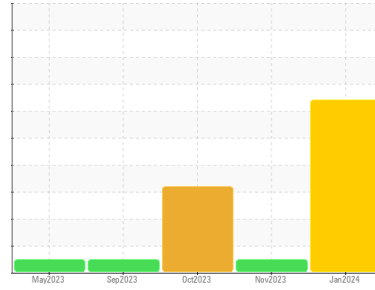




PROBLEM SUMMARY

Sample Rating Trend



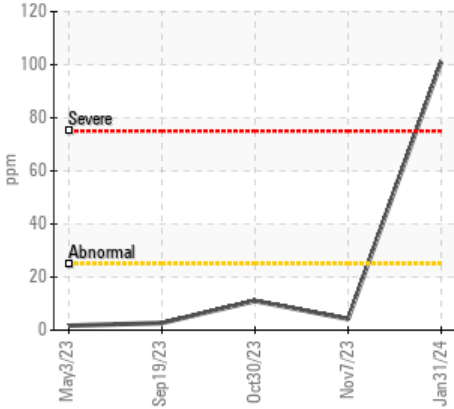
DIRT



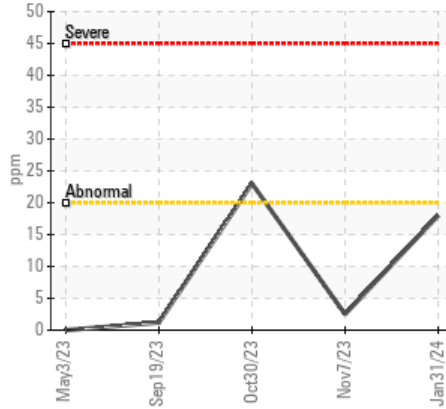
Machine Id
422013
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

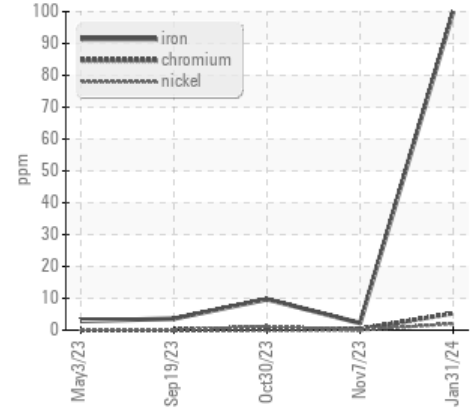
Silicon (ppm)



Aluminum (ppm)



Ferrous Alloys



RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	SEVERE
Aluminum	ppm	ASTM D5185m	>20	▲ 18	2	▲ 23
Silicon	ppm	ASTM D5185m	>25	● 101	4	11

Customer Id: GFL465
Sample No.: GFL0107733
Lab Number: 06085274
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldrige +1
don.b505@comcast.net

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Dirt Access	---	---	?	We advise that you check the air filter, air induction system, and any areas where dirt may enter the component.

HISTORICAL DIAGNOSIS

07 Nov 2023 Diag: Sean Felton

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. Fuel content negligible. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



30 Oct 2023 Diag: Wes Davis

FUEL



We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Aluminum ppm levels are abnormal. Piston wear is indicated. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report



19 Sep 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

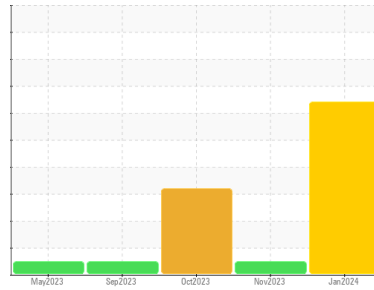
view report





OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
422013
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

An increase in the iron level is noted.

Contamination

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0107733	GFL0096529	GFL0096526
Sample Date	Client Info	31 Jan 2024	07 Nov 2023	30 Oct 2023
Machine Age	hrs	29198	28750	28694
Oil Age	hrs	600	600	600
Oil Changed	Client Info	Changed	Not Changd	Changed
Sample Status		SEVERE	NORMAL	SEVERE

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<1.0	1.5	6.7
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	▲ 100	2	10
Chromium	ppm ASTM D5185m >20	5	<1	<1
Nickel	ppm ASTM D5185m >5	2	0	1
Titanium	ppm ASTM D5185m >2	2	0	0
Silver	ppm ASTM D5185m >2	0	<1	0
Aluminum	ppm ASTM D5185m >20	▲ 18	2	23
Lead	ppm ASTM D5185m >40	<1	<1	0
Copper	ppm ASTM D5185m >330	6	<1	2
Tin	ppm ASTM D5185m >15	1	0	<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	<1	5
Barium	ppm ASTM D5185m 0	0	6	0
Molybdenum	ppm ASTM D5185m 60	63	59	54
Manganese	ppm ASTM D5185m 0	2	0	<1
Magnesium	ppm ASTM D5185m 1010	1024	866	859
Calcium	ppm ASTM D5185m 1070	1161	1062	972
Phosphorus	ppm ASTM D5185m 1150	998	1003	905
Zinc	ppm ASTM D5185m 1270	1289	1141	1142
Sulfur	ppm ASTM D5185m 2060	3019	3529	2631

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	101	4	11
Sodium	ppm ASTM D5185m	4	0	3
Potassium	ppm ASTM D5185m >20	8	2	3

INFRA-RED

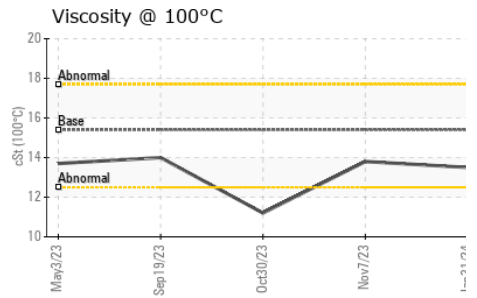
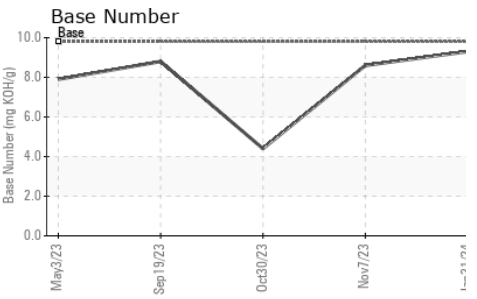
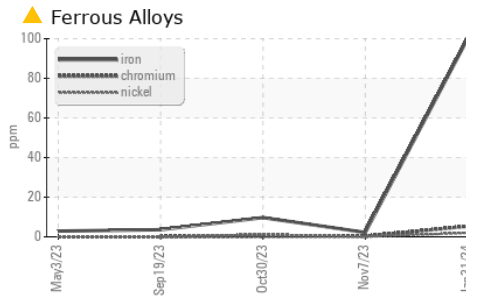
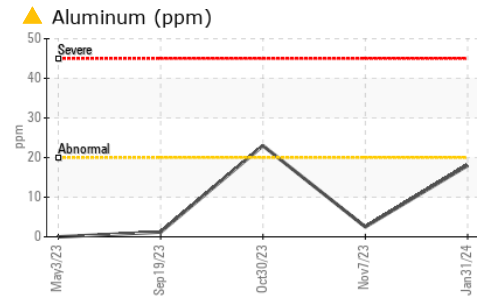
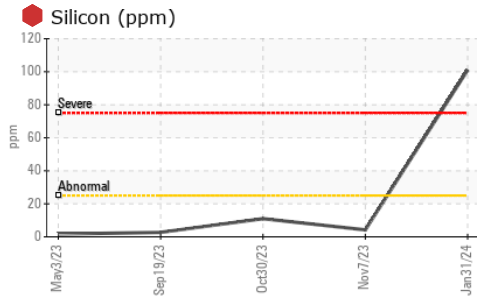
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	0.1	0.1	0.4
Nitration	Abs/cm *ASTM D7624 >20	6.2	5.2	10.2
Sulfation	Abs/.1mm *ASTM D7415 >30	18.0	17.9	21.8

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	14.1	13.7	18.0
Base Number (BN)	mg KOH/g ASTM D2896 9.8	9.3	8.6	4.4



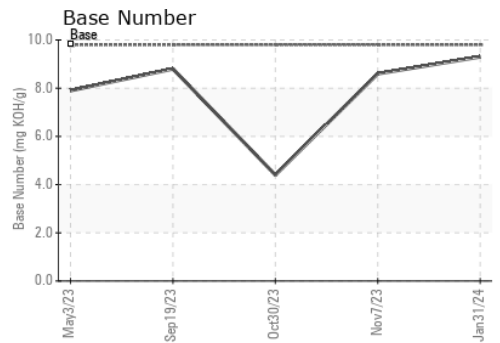
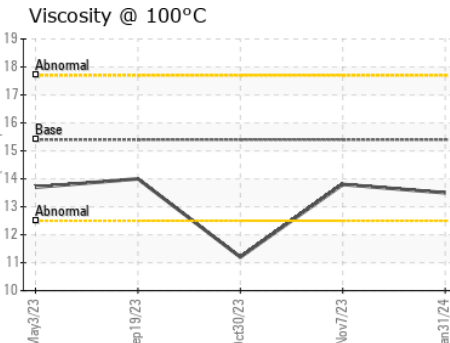
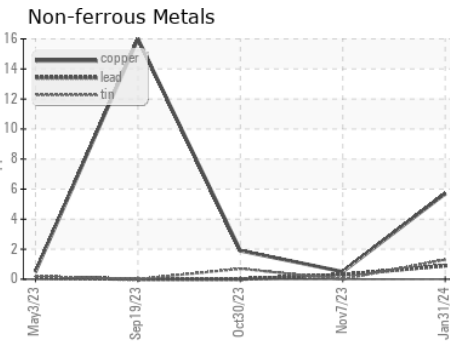
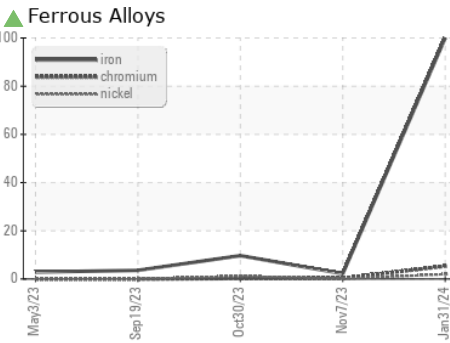
OIL ANALYSIS REPORT



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	13.5	13.8

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0107733
 Lab Number : 06085274
 Unique Number : 10872719
 Test Package : FLEET

GFL Environmental - 465 - Pontiac
 888 Baldwin
 Pontiac, MI
 US 48340

Contact: Ricky Matthews
 rickymathews@gflenv.com

T: (586)825-9514

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)

F: