



OIL ANALYSIS REPORT

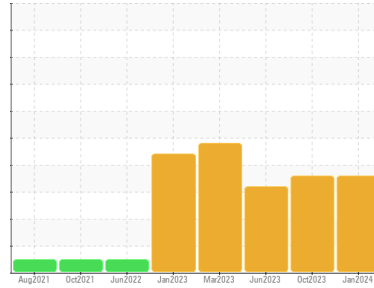
Sample Rating Trend

DEGRADATION

Machine Id
945004-260236

Component
Natural Gas Engine

Fluid
PETRO CANADA DURON GEO LD 15W40 (7 GAL)



DIAGNOSIS

Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The oil viscosity is lower than normal. Additive levels indicate the addition of a different brand, or type of oil. The BN level is low. Confirm oil type.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0081079	GFL0081110	GFL0081055
Sample Date	Client Info	17 Jan 2024	17 Oct 2023	19 Jun 2023
Machine Age	hrs	13211	12746	12249
Oil Age	hrs	609	144	677
Oil Changed	Client Info	Not Chngd	Not Chngd	Not Chngd
Sample Status		ABNORMAL	ABNORMAL	ABNORMAL

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >50	0	15	9
Chromium	ppm ASTM D5185m >4	0	<1	0
Nickel	ppm ASTM D5185m >2	0	<1	0
Titanium	ppm ASTM D5185m	0	0	0
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >9	0	2	0
Lead	ppm ASTM D5185m >30	0	0	0
Copper	ppm ASTM D5185m >35	<1	<1	<1
Tin	ppm ASTM D5185m >4	0	0	0
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 50	14	29	21
Barium	ppm ASTM D5185m 5	0	0	0
Molybdenum	ppm ASTM D5185m 50	▲ 8	▲ 8	21
Manganese	ppm ASTM D5185m 0	<1	0	0
Magnesium	ppm ASTM D5185m 560	▲ 74	▲ 56	▲ 209
Calcium	ppm ASTM D5185m 1510	▲ 282	▲ 225	▲ 672
Phosphorus	ppm ASTM D5185m 780	▲ 273	▲ 219	▲ 434
Zinc	ppm ASTM D5185m 870	▲ 120	▲ 88	▲ 391
Sulfur	ppm ASTM D5185m 2040	1495	1729	2127

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >+100	1	3	3
Sodium	ppm ASTM D5185m	2	7	39
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	5.2	4.2	6.6
Sulfation	Abs/.1mm *ASTM D7415 >30	25.1	20.6	21.1

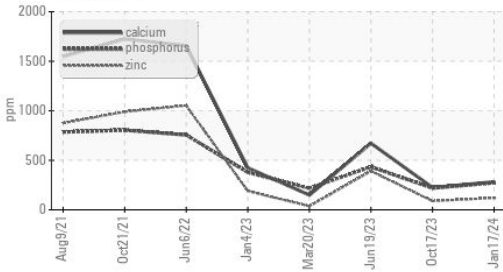
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	31.7	22.0	20.9
Base Number (BN)	mg KOH/g ASTM D2896 10.2	▲ 0.3	▲ 0.0	▲ 2.5

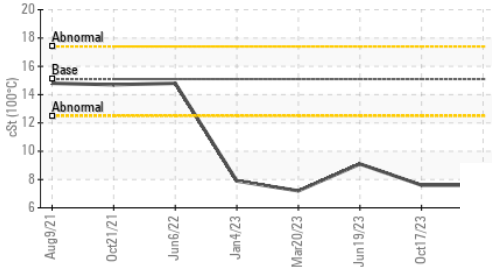


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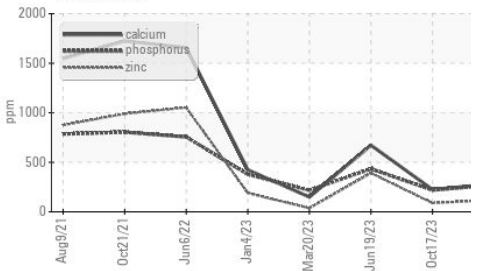
▲ Additives



▲ Viscosity @ 100°C



▲ Additives

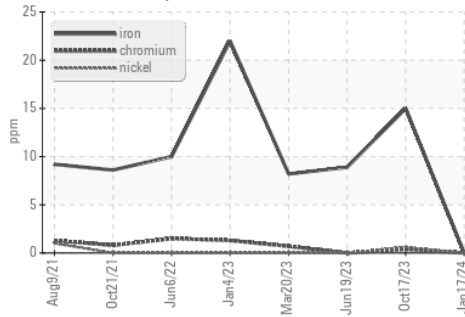


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

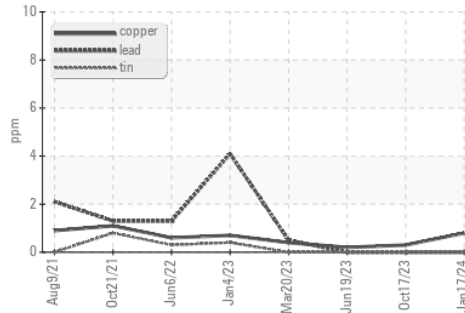
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1 ▲ 7.6	▲ 7.6	▲ 9.1

GRAPHS

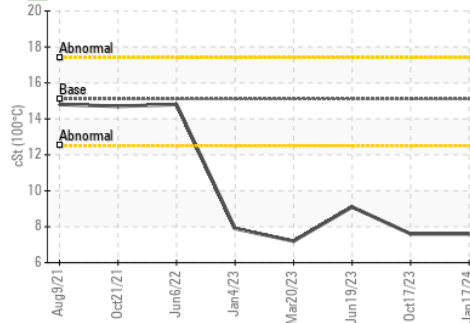
Ferrous Alloys



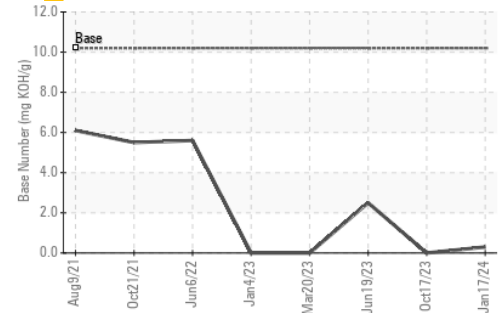
Non-ferrous Metals



▲ Viscosity @ 100°C



▲ Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0081079 **Received** : 19 Jan 2024
Lab Number : 06066119 **Diagnosed** : 23 Jan 2024
Unique Number : 10842796 **Diagnostician** : Don Baldrige
Test Package : FLEET

GFL Environmental - 884 - Lake County - Tavares
 321 Southridge Industrial Way
 Tavares, FL
 US 32778
 Contact: JEFF COOPERSMITH

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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