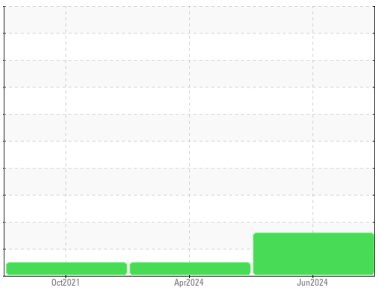
OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Area
(C-GQNJ)
Machine Id
[C-GQNJ] BEECHCRAFT KING AIR 200 PCE-PJ1307
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, dirt and/or grease. 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		**WC0932414**	WC0911749	WC0611858
Sample Date		Client Info		**04 Jun 2024**	01 Apr 2024	12 Oct 2021
TSN	hrs	Client Info		**5712**	5524	3119
TSO	hrs	Client Info		**5712**	5524	3119
Oil Age	hrs	Client Info		**906**	719	170
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	NORMAL	NORMAL

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

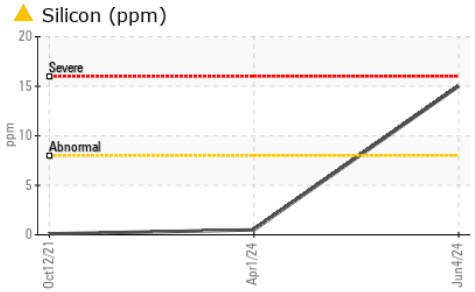
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**<1**	0	<1
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)	0	**<1**	<1	0
Calcium	ppm	ASTM D5185(m)	0	**0**	0	0
Phosphorus	ppm	ASTM D5185(m)	2500	**2634**	2649	1407
Zinc	ppm	ASTM D5185(m)	0	**1**	<1	1
Sulfur	ppm	ASTM D5185(m)	0	**2**	3	6
Lithium	ppm	ASTM D5185(m)		**<1**	<1	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>8	▲ **15**	<1	<1
Sodium	ppm	ASTM D5185(m)		**0**	0	<1
Potassium	ppm	ASTM D5185(m)	>20	**0**	0	<1
Water	%	ASTM D6304*	>0.1	**0.053**	0.020	0.046
ppm Water	ppm	ASTM D6304*	>1000	**532**	210	460.2

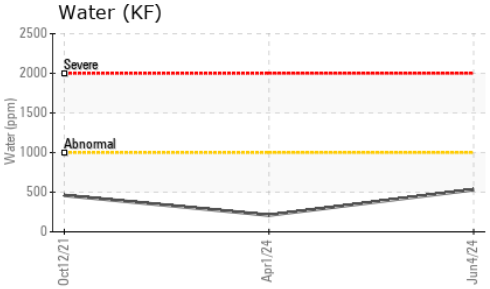
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.43	**0.27**	0.34	0.09

OIL ANALYSIS REPORT

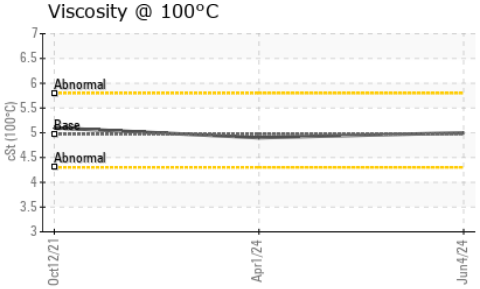
Silicon (ppm)



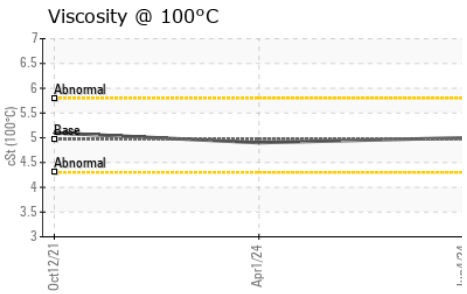
Water (KF)



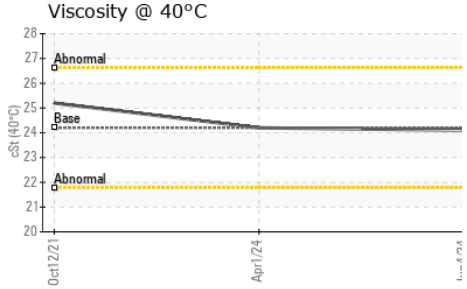
Viscosity @ 100°C



Viscosity @ 100°C



Viscosity @ 40°C



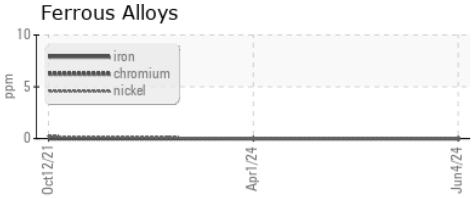
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	NONE
Sand/Dirt	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
Free Water	scalar	Visual*		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	24.2	**24.1**	24.2	25.2
Visc @ 100°C	cSt	ASTM D7279(m)	4.97	**5.0**	4.9	5.1
Viscosity Index (VI)	Scale	ASTM D2270*	134	**137**	128	134

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						

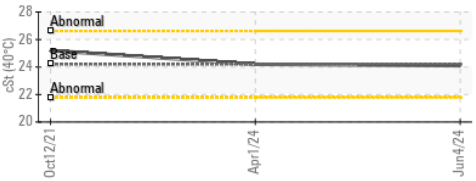
GRAPHS

Ferrous Alloys

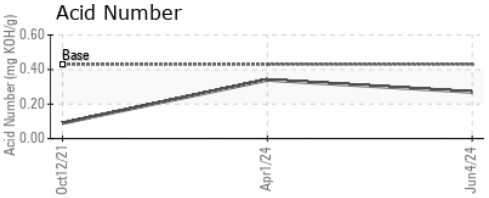


Non-ferrous Metals

Viscosity @ 40°C



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0932414 **Received** : 12 Jun 2024
Lab Number : 02641396 **Tested** : 17 Jun 2024
Unique Number : 5798935 **Diagnosed** : 17 Jun 2024 - 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.

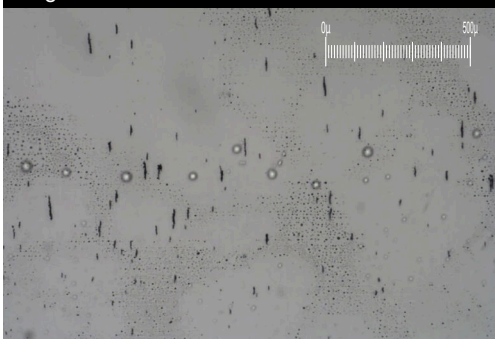
FAST AIR LTD
80 HANGAR LINE ROAD
WINNIPEG, MB
CA R3J 3Y7
Contact: Denis Bourgouin
denis.bourgouin@flyfastair.com
T: (204)772-7622
F: (204)783-2483

FERROGRAPHY REPORT

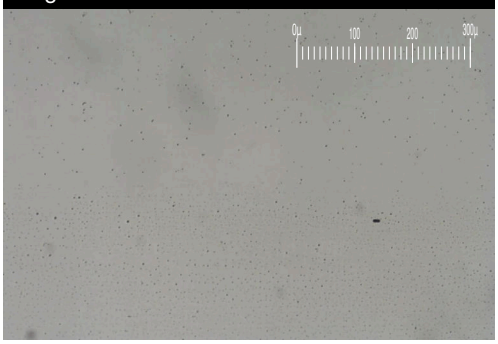
Area
(C-GQNJ)
Machine Id
[C-GQNJ] BEECHCRAFT KING AIR 200 PCE-PJ1307
Component
Right Jet Turbine
Fluid
EASTMAN TURBO OIL 2380 (12 QTS)

Magn: 200x Illum: BC

Magn: 50x Illum: RW



Magn: 100x Illum: RW

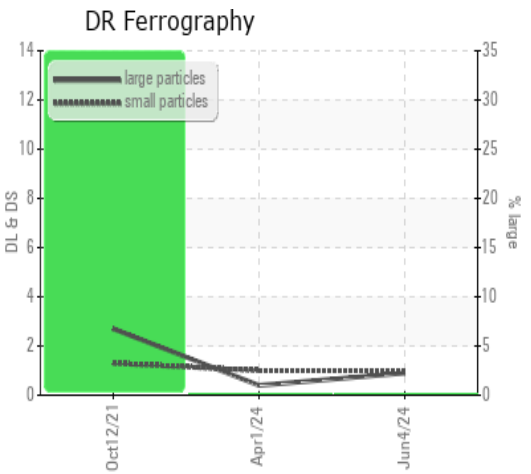


DR-FERROGRAPHY		method	limit/base	current	history1	history2
Large Particles		DR-Ferr*		**0.9**	0.4	2.7
Small Particles		DR-Ferr*		**1.0**	1.0	1.3
Total Particles		DR-Ferr*	>---	**1.9**	1.4	4
Large Particles Percentage	%	DR-Ferr*		**0**	0	35
Severity Index		DR-Ferr*		**0**	0	3.8

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