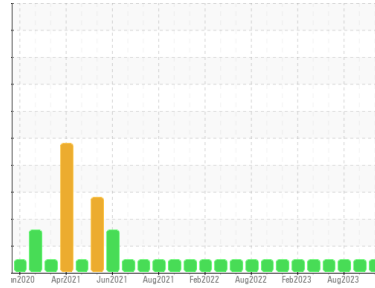




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**(C-GSNM) SKYNORTH AIR LTD**  
 Machine Id  
**BEECHCRAFT PCE51110**  
 Component  
**Right 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>WC0875114</b>	WC0865632	WC0847183
Sample Date	Client Info		<b>13 Dec 2023</b>	25 Oct 2023	28 Aug 2023
TSN	hrs	Client Info	<b>21132</b>	20963	20767
TSO	hrs	Client Info	<b>3518</b>	3349	3153
Oil Age	hrs	Client Info	<b>2861</b>	2692	2497
Oil Changed		Client Info	<b>Not Chngd</b>	Not Chngd	Not Chngd
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>	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>0</b>	0	<1
Lead	ppm	ASTM D5185(m) >3	<b>0</b>	<1	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	0
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	0
Calcium	ppm	ASTM D5185(m) 0	<b>0</b>	0	<1
Phosphorus	ppm	ASTM D5185(m) 2500	<b>2708</b>	2693	2756
Zinc	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	<1	1
Sulfur	ppm	ASTM D5185(m) 0	<b>3</b>	3	1
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

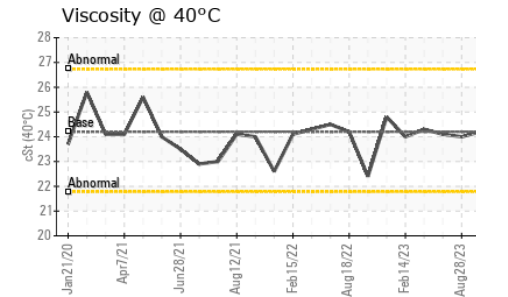
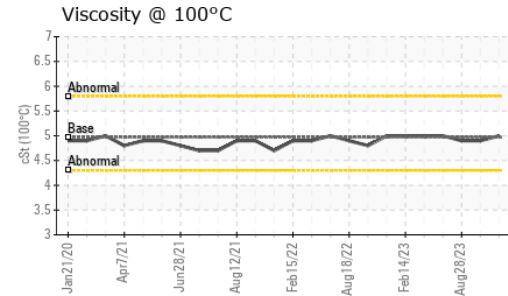
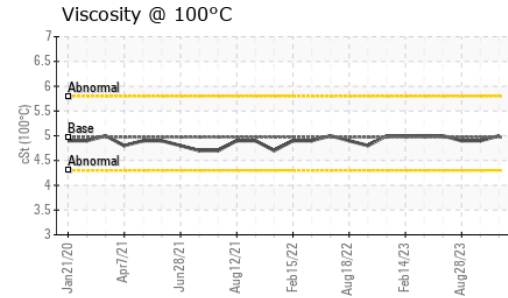
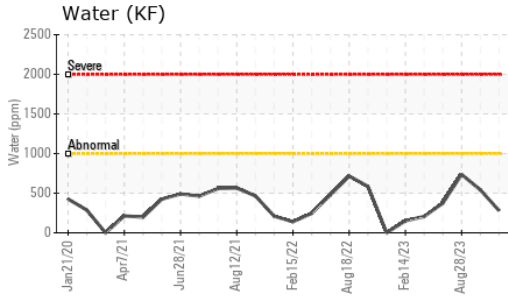
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >8	<b>5</b>	6	5
Sodium	ppm	ASTM D5185(m)	<b>0</b>	<1	<1
Potassium	ppm	ASTM D5185(m) >20	<b>0</b>	0	<1
Water	%	ASTM D6304* >0.1	<b>0.028</b>	0.054	0.073
ppm Water	ppm	ASTM D6304* >1000	<b>280</b>	541.3	736.6

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974* 0.43	<b>0.35</b>	0.34	0.26



