



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
731116
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0120201	GFL0120164	GFL0120175
Sample Date		Client Info		13 Jun 2024	23 May 2024	16 May 2024
Machine Age	hrs	Client Info		7189	7051	7027
Oil Age	hrs	Client Info		0	1200	0
Filter Age	hrs	Client Info		0	1200	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				ATTENTION	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	4	▲ 53	▲ 68
Chromium	ppm	ASTM D5185m	>4	0	4	4
Nickel	ppm	ASTM D5185m	>2	0	2	2
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>9	4	8	7
Lead	ppm	ASTM D5185m	>30	0	10	3
Copper	ppm	ASTM D5185m	>35	1	2	2
Tin	ppm	ASTM D5185m	>4	0	1	1
Vanadium	ppm	ASTM D5185m		0	<1	<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.

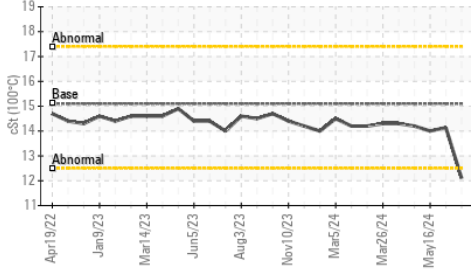
Silicon	ppm	ASTM D5185m	>+100	2	19	22
Potassium	ppm	ASTM D5185m	>20	3	3	4
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.4	12.9	11.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.5	28.4	25.3
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	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	>0.1	NEG	NEG	NEG

FLUID CONDITION

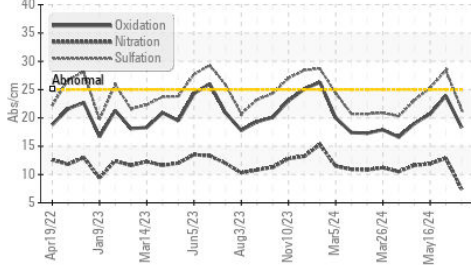
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		2	15	26
Boron	ppm	ASTM D5185m	50	44	4	6
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	50	1	58	62
Manganese	ppm	ASTM D5185m	0	0	2	1
Magnesium	ppm	ASTM D5185m	560	862	522	558
Calcium	ppm	ASTM D5185m	1510	1284	1760	1707
Phosphorus	ppm	ASTM D5185m	780	745	736	871
Zinc	ppm	ASTM D5185m	870	870	966	1039
Sulfur	ppm	ASTM D5185m	2040	2711	3466	2941
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.3	23.9	20.7
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	9.0	▲ 2.7	▲ 2.9
Visc @ 100°C	cSt	ASTM D445	15.1	● 12.1	14.14	14.0

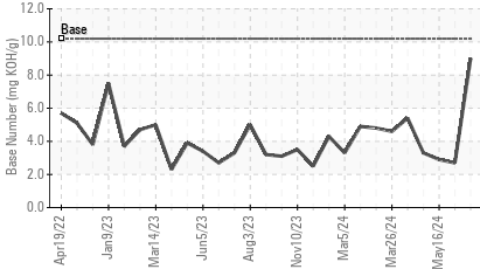
● Viscosity @ 100°C



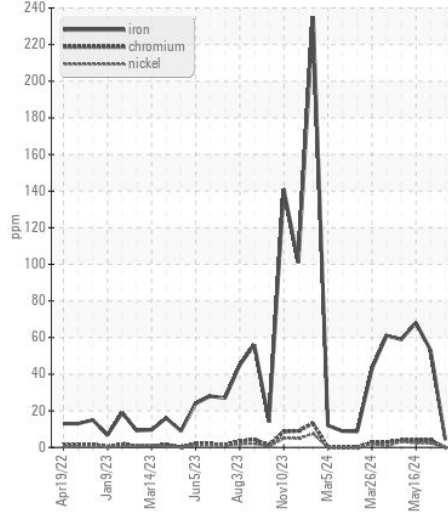
FT-IR (Direct Trend)



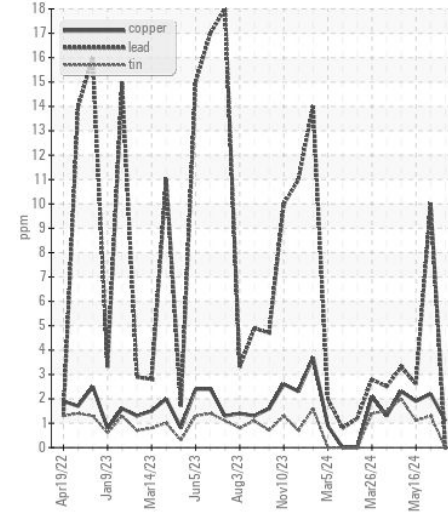
Base Number



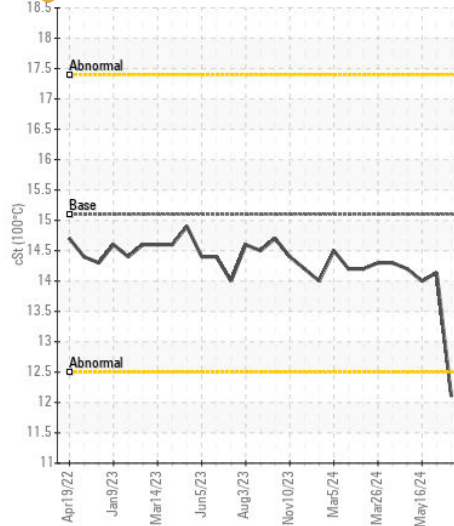
Ferrous Alloys



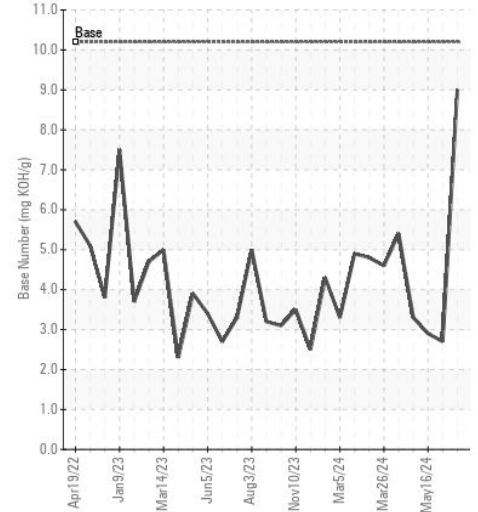
Non-ferrous Metals



● Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0120201 **Received** : 18 Jun 2024
Lab Number : 06213201 **Tested** : 21 Jun 2024
Unique Number : 11086065 **Diagnosed** : 21 Jun 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: FUELDILUTION, PercentFuel)

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