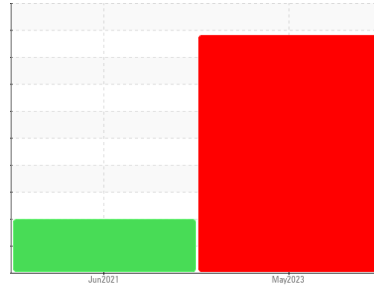


OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area
EBI DE COSTA RICA
Machine Id
MACK 1535
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 68 (50 GAL)

DIAGNOSIS

Recommendation

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 recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. Resample in 30-45 days to monitor this situation.

Wear

Chromium ppm levels are severe.

Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

Viscosity of sample indicates oil is within SAE 75W80 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. 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		PC0073928	PC0044652	---
Sample Date	Client Info		27 May 2023	28 Jun 2021	---
Machine Age	hrs	Client Info	7137	3230	---
Oil Age	hrs	Client Info	3907	3230	---
Oil Changed	Client Info		Not Chngd	Changed	---
Sample Status			SEVERE	SEVERE	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >50	24	12	---
Chromium	ppm	ASTM D5185(m) >10	22	7	---
Nickel	ppm	ASTM D5185(m) >4	0	<1	---
Titanium	ppm	ASTM D5185(m)	<1	0	---
Silver	ppm	ASTM D5185(m)	0	0	---
Aluminum	ppm	ASTM D5185(m) >5	3	2	---
Lead	ppm	ASTM D5185(m) >4	<1	<1	---
Copper	ppm	ASTM D5185(m) >15	4	3	---
Tin	ppm	ASTM D5185(m) >4	0	<1	---
Antimony	ppm	ASTM D5185(m)	0	0	---
Vanadium	ppm	ASTM D5185(m)	0	0	---
Beryllium	ppm	ASTM D5185(m)	0	0	---
Cadmium	ppm	ASTM D5185(m)	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 0	6	7	---
Barium	ppm	ASTM D5185(m) 0	0	0	---
Molybdenum	ppm	ASTM D5185(m) 0	4	4	---
Manganese	ppm	ASTM D5185(m) 0	<1	0	---
Magnesium	ppm	ASTM D5185(m) 0	54	57	---
Calcium	ppm	ASTM D5185(m) 50	181	176	---
Phosphorus	ppm	ASTM D5185(m) 330	660	682	---
Zinc	ppm	ASTM D5185(m) 430	789	845	---
Sulfur	ppm	ASTM D5185(m) 760	1507	1658	---
Lithium	ppm	ASTM D5185(m)	<1	<1	---

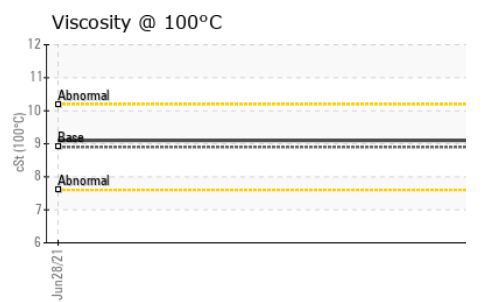
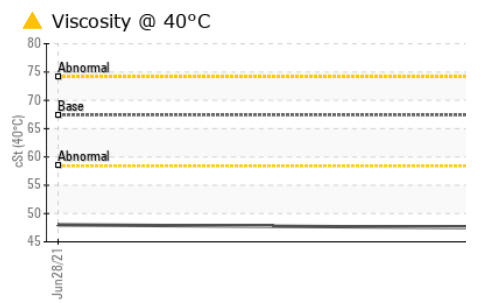
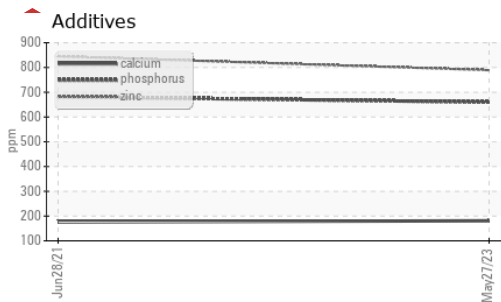
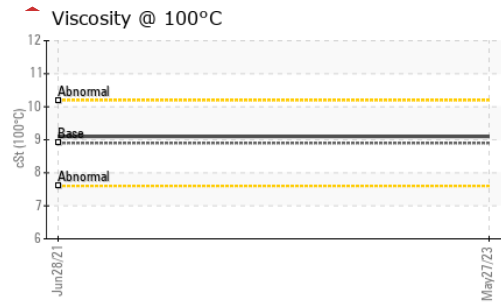
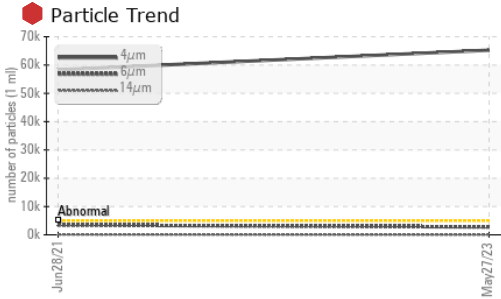
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >15	8	5	---
Sodium	ppm	ASTM D5185(m)	1	<1	---
Potassium	ppm	ASTM D5185(m) >20	<1	<1	---

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	65235	58308	---
Particles >6µm	ASTM D7647	>1300	2780	3453	---
Particles >14µm	ASTM D7647	>160	24	85	---
Particles >21µm	ASTM D7647	>40	5	23	---
Particles >38µm	ASTM D7647	>10	0	3	---
Particles >71µm	ASTM D7647	>3	0	0	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	23/19/12	23/19/14	---

OIL ANALYSIS REPORT

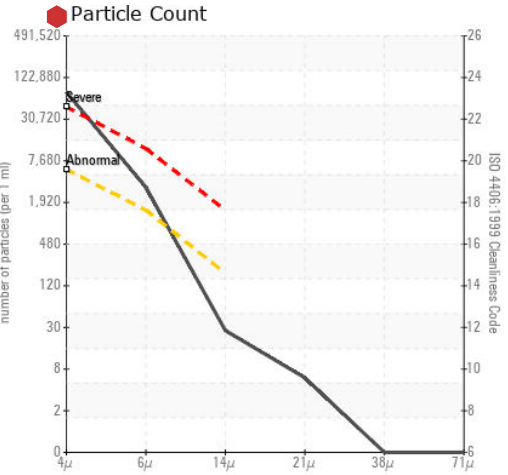
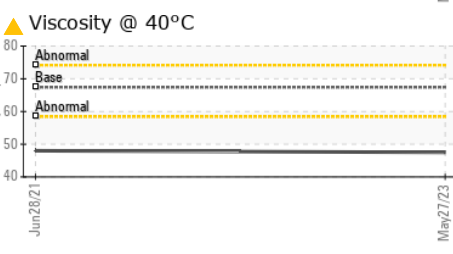
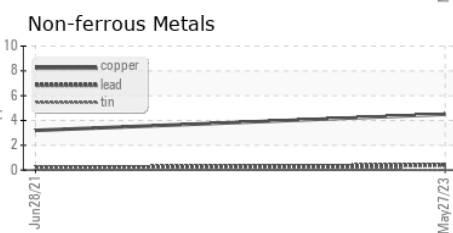
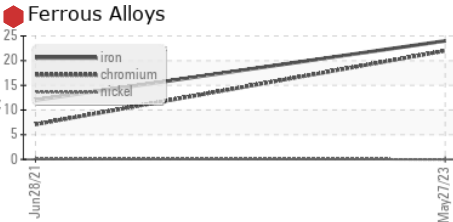


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	---
Silt	scalar	Visual*	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	LIGHT	---
Appearance	scalar	Visual*	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.1	NEG	---
Free Water	scalar	Visual*		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	67.4	▲ 47.5	▲ 48
Visc @ 100°C	cSt	ASTM D7279(m)	8.9	▲ 9.1	9.1
Viscosity Index (VI)	Scale	ASTM D2270*	105	▲ 176	▲ 174

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

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **INDUSTRIAS del PETROLEO CANAD. SA**
Sample No. : PC0073928 **Received** : 06 Jul 2023 Contiguo FANAL, frente a la Autopista Bernardo Soto
Lab Number : 02568241 **Diagnosed** : 07 Jul 2023 Grecia, A
Unique Number : 5605287 **Diagnostician** : Kevin Marson CR
Test Package : MOB 2 (Additional Tests: KV100, VI)
 Contact: Erick Bogantes
 cotizaciones@lubricantescanada.com
 T: 1(115)062-1598
 F: 1(115)062-2870

*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.*