



# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area

**(N4417F)**

Machine Id

**[N4417F] DHC-8-402 PCE-FA0931**

Component

**Right Jet Turbine**

Fluid

**{not provided} (--- 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. Please specify the brand, type, and viscosity of the oil on your 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>WC0909610</b>	---	---
Sample Date	Client Info	<b>18 Apr 2024</b>	---	---
TSN	hrs Client Info	<b>0</b>	---	---
TSO	hrs Client Info	<b>0</b>	---	---
Oil Age	hrs Client Info	<b>0</b>	---	---
Oil Changed	Client Info	<b>N/A</b>	---	---
Sample Status		<b>NORMAL</b>	---	---

## WEAR METALS

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

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m)	<b>&lt;1</b>	---	---
Barium	ppm ASTM D5185(m)	<b>0</b>	---	---
Molybdenum	ppm ASTM D5185(m)	<b>0</b>	---	---
Manganese	ppm ASTM D5185(m)	<b>0</b>	---	---
Magnesium	ppm ASTM D5185(m)	<b>0</b>	---	---
Calcium	ppm ASTM D5185(m)	<b>0</b>	---	---
Phosphorus	ppm ASTM D5185(m)	<b>2675</b>	---	---
Zinc	ppm ASTM D5185(m)	<b>&lt;1</b>	---	---
Sulfur	ppm ASTM D5185(m)	<b>2</b>	---	---
Lithium	ppm ASTM D5185(m)	<b>&lt;1</b>	---	---

## CONTAMINANTS

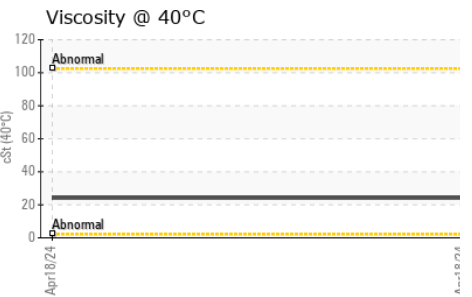
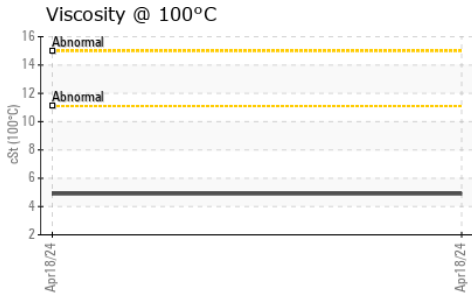
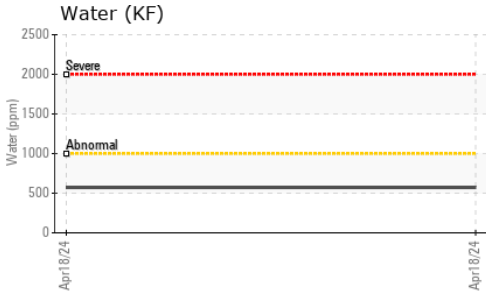
method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >8	<b>0</b>	---	---
Sodium	ppm ASTM D5185(m)	<b>0</b>	---	---
Potassium	ppm ASTM D5185(m) >20	<b>&lt;1</b>	---	---
Water	% ASTM D6304* >0.1	<b>0.057</b>	---	---
ppm Water	ppm ASTM D6304* >1000	<b>573</b>	---	---

## FLUID DEGRADATION

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



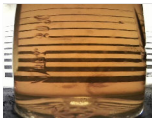

# OIL ANALYSIS REPORT



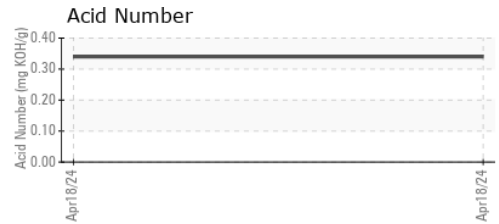
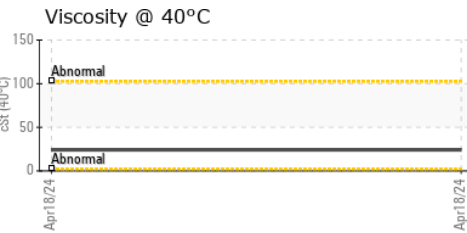
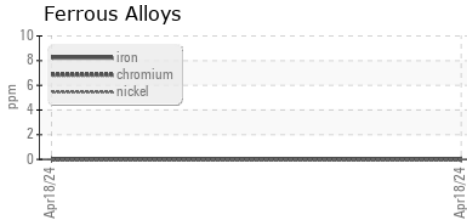
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	---	---
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>VLITE</b>	---	---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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	<b>24.1</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	<b>4.9</b>	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	<b>129</b>	---	---

