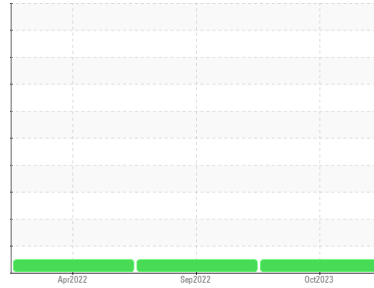




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**EHG3-BRG1**

Component  
**Bearing**

Fluid  
**MOBIL DTE EXCEL ISO 68 (--- 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.

### Wear

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

### Contaminants

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>WC0815809</b>	WC0736145	WC0676734
Sample Date	Client Info		<b>19 Oct 2023</b>	02 Sep 2022	04 Apr 2022
Machine Age	mths	Client Info	<b>31</b>	18	13
Oil Age	mths	Client Info	<b>31</b>	18	13
Oil Changed	Client Info		<b>Not Changed</b>	Not Changed	Not Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		<b>0</b>	0	0
Iron	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Chromium	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >20	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	0	0
Lead	ppm	ASTM D5185(m) >20	<b>6</b>	4	4
Copper	ppm	ASTM D5185(m) >20	<b>18</b>	12	10
Tin	ppm	ASTM D5185(m) >20	<b>1</b>	1	2
Antimony	ppm	ASTM D5185(m)	<b>0</b>	<1	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)	<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185(m)	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	<b>0</b>	<1	0
Calcium	ppm	ASTM D5185(m)	<b>&lt;1</b>	0	<1
Phosphorus	ppm	ASTM D5185(m)	<b>133</b>	135	134
Zinc	ppm	ASTM D5185(m)	<b>60</b>	65	75
Sulfur	ppm	ASTM D5185(m)	<b>529</b>	522	506
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

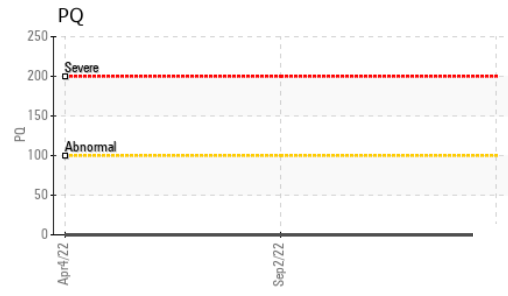
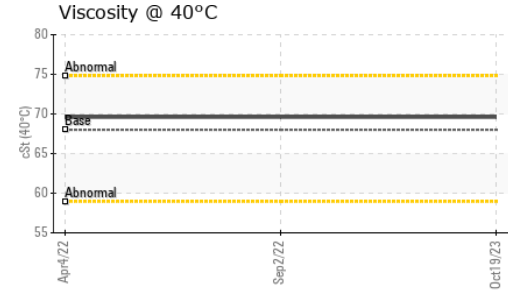
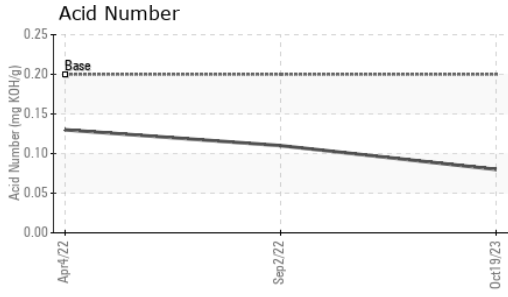
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >15	<b>&lt;1</b>	<1	<1
Sodium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	0
Potassium	ppm	ASTM D5185(m) >20	<b>0</b>	<1	<1

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974* .2	<b>0.08</b>	0.11	0.13



