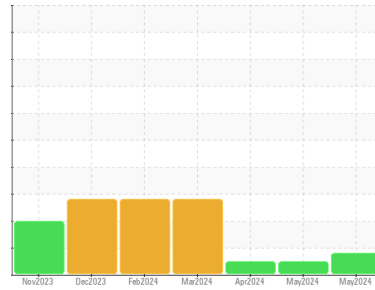




OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
414046
 Component
Diesel Engine
 Fluid

PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0121216	GFL0118626	GFL0118611
Sample Date	Client Info	29 May 2024	06 May 2024	08 Apr 2024
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	Not Changed	Not Changed	Not Changed
Sample Status		ABNORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	<1.0	<1.0
Water	WC Method >0.2	NEG	NEG	NEG
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >110	14	11	4
Chromium	ppm ASTM D5185m >4	<1	<1	<1
Nickel	ppm ASTM D5185m >2	1	<1	1
Titanium	ppm ASTM D5185m	0	0	<1
Silver	ppm ASTM D5185m >2	<1	<1	<1
Aluminum	ppm ASTM D5185m >25	7	5	2
Lead	ppm ASTM D5185m >45	2	<1	<1
Copper	ppm ASTM D5185m >85	▲ 203	56	16
Tin	ppm ASTM D5185m >4	<1	0	1
Vanadium	ppm ASTM D5185m	<1	0	<1
Cadmium	ppm ASTM D5185m	0	0	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	2	6	6
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	59	61	60
Manganese	ppm ASTM D5185m 0	1	<1	1
Magnesium	ppm ASTM D5185m 1010	887	938	947
Calcium	ppm ASTM D5185m 1070	1129	1214	1185
Phosphorus	ppm ASTM D5185m 1150	992	1028	1030
Zinc	ppm ASTM D5185m 1270	1176	1244	1235
Sulfur	ppm ASTM D5185m 2060	2996	3406	3373

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	8	7	8
Sodium	ppm ASTM D5185m	3	2	<1
Potassium	ppm ASTM D5185m >20	21	14	4

INFRA-RED

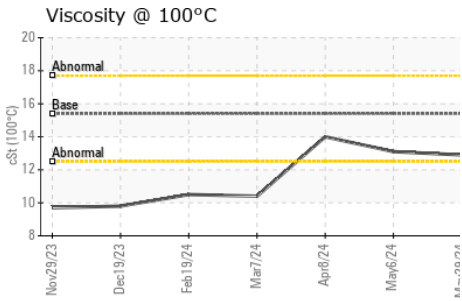
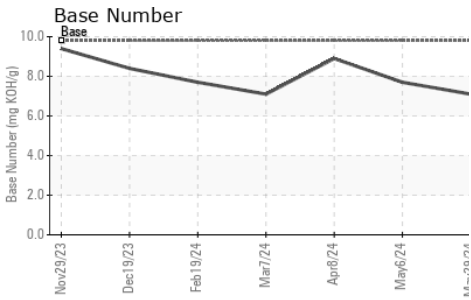
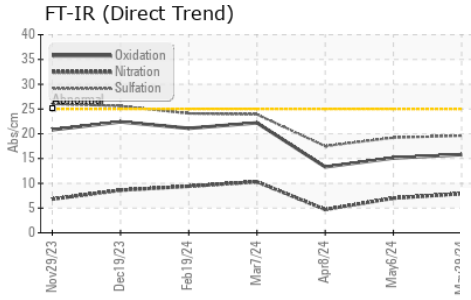
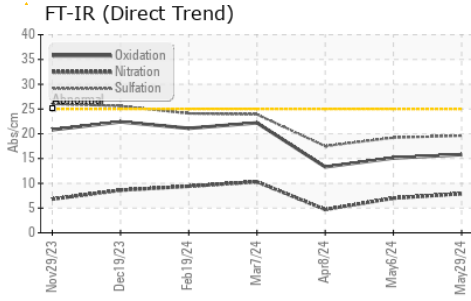
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.2	0.2	0.1
Nitration	Abs/cm *ASTM D7624 >20	7.9	7.0	4.7
Sulfation	Abs/.1mm *ASTM D7415 >30	19.6	19.2	17.5

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	15.8	15.1	13.3
Base Number (BN)	mg KOH/g ASTM D2896 9.8	7.1	7.7	8.9



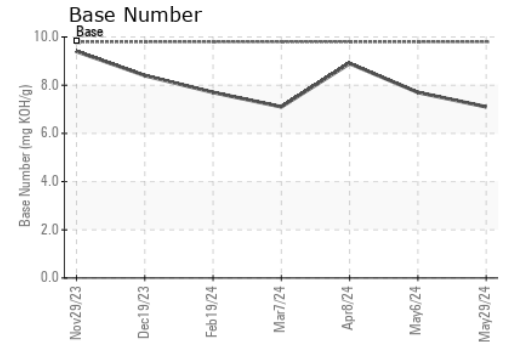
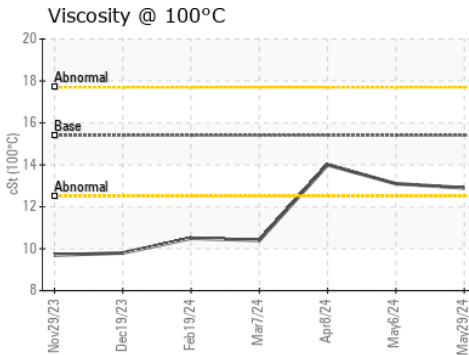
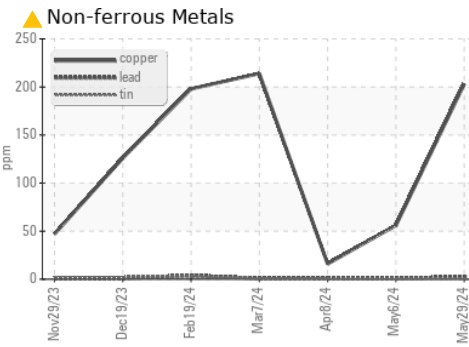
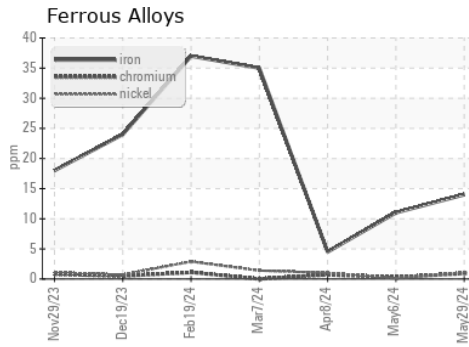
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
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
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	12.9	13.1

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0121216
 Lab Number : 06202492
 Unique Number : 11069953
 Test Package : FLEET

GFL Environmental - 846 - Mayfield Hauling
 3426 State Route 45
 Mayfield, KY
 US 42066

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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 T: (270)970-3690

F: