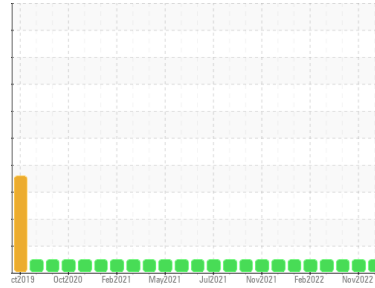




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
2864

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (10 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		GFL0072243	GFL0059046	GFL0049622
Sample Date	Client Info		12 Jul 2023	11 Nov 2022	18 Jul 2022
Machine Age	mls	Client Info	193713	9653	8725
Oil Age	mls	Client Info	11500	0	0
Oil Changed	Client Info		Changed	Changed	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 >165	10	15	9
Chromium	ppm	ASTM D5185m >5	<1	<1	<1
Nickel	ppm	ASTM D5185m >4	<1	0	0
Titanium	ppm	ASTM D5185m >2	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	<1
Aluminum	ppm	ASTM D5185m >20	1	3	1
Lead	ppm	ASTM D5185m >150	2	3	1
Copper	ppm	ASTM D5185m >90	1	3	1
Tin	ppm	ASTM D5185m >5	<1	<1	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	7	4	6
Barium	ppm	ASTM D5185m 0	0	8	0
Molybdenum	ppm	ASTM D5185m 60	65	60	57
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	899	926	923
Calcium	ppm	ASTM D5185m 1070	1108	1109	1106
Phosphorus	ppm	ASTM D5185m 1150	1016	992	935
Zinc	ppm	ASTM D5185m 1270	1196	1211	1224
Sulfur	ppm	ASTM D5185m 2060	3066	3047	3288

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >35	4	6	4
Sodium	ppm	ASTM D5185m	17	9	4
Potassium	ppm	ASTM D5185m >20	3	0	0

INFRA-RED

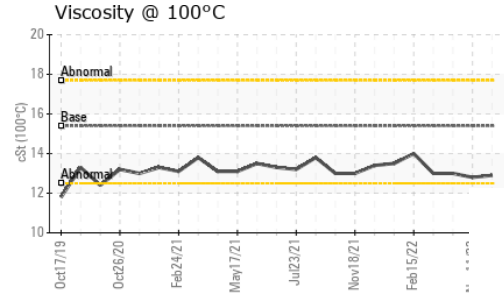
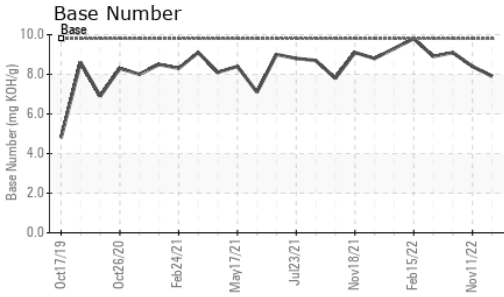
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >7.5	0.4	0.5	0.4
Nitration	Abs/cm	*ASTM D7624 >20	8.2	10.6	8.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.6	21.8	21.1

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.1	17.6	16.0
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.9	8.4	9.1



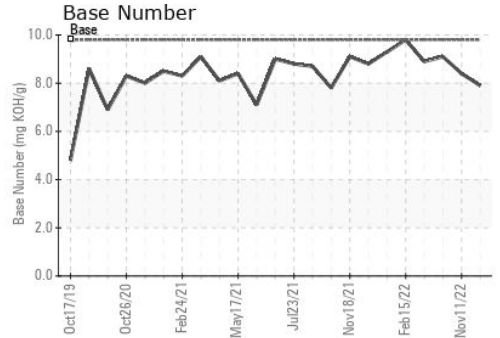
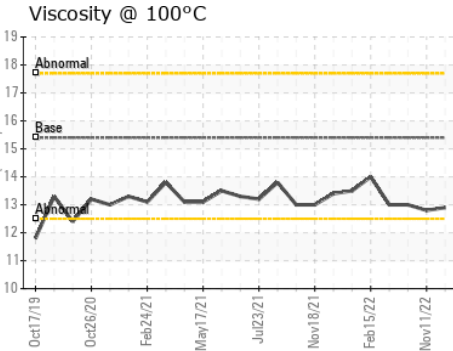
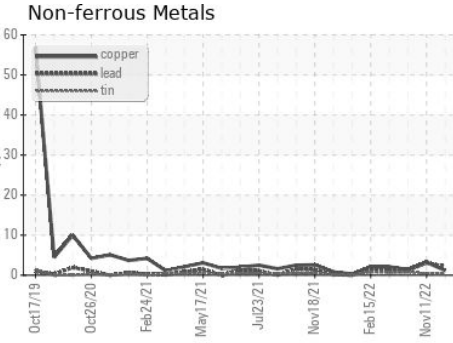
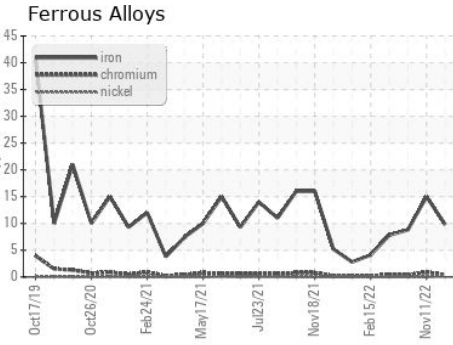
OIL ANALYSIS REPORT



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	12.9	12.8	13.0

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0072243 **Received** : 17 Jul 2023
Lab Number : **05899695** **Diagnosed** : 18 Jul 2023
Unique Number : 10561051 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 004 - Newport - Central Coast
 427 Roberts Road
 Newport, NC
 US 28570
 Contact: Marquis Williams
 marquis.williams@gflenv.com
 T:
 F: (252)223-6010

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)