



OIL ANALYSIS REPORT

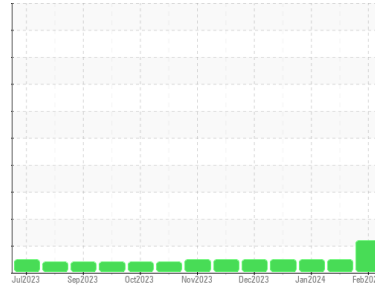
Sample Rating Trend

DEGRADATION

Machine Id
433003

Component
Natural Gas Engine

Fluid
PETRO CANADA DURON GEO LD 15W40 (--- LTR)



DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. 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 level is low. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0109771	GFL0109856	GFL0103315
Sample Date	Client Info	08 Feb 2024	05 Feb 2024	22 Jan 2024
Machine Age	hrs	2408	2350	2178
Oil Age	hrs	1200	0	0
Oil Changed	Client Info	Changed	Not Changd	Not Changd
Sample Status		ABNORMAL	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	11	9	9
Chromium	ppm ASTM D5185m >4	<1	<1	<1
Nickel	ppm ASTM D5185m >2	0	0	0
Titanium	ppm ASTM D5185m	0	<1	0
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >9	6	4	5
Lead	ppm ASTM D5185m >30	6	3	2
Copper	ppm ASTM D5185m >35	10	9	9
Tin	ppm ASTM D5185m >4	<1	2	2
Vanadium	ppm ASTM D5185m	0	<1	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 50	4	17	6
Barium	ppm ASTM D5185m 5	0	<1	0
Molybdenum	ppm ASTM D5185m 50	51	50	44
Manganese	ppm ASTM D5185m 0	<1	1	<1
Magnesium	ppm ASTM D5185m 560	585	570	531
Calcium	ppm ASTM D5185m 1510	1561	1378	1481
Phosphorus	ppm ASTM D5185m 780	729	677	620
Zinc	ppm ASTM D5185m 870	935	872	835
Sulfur	ppm ASTM D5185m 2040	2368	2165	1998

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >+100	16	20	15
Sodium	ppm ASTM D5185m	3	12	4
Potassium	ppm ASTM D5185m >20	0	0	<1

INFRA-RED

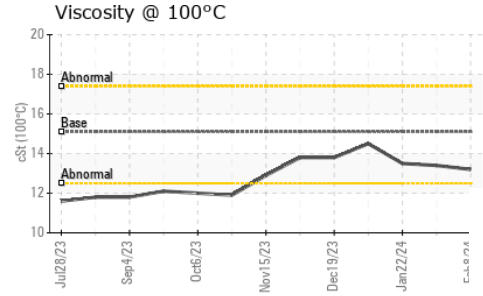
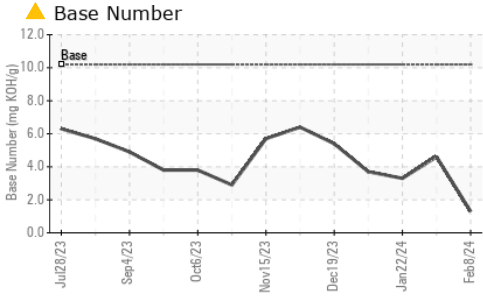
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	0	0	0
Nitration	Abs/cm *ASTM D7624 >20	11.4	10.2	11.5
Sulfation	Abs/.1mm *ASTM D7415 >30	24.4	23.2	24.4

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	21.6	20.2	20.4
Base Number (BN)	mg KOH/g ASTM D2896 10.2	▲ 1.3	4.6	3.3



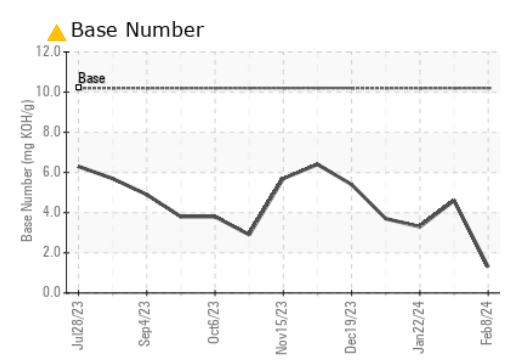
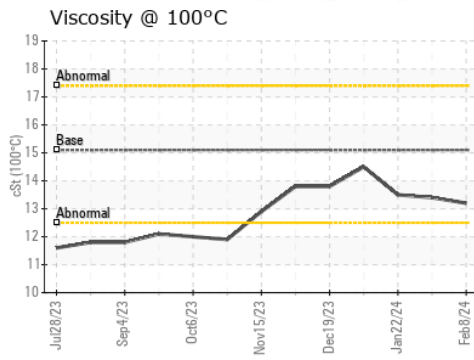
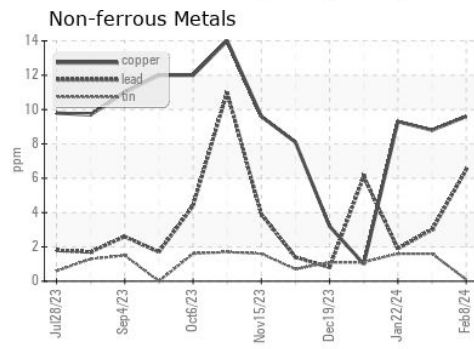
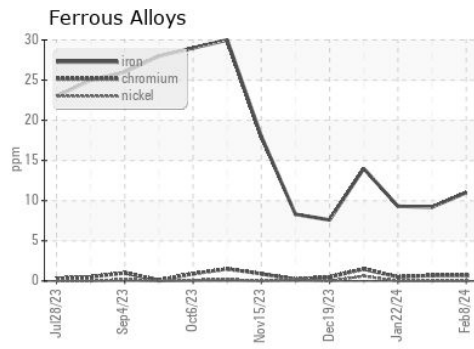
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VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
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	13.2	13.4	13.5

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0109771 **Received** : 12 Feb 2024
Lab Number : 06085660 **Tested** : 13 Feb 2024
Unique Number : 10873105 **Diagnosed** : 13 Feb 2024 - Jonathan Hester
Test Package : FLEET

GFL Environmental - 836 - Kansas City Hauling
 7801 East Truman Road
 Kansas City, MO
 US 64126
 Contact: Loyce Stewart
 loyce.stewart@gflenv.com
 T:
 F:

Certificate L2367
 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)