



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	MARGINAL

Machine Id
912066
 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		GFL0120161	GFL0117249	GFL0117235
Sample Date		Client Info		29 May 2024	04 May 2024	30 Apr 2024
Machine Age	hrs	Client Info		6072	5922	5890
Oil Age	hrs	Client Info		0	0	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				MARGINAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	37	6	▲ 52
Chromium	ppm	ASTM D5185m	>4	3	1	1
Nickel	ppm	ASTM D5185m	>2	<1	1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	<1	<1	0
Aluminum	ppm	ASTM D5185m	>9	7	4	3
Lead	ppm	ASTM D5185m	>30	<1	5	<1
Copper	ppm	ASTM D5185m	>35	2	2	17
Tin	ppm	ASTM D5185m	>4	<1	2	<1
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.

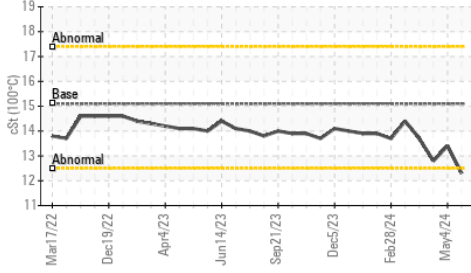
Silicon	ppm	ASTM D5185m	>+100	18	6	10
Potassium	ppm	ASTM D5185m	>20	9	3	▲ 22
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.4	0.1	1.4
Nitration	Abs/cm	*ASTM D7624	>20	8.6	11.0	14.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.4	24.1	26.1
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	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

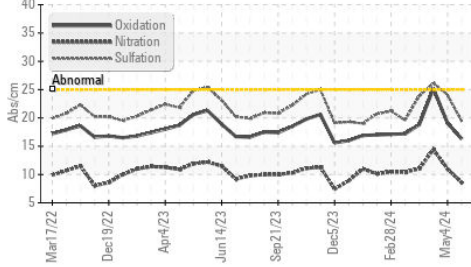
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		5	11	▲ 198
Boron	ppm	ASTM D5185m	50	3	<1	14
Barium	ppm	ASTM D5185m	5	<1	0	0
Molybdenum	ppm	ASTM D5185m	50	60	45	60
Manganese	ppm	ASTM D5185m	0	<1	1	0
Magnesium	ppm	ASTM D5185m	560	882	544	670
Calcium	ppm	ASTM D5185m	1510	1119	1778	1592
Phosphorus	ppm	ASTM D5185m	780	1034	808	863
Zinc	ppm	ASTM D5185m	870	1179	1004	1131
Sulfur	ppm	ASTM D5185m	2040	3031	3063	3046
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.3	19.1	25.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	8.0	▲ 1.6	5.8
Visc @ 100°C	cSt	ASTM D445	15.1	▲ 12.3	13.4	12.8

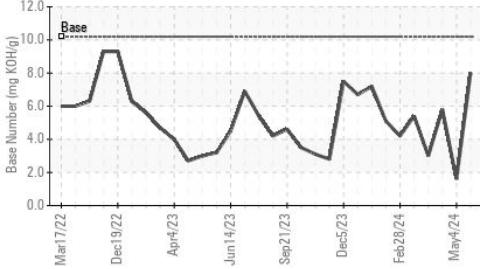
▲ Viscosity @ 100°C



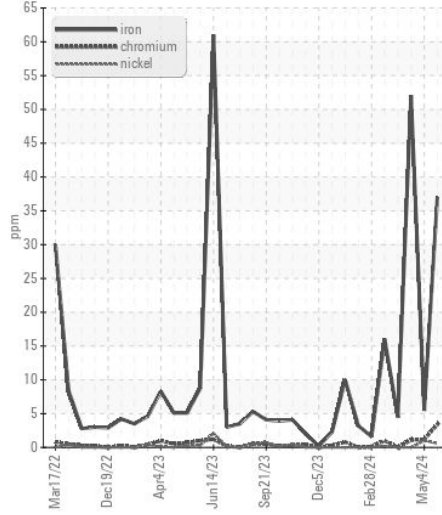
FT-IR (Direct Trend)



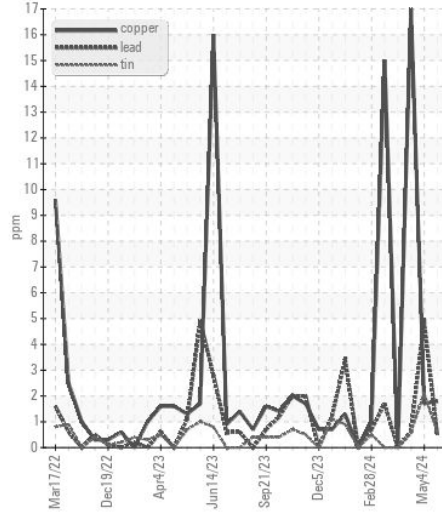
Base Number



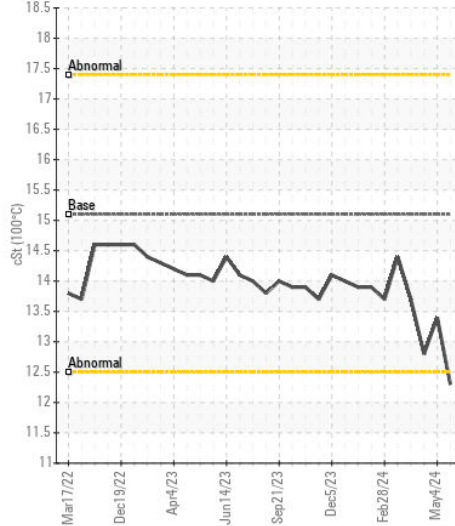
Ferrous Alloys



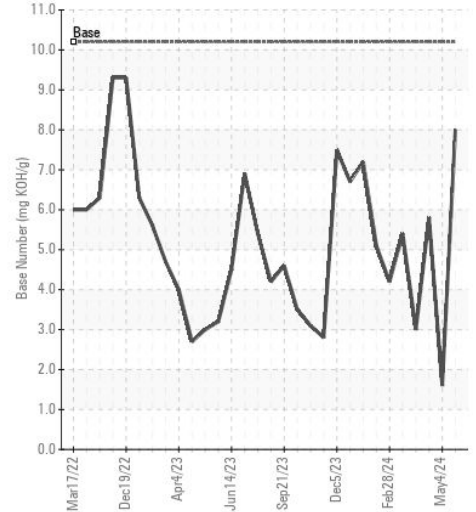
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0120161 **Received** : 31 May 2024
Lab Number : 06196309 **Tested** : 03 Jun 2024
Unique Number : 11058432 **Diagnosed** : 03 Jun 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: FUELDILUTION)

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: