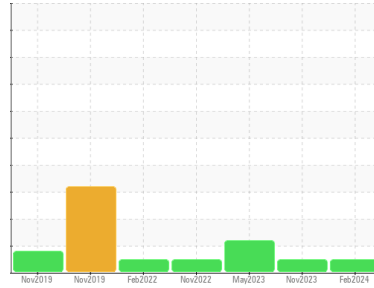




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
229036-632120

Component
Diesel Engine

Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

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 suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0103986	GFL0100529	GFL0083463
Sample Date	Client Info	01 Feb 2024	13 Nov 2023	22 May 2023
Machine Age	hrs	Client Info	7541	314105
Oil Age	hrs	Client Info	7541	314105
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		NORMAL	NORMAL	ABNORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	<1.0	<1.0
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 D5185m >100	42	72	▲ 222
Chromium	ppm ASTM D5185m >20	<1	2	6
Nickel	ppm ASTM D5185m >4	<1	0	2
Titanium	ppm ASTM D5185m	0	<1	<1
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	6	4	8
Lead	ppm ASTM D5185m >40	<1	<1	1
Copper	ppm ASTM D5185m >330	10	2	4
Tin	ppm ASTM D5185m >15	<1	<1	<1
Vanadium	ppm ASTM D5185m	<1	<1	<1
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 50	8	8	3
Barium	ppm ASTM D5185m 5	0	0	0
Molybdenum	ppm ASTM D5185m 50	69	85	87
Manganese	ppm ASTM D5185m 0	<1	<1	3
Magnesium	ppm ASTM D5185m 560	1092	1307	1381
Calcium	ppm ASTM D5185m 1510	1356	1915	1580
Phosphorus	ppm ASTM D5185m 780	1218	1431	1437
Zinc	ppm ASTM D5185m 870	1518	1743	1810
Sulfur	ppm ASTM D5185m 2040	3059	3322	3799

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	8	11	20
Sodium	ppm ASTM D5185m	2	4	4
Potassium	ppm ASTM D5185m >20	3	0	2

INFRA-RED

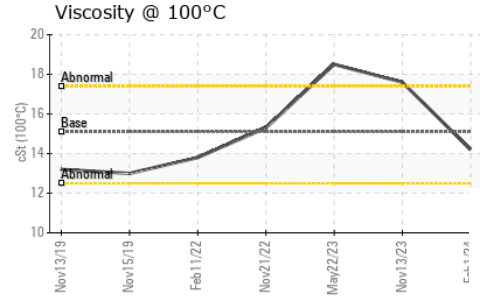
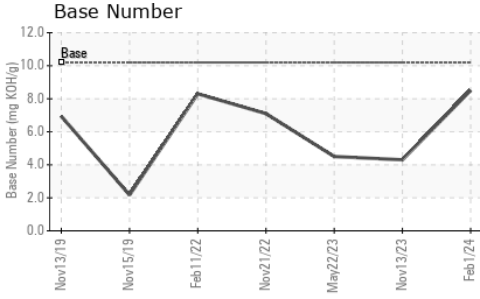
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.8	1.1	1.8
Nitration	Abs/cm *ASTM D7624 >20	12.9	17.8	28.2
Sulfation	Abs/.1mm *ASTM D7415 >30	26.7	34.0	47.2

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	26.9	39.0	70.9
Base Number (BN)	mg KOH/g ASTM D2896 10.2	8.5	4.3	4.5



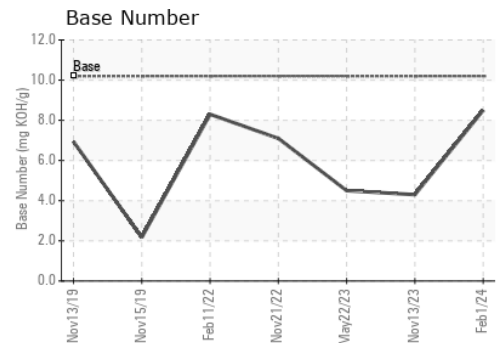
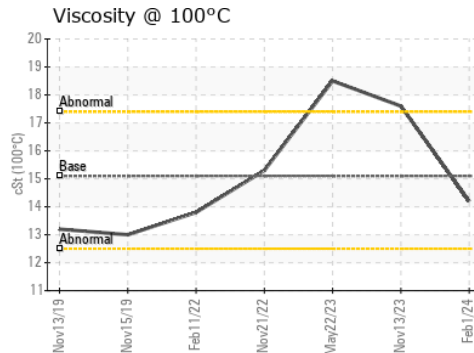
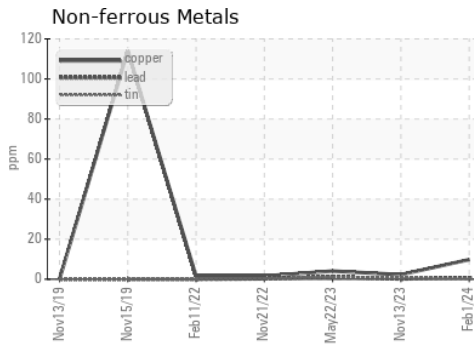
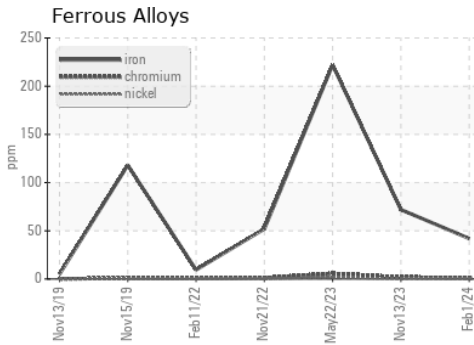
OIL ANALYSIS REPORT



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	15.1	14.2	17.6 ▲ 18.5

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0103986
 Lab Number : 06081081
 Unique Number : 10863172
 Test Package : FLEET

Received : 06 Feb 2024
 Tested : 07 Feb 2024
 Diagnosed : 07 Feb 2024 - Don Baldrige

GFL Environmental - 865 - East Mount Hauling
 7213 East Mount Houston Road
 Houston, TX
 US 77050
 Contact: Saul Castillo
 saul.castillo@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)

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F: