



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
933023
 Component
Natural Gas 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		GFL0124084	GFL0117216	GFL0117252
Sample Date		Client Info		06 Jul 2024	17 May 2024	29 Apr 2024
Machine Age	hrs	Client Info		3639	3262	3116
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		1200	0	0
Oil Changed		Client Info		Not Changed	Not Changed	Not Changed
Filter Changed		Client Info		Changed	Not Changed	Not Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	10	7	13
Chromium	ppm	ASTM D5185m	>4	2	<1	0
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	3	3	0
Lead	ppm	ASTM D5185m	>30	2	1	2
Copper	ppm	ASTM D5185m	>35	8	8	0
Tin	ppm	ASTM D5185m	>4	1	1	<1
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.

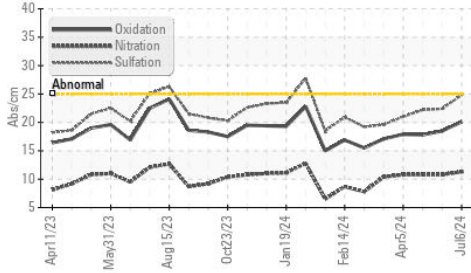
Silicon	ppm	ASTM D5185m	>+100	8	10	3
Potassium	ppm	ASTM D5185m	>20	2	1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	11.3	10.8	10.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.8	22.4	22.2
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	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

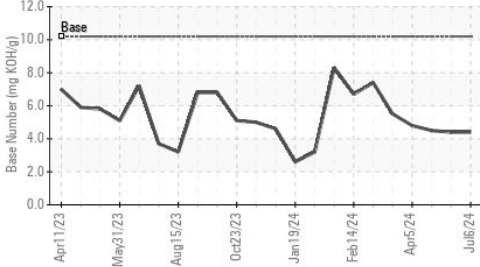
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		4	4	6
Boron	ppm	ASTM D5185m	50	8	9	10
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	50	55	54	61
Manganese	ppm	ASTM D5185m	0	<1	1	0
Magnesium	ppm	ASTM D5185m	560	599	594	637
Calcium	ppm	ASTM D5185m	1510	1688	1694	1992
Phosphorus	ppm	ASTM D5185m	780	810	788	865
Zinc	ppm	ASTM D5185m	870	1040	1038	1214
Sulfur	ppm	ASTM D5185m	2040	2545	2988	3367
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.1	18.5	17.8
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	4.4	4.4	4.5
Visc @ 100°C	cSt	ASTM D445	15.1	14.7	14.5	14.3

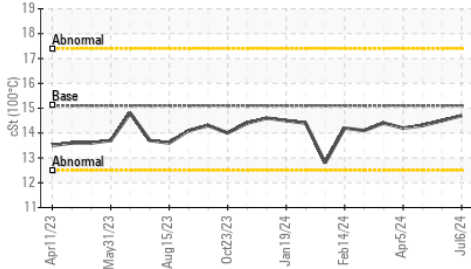
FT-IR (Direct Trend)



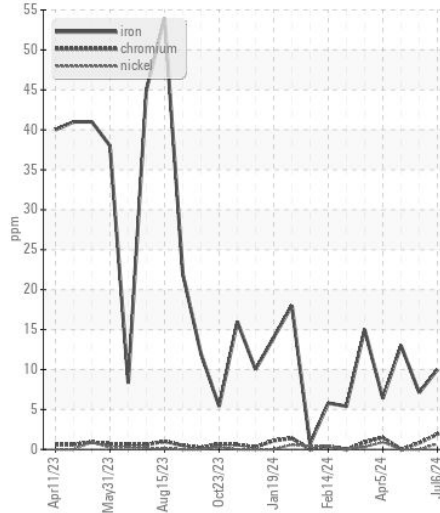
Base Number



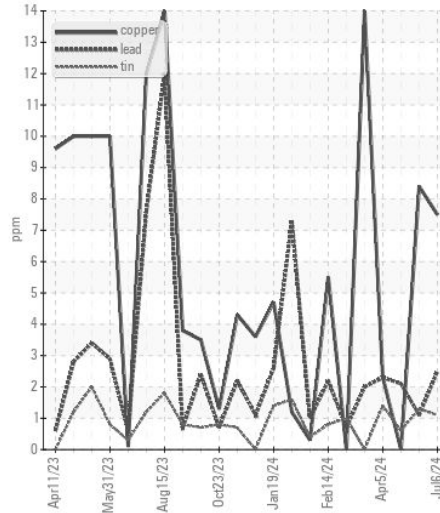
Viscosity @ 100°C



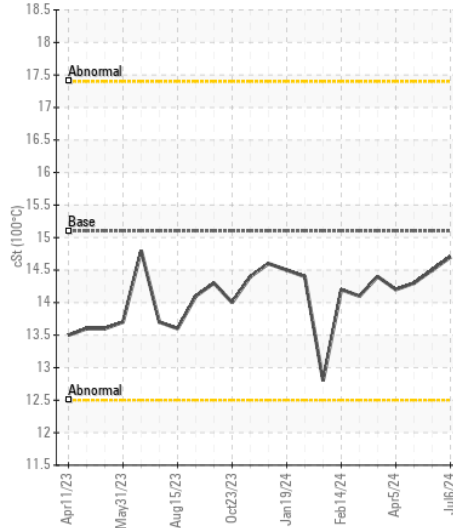
Ferrous Alloys



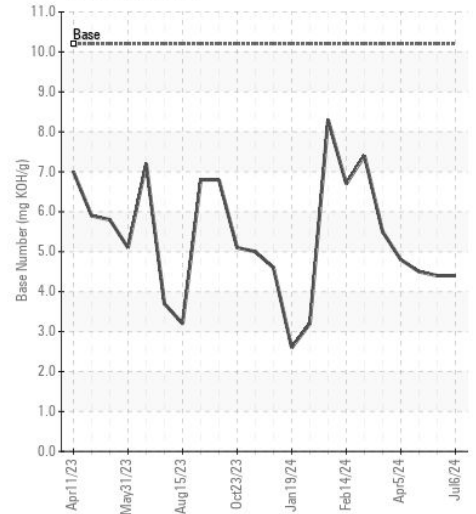
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0124084
Lab Number : 06231998
Unique Number : 11115491
Test Package : FLEET

Received : 10 Jul 2024
Tested : 10 Jul 2024
Diagnosed : 10 Jul 2024 - Wes Davis

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: