



PROBLEM SUMMARY

Sample Rating Trend

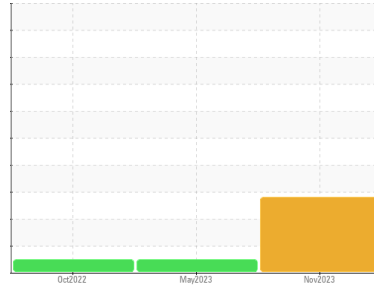
FUEL



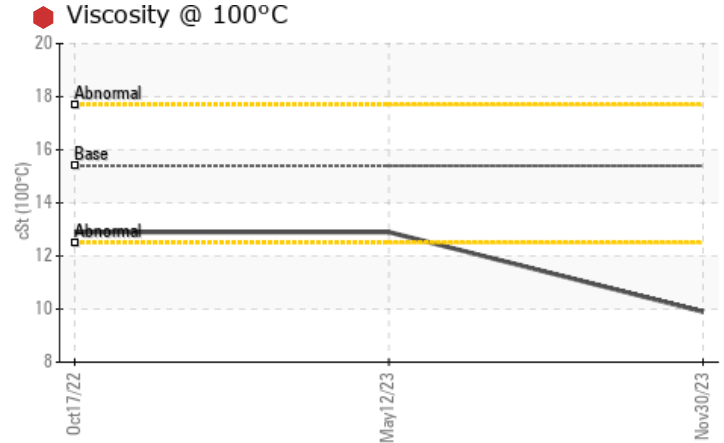
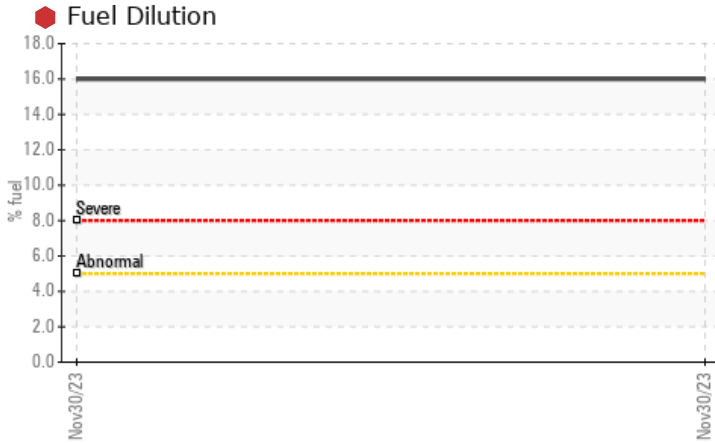
Machine Id
411052

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)



COMPONENT CONDITION SUMMARY



RECOMMENDATION

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.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	NORMAL
Fuel	%	ASTM D3524	>5	16.0	<1.0	<1.0
Visc @ 100°C	cSt	ASTM D445	15.4	9.9	12.9	12.9

Customer Id: GFL912
Sample No.: GFL0064698
Lab Number: 06042841
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.

HISTORICAL DIAGNOSIS

12 May 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.

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17 Oct 2022 Diag: Don Baldrige

NORMAL



Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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.

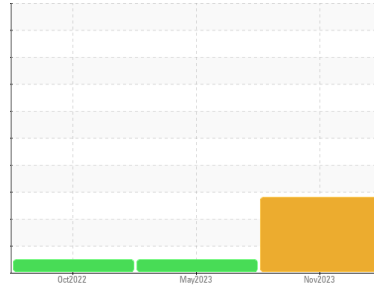
[view report](#)





OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
411052

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

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.

Wear

All component wear rates are normal.

Contamination

There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Fluid Condition

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 due to the presence of contaminants.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0064698	GFL0072489	GFL0059823
Sample Date	Client Info	30 Nov 2023	12 May 2023	17 Oct 2022
Machine Age	hrs	6043	5340	0
Oil Age	hrs	611	615	0
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		SEVERE	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
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	11	40	40
Chromium	ppm ASTM D5185m >20	<1	2	2
Nickel	ppm ASTM D5185m >4	4	<1	0
Titanium	ppm ASTM D5185m	0	<1	0
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	<1	12	24
Lead	ppm ASTM D5185m >40	0	3	6
Copper	ppm ASTM D5185m >330	4	1	2
Tin	ppm ASTM D5185m >15	<1	1	1
Vanadium	ppm ASTM D5185m	<1	<1	0
Cadmium	ppm ASTM D5185m	0	<1	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	17	15	33
Barium	ppm ASTM D5185m 0	0	0	0
Molybdenum	ppm ASTM D5185m 60	53	61	46
Manganese	ppm ASTM D5185m 0	<1	1	1
Magnesium	ppm ASTM D5185m 1010	698	966	556
Calcium	ppm ASTM D5185m 1070	918	1289	1669
Phosphorus	ppm ASTM D5185m 1150	787	926	731
Zinc	ppm ASTM D5185m 1270	946	1238	912
Sulfur	ppm ASTM D5185m 2060	2236	3140	2683

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	4	6	9
Sodium	ppm ASTM D5185m	4	6	7
Potassium	ppm ASTM D5185m >20	0	21	51
Fuel	% ASTM D3524 >5	16.0	<1.0	<1.0

INFRA-RED

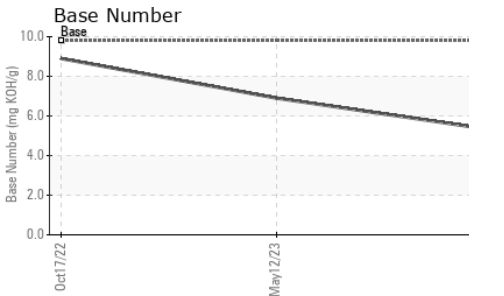
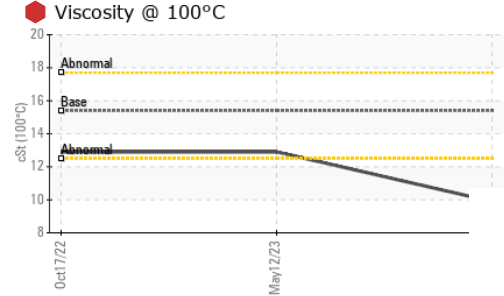
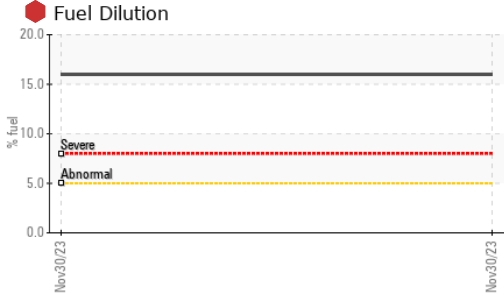
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.5	0.4	0.4
Nitration	Abs/cm *ASTM D7624 >20	8.5	10.7	12.3
Sulfation	Abs/.1mm *ASTM D7415 >30	21.8	21.8	25.1

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	18.8	18.9	25.8
Base Number (BN)	mg KOH/g ASTM D2896 9.8	5.3	6.9	8.9



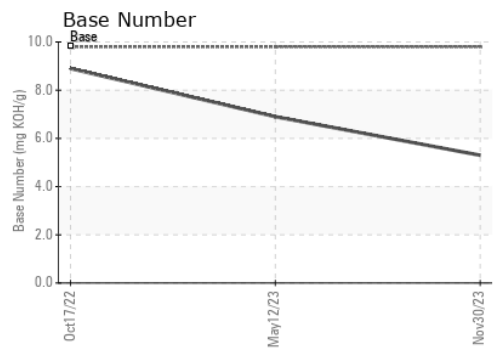
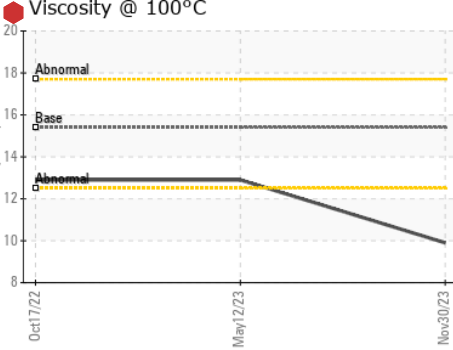
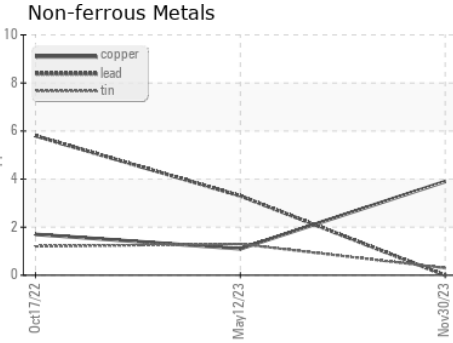
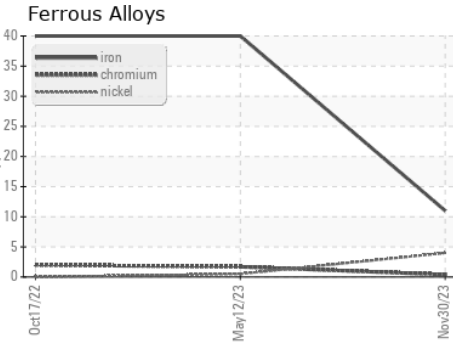
OIL ANALYSIS REPORT



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	9.9	12.9

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0064698 **Received** : 22 Dec 2023
Lab Number : 06042841 **Diagnosed** : 27 Dec 2023
Unique Number : 10803449 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 912 - Fort Atkinson HC
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 Fort Atkinson, WI
 US 53538
 Contact: LEONARD KOZLEUCHAR
 leonard.kozleuchar@gflenv.com
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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)