

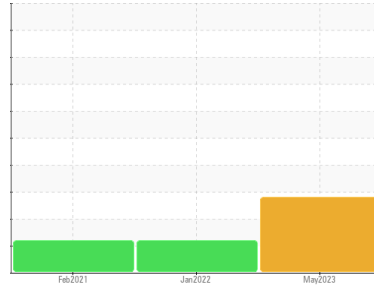
# OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area  
**EBI DE COSTA RICA**  
Machine Id  
**FREIGHTLINER 1006**  
Component  
**Hydraulic System**  
Fluid  
**PETRO CANADA HYDREX AW 68 (42 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. Resample in 30-45 days to monitor this situation.

### Wear

All component wear rates are normal.

### 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 ISO 32 range, advise investigate. 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	<b>PC0069041</b>	PC0058088	PC0040317
Sample Date	Client Info	<b>29 May 2023</b>	17 Jan 2022	24 Feb 2021
Machine Age	hrs	<b>13833</b>	12472	11445
Oil Age	hrs	<b>2388</b>	1027	2000
Oil Changed	Client Info	<b>Not Chngd</b>	N/A	N/A
Sample Status		<b>SEVERE</b>	SEVERE	SEVERE

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >20	<b>9</b>	5	12
Chromium	ppm	ASTM D5185(m) >10	<b>2</b>	<1	1
Nickel	ppm	ASTM D5185(m) >10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m) >10	<b>2</b>	<1	2
Lead	ppm	ASTM D5185(m) >10	<b>&lt;1</b>	<1	2
Copper	ppm	ASTM D5185(m) >75	<b>5</b>	4	17
Tin	ppm	ASTM D5185(m) >10	<b>0</b>	<1	<1
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	0	<1
Manganese	ppm	ASTM D5185(m) 0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m) 0	<b>6</b>	8	6
Calcium	ppm	ASTM D5185(m) 50	<b>43</b>	49	95
Phosphorus	ppm	ASTM D5185(m) 330	<b>297</b>	333	347
Zinc	ppm	ASTM D5185(m) 430	<b>346</b>	398	413
Sulfur	ppm	ASTM D5185(m) 760	<b>656</b>	758	903
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

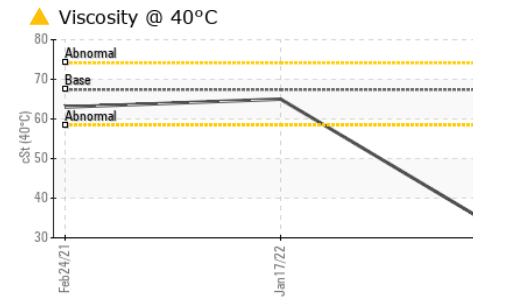
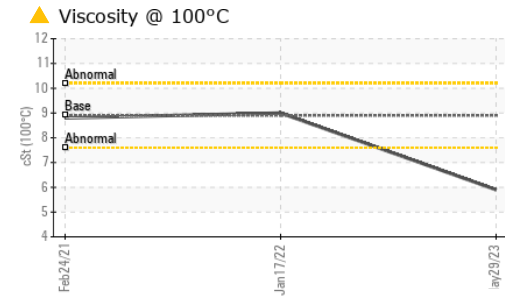
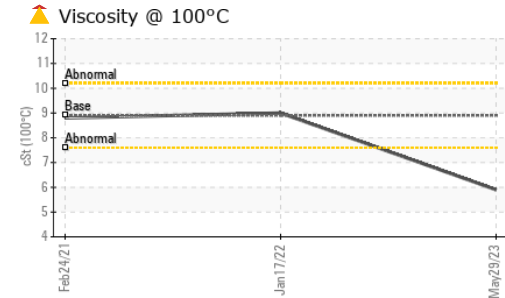
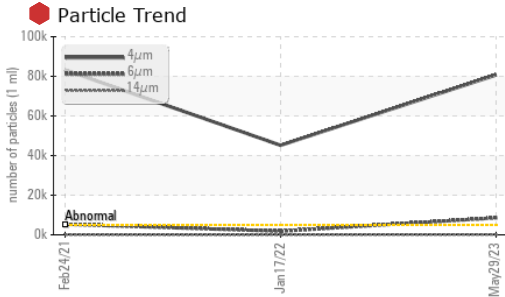
## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >20	<b>4</b>	1	4
Sodium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	8
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	1

## FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	<b>80694</b>	45190	83223
Particles >6µm	ASTM D7647 >1300	<b>8558</b>	1807	5348
Particles >14µm	ASTM D7647 >160	<b>69</b>	8	3
Particles >21µm	ASTM D7647 >40	<b>10</b>	2	0
Particles >38µm	ASTM D7647 >10	<b>0</b>	0	0
Particles >71µm	ASTM D7647 >3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	<b>24/20/13</b>	23/18/10	24/20/9

# OIL ANALYSIS REPORT

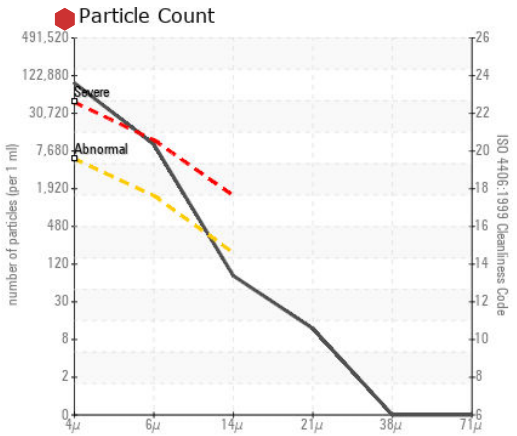
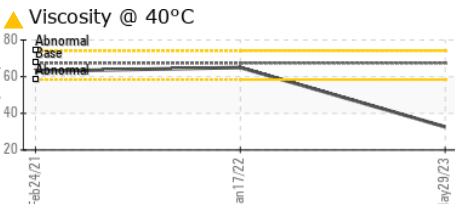
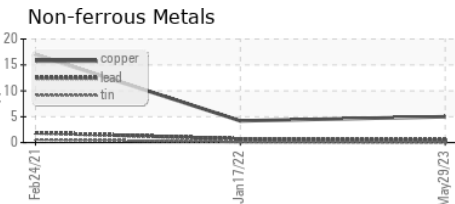
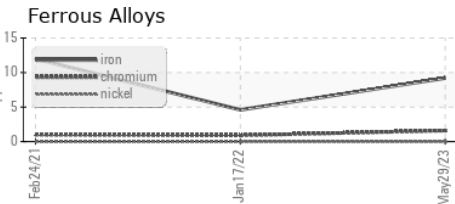


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D2729(m)	67.4	▲ 32.6	65.0	63.0
Visc @ 100°C	cSt	ASTM D2729(m)	8.9	▲ 5.9	9	8.8
Viscosity Index (VI)	Scale	ASTM D2270*	105	126	113	113

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **INDUSTRIAS del PETROLEO CANAD. SA**  
**Sample No.** : PC0069041 **Received** : 06 Jul 2023 Contiguo FANAL, frente a la Autopista Bernardo Soto  
**Lab Number** : 02568280 **Diagnosed** : 07 Jul 2023 Grecia, A  
**Unique Number** : 5605326 **Diagnostician** : Kevin Marson CR  
**Test Package** : MOB 2 ( Additional Tests: KV100, VI )

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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