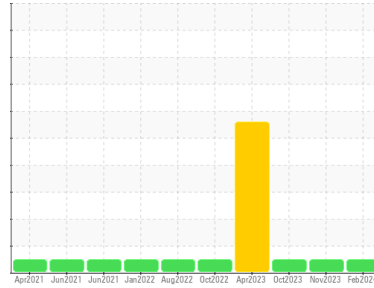


# OIL ANALYSIS REPORT



Area  
**Loader**  
Machine Id  
**SRF0110**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON HP 15W40 (37 LTR)**

Sample Rating Trend



**NORMAL**

## DIAGNOSIS

- Recommendation**  
Resample at the next service interval to monitor.
- Wear**  
All component wear rates are normal.
- Contamination**  
There is no indication of any contamination in the oil.
- Fluid Condition**  
The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PC0074863</b>	PC0074874	PC0047174
Sample Date	Client Info		<b>14 Feb 2024</b>	21 Nov 2023	23 Oct 2023
Machine Age	hrs	Client Info	<b>30232</b>	28756	28318
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >100	<b>17</b>	11	8
Chromium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185(m) >2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m) >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m) >2	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185(m) >25	<b>1</b>	2	3
Lead	ppm	ASTM D5185(m) >40	<b>1</b>	<1	<1
Copper	ppm	ASTM D5185(m) >330	<b>4</b>	4	5
Tin	ppm	ASTM D5185(m) >15	<b>0</b>	0	0
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>2</b>	2	1
Barium	ppm	ASTM D5185(m) 0	<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185(m) 60	<b>65</b>	64	63
Manganese	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m) 1010	<b>1029</b>	987	977
Calcium	ppm	ASTM D5185(m) 1070	<b>1196</b>	1093	1007
Phosphorus	ppm	ASTM D5185(m) 1150	<b>1106</b>	1043	1064
Zinc	ppm	ASTM D5185(m) 1270	<b>1303</b>	1255	1217
Sulfur	ppm	ASTM D5185(m) 2060	<b>2827</b>	2652	2644
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

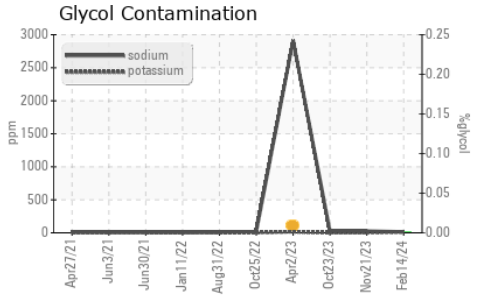
## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	<b>3</b>	4	3
Sodium	ppm	ASTM D5185(m)	<b>15</b>	27	27
Potassium	ppm	ASTM D5185(m) >20	<b>9</b>	<1	0
Glycol	%	ASTM D7922*	<b>0.0</b>	NEG	NEG

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	<b>0.4</b>	0.2	0
Nitration	Abs/cm	ASTM D7624* >20	<b>10.6</b>	8.3	5.5
Sulfation	Abs.1mm	ASTM D7415* >30	<b>22.7</b>	19.8	19.0

# OIL ANALYSIS REPORT

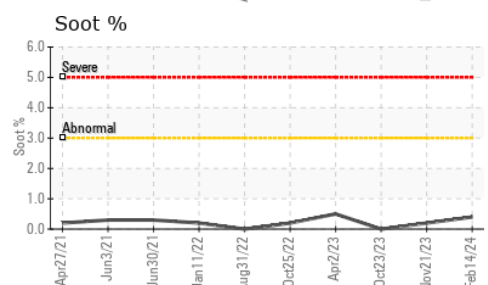
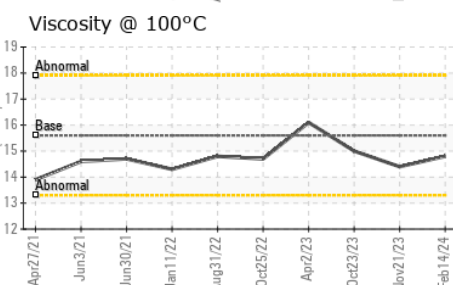
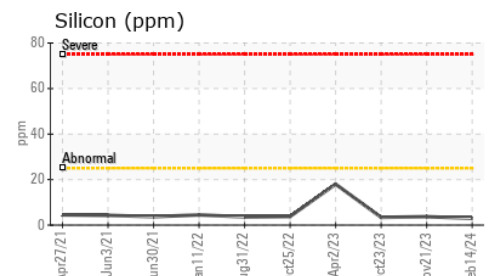
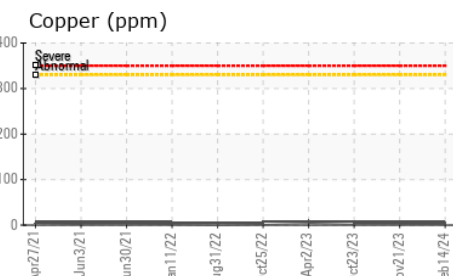
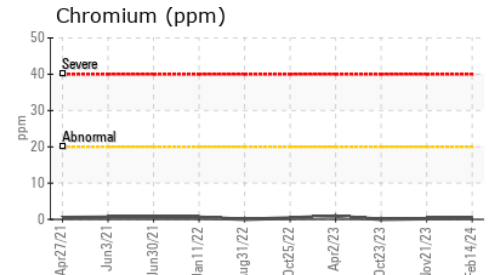
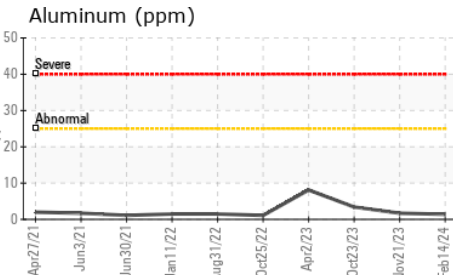
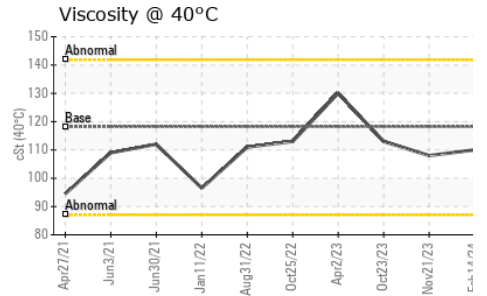
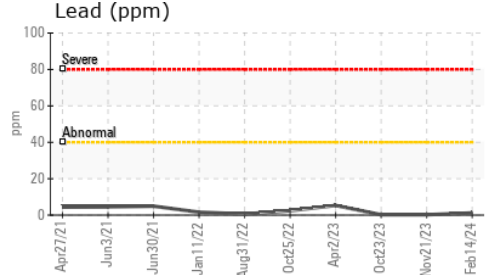
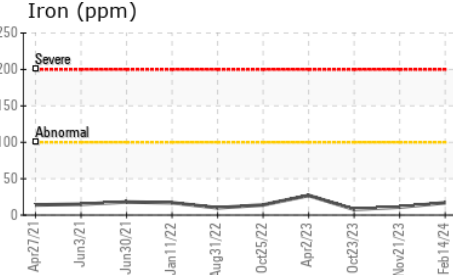
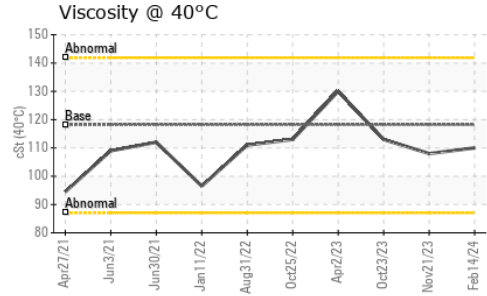


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>20.7</b>	16.3	14.2

VISUAL		method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar	Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	118.2	<b>110</b>	108	113
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	<b>14.8</b>	14.4	15.0
Viscosity Index (VI)	Scale	ASTM D2270*	139	<b>139</b>	136	137

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0074863  
**Lab Number** : 02619517  
**Unique Number** : 5736627  
**Test Package** : MOB 1 ( Additional Tests: Glycol, KV40, VI )

**Lakeshore Gold Timmins West**  
 Timmins, ON  
 CA  
 Contact: Dale Arseneau  
 darseneau@ca.panamericansilver.com  
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 F:

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.