



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
733020

Component
Natural Gas Engine

Fluid
PETRO CANADA DURON GEO LD 15W40 (--- QTS)

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		GFL0114033	GFL0109788	GFL0103282
Sample Date		Client Info		18 Mar 2024	26 Feb 2024	24 Jan 2024
Machine Age	hrs	Client Info		1489	1390	1207
Oil Age	hrs	Client Info		0	0	1207
Filter Age	hrs	Client Info		0	0	1207
Oil Changed		Client Info		Not Chngd	Not Chngd	Changed
Filter Changed		Client Info		Not Chngd	Not Chngd	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	32	13	56
Chromium	ppm	ASTM D5185m	>4	2	<1	3
Nickel	ppm	ASTM D5185m	>2	1	<1	2
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>9	26	2	54
Lead	ppm	ASTM D5185m	>30	2	<1	3
Copper	ppm	ASTM D5185m	>35	9	2	16
Tin	ppm	ASTM D5185m	>4	2	<1	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

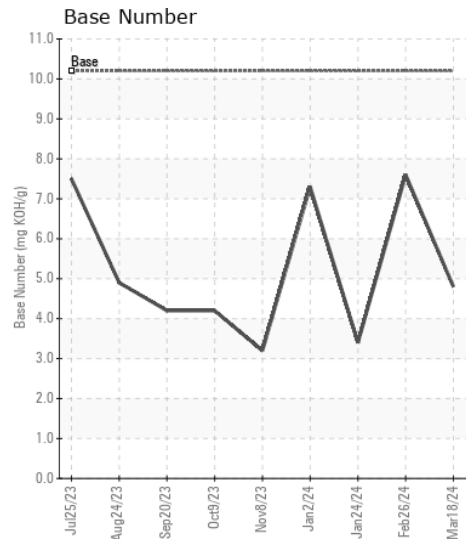
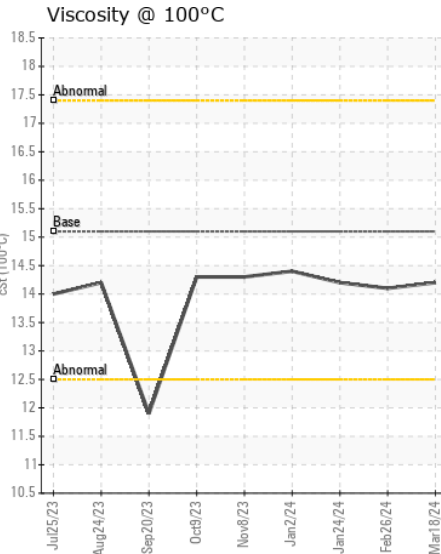
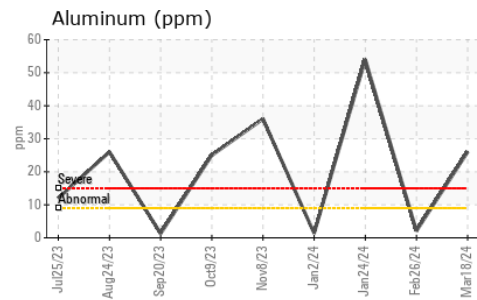
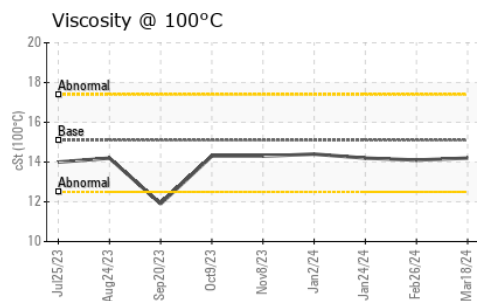
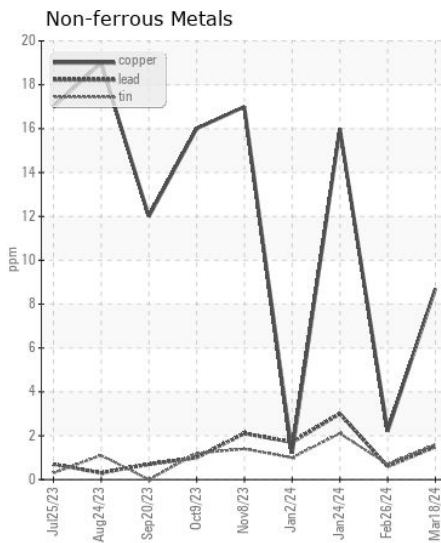
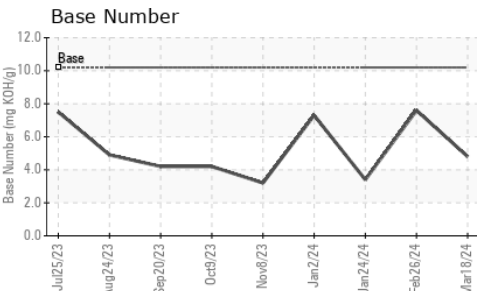
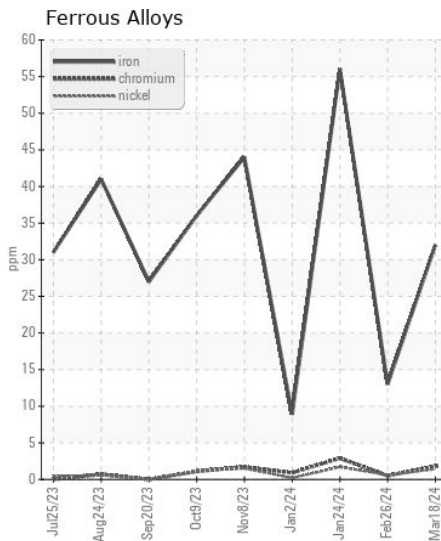
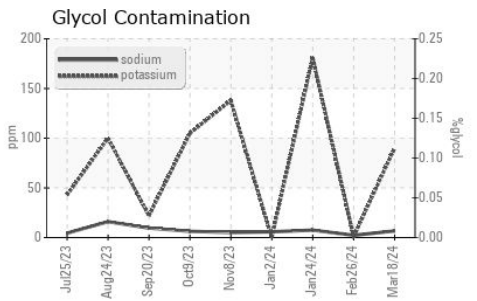
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>+100	18	7	22
Potassium	ppm	ASTM D5185m	>20	90	<1	181
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0	0
Nitration	Abs/cm	*ASTM D7624	>20	10.6	7.6	12.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.6	18.8	26.5
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		7	2	8
Boron	ppm	ASTM D5185m	50	7	30	12
Barium	ppm	ASTM D5185m	5	<1	0	3
Molybdenum	ppm	ASTM D5185m	50	60	54	62
Manganese	ppm	ASTM D5185m	0	7	2	12
Magnesium	ppm	ASTM D5185m	560	811	594	808
Calcium	ppm	ASTM D5185m	1510	1246	1624	1391
Phosphorus	ppm	ASTM D5185m	780	862	779	830
Zinc	ppm	ASTM D5185m	870	1075	1051	1033
Sulfur	ppm	ASTM D5185m	2040	2786	2800	2434
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.4	15.6	23.4
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	4.8	7.6	▲ 3.4
Visc @ 100°C	cSt	ASTM D445	15.1	14.2	14.1	14.2



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0114033
Lab Number : 06123480
Unique Number : 10937631
Test Package : FLEET
Received : 20 Mar 2024
Tested : 21 Mar 2024
Diagnosed : 22 Mar 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
 T:
 F:

Certificate L2367
 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)