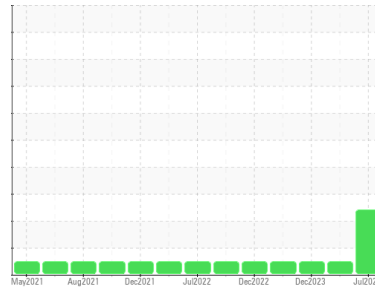




OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id
426086

Component
Natural Gas Engine

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

DIAGNOSIS

▲ Recommendation

Check for low coolant level. 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

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 acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0119135	GFL0115503	GFL0094228
Sample Date	Client Info	16 Jul 2024	22 Mar 2024	08 Dec 2023
Machine Age	hrs	21178	70775	70605
Oil Age	hrs	70775	170	538
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		ABNORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.1	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >50	11	20	5
Chromium	ppm ASTM D5185m >4	<1	0	<1
Nickel	ppm ASTM D5185m >2	<1	<1	<1
Titanium	ppm ASTM D5185m	<1	0	<1
Silver	ppm ASTM D5185m >3	<1	0	0
Aluminum	ppm ASTM D5185m >9	4	2	1
Lead	ppm ASTM D5185m >30	4	1	<1
Copper	ppm ASTM D5185m >35	3	<1	<1
Tin	ppm ASTM D5185m >4	<1	<1	<1
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	<1	0	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 50	8	4	26
Barium	ppm ASTM D5185m 5	0	0	11
Molybdenum	ppm ASTM D5185m 50	61	59	50
Manganese	ppm ASTM D5185m 0	<1	<1	<1
Magnesium	ppm ASTM D5185m 560	591	874	545
Calcium	ppm ASTM D5185m 1510	1545	1054	1481
Phosphorus	ppm ASTM D5185m 780	806	1035	761
Zinc	ppm ASTM D5185m 870	1046	1234	926
Sulfur	ppm ASTM D5185m 2040	2586	3379	2639

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >+100	5	3	3
Sodium	ppm ASTM D5185m	116	17	4
Potassium	ppm ASTM D5185m >20	113	10	3

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	0.2	1.5	0
Nitration	Abs/cm *ASTM D7624 >20	11.9	10.3	8.4
Sulfation	Abs/.1mm *ASTM D7415 >30	22.6	20.6	18.5

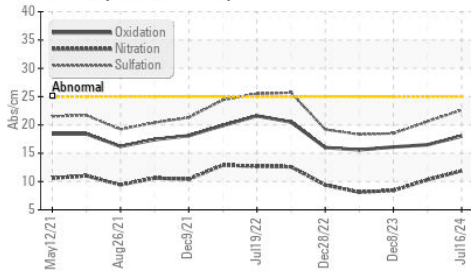
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	18.0	16.5	16.1
Base Number (BN)	mg KOH/g ASTM D2896 10.2	5.5	8.7	7.6

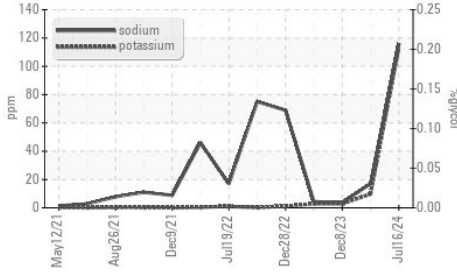


OIL ANALYSIS REPORT

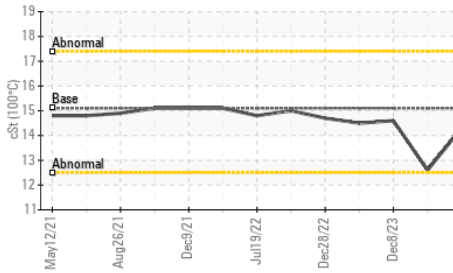
FT-IR (Direct Trend)



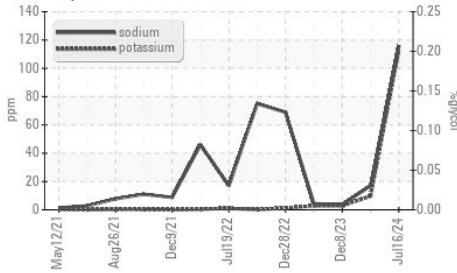
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

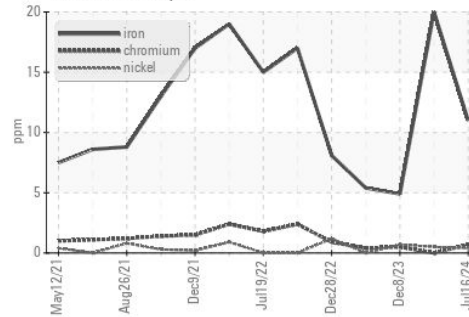


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

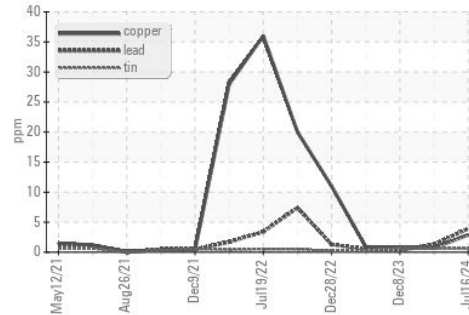
PARAMETER	method	limit/base	current	history1	history2
FLUID PROPERTIES					
Visc @ 100°C	cSt	ASTM D445	15.1	14.3	12.6

GRAPHS

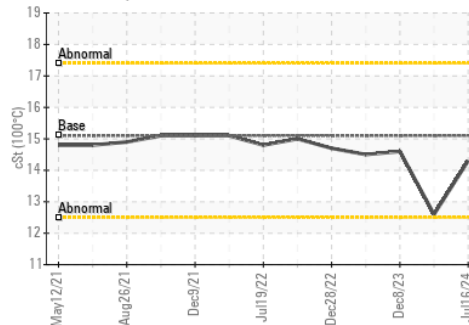
Ferrous Alloys



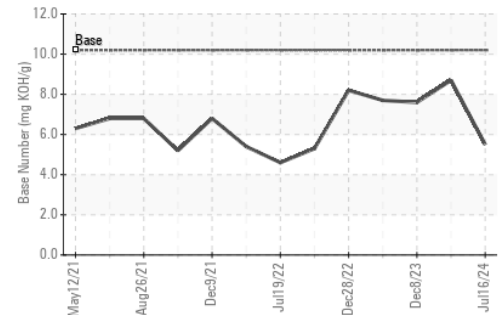
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0119135
Lab Number : 06239844
Unique Number : 11128678
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 882 - Gainesville
 5002 SW 41st Blvd
 Gainesville, FL
 US 32608
 Contact: ROBERT CLARK
 robert.clark@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: