



WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
4609
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON XL SYN BLEND 15W40 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. No other corrective action is recommended at this time.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0117337	GFL0091564	GFL0077550
Sample Date		Client Info		30 Mar 2024	05 Oct 2023	24 Apr 2023
Machine Age	kms	Client Info		725189	14515	18754
Oil Age	kms	Client Info		0	0	1861
Filter Age	kms	Client Info		0	0	1861
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Chromium ppm levels are abnormal. Ring wear is indicated.

Iron	ppm	ASTM D5185(m)	>110	59	28	20
Chromium	ppm	ASTM D5185(m)	>4	▲ 5	1	<1
Nickel	ppm	ASTM D5185(m)	>2	0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>2	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>25	7	5	3
Lead	ppm	ASTM D5185(m)	>45	5	2	<1
Copper	ppm	ASTM D5185(m)	>85	3	2	3
Tin	ppm	ASTM D5185(m)	>4	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

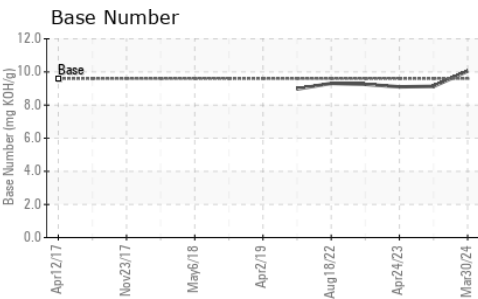
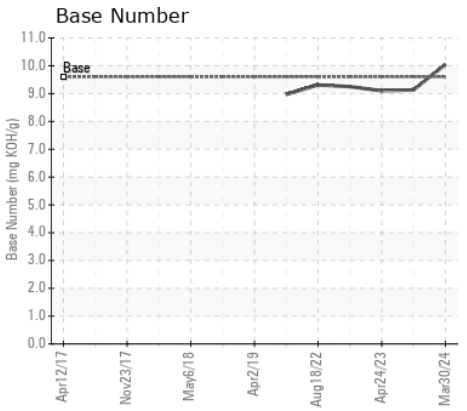
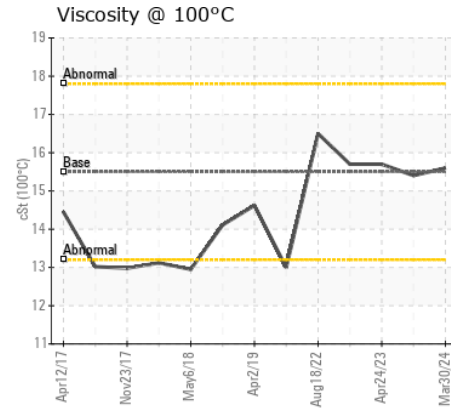
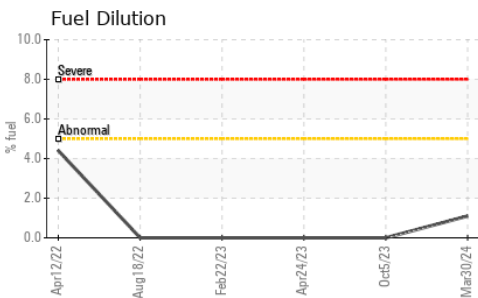
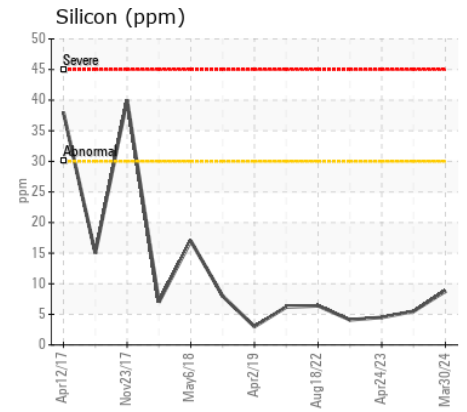
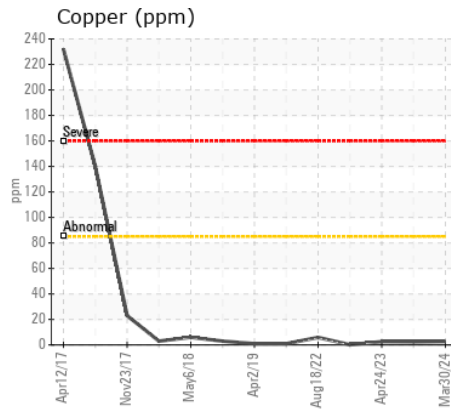
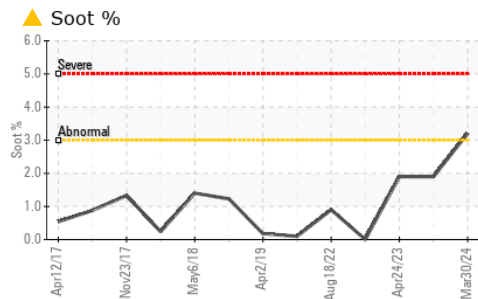
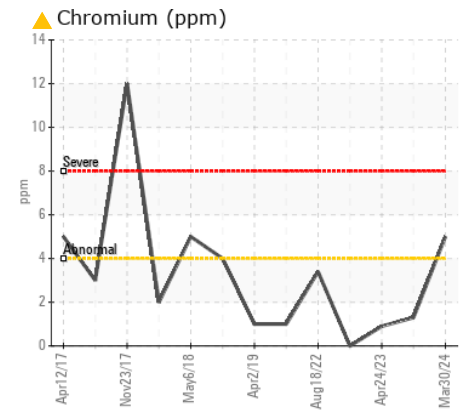
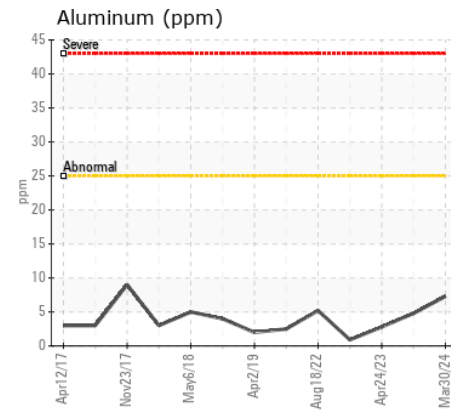
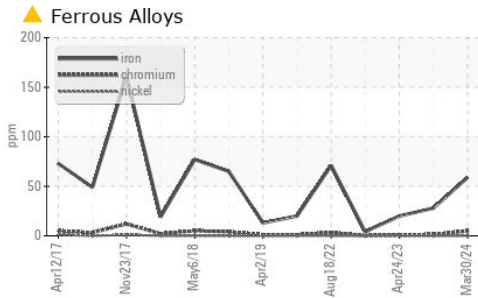
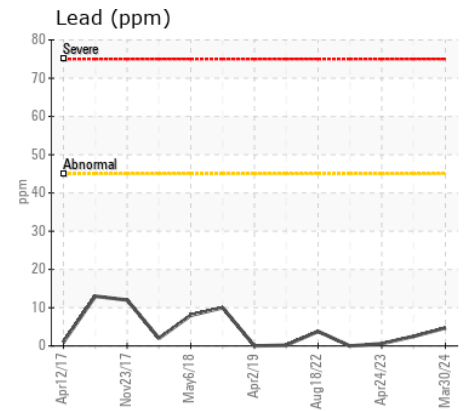
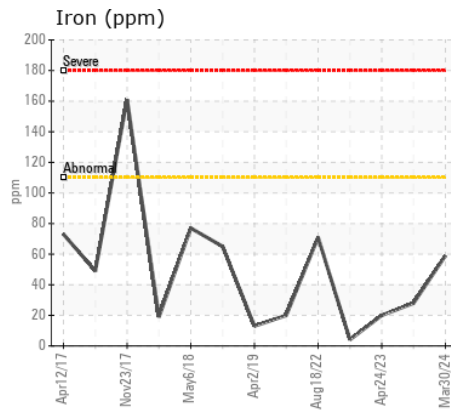
