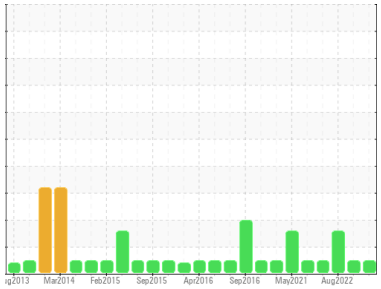
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
[T-20701] TRONAIR 05-3005-3400.81 T-20701 (S/N 1602679806)
Component
Circulating Hydraulic System
Fluid
SKYDROL LD-4 (13 GAL)

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal. The direct-reading & analytical ferrographic results are normal indicating no abnormal wear in the system.

Contaminants
The water content is negligible. The system cleanliness is acceptable for your target SAE AS4059 (replaces NAS 1638) cleanliness code. There is no indication of any contamination in the oil. The system and fluid cleanliness is acceptable.

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		**WC0744605**	WC0744602	WC0705990
Sample Date		Client Info		**04 Nov 2022**	23 Sep 2022	25 Aug 2022
TSN	mths	Client Info		**0**	0	0
TSO	mths	Client Info		**0**	0	0
Oil Age	mths	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	Not Changd
Sample Status				**NORMAL**	NORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	**<1**	1	<1
Chromium	ppm	ASTM D5185(m)	>10	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>10	**0**	0	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>10	**<1**	<1	<1
Lead	ppm	ASTM D5185(m)	>20	**<1**	<1	0
Copper	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Tin	ppm	ASTM D5185(m)	>10	**<1**	<1	0
Antimony	ppm	ASTM D5185(m)		**<1**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**2**	4	2

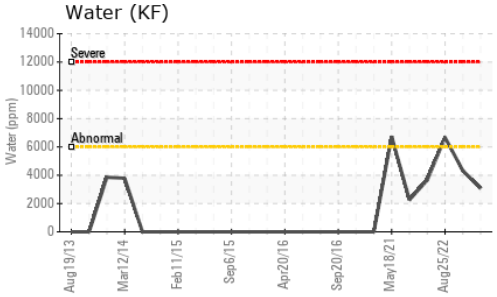
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**5**	7	2
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Calcium	ppm	ASTM D5185(m)	0	**5**	5	4
Phosphorus	ppm	ASTM D5185(m)	20000	**26860**	24977	41368
Zinc	ppm	ASTM D5185(m)	0	**4**	8	7
Sulfur	ppm	ASTM D5185(m)	1900	**1575**	1685	1741
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**2**	2	2
Sodium	ppm	ASTM D5185(m)		**5**	5	5
Potassium	ppm	ASTM D5185(m)	>20	**16**	18	19
Water	%	ASTM D6304*	>0.6	**0.307**	0.432	▲ 0.666
ppm Water	ppm	ASTM D6304*	>6000	**3073.3**	4323.5	▲ 6667.2

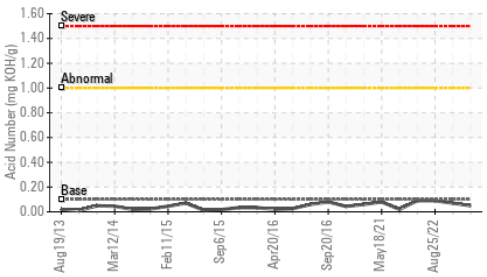
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles 5-15µm	count	NAS 1638	>127999	**72727**	83241	51441
Particles 15-25µm	count	NAS 1638	>22799	**1868**	3474	4346
Particles 25-50µm	count	NAS 1638	>4049	**807**	2600	2041
Particles 50-100µm	count	NAS 1638	>719	**60**	227	120
Particles >100µm	count	NAS 1638	>127	**53**	13	27
NAS 1638	Class	NAS 1638	>9	**9**	9	9

OIL ANALYSIS REPORT

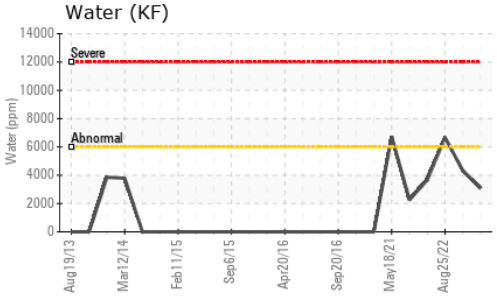
Water (KF)



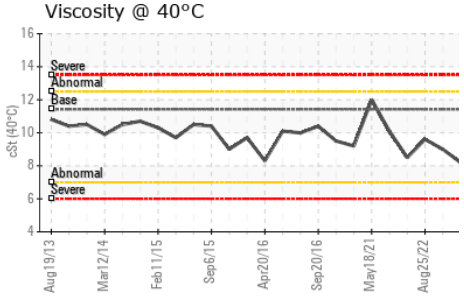
Acid Number



Water (KF)



Viscosity @ 40°C

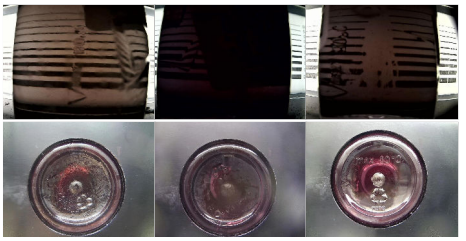


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.10	**0.05**	0.07	0.09

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**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.6	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

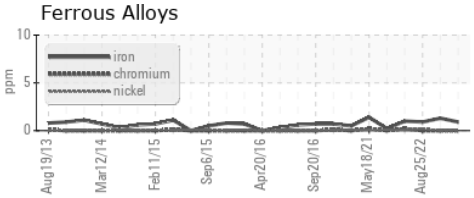
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	11.42	**8.2**	9	9.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

