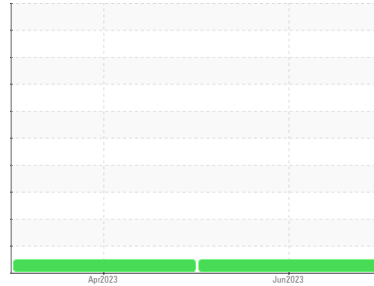




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
421040-455

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All 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	history 1	history 2
Sample Number	Client Info	GFL0066137	GFL0060334	---
Sample Date	Client Info	29 Jun 2023	05 Apr 2023	---
Machine Age	hrs	Client Info	6577	5958
Oil Age	hrs	Client Info	600	500
Oil Changed	Client Info	Changed	Changed	---
Sample Status		NORMAL	NORMAL	---

CONTAMINATION

method	limit/base	current	history 1	history 2
Fuel	WC Method >5	<1.0	<1.0	---
Glycol	WC Method	NEG	NEG	---

WEAR METALS

method	limit/base	current	history 1	history 2
Iron	ppm ASTM D5185m >80	11	16	---
Chromium	ppm ASTM D5185m >5	1	2	---
Nickel	ppm ASTM D5185m >2	0	0	---
Titanium	ppm ASTM D5185m	<1	0	---
Silver	ppm ASTM D5185m >3	0	0	---
Aluminum	ppm ASTM D5185m >30	3	9	---
Lead	ppm ASTM D5185m >30	<1	0	---
Copper	ppm ASTM D5185m >150	7	10	---
Tin	ppm ASTM D5185m >5	<1	<1	---
Vanadium	ppm ASTM D5185m	0	0	---
Cadmium	ppm ASTM D5185m	0	0	---

ADDITIVES

method	limit/base	current	history 1	history 2
Boron	ppm ASTM D5185m 0	14	15	---
Barium	ppm ASTM D5185m 0	0	0	---
Molybdenum	ppm ASTM D5185m 60	65	65	---
Manganese	ppm ASTM D5185m 0	<1	<1	---
Magnesium	ppm ASTM D5185m 1010	986	934	---
Calcium	ppm ASTM D5185m 1070	1144	1151	---
Phosphorus	ppm ASTM D5185m 1150	1068	973	---
Zinc	ppm ASTM D5185m 1270	1316	1242	---
Sulfur	ppm ASTM D5185m 2060	3940	3128	---

CONTAMINANTS

method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185m >20	8	6	---
Sodium	ppm ASTM D5185m	2	2	---
Potassium	ppm ASTM D5185m >20	6	10	---

INFRA-RED

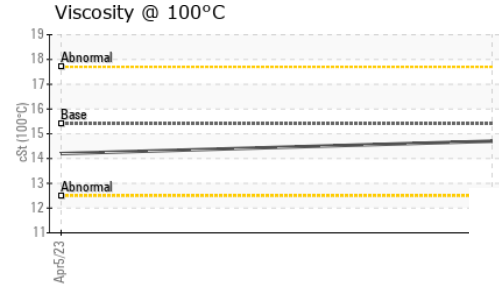
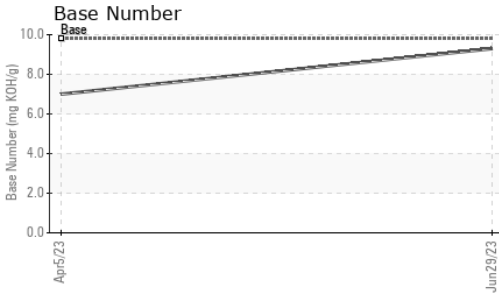
method	limit/base	current	history 1	history 2
Soot %	% *ASTM D7844 >3	0.2	0.4	---
Nitration	Abs/cm *ASTM D7624 >20	6.2	8.7	---
Sulfation	Abs/.1mm *ASTM D7415 >30	19.1	21.4	---

FLUID DEGRADATION

method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm *ASTM D7414 >25	14.5	18.4	---
Base Number (BN)	mg KOH/g ASTM D2896 9.8	9.3	7.0	---



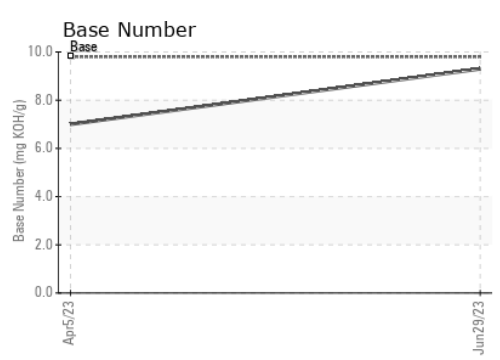
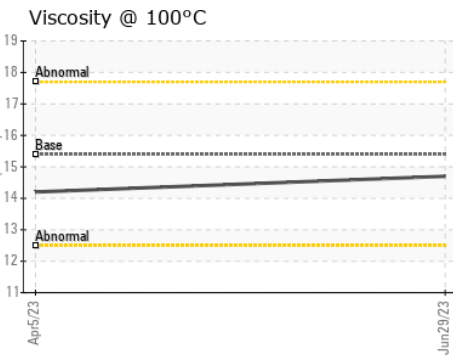
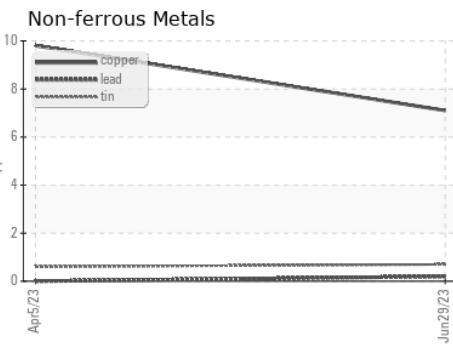
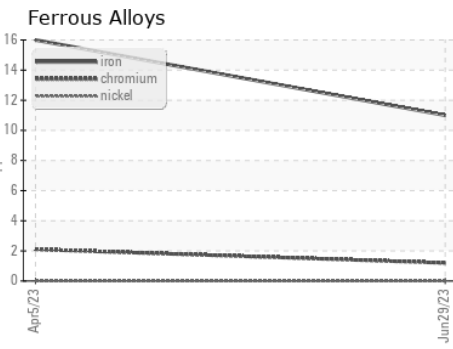
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	14.7	14.2

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0066137
Lab Number : 05891179
Unique Number : 10546989
Test Package : FLEET

GFL Environmental - 904 - Chippewa Falls HC
 11888 & 11863 30th Avenue
 Chippewa Falls, WI
 US 54729
 Contact: Andy Kane

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: