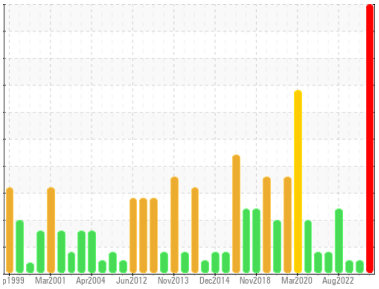
PROBLEM SUMMARY

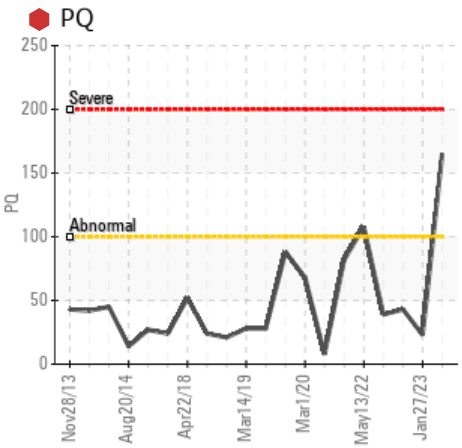
Sample Rating Trend

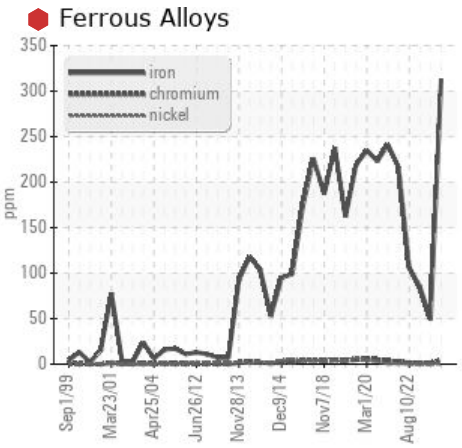


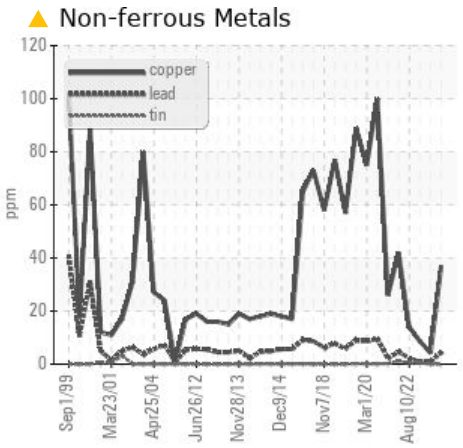
WEAR

Area
PUMPHOUSE/LANCE & FCE PUMPS
Machine Id
C - Lance and Furnace 1 Electric Pump OB
Component
Lube System
Fluid
PETRO CANADA HYDREX AW 100 (1 GAL)

COMPONENT CONDITION SUMMARY







RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	NORMAL
PQ		ASTM D8184*	>DFLT	**165**	23	43
Iron	ppm	ASTM D5185(m)	>20	**313**	49	85
Copper	ppm	ASTM D5185(m)	>20	**37**	4	9

Customer Id: LEWBOSC
Sample No.: WC0824421
Lab Number: 02560852
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Bill Quesnel CLS,OMA II,MLA-III,LLA-I +1 (289)291-4641 x4641
Bill.Quesnel@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 Fluid	---	---	?	We recommend that you drain the oil from the component if this has not already been done.
Resample	---	---	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

27 Jan 2023 Diag: Kevin Marson

NORMAL

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

13 Dec 2022 Diag: Kevin Marson

NORMAL

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

10 Aug 2022 Diag: Kevin Marson

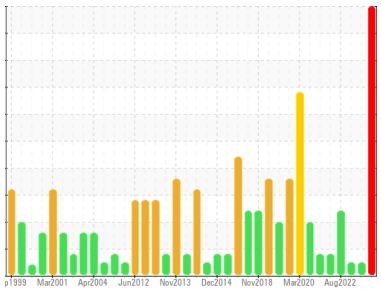
WATER

We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. 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 advise that you follow the water drain-off procedure for this component. We recommend an early resample to monitor this condition.Iron ppm levels are noted. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. All other component wear rates are normal. Free water present. The system cleanliness is acceptable for your 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

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
PUMPHOUSE/LANCE & FCE PUMPS
Machine Id
C - Lance and Furnace 1 Electric Pump OB
Component
Lube System
Fluid
PETRO CANADA HYDREX AW 100 (1 GAL)

DIAGNOSIS

Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear

Iron ppm levels are severe. PQ levels are severe. Copper ppm levels are abnormal. Cylinder or oil pump wear indicated. Oil cooler core leaching or motor piston wear is indicated. The very high ferrous density (PQ) index indicates that severe wear is occurring.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

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		**WC0824421**	WC0785683	WC0772026
Sample Date		Client Info		**31 May 2023**	27 Jan 2023	13 Dec 2022
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**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*	>DFLT	● **165**	23	43
Iron	ppm	ASTM D5185(m)	>20	● **313**	49	85
Chromium	ppm	ASTM D5185(m)	>20	**5**	<1	1
Nickel	ppm	ASTM D5185(m)	>20	**<1**	0	0
Titanium	ppm	ASTM D5185(m)		**<1**	0	<1
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**10**	<1	<1
Lead	ppm	ASTM D5185(m)	>20	**4**	<1	<1
Copper	ppm	ASTM D5185(m)	>20	▲ **37**	4	9
Tin	ppm	ASTM D5185(m)	>20	**0**	0	<1
Antimony	ppm	ASTM D5185(m)		**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

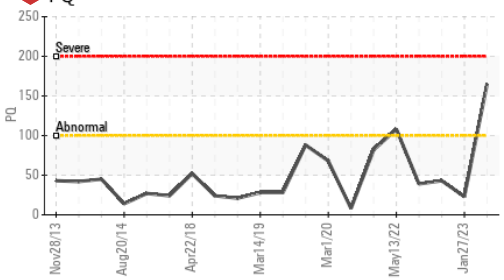
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Barium	ppm	ASTM D5185(m)	0	**4**	1	<1
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	0
Manganese	ppm	ASTM D5185(m)	0	**1**	<1	<1
Magnesium	ppm	ASTM D5185(m)	0	**3**	<1	<1
Calcium	ppm	ASTM D5185(m)	50	**43**	51	53
Phosphorus	ppm	ASTM D5185(m)	330	**375**	358	421
Zinc	ppm	ASTM D5185(m)	430	**420**	424	416
Sulfur	ppm	ASTM D5185(m)	760	**2582**	2506	2614
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**4**	4	6
Sodium	ppm	ASTM D5185(m)		**3**	2	2
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	0

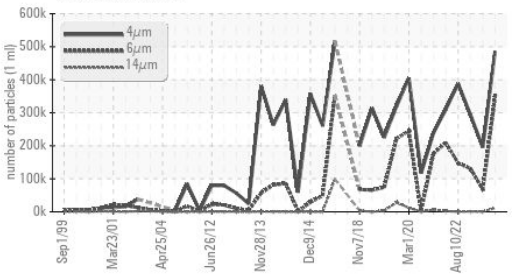
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**485959**	195406	294519
Particles >6µm		ASTM D7647	>10240000	**347684**	66904	131246
Particles >14µm		ASTM D7647	>10240000	**11448**	356	1110
Particles >21µm		ASTM D7647	>2560000	**268**	41	211
Particles >38µm		ASTM D7647	>640000	**0**	0	2
Particles >71µm		ASTM D7647	>160000	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>--/30/30	**26/26/21**	25/23/16	25/24/17

