



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
731116
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)

RECOMMENDATION

The oil is near the end of it's useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0120164	GFL0120175	GFL0117159
Sample Date		Client Info		23 May 2024	16 May 2024	23 Apr 2024
Machine Age	hrs	Client Info		7051	7027	6885
Oil Age	hrs	Client Info		1200	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				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

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

Iron	ppm	ASTM D5185m	>50	▲ 53	▲ 68	▲ 59
Chromium	ppm	ASTM D5185m	>4	4	4	4
Nickel	ppm	ASTM D5185m	>2	2	2	3
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>9	8	7	6
Lead	ppm	ASTM D5185m	>30	10	3	3
Copper	ppm	ASTM D5185m	>35	2	2	2
Tin	ppm	ASTM D5185m	>4	1	1	2
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

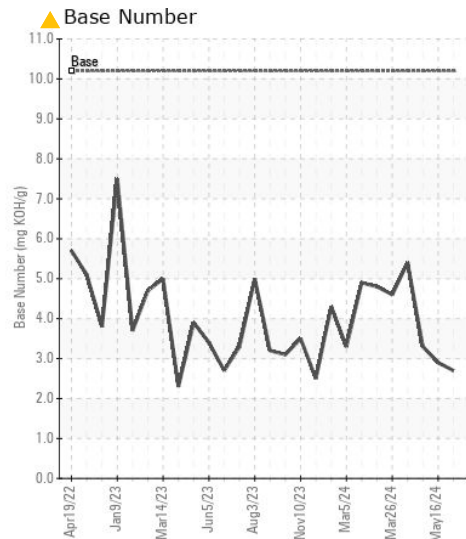
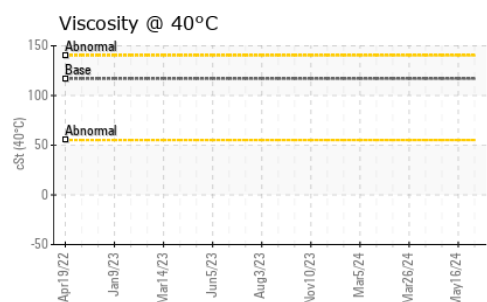
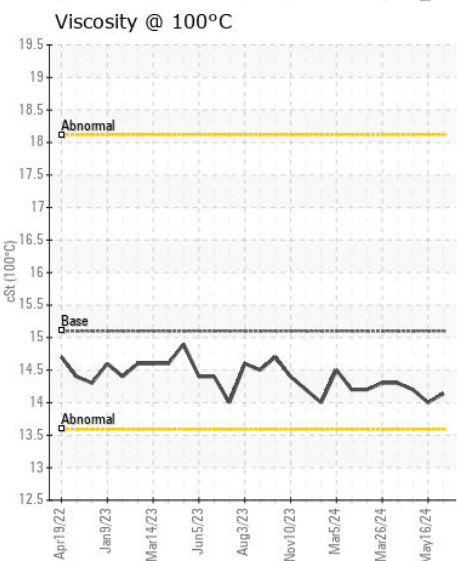
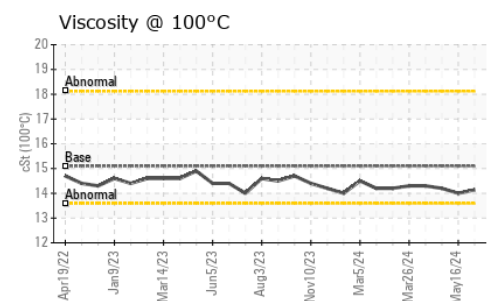
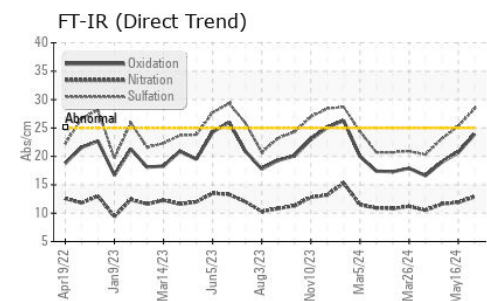
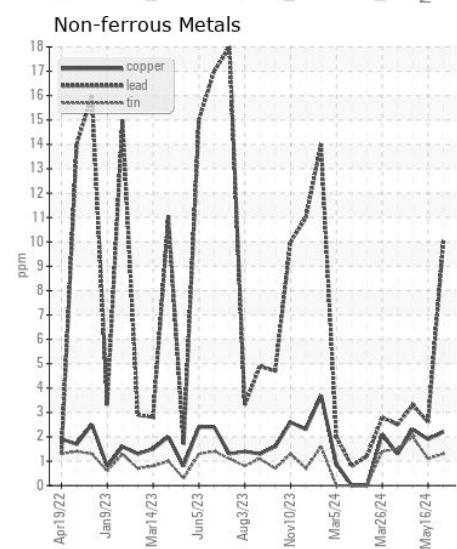
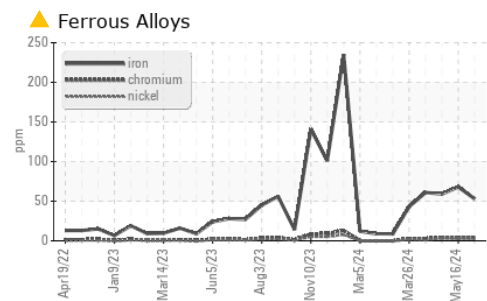
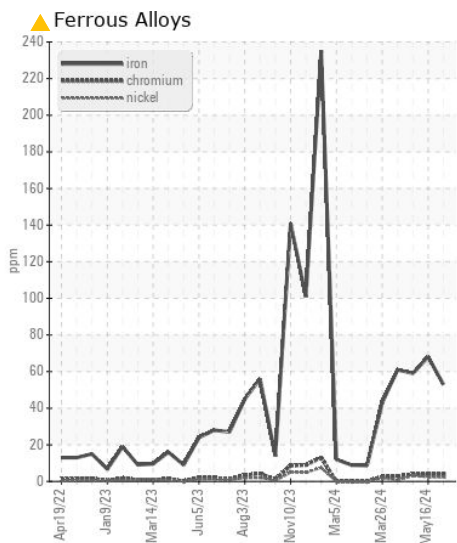
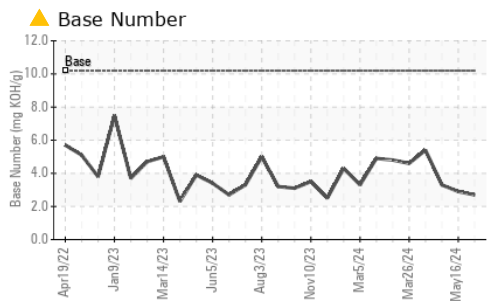
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	19	22	21
