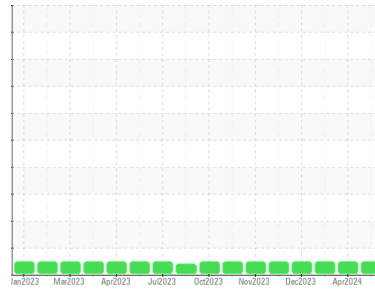




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
(1203951) ALEXANDER CITY
 Machine Id
427128
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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		GFL0089937	GFL0092439	GFL0079723
Sample Date	Client Info		11 Apr 2024	03 Apr 2024	24 Jan 2024
Machine Age	mls	Client Info	369540	15620	353231
Oil Age	mls	Client Info	355946	15620	339637
Oil Changed	Client Info		N/A	Not Changd	N/A
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>6.0	<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 >100	10	9	3
Chromium	ppm	ASTM D5185m >20	<1	0	0
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	2	2	1
Lead	ppm	ASTM D5185m >40	<1	0	<1
Copper	ppm	ASTM D5185m >330	1	<1	<1
Tin	ppm	ASTM D5185m >15	<1	0	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	2	4	8
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	59	62	58
Manganese	ppm	ASTM D5185m 0	0	0	<1
Magnesium	ppm	ASTM D5185m 1010	906	1047	959
Calcium	ppm	ASTM D5185m 1070	1059	1178	1019
Phosphorus	ppm	ASTM D5185m 1150	957	1132	1062
Zinc	ppm	ASTM D5185m 1270	1167	1364	1277
Sulfur	ppm	ASTM D5185m 2060	3330	4043	3300

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	4	4	3
Sodium	ppm	ASTM D5185m	5	2	1
Potassium	ppm	ASTM D5185m >20	19	1	2

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.6	0.5	0.2
Nitration	Abs/cm	*ASTM D7624 >20	9.3	9.0	6.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.9	19.5	17.8

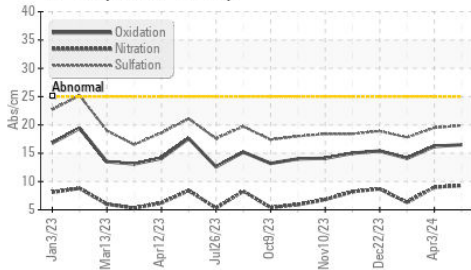
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.5	16.2	14.1
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	6.7	6.9	8.6

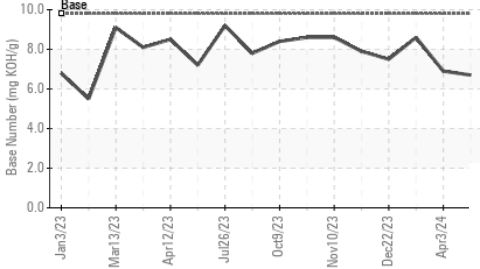


OIL ANALYSIS REPORT

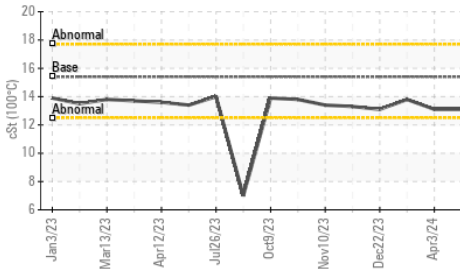
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

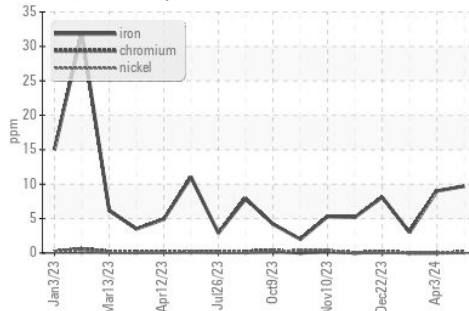


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

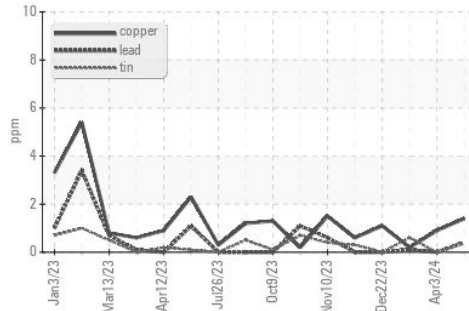
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.1	13.8

GRAPHS

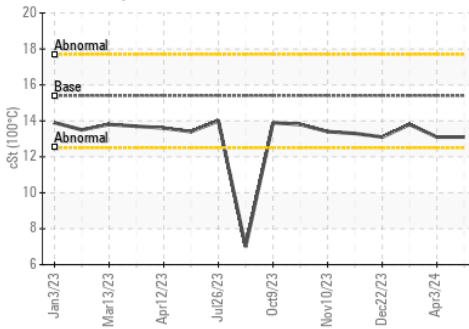
Ferrous Alloys



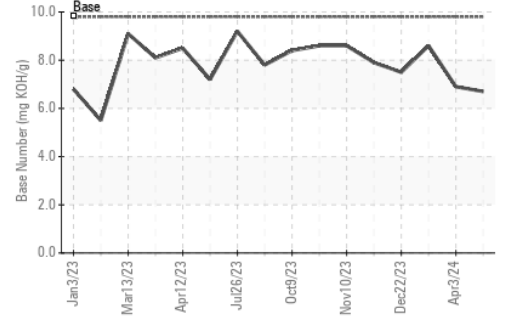
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0089937
Lab Number : 06150991
Unique Number : 10981069
Test Package : FLEET

Received : 16 Apr 2024
Tested : 17 Apr 2024
Diagnosed : 17 Apr 2024 - Wes Davis

GFL Environmental - 172 - Montgomery-Alexander City-Tallahassee
 Multiple Sites
 Montgomery, AL
 US 36108
 Contact: RICHARD HATFIELD
 rhatfield@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:
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