



OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINANTS	NORMAL
OIL CONDITION	NORMAL

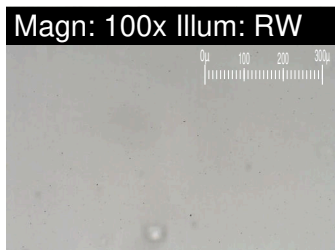
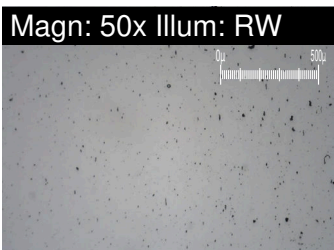
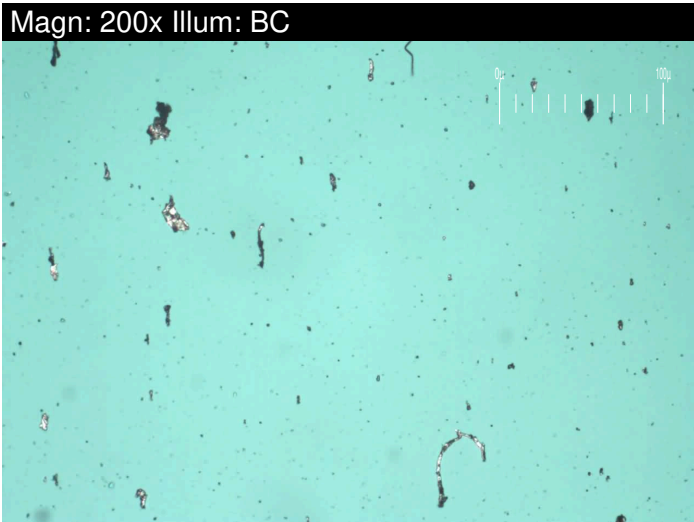
Area
(C-GBNE)
Machine Id
[C-GBNE] CESSNA C560 PCE-108476
Component
Left Jet Turbine
Fluid
EASTMAN TURBO OIL 2380 (9 LTR)

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

WEAR

Wear particle analysis indicates that the ferrous cutting particles are severe. Cutting wear particles are caused by either hard protuberances (mis-aligned components, etc.), or abrasives entering the system and embedding themselves in softer materials (sand, etc.), and gouging out mating surfaces.



Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0841639	WC0880033	WC0818477
Sample Date		Client Info		04 May 2024	10 Dec 2023	21 Jun 2023
TSN	hrs	Client Info		9592	9282	9122
TSO	hrs	Client Info		2368	2058	1898
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Not Changd	Not Changd
Filter Changed		Client Info		N/A	Not Changd	Not Changd
Sample Status				SEVERE	ABNORMAL	NORMAL

Iron	ppm	ASTM D5185(m)	>20	1	<1	<1
Chromium	ppm	ASTM D5185(m)	>7	0	0	0
Nickel	ppm	ASTM D5185(m)	>6	0	0	0
Titanium	ppm	ASTM D5185(m)	>8	0	0	0
Silver	ppm	ASTM D5185(m)	>8	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>8	<1	<1	0
Lead	ppm	ASTM D5185(m)	>3	0	<1	0
Copper	ppm	ASTM D5185(m)	>8	0	<1	0
Tin	ppm	ASTM D5185(m)	>2	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
Large Particles		DR-Ferr*		2.8	2.1	1.0
Small Particles		DR-Ferr*		3.2	1.8	0.6
Total Particles		DR-Ferr*	>---	6	3.9	1.6
Large Particles Percentage	%	DR-Ferr*		0	7.7	25
Severity Index		DR-Ferr*		1	1	0
Ferrous Rubbing	Scale 0-10	ASTM D7684*		2	1	1
Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*		1		
Ferrous Rolling	Scale 0-10	ASTM D7684*		1	1	1
Ferrous Break-in	Scale 0-10	ASTM D7684*				
Ferrous Spheres	Scale 0-10	ASTM D7684*				
Ferrous Black Oxides	Scale 0-10	ASTM D7684*		1		
Ferrous Red Oxides	Scale 0-10	ASTM D7684*				
Ferrous Corrosive	Scale 0-10	ASTM D7684*				
Ferrous Other	Scale 0-10	ASTM D7684*				
Nonferrous Rubbing	Scale 0-10	ASTM D7684*				
Nonferrous Sliding	Scale 0-10	ASTM D7684*				
Nonferrous Cutting	Scale 0-10	ASTM D7684*				
Nonferrous Rolling	Scale 0-10	ASTM D7684*				
Nonferrous Other	Scale 0-10	ASTM D7684*				

CONTAMINANTS

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

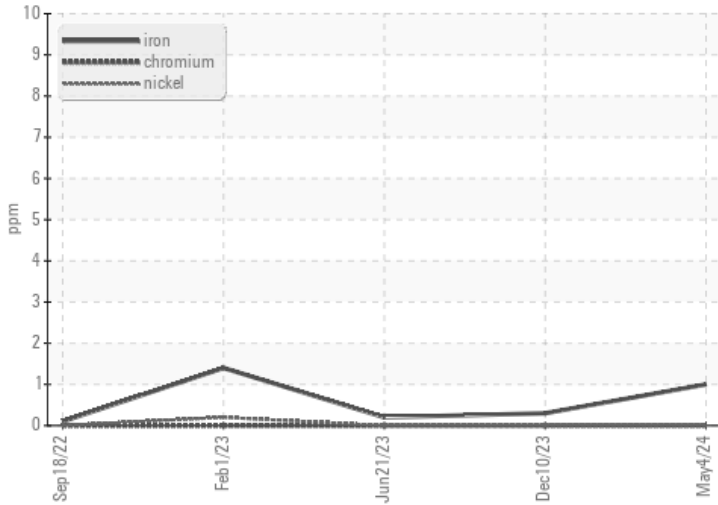
Silicon	ppm	ASTM D5185(m)	>25	0	0	0
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Water	%	ASTM D6304*	>0.1	0.045	0.032	0.056
ppm Water	ppm	ASTM D6304*	>1000	460	328	563.0
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	NONE	VLITE
Sand/Dirt	scalar	Visual*	NONE	NONE	VLITE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	NEG
Carbonaceous Material	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*		1	1	1
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		2	1	1

OIL CONDITION

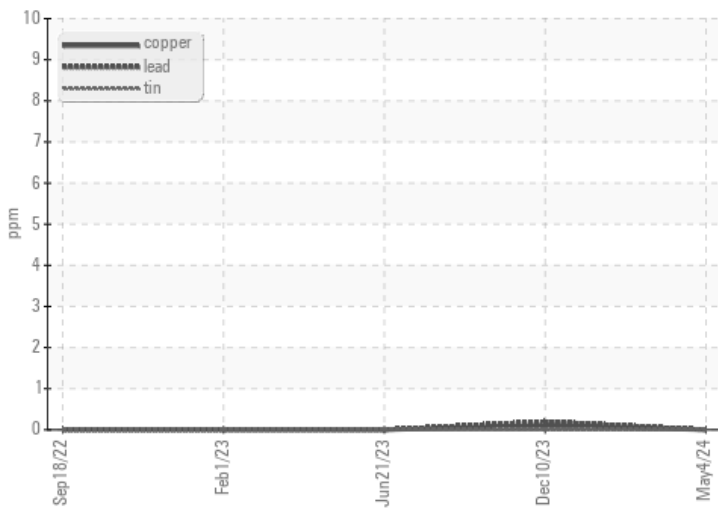
The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		0	0	<1
Boron	ppm	ASTM D5185(m)	0	<1	<1	<1
Barium	ppm	ASTM D5185(m)	0	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)	0	<1	<1	0
Calcium	ppm	ASTM D5185(m)	0	0	<1	<1
Phosphorus	ppm	ASTM D5185(m)	2500	2500	2629	2722
Zinc	ppm	ASTM D5185(m)	0	<1	<1	1
Sulfur	ppm	ASTM D5185(m)	0	1	2	1
Acid Number (AN)	mg KOH/g	ASTM D974*	0.43	0.09	0.12	0.20
Visc @ 40°C	cSt	ASTM D7279(m)	24.2	24.3	24.1	23.6
Visc @ 100°C	cSt	ASTM D7279(m)	4.97	5.0	5	4.9
Viscosity Index (VI)	Scale	ASTM D2270*	134	135	137	134
Lubricant Degradation	Scale 0-10	ASTM D7684*				

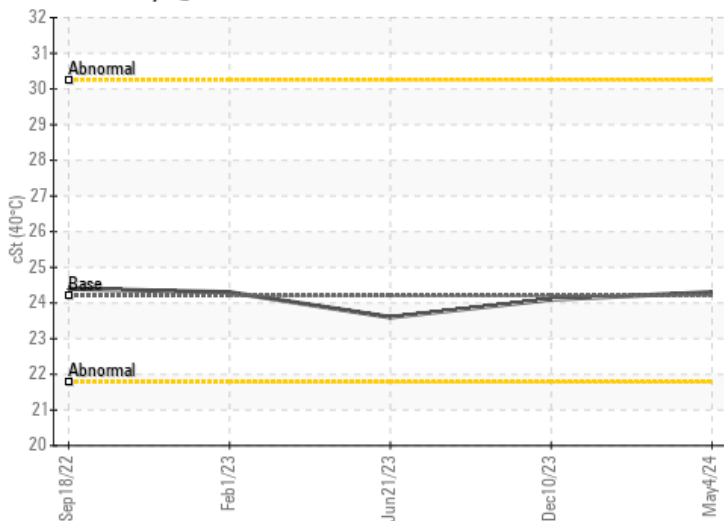
Ferrous Alloys



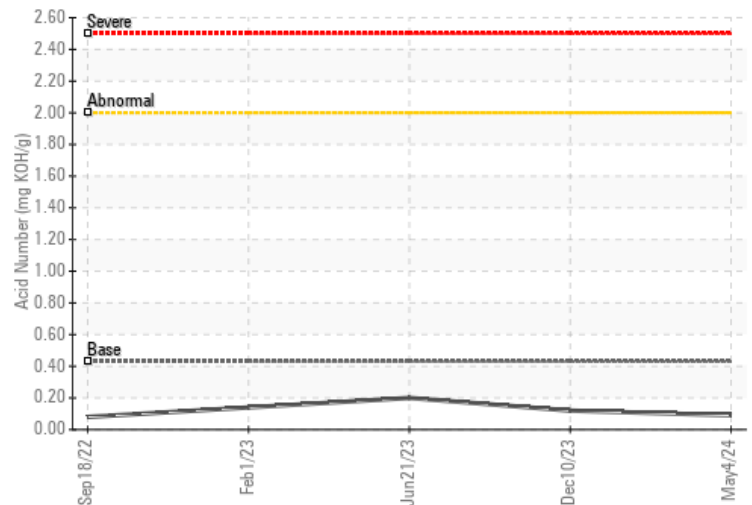
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0841639
Lab Number : 02639848
Unique Number : 5789010
Test Package : AVI 3

Received : 05 Jun 2024
Tested : 06 Jun 2024
Diagnosed : 07 Jun 2024 - Kevin Marson

Keewatin Air LP
 50 Morberg Way
 Winnipeg, MB
 CA R3H 0A4

Contact: Rochelle Aranez
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 T: (204)888-0100
 F: (204)888-5791

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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