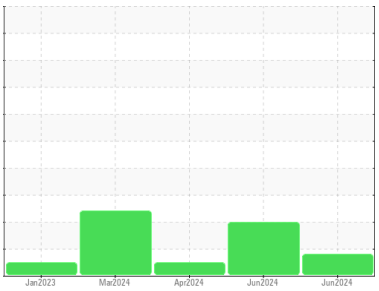
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
(C-FAJR)
Machine Id
[C-FAJR] PIPER PA31-350 L-5571-61A
Component
Left Piston Aircraft Engine
Fluid
PHILLIPS 66 AVIATION X/C OIL SAE20W50 (--- GAL)

DIAGNOSIS

Recommendation
We recommend an early resample to monitor this condition.

Wear
Nickel ppm levels are marginal. All other component wear rates are normal.

Contamination
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		**WC0945316**	WC0838458	WC0896316
Sample Date		Client Info		**10 Jun 2024**	03 Jun 2024	10 Apr 2024
TSN	hrs	Client Info		**0**	0	0
TSO	hrs	Client Info		**4436**	426	290
Oil Age	hrs	Client Info		**18**	65	24
Oil Changed		Client Info		**Not Changd**	Changed	N/A
Sample Status				**MARGINAL**	ABNORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
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

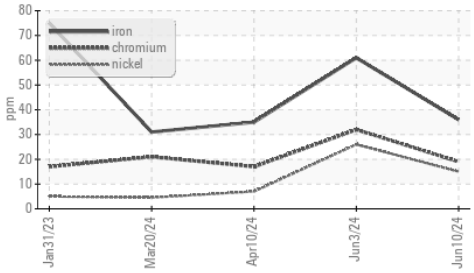
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>90	**36**	61	35
Chromium	ppm	ASTM D5185(m)	>20	**19**	▲ 32	17
Nickel	ppm	ASTM D5185(m)	>15	▲ **15**	▲ 26	7
Titanium	ppm	ASTM D5185(m)		**<1**	<1	0
Silver	ppm	ASTM D5185(m)	>5	**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>25	**10**	14	5
Lead	ppm	ASTM D5185(m)	>20000	**4648**	9583	4127
Copper	ppm	ASTM D5185(m)	>25	**7**	10	10
Tin	ppm	ASTM D5185(m)	>30	**0**	<1	<1
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)		**<1**	2	1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0.0	**<1**	0	0
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	**3**	4	4
Calcium	ppm	ASTM D5185(m)	4.7	**<1**	<1	1
Phosphorus	ppm	ASTM D5185(m)	0.0	**<1**	<1	1
Zinc	ppm	ASTM D5185(m)	0.1	**3**	5	4
Sulfur	ppm	ASTM D5185(m)	848	**987**	1014	962
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

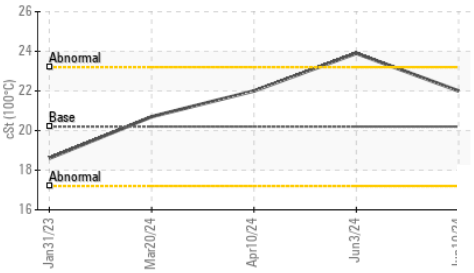
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**8**	8	12
Sodium	ppm	ASTM D5185(m)		**<1**	2	3
Potassium	ppm	ASTM D5185(m)	>20	**0**	0	0

OIL ANALYSIS REPORT

Ferrous Alloys



Viscosity @ 100°C

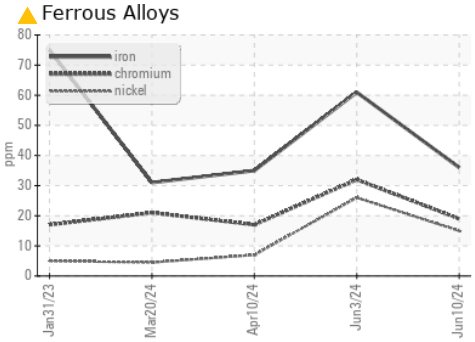


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**VLITE**	VLITE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	VLITE
Sand/Dirt	scalar	Visual*	NONE	**VLITE**	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
Free Water	scalar	Visual*		**NEG**	NEG	NEG

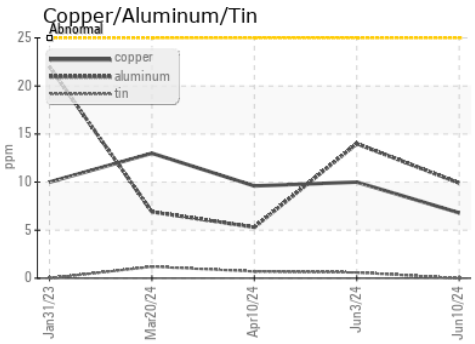
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	20.2	**22.0**	▲ 23.9	22.0

GRAPHS

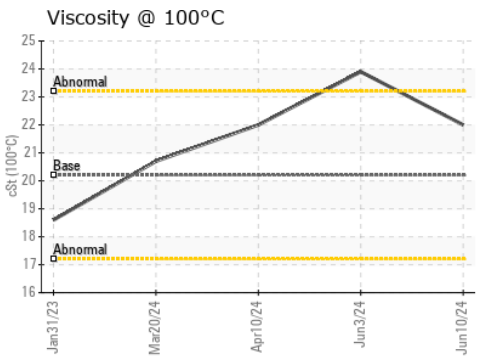
Ferrous Alloys



Copper/Aluminum/Tin



Viscosity @ 100°C



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0945316
Lab Number : 02641679
Unique Number : 5799218
Test Package : AVI 1

Received : 13 Jun 2024
Tested : 13 Jun 2024
Diagnosed : 13 Jun 2024 - Kevin Marson

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.

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