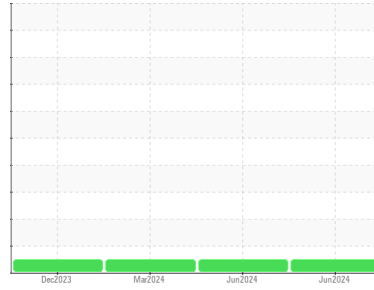




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
(TMV3662)

Machine Id
934066

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

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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		GFL0125181	GFL0125245	GFL0114401
Sample Date	Client Info		29 Jun 2024	21 Jun 2024	18 Mar 2024
Machine Age	hrs	Client Info	2093	2034	15655
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Not Changed	Not Changd	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	21	23	22
Chromium	ppm	ASTM D5185m >4	2	3	2
Nickel	ppm	ASTM D5185m >2	0	1	1
Titanium	ppm	ASTM D5185m	0	<1	<1
Silver	ppm	ASTM D5185m >3	0	<1	0
Aluminum	ppm	ASTM D5185m >9	31	38	31
Lead	ppm	ASTM D5185m >30	<1	1	2
Copper	ppm	ASTM D5185m >35	2	4	6
Tin	ppm	ASTM D5185m >4	<1	<1	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	6	8	11
Barium	ppm	ASTM D5185m 5	0	<1	2
Molybdenum	ppm	ASTM D5185m 50	59	63	66
Manganese	ppm	ASTM D5185m 0	1	1	3
Magnesium	ppm	ASTM D5185m 560	648	669	632
Calcium	ppm	ASTM D5185m 1510	1930	1869	1858
Phosphorus	ppm	ASTM D5185m 780	835	915	791
Zinc	ppm	ASTM D5185m 870	1099	1127	1071
Sulfur	ppm	ASTM D5185m 2040	3080	2752	2816

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >+100	6	8	8
Sodium	ppm	ASTM D5185m	9	8	6
Potassium	ppm	ASTM D5185m >20	108	129	112

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	0	0	0
Nitration	Abs/cm	*ASTM D7624 >20	11.5	11.1	11.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	25.5	24.7	23.3

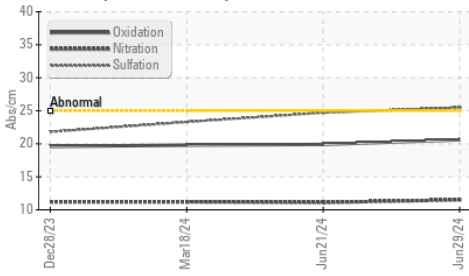
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	20.6	19.9	19.8
Base Number (BN)	mg KOH/g	ASTM D2896 10.2	4.2	4.6	3.6

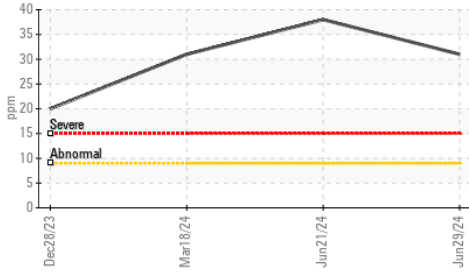


OIL ANALYSIS REPORT

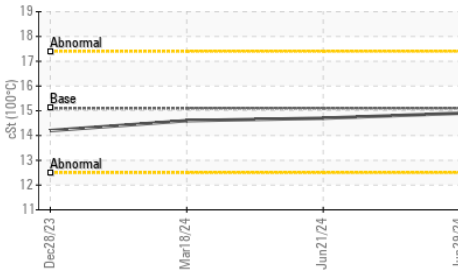
FT-IR (Direct Trend)



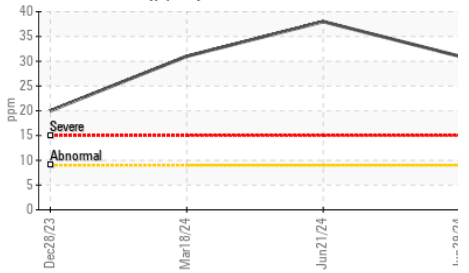
Aluminum (ppm)



Viscosity @ 100°C



Aluminum (ppm)

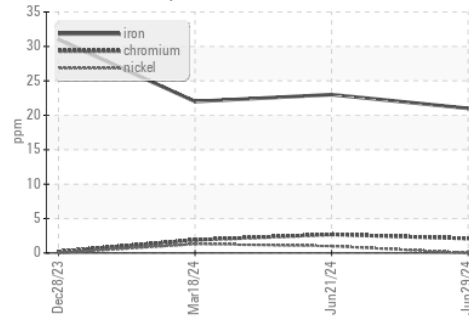


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

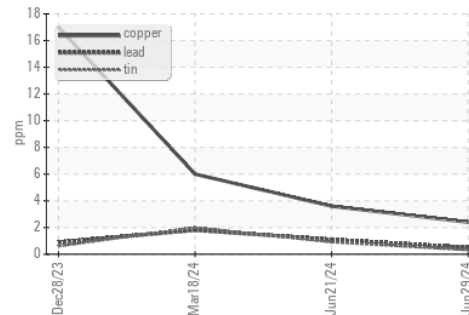
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.7	14.6

GRAPHS

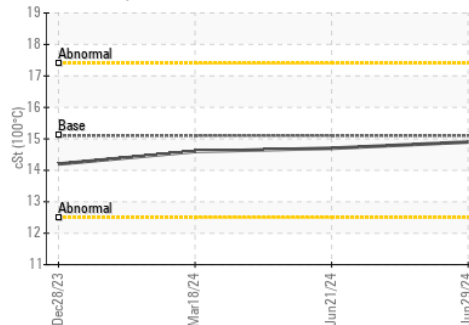
Ferrous Alloys



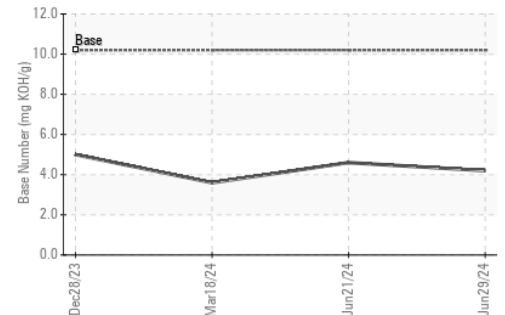
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0125181
Lab Number : 06229595
Unique Number : 11113088
Test Package : FLEET

Received : 05 Jul 2024
Tested : 09 Jul 2024
Diagnosed : 09 Jul 2024 - Wes Davis

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: