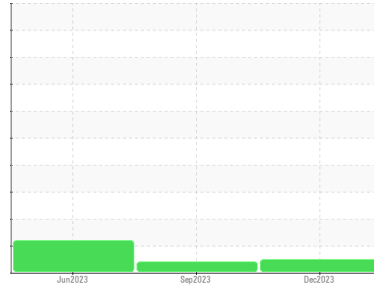




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
212040

Component
Diesel Engine

Fluid
PETRO CANADA DURON UHP 5W40 (--- GAL)

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		GFL0086961	GFL0086938	GFL0069280
Sample Date	Client Info		04 Dec 2023	07 Sep 2023	07 Jun 2023
Machine Age	mls	Client Info	8000	3300	2579
Oil Age	mls	Client Info	3000	3300	2579
Oil Changed	Client Info		N/A	Not Changd	Not Changd
Sample Status			NORMAL	ATTENTION	ATTENTION

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	▲ 3.5
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	20	78	68
Chromium	ppm	ASTM D5185m >20	<1	3	2
Nickel	ppm	ASTM D5185m >2	0	1	1
Titanium	ppm	ASTM D5185m >2	<1	<1	<1
Silver	ppm	ASTM D5185m >2	4	19	19
Aluminum	ppm	ASTM D5185m >25	2	8	7
Lead	ppm	ASTM D5185m >40	0	1	1
Copper	ppm	ASTM D5185m >330	10	43	43
Tin	ppm	ASTM D5185m >15	0	<1	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 65	15	64	79
Barium	ppm	ASTM D5185m 0	0	0	2
Molybdenum	ppm	ASTM D5185m 65	48	<1	1
Manganese	ppm	ASTM D5185m 0	1	7	6
Magnesium	ppm	ASTM D5185m 1160	886	698	628
Calcium	ppm	ASTM D5185m 820	905	1226	1225
Phosphorus	ppm	ASTM D5185m 1160	869	1052	1013
Zinc	ppm	ASTM D5185m 1260	1086	1162	1145
Sulfur	ppm	ASTM D5185m 3000	3050	4398	4144

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	12	36	36
Sodium	ppm	ASTM D5185m	3	13	12
Potassium	ppm	ASTM D5185m >20	<1	10	10

INFRA-RED

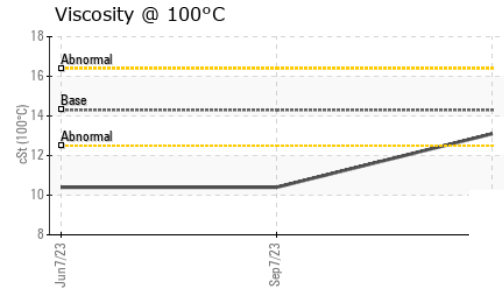
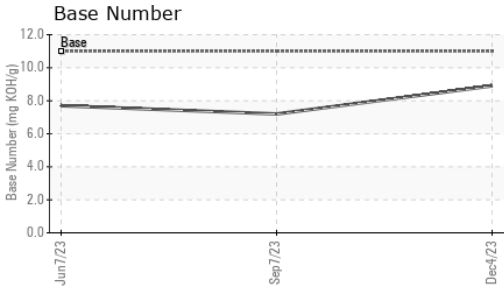
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	5.7	9.8	9.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	17.8	19.9	20.3

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.1	14.0	15.6
Base Number (BN)	mg KOH/g	ASTM D2896 11.0	8.9	7.2	7.7



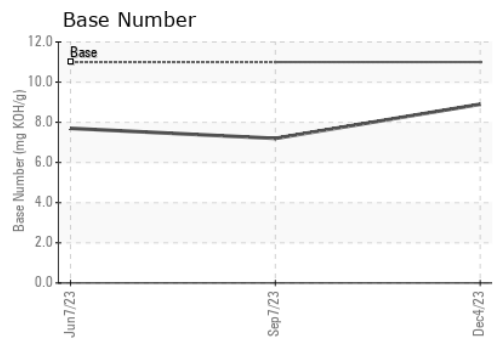
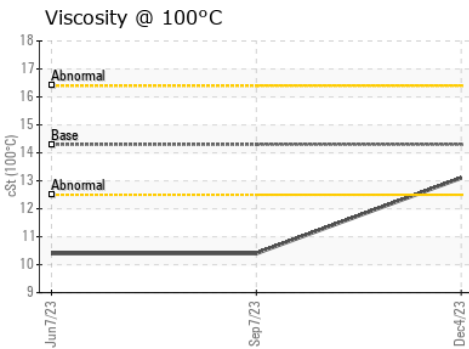
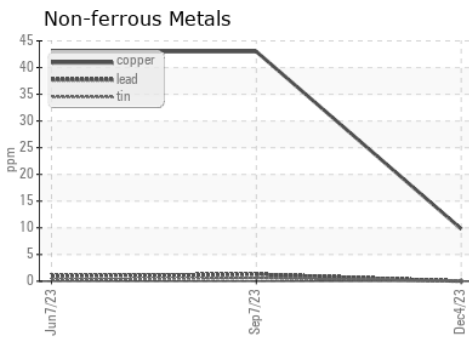
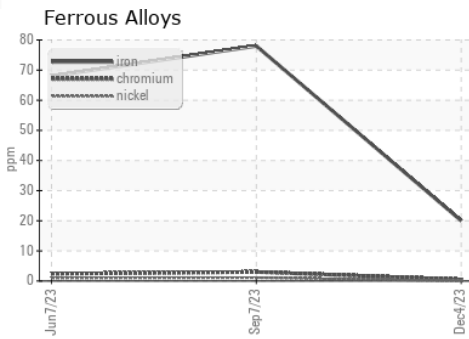
OIL ANALYSIS REPORT



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	14.3	13.1	▲ 10.4 ▲ 10.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0086961 **Received** : 07 Dec 2023
Lab Number : **06028517** **Diagnosed** : 09 Dec 2023
Unique Number : 10778308 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 408 - Brown City
 4235 M-53
 BROWN CITY, MI
 US 48416
 Contact: WILLIAM DEOLA
 bdeola@gflenv.com
 T: (810)238-2836
 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)