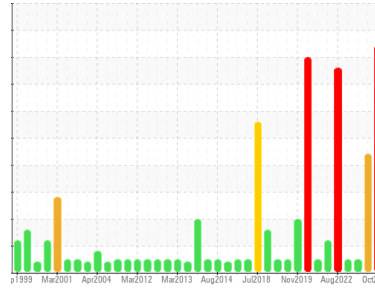




PROBLEM SUMMARY

Sample Rating Trend



WEAR

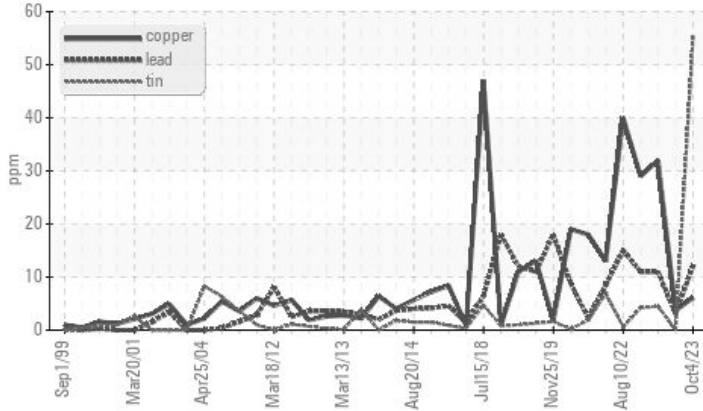


Area
PUMPHOUSE/LANCE & FCE PUMPS
 Machine Id
C - Lance and Furnace Turbine OB

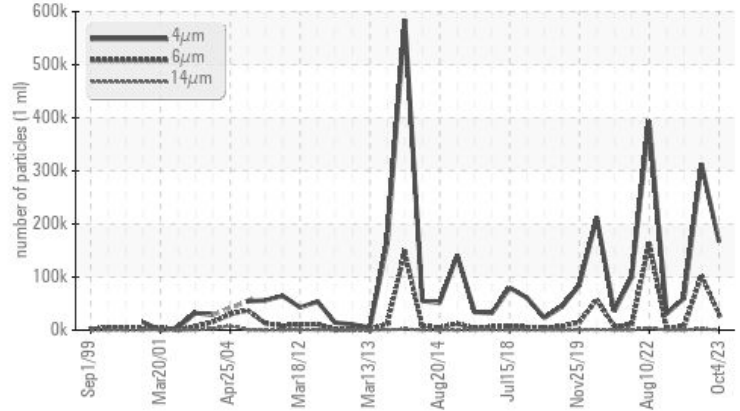
Component
Lube System
 Fluid
PETRO CANADA HYDREX AW 100 (1 GAL)

COMPONENT CONDITION SUMMARY

Non-ferrous Metals



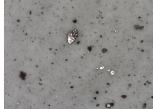
Particle Trend



RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	SEVERE	NORMAL
Tin	ppm	ASTM D5185(m)	>20	55	0	4
Antimony	ppm	ASTM D5185(m)		5	0	<1
Particles >6µm		ASTM D7647	>10000	30256	103495	6707
Oil Cleanliness		ISO 4406 (c)	>--/20/18	25/22/16	25/24/18	23/20/14
White Metal	scalar	Visual*	NONE	VLITE	NONE	NONE
PrtFilter					no image	no image

Customer Id: LEWBOSC
 Sample No.: WC0866297
 Lab Number: 02586768
 Test Package: IND 2



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
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

WATER



31 May 2023 Diag: Bill Quesnel

We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. We advise that you follow the water drain-off procedure for this component. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. There is a high concentration of water present in the oil. Free water present. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

[view report](#)



NORMAL



27 Jan 2023 Diag: Kevin Marson

Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

[view report](#)



NORMAL



13 Dec 2022 Diag: Kevin Marson

Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

[view report](#)





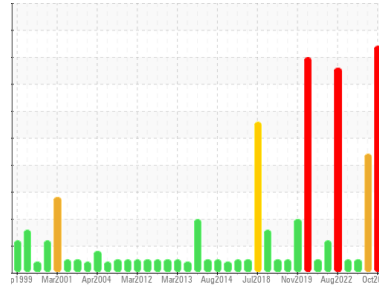
OIL ANALYSIS REPORT

Sample Rating Trend

WEAR

Area PUMPHOUSE/LANCE & FCE PUMPS Machine Id C - Lance and Furnace Turbine OB

Component
Lube System
Fluid
PETRO CANADA HYDREX AW 100 (1 GAL)



DIAGNOSIS

Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Wear

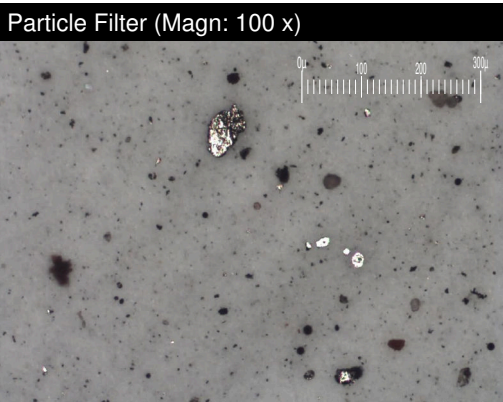
Tin ppm levels are severe. Antimony ppm levels are abnormal. Pump thrust plate, or bushing wear is indicated. Light concentration of visible metal present.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

Fluid Condition

The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.



SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0866297	WC0824426	WC0785689
Sample Date	Client Info		04 Oct 2023	31 May 2023	27 Jan 2023
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			SEVERE	SEVERE	NORMAL

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*	>DFLT	0	7	0
Iron	ppm	ASTM D5185(m)	>20	4	48
Chromium	ppm	ASTM D5185(m)	>20	0	<1
Nickel	ppm	ASTM D5185(m)	>20	0	0
Titanium	ppm	ASTM D5185(m)		0	0
Silver	ppm	ASTM D5185(m)		<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	<1	<1
Lead	ppm	ASTM D5185(m)	>20	12	3
Copper	ppm	ASTM D5185(m)	>20	6	4
Tin	ppm	ASTM D5185(m)	>20	55	0
Antimony	ppm	ASTM D5185(m)		5	0
Vanadium	ppm	ASTM D5185(m)		0	0
Beryllium	ppm	ASTM D5185(m)		0	0
Cadmium	ppm	ASTM D5185(m)		0	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	<1	<1
Barium	ppm	ASTM D5185(m)	0	<1	14
Molybdenum	ppm	ASTM D5185(m)	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	<1
Magnesium	ppm	ASTM D5185(m)	0	0	<1
Calcium	ppm	ASTM D5185(m)	50	47	29
Phosphorus	ppm	ASTM D5185(m)	330	319	331
Zinc	ppm	ASTM D5185(m)	430	408	379
Sulfur	ppm	ASTM D5185(m)	760	2431	3364
Lithium	ppm	ASTM D5185(m)		<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	2	8
Sodium	ppm	ASTM D5185(m)		<1	2
Potassium	ppm	ASTM D5185(m)	>20	24	<1

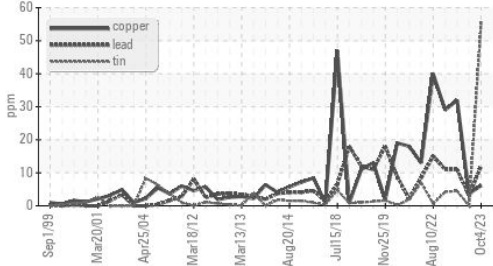
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		166702	312222	60049
Particles >6µm	ASTM D7647	>10000	30256	103495	6707
Particles >14µm	ASTM D7647	>2500	425	2237	94
Particles >21µm	ASTM D7647	>640	72	488	17
Particles >38µm	ASTM D7647	>160	3	3	0
Particles >71µm	ASTM D7647	>40	0	0	0
Oil Cleanliness	ISO 4406 (c)	>--/20/18	25/22/16	25/24/18	23/20/14

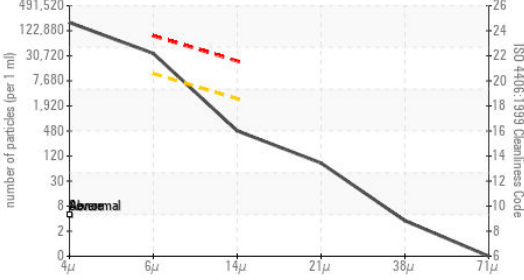


OIL ANALYSIS REPORT

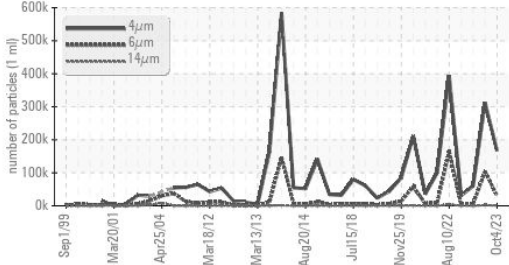
Non-ferrous Metals



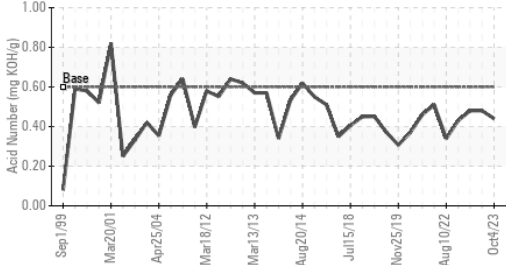
Particle Count



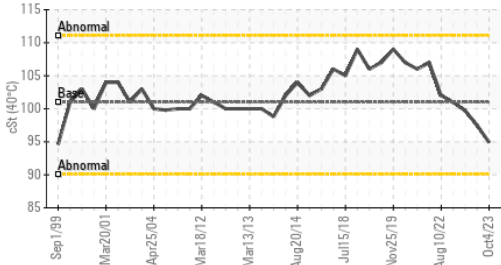
Particle Trend



Acid Number



Viscosity @ 40°C



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	0.44	0.48	0.48

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	▲ VLITE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	LAYRD	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>5	NEG	1% ▲	NEG
Free Water	scalar	Visual*		NEG	▲ >10%	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	101	94.9	97.5	99.7

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



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **STELCO - BOSC - Basic Oxygen Slab Caster**
Sample No. : WC0866297 **Received** : 04 Oct 2023 2330 Regional Road #3, Door: BOSC8
Lab Number : **02586768** **Diagnosed** : 06 Oct 2023 NANTICOKE, ON
Unique Number : 5655834 **Diagnostician** : Kevin Marson CA N0A 1L0
Test Package : IND 2 (Additional Tests: Bottom, BottomAnalysis, FilterPatch, PQ, PrtFilter) Contact: Tom Walden
 Thomas.Walden@stelco.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.

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