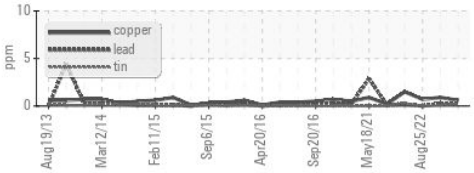


GRAPHS

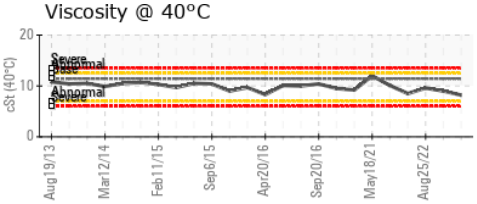
Ferrous Alloys



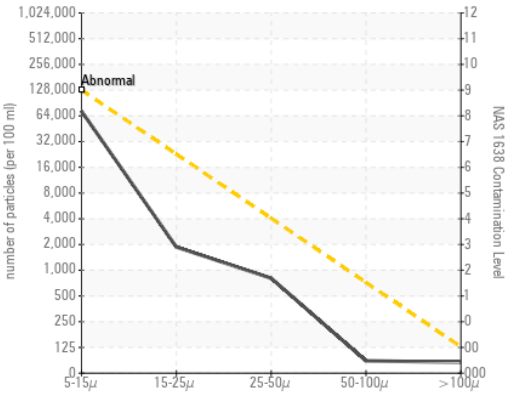
Non-ferrous Metals



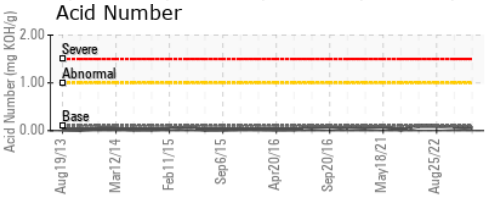
Viscosity @ 40°C



Particle Count



Acid Number



CALA
ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0744605
Lab Number : 02523012
Unique Number : 5487993
Test Package : AVI 3 (Additional Tests: KF, PrtCount)

Received : 16 Nov 2022
Tested : 17 Nov 2022
Diagnosed : 18 Nov 2022 - Kevin Marson

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.

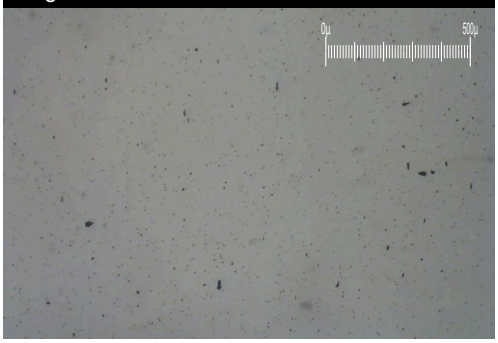
SKYSERVICE BUSINESS AVIATION INC
6120 MIDFIELD ROAD
MISSISSAUGA, ON
CA L4W 2P7
Contact: Crew Chief
maintenance_yyz@skyservice.com
T: (416)399-4437
F:

FERROGRAPHY REPORT

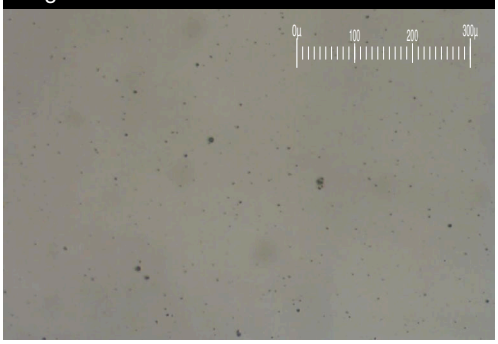
Machine Id
[T-20701] TRONAIR 05-3005-3400.81 T-20701 (S/N 1602679806)
Component
Circulating Hydraulic System
Fluid
SKYDROL LD-4 (13 GAL)

Magn: 200x Illum: BC

Magn: 50x Illum: RW



Magn: 100x Illum: RW

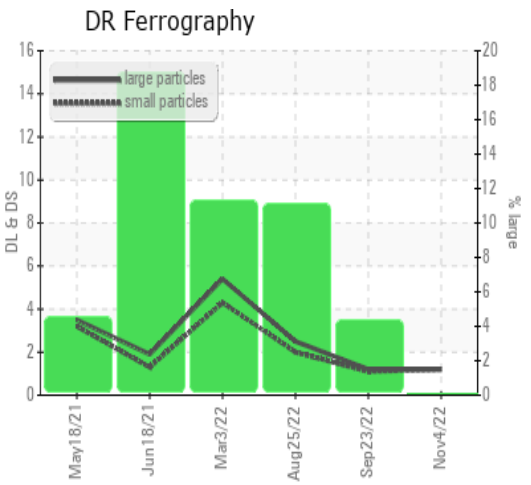


DR-FERROGRAPHY		method	limit/base	current	history1	history2
Large Particles		DR-Ferr*		**1.2**	1.2	2.5
Small Particles		DR-Ferr*		**1.2**	1.1	2.0
Total Particles		DR-Ferr*	>---	**2.4**	2.3	4.5
Large Particles Percentage	%	DR-Ferr*		**0**	4.3	11.1
Severity Index		DR-Ferr*		**0**	0	1

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*			2	
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**	2	1
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		**1**		1

WEAR

All component wear rates are normal. The direct-reading & analytical ferrographic results are normal indicating no abnormal wear in the system.



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