



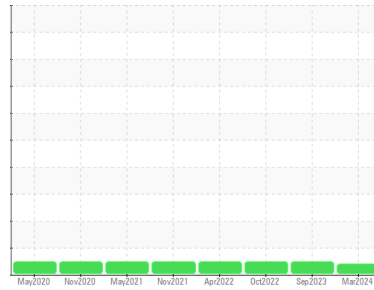
OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY



Machine Id
828011
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as PETRO CANADA DURON SHP 15W40, however, a fluid match indicates that this fluid is SAE 30 Diesel Engine Oil. Please confirm the oil type and grade on your next sample.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0102900	GFL0065879	GFL0061948
Sample Date	Client Info	21 Mar 2024	25 Sep 2023	14 Oct 2022
Machine Age	hrs	0	0	8708
Oil Age	hrs	10037	9485	323
Oil Changed	Client Info	N/A	N/A	Changed
Sample Status		ABNORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	NEG	NEG	NEG
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >80	24	20	16
Chromium	ppm ASTM D5185(m) >5	<1	<1	<1
Nickel	ppm ASTM D5185(m) >2	<1	0	0
Titanium	ppm ASTM D5185(m)	0	0	<1
Silver	ppm ASTM D5185(m) >3	0	<1	0
Aluminum	ppm ASTM D5185(m) >30	5	4	4
Lead	ppm ASTM D5185(m) >30	0	1	<1
Copper	ppm ASTM D5185(m) >150	<1	1	2
Tin	ppm ASTM D5185(m) >5	0	0	<1
Antimony	ppm ASTM D5185(m)	0	0	<1
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	26	44	6
Barium	ppm ASTM D5185(m) 0	0	<1	0
Molybdenum	ppm ASTM D5185(m) 60	37	21	56
Manganese	ppm ASTM D5185(m) 0	0	0	<1
Magnesium	ppm ASTM D5185(m) 1010	465	315	893
Calcium	ppm ASTM D5185(m) 1070	1664	1857	1068
Phosphorus	ppm ASTM D5185(m) 1150	748	951	1023
Zinc	ppm ASTM D5185(m) 1270	905	1161	1131
Sulfur	ppm ASTM D5185(m) 2060	2021	2706	2473
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

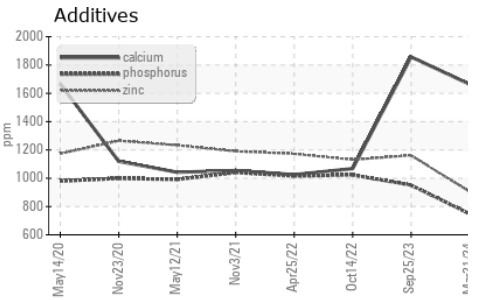
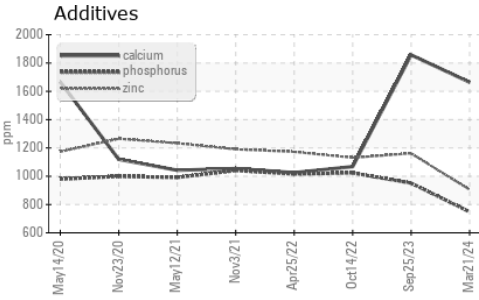
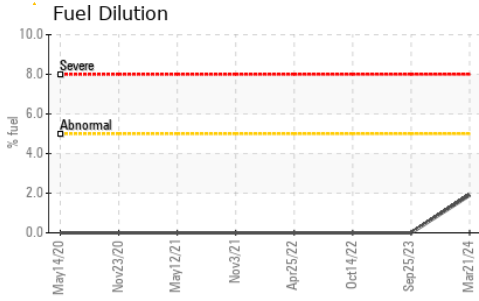
method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >20	4	4	4
Sodium	ppm ASTM D5185(m)	2	3	6
Potassium	ppm ASTM D5185(m) >20	4	13	2
Fuel	% ASTM D7593* >5	1.9	<1.0	<1.0

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% ASTM D7844* >3	0.7	0.4	0.2
Nitration	Abs/cm ASTM D7624* >20	11.5	9.1	8.7
Sulfation	Abs/.1mm ASTM D7415* >30	23.4	22.1	19.8



OIL ANALYSIS REPORT

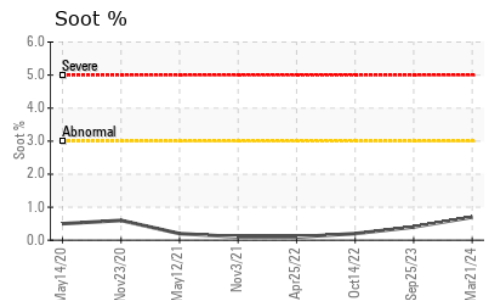
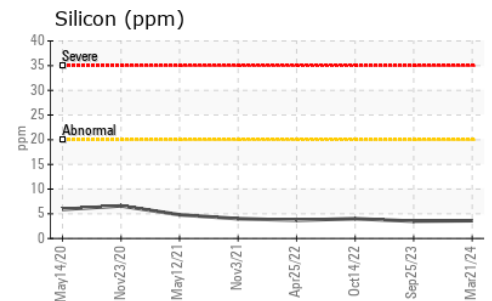
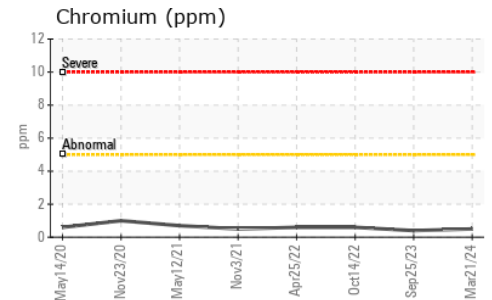
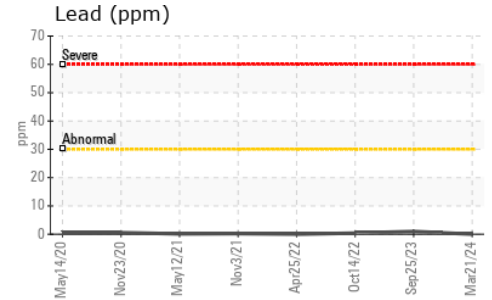
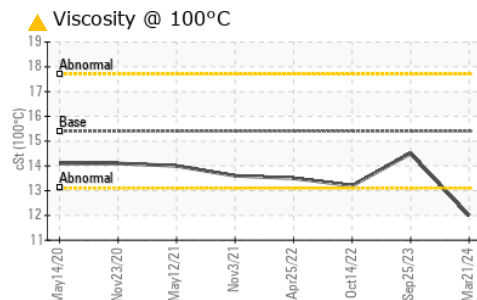
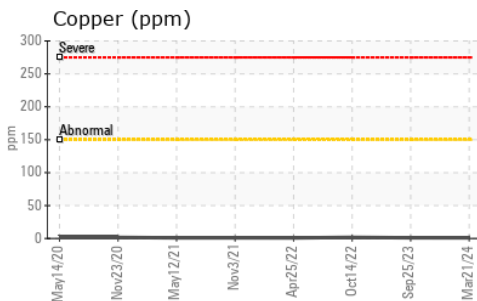
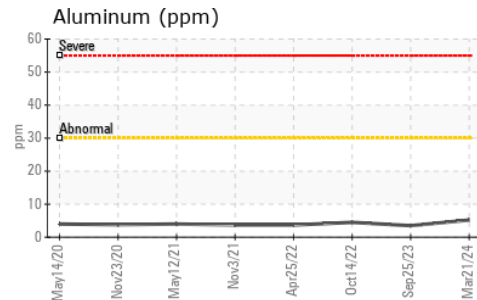
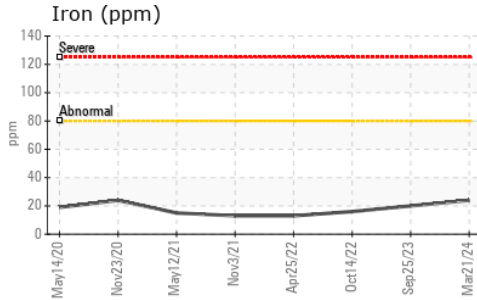


FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	>25	23.5	16.9	15.4

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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 12.0	14.5	13.2

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0102900 **Received** : 26 Mar 2024
Lab Number : 02624603 **Tested** : 27 Mar 2024
Unique Number : 5749722 **Diagnosed** : 27 Mar 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 246 - Windsor
 2700 Deziel Dr
 Windsor, ON
 CA N8W 5H8
 Contact: Dave Varga
 dvarga@gflenv.com
 T: (519)944-8009
 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.