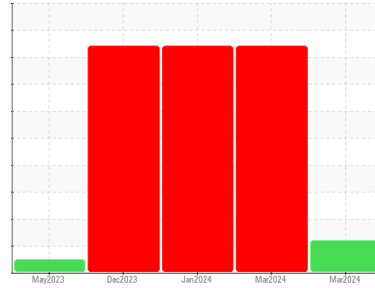




OIL ANALYSIS REPORT

Sample Rating Trend



COOL CHEMICALS



Machine Id
949010-205269

Component
Natural Gas Engine

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

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: PMB was done on the 03/05/24)

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels are high. Test for glycol is negative.

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	GFL0114420	GFL0114483	GFL0100551
Sample Date	Client Info	13 Mar 2024	05 Mar 2024	08 Jan 2024
Machine Age	mls	215213	14926	14513
Oil Age	mls	0	600	14513
Oil Changed	Client Info	Not Changed	Changed	Not Changed
Sample Status		ATTENTION	SEVERE	SEVERE

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>50	5	12	19
Chromium	ppm	ASTM D5185m	>4	<1	2	3
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>9	3	2	3
Lead	ppm	ASTM D5185m	>30	<1	1	3
Copper	ppm	ASTM D5185m	>35	1	5	17
Tin	ppm	ASTM D5185m	>4	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	50	38	14	37
Barium	ppm	ASTM D5185m	5	2	0	0
Molybdenum	ppm	ASTM D5185m	50	53	73	162
Manganese	ppm	ASTM D5185m	0	<1	<1	1
Magnesium	ppm	ASTM D5185m	560	527	621	565
Calcium	ppm	ASTM D5185m	1510	1581	1553	1546
Phosphorus	ppm	ASTM D5185m	780	725	846	884
Zinc	ppm	ASTM D5185m	870	942	997	1064
Sulfur	ppm	ASTM D5185m	2040	2716	3110	2607

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>+100	4	7	13
Sodium	ppm	ASTM D5185m		17	▲ 79	▲ 235
Potassium	ppm	ASTM D5185m	>20	61	▲ 321	▲ 1008
Glycol	%	*ASTM D2982		---	▲ 0.10	▲ 0.20

INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844		0	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.6	8.6	9.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.0	20.1	18.5

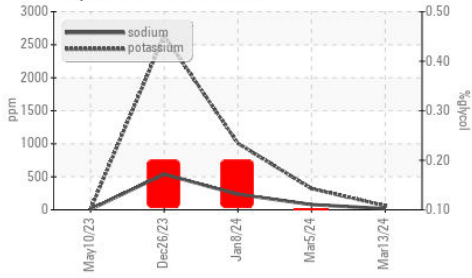
FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.0	16.7	16.4
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	8.6	7.9	15.3

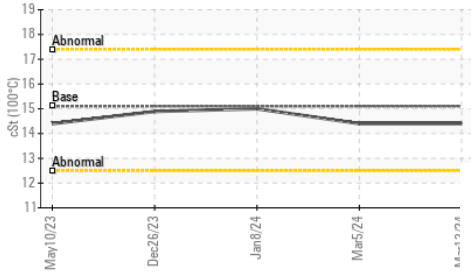


OIL ANALYSIS REPORT

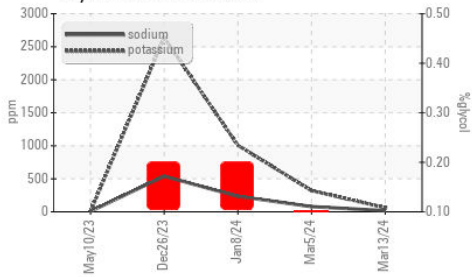
Glycol Contamination



Viscosity @ 100°C



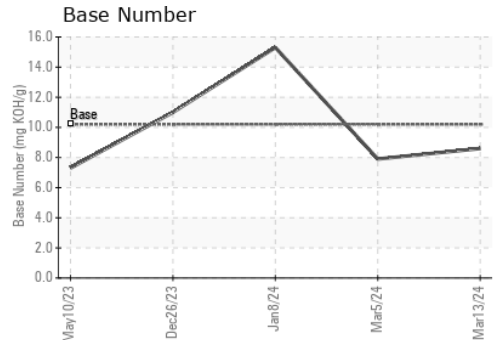
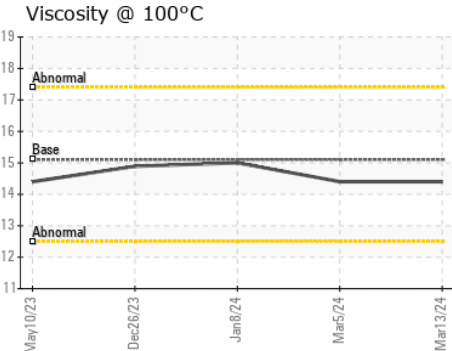
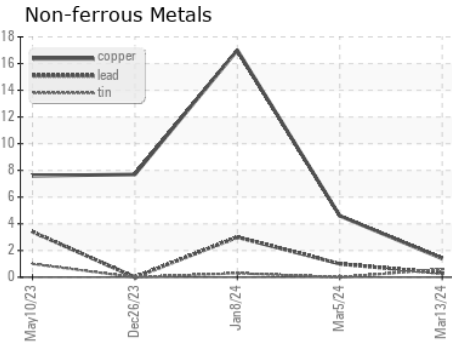
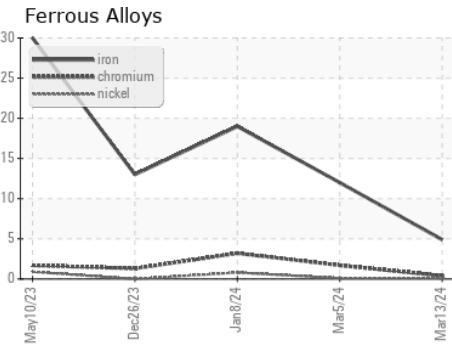
Glycol Contamination



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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.4	15.0

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0114420
Lab Number : 06125408
Unique Number : 10939559
Test Package : FLEET

Received : 21 Mar 2024
Tested : 26 Mar 2024
Diagnosed : 26 Mar 2024 - Jonathan Hester

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)

T:
F: