



OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Area

(C-GWOC)

Machine Id

MURPHY 7703287

Component

Piston Aircraft Engine

Fluid

SHELL AEROSPORT PLUS 4 (--- LTR)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0944743	---	---
Sample Date	Client Info		01 Jun 2024	---	---
TSN	hrs	Client Info	85	---	---
TSO	hrs	Client Info	85	---	---
Oil Age	hrs	Client Info	25	---	---
Oil Changed		Client Info	Changed	---	---
Sample Status			ABNORMAL	---	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	---	---
Glycol	WC Method		NEG	---	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>260	21	---
Chromium	ppm	ASTM D5185(m)	>10	<1	---
Nickel	ppm	ASTM D5185(m)	>8	2	---
Titanium	ppm	ASTM D5185(m)	>4	0	---
Silver	ppm	ASTM D5185(m)	>2	<1	---
Aluminum	ppm	ASTM D5185(m)	>20	3	---
Lead	ppm	ASTM D5185(m)	>20000	9	---
Copper	ppm	ASTM D5185(m)	>45	14	---
Tin	ppm	ASTM D5185(m)	>8	<1	---
Antimony	ppm	ASTM D5185(m)	>8	0	---
Vanadium	ppm	ASTM D5185(m)		0	---
Beryllium	ppm	ASTM D5185(m)	>2	0	---
Cadmium	ppm	ASTM D5185(m)		0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		61	---
Barium	ppm	ASTM D5185(m)		2	---
Molybdenum	ppm	ASTM D5185(m)		<1	---
Manganese	ppm	ASTM D5185(m)		<1	---
Magnesium	ppm	ASTM D5185(m)		16	---
Calcium	ppm	ASTM D5185(m)		2523	---
Phosphorus	ppm	ASTM D5185(m)		1461	---
Zinc	ppm	ASTM D5185(m)		1775	---
Sulfur	ppm	ASTM D5185(m)		4173	---
Lithium	ppm	ASTM D5185(m)		<1	---

CONTAMINANTS

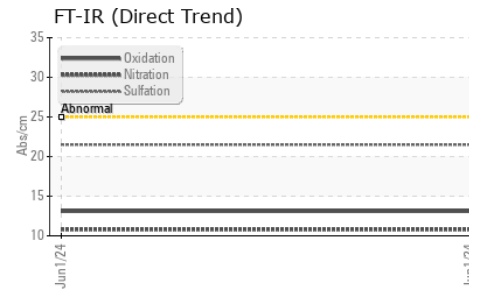
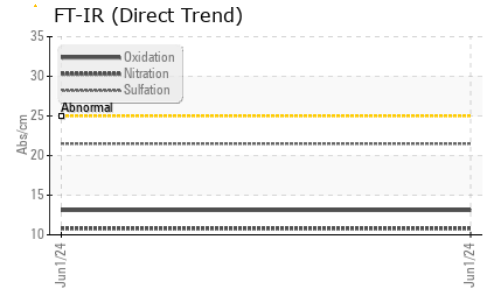
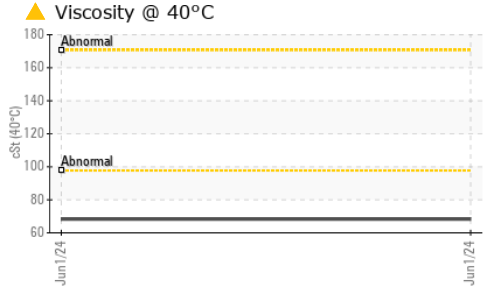
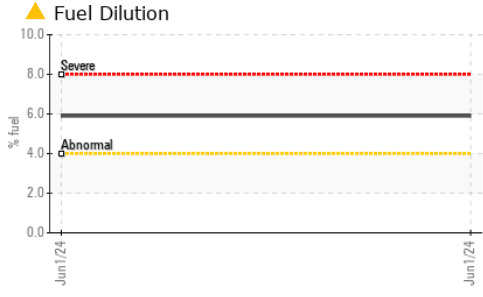
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>35	8	---
Sodium	ppm	ASTM D5185(m)		3	---
Potassium	ppm	ASTM D5185(m)	>20	4	---
Fuel	%	ASTM D7593*	>4.0	▲ 5.9	---

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		0	---
Nitration	Abs/cm	ASTM D7624*	>20	10.8	---
Sulfation	Abs./1mm	ASTM D7415*	>30	21.5	---



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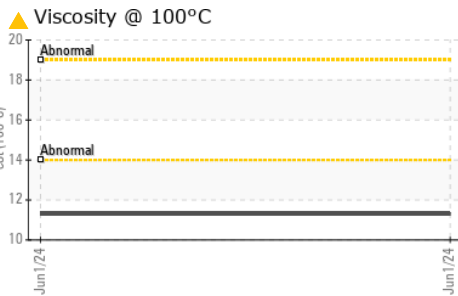
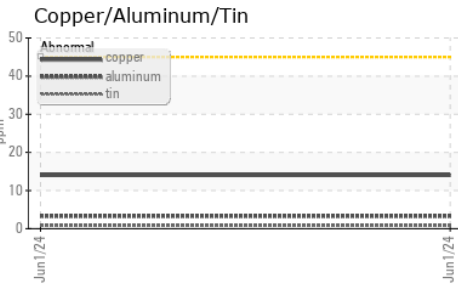
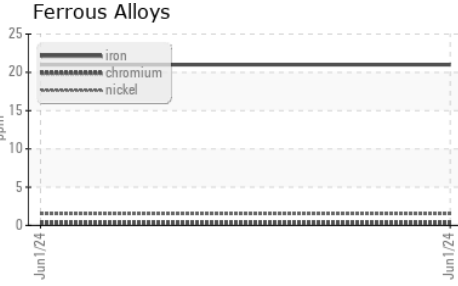


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Oxidation	Abs./1mm	ASTM D7414*	>25	13.1	---	---

VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Precipitate	scalar	Visual*	NONE	NONE	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.1	NEG	---	---
Free Water	scalar	Visual*		NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	▲ 68.3	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	▲ 11.3	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	159	---	---

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0944743 **Received** : 18 Jun 2024
Lab Number : **02642578** **Tested** : 19 Jun 2024
Unique Number : 5800117 **Diagnosed** : 19 Jun 2024 - Kevin Marson
Test Package : AVI 1 (Additional Tests: FT-IR, FuelDilution, KV40, PercentFuel, VI)

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.

Tim Kuntz
 520 Louise Ave North
 Listowel, ON
 CA N4W 3V4
 Contact: Tim Kuntz
 tkuntz99@gmail.com
 T: (226)930-0365
 F: