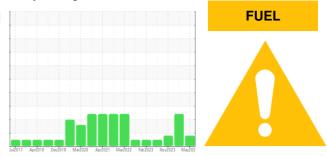


## **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

## 8423

Component Diesel Engine

#### Fluid PETRO CANADA DURON SHP 15W40 (20 LTR)

### DIAGNOSIS

#### Recommendation

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

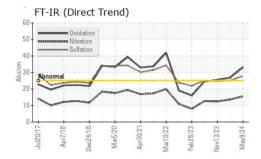
#### Fluid Condition

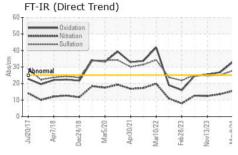
The oil is no longer serviceable due to the presence of contaminants.

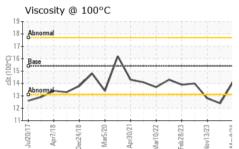
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0116857	GFL0110727	GFL0085663
Sample Date		Client Info		09 May 2024	05 Feb 2024	13 Nov 2023
Machine Age	hrs	Client Info		3055	3055	3055
Oil Age	hrs	Client Info		3055	3055	3055
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	SEVERE	ABNORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method	20.L	NEG	NEG	NEG
				NEG		
WEAR METAL		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	45	30	24
Chromium	ppm	ASTM D5185(m)	>20	1	1	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	1	2	1
Lead	ppm	ASTM D5185(m)	>40	0	<1	<1
Copper	ppm	ASTM D5185(m)	>330	1	<1	1
Tin	ppm	ASTM D5185(m)	>15	0	0	0
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	1	2	2
Barium	ppm	ASTM D5185(m)	0	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	60	54	51	55
Manganese	ppm	ASTM D5185(m)	0	<1	0	0
Magnesium	ppm					0
O a la la ma	1. 1	ASTM D5185(m)	1010	867	811	879
Calcium	ppm	ASTM D5185(m) ASTM D5185(m)	1010 1070		811 912	
Phosphorus		. ,		867		879
	ppm	ASTM D5185(m)	1070	867 915	912	879 979
Phosphorus	ppm ppm	ASTM D5185(m) ASTM D5185(m)	1070 1150	867 915 872	912 859	879 979 904
Phosphorus Zinc	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	1070 1150 1270	867 915 872 1061	912 859 1012	879 979 904 1110
Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	1070 1150 1270	867 915 872 1061 2048	912 859 1012 2184	879 979 904 1110 2221
Phosphorus Zinc Sulfur Lithium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	1070 1150 1270 2060	867 915 872 1061 2048 <1	912 859 1012 2184 <1	879 979 904 1110 2221 <1
Phosphorus Zinc Sulfur Lithium CONTAMINAN	ppm ppm ppm ppm ppm TS	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	1070 1150 1270 2060 limit/base	867 915 872 1061 2048 <1 current	912 859 1012 2184 <1 history1	879 979 904 1110 2221 <1 history2
Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm ppm ppm ppm ppm TS	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method	1070 1150 1270 2060 limit/base	867 915 872 1061 2048 <1 current 6	912 859 1012 2184 <1 history1 6	879 979 904 1110 2221 <1 history2 5
Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm TS ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	1070 1150 1270 2060 limit/base >25	867 915 872 1061 2048 <1 <u>current</u> 6 8	912 859 1012 2184 <1 history1 6 5	879 979 904 1110 2221 <1 history2 5 4
Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	1070 1150 1270 2060 limit/base >25 >25	867 915 872 1061 2048 <1 <u>current</u> 6 8 <1	912 859 1012 2184 <1 history1 6 5 1	879 979 904 1110 2221 <1 <b>history2</b> 5 4 <1
Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	1070 1150 1270 2060 Iimit/base >25 >20 >5	867 915 872 1061 2048 <1 <u>current</u> 6 8 <1	912 859 1012 2184 <1 history1 6 5 1 1 ▲ 9.5 history1	879 979 904 1110 2221 <1 history2 5 4 <1 <1 <
Phosphorus Zinc Sulfur Lithium CONTAMINAN Solicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm TS ppm ppm %	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D7593*	1070 1150 1270 2060 Iimit/base >25 >20 >5 Iimit/base >3	867 915 872 1061 2048 <1 current 6 8 <1 <1 7.4 current 0.7	912 859 1012 2184 <1 history1 6 5 1 6 5 1 4 9.5 history1 0.6	879 979 904 1110 2221 <1 5 4 <1 < 6.5 history2 0.5
Phosphorus Zinc Sulfur Lithium CONTAMINAN Solicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm <b>TS</b> ppm ppm ppm %	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	1070 1150 2200 limit/base >25 >20 >5 limit/base	867 915 872 1061 2048 <1 current 6 8 <1 ▲ 7.4 current	912 859 1012 2184 <1 history1 6 5 1 1 ▲ 9.5 history1	879 979 904 1110 2221 <1 <b>history2</b> 5 4 <1 <1 € 6.5 <b>history2</b>

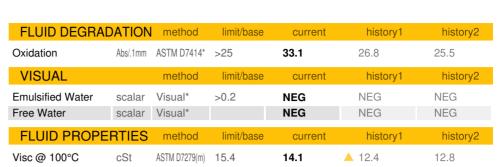


# **OIL ANALYSIS REPORT**









100

81

60

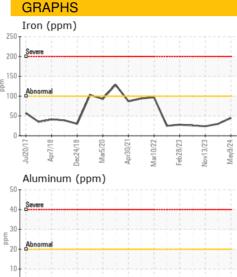
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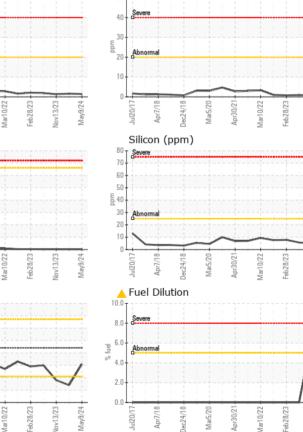
50

Lead (ppm)

lec24/1

Chromium (ppm)





Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CALA Sample No. : GFL0116857 Received : 13 May 2024 Lab Number : 02634866 Tested : 14 May 2024 ISO 17025:2017 Accredited Laboratory Unique Number : 5776019 Diagnosed : 14 May 2024 - Kevin Marson Test Package : MOB 1 (Additional Tests: PercentFuel) 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.

Ο

400

350

300

250 E 200

150

100-

50

0

19 18

17

0-001) 15 14

12

Copper (ppm)

Dec24/1

Jec24/1

Viscosity @ 100°C

GFL Environmental - 221 - Windsor 905 Tecumseh Road W Windsor, ON CA N8W 4J5 Contact: Pamela-Jean Butler pamelajean.butler@gflenv.com T: (519)948-8126 E:

lar10/77 sb28/23 av9/24



Report Id: GFL221 [WCAMIS] 02634866 (Generated: 05/15/2024 13:03:14) Rev: 1

Submitted By: Pamela-Jean Butler Page 2 of 2

Jov13/23