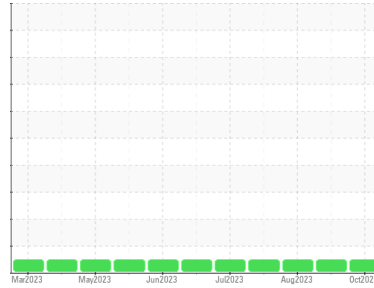




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
413017
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

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		GFL0097221	GFL0069206	GFL0069152
Sample Date	Client Info		13 Oct 2023	07 Sep 2023	24 Aug 2023
Machine Age	hrs	Client Info	1668	1447	1340
Oil Age	hrs	Client Info	328	107	553
Oil Changed	Client Info		Not Chngd	Not Chngd	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	10	4	15
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >5	4	<1	1
Titanium	ppm	ASTM D5185m >2	<1	0	0
Silver	ppm	ASTM D5185m >2	0	<1	<1
Aluminum	ppm	ASTM D5185m >20	4	2	9
Lead	ppm	ASTM D5185m >40	<1	<1	0
Copper	ppm	ASTM D5185m >330	13	9	58
Tin	ppm	ASTM D5185m >15	<1	<1	1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	2	5	5
Barium	ppm	ASTM D5185m 0	10	0	0
Molybdenum	ppm	ASTM D5185m 60	56	58	64
Manganese	ppm	ASTM D5185m 0	<1	1	<1
Magnesium	ppm	ASTM D5185m 1010	832	989	933
Calcium	ppm	ASTM D5185m 1070	948	1061	1140
Phosphorus	ppm	ASTM D5185m 1150	928	1047	1023
Zinc	ppm	ASTM D5185m 1270	1087	1324	1291
Sulfur	ppm	ASTM D5185m 2060	2752	3968	3410

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	5	4	6
Sodium	ppm	ASTM D5185m	2	3	4
Potassium	ppm	ASTM D5185m >20	10	6	26

INFRA-RED

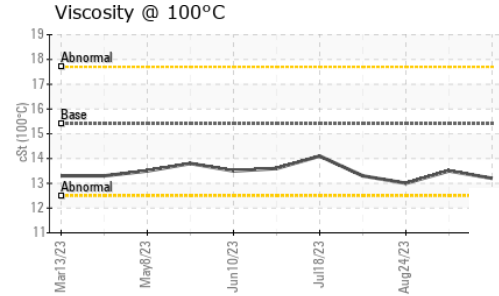
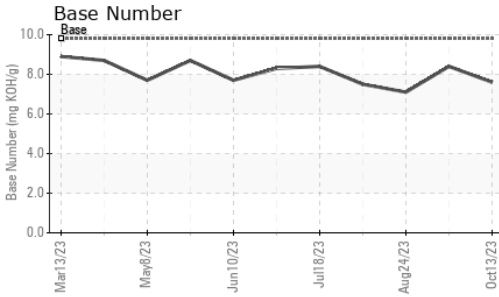
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.3	0.1	0.4
Nitration	Abs/cm	*ASTM D7624 >20	6.6	5.0	7.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.1	17.2	19.4

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.9	12.9	15.5
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.6	8.4	7.1



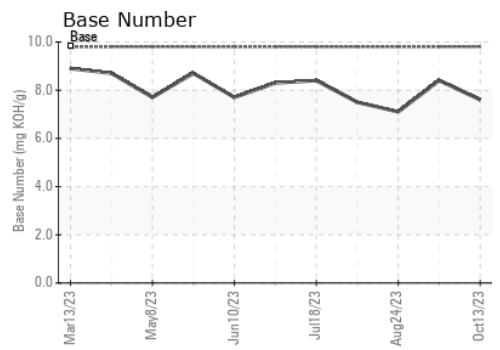
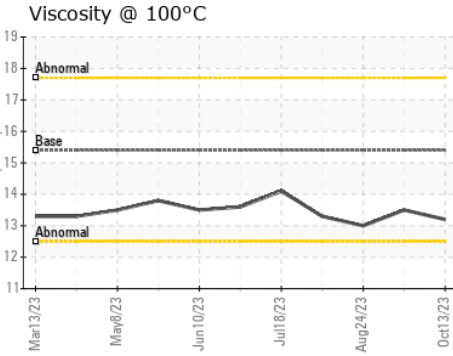
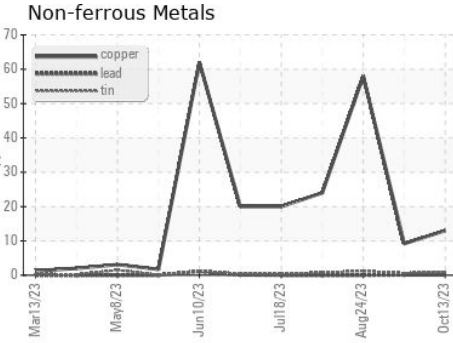
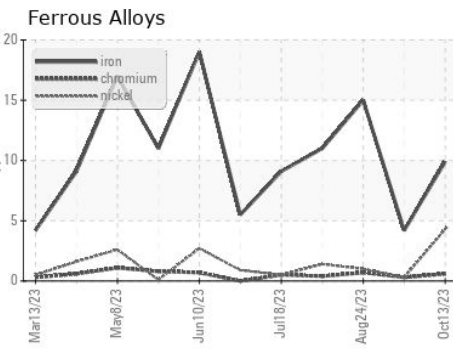
OIL ANALYSIS REPORT



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	13.2	13.5	13.0

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0097221 **Received** : 17 Oct 2023
Lab Number : **05981113** **Diagnosed** : 18 Oct 2023
Unique Number : 10698408 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 073 - Warner Robins - Transwaste
 155 Story Road
 Warner Robins, GA
 US 31093
 Contact: JOSH MALONEY
 jmaloney@gflenv.com

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)