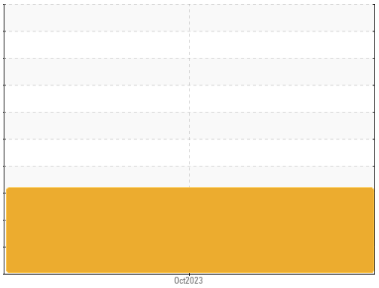
PROBLEM SUMMARY

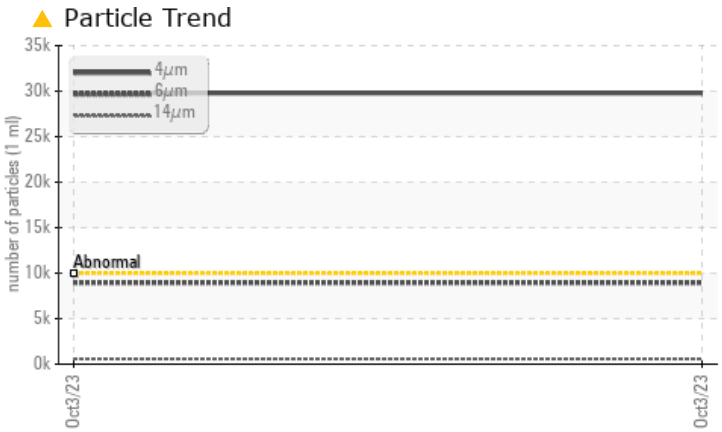
Sample Rating Trend

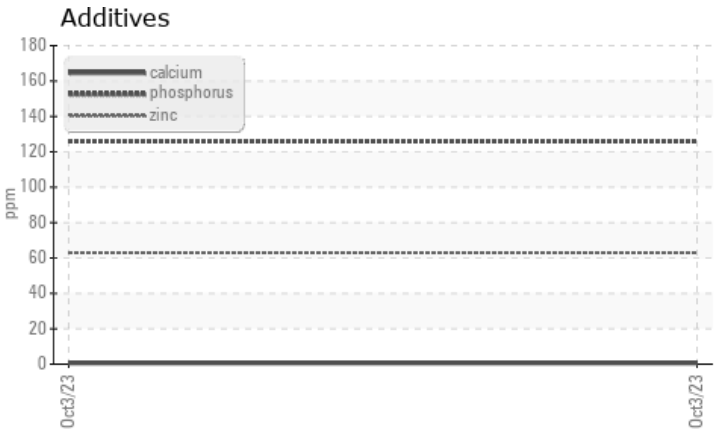


VISUAL METAL

Machine Id
EHG2
Component
Thrust Bearing
Fluid
MOBIL DTE EXCEL ISO 68 (--- LTR)

COMPONENT CONDITION SUMMARY

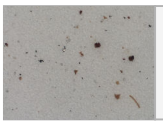




RECOMMENDATION

The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	---	---
Particles >4µm		ASTM D7647	>10000	▲ **29777**	---	---
Particles >6µm		ASTM D7647	>2500	▲ **8950**	---	---
Particles >14µm		ASTM D7647	>160	▲ **579**	---	---
Particles >21µm		ASTM D7647	>40	▲ **125**	---	---
Oil Cleanliness		ISO 4406 (c)	>20/18/14	▲ **22/20/16**	---	---
White Metal	scalar	Visual*	NONE	▲ **VLITE**	---	---
PrtFilter					*no image*	*no image*

Customer Id: ENE271OTT
Sample No.: WC0815893
Lab Number: 02586836
Test Package: IND 3

To manage this report scan the QR code

To discuss the diagnosis or test data:
Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

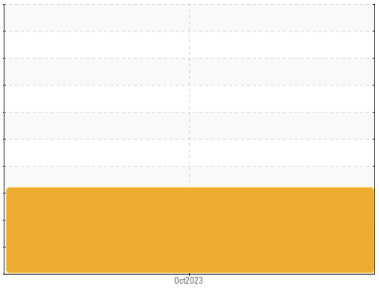
RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.
Information Required	---	---	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check Fluid Source	---	---	?	Confirm the source of the lubricant being utilized for top-up/fill.

HISTORICAL DIAGNOSIS

OIL ANALYSIS REPORT

Sample Rating Trend



VISUAL METAL

Machine Id
EHG2
Component
Thrust Bearing
Fluid
MOBIL DTE EXCEL ISO 68 (--- LTR)

DIAGNOSIS

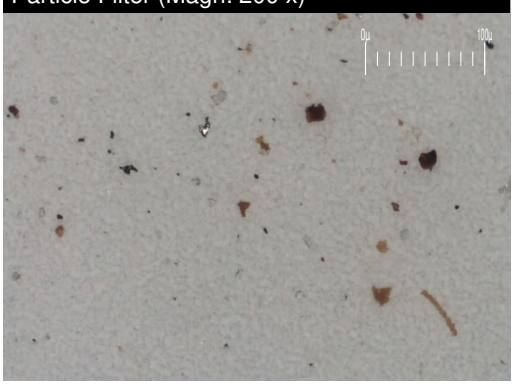
Recommendation
The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear
Light concentration of visible metal present.

Contaminants
There is a moderate amount of particulates (2 to 100 microns in size) present in the oil.

Oil Condition
Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Particle Filter (Magn: 200 x)



SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0815893**	---	---
Sample Date		Client Info		**03 Oct 2023**	---	---
Machine Age	mths	Client Info		**30**	---	---
Oil Age	mths	Client Info		**30**	---	---
Oil Changed		Client Info		**Changed**	---	---
Sample Status				**ABNORMAL**	---	---

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**0**	---	---
Iron	ppm	ASTM D5185(m)	>85	**<1**	---	---
Chromium	ppm	ASTM D5185(m)	>20	**0**	---	---
Nickel	ppm	ASTM D5185(m)	>20	**0**	---	---
Titanium	ppm	ASTM D5185(m)		**0**	---	---
Silver	ppm	ASTM D5185(m)		**<1**	---	---
Aluminum	ppm	ASTM D5185(m)	>40	**0**	---	---
Lead	ppm	ASTM D5185(m)	>60	**<1**	---	---
Copper	ppm	ASTM D5185(m)	>7	**3**	---	---
Tin	ppm	ASTM D5185(m)	>40	**<1**	---	---
Antimony	ppm	ASTM D5185(m)		**0**	---	---
Vanadium	ppm	ASTM D5185(m)		**0**	---	---
Beryllium	ppm	ASTM D5185(m)		**0**	---	---
Cadmium	ppm	ASTM D5185(m)		**0**	---	---

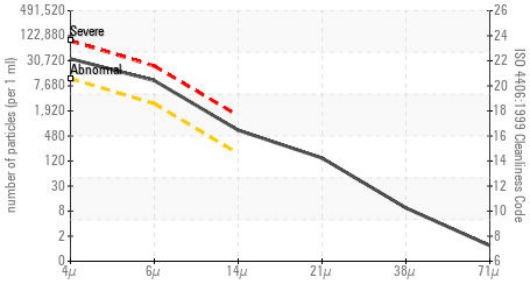
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**<1**	---	---
Barium	ppm	ASTM D5185(m)		**0**	---	---
Molybdenum	ppm	ASTM D5185(m)		**0**	---	---
Manganese	ppm	ASTM D5185(m)		**0**	---	---
Magnesium	ppm	ASTM D5185(m)		**0**	---	---
Calcium	ppm	ASTM D5185(m)		**<1**	---	---
Phosphorus	ppm	ASTM D5185(m)		**126**	---	---
Zinc	ppm	ASTM D5185(m)		**63**	---	---
Sulfur	ppm	ASTM D5185(m)		**1360**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**<1**	---	---
Sodium	ppm	ASTM D5185(m)		**<1**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**24**	---	---

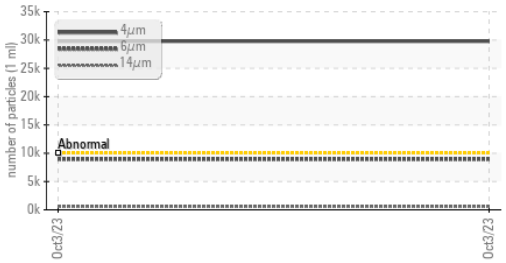
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	▲ **29777**	---	---
Particles >6µm	ASTM D7647	>2500	▲ **8950**	---	---
Particles >14µm	ASTM D7647	>160	▲ **579**	---	---
Particles >21µm	ASTM D7647	>40	▲ **125**	---	---
Particles >38µm	ASTM D7647	>10	**8**	---	---
Particles >71µm	ASTM D7647	>3	**1**	---	---
Oil Cleanliness	ISO 4406 (c)	>20/18/14	▲ **22/20/16**	---	---

