



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
929064-192616
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter 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		GFL0106212	GFL0106126	GFL0082073
Sample Date		Client Info		18 Apr 2024	06 Feb 2024	03 Dec 2023
Machine Age	hrs	Client Info		14566	13965	13481
Oil Age	hrs	Client Info		600	600	0
Filter Age	hrs	Client Info		600	600	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>110	26	28	21
Chromium	ppm	ASTM D5185m	>4	<1	2	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	1	<1	2
Lead	ppm	ASTM D5185m	>45	2	1	<1
Copper	ppm	ASTM D5185m	>85	3	2	<1
Tin	ppm	ASTM D5185m	>4	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

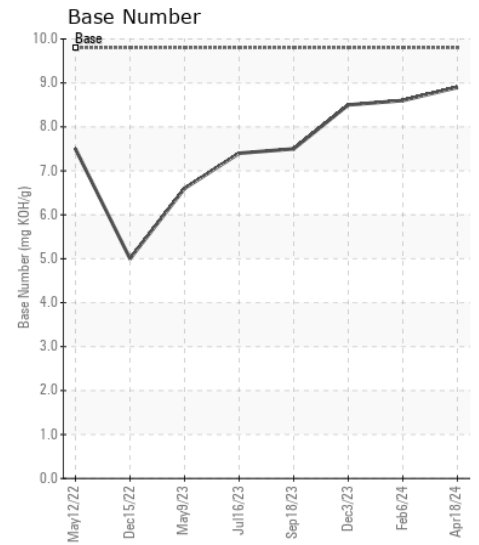
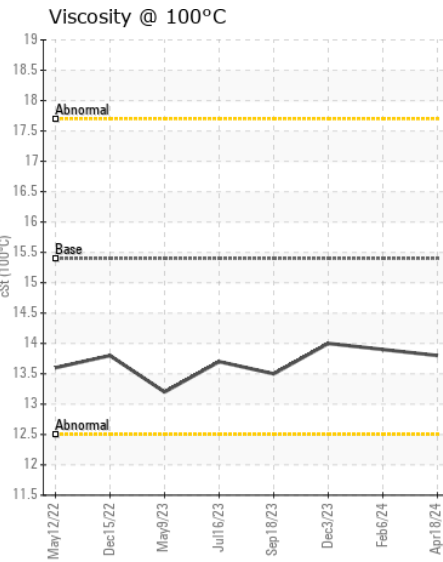
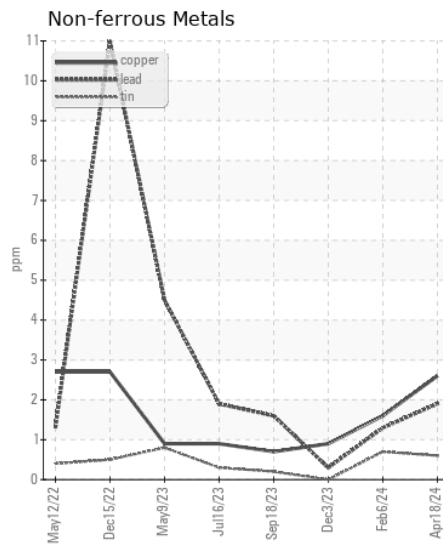
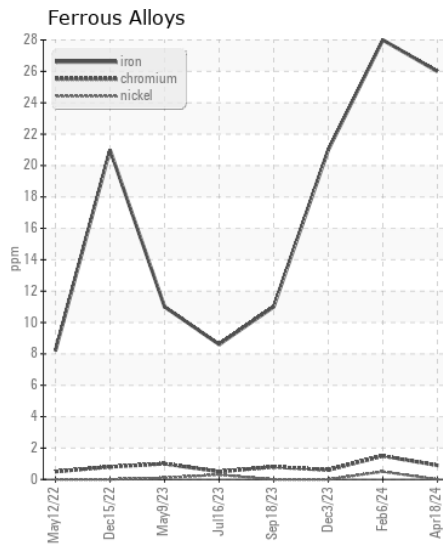
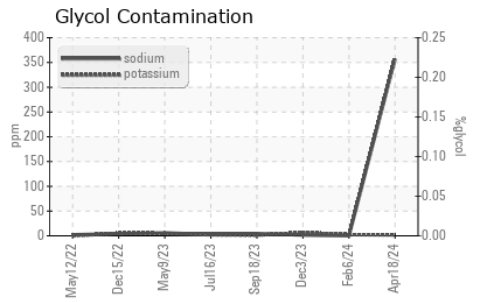
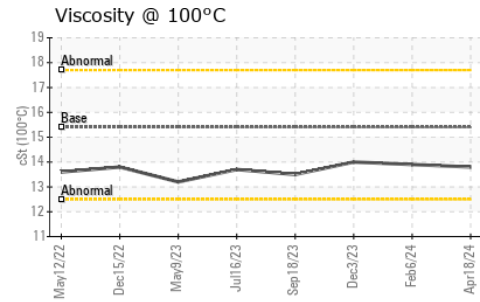
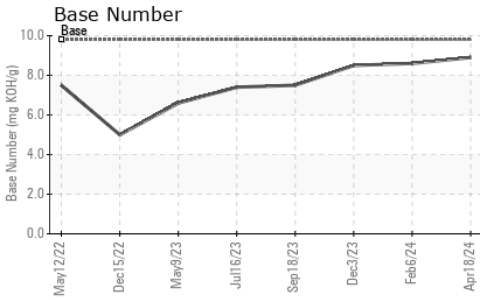
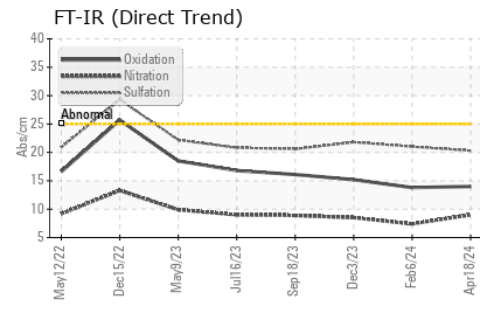
Sodium and/or potassium levels are high.

Silicon	ppm	ASTM D5185m	>30	7	5	3
Potassium	ppm	ASTM D5185m	>20	2	2	6
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.4	1.7	1.5
Nitration	Abs/cm	*ASTM D7624	>20	9.0	7.4	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.3	21.0	21.8
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	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		▲ 357	0	2
Boron	ppm	ASTM D5185m	0	5	9	5
Barium	ppm	ASTM D5185m	0	0	0	2
Molybdenum	ppm	ASTM D5185m	60	78	69	61
Manganese	ppm	ASTM D5185m	0	<1	<1	0
Magnesium	ppm	ASTM D5185m	1010	978	1042	901
Calcium	ppm	ASTM D5185m	1070	1145	1134	1090
Phosphorus	ppm	ASTM D5185m	1150	1056	1016	951
Zinc	ppm	ASTM D5185m	1270	1296	1346	1197
Sulfur	ppm	ASTM D5185m	2060	3702	2994	4384
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.0	13.8	15.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.9	8.6	8.5
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	13.9	14.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0106212 **Received** : 26 Apr 2024
Lab Number : 06161195 **Tested** : 30 Apr 2024
Unique Number : 10996618 **Diagnosed** : 30 Apr 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 152 - Jacksonville
 7580 PHILIPS HWY
 Jacksonville, FL
 US 32256
 Contact: Chris Smith
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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)