



Machine Id
831052
Component
Diesel 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		GFL0112382	GFL0091623	GFL0070721
Sample Date		Client Info		26 Feb 2024	18 Sep 2023	27 Feb 2023
Machine Age	hrs	Client Info		3582	46820	1750
Oil Age	hrs	Client Info		759	18318	733
Filter Age	hrs	Client Info		759	18318	733
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	18	19	24
Chromium	ppm	ASTM D5185(m)	>20	1	2	2
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	<1
Silver	ppm	ASTM D5185(m)	>2	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	2	2	5
Lead	ppm	ASTM D5185(m)	>40	1	2	<1
Copper	ppm	ASTM D5185(m)	>330	2	2	3
Tin	ppm	ASTM D5185(m)	>15	<1	<1	1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

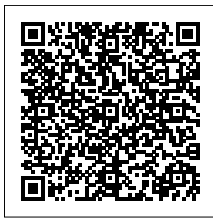
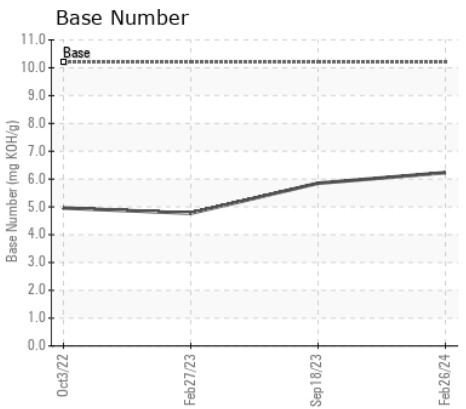
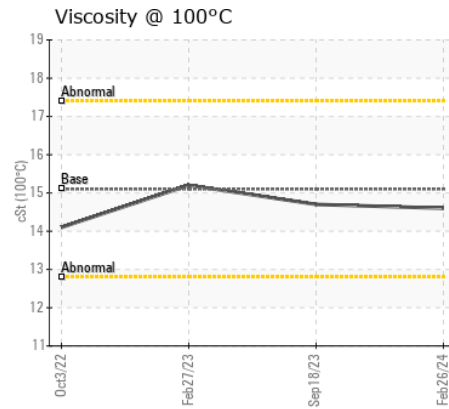
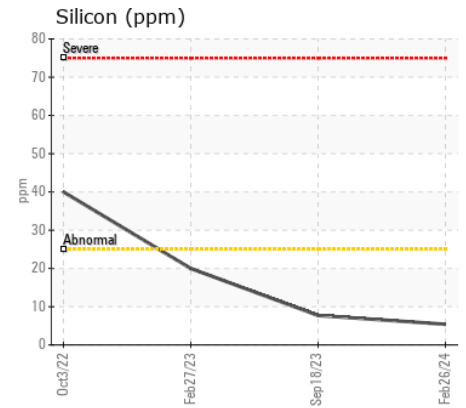
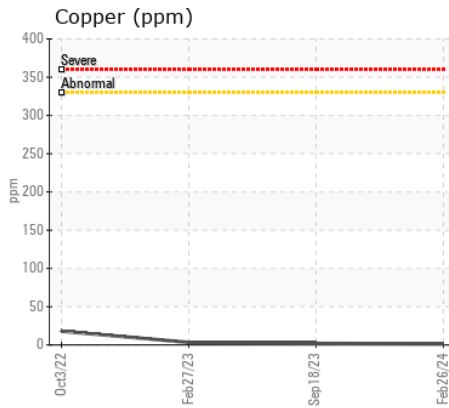
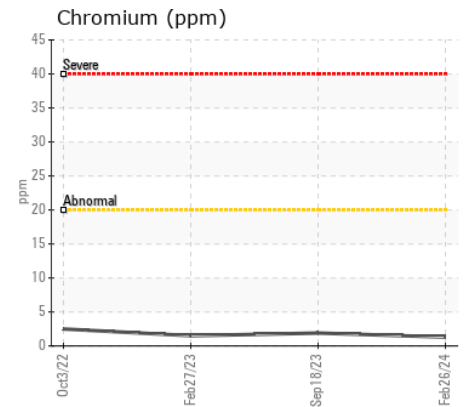
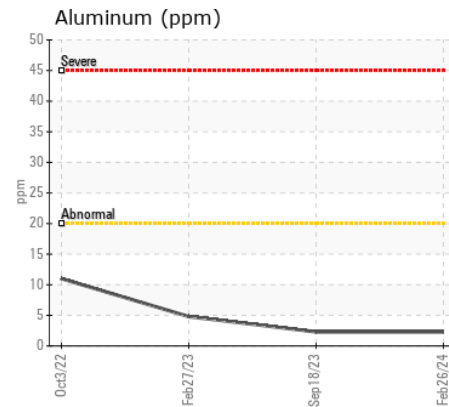
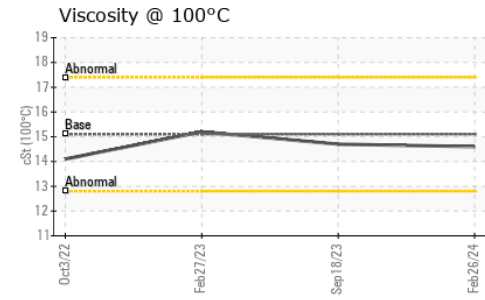
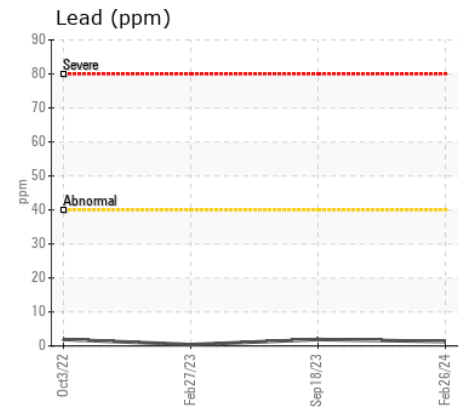
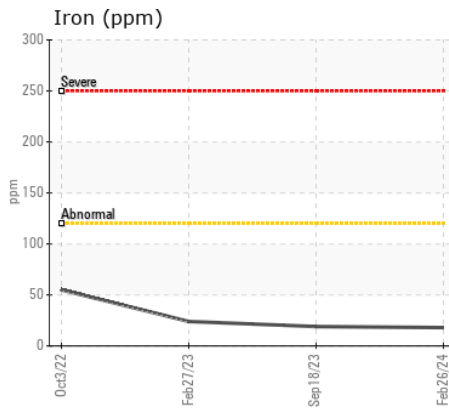
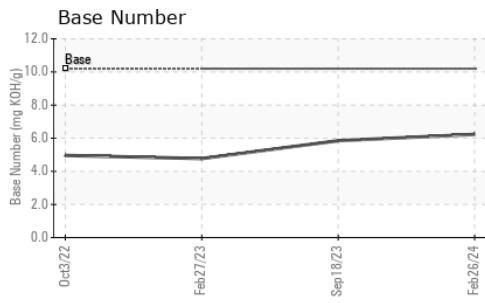
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	5	8	20
Potassium	ppm	ASTM D5185(m)	>20	1	1	5
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>4	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	12.1	11.3	11.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	24.8	26.0	24.7
Emulsified Water	scalar	Visual*	>0.2	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 D5185(m)		9	10	8
Boron	ppm	ASTM D5185(m)	50	6	10	8
Barium	ppm	ASTM D5185(m)	5	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	50	54	58	55
Manganese	ppm	ASTM D5185(m)	0	<1	<1	2
Magnesium	ppm	ASTM D5185(m)	560	571	627	574
Calcium	ppm	ASTM D5185(m)	1510	1675	1740	1657
Phosphorus	ppm	ASTM D5185(m)	780	727	786	735
Zinc	ppm	ASTM D5185(m)	870	923	988	907
Sulfur	ppm	ASTM D5185(m)	2040	2081	2039	2044
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.2	21.2	18.0
Base Number (BN)	mg KOH/g	ASTM D2896*	10.2	6.23	5.85	4.77
Visc @ 100°C	cSt	ASTM D7279(m)	15.1	14.6	14.7	15.2



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0112382
Lab Number : 02619528
Unique Number : 5736638
Test Package : MOB 2
Received : 04 Mar 2024
Tested : 05 Mar 2024
Diagnosed : 05 Mar 2024 - Kevin Marson

GFL Environmental - 550 - Rocky View County
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To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.