



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
834046

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		GFL0124050	GFL0120238	GFL0114076
Sample Date		Client Info		25 Jun 2024	03 Jun 2024	27 Mar 2024
Machine Age	hrs	Client Info		1528	1380	960
Oil Age	hrs	Client Info		0	0	960
Filter Age	hrs	Client Info		0	0	960
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

Cylinder, crank, or cam shaft wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	▲ 56	▲ 52	45
Chromium	ppm	ASTM D5185m	>5	2	4	<1
Nickel	ppm	ASTM D5185m	>4	<1	2	2
Titanium	ppm	ASTM D5185m	>5	<1	<1	0
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>25	6	6	6
Lead	ppm	ASTM D5185m	>40	5	11	2
Copper	ppm	ASTM D5185m	>150	9	2	9
Tin	ppm	ASTM D5185m	>4	1	2	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.

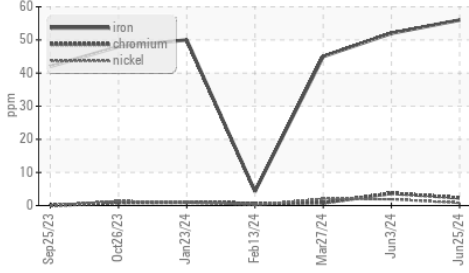
Silicon	ppm	ASTM D5185m	>25	17	18	20
Potassium	ppm	ASTM D5185m	>20	4	4	4
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	11.6	12.1	12.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	26.0	26.5	23.8
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	LIGHT
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

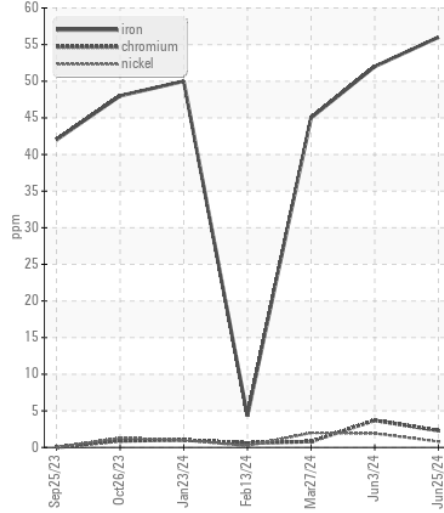
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		7	11	4
Boron	ppm	ASTM D5185m	50	14	4	9
Barium	ppm	ASTM D5185m	5	2	2	0
Molybdenum	ppm	ASTM D5185m	50	69	60	53
Manganese	ppm	ASTM D5185m	0	9	1	9
Magnesium	ppm	ASTM D5185m	560	839	536	711
Calcium	ppm	ASTM D5185m	1510	1961	1893	1404
Phosphorus	ppm	ASTM D5185m	780	997	806	749
Zinc	ppm	ASTM D5185m	870	1233	1055	986
Sulfur	ppm	ASTM D5185m	2040	3230	2912	2702
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.9	22.1	21.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	4.6	3.2	3.9
Visc @ 100°C	cSt	ASTM D445	15.1	14.4	14.1	14.6

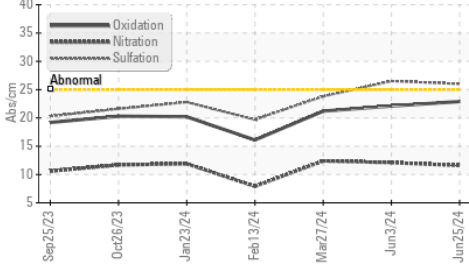
▲ Ferrous Alloys



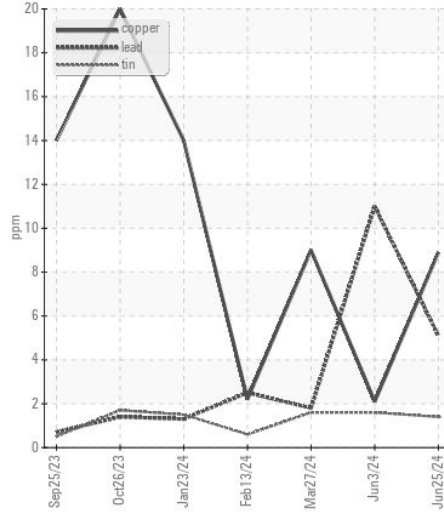
▲ Ferrous Alloys



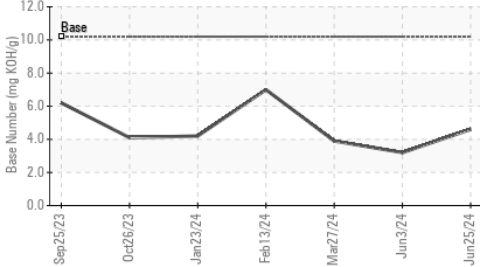
FT-IR (Direct Trend)



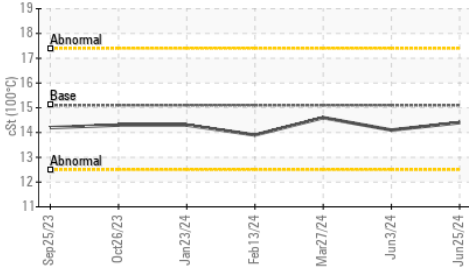
Non-ferrous Metals



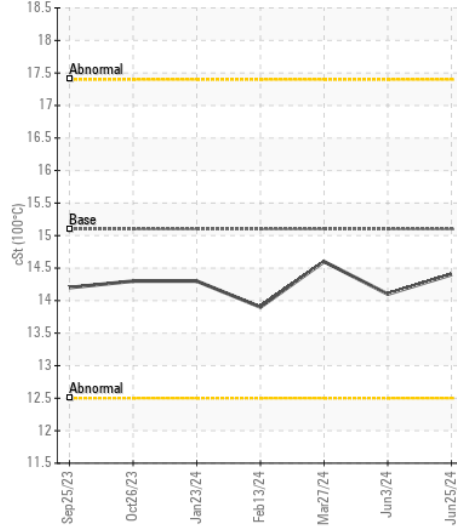
Base Number



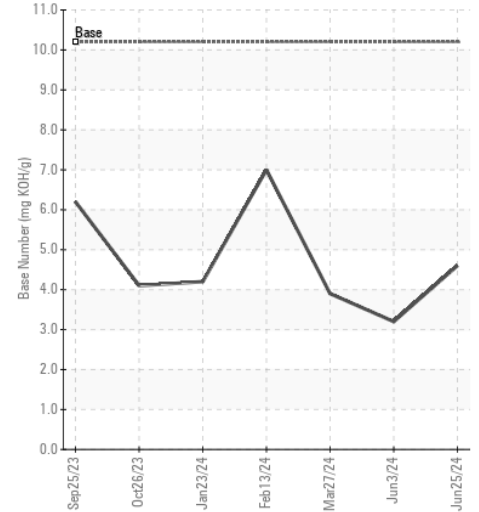
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0124050
 Lab Number : 06223207
 Unique Number : 11101404
 Test Package : FLEET

Received : 28 Jun 2024
 Tested : 28 Jun 2024
 Diagnosed : 30 Jun 2024 - Don Baldrige

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: