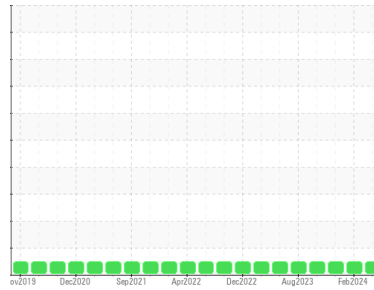




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**401207**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- 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>GFL0111988</b>	GFL0090397	GFL0090395
Sample Date	Client Info		<b>25 Apr 2024</b>	26 Feb 2024	20 Dec 2023
Machine Age	kms	Client Info	<b>252856</b>	241789	230370
Oil Age	kms	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>Changed</b>	N/A	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>10</b>	20	12
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>1</b>	2	2
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>330	<b>3</b>	3	2
Tin	ppm	ASTM D5185(m)	>15	<b>0</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)	0	<b>2</b>	2	2
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>59</b>	60	59
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185(m)	1010	<b>966</b>	972	976
Calcium	ppm	ASTM D5185(m)	1070	<b>1070</b>	1072	1064
Phosphorus	ppm	ASTM D5185(m)	1150	<b>983</b>	968	991
Zinc	ppm	ASTM D5185(m)	1270	<b>1199</b>	1185	1175
Sulfur	ppm	ASTM D5185(m)	2060	<b>2402</b>	2398	2545
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>1</b>	3	3
Sodium	ppm	ASTM D5185(m)		<b>5</b>	4	3
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	4	5

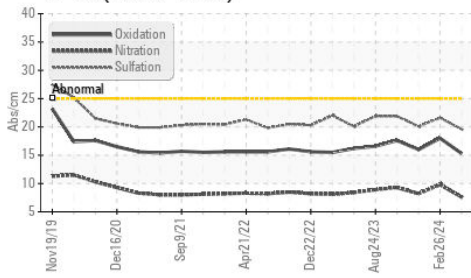
## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	>4	<b>0.2</b>	0.5	0.3
Nitration	Abs/cm	ASTM D7624*	>20	<b>7.6</b>	9.8	8.2
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>19.6</b>	21.6	20.1

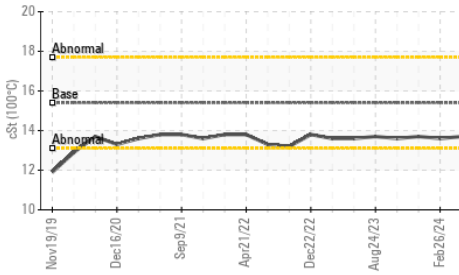


# OIL ANALYSIS REPORT

FT-IR (Direct Trend)



Viscosity @ 100°C



## FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs./1mm ASTM D7414*	>25	15.3	18.0	16.0

## VISUAL

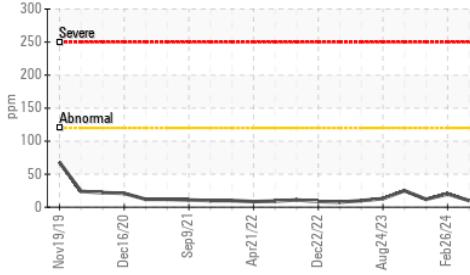
method	limit/base	current	history1	history2	
Emulsified Water	scalar Visual*	>0.2	NEG	NEG	NEG
Free Water	scalar Visual*		NEG	NEG	NEG

## FLUID PROPERTIES

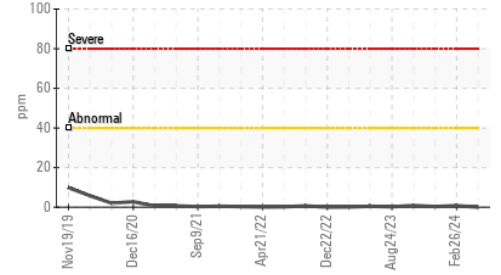
method	limit/base	current	history1	history2	
Visc @ 100°C	cSt ASTM D7279(m)	15.4	13.7	13.6	13.7

## GRAPHS

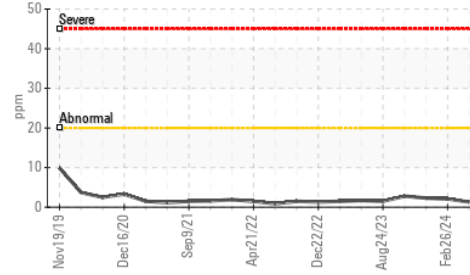
Iron (ppm)



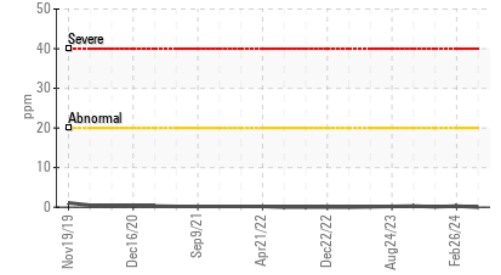
Lead (ppm)



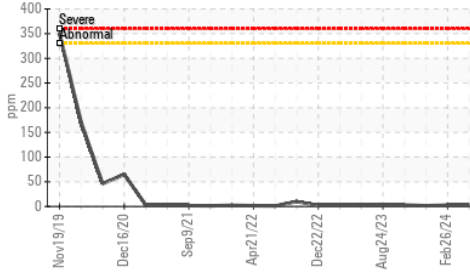
Aluminum (ppm)



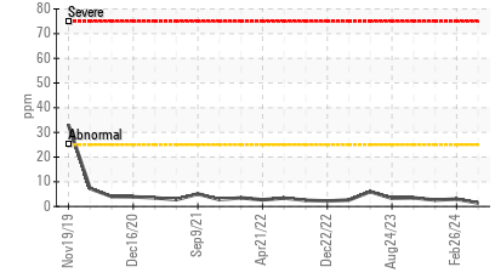
Chromium (ppm)



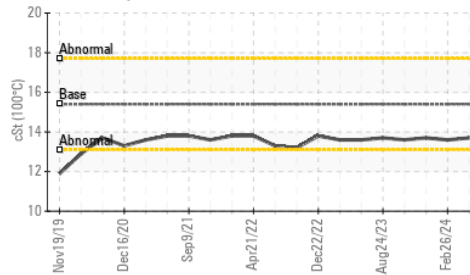
Copper (ppm)



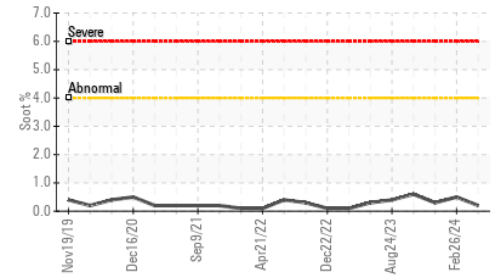
Silicon (ppm)



Viscosity @ 100°C



Soot %



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0111988 **Received** : 30 Apr 2024  
**Lab Number** : 02632232 **Tested** : 30 Apr 2024  
**Unique Number** : 5773385 **Diagnosed** : 30 Apr 2024 - Wes Davis  
**Test Package** : MOB 1

**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.