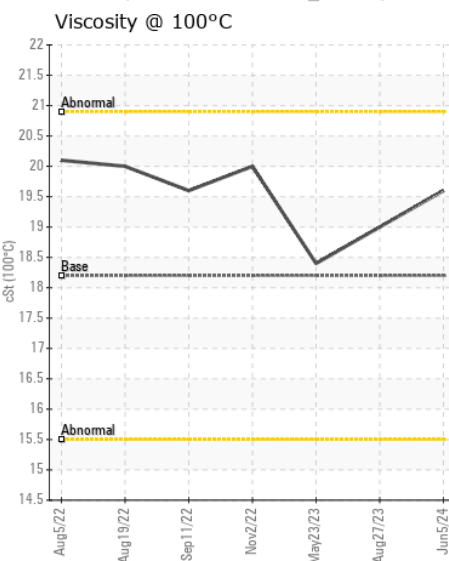
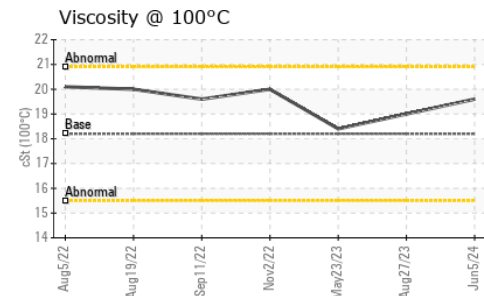
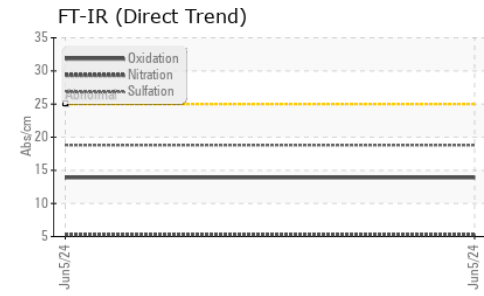
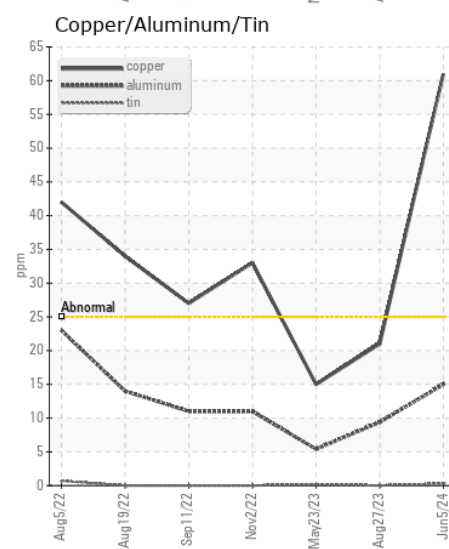
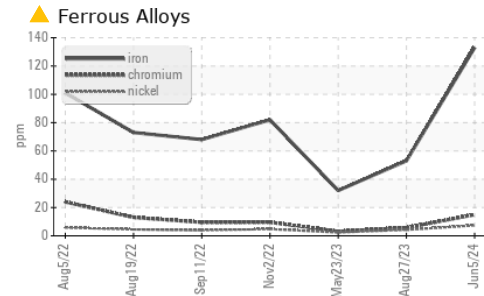
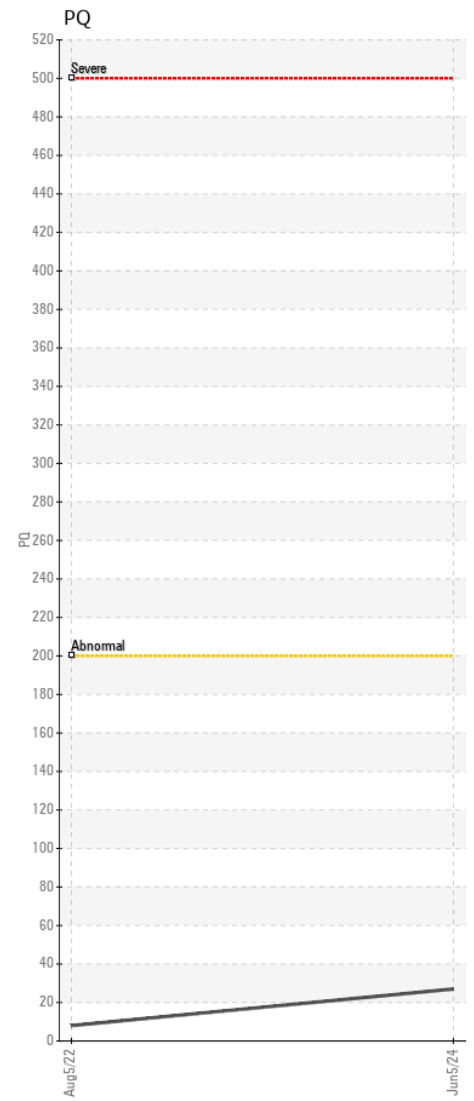
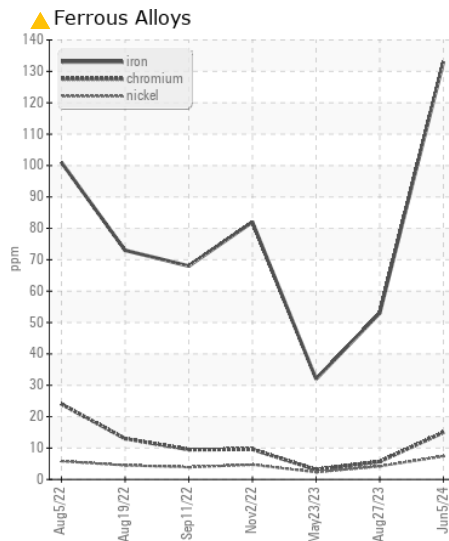
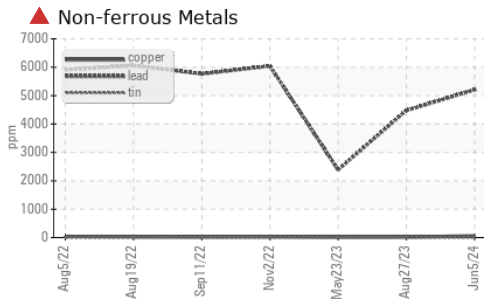
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0882956	WC0706053	WC0706005
Sample Date		Client Info		05 Jun 2024	27 Aug 2023	23 May 2023
TSN	hrs	Client Info		0	0	0
TSO	hrs	Client Info		1578	1384	1305
Oil Age	hrs	Client Info		45	29	10
Filter Age	hrs	Client Info		45	29	10
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	NORMAL	NORMAL

