



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
933024
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (--- LTR)

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		GFL0114063	GFL0114008	GFL0114025
Sample Date		Client Info		17 Apr 2024	29 Mar 2024	13 Mar 2024
Machine Age	hrs	Client Info		2993	2850	2170
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				ABNORMAL	NORMAL	NORMAL

WEAR

Cylinder, crank, or cam shaft wear is indicated.

Iron	ppm	ASTM D5185m	>50	▲ 60	7	15
Chromium	ppm	ASTM D5185m	>4	3	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	5	2	2
Lead	ppm	ASTM D5185m	>30	2	<1	<1
Copper	ppm	ASTM D5185m	>35	1	<1	16
Tin	ppm	ASTM D5185m	>4	1	1	0
Vanadium	ppm	ASTM D5185m		<1	<1	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.

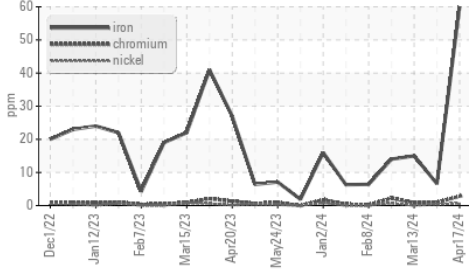
Silicon	ppm	ASTM D5185m	>+100	16	11	4
Potassium	ppm	ASTM D5185m	>20	2	2	21
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	11.5	9.1	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.5	19.6	19.6
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	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 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		10	4	70
Boron	ppm	ASTM D5185m	50	4	21	12
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	50	59	49	54
Manganese	ppm	ASTM D5185m	0	1	<1	<1
Magnesium	ppm	ASTM D5185m	560	541	600	536
Calcium	ppm	ASTM D5185m	1510	1741	1701	1534
Phosphorus	ppm	ASTM D5185m	780	730	848	760
Zinc	ppm	ASTM D5185m	870	952	1048	931
Sulfur	ppm	ASTM D5185m	2040	2865	3311	2487
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.5	16.7	17.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	3.8	6.5	5.5
Visc @ 100°C	cSt	ASTM D445	15.1	14.3	14.0	14.3

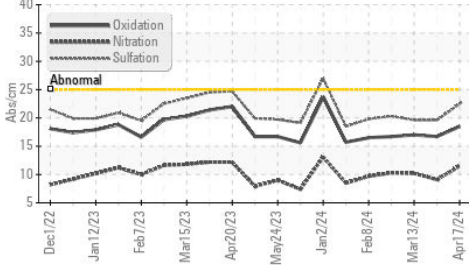
▲ Ferrous Alloys



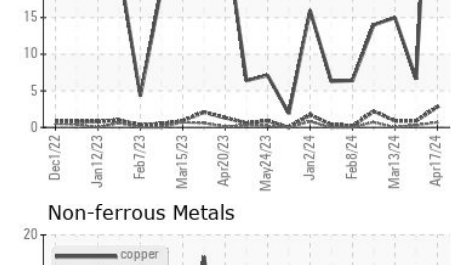
▲ Ferrous Alloys



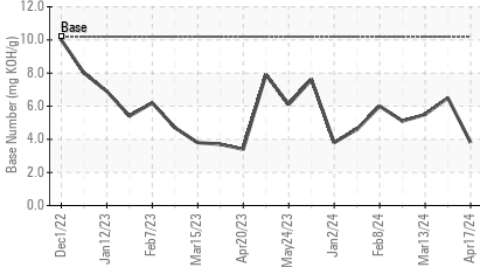
FT-IR (Direct Trend)



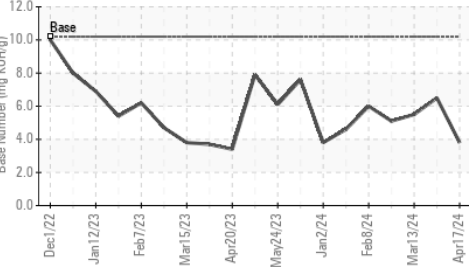
Non-ferrous Metals



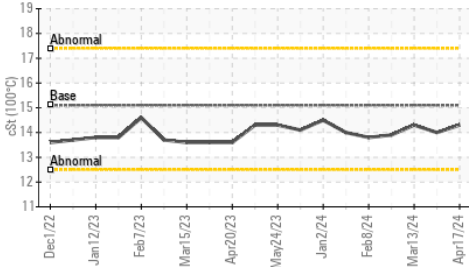
Base Number



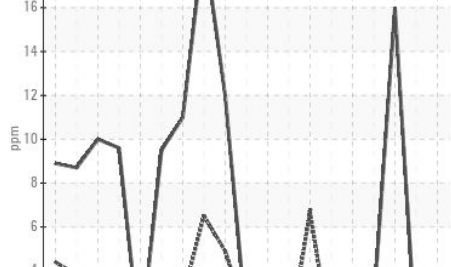
Viscosity @ 100°C



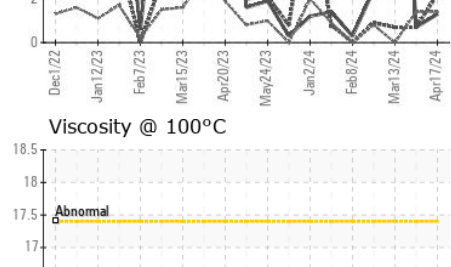
Viscosity @ 100°C



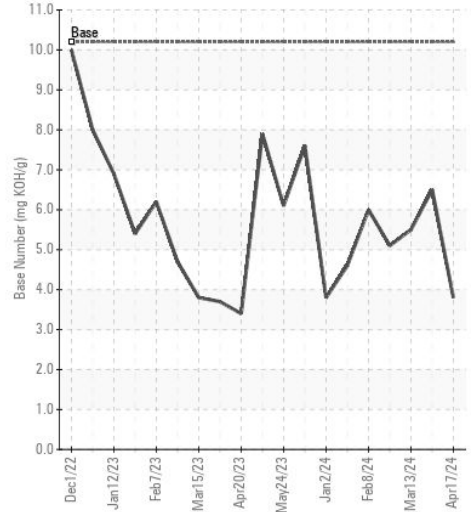
Base Number



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0114063
 Lab Number : 06154112
 Unique Number : 10989535
 Test Package : FLEET

Received : 19 Apr 2024
 Tested : 23 Apr 2024
 Diagnosed : 23 Apr 2024 - Sean Felton

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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