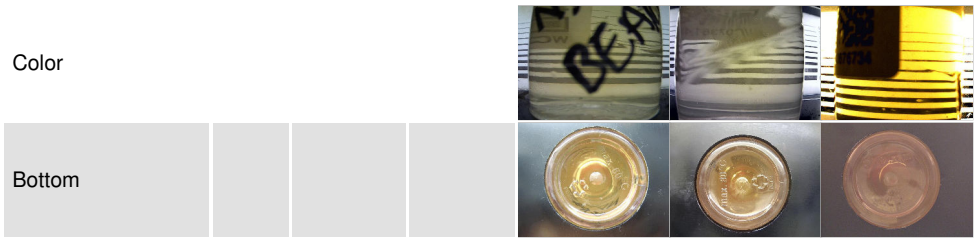
# OIL ANALYSIS REPORT



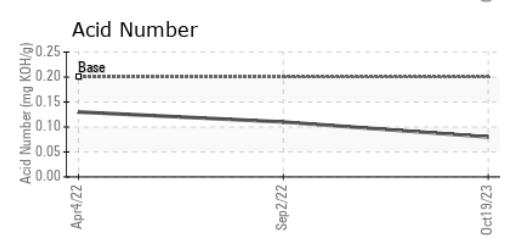
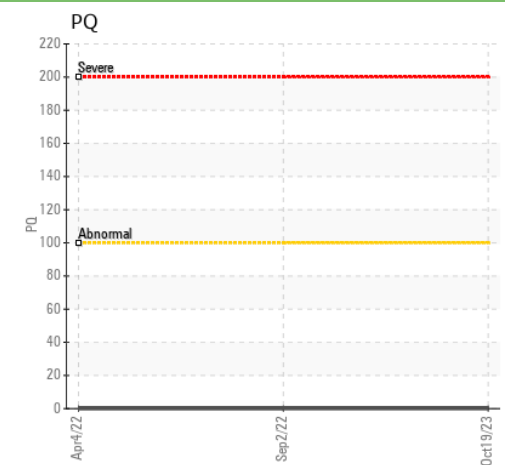
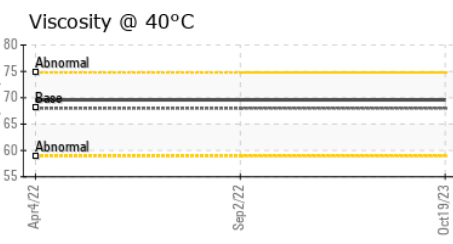
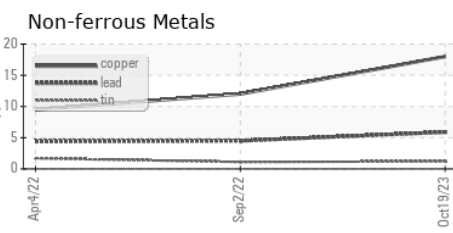
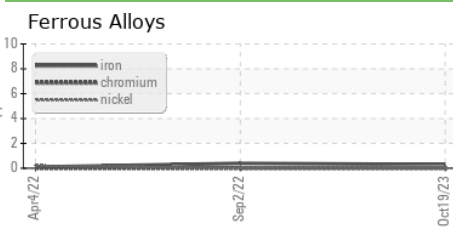
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	68	69.6	69.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **Chaudiere Hydro LP - Energy Ottawa**  
**Sample No.** : WC0815809 **Received** : 23 Oct 2023 4 Booth Street  
**Lab Number** : 02591029 **Diagnosed** : 27 Oct 2023 Ottawa, ON  
**Unique Number** : 5668108 **Diagnostician** : Kevin Marson CA K1R 6K8  
**Test Package** : IND 3 Contact: Cheryl Gharib  
info@portagepower.com

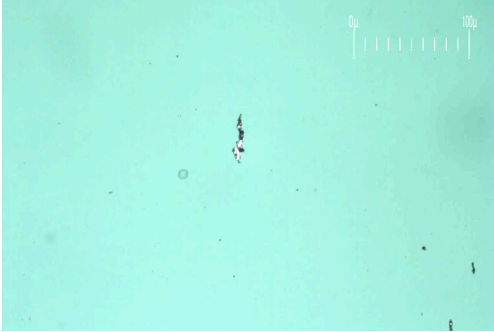
To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

T:  
 F: x

# FERROGRAPHY REPORT

Machine Id  
**EHG3-BRG1**  
 Component  
**Bearing**  
 Fluid  
**MOBIL DTE EXCEL ISO 68 (--- GAL)**

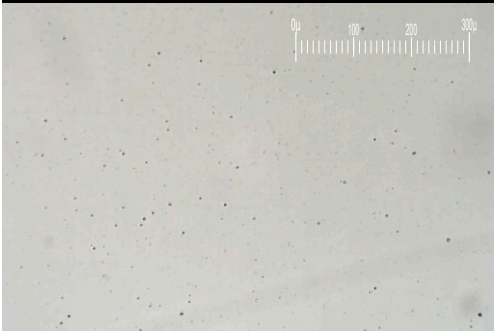
Magn: 200x Illum: BC



Magn: 50x Illum: RW



Magn: 100x Illum: RW

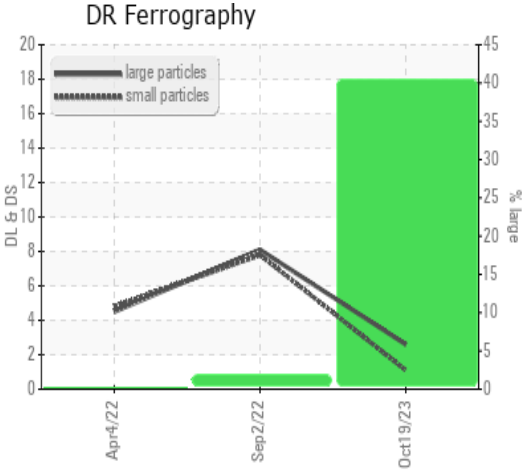


DR-FERROGRAPHY		method	limit/base	current	history1	history2
Large Particles		DR-Ferr*		<b>2.6</b>	8.1	4.5
Small Particles		DR-Ferr*		<b>1.1</b>	7.8	4.8
Total Particles		DR-Ferr*	>---	<b>3.7</b>	15.9	9.3
Large Particles Percentage	%	DR-Ferr*		<b>40.5</b>	1.9	0
Severity Index		DR-Ferr*		<b>4</b>	2	1

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*				
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*			1	
Carbonaceous Material	Scale 0-10	ASTM D7684*				
Lubricant Degradation	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*		1	1	1
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		2	1	1

### WEAR

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



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