



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area

(C-FRRG)

Machine Id

CESSNA 32175-D-5-C

Component

Piston Aircraft Engine

Fluid

PHILLIPS 66 AVIATION X/C OIL SAE20W50 (8 GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil from the component if this has not already been done. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0827563	WC0827564	WC0827565
Sample Date		Client Info		30 May 2024	07 Apr 2024	03 Dec 2023
TSN	hrs	Client Info		0	0	0
TSO	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

PQ	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184*		92	123	---
Iron	ppm	ASTM D5185(m)	>90	94	▲ 183	40
Chromium	ppm	ASTM D5185(m)	>20	5	13	4
Nickel	ppm	ASTM D5185(m)	>15	<1	2	2
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>5	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>25	5	12	3
Lead	ppm	ASTM D5185(m)	>20000	1782	3356	2174
Copper	ppm	ASTM D5185(m)	>25	6	13	4
Tin	ppm	ASTM D5185(m)	>30	<1	2	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

There is a moderate concentration of dirt present in the oil.

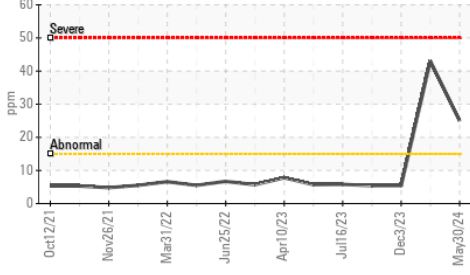
Silicon	ppm	ASTM D5185(m)	>15	▲ 25	▲ 43	5
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	0
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Silt	scalar	Visual*	NONE	VLITE	VLITE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	.2%

FLUID CONDITION

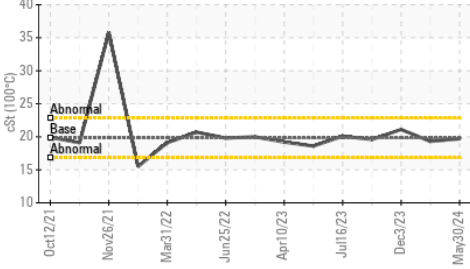
The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		<1	<1	<1
Boron	ppm	ASTM D5185(m)		1	<1	<1
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		<1	1	0
Magnesium	ppm	ASTM D5185(m)		3	5	3
Calcium	ppm	ASTM D5185(m)		2	5	2
Phosphorus	ppm	ASTM D5185(m)		1	3	<1
Zinc	ppm	ASTM D5185(m)		2	4	2
Sulfur	ppm	ASTM D5185(m)		863	920	881
Visc @ 100°C	cSt	ASTM D7279(m)	19.8	19.7	19.3	21.1

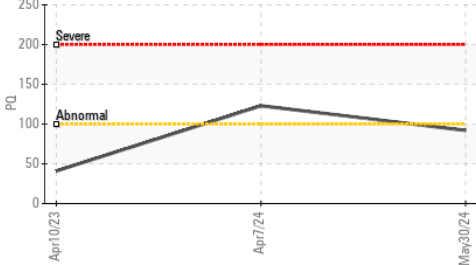
▲ Silicon (ppm)



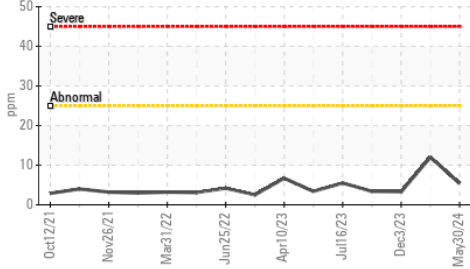
Viscosity @ 100°C



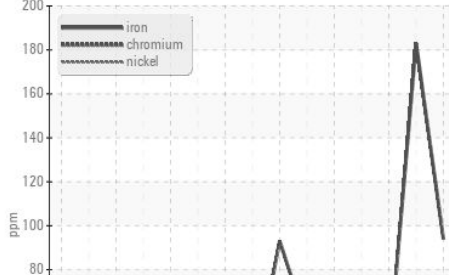
PQ



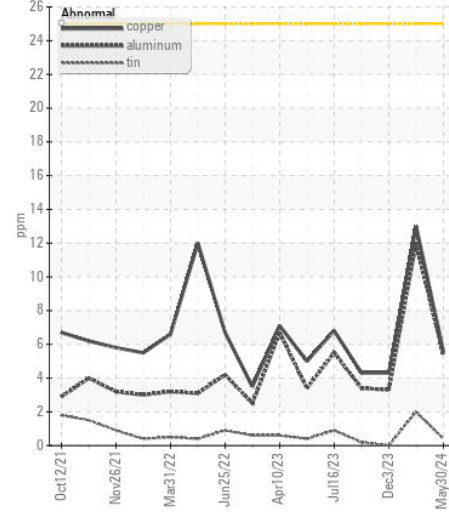
Aluminum (ppm)



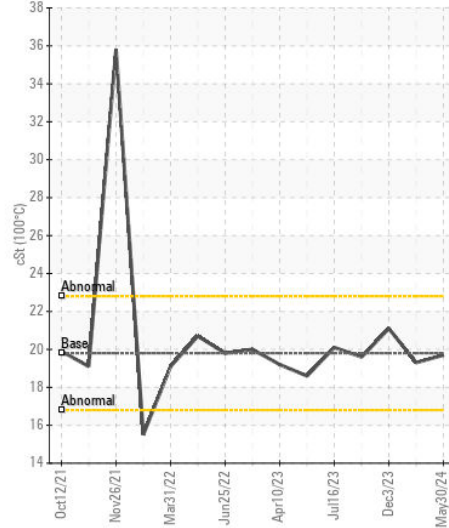
Ferrous Alloys



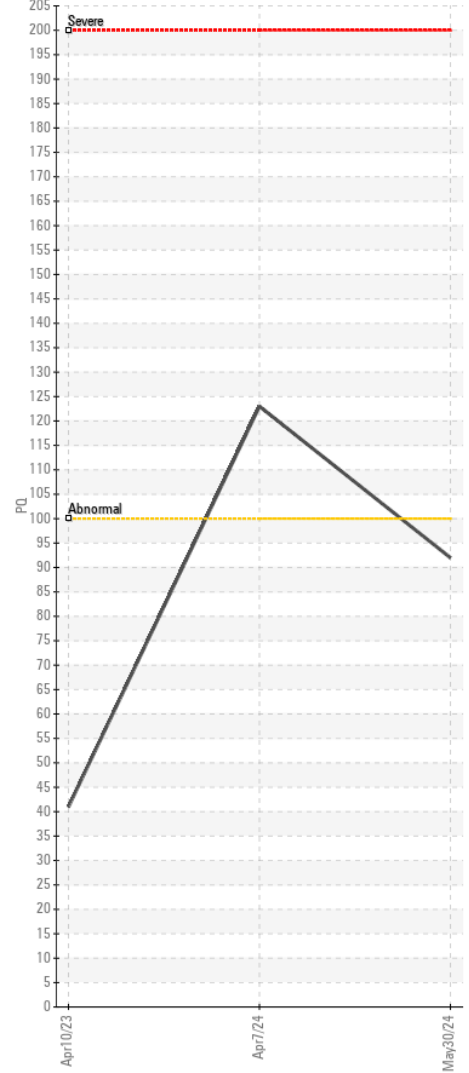
Copper/Aluminum/Tin



Viscosity @ 100°C



PQ



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0827563
Lab Number : 02639392
Unique Number : 5788554
Test Package : AVI 1 (Additional Tests: PQ)

Received : 03 Jun 2024
Tested : 03 Jun 2024
Diagnosed : 04 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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