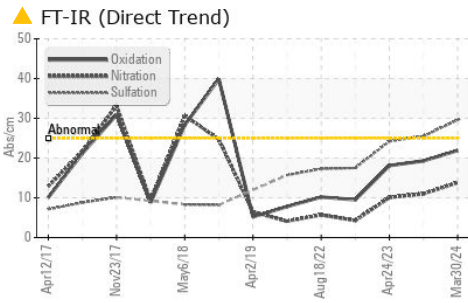
Light fuel dilution occurring. Light concentration of carbon/soot present in the oil. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185(m)	>30	9	6	4
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Fuel	%	ASTM D7593*	>5	1.1	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	▲ 3.2	1.9	1.9
Nitration	Abs/cm	ASTM D7624*	>20	13.8	11.0	10.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	29.6	25.5	24.2
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 oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		5	5	2
Boron	ppm	ASTM D5185(m)	1	13	8	6
Barium	ppm	ASTM D5185(m)	1	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	60	74	69	65
Manganese	ppm	ASTM D5185(m)	1	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	1157	1078	1043
Calcium	ppm	ASTM D5185(m)	1070	1334	1206	1208
Phosphorus	ppm	ASTM D5185(m)	1150	1166	1096	1144
Zinc	ppm	ASTM D5185(m)	1270	1386	1322	1276
Sulfur	ppm	ASTM D5185(m)	2060	2619	2557	2633
Oxidation	Abs/.1mm	ASTM D7414*	>25	21.9	19.3	18.1
Base Number (BN)	mg KOH/g	ASTM D2896*	9.6	10.05	9.13	9.10
Visc @ 100°C	cSt	ASTM D7279(m)	15.5	15.6	15.4	15.7



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0117337
Lab Number : 02628763
Unique Number : 5761895
Test Package : MOB 2 (Additional Tests: FUELDILUTION, PercentFuel)

GFL Environmental - 550 - Rocky View County
 220 Carmek Blvd
 Rocky View County, AB
 CA T1X 1X1
 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.

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