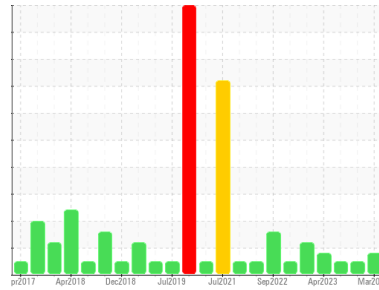




# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Machine Id  
**8267**

Component  
**Front Diesel Engine**

Fluid  
**PETRO CANADA DURON XL SYN BLEND 15W40 (22 LTR)**

## DIAGNOSIS

### Recommendation

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

Iron ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0112471</b>	GFL0091636	GFL0084266
Sample Date	Client Info	<b>08 Mar 2024</b>	26 Sep 2023	11 Jul 2023
Machine Age	hrs	<b>16727</b>	358486	346008
Oil Age	hrs	<b>330</b>	12950	0
Oil Changed	Client Info	<b>Changed</b>	Changed	N/A
Sample Status		<b>ABNORMAL</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		
PQ	ASTM D8184*	>65	<b>22</b>	---	---	
Iron	ppm	ASTM D5185(m)	>80	<b>▲ 86</b>	76	63
Chromium	ppm	ASTM D5185(m)	>5	<b>3</b>	2	2
Nickel	ppm	ASTM D5185(m)	>2	<b>2</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>30	<b>6</b>	5	4
Lead	ppm	ASTM D5185(m)	>30	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>150	<b>5</b>	2	2
Tin	ppm	ASTM D5185(m)	>5	<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)	1	<b>3</b>	3	3
Barium	ppm	ASTM D5185(m)	1	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>68</b>	73	67
Manganese	ppm	ASTM D5185(m)	1	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>1053</b>	1189	1117
Calcium	ppm	ASTM D5185(m)	1070	<b>1194</b>	1345	1219
Phosphorus	ppm	ASTM D5185(m)	1150	<b>1103</b>	1197	1180
Zinc	ppm	ASTM D5185(m)	1270	<b>1293</b>	1469	1363
Sulfur	ppm	ASTM D5185(m)	2060	<b>2626</b>	2510	2482
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>20	<b>19</b>	8	8
Sodium	ppm	ASTM D5185(m)		<b>6</b>	8	7
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	2	1

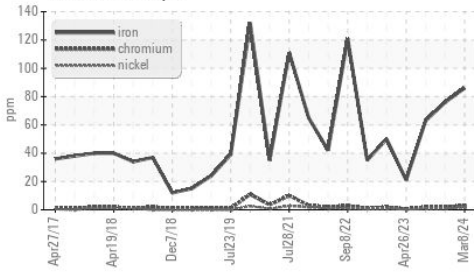
## INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	ASTM D7844*	>3	<b>0.9</b>	1.8	1.5
Nitration	Abs/cm	ASTM D7624*	>20	<b>11.6</b>	12.7	12.2
Sulfation	Abs.1mm	ASTM D7415*	>30	<b>22.8</b>	27.2	27.1



# OIL ANALYSIS REPORT

### ▲ Ferrous Alloys



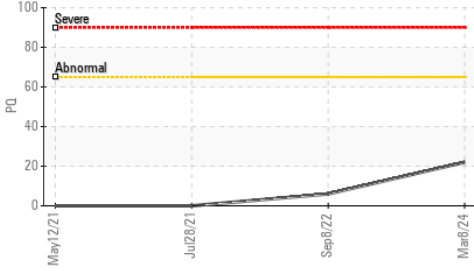
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>20.6</b>	24.3	24.0
Base Number (BN)	mg KOH/g	ASTM D2896*	9.6	<b>9.71</b>	8.64	9.12

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

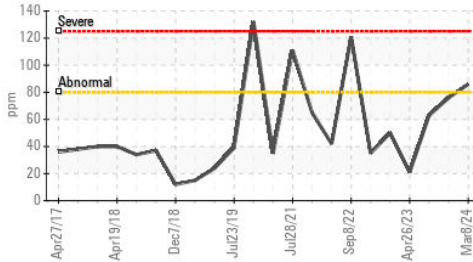
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.5	<b>14.9</b>	16.4	15.6

### GRAPHS

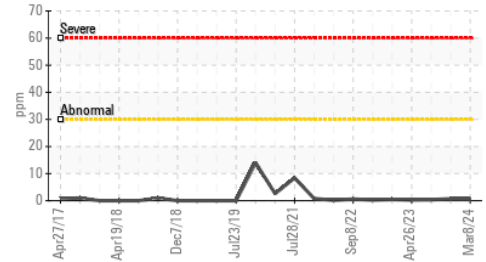
#### PQ



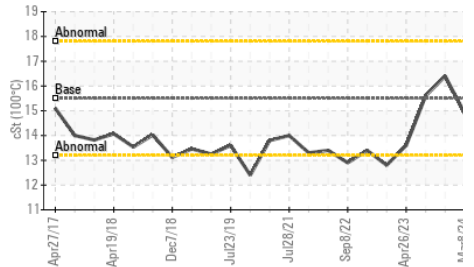
#### ▲ Iron (ppm)



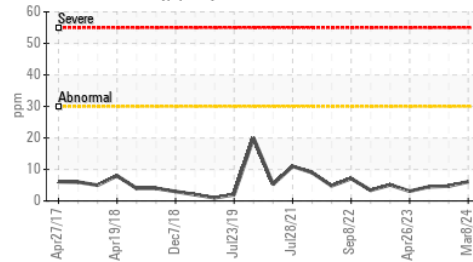
#### Lead (ppm)



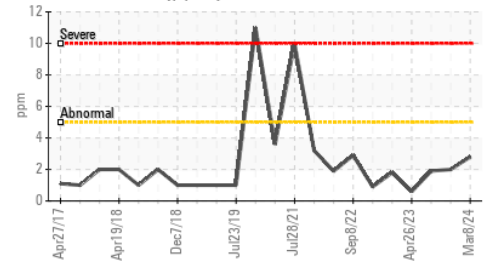
#### Viscosity @ 100°C



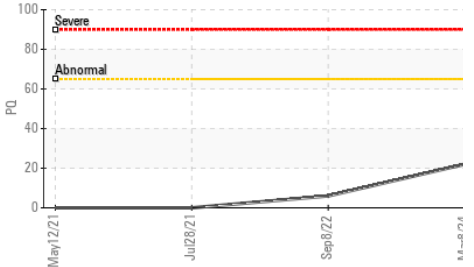
#### Aluminum (ppm)



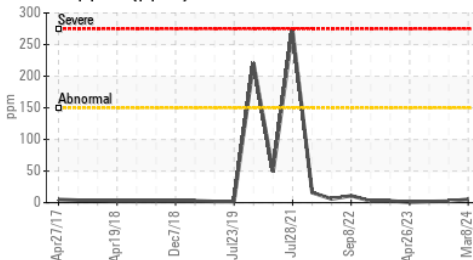
#### Chromium (ppm)



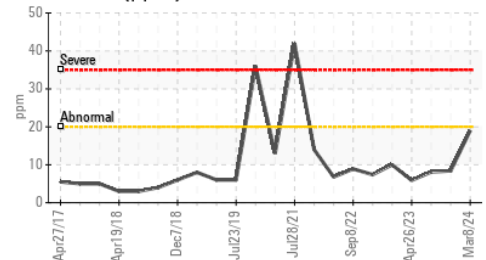
#### PQ



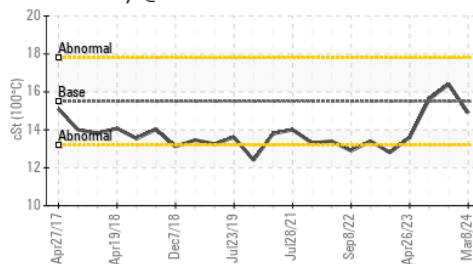
#### Copper (ppm)



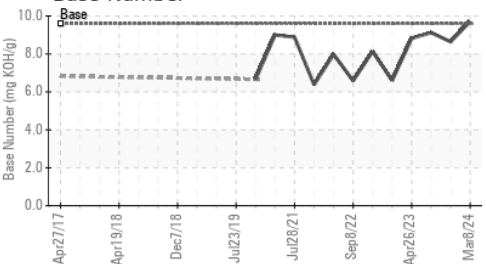
#### Silicon (ppm)



#### Viscosity @ 100°C



#### Base Number



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 550 - Rocky View County**  
**Sample No.** : GFL0112471 **Received** : 19 Mar 2024 **220 Carmek Blvd**  
**Lab Number** : **02623197** **Tested** : 20 Mar 2024 **Rocky View County, AB**  
**Unique Number** : 5748316 **Diagnosed** : 20 Mar 2024 - Kevin Marson **CA T1X 1X1**  
**Test Package** : MOB 2 ( Additional Tests: PQ ) **Contact: GFL Calgary**  
**calgarymaintenance@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: (403)369-6163**