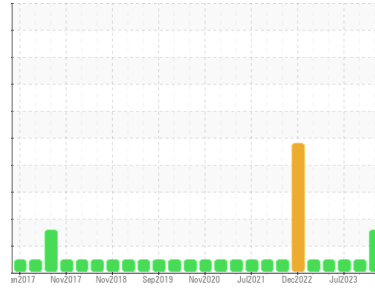




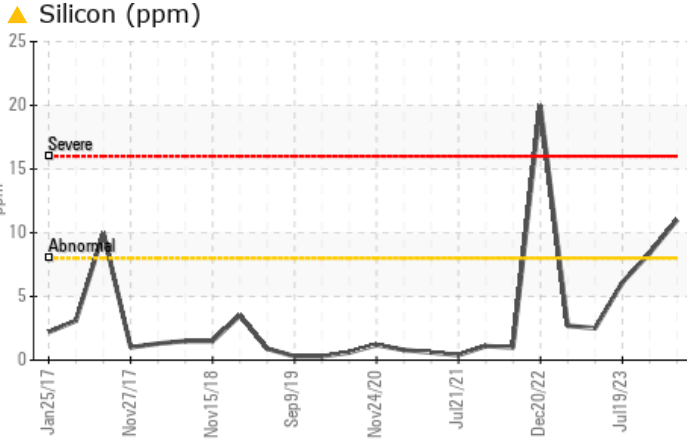
# PROBLEM SUMMARY

Sample Rating Trend



Area  
**(C-FDEB)**  
 Machine Id  
**[C-FDEB] BEECHCRAFT KING AIR 200 PCERC0113 (S/N 2380)**  
 Component  
**Right Jet Turbine**  
 Fluid  
**EASTMAN TURBO OIL 2380 (12 QTS)**

## COMPONENT CONDITION SUMMARY



## RECOMMENDATION

Check seals and/or filters for points of contaminant entry. We recommend an early resample to monitor this condition.

## PROBLEMATIC TEST RESULTS

Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL
Silicon	ppm	ASTM D5185(m)	>8	<b>▲ 11</b>	8	6

Customer Id: FASWIN  
 Sample No.: WC0887234  
 Lab Number: 02602831  
 Test Package: AVI 3



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Kevin Marson +1 (289)291-4644 x4644  
[Kevin.Marson@wearcheck.com](mailto:Kevin.Marson@wearcheck.com)

To change component or sample information:  
 Gloria Gonzalez +1 (289)291-4643 x4643  
[gloria.gonzalez@wearcheck.com](mailto:gloria.gonzalez@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.

## HISTORICAL DIAGNOSIS

### 10 Oct 2023 Diag: Kevin Marson

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The direct-reading & analytical ferrographic results are normal indicating no abnormal wear in the system. The water content is negligible. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

[view report](#)



### 19 Jul 2023 Diag: Kevin Marson

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The direct-reading & analytical ferrographic results are normal indicating no abnormal wear in the system. The water content is negligible. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

[view report](#)



### 23 May 2023 Diag: Kevin Marson

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. The direct-reading & analytical ferrographic results are normal indicating no abnormal wear in the system. The water content is negligible. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

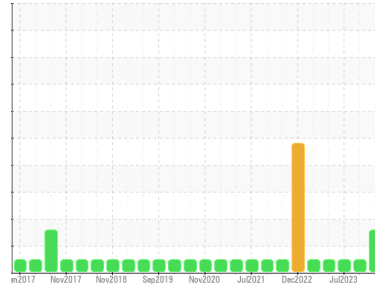
[view report](#)





# OIL ANALYSIS REPORT

Sample Rating Trend



Area  
**(C-FDEB)**  
 Machine Id  
**[C-FDEB] BEECHCRAFT KING AIR 200 PCERC0113 (S/N 2380)**  
 Component  
**Right Jet Turbine**  
 Fluid  
**EASTMAN TURBO OIL 2380 (12 QTS)**

## DIAGNOSIS

**Recommendation**  
 Check seals and/or filters for points of contaminant entry. We recommend an early resample to monitor this condition.

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

**Contaminants**  
 Elemental level of silicon (Si) above normal indicating ingress of seal material and/or dirt. The water content is negligible.

**Oil Condition**  
 The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>WC0887234</b>	WC0844511	WC0827507
Sample Date	Client Info	<b>08 Dec 2023</b>	10 Oct 2023	19 Jul 2023
TSN	hrs Client Info	<b>6888</b>	6724	5734
TSO	hrs Client Info	<b>1352</b>	1189	982
Oil Age	hrs Client Info	<b>1352</b>	1189	982
Oil Changed	Client Info	<b>Not Chngd</b>	N/A	N/A
Sample Status		<b>ABNORMAL</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>	0	0
Titanium	ppm ASTM D5185(m) >2	<b>0</b>	0	0
Silver	ppm ASTM D5185(m) >2	<b>&lt;1</b>	<1	0
Aluminum	ppm ASTM D5185(m) >2	<b>&lt;1</b>	0	<1
Lead	ppm ASTM D5185(m) >3	<b>&lt;1</b>	0	0
Copper	ppm ASTM D5185(m) >3	<b>&lt;1</b>	<1	<1
Tin	ppm ASTM D5185(m) >2	<b>0</b>	0	0
Antimony	ppm ASTM D5185(m)	<b>0</b>	0	0
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>&lt;1</b>	<1	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>0</b>	0	<1
Calcium	ppm ASTM D5185(m) 0	<b>0</b>	0	<1
Phosphorus	ppm ASTM D5185(m) 2500	<b>2663</b>	2662	2733
Zinc	ppm ASTM D5185(m) 0	<b>1</b>	1	2
Sulfur	ppm ASTM D5185(m) 0	<b>30</b>	2	2
Lithium	ppm ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

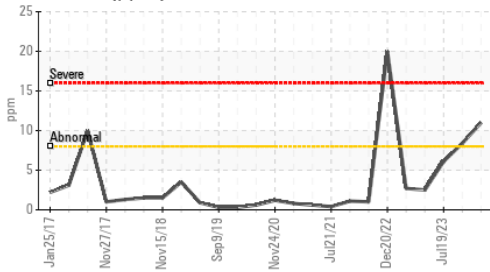
method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >8	<b>▲ 11</b>	8	6
Sodium	ppm ASTM D5185(m)	<b>&lt;1</b>	<1	<1
Potassium	ppm ASTM D5185(m) >20	<b>0</b>	0	0
Water	% ASTM D6304* >0.1	<b>0.034</b>	0.047	0.072
ppm Water	ppm ASTM D6304* >1000	<b>342</b>	471.5	723.6

## FLUID DEGRADATION

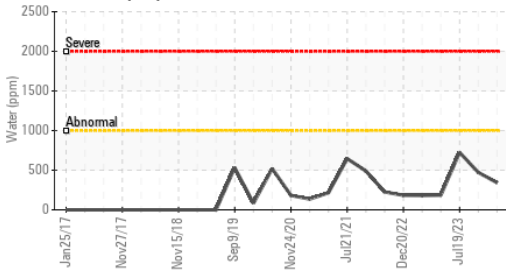
method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974* 0.43	<b>0.31</b>	0.32	0.32

# OIL ANALYSIS REPORT

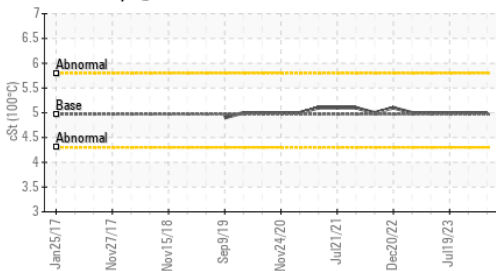
▲ Silicon (ppm)



