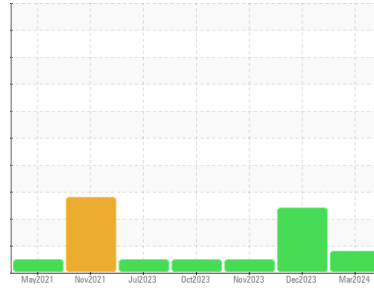




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
4709M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (5 GAL)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the 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	GFL0115017	GFL0101484	GFL0101587
Sample Date	Client Info	03 Mar 2024	04 Dec 2023	09 Nov 2023
Machine Age	hrs	12809	12084	11918
Oil Age	hrs	725	11918	11627
Oil Changed	Client Info	Changed	Not Changd	N/A
Sample Status		ABNORMAL	SEVERE	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 D5185m >75	15	15	4
Chromium	ppm ASTM D5185m >5	<1	<1	<1
Nickel	ppm ASTM D5185m >4	0	0	<1
Titanium	ppm ASTM D5185m >2	<1	0	<1
Silver	ppm ASTM D5185m >2	0	0	<1
Aluminum	ppm ASTM D5185m >15	3	2	2
Lead	ppm ASTM D5185m >25	<1	1	<1
Copper	ppm ASTM D5185m >100	<1	<1	<1
Tin	ppm ASTM D5185m >4	0	0	<1
Vanadium	ppm ASTM D5185m	<1	0	<1
Cadmium	ppm ASTM D5185m	0	0	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	1	7	<1
Barium	ppm ASTM D5185m 0	0	2	<1
Molybdenum	ppm ASTM D5185m 60	59	57	60
Manganese	ppm ASTM D5185m 0	0	0	<1
Magnesium	ppm ASTM D5185m 1010	974	861	930
Calcium	ppm ASTM D5185m 1070	1075	1032	1101
Phosphorus	ppm ASTM D5185m 1150	1003	901	1039
Zinc	ppm ASTM D5185m 1270	1266	1133	1230
Sulfur	ppm ASTM D5185m 2060	3065	2918	3142

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	5	4	5
Sodium	ppm ASTM D5185m	4	18	0
Potassium	ppm ASTM D5185m >20	3	4	3
Fuel	% ASTM D3524 >3.0	▲ 4.1	▲ 9.6	<1.0

INFRA-RED

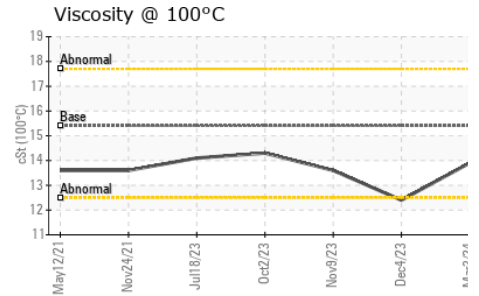
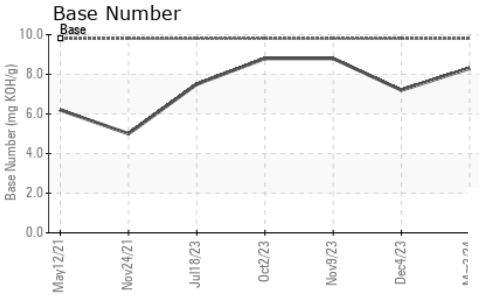
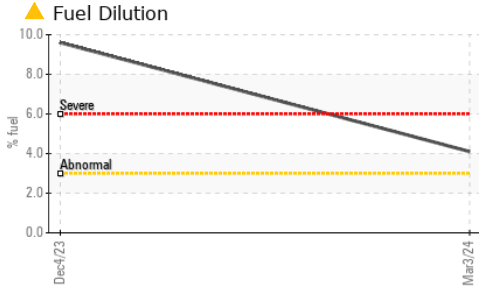
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	0.2	0.3	0.1
Nitration	Abs/cm *ASTM D7624 >20	9.6	11.4	6.8
Sulfation	Abs/.1mm *ASTM D7415 >30	21.2	21.7	19.0

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	19.4	20.5	15.1
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.3	7.2	8.8



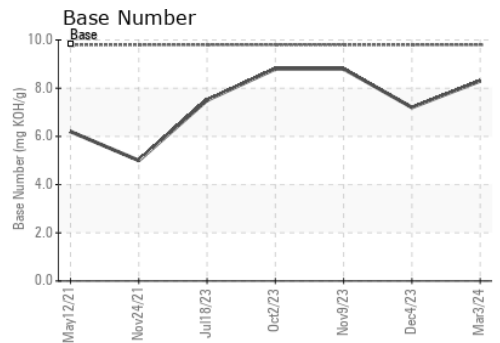
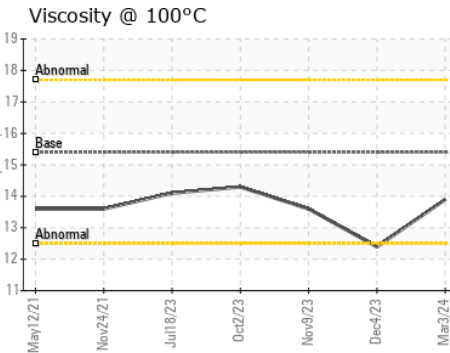
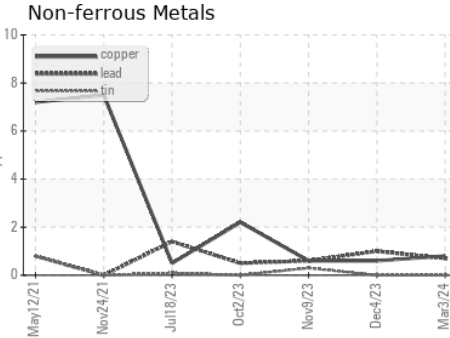
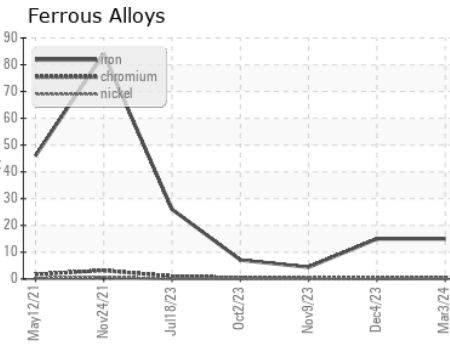
OIL ANALYSIS REPORT



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	13.9	▲ 12.4	13.6

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0115017

Lab Number : 06111126

Unique Number : 10914623

Test Package : FLEET (Additional Tests: PercentFuel)

Received : 07 Mar 2024

Tested : 11 Mar 2024

Diagnosed : 11 Mar 2024 - Wes Davis

GFL Environmental - 405 - Arbor Hills

7400 Napier Rd

NORTHVILLE, MI

US 48168

Contact: Anthony Hopkins

ahopkins@gflenv.com

T:

F:

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)