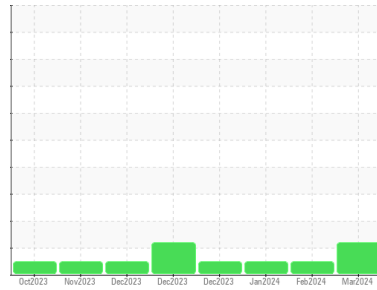




OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION



Machine Id
834045
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

DIAGNOSIS

Recommendation

The oil is near the end of its useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN level is low. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0114146	GFL0108065	GFL0108130
Sample Date	Client Info		12 Mar 2024	17 Feb 2024	23 Jan 2024
Machine Age	hrs	Client Info	1126	988	857
Oil Age	hrs	Client Info	1126	857	0
Oil Changed	Client Info		Not Chngd	N/A	Not Chngd
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<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 >120	89	84	71
Chromium	ppm	ASTM D5185m >20	2	2	<1
Nickel	ppm	ASTM D5185m >5	2	2	2
Titanium	ppm	ASTM D5185m >2	<1	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	8	8	6
Lead	ppm	ASTM D5185m >40	4	4	2
Copper	ppm	ASTM D5185m >330	19	19	17
Tin	ppm	ASTM D5185m >15	2	2	2
Vanadium	ppm	ASTM D5185m	<1	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	1	3	4
Barium	ppm	ASTM D5185m 5	4	4	2
Molybdenum	ppm	ASTM D5185m 50	65	67	60
Manganese	ppm	ASTM D5185m 0	16	16	14
Magnesium	ppm	ASTM D5185m 560	874	940	815
Calcium	ppm	ASTM D5185m 1510	1394	1447	1247
Phosphorus	ppm	ASTM D5185m 780	795	843	765
Zinc	ppm	ASTM D5185m 870	969	1052	907
Sulfur	ppm	ASTM D5185m 2040	2621	2315	2233

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	29	33	32
Sodium	ppm	ASTM D5185m	10	9	6
Potassium	ppm	ASTM D5185m >20	28	8	6

INFRA-RED

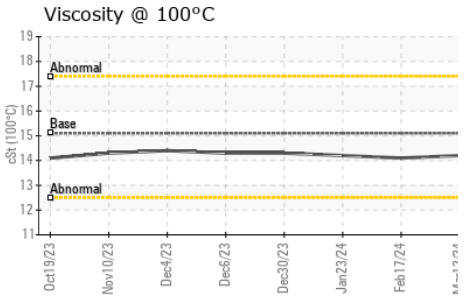
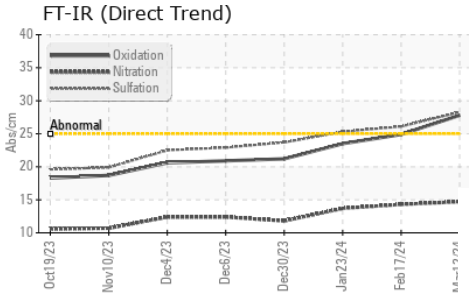
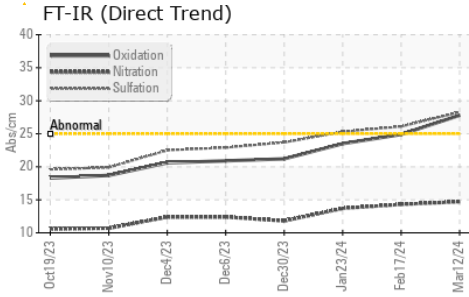
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0	0	0
Nitration	Abs/cm	*ASTM D7624 >20	14.7	14.3	13.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	28.3	26.1	25.3

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	27.8	24.9	23.5
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	▲ 2.5	4.4	4.2



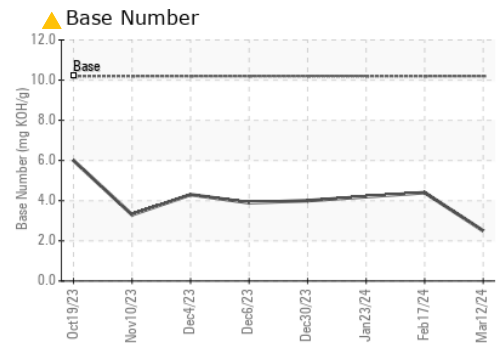
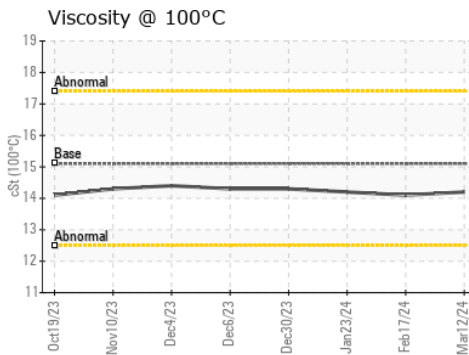
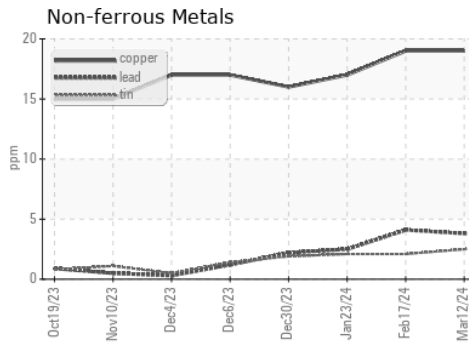
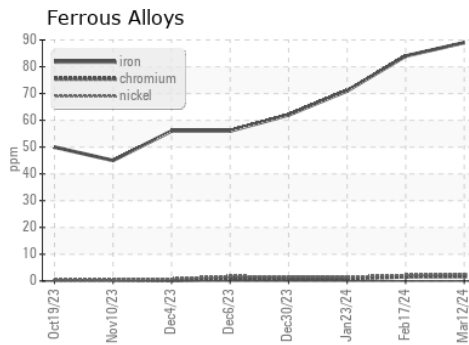
OIL ANALYSIS REPORT



PARAMETER	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	14.1

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0114146
Lab Number : 06150967
Unique Number : 10981045
Test Package : FLEET

Received : 16 Apr 2024
Tested : 17 Apr 2024
Diagnosed : 19 Apr 2024 - Don Baldrige

GFL Environmental - 837 - Harrison TS
 22820 S State Route 291
 Harrisonville, MO
 US 64701
 Contact: SARA PATRICK
 spatrack@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)