



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
834044
Component
Diesel Engine
Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0122798	GFL0122833	GFL0118850
Sample Date		Client Info		13 Jun 2024	24 May 2024	01 May 2024
Machine Age	hrs	Client Info		1852	1717	1574
Oil Age	hrs	Client Info		1852	1717	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	54	57	60
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>5	2	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	6	5	5
Lead	ppm	ASTM D5185m	>40	5	4	5
Copper	ppm	ASTM D5185m	>330	11	12	12
Tin	ppm	ASTM D5185m	>15	2	2	2
Vanadium	ppm	ASTM D5185m		0	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.

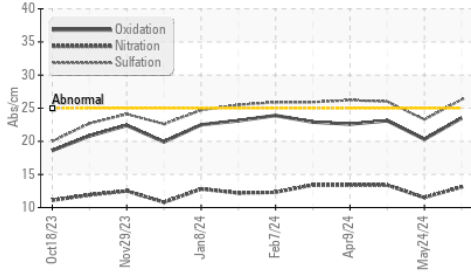
Silicon	ppm	ASTM D5185m	>25	18	19	20
Potassium	ppm	ASTM D5185m	>20	13	9	9
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.1	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	13.1	11.5	13.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.3	23.3	26.0
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	>0.2	NEG	NEG	NEG

FLUID CONDITION

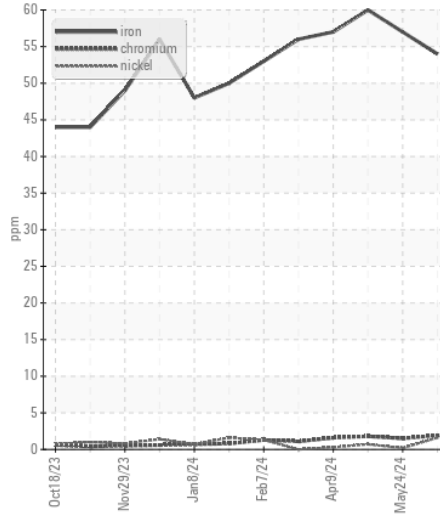
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		6	6	5
Boron	ppm	ASTM D5185m	50	12	10	4
Barium	ppm	ASTM D5185m	5	2	0	3
Molybdenum	ppm	ASTM D5185m	50	74	72	74
Manganese	ppm	ASTM D5185m	0	10	10	11
Magnesium	ppm	ASTM D5185m	560	892	821	919
Calcium	ppm	ASTM D5185m	1510	1722	1583	1734
Phosphorus	ppm	ASTM D5185m	780	895	860	946
Zinc	ppm	ASTM D5185m	870	1187	1068	1188
Sulfur	ppm	ASTM D5185m	2040	2971	2695	3127
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.5	20.3	23.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	4.3	4.7	3.5
Visc @ 100°C	cSt	ASTM D445	15.1	14.7	14.6	14.6

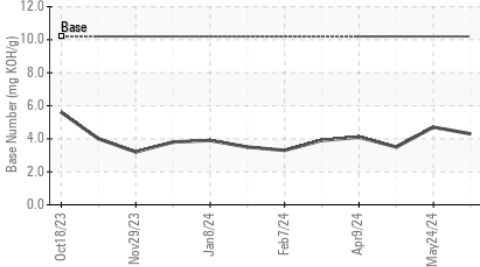
FT-IR (Direct Trend)



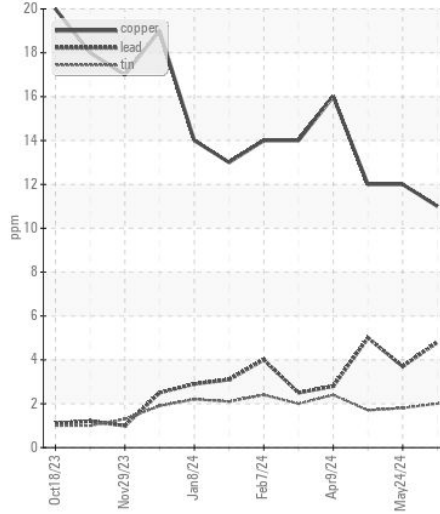
Ferrous Alloys



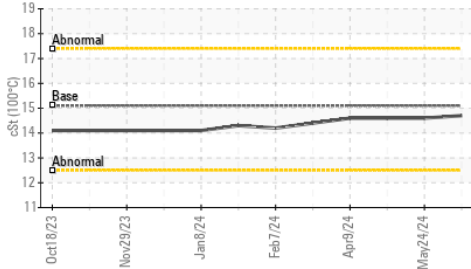
Base Number



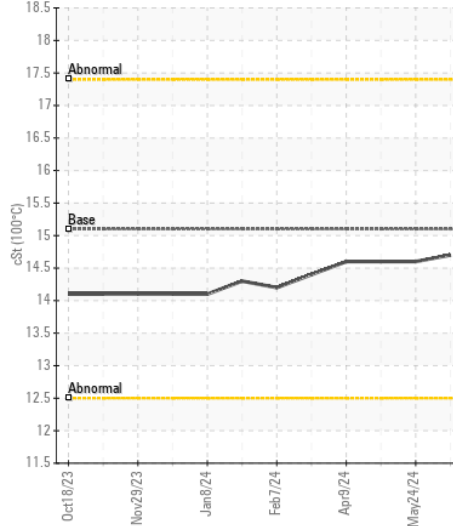
Non-ferrous Metals



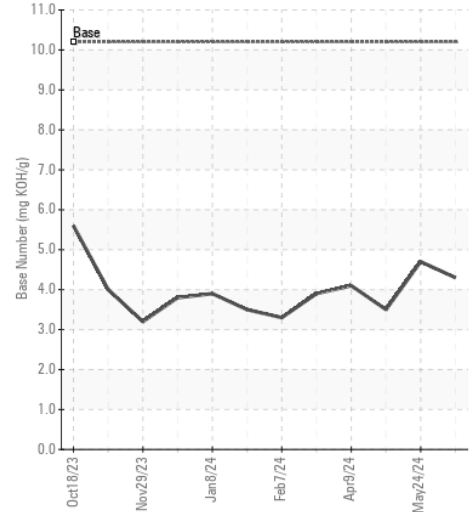
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0122798
Lab Number : 06220516
Unique Number : 11098713
Test Package : FLEET

Received : 25 Jun 2024
Tested : 26 Jun 2024
Diagnosed : 26 Jun 2024 - Wes Davis

GFL Environmental - 837 - Harrison TS
 22820 S State Route 291
 Harrisonville, MO
 US 64701
 Contact: JEREMY BROWN
 jeremyb@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)

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F: