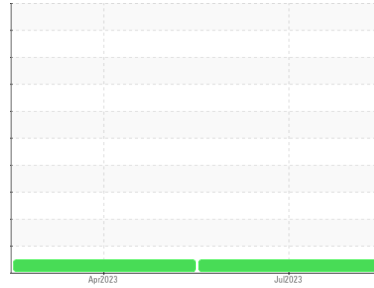




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
912091

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

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	GFL0083981	GFL0078710	---
Sample Date	Client Info	05 Jul 2023	18 Apr 2023	---
Machine Age	hrs Client Info	1166	574	---
Oil Age	hrs Client Info	592	574	---
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 >100	27	94	---
Chromium	ppm ASTM D5185m >20	1	3	---
Nickel	ppm ASTM D5185m >4	0	0	---
Titanium	ppm ASTM D5185m	0	0	---
Silver	ppm ASTM D5185m >3	0	0	---
Aluminum	ppm ASTM D5185m >20	2	8	---
Lead	ppm ASTM D5185m >40	<1	0	---
Copper	ppm ASTM D5185m >330	2	7	---
Tin	ppm ASTM D5185m >15	<1	0	---
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	4	9	---
Barium	ppm ASTM D5185m 0	0	1	---
Molybdenum	ppm ASTM D5185m 60	64	63	---
Manganese	ppm ASTM D5185m 0	<1	3	---
Magnesium	ppm ASTM D5185m 1010	888	946	---
Calcium	ppm ASTM D5185m 1070	1095	1134	---
Phosphorus	ppm ASTM D5185m 1150	988	982	---
Zinc	ppm ASTM D5185m 1270	1183	1258	---
Sulfur	ppm ASTM D5185m 2060	2816	3356	---

CONTAMINANTS

method	limit/base	current	history 1	history 2
Silicon	ppm ASTM D5185m >25	4	11	---
Sodium	ppm ASTM D5185m	<1	3	---
Potassium	ppm ASTM D5185m >20	4	13	---

INFRA-RED

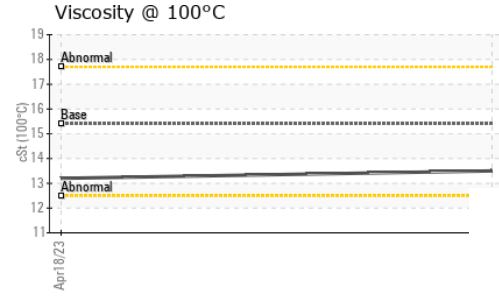
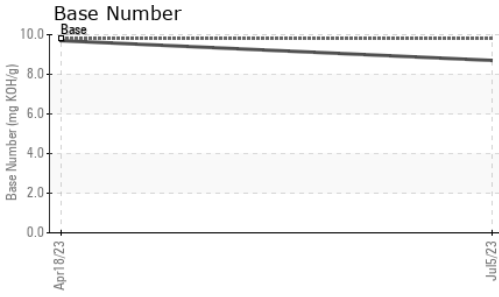
method	limit/base	current	history 1	history 2
Soot %	% *ASTM D7844 >3	0.5	0.8	---
Nitration	Abs/cm *ASTM D7624 >20	8.2	7.6	---
Sulfation	Abs/.1mm *ASTM D7415 >30	19.8	20.6	---

FLUID DEGRADATION

method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm *ASTM D7414 >25	15.2	15.3	---
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.7	9.7	---



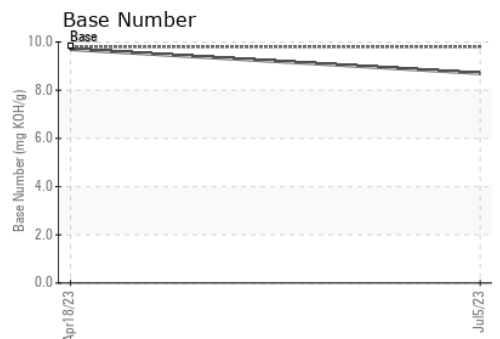
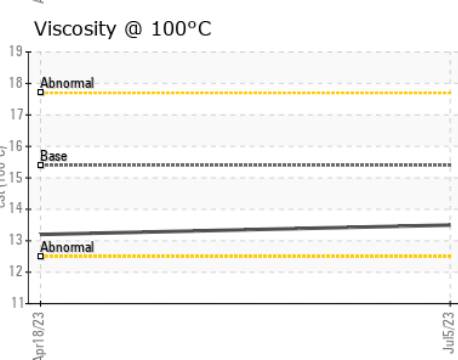
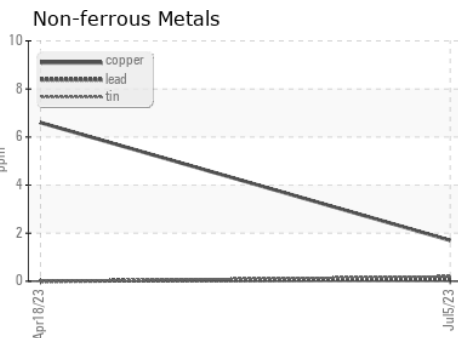
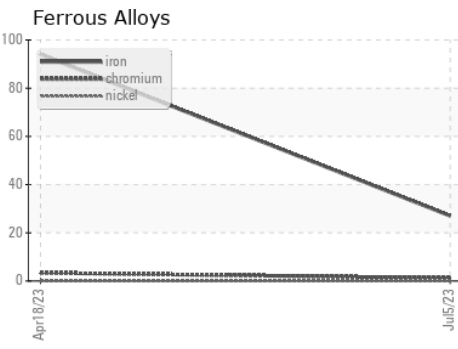
OIL ANALYSIS REPORT



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	13.5	13.2	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0083981 **Received** : 11 Jul 2023
Lab Number : **05895491** **Diagnosed** : 12 Jul 2023
Unique Number : 10551301 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 622 - Traverse City Hauling
 160 Hughes Dr
 Traverse City, MI
 US 49686
 Contact: TECHNICIAN ACCOUNT
 aw.tc.maint@gflenv.com
 T:
 F:

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)