

Machine Id
501936
Component
Diesel Engine
Fluid
PETRO CANADA DURON E XL 15W40 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0117323	---	---
Sample Date		Client Info		10 Apr 2024	---	---
Machine Age	hrs	Client Info		21645	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

Aluminum ppm levels are abnormal. Piston wear is indicated.

Iron	ppm	ASTM D5185(m)	>100	16	---	---
Chromium	ppm	ASTM D5185(m)	>20	<1	---	---
Nickel	ppm	ASTM D5185(m)	>4	<1	---	---
Titanium	ppm	ASTM D5185(m)		0	---	---
Silver	ppm	ASTM D5185(m)	>3	0	---	---
Aluminum	ppm	ASTM D5185(m)	>20	▲ 28	---	---
Lead	ppm	ASTM D5185(m)	>40	0	---	---
Copper	ppm	ASTM D5185(m)	>330	4	---	---
Tin	ppm	ASTM D5185(m)	>15	0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---

CONTAMINATION

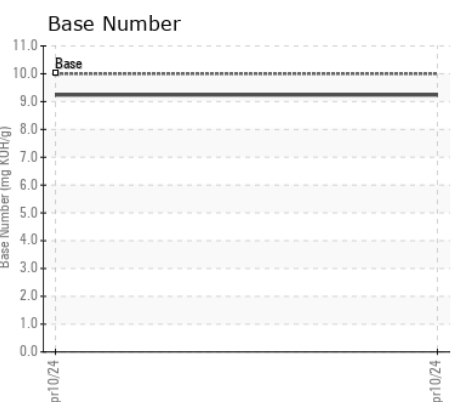
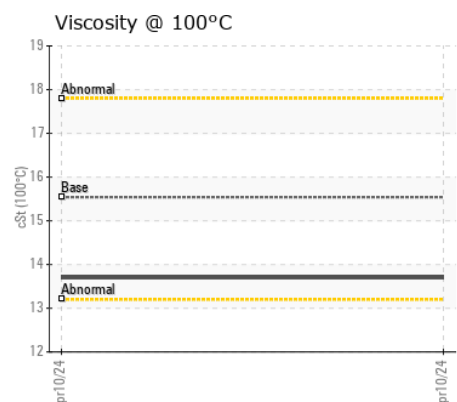
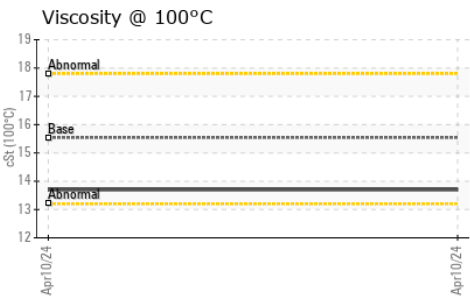
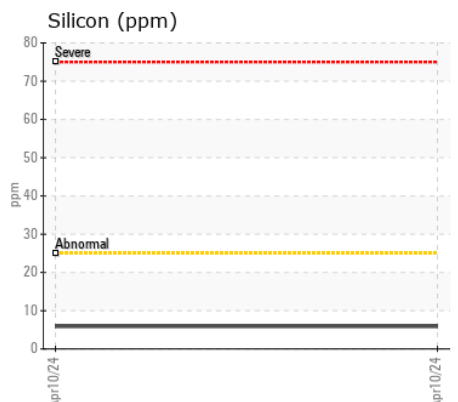
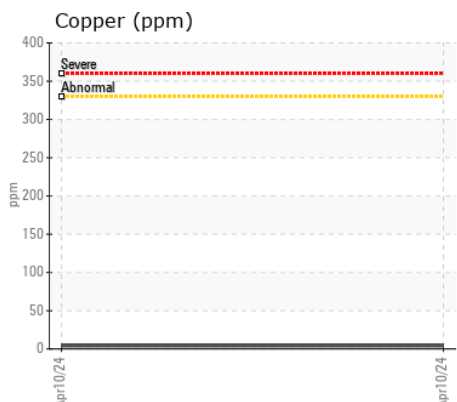
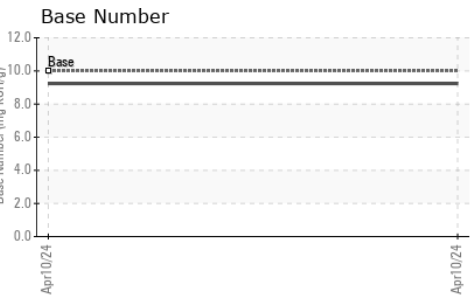
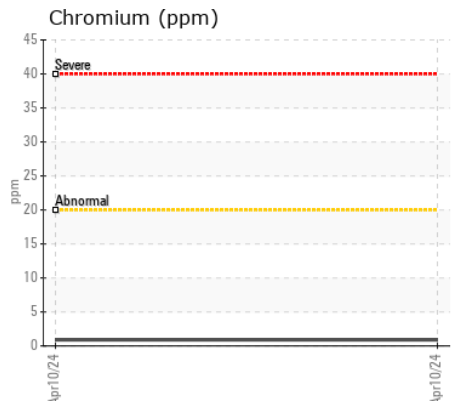
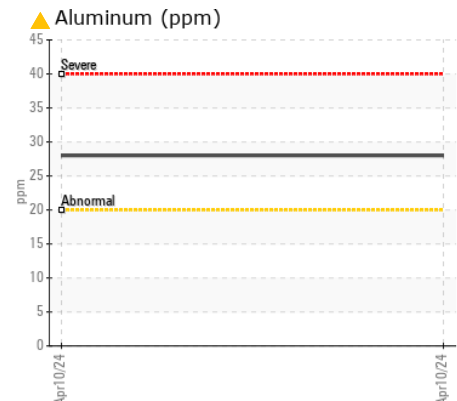
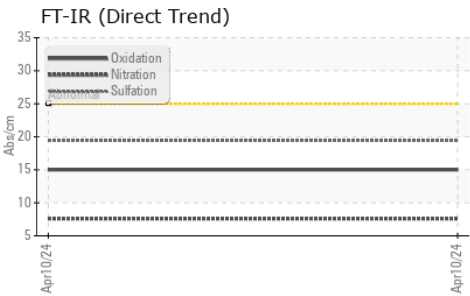
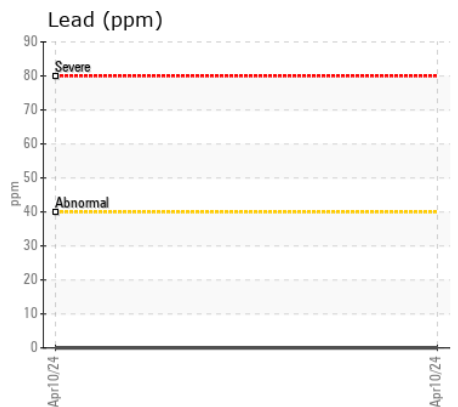
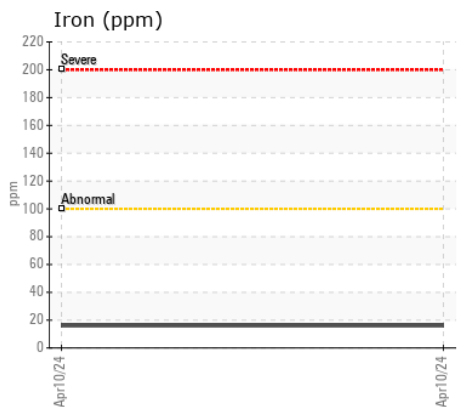
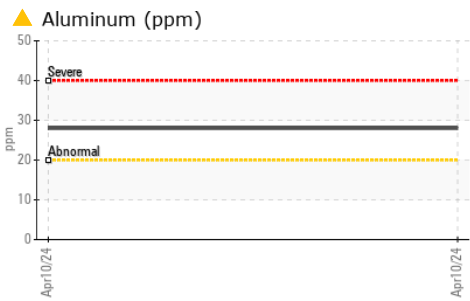
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	6	---	---
