



OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
401190

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

DIAGNOSIS

▲ Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. No other corrective action is recommended at this time. (Customer Sample Comment: First record of oil sample)

Wear

All component wear rates are normal.

▲ Contamination

Light fuel dilution occurring. There is a moderate concentration of dirt present in the oil. No other contaminants were detected in the oil.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0088932	---	---
Sample Date	Client Info	17 Aug 2023	---	---
Machine Age	hrs	24930	---	---
Oil Age	hrs	2000	---	---
Oil Changed	Client Info	Changed	---	---
Sample Status		ABNORMAL	---	---

CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	NEG	---	---

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >100	34	---	---
Chromium	ppm ASTM D5185(m) >20	2	---	---
Nickel	ppm ASTM D5185(m) >4	0	---	---
Titanium	ppm ASTM D5185(m)	<1	---	---
Silver	ppm ASTM D5185(m) >3	<1	---	---
Aluminum	ppm ASTM D5185(m) >20	4	---	---
Lead	ppm ASTM D5185(m) >40	<1	---	---
Copper	ppm ASTM D5185(m) >330	13	---	---
Tin	ppm ASTM D5185(m) >15	<1	---	---
Antimony	ppm ASTM D5185(m)	0	---	---
Vanadium	ppm ASTM D5185(m)	0	---	---
Beryllium	ppm ASTM D5185(m)	0	---	---
Cadmium	ppm ASTM D5185(m)	0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m) 0	9	---	---
Barium	ppm ASTM D5185(m) 0	<1	---	---
Molybdenum	ppm ASTM D5185(m) 60	24	---	---
Manganese	ppm ASTM D5185(m) 0	<1	---	---
Magnesium	ppm ASTM D5185(m) 1010	300	---	---
Calcium	ppm ASTM D5185(m) 1070	1945	---	---
Phosphorus	ppm ASTM D5185(m) 1150	990	---	---
Zinc	ppm ASTM D5185(m) 1270	1100	---	---
Sulfur	ppm ASTM D5185(m) 2060	2920	---	---
Lithium	ppm ASTM D5185(m)	<1	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >25	▲ 35	---	---
Sodium	ppm ASTM D5185(m)	6	---	---
Potassium	ppm ASTM D5185(m) >20	2	---	---
Fuel	% ASTM D7593* >5	1.2	---	---

INFRA-RED

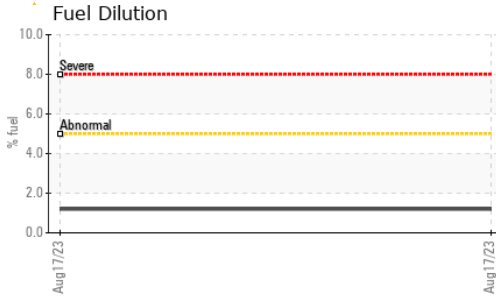
method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >3	0.4	---	---
Nitration	Abs/cm ASTM D7624* >20	8.7	---	---
Sulfation	Abs/.1mm ASTM D7415* >30	20.4	---	---

FLUID DEGRADATION

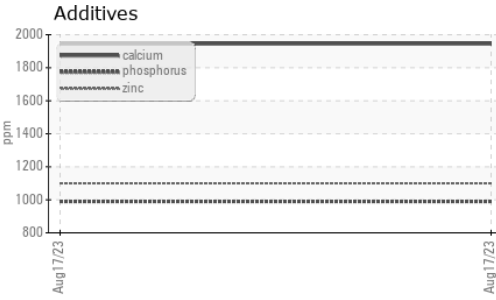
method	limit/base	current	history1	history2
Oxidation	Abs/.1mm ASTM D7414* >25	12.1	---	---



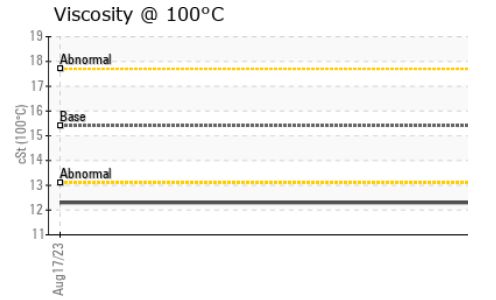
OIL ANALYSIS REPORT



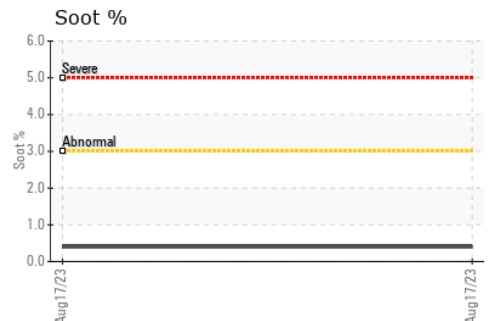
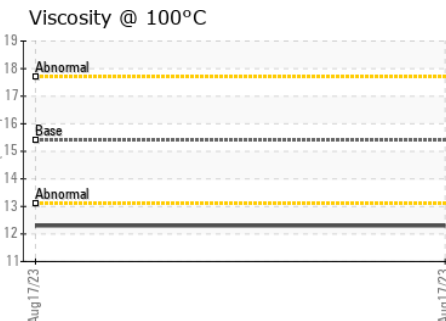
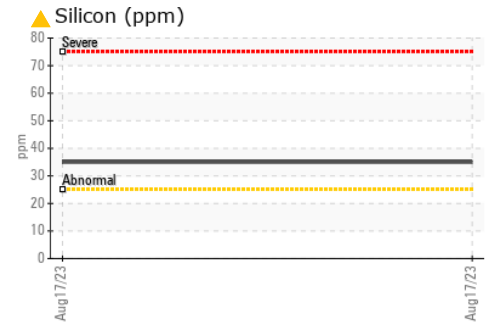
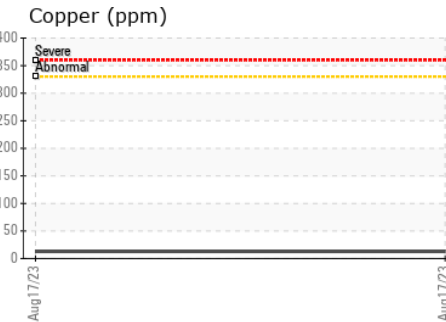
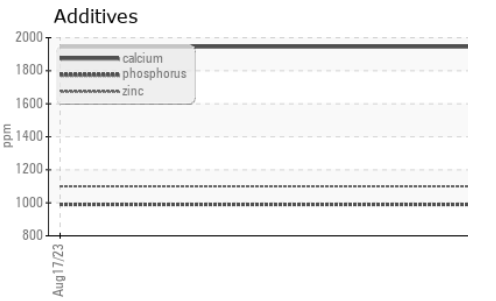
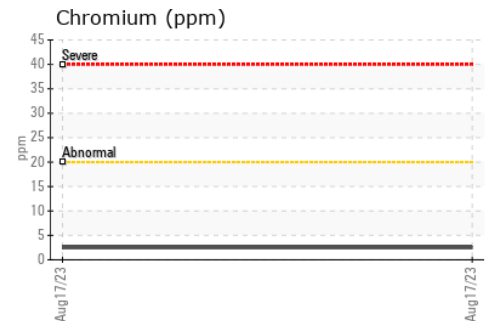
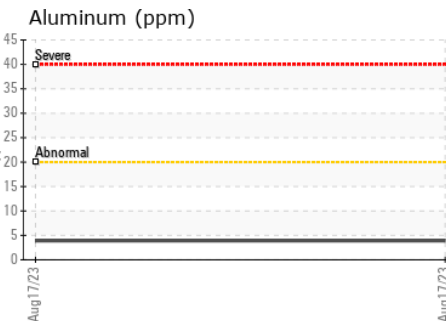
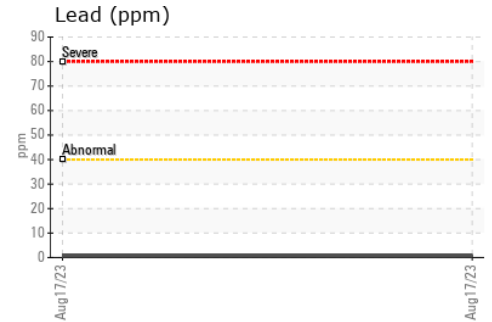
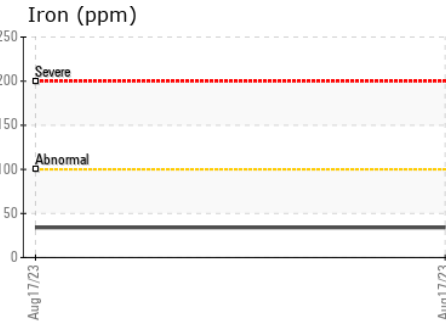
VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.2	NEG	---
Free Water	scalar	Visual*		NEG	---



FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	12.3	---



GRAPHS



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0088932 **Received** : 18 Aug 2023
Lab Number : 02576701 **Diagnosed** : 21 Aug 2023
Unique Number : 5629761 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 216M
 2475 Beryl Drive
 Oakville, ON
 CA L6J 7X4
 Contact: Matthew Gunness
 mgunness@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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F: