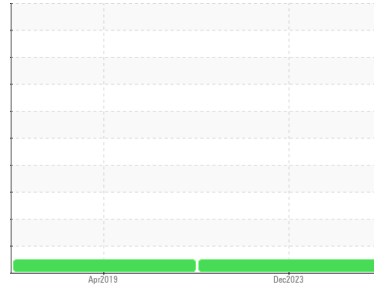




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
VAMPIRE CFJRH

Component
Jet Turbine

Fluid
SHELL AEROSHELL 500 (8 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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		WC0723829	WC0304572	---
Sample Date	Client Info		04 Dec 2023	04 Apr 2019	---
TSN	hrs	Client Info	2554	0	---
TSO	hrs	Client Info	315	0	---
Oil Age	hrs	Client Info	20	0	---
Oil Changed		Client Info	Changed	N/A	---
Sample Status			NORMAL	NORMAL	---

WEAR METALS

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

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 0	<1	2	---
Barium	ppm	ASTM D5185(m) 0	<1	0	---
Molybdenum	ppm	ASTM D5185(m) 0	0	0	---
Manganese	ppm	ASTM D5185(m) 0	0	0	---
Magnesium	ppm	ASTM D5185(m) 0	0	<1	---
Calcium	ppm	ASTM D5185(m) 0	0	<1	---
Phosphorus	ppm	ASTM D5185(m) 1000	863	5	---
Zinc	ppm	ASTM D5185(m) 5	<1	<1	---
Sulfur	ppm	ASTM D5185(m) 0	93	1086	---
Lithium	ppm	ASTM D5185(m)	<1	0	---

CONTAMINANTS

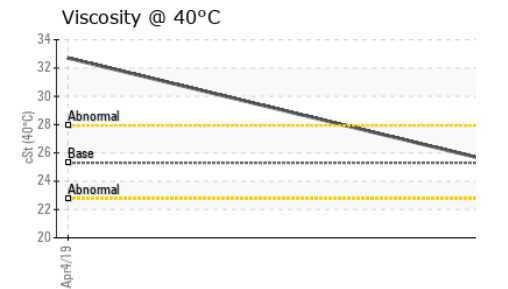
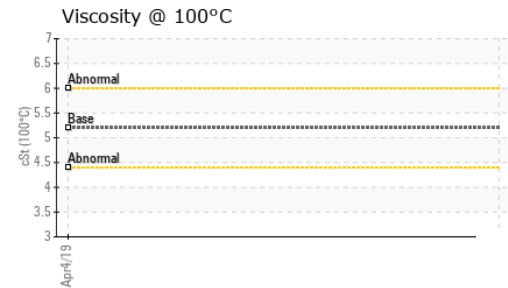
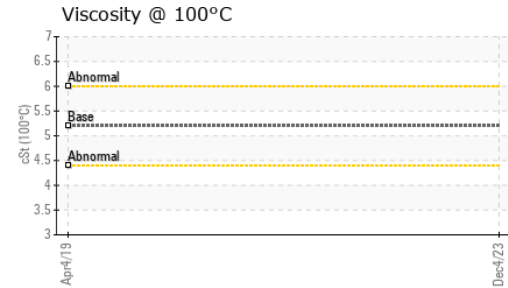
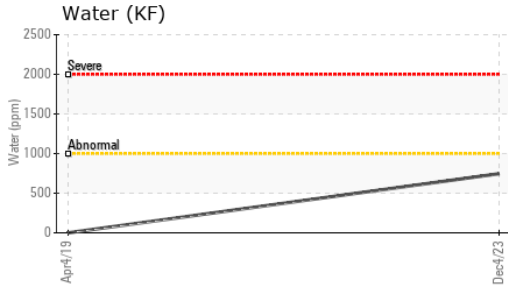
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >8	<1	2	---
Sodium	ppm	ASTM D5185(m)	<1	<1	---
Potassium	ppm	ASTM D5185(m) >20	0	<1	---
Water	%	ASTM D6304* >0.1	0.074	---	---
ppm Water	ppm	ASTM D6304* >1000	746	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974* 0.11	0.05	0.051	---



