

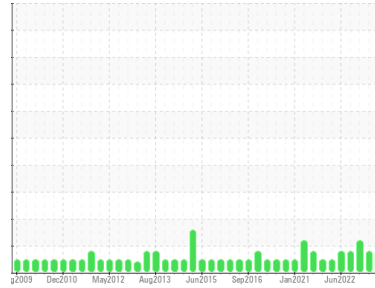


# OIL ANALYSIS REPORT

Sample Rating Trend

FUEL

Area  
**LIBERTY CITY**  
 Machine Id  
**PETERBILT 186 LIBERTY CITY DAY CAB**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON HP 15W40 (36 LTR)**



## DIAGNOSIS

### Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

### Wear

All component wear rates are normal.

### Contamination

Light fuel dilution occurring. No other contaminants were detected 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>WC0821934</b>	WC0773553	WC0773518
Sample Date	Client Info		<b>24 Aug 2023</b>	29 May 2023	14 Feb 2023
Machine Age	kms	Client Info	<b>1889792</b>	1889759	1889645
Oil Age	kms	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>MARGINAL</b>	MARGINAL	ABNORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >110	<b>37</b>	22	40
Chromium	ppm	ASTM D5185(m) >4	<b>1</b>	1	2
Nickel	ppm	ASTM D5185(m) >2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m) >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m) >25	<b>&lt;1</b>	<1	1
Lead	ppm	ASTM D5185(m) >45	<b>9</b>	9	8
Copper	ppm	ASTM D5185(m) >85	<b>1</b>	1	2
Tin	ppm	ASTM D5185(m) >4	<b>&lt;1</b>	<1	2
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	<1
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>	1	2
Barium	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 60	<b>57</b>	58	60
Manganese	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m) 1010	<b>923</b>	957	981
Calcium	ppm	ASTM D5185(m) 1070	<b>988</b>	1009	1105
Phosphorus	ppm	ASTM D5185(m) 1150	<b>1006</b>	1038	1075
Zinc	ppm	ASTM D5185(m) 1270	<b>1150</b>	1159	1172
Sulfur	ppm	ASTM D5185(m) 2060	<b>2478</b>	2496	2633
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >30	<b>2</b>	2	4
Sodium	ppm	ASTM D5185(m)	<b>2</b>	1	1
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	0	0
Fuel	%	ASTM D7593* >5	<b>▲ 3.2</b>	<b>▲ 4</b>	<b>▲ 3.6</b>

## INFRA-RED

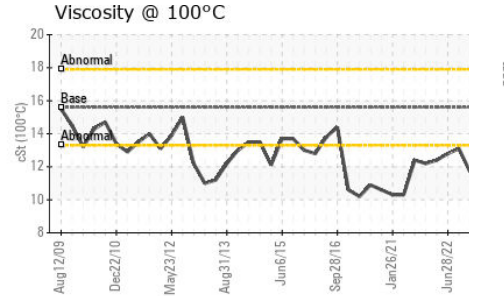
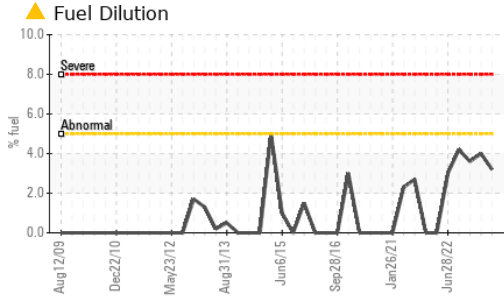
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	<b>1.8</b>	1	0.8
Nitration	Abs/cm	ASTM D7624* >20	<b>8.0</b>	7.8	8.4
Sulfation	Abs/.1mm	ASTM D7415* >30	<b>25.6</b>	21.8	22.6

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414* >25	<b>18.5</b>	16.7	15.8