OIL ANALYSIS REPORT

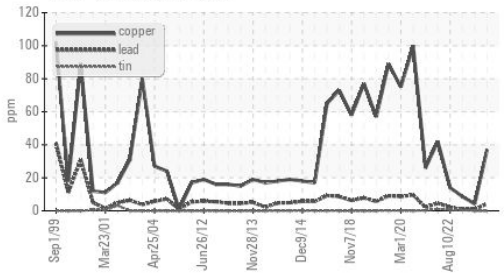
PQ



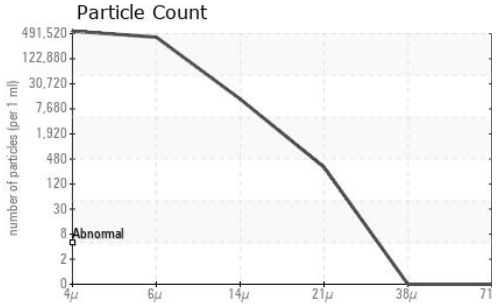
Particle Trend



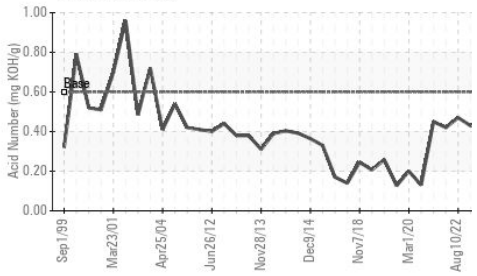
Non-ferrous Metals



Particle Count



Acid Number

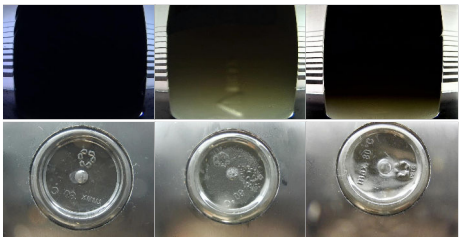


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	**0.42**	0.44	0.43

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

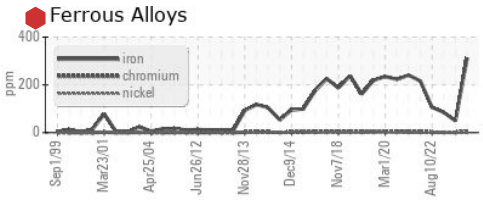
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	101	**92.8**	93.5	93.9

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

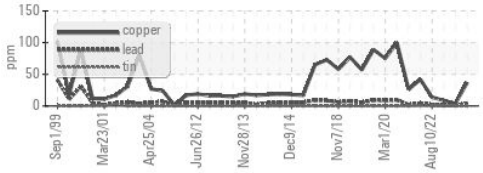


GRAPHS

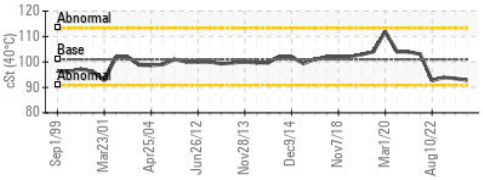
Ferrous Alloys



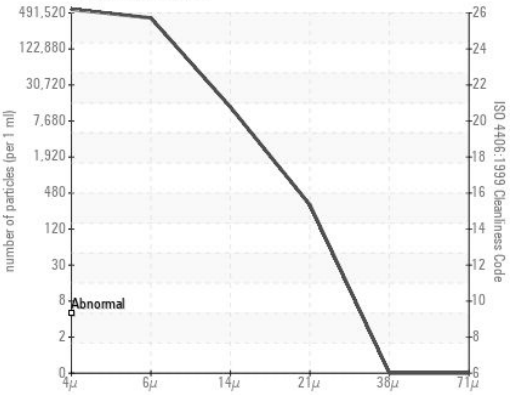
Non-ferrous Metals



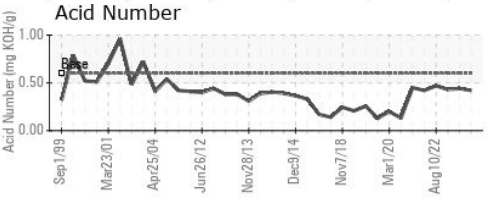
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **STELCO - BOSC - Basic Oxygen Slab Caster**
Sample No. : WC0824421 **Received** : 31 May 2023 2330 Regional Road #3, Door: BOSC8
Lab Number : 02560852 **Diagnosed** : 01 Jun 2023 NANTICOKE, ON
Unique Number : 5589893 **Diagnostician** : Bill Quesnel CA N0A 1L0
Test Package : IND 2 (Additional Tests: PQ) Contact: Tom Walden

To discuss this sample report, contact Customer Service at 1-800-268-2131. Thomas.Walden@stelco.com
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T: (519)587-4541
Validity of results and interpretation are based on the sample and information as supplied. F: (519)587-7702