Potassium	ppm	ASTM D5185(m)	>20	2	---	---
Fuel		WC Method	>5	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	ASTM D7844*	>3	0.3	---	---
Nitration	Abs/cm	ASTM D7624*	>20	7.6	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.4	---	---
Emulsified Water	scalar	Visual*	>0.2	NEG	---	---

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		<1	---	---
Boron	ppm	ASTM D5185(m)	1	4	---	---
Barium	ppm	ASTM D5185(m)	0	0	---	---
Molybdenum	ppm	ASTM D5185(m)	60	58	---	---
Manganese	ppm	ASTM D5185(m)	0	<1	---	---
Magnesium	ppm	ASTM D5185(m)	1010	943	---	---
Calcium	ppm	ASTM D5185(m)	1070	1062	---	---
Phosphorus	ppm	ASTM D5185(m)	1150	972	---	---
Zinc	ppm	ASTM D5185(m)	1270	1170	---	---
Sulfur	ppm	ASTM D5185(m)	2060	2329	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.0	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*	10.0	9.24	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.54	13.7	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 550 - Rocky View County**
Sample No. : GFL0117323 **Received** : 16 Apr 2024 220 Carmek Blvd
Lab Number : 02629137 **Tested** : 17 Apr 2024 Rocky View County, AB
Unique Number : 5762269 **Diagnosed** : 18 Apr 2024 - Kevin Marson CA T1X 1X1
Test Package : MOB 2 **Contact**: GFL Calgary
 calgarymaintenance@gflenv.com

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. **F: (403)369-6163**