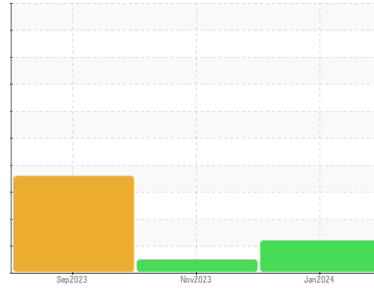




OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION



Area
GFL035
Machine Id
934047
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (42 QTS)

DIAGNOSIS

▲ Recommendation

The oil is near the end of its useful service life, recommend schedule an oil change. 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 level is low. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0085229	GFL0102301	GFL0071621
Sample Date	Client Info		11 Jan 2024	17 Nov 2023	15 Sep 2023
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	600	300	600
Oil Changed	Client Info		Not Chngd	Not Chngd	Changed
Sample Status			ABNORMAL	NORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
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 >120	35	16	56
Chromium	ppm	ASTM D5185m >20	2	<1	1
Nickel	ppm	ASTM D5185m >5	1	2	1
Titanium	ppm	ASTM D5185m >2	0	0	0
Silver	ppm	ASTM D5185m >2	0	<1	0
Aluminum	ppm	ASTM D5185m >20	12	6	▲ 23
Lead	ppm	ASTM D5185m >40	6	0	2
Copper	ppm	ASTM D5185m >330	5	3	22
Tin	ppm	ASTM D5185m >15	2	<1	2
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	4	6	4
Barium	ppm	ASTM D5185m 0	0	0	<1
Molybdenum	ppm	ASTM D5185m 60	60	51	57
Manganese	ppm	ASTM D5185m 0	3	2	15
Magnesium	ppm	ASTM D5185m 1010	651	564	763
Calcium	ppm	ASTM D5185m 1070	1656	1495	1154
Phosphorus	ppm	ASTM D5185m 1150	812	712	721
Zinc	ppm	ASTM D5185m 1270	1016	958	951
Sulfur	ppm	ASTM D5185m 2060	2374	2461	2520

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	11	8	▲ 41
Sodium	ppm	ASTM D5185m	10	8	5
Potassium	ppm	ASTM D5185m >20	21	12	57

INFRA-RED

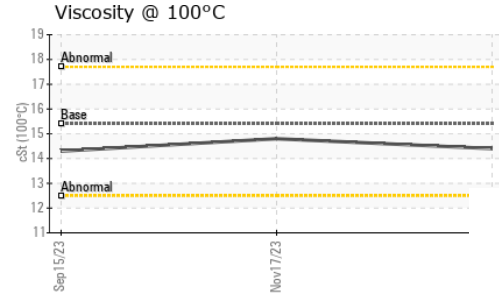
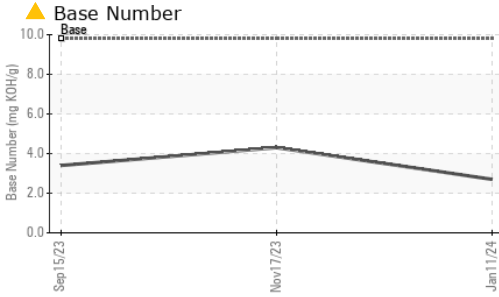
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0	0	0.1
Nitration	Abs/cm	*ASTM D7624 >20	12.7	11.7	11.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	27.6	21.6	23.4

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	23.2	18.8	21.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	▲ 2.7	4.3	▲ 3.4



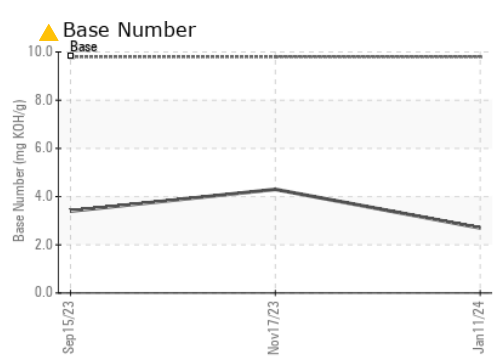
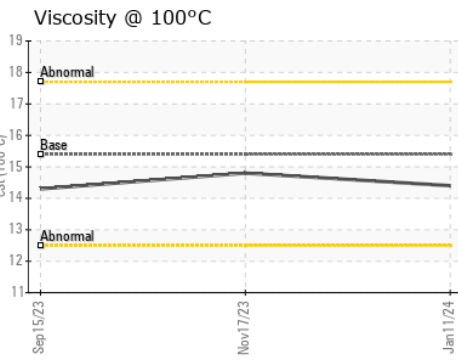
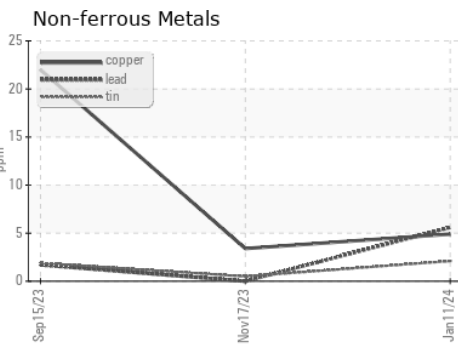
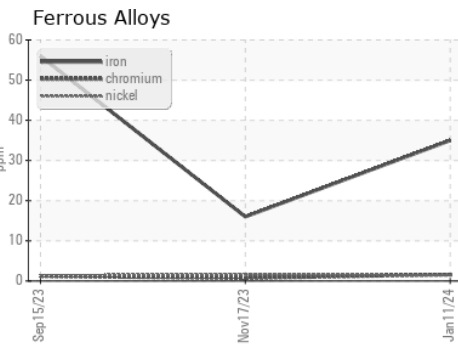
OIL ANALYSIS REPORT



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	14.4	14.8	14.3

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0085229 **Recieved** : 16 Jan 2024
Lab Number : **06060820** **Diagnosed** : 17 Jan 2024
Unique Number : 10832202 **Diagnostician** : Jonathan Hester
Test Package : FLEET

GFL Environmental - 035 - Greensboro
 1236 Elon Place
 High Point, NC
 US 27263
 Contact: JORGE COSTA
 jorge.costa@gflenv.com
 T: (336)668-3712
 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)