

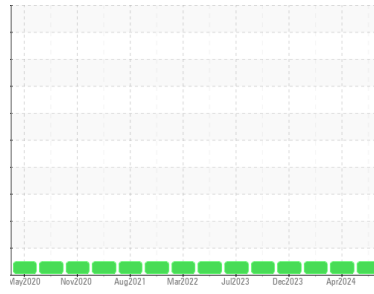


# OIL ANALYSIS REPORT



Machine Id  
**427009**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- LTR)**

### Sample Rating Trend



**NORMAL**



## DIAGNOSIS

### Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. 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

Additive levels indicate the addition of a different brand, or type of oil. 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>GFL0112000</b>	GFL0111989	GFL0090408
Sample Date	Client Info			<b>11 Jul 2024</b>	15 Apr 2024	13 Feb 2024
Machine Age	kms	Client Info		<b>394607</b>	384057	16895
Oil Age	kms	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>Changed</b>	Changed	N/A
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>8</b>	13	10
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>2</b>	2	2
Lead	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	1	1
Copper	ppm	ASTM D5185(m)	>330	<b>&lt;1</b>	2	1
Tin	ppm	ASTM D5185(m)	>15	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)		<b>&lt;1</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>16</b>	3	2
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>71</b>	59	59
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185(m)	1010	<b>585</b>	981	977
Calcium	ppm	ASTM D5185(m)	1070	<b>1526</b>	1067	1068
Phosphorus	ppm	ASTM D5185(m)	1150	<b>942</b>	989	1030
Zinc	ppm	ASTM D5185(m)	1270	<b>1188</b>	1208	1208
Sulfur	ppm	ASTM D5185(m)	2060	<b>2832</b>	2398	2740
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

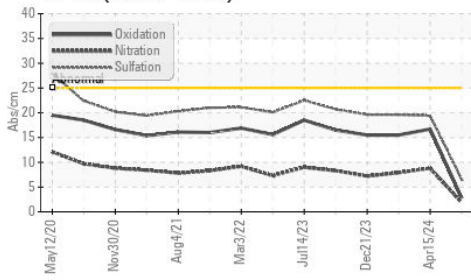
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	1	2
Sodium	ppm	ASTM D5185(m)		<b>4</b>	6	2
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	1	1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>4	<b>0</b>	1.2	0.4
Nitration	Abs/cm	ASTM D7624*	>20	<b>1.9</b>	8.8	7.9
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>6.6</b>	19.4	19.6

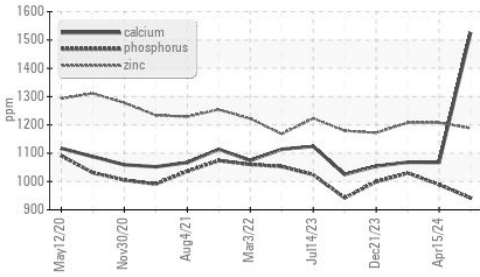


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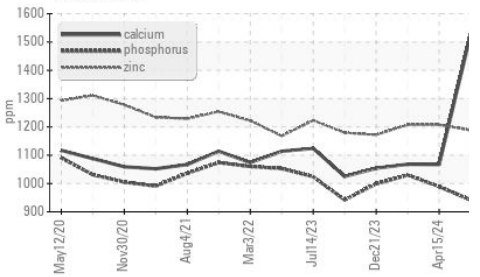
### FT-IR (Direct Trend)



### Additives



### Additives



### FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs./1mm ASTM D7414*	>25	2.8	16.7	15.5

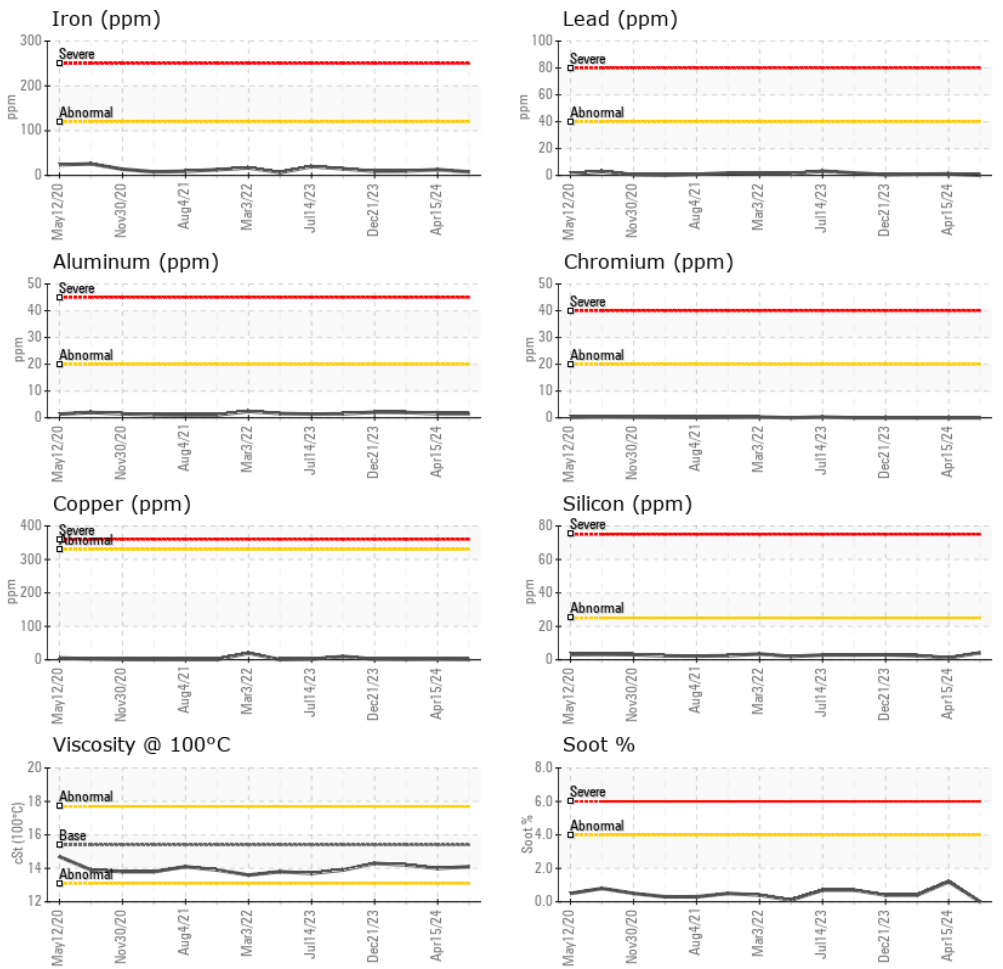
### VISUAL

method	limit/base	current	history1	history2	
White Metal	scalar Visual*	NONE	NONE	---	---
Yellow Metal	scalar Visual*	NONE	NONE	---	---
Precipitate	scalar Visual*	NONE	NONE	---	---
Silt	scalar Visual*	NONE	NONE	---	---
Debris	scalar Visual*	NONE	NONE	---	---
Sand/Dirt	scalar Visual*	NONE	NONE	---	---
Appearance	scalar Visual*	NORML	NORML	---	---
Odor	scalar Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar Visual*		NEG	NEG	NEG

### FLUID PROPERTIES

method	limit/base	current	history1	history2	
Visc @ 100°C	cSt ASTM D7279(m)	15.4	14.1	14.0	14.2

### GRAPHS



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0112000 **Received** : 16 Jul 2024  
**Lab Number** : 02648085 **Tested** : 16 Jul 2024  
**Unique Number** : 5813637 **Diagnosed** : 16 Jul 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: Visual )

**GFL Environmental - 216M**  
 2475 Beryl Drive  
 Oakville, ON  
 CA L6J 7X4  
 Contact: Matthew Gunness  
 mgunness@gflenv.com

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.

T:  
F: