



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	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)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	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
Filter Age	hrs	Client Info		55	59	64
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

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
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

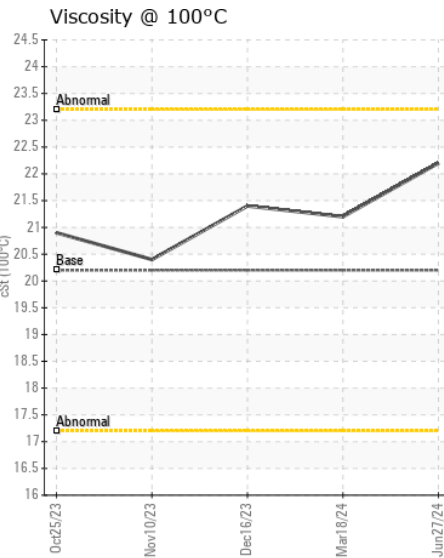
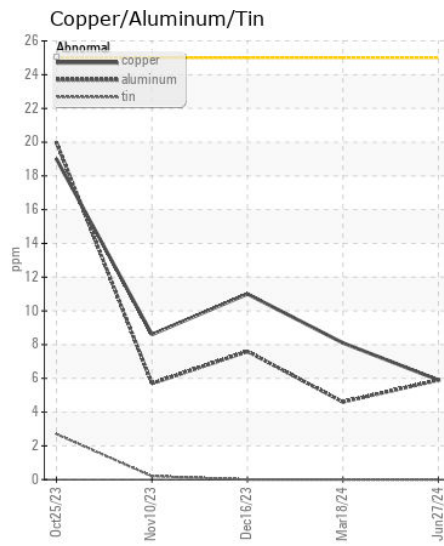
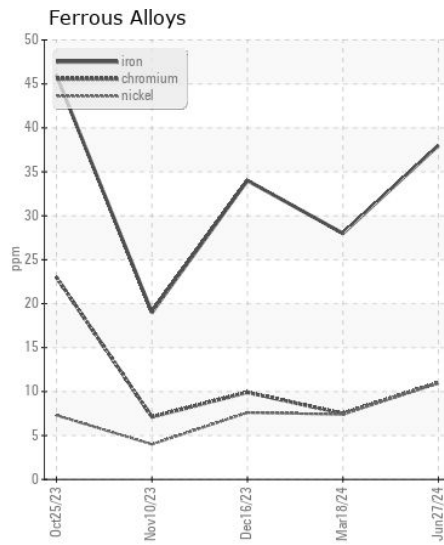
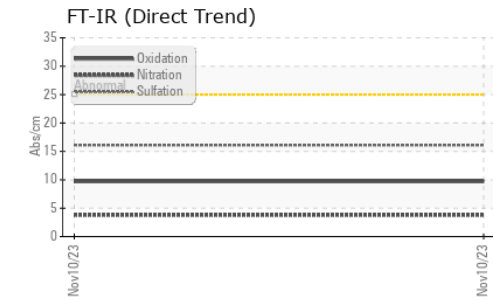
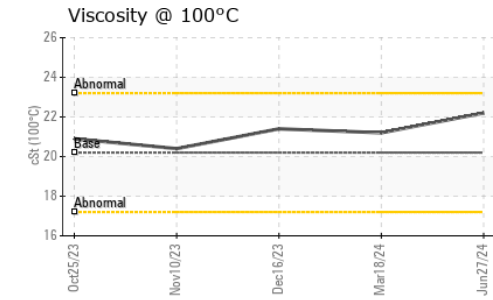
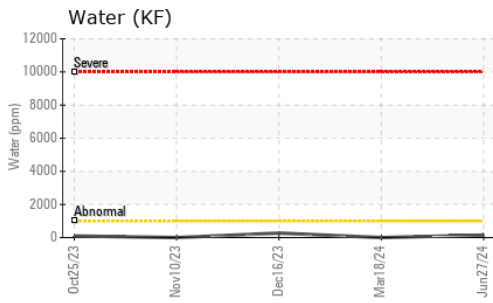
The water content is negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	4	4	7
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	1
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water	%	ASTM D6304*	>0.1	0.015	---	0.027
ppm Water	ppm	ASTM D6304*	>1000	150	---	271
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*		---	---	---
Nitration	Abs/cm	ASTM D7624*	>20	---	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	---	---	---
Silt	scalar	Visual*	NONE	VLITE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	WGOIL	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	.2%	NEG	.2%

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		<1	<1	<1
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
Oxidation	Abs/.1mm	ASTM D7414*	>25	---	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	20.2	22.2	21.2	21.4



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