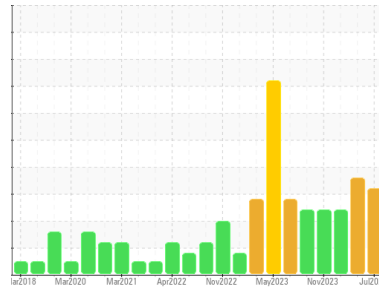




# OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id  
**800019**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (20 LTR)**

## DIAGNOSIS

### Recommendation

We advise that you check the fuel injection system. Check for low coolant level. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of fuel present in the oil. Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative. Tests confirm the presence of fuel in the oil.

### Fluid Condition

The oil viscosity is lower than typical, possibly indicating the addition of lighter grade oil. The oil is no longer serviceable due to the presence of contaminants. The condition of the oil is acceptable for the time in service (see recommendation).

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>GFL0124679</b>	GFL0110686	GFL0102723
Sample Date	Client Info	<b>03 Jul 2024</b>	23 Apr 2024	30 Jan 2024
Machine Age	hrs	<b>15260</b>	14684	14142
Oil Age	hrs	<b>600</b>	0	0
Oil Changed	Client Info	<b>Changed</b>	N/A	Changed
Sample Status		<b>SEVERE</b>	SEVERE	SEVERE

## CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method	<b>&gt;0.2</b>	NEG	NEG

## WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185(m)	>75	<b>39</b>	40	40
Chromium	ppm	ASTM D5185(m)	>5	<b>3</b>	3	4
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>15	<b>10</b>	6	4
Lead	ppm	ASTM D5185(m)	>25	<b>0</b>	0	<1
Copper	ppm	ASTM D5185(m)	>100	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>4	<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)	0	<b>2</b>	3	1
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>90</b>	60	45
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185(m)	1010	<b>855</b>	794	733
Calcium	ppm	ASTM D5185(m)	1070	<b>934</b>	864	834
Phosphorus	ppm	ASTM D5185(m)	1150	<b>874</b>	817	767
Zinc	ppm	ASTM D5185(m)	1270	<b>1068</b>	973	899
Sulfur	ppm	ASTM D5185(m)	2060	<b>2233</b>	1965	1956
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

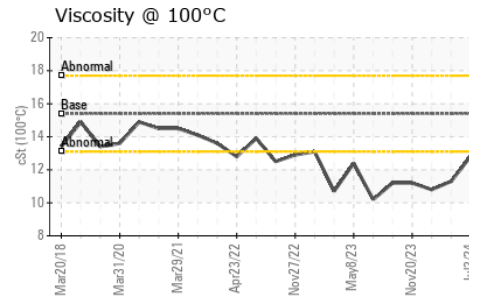
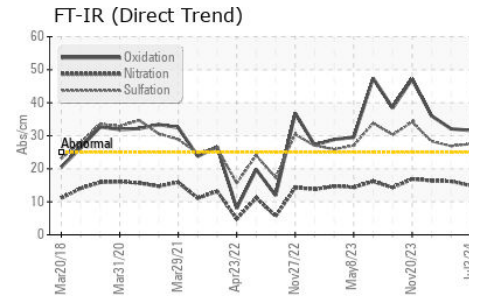
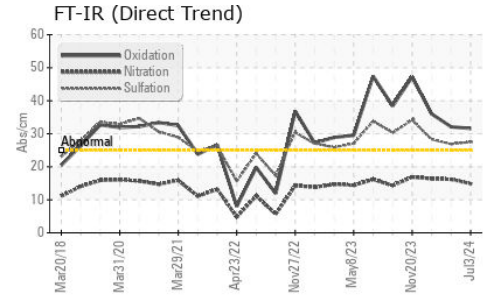
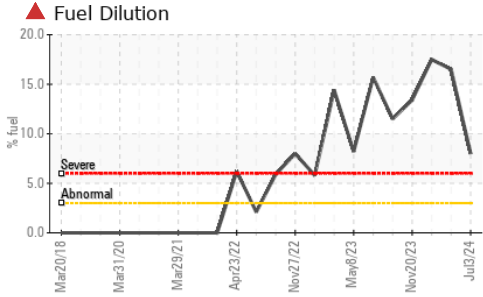
method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>25	<b>4</b>	3	5
Sodium	ppm	ASTM D5185(m)		<b>469</b>	210	79
Potassium	ppm	ASTM D5185(m)	>20	<b>17</b>	9	6
Fuel	%	ASTM D7593*	>3.0	<b>8</b>	16.5	17.5
Glycol	%	ASTM D7922*		<b>0.0</b>	0.0	0.0

## INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	ASTM D7844*	>6	<b>0.6</b>	0.6	0.5
Nitration	Abs/cm	ASTM D7624*	>20	<b>14.9</b>	16.2	16.4
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>27.5</b>	26.9	28.3



# OIL ANALYSIS REPORT

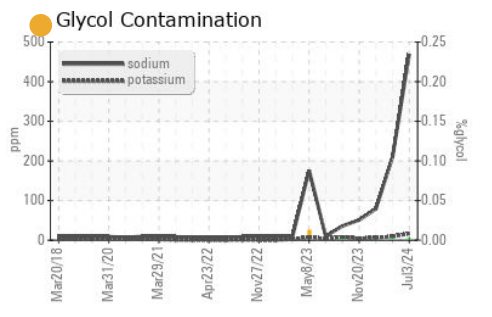
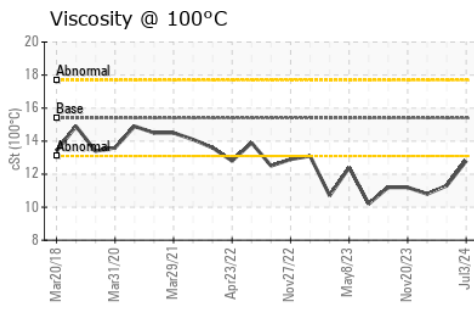
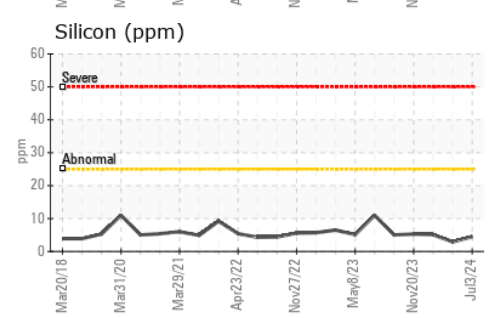
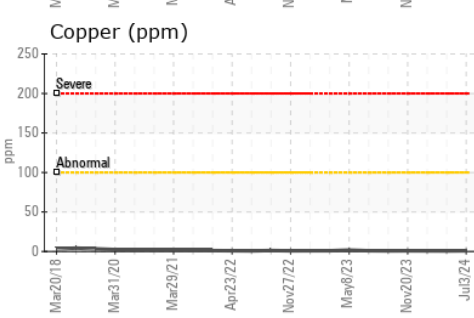
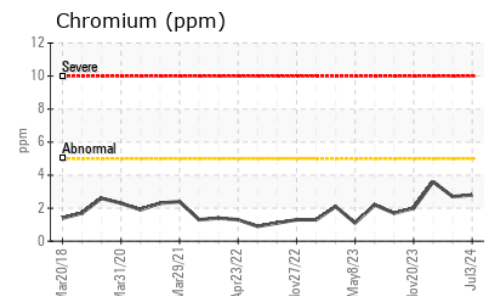
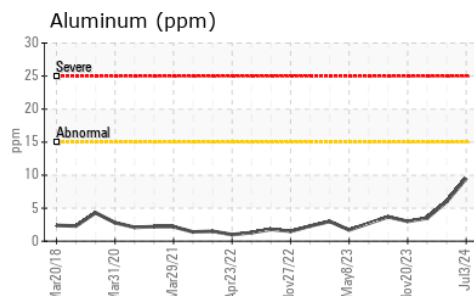
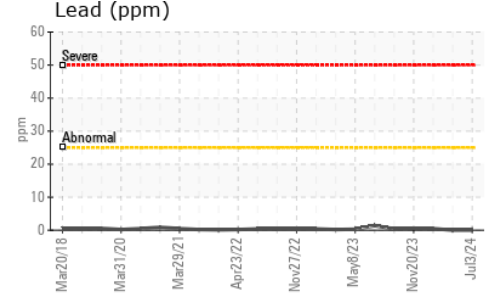
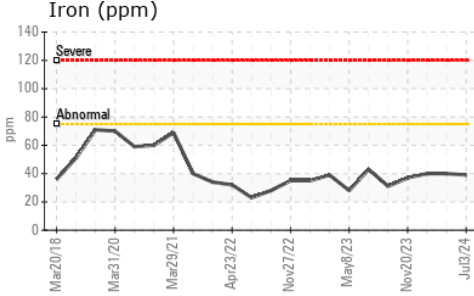


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>31.6</b>	32.1	36.0

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)	15.4	<b>12.8</b>	▲ 11.3	▲ 10.8

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0124679 **Received** : 05 Jul 2024  
**Lab Number** : **02645728** **Tested** : 08 Jul 2024  
**Unique Number** : 5803267 **Diagnosed** : 08 Jul 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: Glycol, PercentFuel )

**GFL Environmental - 207 - Pickering SW**  
 1034 TOY AVENUE, PICKERING YARD  
 PICKERING, ON  
 CA L1W 3P1  
 Contact: Ian Patton  
 ipatton@gflenv.com  
 T: (905)831-6297  
 F: (905)426-3577

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.