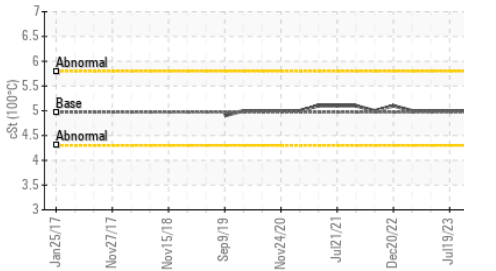
Water (KF)



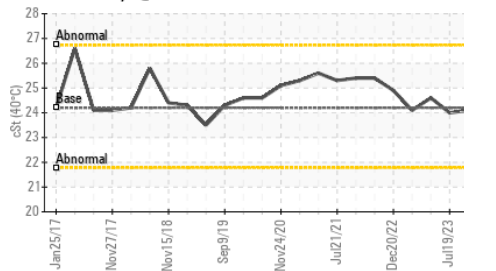
Viscosity @ 100°C



Viscosity @ 100°C



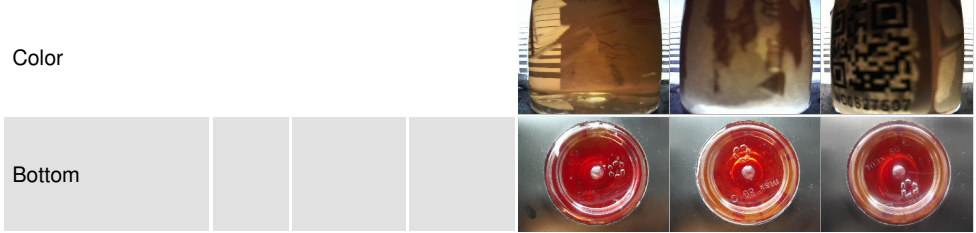
Viscosity @ 40°C



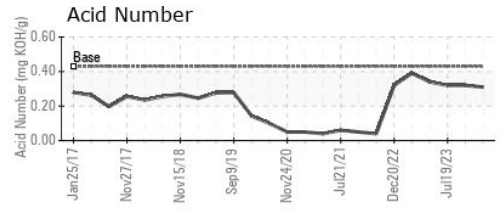
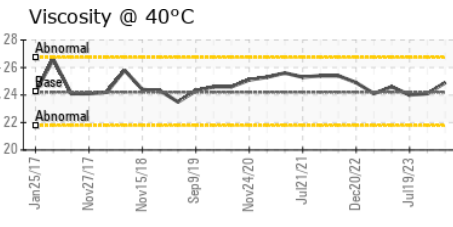
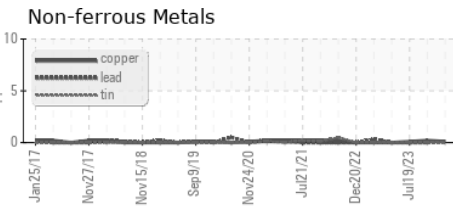
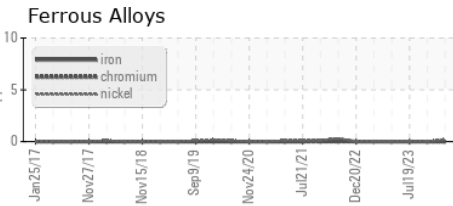
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	24.2	<b>24.9</b>	24.1	24.0
Visc @ 100°C	cSt	ASTM D7279(m)	4.97	<b>5</b>	5	5
Viscosity Index (VI)	Scale	ASTM D2270*	134	<b>129</b>	137	138

SAMPLE IMAGES



## GRAPHS



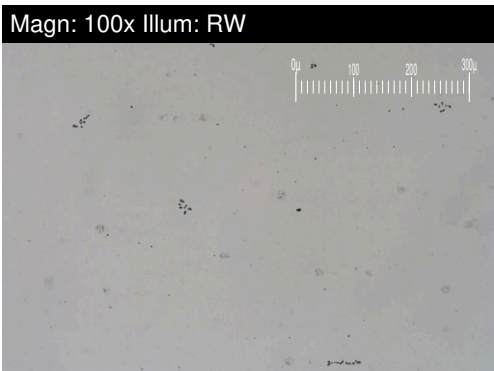
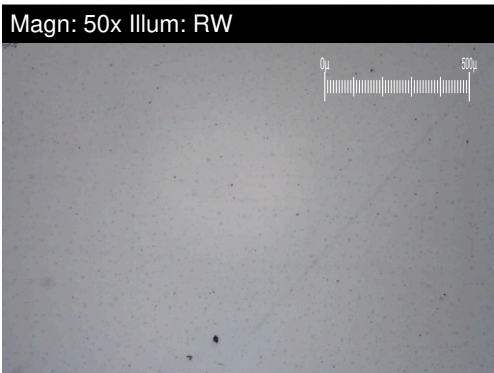
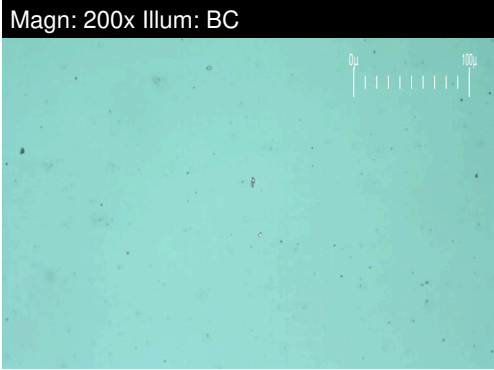
**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0887234  
**Lab Number** : **02602831**      **Received** : 13 Dec 2023  
**Unique Number** : 5695916      **Diagnosed** : 18 Dec 2023  
**Test Package** : AVI 3      **Diagnostician** : Kevin Marson

**FAST AIR LTD**  
 80 HANGAR LINE ROAD  
 WINNIPEG, MB  
 CA R3J 3Y7  
 Contact: Denis Bourgouin  
 denis.bourgouin@flyfastair.com  
 T: (204)772-7622  
 F: (204)783-2483

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-FDEB)**  
 Machine Id  
**[C-FDEB] BEEHCRAFT KING AIR 200 PCERC0113 (S/N 2380)**  
 Component  
**Right Jet Turbine**  
 Fluid  
**EASTMAN TURBO OIL 2380 (12 QTS)**

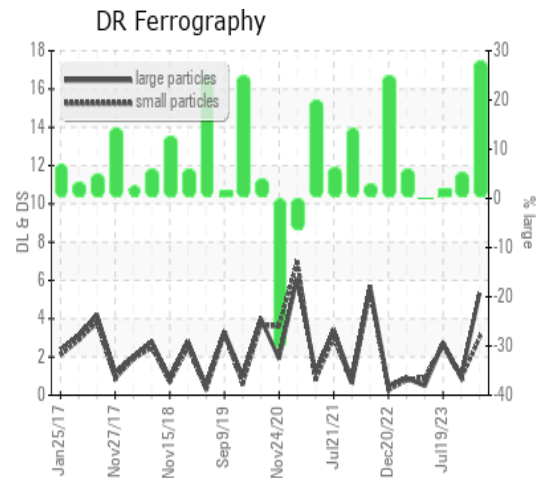


DR-FERROGRAPHY		method	limit/base	current	history1	history2
Large Particles		DR-Ferr*		<b>5.3</b>	1.0	2.7
Small Particles		DR-Ferr*		<b>3.0</b>	0.9	2.6
Total Particles		DR-Ferr*	>---	<b>8.3</b>	1.9	5.3
Large Particles Percentage	%	DR-Ferr*		<b>27.7</b>	5.3	1.9
Severity Index		DR-Ferr*		<b>12</b>	0	0

FERROGRAPHY		method	limit/base	current	history1	history2
Ferrous Rubbing	Scale 0-10	ASTM D7684*		1	1	1
Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*				
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*				
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*				1
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		1	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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