OIL ANALYSIS REPORT

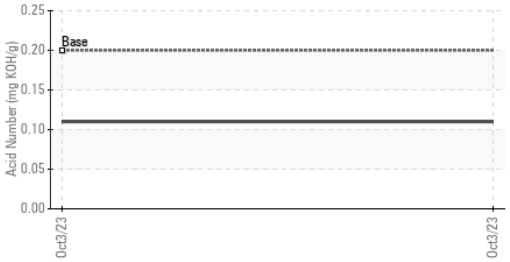
Particle Count



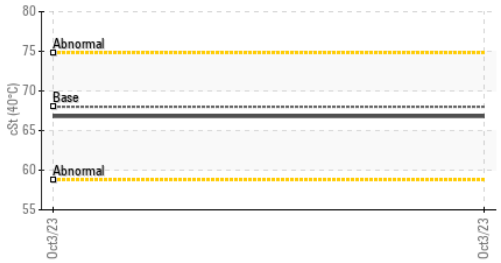
Particle Trend



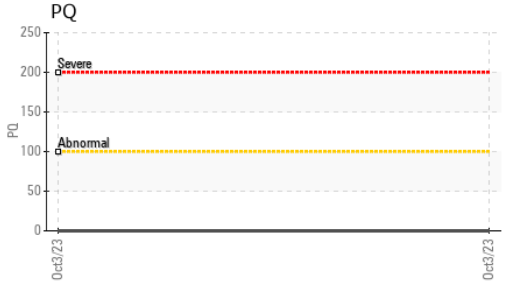
Acid Number



Viscosity @ 40°C



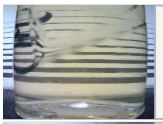
PQ



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	.2	**0.11**	---	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	▲ **VLITE**	---	---
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*	>2	**NEG**	---	---
Free Water	scalar	Visual*		**NEG**	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	68	**66.8**	---	---

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

ISO 17025:2017 Accredited Laboratory

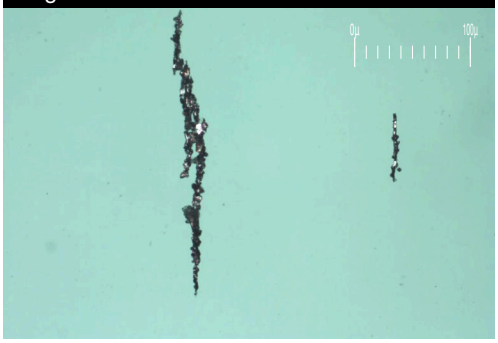
Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **Chaudiere Hydro LP - Energy Ottawa**
Sample No. : WC0815893 **Received** : 04 Oct 2023 4 Booth Street
Lab Number : 02586836 **Diagnosed** : 06 Oct 2023 Ottawa, ON
Unique Number : 5655902 **Diagnostician** : Kevin Marson CA K1R 6K8
Test Package : IND 3 (Additional Tests: BottomAnalysis, FilterPatch, PrtCount, PrtFilter, TAN Man) Contact: Cheryl Gharib

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

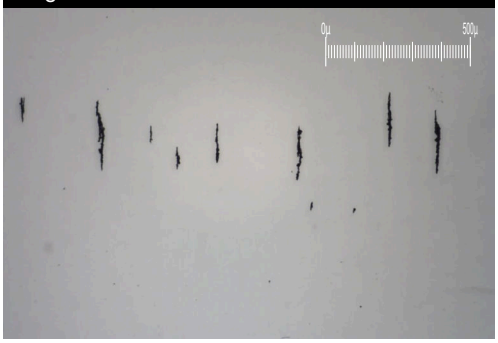
FERROGRAPHY REPORT

Machine Id
EHG2
Component
Thrust Bearing
Fluid
MOBIL DTE EXCEL ISO 68 (--- LTR)

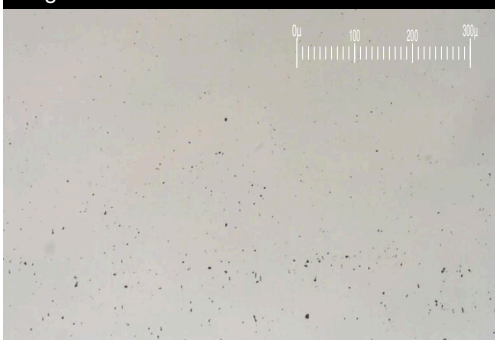
Magn: 200x Illum: BC



Magn: 50x Illum: RW



Magn: 100x Illum: RW

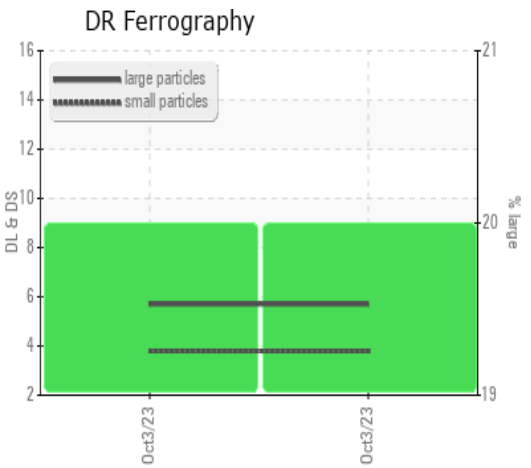


DR-FERROGRAPHY		method	limit/base	current	history1	history2
Large Particles		DR-Ferr*		**5.7**	---	---
Small Particles		DR-Ferr*		**3.8**	---	---
Total Particles		DR-Ferr*	>---	**9.5**	---	---
Large Particles Percentage	%	DR-Ferr*		**20**	---	---
Severity Index		DR-Ferr*		**11**	---	---

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

WEAR

Light concentration of visible metal present.



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