



Machine Id
724039
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

We advise that you check the fuel injection system. 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		GFL0111199	GFL0111249	---
Sample Date		Client Info		21 Jun 2024	24 Apr 2024	---
Machine Age	hrs	Client Info		0	0	---
Oil Age	hrs	Client Info		600	600	---
Filter Age	hrs	Client Info		600	600	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				SEVERE	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>110	23	32	---
Chromium	ppm	ASTM D5185m	>4	2	2	---
Nickel	ppm	ASTM D5185m	>2	0	0	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>25	<1	2	---
Lead	ppm	ASTM D5185m	>45	<1	<1	---
Copper	ppm	ASTM D5185m	>85	<1	0	---
Tin	ppm	ASTM D5185m	>4	<1	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

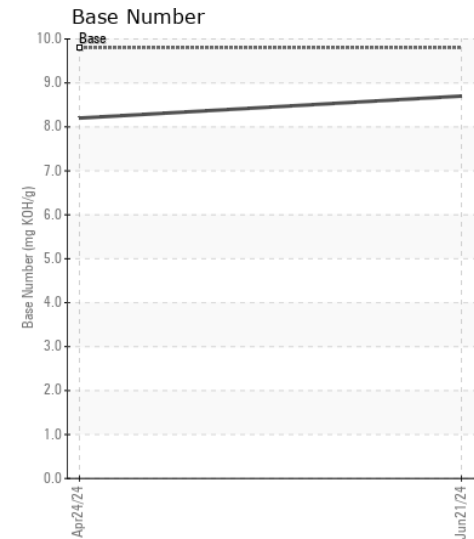
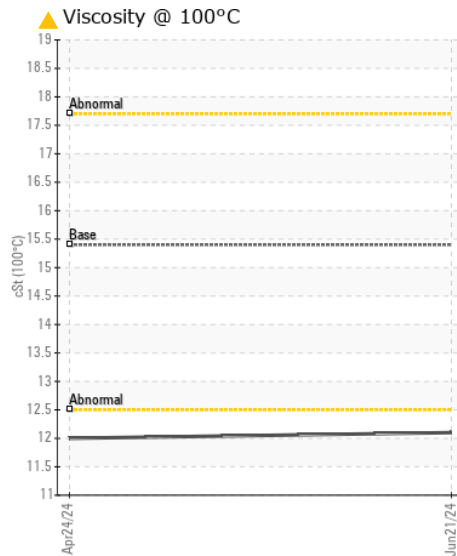
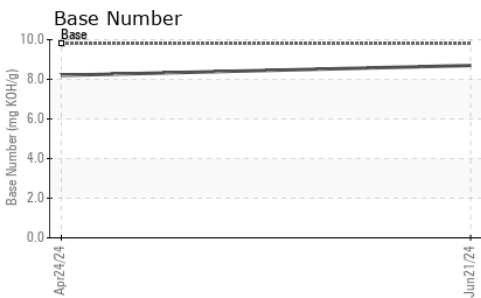
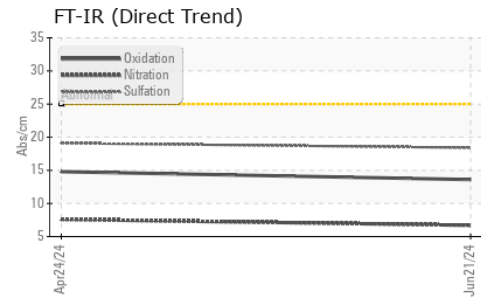
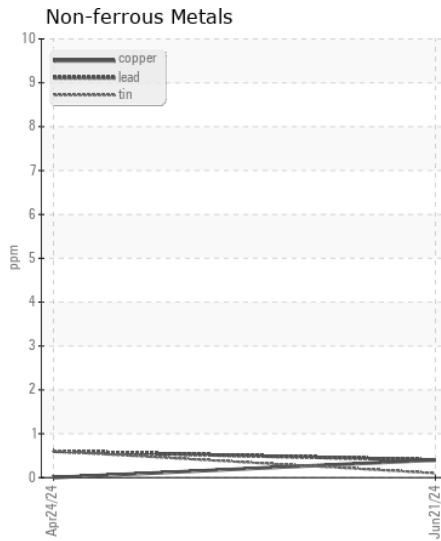
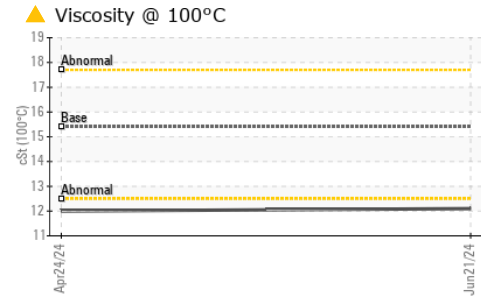
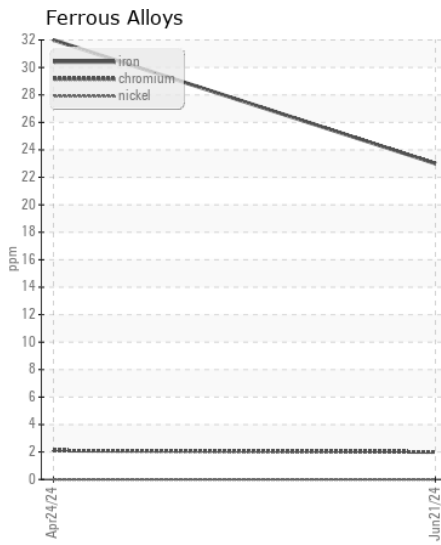
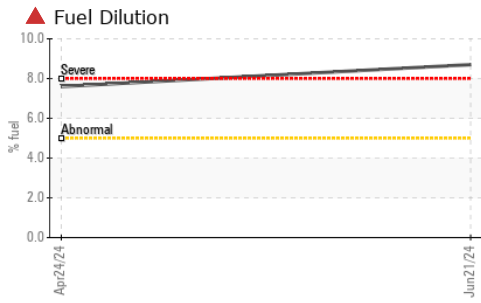
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>30	4	7	---
Potassium	ppm	ASTM D5185m	>20	0	<1	---
Fuel	%	ASTM D3524	>5	▲ 8.7	▲ 7.6	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.5	0.5	---
Nitration	Abs/cm	*ASTM D7624	>20	6.7	7.6	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.4	19.1	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	---

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		3	4	---
Boron	ppm	ASTM D5185m	0	2	2	---
Barium	ppm	ASTM D5185m	0	0	0	---
Molybdenum	ppm	ASTM D5185m	60	55	54	---
Manganese	ppm	ASTM D5185m	0	<1	<1	---
Magnesium	ppm	ASTM D5185m	1010	997	867	---
Calcium	ppm	ASTM D5185m	1070	1126	959	---
Phosphorus	ppm	ASTM D5185m	1150	1053	904	---
Zinc	ppm	ASTM D5185m	1270	1297	1118	---
Sulfur	ppm	ASTM D5185m	2060	3700	2981	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.6	14.8	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.7	8.2	---
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.1	▲ 12.0	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0111199
Lab Number : 06224302
Unique Number : 11102499
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 960B - Pittsfield HC
 1335 W. Washington
 Pittsfield, IL
 US 62363

Contact: David Bradshaw
 david.bradshaw@gflenv.com

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)

T:
F: