



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 11198C
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (9 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0109608	GFL0109587	GFL0087544
Sample Date		Client Info		17 Apr 2024	07 Feb 2024	14 Sep 2023
Machine Age	hrs	Client Info		15152	3154	2559
Oil Age	hrs	Client Info		277	1170	575
Filter Age	hrs	Client Info		277	1170	575
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	12	26	12
Chromium	ppm	ASTM D5185m	>4	4	▲ 8	3
Nickel	ppm	ASTM D5185m	>2	2	1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>9	2	3	2
Lead	ppm	ASTM D5185m	>30	6	▲ 32	2
Copper	ppm	ASTM D5185m	>35	12	32	24
Tin	ppm	ASTM D5185m	>4	2	1	2
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

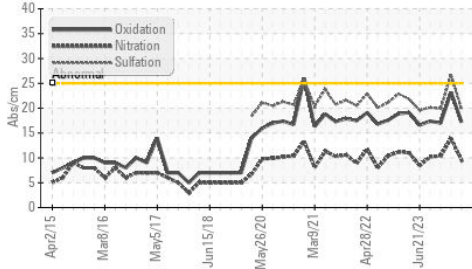
Silicon	ppm	ASTM D5185m	>+100	5	6	7
Potassium	ppm	ASTM D5185m	>20	3	6	4
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.5	13.9	10.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.8	26.7	19.9
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
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	>0.1	NEG	NEG	NEG

FLUID CONDITION

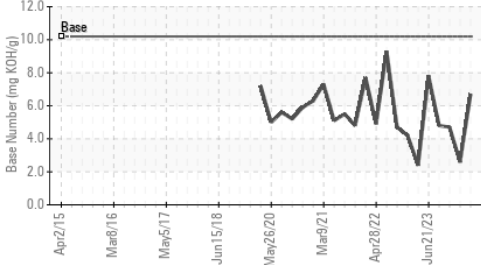
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		7	10	8
Boron	ppm	ASTM D5185m	50	23	2	5
Barium	ppm	ASTM D5185m	5	0	<1	44
Molybdenum	ppm	ASTM D5185m	50	50	55	50
Manganese	ppm	ASTM D5185m	0	2	1	1
Magnesium	ppm	ASTM D5185m	560	552	576	503
Calcium	ppm	ASTM D5185m	1510	1542	1687	1434
Phosphorus	ppm	ASTM D5185m	780	856	809	613
Zinc	ppm	ASTM D5185m	870	964	993	884
Sulfur	ppm	ASTM D5185m	2040	2828	2693	2396
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.2	23.2	17.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	6.7	2.6	4.7
Visc @ 100°C	cSt	ASTM D445	15.1	14.5	14.3	14.8

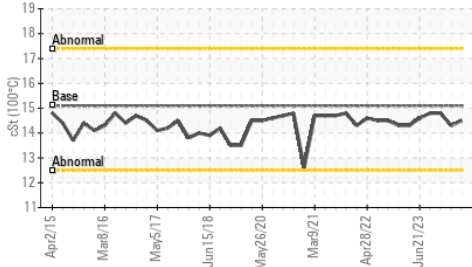
FT-IR (Direct Trend)



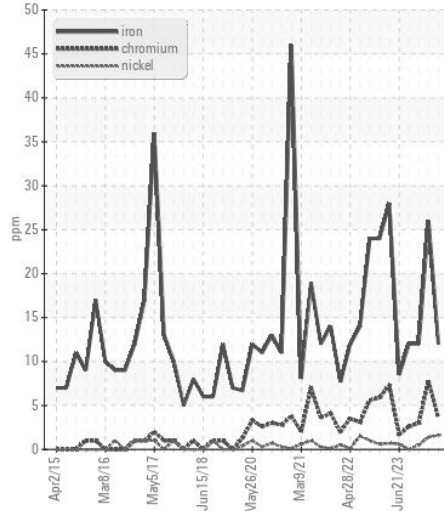
Base Number



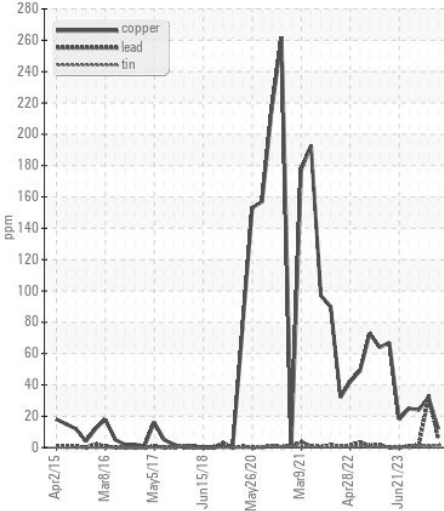
Viscosity @ 100°C



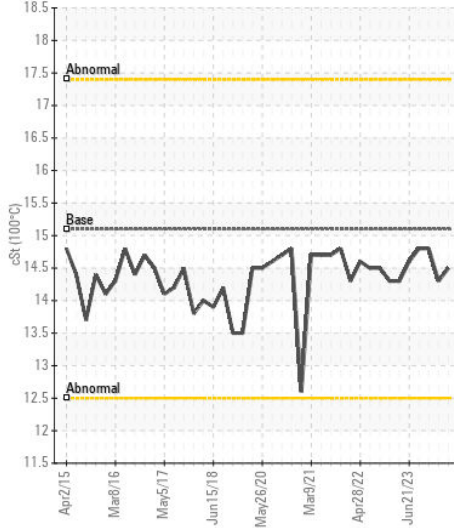
Ferrous Alloys



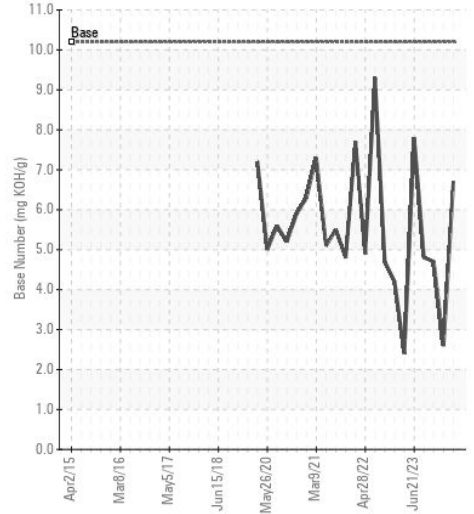
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0109608
Lab Number : 06152740
Unique Number : 10982818
Test Package : FLEET

GFL Environmental - 331 - Columbus
 180 Ada Moore Rd
 Columbus, NC
 US 28722
 Contact: Matt Segars
 matt.segars@gflenv.com
 T: (800)207-6618
 F: (252)617-2494

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)