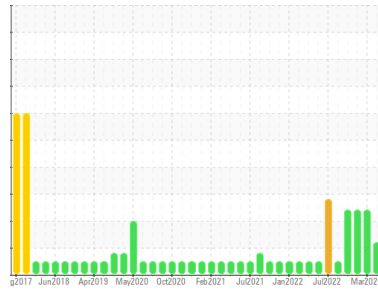




OIL ANALYSIS REPORT

Sample Rating Trend



COOL CHEMICALS



Area
(P633852)
 Machine Id
10775C
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (30 QTS)

DIAGNOSIS

Recommendation

Oil and filter 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

Sodium and/or potassium levels remain 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	GFL0125699	GFL0101761	GFL0101753
Sample Date	Client Info	20 Jun 2024	26 Mar 2024	22 Mar 2024
Machine Age	hrs	16399	15951	15930
Oil Age	hrs	600	600	600
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		MARGINAL	ABNORMAL	ABNORMAL

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	13	58	54
Chromium	ppm ASTM D5185m >4	<1	4	4
Nickel	ppm ASTM D5185m >2	0	2	2
Titanium	ppm ASTM D5185m	0	<1	<1
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >9	2	8	7
Lead	ppm ASTM D5185m >30	1	7	7
Copper	ppm ASTM D5185m >35	0	2	2
Tin	ppm ASTM D5185m >4	<1	2	2
Vanadium	ppm ASTM D5185m	0	<1	<1
Cadmium	ppm ASTM D5185m	0	<1	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 50	12	13	14
Barium	ppm ASTM D5185m 5	0	1	1
Molybdenum	ppm ASTM D5185m 50	55	70	68
Manganese	ppm ASTM D5185m 0	1	3	3
Magnesium	ppm ASTM D5185m 560	624	749	736
Calcium	ppm ASTM D5185m 1510	1746	2082	2033
Phosphorus	ppm ASTM D5185m 780	811	1068	1052
Zinc	ppm ASTM D5185m 870	1072	1239	1218
Sulfur	ppm ASTM D5185m 2040	2900	2952	2974

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >+100	4	11	11
Sodium	ppm ASTM D5185m	11	▲ 25	▲ 25
Potassium	ppm ASTM D5185m >20	▲ 76	▲ 218	▲ 209

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	0	0	0
Nitration	Abs/cm *ASTM D7624 >20	11.1	14.4	14.2
Sulfation	Abs/.1mm *ASTM D7415 >30	23.0	28.8	28.4

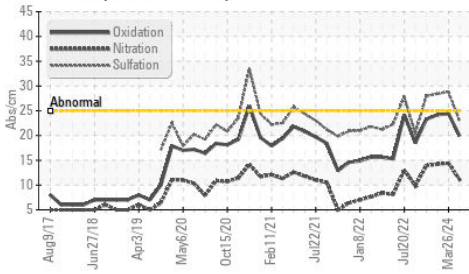
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	19.9	24.4	24.2
Base Number (BN)	mg KOH/g ASTM D2896 10.2	4.6	3.9	4.1

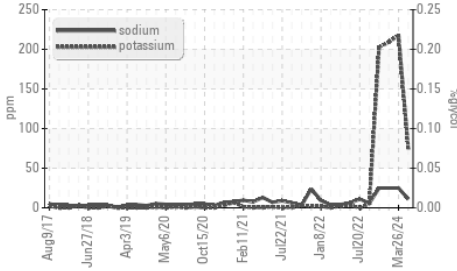


OIL ANALYSIS REPORT

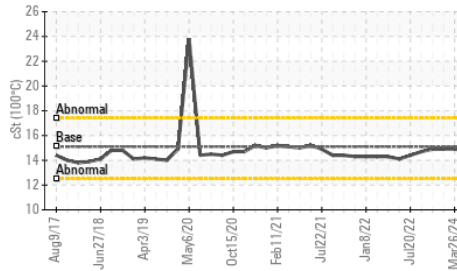
FT-IR (Direct Trend)



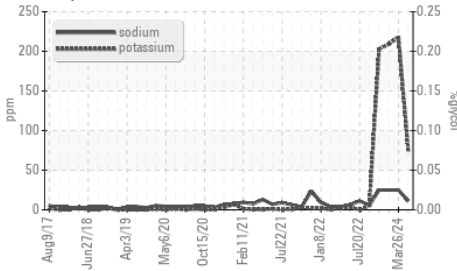
Glycol Contamination



Viscosity @ 100°C



Glycol Contamination

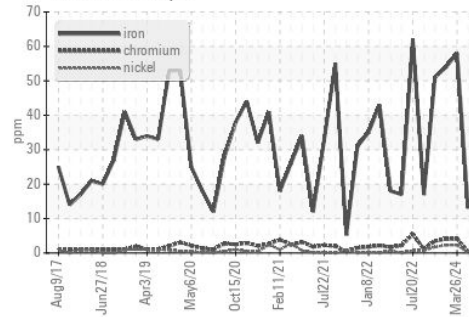


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

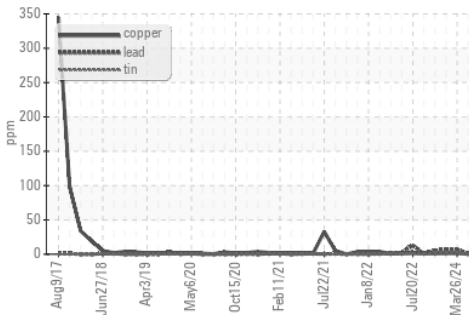
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.8	14.9

GRAPHS

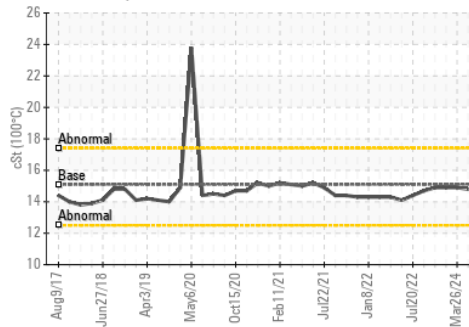
Ferrous Alloys



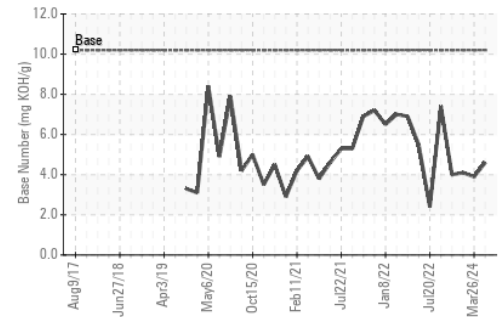
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

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

Sample No. : GFL0125699

Lab Number : 06216710

Unique Number : 11089574

Test Package : FLEET (Additional Tests: Glycol)

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)

Received : 21 Jun 2024

Tested : 24 Jun 2024

Diagnosed : 24 Jun 2024 - Jonathan Hester

GFL Environmental - 030 - Conway Myrtle Beach

3010 HWY 378

Conway, SC

US 29527

Contact: ARCILIO RUEZ

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