



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
713010
Component
Diesel Engine
Fluid
PETRO CANADA DURON UHP 5W30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0122815	GFL0114185	GFL0114111
Sample Date		Client Info		21 May 2024	09 Apr 2024	18 Mar 2024
Machine Age	hrs	Client Info		2801	2690	2550
Oil Age	hrs	Client Info		2661	0	20091
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Changed	Not Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

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

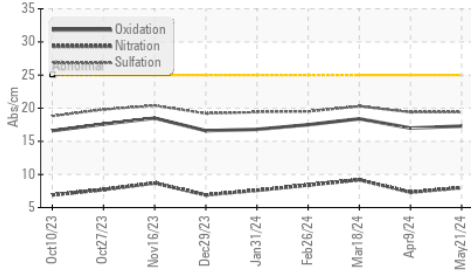
Silicon	ppm	ASTM D5185m	>25	9	4	4
Potassium	ppm	ASTM D5185m	>20	3	0	26
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.2	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	8.0	7.3	9.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.4	19.4	20.3
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

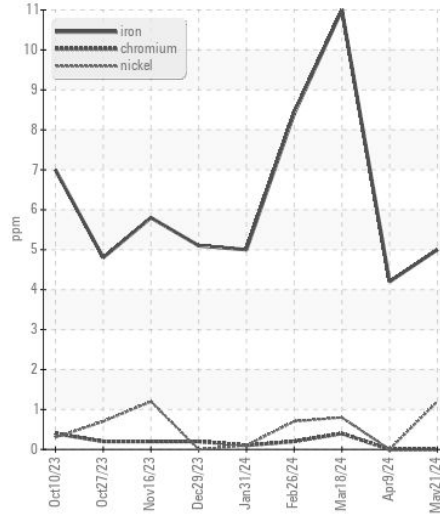
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		5	5	7
Boron	ppm	ASTM D5185m	0	37	50	16
Barium	ppm	ASTM D5185m	0	0	<1	0
Molybdenum	ppm	ASTM D5185m	64	56	58	55
Manganese	ppm	ASTM D5185m	0	<1	2	<1
Magnesium	ppm	ASTM D5185m	1160	1152	1149	992
Calcium	ppm	ASTM D5185m	820	840	919	870
Phosphorus	ppm	ASTM D5185m	1160	1017	1119	949
Zinc	ppm	ASTM D5185m	1260	1297	1301	1148
Sulfur	ppm	ASTM D5185m	3000	3798	3892	3299
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.3	17.0	18.4
Base Number (BN)	mg KOH/g	ASTM D2896	11.0	8.4	9.0	7.1
Visc @ 100°C	cSt	ASTM D445	11.9	11.7	11.7	12.2

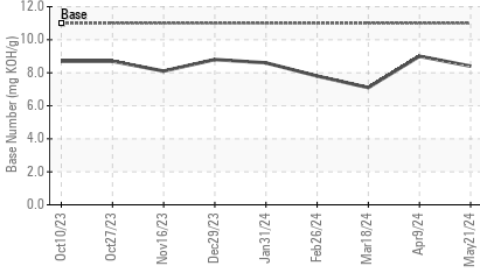
FT-IR (Direct Trend)



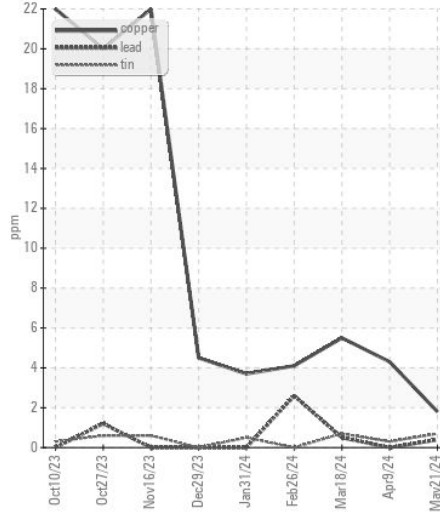
Ferrous Alloys



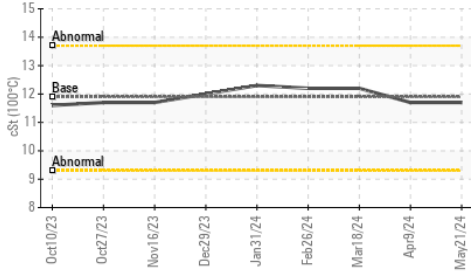
Base Number



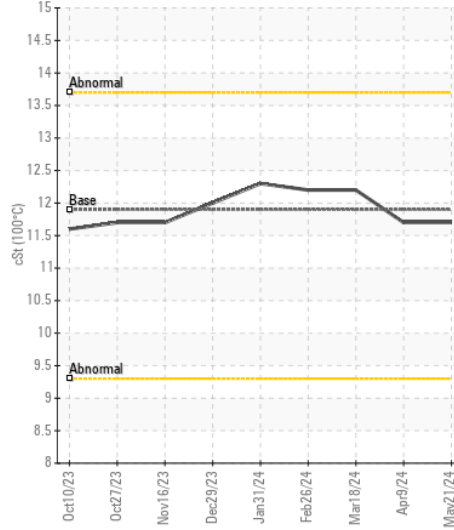
Non-ferrous Metals



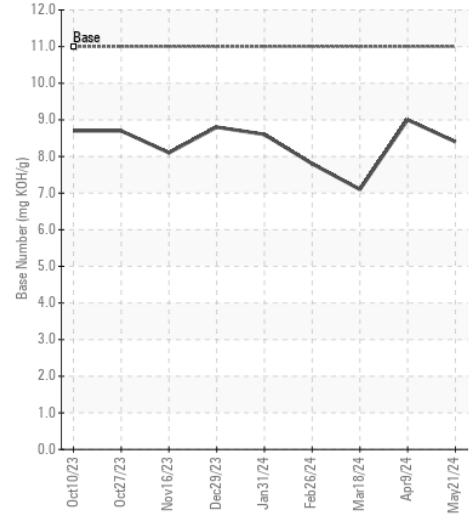
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0122815
Lab Number : 06190242
Unique Number : 11046994
Test Package : FLEET

Received : 24 May 2024
Tested : 28 May 2024
Diagnosed : 28 May 2024 - Wes Davis

GFL Environmental - 837 - Harrison TS
 22820 S State Route 291
 Harrisonville, MO
 US 64701
 Contact: SARA PATRICK
 spatrick@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: