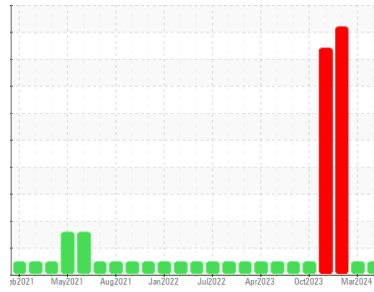




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
(YA156369)

Machine Id
910029

Component
Diesel Engine

Fluid
PETRO CANADA DURON GEO LD 15W40 (8 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	GFL0115990	GFL0090035	GFL0090007	
Sample Date	Client Info	02 Jul 2024	21 Mar 2024	08 Mar 2024	
Machine Age	hrs	Client Info	41069	9862	41069
Oil Age	hrs	Client Info	0	100	0
Oil Changed	Client Info	Not Changed	Not Changd	Not Changed	
Sample Status		NORMAL	NORMAL	SEVERE	

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<1.0	<1.0	<1.0
Water	WC Method >0.2	NEG	NEG	NEG
Glycol	WC Method	NEG	NEG	▲ 0.20

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >165	8	6	43
Chromium	ppm ASTM D5185m >5	<1	1	▲ 10
Nickel	ppm ASTM D5185m >4	0	<1	2
Titanium	ppm ASTM D5185m >2	0	<1	<1
Silver	ppm ASTM D5185m >2	0	<1	0
Aluminum	ppm ASTM D5185m >20	2	2	4
Lead	ppm ASTM D5185m >150	0	1	14
Copper	ppm ASTM D5185m >90	<1	1	8
Tin	ppm ASTM D5185m >5	0	1	<1
Vanadium	ppm ASTM D5185m	0	<1	0
Cadmium	ppm ASTM D5185m	0	<1	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 50	17	28	15
Barium	ppm ASTM D5185m 5	0	1	0
Molybdenum	ppm ASTM D5185m 50	54	51	94
Manganese	ppm ASTM D5185m 0	0	1	1
Magnesium	ppm ASTM D5185m 560	749	582	571
Calcium	ppm ASTM D5185m 1510	1326	1518	1567
Phosphorus	ppm ASTM D5185m 780	962	789	833
Zinc	ppm ASTM D5185m 870	1107	972	1013
Sulfur	ppm ASTM D5185m 2040	2641	2632	2940

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >35	5	7	17
Sodium	ppm ASTM D5185m	3	3	▲ 414
Potassium	ppm ASTM D5185m >20	3	4	▲ 6687

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >7.5	0	0	0.1
Nitration	Abs/cm *ASTM D7624 >20	7.6	8.0	17.4
Sulfation	Abs/.1mm *ASTM D7415 >30	19.7	19.0	31.8

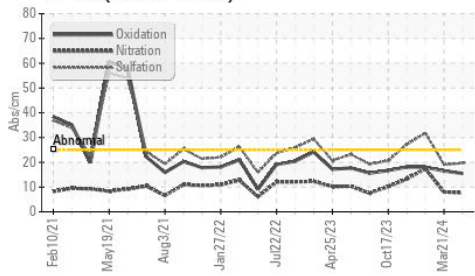
FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	15.5	16.5	18.0
Base Number (BN)	mg KOH/g ASTM D2896 10.2	7.5	7.4	15.5

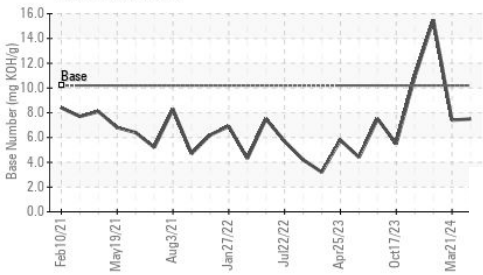


OIL ANALYSIS REPORT

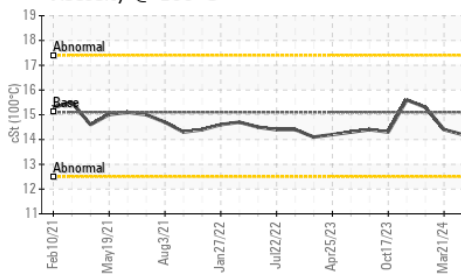
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

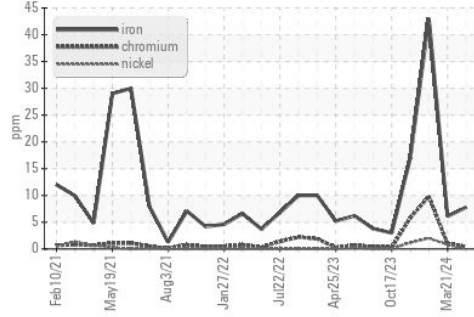


VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

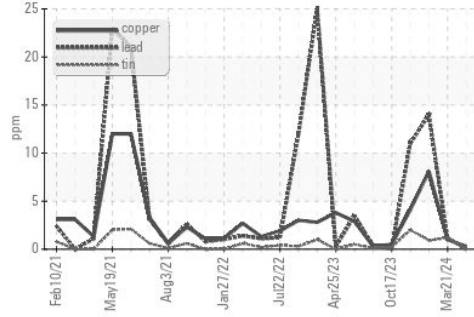
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.1	14.2	14.4	15.3

GRAPHS

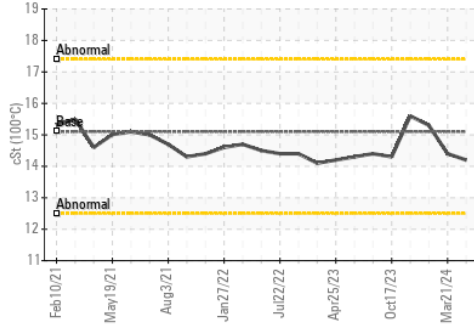
Ferrous Alloys



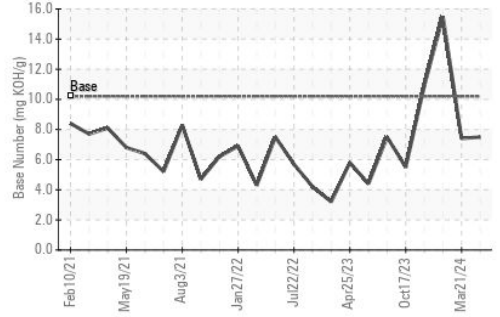
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0115990 **Received** : 03 Jul 2024
Lab Number : **06227109** **Tested** : 05 Jul 2024
Unique Number : 11110602 **Diagnosed** : 05 Jul 2024 - Wes Davis
Test Package : FLEET

GFL Environmental - 018 - Fayetteville
 4621 Marracco Drive
 Hope Mills, NC
 US 28348
 Contact: Robert Carter
 robert.carter@gflenv.com
 T: (910)596-1170
 F:

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)