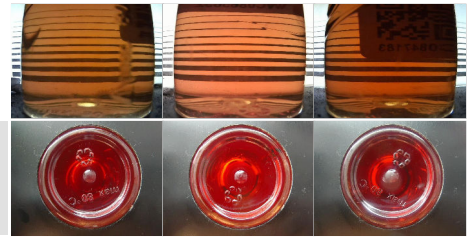
# OIL ANALYSIS REPORT



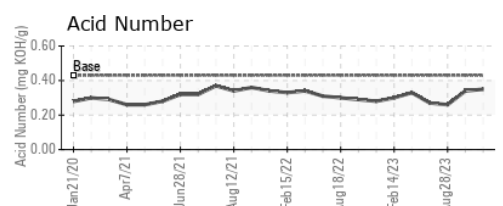
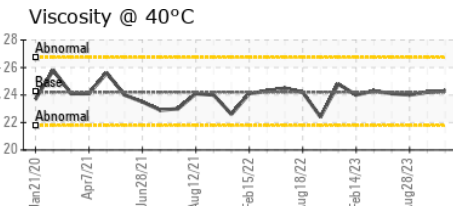
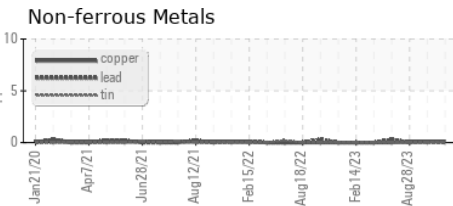
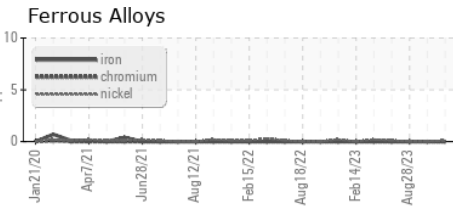
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	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	<b>24.3</b>	24.2
Visc @ 100°C	cSt	ASTM D7279(m)	4.97	<b>5</b>	4.9
Viscosity Index (VI)	Scale	ASTM D2270*	134	<b>135</b>	128

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					



## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0875114 **Received** : 18 Dec 2023  
**Lab Number** : **02603776** **Diagnosed** : 21 Dec 2023  
**Unique Number** : 5696861 **Diagnostician** : Kevin Marson  
**Test Package** : AVI 3

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.

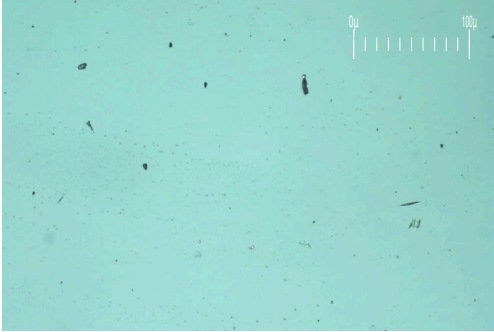
**Skynorth Air**  
 175 West Hangar Road  
 Winnipeg, MB  
 CA R3J 3Z1  
 Contact: Rowena Roopchand  
 parts@skynorthair.com  
 T: (204)338-8039  
 F:



# FERROGRAPHY REPORT

Area  
**(C-GSNM) SKYNORTH AIR LTD**  
 Machine Id  
**BEECHCRAFT PCE51110**  
 Component  
**Right Jet Turbine**  
 Fluid  
**EASTMAN TURBO OIL 2380 (--- GAL)**

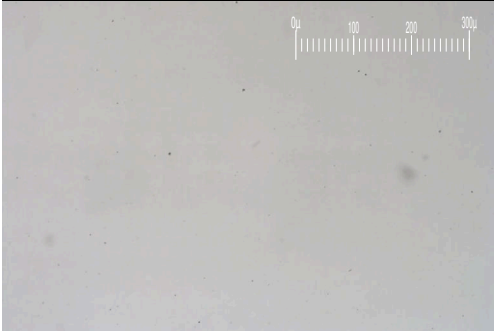
Magn: 200x Illum: BC



Magn: 50x Illum: RW



Magn: 100x Illum: RW

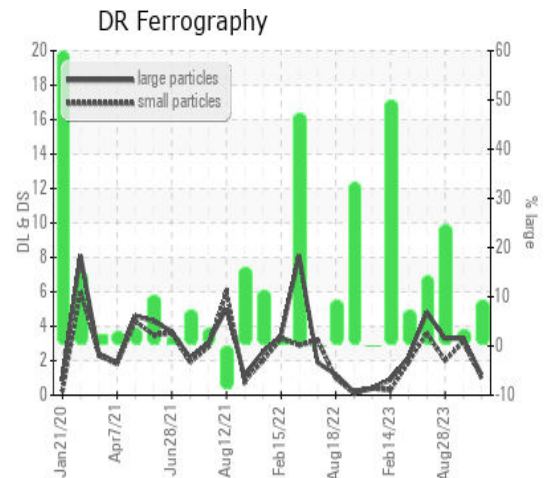


DR-FERROGRAPHY		method	limit/base	current	history1	history2
Large Particles		DR-Ferr*		<b>1.2</b>	3.3	3.3
Small Particles		DR-Ferr*		<b>1.0</b>	3.1	2.0
Total Particles		DR-Ferr*	>---	<b>2.2</b>	6.4	5.3
Large Particles Percentage	%	DR-Ferr*		<b>9.1</b>	3.1	24.5
Severity Index		DR-Ferr*		<b>0</b>	1	4

FERROGRAPHY		method	limit/base	current	history1	history2
Ferrous Rubbing	Scale 0-10	ASTM D7684*		1	2	2
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	1	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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