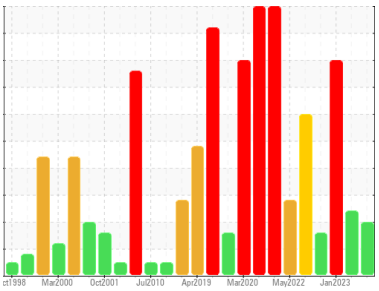
PROBLEM SUMMARY

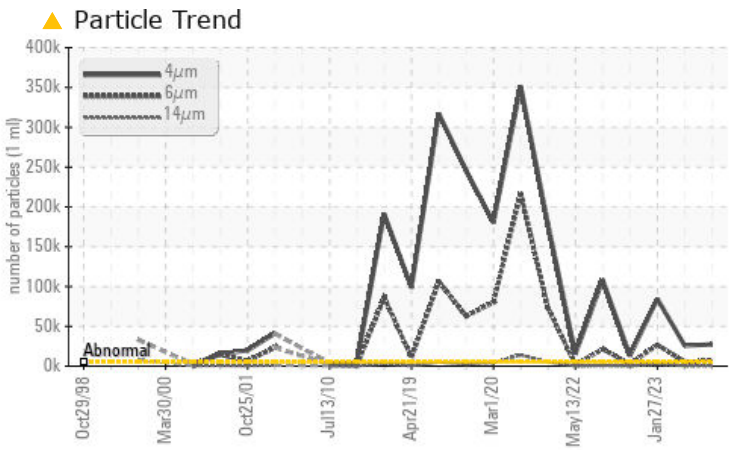
Sample Rating Trend

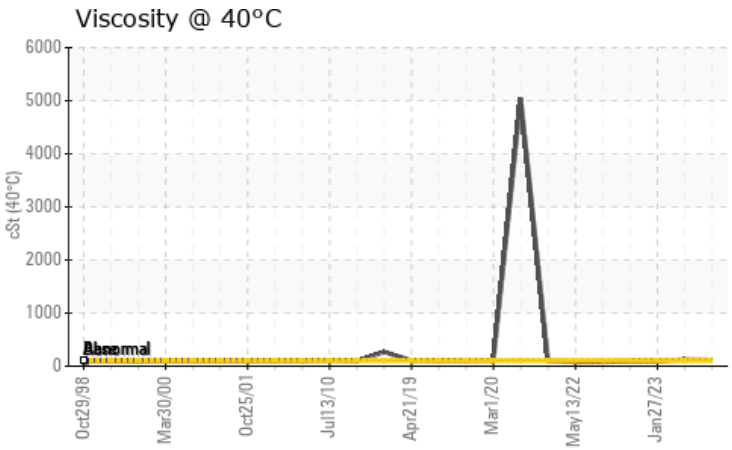


ISO

Area
PUMPHOUSE/HOOD COOLING PUMPS
Machine Id
C - Hood Cooling 1 Electric Pump OB
Component
Lube System
Fluid
PETRO CANADA HYDREX AW 100 (1 GAL)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	SEVERE
Particles >4µm		ASTM D7647	>5000	▲ **27319**	▲ 25758	⬢ 84594
Particles >6µm		ASTM D7647	>1300	▲ **6016**	▲ 5385	⬢ 26739
Particles >14µm		ASTM D7647	>160	▲ **390**	▲ 285	⬢ 2509
Particles >21µm		ASTM D7647	>40	▲ **102**	▲ 68	⬢ 795
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **22/20/16**	▲ 22/20/15	⬢ 24/22/19

Customer Id: LEWBOSC
Sample No.: WC0850126
Lab Number: 02576245
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 advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Filter Fluid	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

HISTORICAL DIAGNOSIS

31 May 2023 Diag: Bill Quesnel

VISCOSITY

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.All component wear rates are normal. 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. The viscosity of the oil is higher than normal, possibly indicating the addition of a heavier grade 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.

view report

27 Jan 2023 Diag: Kevin Marson

ISO

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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. Resample in 30-45 days to monitor this situation.All component wear rates are normal. Particles >14µm are severely high. Particles >21µm are severely high. Particles >6µm are severely high. Oil Cleanliness are severely high. Particles >4µm are severely high. Particles >38µm are abnormally high. 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

13 Dec 2022 Diag: Kevin Marson

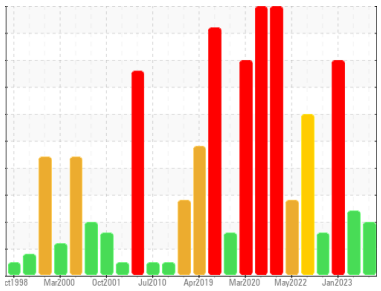
ADDITIVES

We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.All component wear rates are normal. Particles >4µm are abnormally high. Particles >6µm and oil cleanliness are abnormally high. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code. 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.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
PUMPHOUSE/HOOD COOLING PUMPS
Machine Id
C - Hood Cooling 1 Electric Pump OB
Component
Lube System
Fluid
PETRO CANADA HYDREX AW 100 (1 GAL)

DIAGNOSIS

Recommendation
We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
There is a moderate amount of particulates (2 to 100 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 oil viscosity is higher than typical. 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		**WC0850126**	WC0824412	WC0785674
Sample Date		Client Info		**16 Aug 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				**ABNORMAL**	ABNORMAL	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*	>DFLT	**0**	0	0
Iron	ppm	ASTM D5185(m)	>20	**6**	4	5
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>20	**<1**	0	<1
Titanium	ppm	ASTM D5185(m)		**0**	<1	<1
Silver	ppm	ASTM D5185(m)		**<1**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**<1**	0	0
Lead	ppm	ASTM D5185(m)	>20	**1**	<1	<1
Copper	ppm	ASTM D5185(m)	>20	**2**	3	<1
Tin	ppm	ASTM D5185(m)	>20	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**0**	0	<1
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

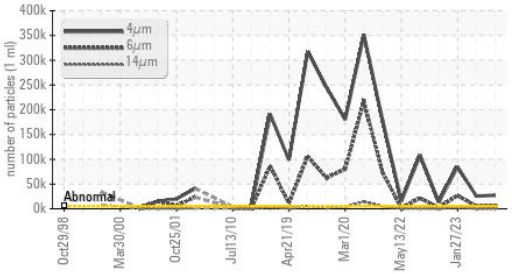
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**2**	3	<1
Barium	ppm	ASTM D5185(m)	0	**14**	10	8
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	0
Manganese	ppm	ASTM D5185(m)	0	**0**	0	0
Magnesium	ppm	ASTM D5185(m)	0	**<1**	0	<1
Calcium	ppm	ASTM D5185(m)	50	**32**	32	44
Phosphorus	ppm	ASTM D5185(m)	330	**330**	336	355
Zinc	ppm	ASTM D5185(m)	430	**337**	302	410
Sulfur	ppm	ASTM D5185(m)	760	**3281**	3731	2536
Lithium	ppm	ASTM D5185(m)		**2**	2	2

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

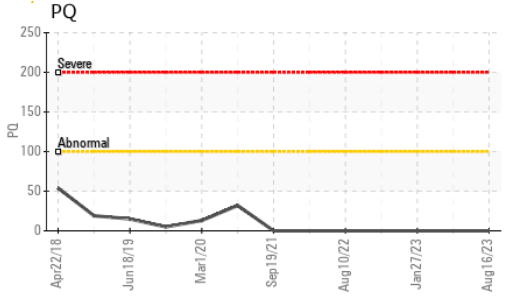
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **27319**	▲ 25758	⬢ 84594
Particles >6µm		ASTM D7647	>1300	▲ **6016**	▲ 5385	⬢ 26739
Particles >14µm		ASTM D7647	>160	▲ **390**	▲ 285	⬢ 2509
Particles >21µm		ASTM D7647	>40	▲ **102**	▲ 68	⬢ 795
Particles >38µm		ASTM D7647	>10	**2**	2	▲ 45
Particles >71µm		ASTM D7647	>3	**1**	0	5
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **22/20/16**	▲ 22/20/15	⬢ 24/22/19

OIL ANALYSIS REPORT

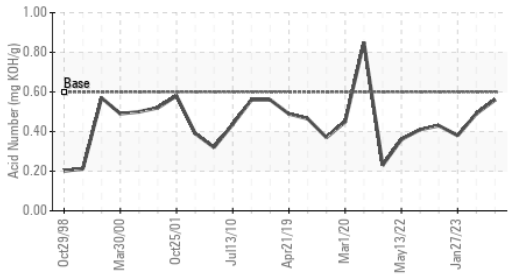
Particle Trend



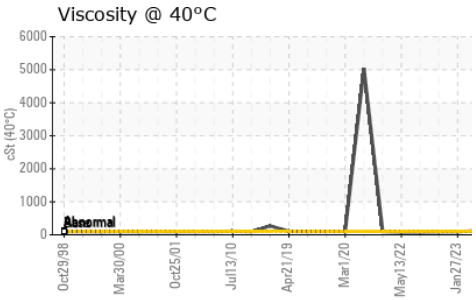
PQ



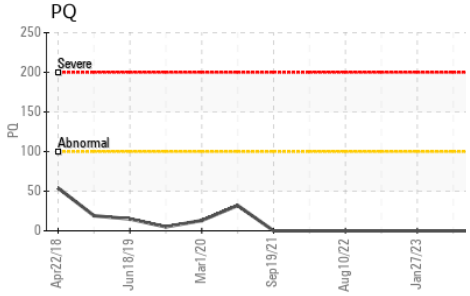
Acid Number



Viscosity @ 40°C



PQ

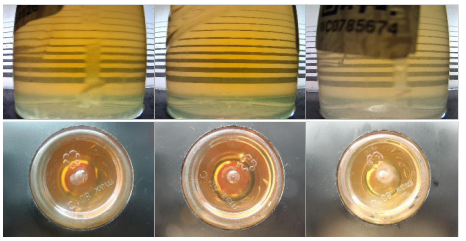


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	**0.56**	0.49	0.38

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	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**VLITE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**VLITE**	VLITE	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

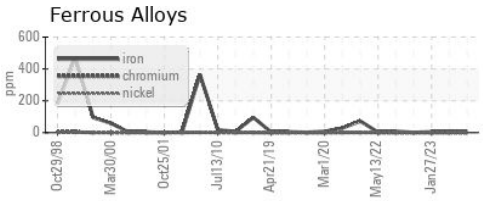
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	101	**113**	▲ 124	93.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

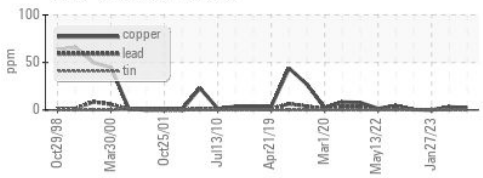


GRAPHS

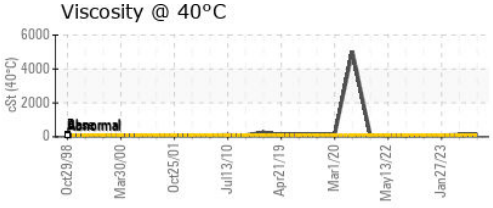
Ferrous Alloys



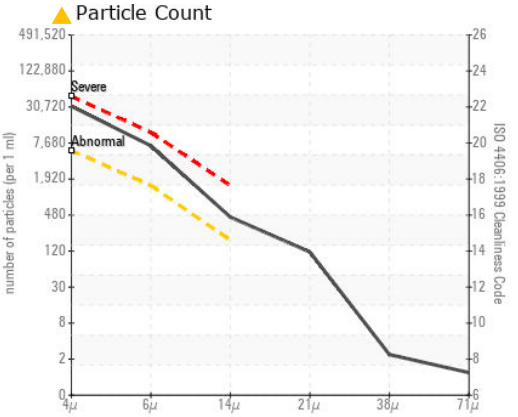
Non-ferrous Metals



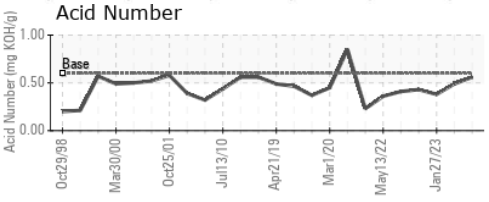
Viscosity @ 40°C



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. : WC0850126 **Received** : 16 Aug 2023 2330 Regional Road #3, Door: BOSC8
Lab Number : 02576245 **Diagnosed** : 17 Aug 2023 NANTICOKE, ON
Unique Number : 5629305 **Diagnostician** : Kevin Marson CA N0A 1L0
Test Package : IND 2 (Additional Tests: PQ, TAN Man) 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