PQ		ASTM D8184*	>200	27	---	---
Iron	ppm	ASTM D5185(m)	>90	▲ 133	53	32
Chromium	ppm	ASTM D5185(m)	>20	15	6	3
Nickel	ppm	ASTM D5185(m)	>15	7	4	2
Titanium	ppm	ASTM D5185(m)		<1	0	0
Silver	ppm	ASTM D5185(m)	>5	0	0	0
Aluminum	ppm	ASTM D5185(m)	>25	15	9	5
Lead	ppm	ASTM D5185(m)	>20000	5207	4475	2384
Copper	ppm	ASTM D5185(m)	>25	▲ 61	21	15
Tin	ppm	ASTM D5185(m)	>30	<1	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185(m)	>15	6	4	3
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*		0.1	---	---
Nitration	Abs/cm	ASTM D7624*	>20	5.3	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.8	---	---
Silt	scalar	Visual*	NONE	VLITE	LIGHT	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	NEG

Sodium	ppm	ASTM D5185(m)		<1	<1	<1
Boron	ppm	ASTM D5185(m)		<1	<1	<1
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)	5	0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)	10	7	6	2
Calcium	ppm	ASTM D5185(m)	10	1	2	1
Phosphorus	ppm	ASTM D5185(m)	1280	1235	1271	1217
Zinc	ppm	ASTM D5185(m)	10	22	23	16
Sulfur	ppm	ASTM D5185(m)	1800	1732	1415	932
Oxidation	Abs/.1mm	ASTM D7414*	>25	13.9	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	18.2	19.6	19.0	18.4



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0882956 **Received** : 02 Jul 2024
Lab Number : 02645099 **Tested** : 03 Jul 2024
Unique Number : 5802638 **Diagnosed** : 03 Jul 2024 - Kevin Marson
Test Package : AVI 1 (Additional Tests: FT-IR, PQ)

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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.