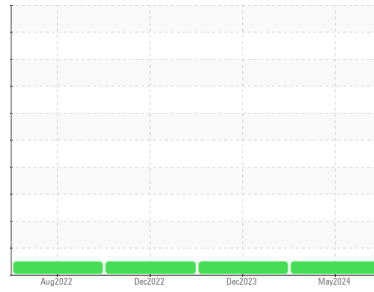




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Area

**(C-FSAO)**

Machine Id

**[C-FSAO] BEECHCRAFT KING AIR 200 PCE-PJ0168**

Component

**Left Jet Turbine**

Fluid

**EASTMAN TURBO OIL 2380 (--- GAL)**

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.  
**NOTE:** Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

#### Wear

All component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.

#### Contaminants

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

#### Oil Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

### SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0889933</b>	WC0889938	WC0750442
Sample Date	Client Info		<b>27 May 2024</b>	27 Dec 2023	20 Dec 2022
TSN	hrs	Client Info	<b>18346</b>	18128	17738
TSO	hrs	Client Info	<b>3377</b>	3159	2769
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed		Client Info	<b>N/A</b>	Not Chngd	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

### WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >8	<b>0</b>	0	0
Chromium	ppm	ASTM D5185(m) >2	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >2	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185(m) >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m) >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m) >2	<b>&lt;1</b>	<1	0
Lead	ppm	ASTM D5185(m) >3	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m) >3	<b>&lt;1</b>	<1	0
Tin	ppm	ASTM D5185(m) >2	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	0	0

### ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	<1	0
Calcium	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Phosphorus	ppm	ASTM D5185(m) 2500	<b>2676</b>	2689	2746
Zinc	ppm	ASTM D5185(m) 0	<b>2</b>	1	<1
Sulfur	ppm	ASTM D5185(m) 0	<b>11</b>	0	1
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

### CONTAMINANTS

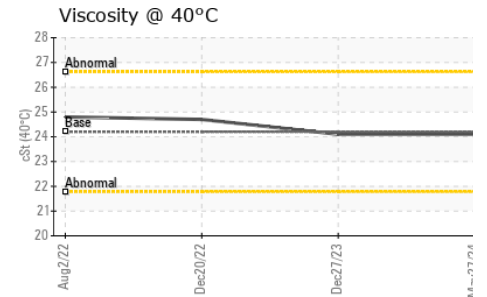
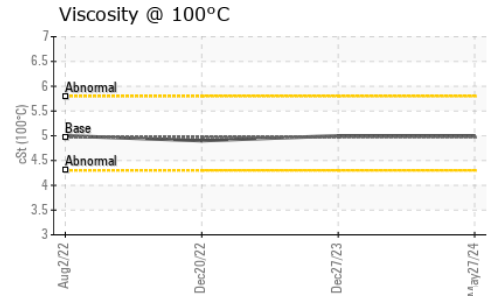
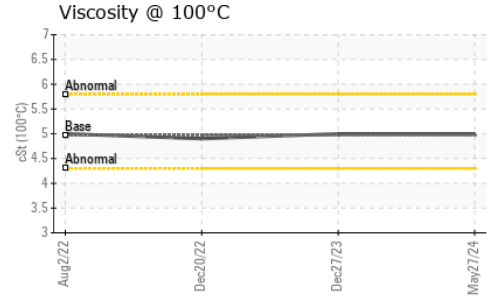
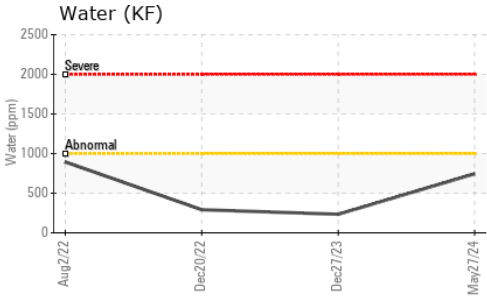
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >8	<b>&lt;1</b>	0	0
Sodium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Water	%	ASTM D6304* >0.1	<b>0.074</b>	0.023	0.029
ppm Water	ppm	ASTM D6304* >1000	<b>745</b>	234	291.5

### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974* 0.43	<b>0.37</b>	0.29	0.29



# OIL ANALYSIS REPORT

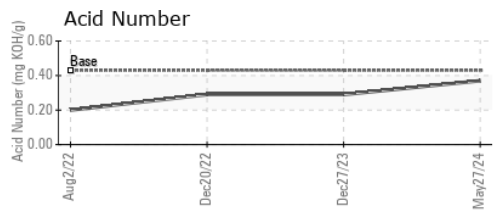
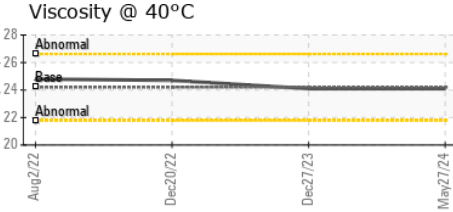
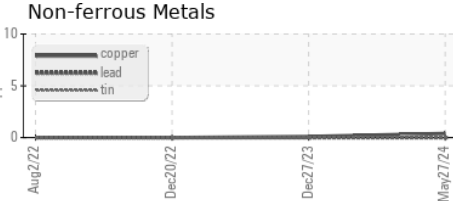
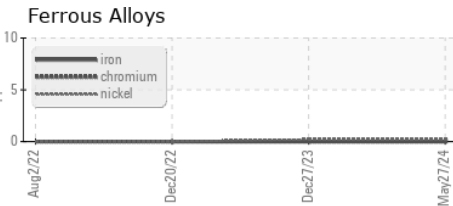


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	24.2	24.1	24.7
Visc @ 100°C	cSt	ASTM D7279(m)	4.97	5	4.9
Viscosity Index (VI)	Scale	ASTM D2270*	134	137	123

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0889933      **Received** : 09 Jul 2024  
**Lab Number** : 02646687      **Tested** : 10 Jul 2024  
**Unique Number** : 5812239      **Diagnosed** : 11 Jul 2024 - Kevin Marson  
**Test Package** : AVI 3

**Keewatin Air LP**  
 50 Morberg Way  
 Winnipeg, MB  
 CA R3H 0A4  
 Contact: Rochelle Aranez  
 raranez@keewatinair.ca  
 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.



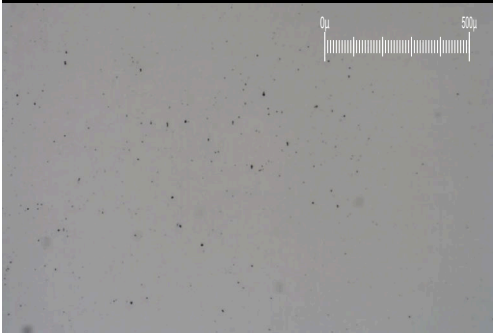
# FERROGRAPHY REPORT

Area  
**(C-FSAO)**  
 Machine Id  
**[C-FSAO] BEECHCRAFT KING AIR 200 PCE-PJ0168**  
 Component  
**Left Jet Turbine**  
 Fluid  
**EASTMAN TURBO OIL 2380 (--- GAL)**

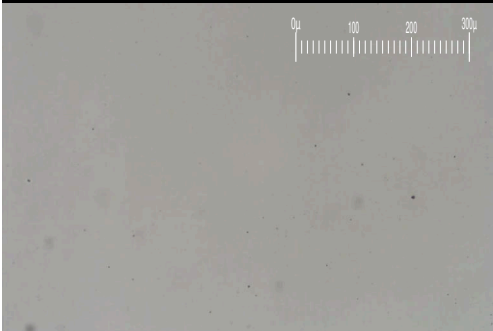
Magn: 200x Illum: BC



Magn: 50x Illum: RW



Magn: 100x Illum: RW

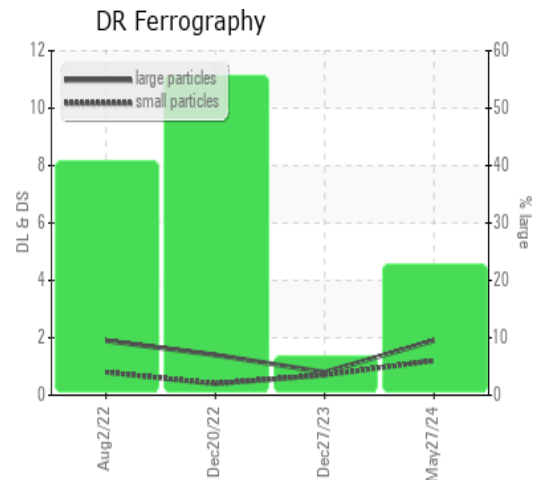


DR-FERROGRAPHY		method	limit/base	current	history1	history2
Large Particles		DR-Ferr*		<b>1.9</b>	0.8	1.4
Small Particles		DR-Ferr*		<b>1.2</b>	0.7	0.4
Total Particles		DR-Ferr*	>---	<b>3.1</b>	1.5	1.8
Large Particles Percentage	%	DR-Ferr*		<b>22.6</b>	6.7	55.6
Severity Index		DR-Ferr*		<b>1</b>	0	1

FERROGRAPHY		method	limit/base	current	history1	history2
Ferrous Rubbing	Scale 0-10	ASTM D7684*		<b>1</b>	1	1
Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*		<b>1</b>	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*				
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*				
Carbonaceous Material	Scale 0-10	ASTM D7684*				
Lubricant Degradation	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*		<b>1</b>	1	1
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		<b>1</b>	1	1

## WEAR

All component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.



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