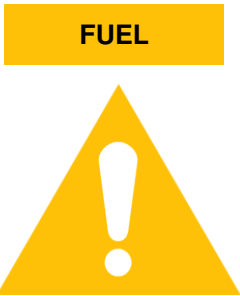
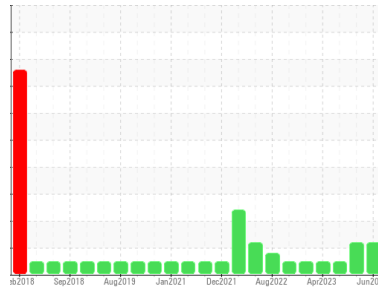




# OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id  
**701049**  
 Component  
**Front 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**  
 Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

**Fluid Condition**  
 Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>GFL0116853</b>	GFL0097438	GFL0085671
Sample Date	Client Info			<b>04 Jun 2024</b>	10 Jan 2024	27 Sep 2023
Machine Age	hrs	Client Info		<b>1393</b>	1393	1393
Oil Age	hrs	Client Info		<b>1393</b>	1393	1393
Oil Changed	Client Info			<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	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
Iron	ppm	ASTM D5185(m)	>90	<b>9</b>	9	11
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	<b>7</b>	7	4
Lead	ppm	ASTM D5185(m)	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185(m)	>330	<b>1</b>	1	2
Tin	ppm	ASTM D5185(m)	>15	<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

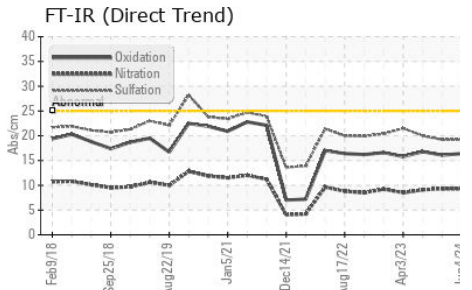
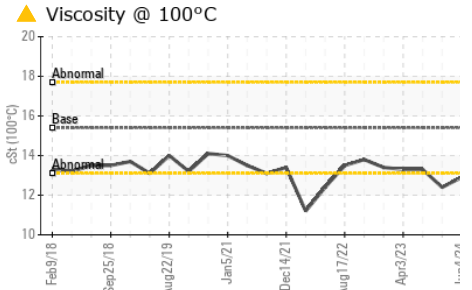
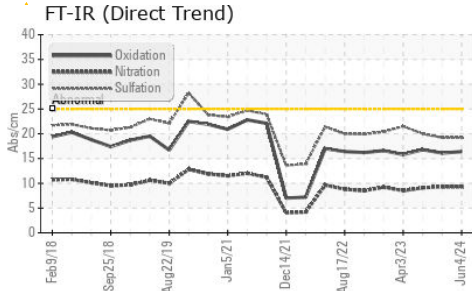
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	<b>2</b>	1	2
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185(m)	60	<b>56</b>	55	58
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	1010	<b>912</b>	886	932
Calcium	ppm	ASTM D5185(m)	1070	<b>1002</b>	988	1032
Phosphorus	ppm	ASTM D5185(m)	1150	<b>952</b>	948	951
Zinc	ppm	ASTM D5185(m)	1270	<b>1143</b>	1104	1173
Sulfur	ppm	ASTM D5185(m)	2060	<b>2421</b>	2467	2317
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>2</b>	2	4
Sodium	ppm	ASTM D5185(m)		<b>1</b>	<1	2
Potassium	ppm	ASTM D5185(m)	>20	<b>12</b>	11	6
Fuel	%	ASTM D7593*	>3.0	<b>▲ 3.2</b>	▲ 4.1	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>6	<b>0.2</b>	0.2	0.2
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.3</b>	9.3	9.1
Sulfation	Abs./1mm	ASTM D7415*	>30	<b>19.2</b>	19.2	20.0



# OIL ANALYSIS REPORT

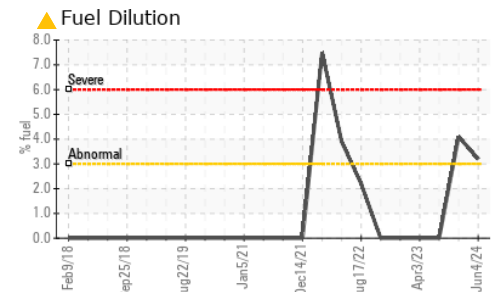
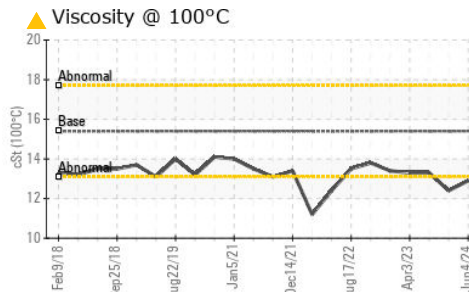
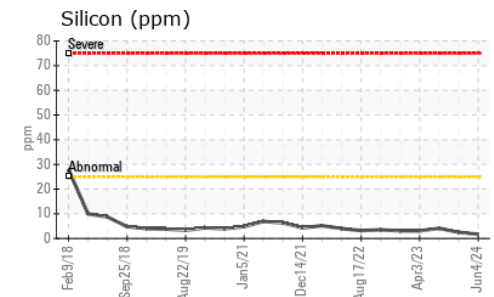
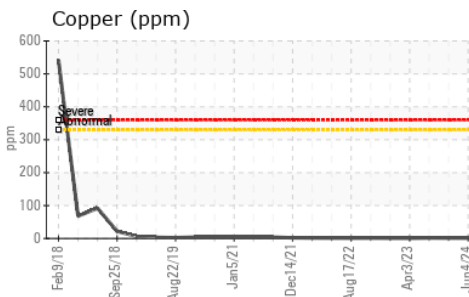
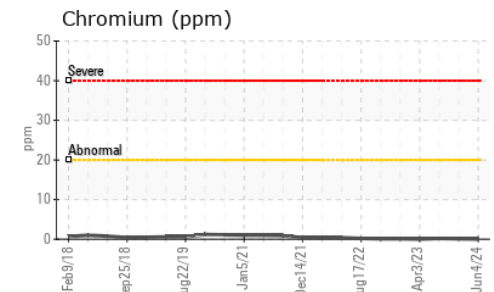
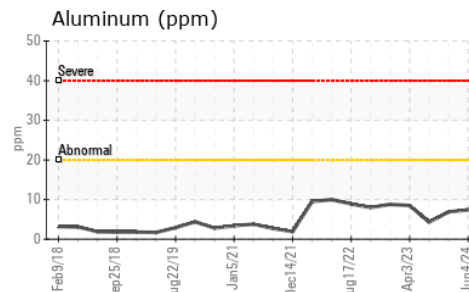
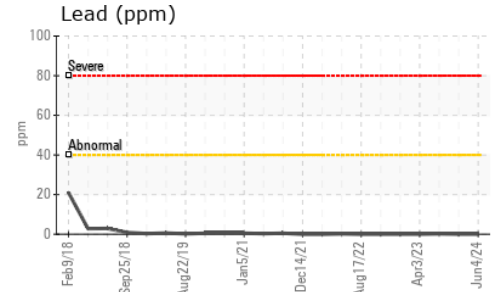
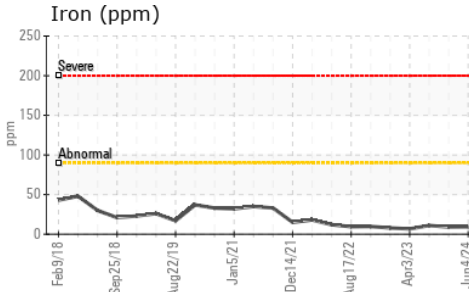


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	<b>16.4</b>	16.1	16.8

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>▲ 12.9</b>	▲ 12.4	13.3

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0116853  
**Lab Number** : **02640104**  
**Unique Number** : 5789266  
**Test Package** : MOB 1 ( Additional Tests: PercentFuel )  
**Received** : 06 Jun 2024  
**Tested** : 07 Jun 2024  
**Diagnosed** : 07 Jun 2024 - Wes Davis

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

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.