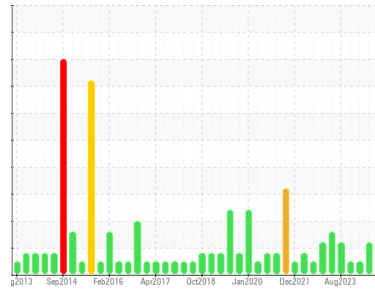




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

System 56 - Hazardous Drains

Machine Id

Z-5601A Centrifuge Gearbox Lube Oil

Component

Gearbox

Fluid

GEAR OIL ISO 320 (13 LTR)

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

All component wear rates are normal.

### Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible.

### Fluid 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	<b>WC0925243</b>	WC	WC0861475
Sample Date	Client Info	<b>24 Jun 2024</b>	04 Apr 2024	13 Dec 2023
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ABNORMAL</b>	ABNORMAL	NORMAL

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >150	<b>8</b>	14	46
Chromium	ppm	ASTM D5185(m) >10	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185(m) >10	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m) >5	<b>&lt;1</b>	<1	2
Lead	ppm	ASTM D5185(m) >65	<b>1</b>	<1	3
Copper	ppm	ASTM D5185(m) >80	<b>41</b>	24	74
Tin	ppm	ASTM D5185(m) >8	<b>2</b>	<1	1
Antimony	ppm	ASTM D5185(m) >5	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m) 50	<b>5</b>	13	4
Barium	ppm	ASTM D5185(m) 15	<b>&lt;1</b>	2	<1
Molybdenum	ppm	ASTM D5185(m) 15	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185(m) 50	<b>&lt;1</b>	2	4
Calcium	ppm	ASTM D5185(m) 50	<b>4</b>	5	17
Phosphorus	ppm	ASTM D5185(m) 350	<b>235</b>	225	200
Zinc	ppm	ASTM D5185(m) 100	<b>8</b>	14	73
Sulfur	ppm	ASTM D5185(m) 12500	<b>5918</b>	6279	4817
Lithium	ppm	ASTM D5185(m)	<b>1</b>	1	<1

## CONTAMINANTS

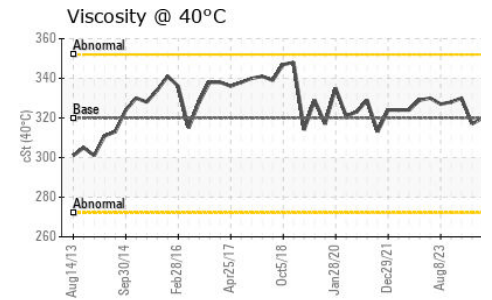
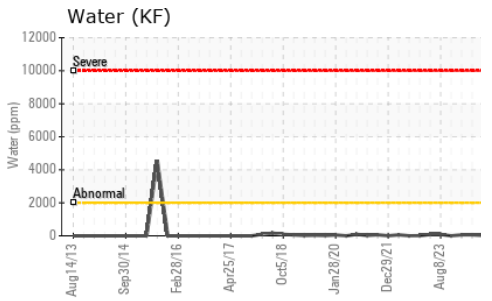
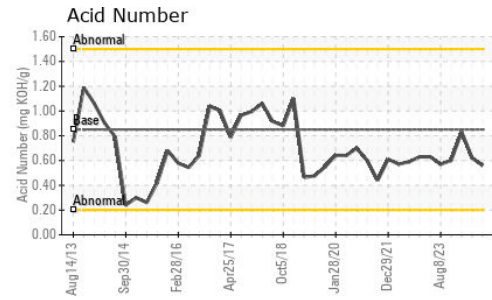
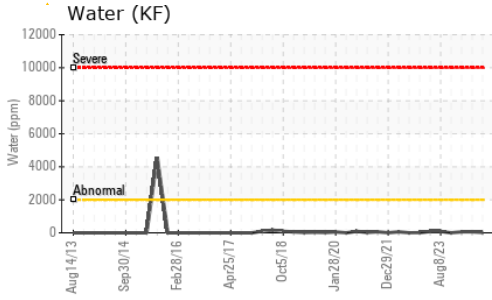
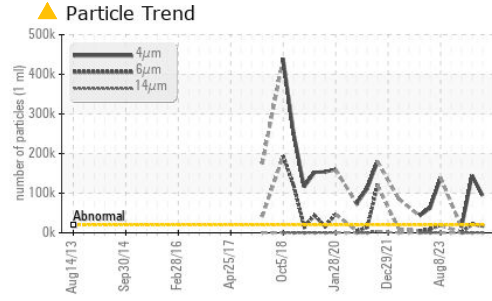
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >20	<b>2</b>	5	3
Sodium	ppm	ASTM D5185(m)	<b>2</b>	5	24
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	4
Water	%	ASTM D6304* >0.2	<b>0.002</b>	0.006	0.006
ppm Water	ppm	ASTM D6304* >2000	<b>21</b>	62	61

## FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >20000	<b>▲ 93992</b>	▲ 144675	13336
Particles >6µm	ASTM D7647 >5000	<b>▲ 17171</b>	▲ 22163	1132
Particles >14µm	ASTM D7647 >640	<b>118</b>	372	51
Particles >21µm	ASTM D7647 >160	<b>24</b>	70	10
Particles >38µm	ASTM D7647 >40	<b>3</b>	3	1
Particles >71µm	ASTM D7647 >10	<b>1</b>	1	0
Oil Cleanliness	ISO 4406 (c) >21/19/16	<b>▲ 24/21/14</b>	▲ 24/22/16	21/17/13



# OIL ANALYSIS REPORT

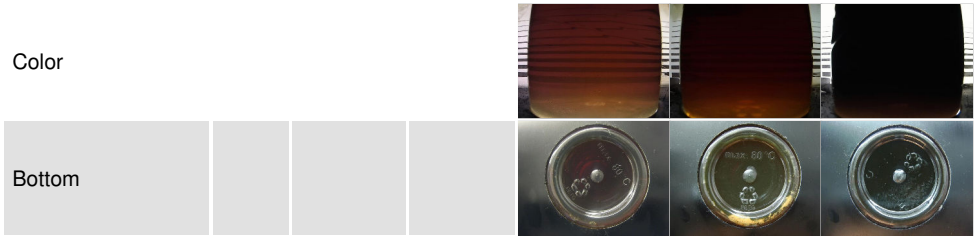


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974*	0.85	<b>0.56</b>	0.62	0.83

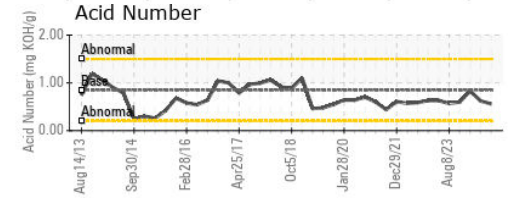
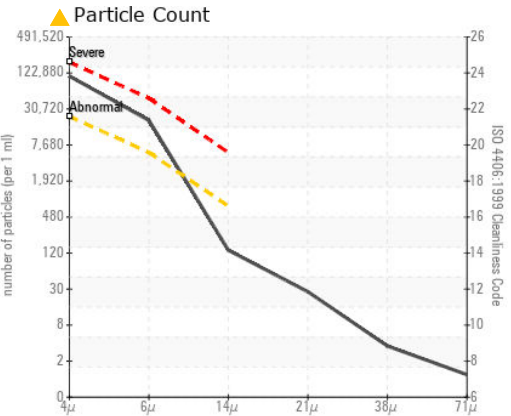
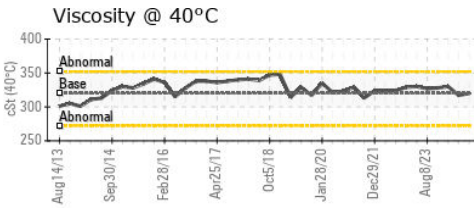
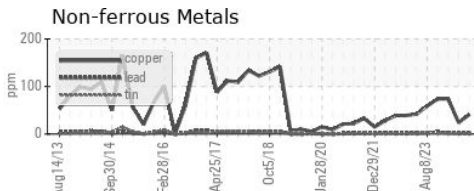
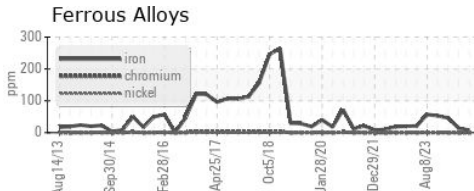
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	<b>VLITE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	VLITE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	VLITE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	.2%	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	320	<b>320</b>	317	330

## SAMPLE IMAGES



## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0925243  
**Lab Number** : 02647935  
**Unique Number** : 5813487  
**Test Package** : MAR 2 ( Additional Tests: KF, PrtCount, TAN Man )

**HIBERNIA MGMT & DEVELOPMENT CO. LTD**  
 SUITE 1000,, 100 NEW GOWER STREET  
 ST.JOHN'S, NL  
 CA A1C 6K3  
 Contact: Sam Nash  
 samantha.m.nash@exxonmobil.com

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.

T:  
 F: (709)722-3766