



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Machine Id
920030
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

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		GFL0116143	GFL0092626	GFL0082509
Sample Date		Client Info		20 May 2024	18 Oct 2023	07 Jul 2023
Machine Age	hrs	Client Info		32022	31044	30468
Oil Age	hrs	Client Info		598	576	606
Filter Age	hrs	Client Info		598	576	606
Oil Changed		Client Info		Changed	Not Changed	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	9	21	14
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	5	3
Lead	ppm	ASTM D5185m	>40	8	2	<1
Copper	ppm	ASTM D5185m	>330	12	2	<1
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

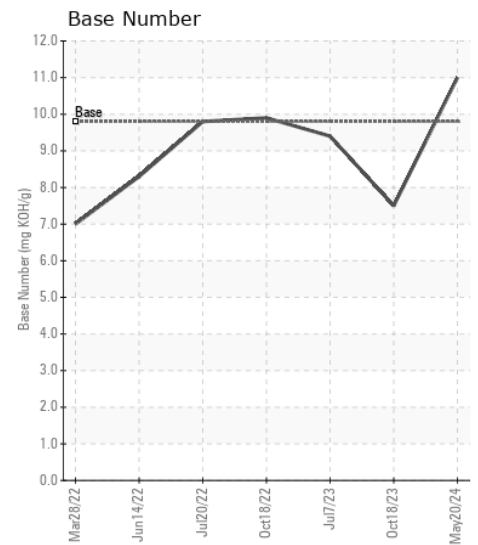
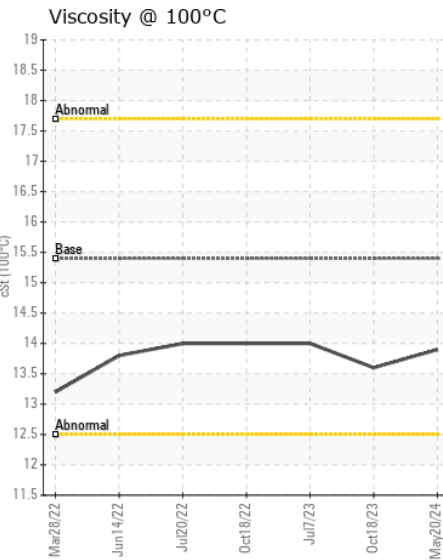
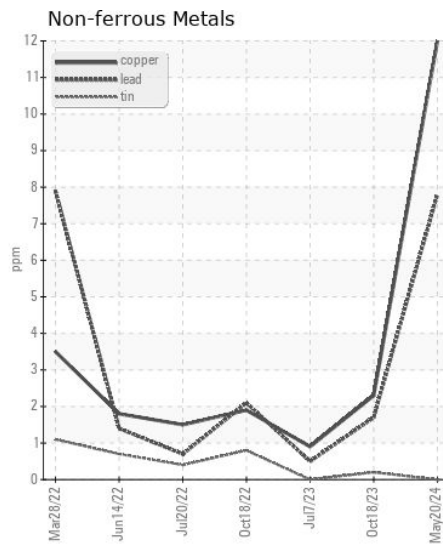
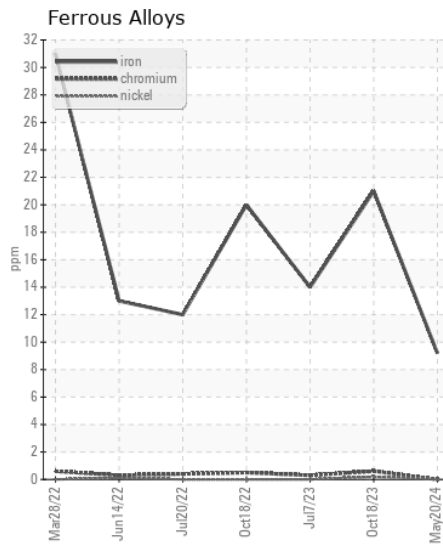
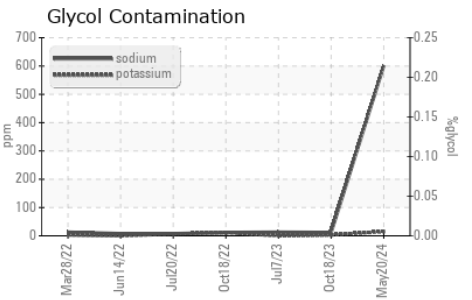
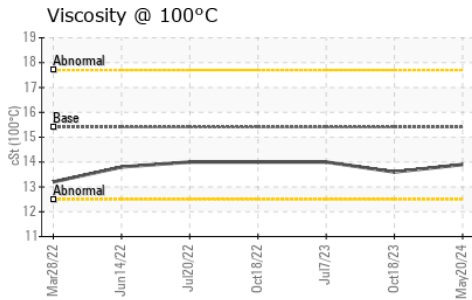
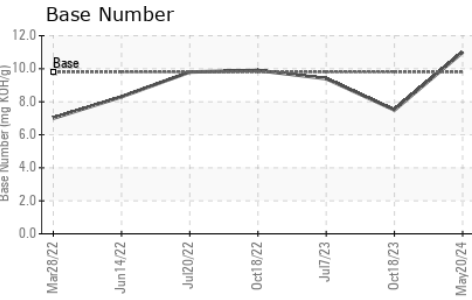
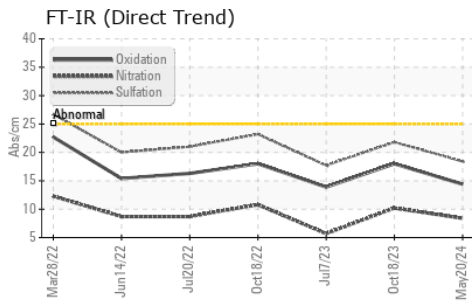
Sodium and/or potassium levels are high.

Silicon	ppm	ASTM D5185m	>25	22	24	12
Potassium	ppm	ASTM D5185m	>20	15	3	0
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.2	0.9	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.4	10.2	5.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.4	21.8	17.7
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		▲ 601	12	13
Boron	ppm	ASTM D5185m	0	23	0	<1
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	85	62	60
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	963	1000	1002
Calcium	ppm	ASTM D5185m	1070	1085	1082	1104
Phosphorus	ppm	ASTM D5185m	1150	1132	1087	1041
Zinc	ppm	ASTM D5185m	1270	1339	1343	1240
Sulfur	ppm	ASTM D5185m	2060	3887	3056	3679
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.4	18.0	13.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	11.0	7.5	9.4
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	13.6	14.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0116143 **Received** : 28 May 2024
Lab Number : 06193222 **Tested** : 31 May 2024
Unique Number : 11049974 **Diagnosed** : 31 May 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 947 - WB Horicon HC
 N7296 County Rd V
 Horicon, WI
 US 53032
 Contact: Tim Kieffer
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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)