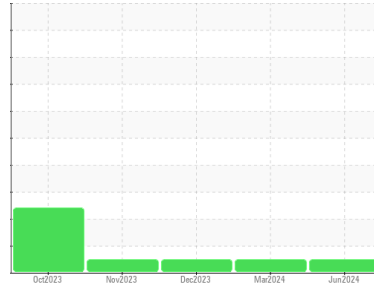




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

(C-GQXD)

Machine Id

[C-GQXD] PIPER PA31-350 L-3246-61A

Component

Left Piston Aircraft Engine

Fluid

PHILLIPS 66 AVIATION X/C OIL SAE20W50 (12 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The water content is negligible. There is no indication of any contamination in the oil.

Fluid Condition

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0945318	WC0896318	WC0838446
Sample Date	Client Info		27 Jun 2024	18 Mar 2024	16 Dec 2023
TSN	hrs	Client Info	0	0	0
TSO	hrs	Client Info	2431	2235	2032
Oil Age	hrs	Client Info	55	59	64
Oil Changed		Client Info	Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>90	38	28	34
Chromium	ppm	ASTM D5185(m)	>20	11	8	10
Nickel	ppm	ASTM D5185(m)	>15	11	7	8
Titanium	ppm	ASTM D5185(m)		<1	0	0
Silver	ppm	ASTM D5185(m)	>5	<1	0	<1
Aluminum	ppm	ASTM D5185(m)	>25	6	5	8
Lead	ppm	ASTM D5185(m)	>20000	8837	8281	8115
Copper	ppm	ASTM D5185(m)	>25	6	8	11
Tin	ppm	ASTM D5185(m)	>30	0	0	0
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		2	<1	2

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	0.0	<1	0	<1
Barium	ppm	ASTM D5185(m)	0.0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0.0	0	0	0
Manganese	ppm	ASTM D5185(m)	0.0	0	0	0
Magnesium	ppm	ASTM D5185(m)	0.0	4	6	12
Calcium	ppm	ASTM D5185(m)	4.7	1	<1	4
Phosphorus	ppm	ASTM D5185(m)	0.0	<1	0	1
Zinc	ppm	ASTM D5185(m)	0.1	3	2	4
Sulfur	ppm	ASTM D5185(m)	848	1004	978	1044
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

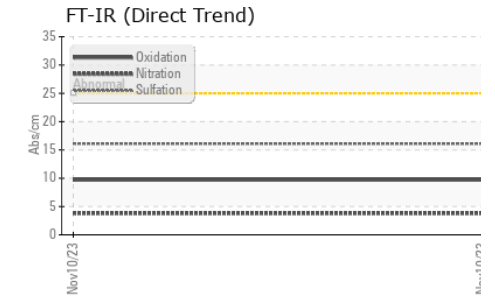
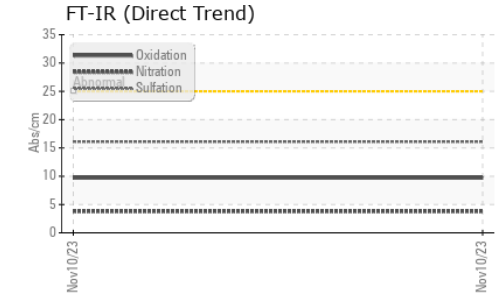
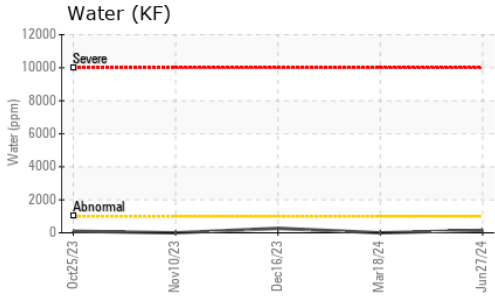
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>15	4	4	7
Sodium	ppm	ASTM D5185(m)		<1	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	1
Water	%	ASTM D6304*	>0.1	0.015	---	0.027
ppm Water	ppm	ASTM D6304*	>1000	150	---	271

INFRA-RED

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



OIL ANALYSIS REPORT



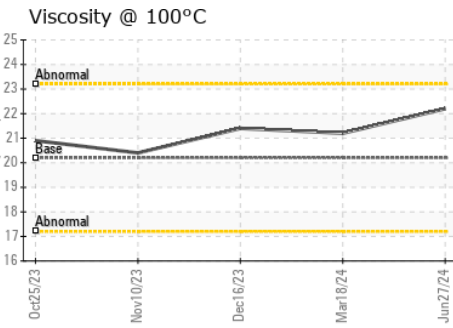
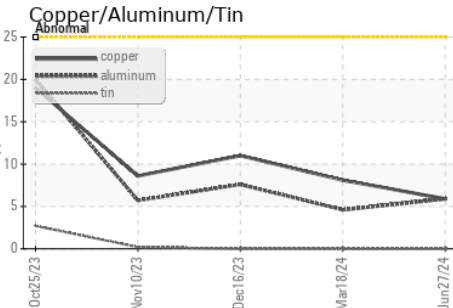
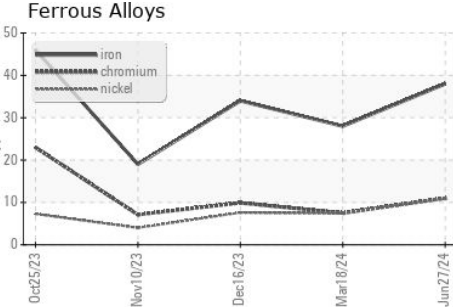
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	---	---
VISUAL					
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	VLITE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	WGOIL	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	.2%	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES

	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	20.2	22.2	21.2

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0945318 **Received** : 04 Jul 2024
Lab Number : **02645427** **Tested** : 05 Jul 2024
Unique Number : 5802966 **Diagnosed** : 05 Jul 2024 - Kevin Marson
Test Package : AVI 1 (Additional Tests: FT-IR, KF)

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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.