



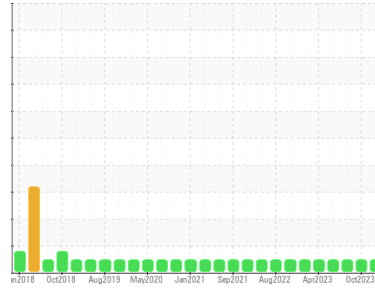
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**401002**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (40 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>GFL0097527</b>	GFL0097554	GFL0088956
Sample Date	Client Info		<b>16 Dec 2023</b>	10 Oct 2023	01 Sep 2023
Machine Age	hrs	Client Info	<b>16337</b>	15771	15487
Oil Age	hrs	Client Info	<b>566</b>	284	566
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<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) >120	<b>22</b>	11	13
Chromium	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >15	<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m) >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m) >3	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185(m) >20	<b>2</b>	1	2
Lead	ppm	ASTM D5185(m) >40	<b>1</b>	<1	1
Copper	ppm	ASTM D5185(m) >330	<b>7</b>	3	4
Tin	ppm	ASTM D5185(m) >15	<b>&lt;1</b>	0	<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>6</b>	7	4
Barium	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	<1	0
Molybdenum	ppm	ASTM D5185(m) 60	<b>60</b>	60	59
Manganese	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185(m) 1010	<b>973</b>	971	967
Calcium	ppm	ASTM D5185(m) 1070	<b>1084</b>	1078	1050
Phosphorus	ppm	ASTM D5185(m) 1150	<b>991</b>	996	1024
Zinc	ppm	ASTM D5185(m) 1270	<b>1194</b>	1189	1174
Sulfur	ppm	ASTM D5185(m) 2060	<b>2525</b>	2565	2422
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

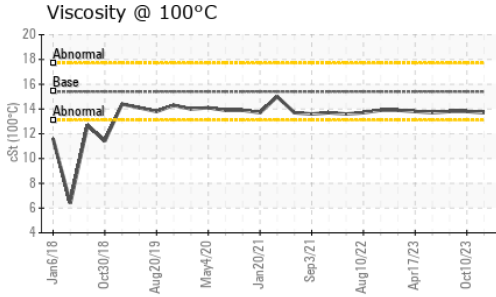
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	<b>4</b>	4	4
Sodium	ppm	ASTM D5185(m)	<b>3</b>	3	3
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	2

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >4	<b>0.1</b>	0	0.1
Nitration	Abs/cm	ASTM D7624* >20	<b>6.8</b>	5.7	7.0
Sulfation	Abs./1mm	ASTM D7415* >30	<b>18.8</b>	18.5	20.4



# OIL ANALYSIS REPORT

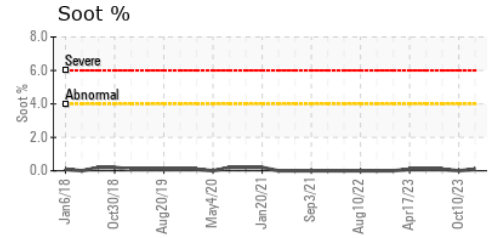
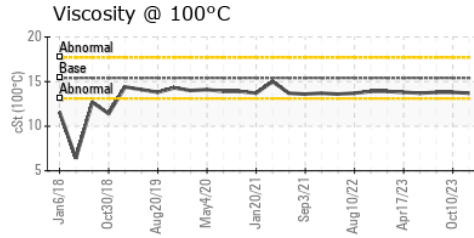
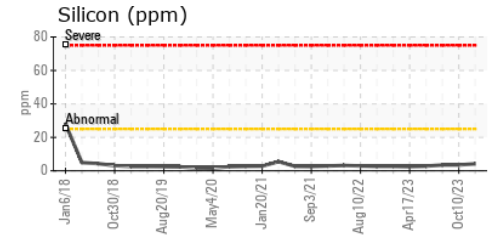
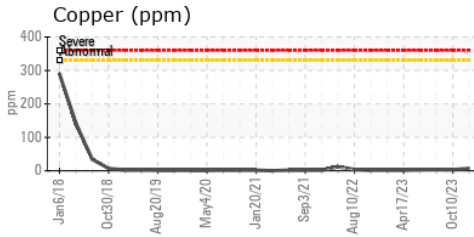
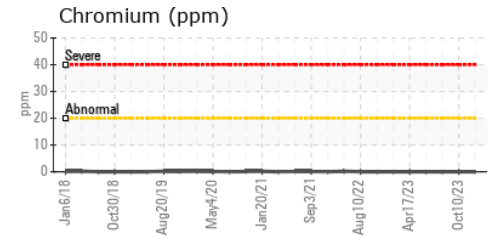
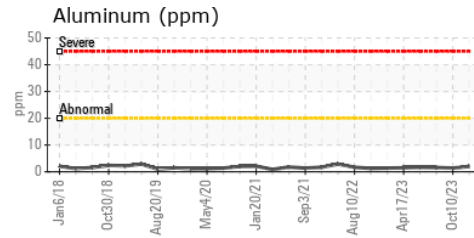
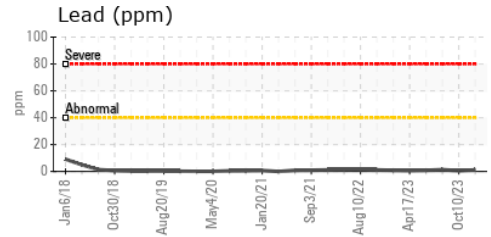
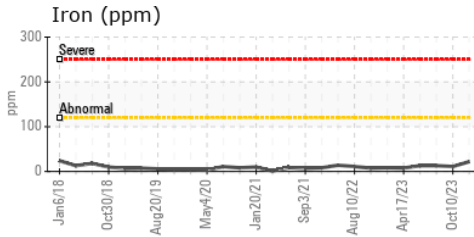


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/1mm	ASTM D7414*	>25	<b>14.8</b>	14.1	14.9

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 @ 100°C	cSt	ASTM D7279(m)	15.4	<b>13.7</b>	13.8	13.8

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0097527 **Received** : 19 Dec 2023  
**Lab Number** : 02604020 **Diagnosed** : 19 Dec 2023  
**Unique Number** : 5697105 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: Visual )

**GFL Environmental - 216**  
 15 Bermondsey Road  
 Toronto, ON  
 CA M4B 1Y9  
 Contact: Tom Hatzioannidis  
 thatzioannidis@gflenv.com  
 T: (416)678-9340  
 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.