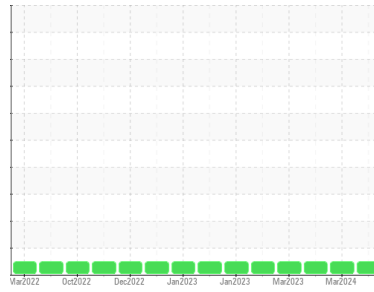




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
946016-260297

Component
Natural Gas Engine

Fluid
PETRO CANADA DURON GEO LD 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	GFL0121751	GFL0106810	GFL0084729	
Sample Date	Client Info	01 Jul 2024	13 Mar 2024	16 Jun 2023	
Machine Age	hrs	Client Info	7153	6574	122905
Oil Age	hrs	Client Info	600	600	0
Oil Changed	Client Info	Changed	Changed	Changed	
Sample Status		NORMAL	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	27	37	10
Chromium	ppm	ASTM D5185m	>4	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>9	2	1	1
Lead	ppm	ASTM D5185m	>30	0	0	<1
Copper	ppm	ASTM D5185m	>35	9	20	10
Tin	ppm	ASTM D5185m	>4	0	0	0
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	50	15	17	39
Barium	ppm	ASTM D5185m	5	0	0	10
Molybdenum	ppm	ASTM D5185m	50	53	50	46
Manganese	ppm	ASTM D5185m	0	1	<1	3
Magnesium	ppm	ASTM D5185m	560	566	618	793
Calcium	ppm	ASTM D5185m	1510	1695	1680	1265
Phosphorus	ppm	ASTM D5185m	780	690	838	745
Zinc	ppm	ASTM D5185m	870	855	1032	911
Sulfur	ppm	ASTM D5185m	2040	2407	3064	2867

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>+100	3	10	16
Sodium	ppm	ASTM D5185m		10	7	6
Potassium	ppm	ASTM D5185m	>20	0	<1	1

INFRA-RED

method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844		0	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.9	10.4	7.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.5	18.3	19.8

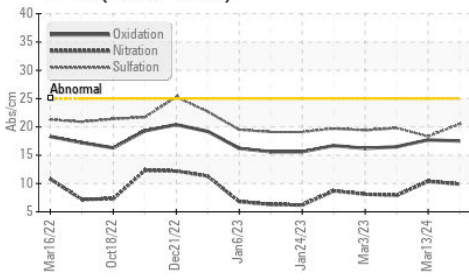
FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.5	17.7	16.5
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	5.7	9.8	9.8

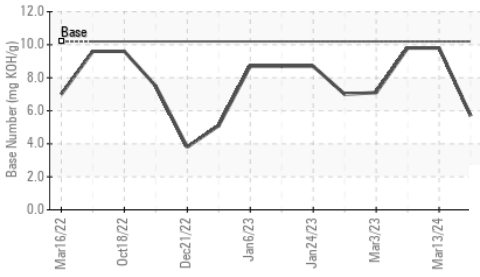


OIL ANALYSIS REPORT

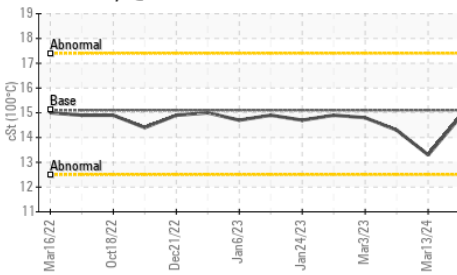
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

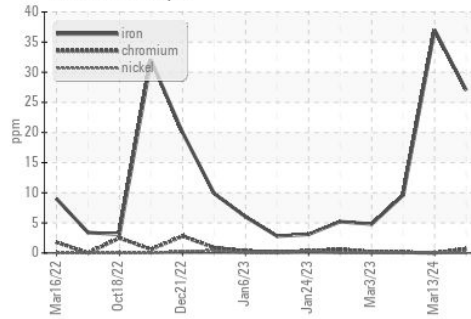


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

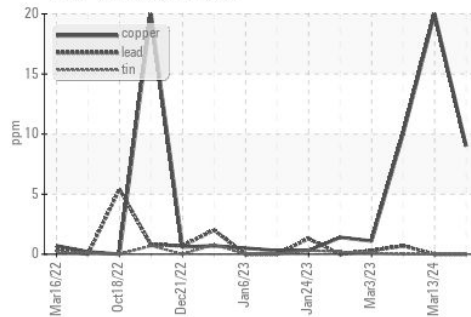
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.8	13.3

GRAPHS

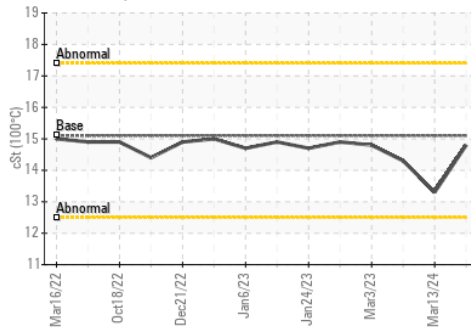
Ferrous Alloys



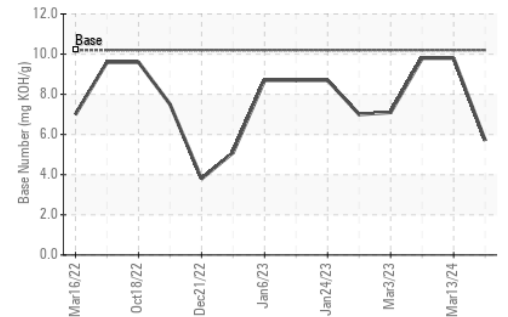
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0121751
Lab Number : 06228393
Unique Number : 11111886
Test Package : FLEET

Received : 05 Jul 2024
Tested : 08 Jul 2024
Diagnosed : 08 Jul 2024 - Wes Davis

GFL Environmental - 856 - Houston South
 8515 Highway 6 South
 Houston, TX
 US 77083

Contact: Apolinar Zacarias
 pzacariascano@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: