



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
911017
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (46 QTS)

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		GFL0103059	GFL0110345	GFL0102767
Sample Date		Client Info		23 May 2024	12 Mar 2024	02 Jan 2024
Machine Age	hrs	Client Info		10166	9561	8969
Oil Age	hrs	Client Info		605	592	580
Filter Age	hrs	Client Info		605	592	580
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	10	7	5
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	<1	<1
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	0	0	<1
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

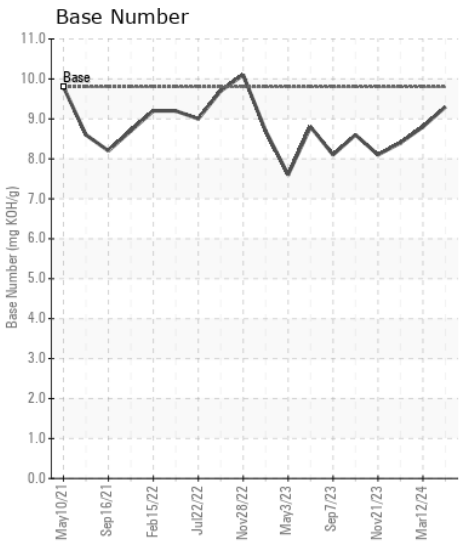
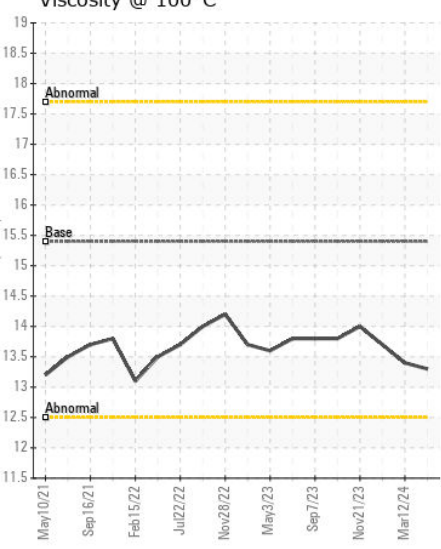
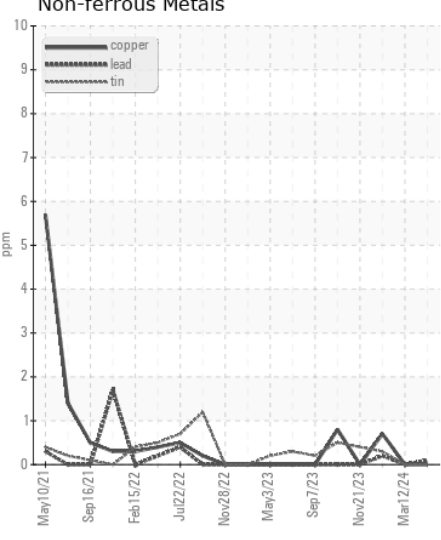
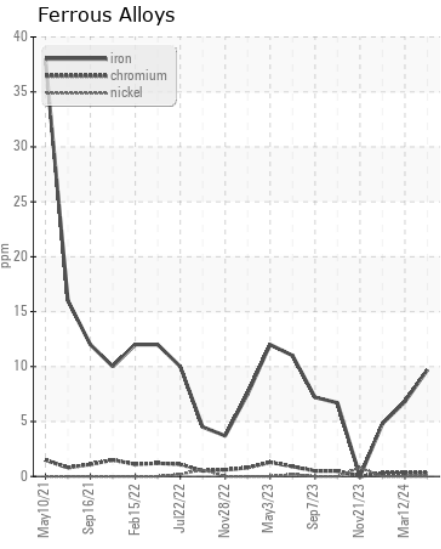
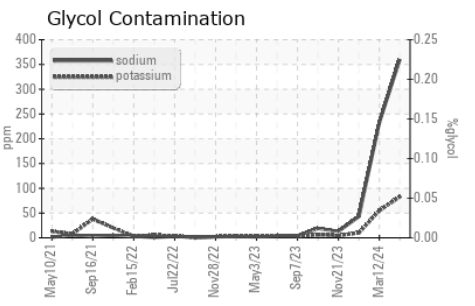
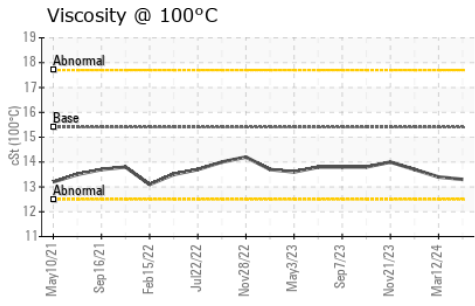
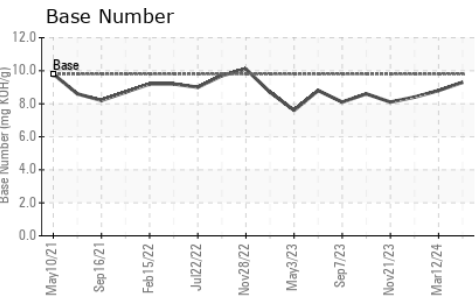
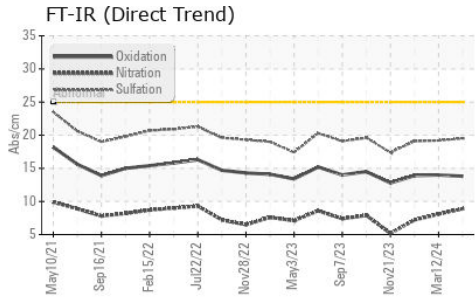
Sodium and/or potassium levels are high.

Silicon	ppm	ASTM D5185m	>25	5	3	3
Potassium	ppm	ASTM D5185m	>20	▲ 83	▲ 55	10
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	0.8	0.6	0.6
Nitration	Abs/cm	*ASTM D7624	>20	8.9	8.1	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.5	19.2	19.1
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	>0.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		▲ 360	▲ 233	43
Boron	ppm	ASTM D5185m	0	5	6	4
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	79	71	58
Manganese	ppm	ASTM D5185m	0	<1	0	0
Magnesium	ppm	ASTM D5185m	1010	975	982	865
Calcium	ppm	ASTM D5185m	1070	1294	1188	1043
Phosphorus	ppm	ASTM D5185m	1150	1116	1110	1022
Zinc	ppm	ASTM D5185m	1270	1396	1376	1160
Sulfur	ppm	ASTM D5185m	2060	3935	3913	2994
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.8	14.0	13.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.3	8.8	8.4
Visc @ 100°C	cSt	ASTM D445	15.4	13.3	13.4	13.7



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0103059
Lab Number : 06193256
Unique Number : 11050008
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 622 - Traverse City Hauling
 160 Hughes Dr
 Traverse City, MI
 US 49686
 Contact: GARY BREWER

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)

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F: