



# OIL ANALYSIS REPORT

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

Machine Id  
**LYCOMING O-235 Lancair (S/N 473-15)**  
 Component  
**Piston Aircraft Engine**  
 Fluid  
**PHILLIPS 66 AVIATION X/C OIL SAE20W50 (5 LTR)**

## RECOMMENDATION

We advise that you check the engine magneto timing. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>CU0016699</b>	---	---
Sample Date		Client Info		<b>06 Nov 2023</b>	---	---
Machine Age		Client Info		<b>25</b>	---	---
Oil Age		Client Info		<b>20</b>	---	---
Filter Age		Client Info		<b>20</b>	---	---
Oil Changed		Client Info		<b>Changed</b>	---	---
Filter Changed		Client Info		<b>Changed</b>	---	---
Sample Status				<b>ABNORMAL</b>	---	---

## WEAR

Chromium ppm levels are abnormal. Ring wear is indicated.

Iron	ppm	ASTM D5185(m)	>90	<b>56</b>	---	---
Chromium	ppm	ASTM D5185(m)	>20	<b>▲ 34</b>	---	---
Nickel	ppm	ASTM D5185(m)	>15	<b>8</b>	---	---
Titanium	ppm	ASTM D5185(m)		<b>0</b>	---	---
Silver	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	---	---
Aluminum	ppm	ASTM D5185(m)	>25	<b>12</b>	---	---
Lead	ppm	ASTM D5185(m)	>20000	<b>1817</b>	---	---
Copper	ppm	ASTM D5185(m)	>25	<b>11</b>	---	---
Tin	ppm	ASTM D5185(m)	>30	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---	---

## CONTAMINATION

There is no indication of any contamination in the oil.

