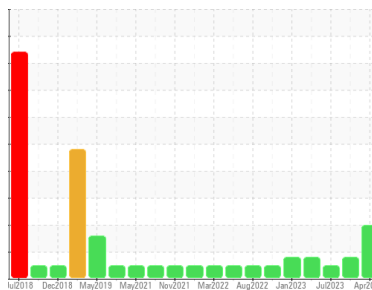




# OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id  
**801106**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON XL SYN BLEND 15W40 (--- GAL)**

## 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 a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. 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>GFL0117297</b>	GFL0099555	GFL0084287
Sample Date	Client Info	<b>29 Apr 2024</b>	17 Jan 2024	20 Jul 2023
Machine Age	hrs	<b>12188</b>	11640	216145
Oil Age	hrs	<b>548</b>	465	0
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed
Sample Status		<b>ABNORMAL</b>	MARGINAL	NORMAL

## CONTAMINATION

method	limit/base	current	history1	history2	
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>0</b>	---	---	
Iron	ppm	ASTM D5185(m)	>80	<b>▲ 91</b>	35	49
Chromium	ppm	ASTM D5185(m)	>5	<b>2</b>	2	<1
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>30	<b>7</b>	6	7
Lead	ppm	ASTM D5185(m)	>30	<b>0</b>	<1	0
Copper	ppm	ASTM D5185(m)	>150	<b>2</b>	2	2
Tin	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
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>2</b>	3	3
Barium	ppm	ASTM D5185(m)	1	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>53</b>	55	61
Manganese	ppm	ASTM D5185(m)	1	<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>858</b>	893	1010
Calcium	ppm	ASTM D5185(m)	1070	<b>952</b>	1006	1105
Phosphorus	ppm	ASTM D5185(m)	1150	<b>873</b>	974	1079
Zinc	ppm	ASTM D5185(m)	1270	<b>1075</b>	1130	1250
Sulfur	ppm	ASTM D5185(m)	2060	<b>2161</b>	2667	2449
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

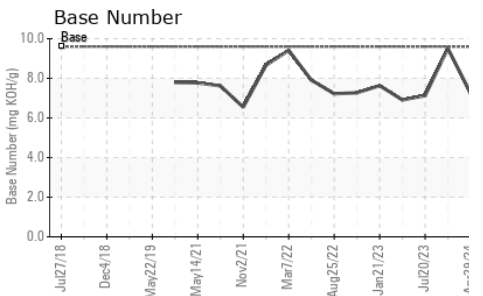
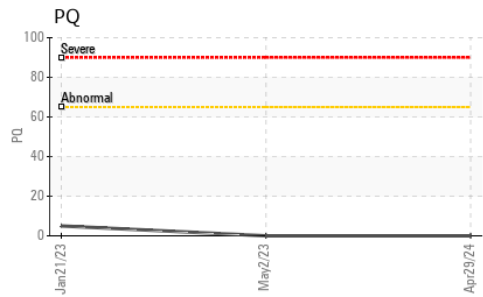
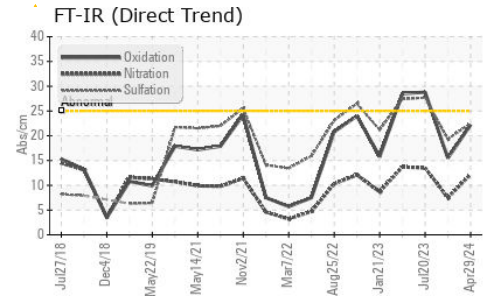
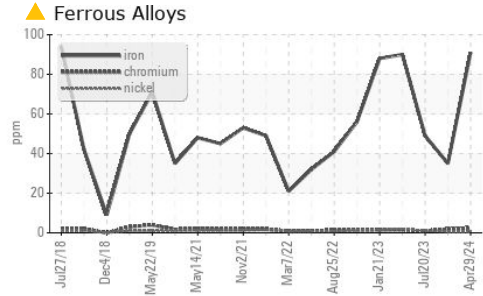
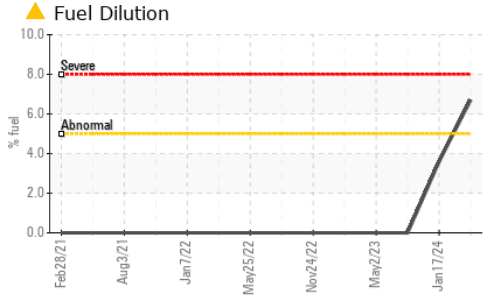
method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>20	<b>15</b>	15	9
Sodium	ppm	ASTM D5185(m)		<b>6</b>	2	7
Potassium	ppm	ASTM D5185(m)	>20	<b>4</b>	2	<1
Fuel	%	ASTM D7593*	>5	<b>▲ 6.7</b>	▲ 3.6	<1.0

## INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	ASTM D7844*	>3	<b>0.7</b>	0.3	0.7
Nitration	Abs/cm	ASTM D7624*	>20	<b>12.2</b>	7.5	13.5
Sulfation	Abs.1mm	ASTM D7415*	>30	<b>22.5</b>	19.3	27.7



# OIL ANALYSIS REPORT

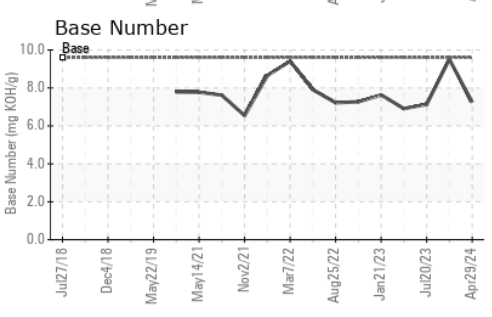
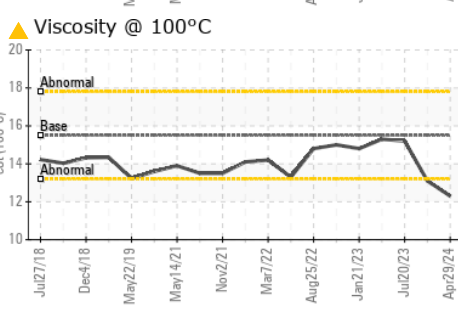
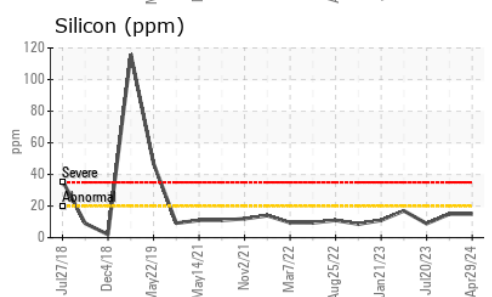
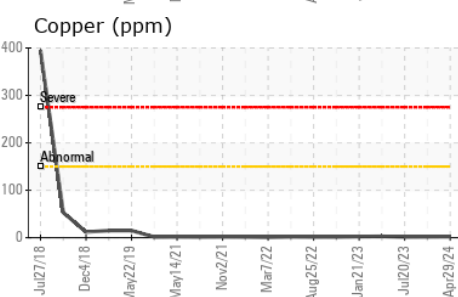
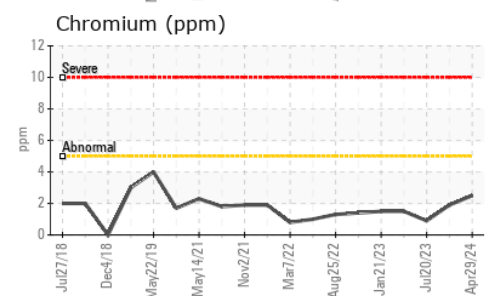
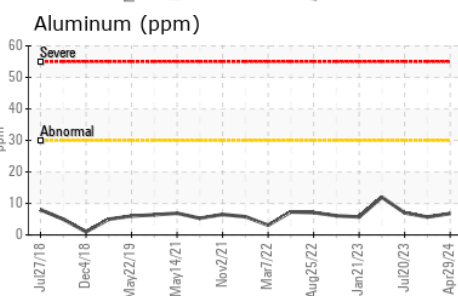
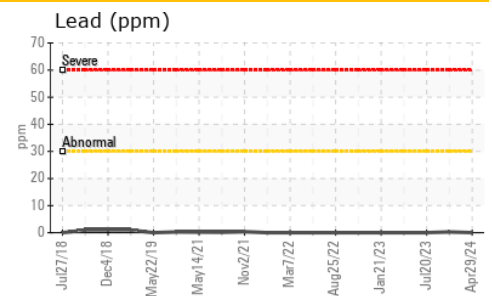
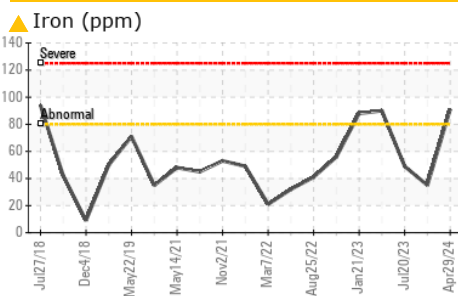


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/1mm	ASTM D7414*	>25	<b>22.2</b>	15.5	28.8
Base Number (BN)	mg KOH/g	ASTM D2896*	9.6	<b>7.25</b>	9.51	7.13

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>▲ 12.3</b>	13.1	15.2

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0117297  
**Lab Number** : 02633819  
**Unique Number** : 5774972  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel, PQ )  
**Received** : 07 May 2024  
**Tested** : 08 May 2024  
**Diagnosed** : 08 May 2024 - Kevin Marson

**GFL Environmental - 550 - Rocky View County**  
 220 Carmek Blvd  
 Rocky View County, AB  
 CA T1X 1X1  
 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.

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