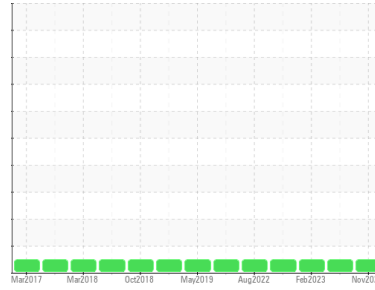




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**4516**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 10W30 (--- LTR)**

## 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>GFL0097637</b>	GFL0090577	GFL0064103
Sample Date	Client Info		<b>16 Nov 2023</b>	30 Aug 2023	16 Feb 2023
Machine Age	hrs	Client Info	<b>22176</b>	11621	0
Oil Age	hrs	Client Info	<b>0</b>	0	10262
Oil Changed	Client Info		<b>Changed</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
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>100	<b>29</b>	47	35
Chromium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>1</b>	1	1
Lead	ppm	ASTM D5185(m)	>40	<b>3</b>	6	3
Copper	ppm	ASTM D5185(m)	>330	<b>12</b>	23	30
Tin	ppm	ASTM D5185(m)	>15	<b>&lt;1</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)	2	<b>4</b>	7	6
Barium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	50	<b>61</b>	61	61
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	950	<b>987</b>	969	978
Calcium	ppm	ASTM D5185(m)	1050	<b>1079</b>	1122	1126
Phosphorus	ppm	ASTM D5185(m)	995	<b>1020</b>	1017	1067
Zinc	ppm	ASTM D5185(m)	1180	<b>1221</b>	1215	1227
Sulfur	ppm	ASTM D5185(m)	2600	<b>2537</b>	2353	2517
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

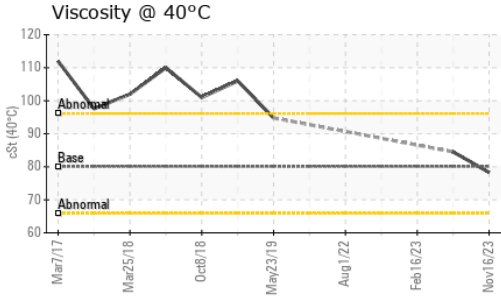
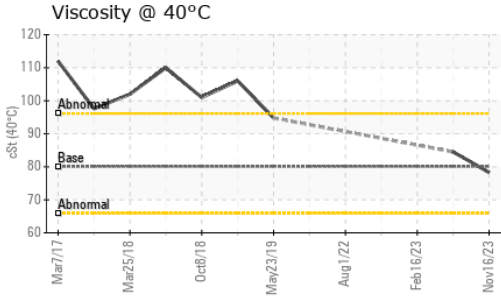
	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>25	<b>3</b>	4	5
Sodium	ppm	ASTM D5185(m)		<b>3</b>	4	3
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	2	1

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>3	<b>0.4</b>	0.6	0.2
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.2</b>	10.7	8.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>22.9</b>	26.4	23.9



# OIL ANALYSIS REPORT

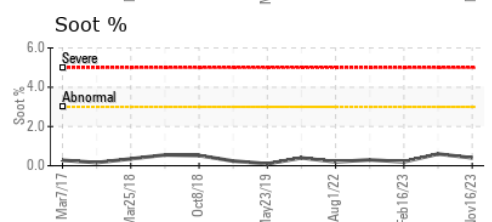
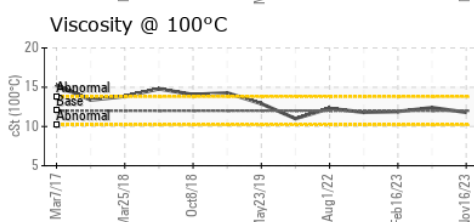
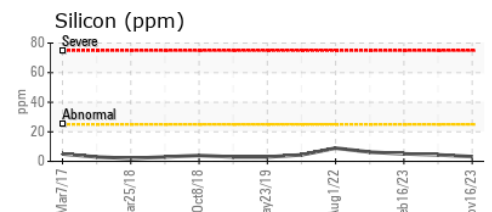
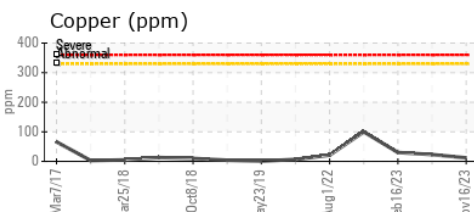
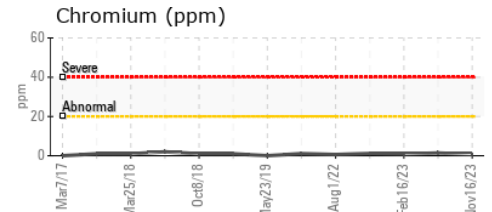
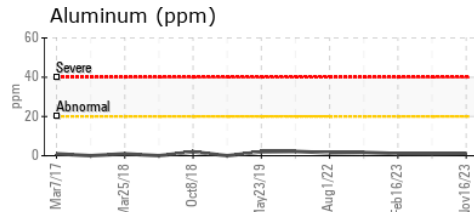
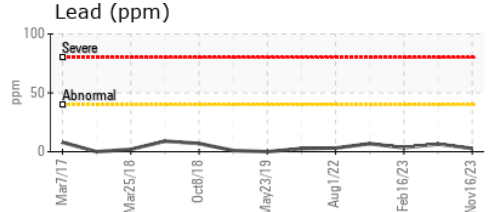
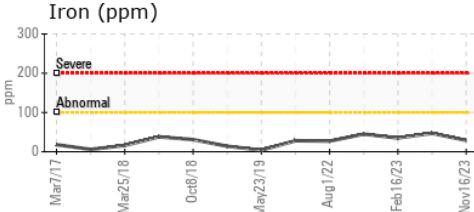


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>20.2</b>	23.0	20.0

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	---	---
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	---	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
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)	80.1	<b>78.3</b>	84.5	---
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	<b>11.8</b>	12.4	11.9
Viscosity Index (VI)	Scale	ASTM D2270*	144	<b>144</b>	143	---

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 554 - Edmonton SW**  
**Sample No.** : GFL0097637 **Received** : 21 Nov 2023  
**Lab Number** : **02597795** **Diagnosed** : 21 Nov 2023  
**Unique Number** : 5682875 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: KV40, VI, Visual )

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.