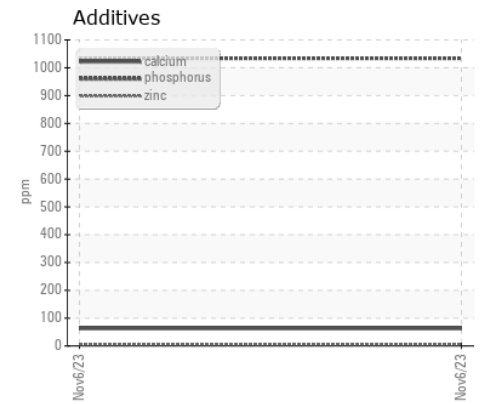
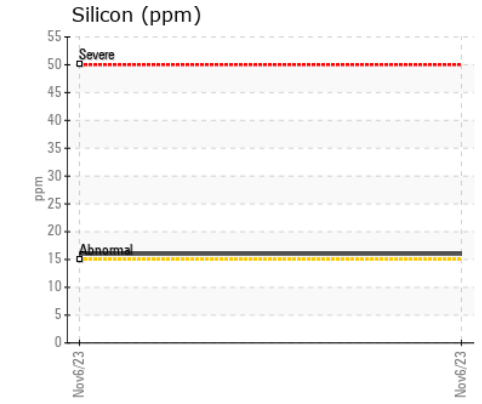
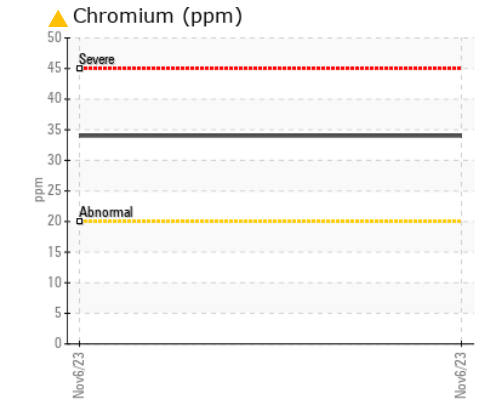
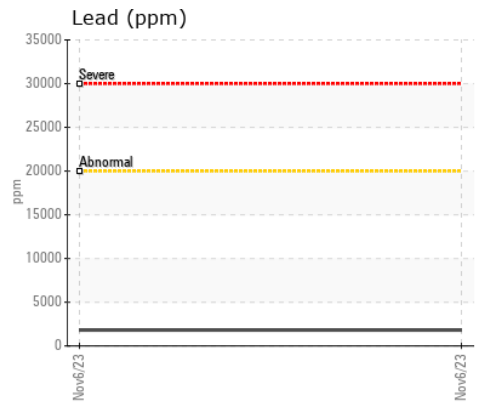
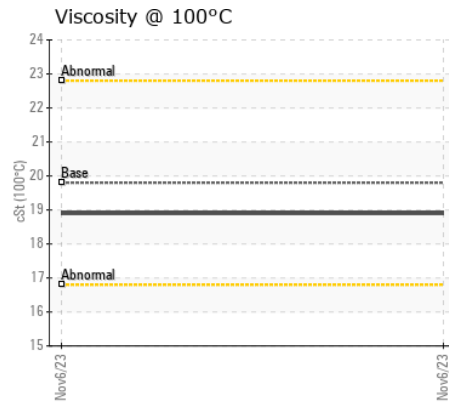
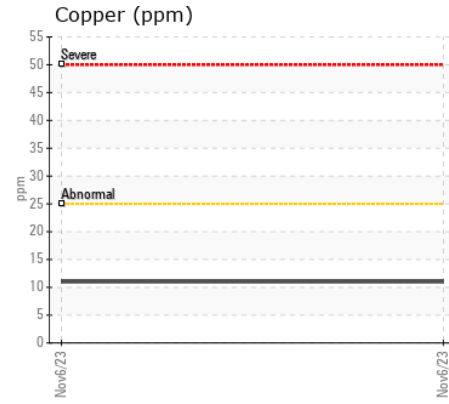
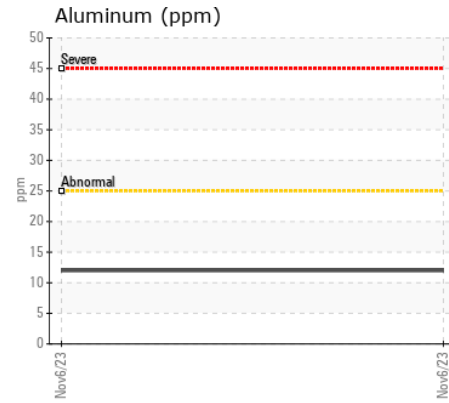
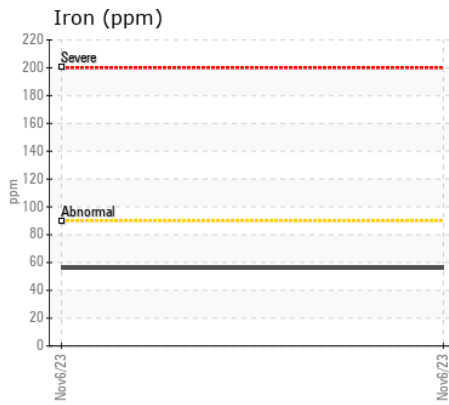
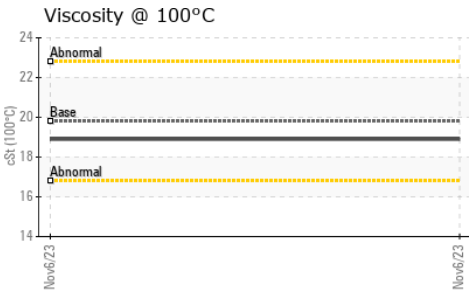
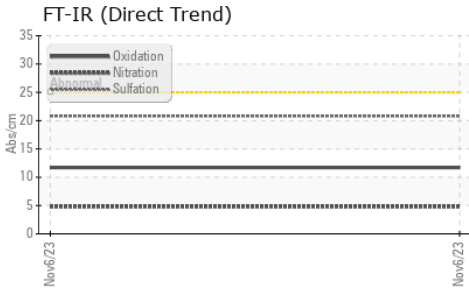
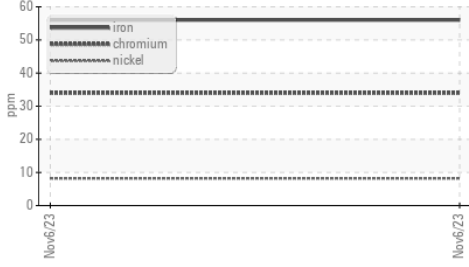
Silicon	ppm	ASTM D5185(m)	>15	<b>16</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	---	---
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	---	---
Water		WC Method	>0.1	<b>NEG</b>	---	---
Glycol		WC Method		<b>NEG</b>	---	---
Soot %	%	ASTM D7844*		<b>0</b>	---	---
Nitration	Abs/cm	ASTM D7624*	>20	<b>4.8</b>	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.8</b>	---	---
Emulsified Water	scalar	Visual*	>0.1	<b>NEG</b>	---	---

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		<b>3</b>	---	---
Boron	ppm	ASTM D5185(m)		<b>&lt;1</b>	---	---
Barium	ppm	ASTM D5185(m)		<b>&lt;1</b>	---	---
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	---	---
Manganese	ppm	ASTM D5185(m)		<b>0</b>	---	---
Magnesium	ppm	ASTM D5185(m)		<b>1</b>	---	---
Calcium	ppm	ASTM D5185(m)		<b>63</b>	---	---
Phosphorus	ppm	ASTM D5185(m)		<b>1034</b>	---	---
Zinc	ppm	ASTM D5185(m)		<b>6</b>	---	---
Sulfur	ppm	ASTM D5185(m)		<b>1611</b>	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>11.7</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	19.8	<b>18.9</b>	---	---

▲ Ferrous Alloys



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : CU0016699  
**Lab Number** : 02594923  
**Unique Number** : 5672002  
**Test Package** : MOB 1  
**Received** : 08 Nov 2023  
**Tested** : 08 Nov 2023  
**Diagnosed** : 08 Nov 2023 - 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.