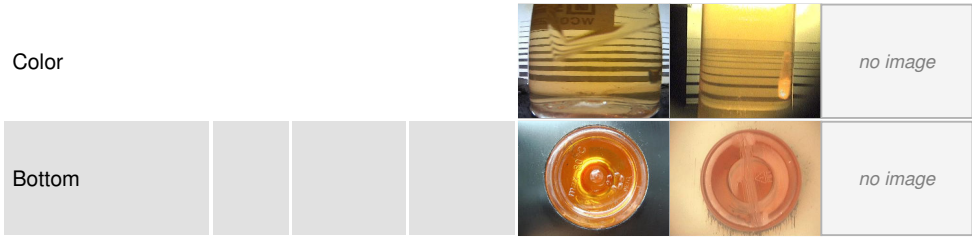
OIL ANALYSIS REPORT



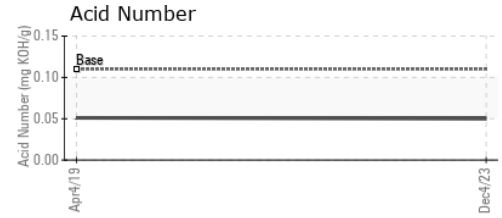
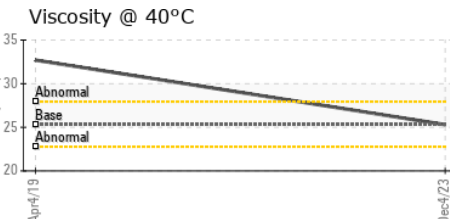
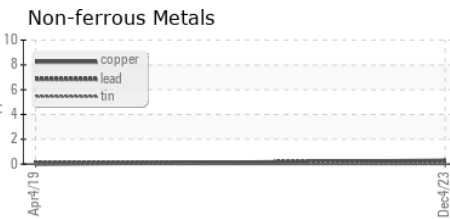
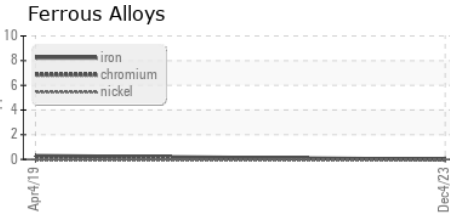
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	---
Silt	scalar	Visual*	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---
Appearance	scalar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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	25.3	32.7	---
Visc @ 100°C	cSt	ASTM D7279(m)	5.2	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	141	---	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



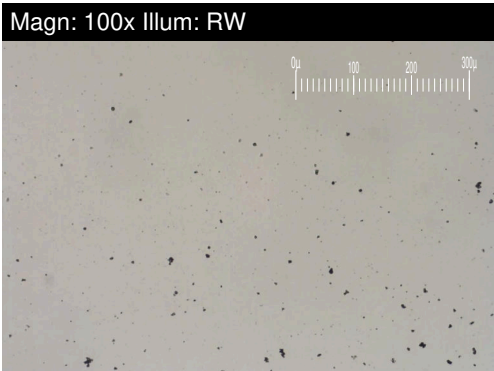
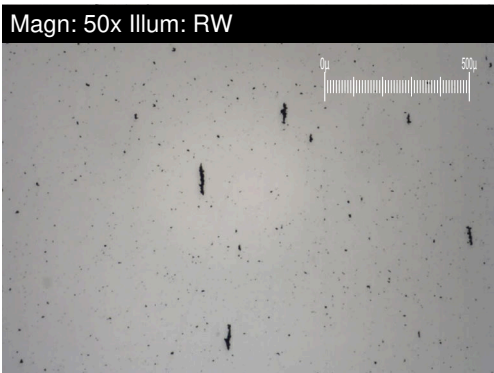
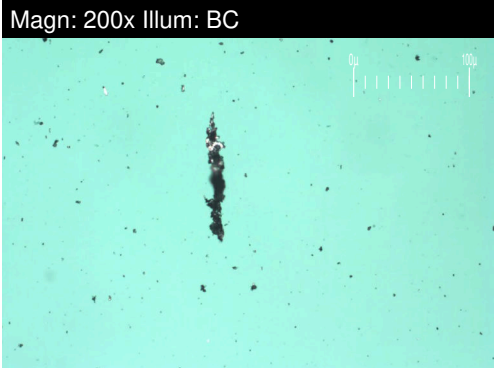
Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0723829
Lab Number : 02600964
Unique Number : 5694049
Test Package : AVI 3

FLITELINE MAINTENANCE
 4C-4881 FOUNTAIN ST. N, HANGAR 33
 BRESLAU, ON
 CA N0B 1M0
 Contact: Michael Koteles
 mike@fliteline.ca
 T: (519)648-3404
 F: (519)648-3040

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

Machine Id
VAMPIRE CFJRH
 Component
Jet Turbine
 Fluid
SHELL AEROSHELL 500 (8 LTR)

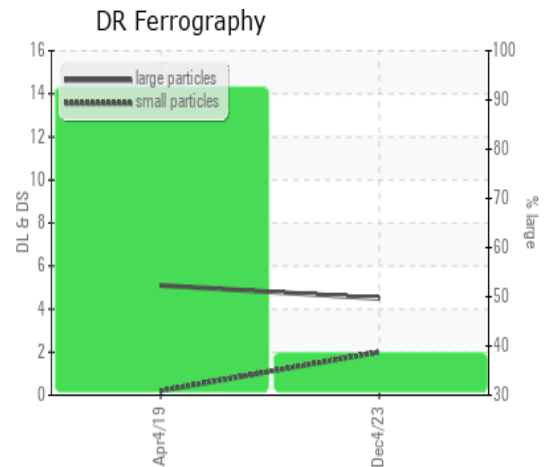


DR-FERROGRAPHY		method	limit/base	current	history1	history2
Large Particles		DR-Ferr*		4.5	5.1	---
Small Particles		DR-Ferr*		2.0	0.2	---
Total Particles		DR-Ferr*	>---	6.5	5.3	---
Large Particles Percentage	%	DR-Ferr*		38.5	92.5	---
Severity Index		DR-Ferr*		11	25	---

FERROGRAPHY		method	limit/base	current	history1	history2
Ferrous Rubbing	Scale 0-10	ASTM D7684*		3	2	
Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*		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*		1		
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*		2	2	

WEAR

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



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