

# **PROBLEM SUMMARY**

# CFCC Machine Id YORK MCLEOD BUILDING CHILLER 1 (S/N GDFM054332) Component Centrifugal Compressor

# Fluid

YORK TYPE C (--- GAL)

# COMPONENT CONDITION SUMMARY





# Ferrous Alloys

### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

# PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	 
Iron	ppm	ASTM D5185m	>50	<u> </u>	 
Acid Number (AN)	mg KOH/g	ASTM D8045	0.11	<b>0.453</b>	 

Customer Id: SCHWILNC Sample No.: WC0801214 Lab Number: 06029466 Test Package: IND 2



To manage this report scan the QR code

*To discuss the diagnosis or test data:* Jonathan Hester +1 919-379-4092 x4092 <u>jhester@wearcheckusa.com</u>

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS						
Action	Status	Date	Done By	Description		
Change Fluid			?	Oil and filter change at the time of sampling has been noted.		
Change Filter			?	Oil and filter change at the time of sampling has been noted.		
Resample			?	We recommend an early resample to monitor this condition.		

HISTORICAL DIAGNOSIS



# **OIL ANALYSIS REPORT**

### Area CFCC Machine Id YORK MCLEOD BUILDING CHILLER 1 (S/N GDFM054332) Component

Centrifugal Compressor

YORK TYPE C (--- GAL)

### DIAGNOSIS

### A Recommendation

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

# 🔺 Wear

The iron level is abnormal. All other component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The AN level is at the top-end of the recommended limit.

SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0801214		
Sample Date		Client Info		04 Dec 2023		
Machine Age	hrs	Client Info		14876		
Oil Age	hrs	Client Info		4600		
Oil Changed		Client Info		Changed		
Sample Status				ABNORMAL		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<b>^</b> 78		
Chromium	ppm	ASTM D5185m	>10	<1		
Nickel	ppm	ASTM D5185m		0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m		0		
Aluminum	ppm	ASTM D5185m	>25	<1		
Lead	ppm	ASTM D5185m	>25	0		
Copper	ppm	ASTM D5185m	>50	8		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
				•		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1	history2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base 0 0	Current 0 0	history1 	history2 
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 0	Current 0 0 0 0	history1	history2  
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 0 0	Current O O O O O	history1   	history2   
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	Current 0 0 0 0 0 0	history1   	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 0 0 0 0 0	Current 0 0 0 0 0 0 <1	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 0 0 0 0 0 0 0	Current 0 0 0 0 0 0 0 2 1 0	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 0 0 0 0 0 0 0 0	Current 0 0 0 0 0 0 0 <1 0 0 0 0	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 0 0 0 0 0 0 0 0 0 200	Current 0 0 0 0 0 0 0 0 0 0 196	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Current 0 0 0 0 0 0 <1 0 0 196 Current	history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 0 0 0 0 0 0 0 0 0 0 0 200 200 200	current           0           0           0           0           0           0           0           0           0           1           0           196           current           2	history1 history1	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base 0 0 0 0 0 0 0 0 0 0 200 200 200 225	Current 0 0 0 0 0 0 (1 0 0 196 Current 2 0	history1 history1 history1	history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	Method ASTM D5185m ASTM D5185m	limit/base 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 200 200	current         0         0         0         0         0         0         0         0         0         0         0         0         0         196         current         2         0            1	history1 history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m	limit/base 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	current         0         0         0         0         0         0         0         0         0         0         196         current         2         0            0            0         0         196         current         2         0            0            0.001	history1                           history1            history1	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m           ASTM D6304           ASTM D6304	limit/base 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	current         0         0         0         0         0         0         0         0         0         196         current         2         0         <11	history1                        history1	history2                        history2 </td
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m           ASTM D6304           ASTM D6304           ASTM D6304	limit/base 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	current         0         0         0         0         0         0         0         0         0         0         0         0         0         0         196         current         2         0         <1	history1	history2                        history2

Sample Rating Trend



Water (KF)

Viscosity @ 40°C

120

10 8 Water (ppm)

60 4

20

0 Dec4/73

75

70 65 Base

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# **OIL ANALYSIS REPORT**







![](_page_3_Figure_5.jpeg)

To discuss this sample report, contact Customer Service at 1-800-237-1369. \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T: (910)813-7445 F:

Certificate L2367

Laboratory

Sample No.

Lab Number