Potassium	ppm	ASTM D5185m	>20	3	4	4
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	12.9	11.9	11.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	28.4	25.3	23.1
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 level is low. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		15	26	9
Boron	ppm	ASTM D5185m	50	4	6	7
Barium	ppm	ASTM D5185m	5	0	0	<1
Molybdenum	ppm	ASTM D5185m	50	58	62	61
Manganese	ppm	ASTM D5185m	0	2	1	2
Magnesium	ppm	ASTM D5185m	560	522	558	527
Calcium	ppm	ASTM D5185m	1510	1760	1707	1653
Phosphorus	ppm	ASTM D5185m	780	736	871	704
Zinc	ppm	ASTM D5185m	870	966	1039	979
Sulfur	ppm	ASTM D5185m	2040	3466	2941	2825
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.9	20.7	19.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	▲ 2.7	▲ 2.9	3.3
Visc @ 100°C	cSt	ASTM D445	15.1	14.14	14.0	14.2



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0120164 **Received** : 28 May 2024
Lab Number : 06192627 **Tested** : 05 Jun 2024
Unique Number : 11049379 **Diagnosed** : 05 Jun 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: KV40)

GFL Environmental - 836 - Kansas City Hauling
 7801 East Truman Road
 Kansas City, MO
 US 64126
 Contact: Loyce Stewart
 loyce.stewart@gflenv.com

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)