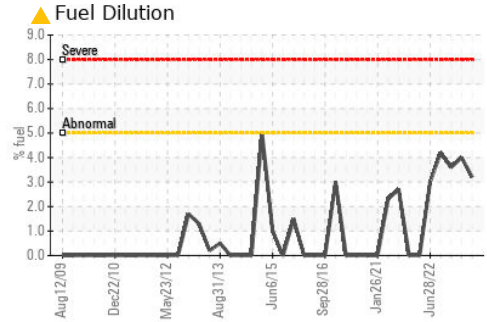
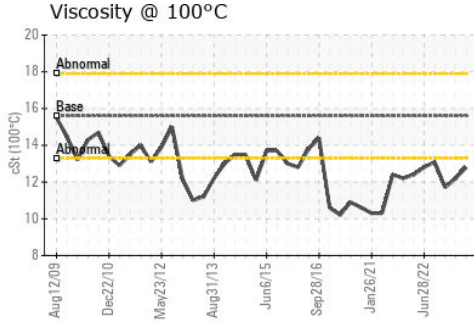
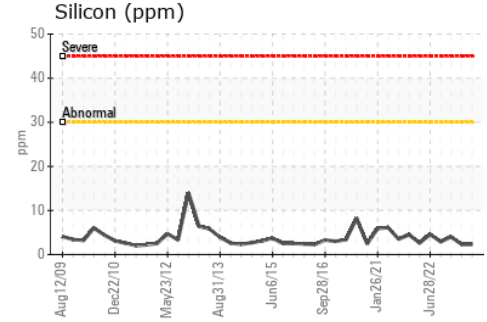
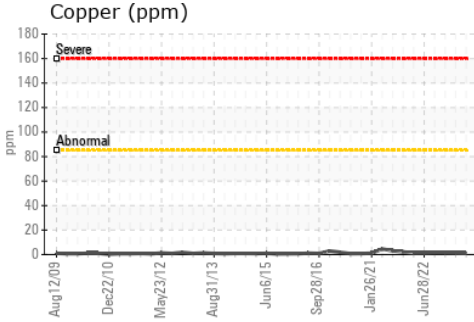
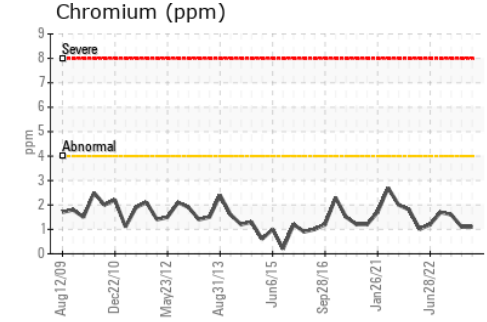
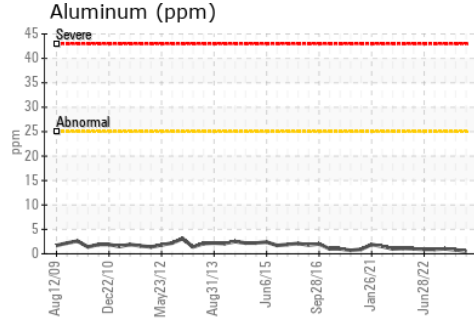
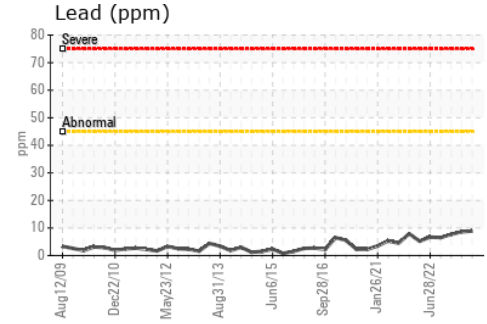
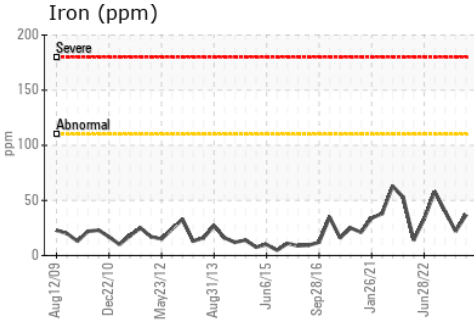
# OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	12.8	12.2 ▲ 11.7

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0821934 **Received** : 06 Sep 2023  
**Lab Number** : 02580641 **Diagnosed** : 07 Sep 2023  
**Unique Number** : 5633701 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel )

**LIBERTY LINEHAUL, INC.**  
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 AYR, ON  
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 T: (519)740-8181  
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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.