### SAMPLE IMAGES

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				no image	no image
Bottom				no image	no image

### GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0909610      **Received** : 19 Apr 2024  
**Lab Number** : **02630177**      **Tested** : 23 Apr 2024  
**Unique Number** : 5763309      **Diagnosed** : 23 Apr 2024 - Kevin Marson  
**Test Package** : AVI 3

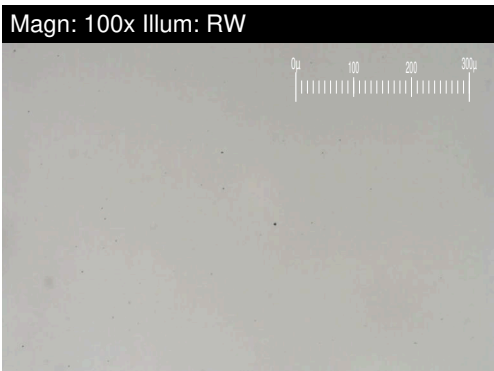
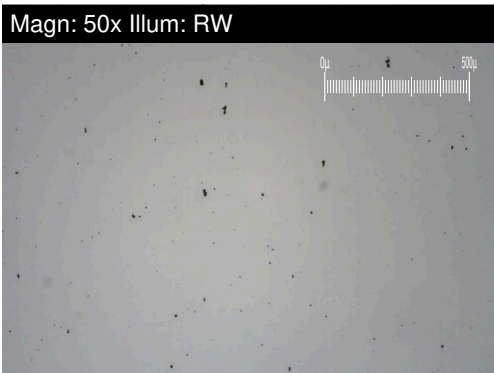
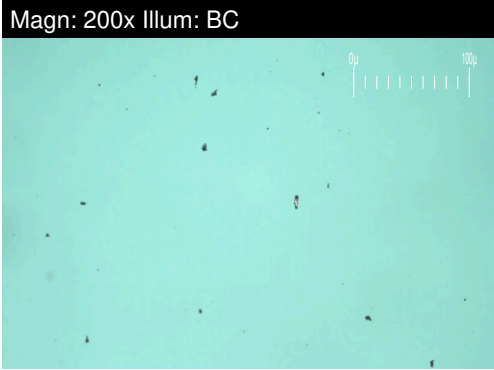
To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

**SMART AVIATION**  
 775 COUNTY ROAD 64  
 BRIGHTON, ON  
 CA K0K 1H0  
 Contact: Mark Rinaldi  
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 T: (343)645-4361  
 F:



# FERROGRAPHY REPORT

Area  
**(N4417F)**  
 Machine Id  
**[N4417F] DHC-8-402 PCE-FA0931**  
 Component  
**Right Jet Turbine**  
 Fluid  
**{not provided} (--- GAL)**

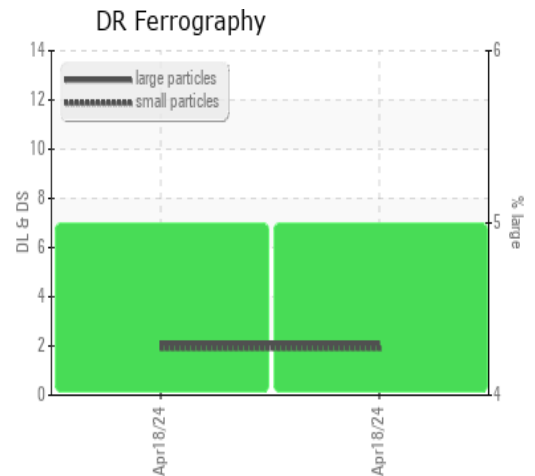


DR-FERROGRAPHY		method	limit/base	current	history1	history2
Large Particles		DR-Ferr*		<b>2.1</b>	---	---
Small Particles		DR-Ferr*		<b>1.9</b>	---	---
Total Particles		DR-Ferr*	>---	<b>4</b>	---	---
Large Particles Percentage	%	DR-Ferr*		<b>5</b>	---	---
Severity Index		DR-Ferr*		<b>0</b>	---	---

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

### WEAR

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



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