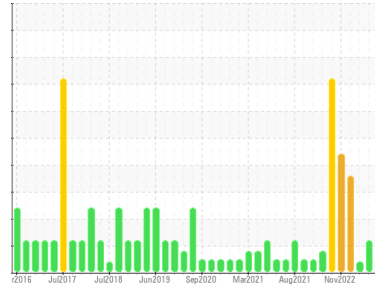




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
2503

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (10 GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0087933	GFL0073299	GFL0073323
Sample Date	Client Info	18 Sep 2023	08 Jun 2023	25 Apr 2023
Machine Age	hrs	477	600	600
Oil Age	hrs	600	600	600
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		NORMAL	ABNORMAL	ATTENTION

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >120	251	12	4
Chromium	ppm	ASTM D5185m >20	14	<1	<1
Nickel	ppm	ASTM D5185m >5	2	3	1
Titanium	ppm	ASTM D5185m >2	<1	<1	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	22	<1	1
Lead	ppm	ASTM D5185m >40	7	<1	0
Copper	ppm	ASTM D5185m >330	8	14	6
Tin	ppm	ASTM D5185m >15	<1	1	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	18	9	27
Barium	ppm	ASTM D5185m 0	0	2	0
Molybdenum	ppm	ASTM D5185m 60	97	108	97
Manganese	ppm	ASTM D5185m 0	3	<1	<1
Magnesium	ppm	ASTM D5185m 1010	461	689	786
Calcium	ppm	ASTM D5185m 1070	2180	1172	1239
Phosphorus	ppm	ASTM D5185m 1150	1182	833	947
Zinc	ppm	ASTM D5185m 1270	1521	1031	1139
Sulfur	ppm	ASTM D5185m 2060	4256	3026	3914

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	17	11	3
Sodium	ppm	ASTM D5185m	54	2	2
Potassium	ppm	ASTM D5185m >20	26	1	<1
Fuel	%	ASTM D3524 >3.0	0.3	▲ 3.7	<1.0

INFRA-RED

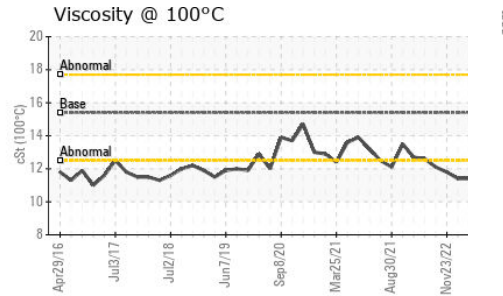
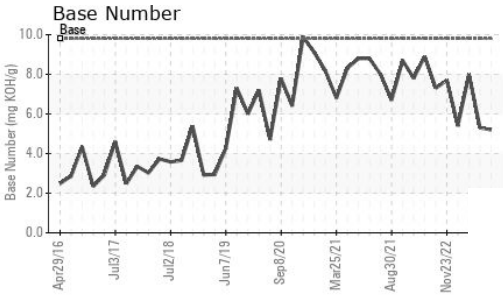
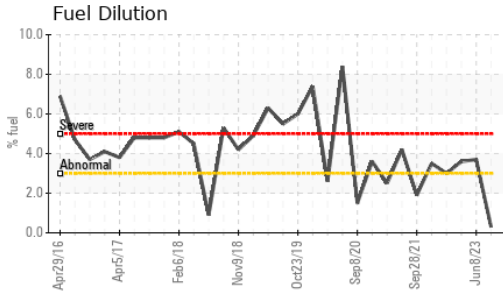
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >4	1.1	0.4	0.2
Nitration	Abs/cm	*ASTM D7624 >20	15.4	8.3	6.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	32.0	20.7	16.9

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	32.1	16.5	12.0
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	5.2	5.3	8.0



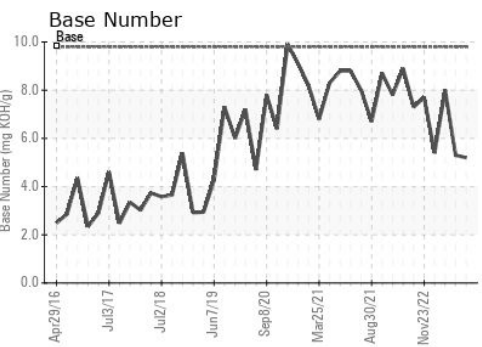
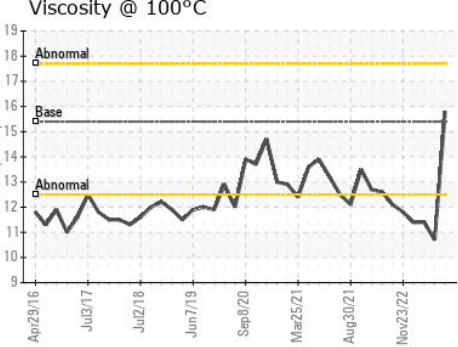
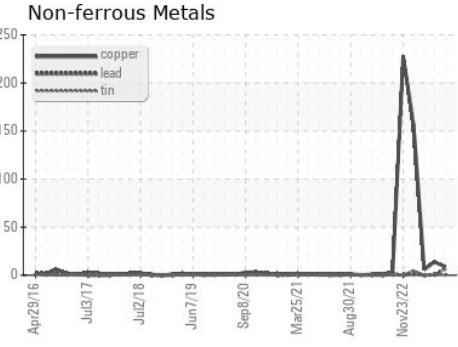
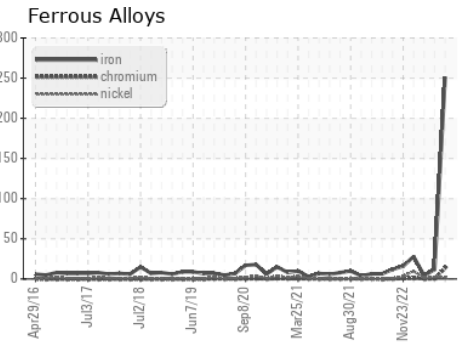
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	15.8	▲ 10.7 ▲ 11.4

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0087933
Lab Number : 05964430
Unique Number : 10670981
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 960 - West Central HC JacksonvilleHC
 2263 State Hwy 104
 Jacksonville, IL
 US 62656
 Contact: David Bradshaw
 david.bradshaw@gflenv.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T:
F: