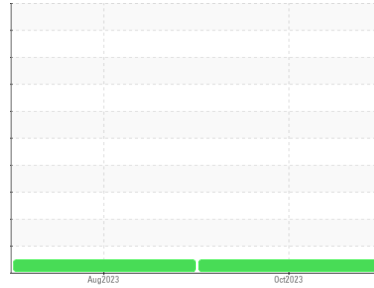




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
812041

Component
Diesel Engine

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

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	history1	history2
Sample Number	Client Info	GFL0096603	GFL0082789	---
Sample Date	Client Info	10 Oct 2023	02 Aug 2023	---
Machine Age	hrs	Client Info	3866	3286
Oil Age	hrs	Client Info	600	600
Oil Changed	Client Info	Changed	Changed	---
Sample Status		NORMAL	NORMAL	---

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	14	19
Chromium	ppm	ASTM D5185m >20	<1	<1
Nickel	ppm	ASTM D5185m >4	<1	<1
Titanium	ppm	ASTM D5185m	<1	0
Silver	ppm	ASTM D5185m >3	<1	<1
Aluminum	ppm	ASTM D5185m >20	<1	<1
Lead	ppm	ASTM D5185m >40	<1	<1
Copper	ppm	ASTM D5185m >330	2	3
Tin	ppm	ASTM D5185m >15	<1	<1
Vanadium	ppm	ASTM D5185m	0	0
Cadmium	ppm	ASTM D5185m	<1	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	0	1
Barium	ppm	ASTM D5185m 0	3	0
Molybdenum	ppm	ASTM D5185m 60	59	64
Manganese	ppm	ASTM D5185m 0	<1	<1
Magnesium	ppm	ASTM D5185m 1010	913	929
Calcium	ppm	ASTM D5185m 1070	1052	1123
Phosphorus	ppm	ASTM D5185m 1150	861	985
Zinc	ppm	ASTM D5185m 1270	1154	1252
Sulfur	ppm	ASTM D5185m 2060	2470	2755

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	3	3
Sodium	ppm	ASTM D5185m	5	3
Potassium	ppm	ASTM D5185m >20	<1	1

INFRA-RED

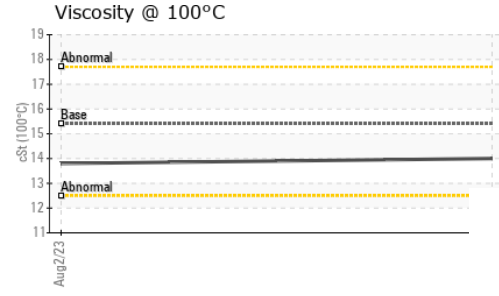
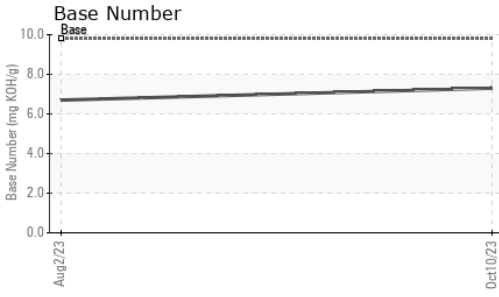
method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.8	0.9
Nitration	Abs/cm	*ASTM D7624 >20	8.4	8.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.8	20.1

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.4	16.3
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.3	6.7



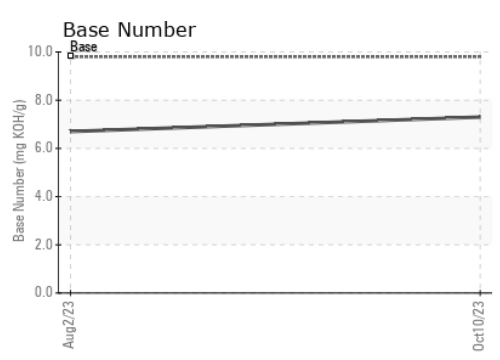
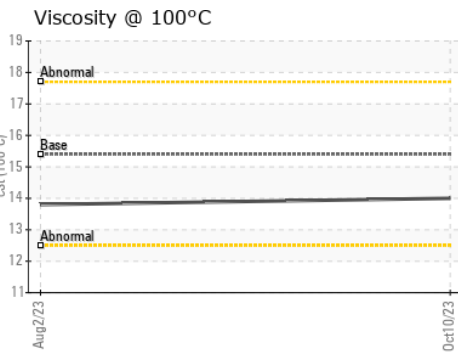
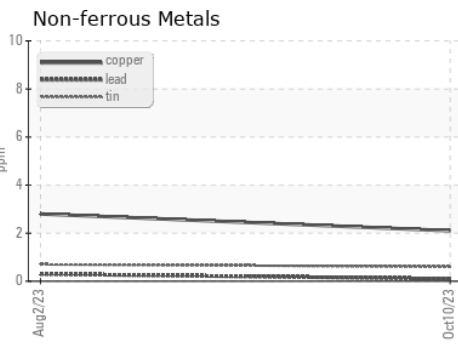
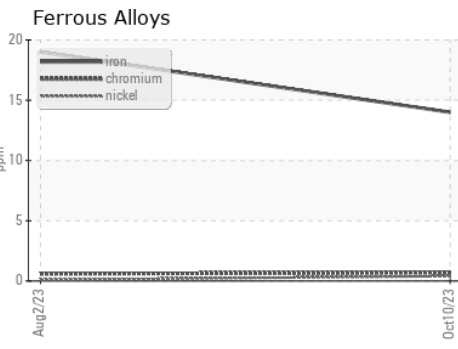
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
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	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	13.8	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0096603 **Received** : 16 Oct 2023
Lab Number : **05980310** **Diagnosed** : 17 Oct 2023
Unique Number : 10697605 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 465 - Pontiac
 888 Baldwin
 Pontiac, MI
 US 48340
 Contact: Ricky Matthews
 rickymathews@gflenv.com
 T: (586)825-9514
 F:

Certificate L2367
 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)