



PROBLEM SUMMARY

Sample Rating Trend

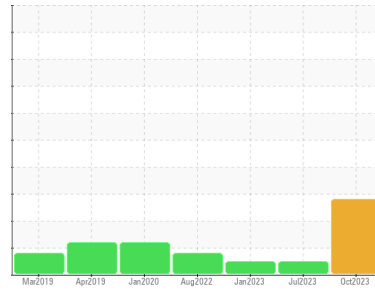
FUEL



Machine Id
728034-310008

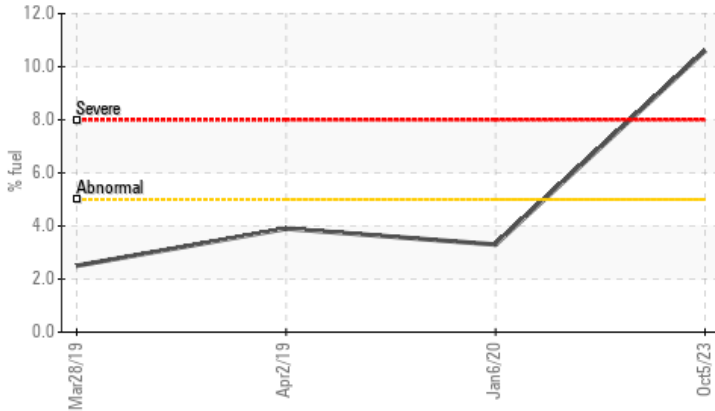
Component
Diesel Engine

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

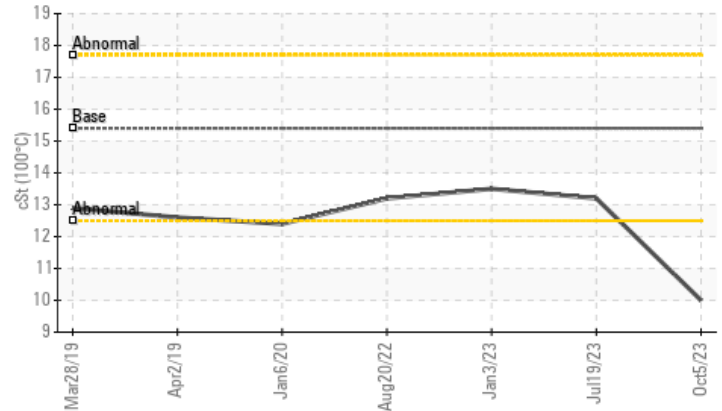


COMPONENT CONDITION SUMMARY

Fuel Dilution



Viscosity @ 100°C



RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	NORMAL
Fuel	%	ASTM D3524	>5	10.6	<1.0	<1.0
Visc @ 100°C	cSt	ASTM D445	15.4	10.0	13.2	13.5

Customer Id: GFL821
 Sample No.: GFL0090195
 Lab Number: 05972483
 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
Change Fluid	---	---	?	We recommend that you drain the oil from the component if this has not already been done.
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

19 Jul 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



03 Jan 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Metal levels are typical for a new component breaking in. 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



20 Aug 2022 Diag: Don Baldrige

WEAR



Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. The aluminum level is abnormal. All other 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.

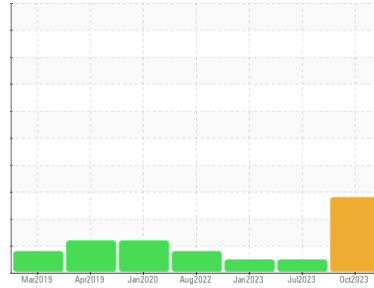
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OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
728034-310008

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. 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	GFL0090195	GFL0076768	GFL0065332
Sample Date	Client Info	05 Oct 2023	19 Jul 2023	03 Jan 2023
Machine Age	hrs	1215	1058	462
Oil Age	hrs	150	600	150
Oil Changed	Client Info	Not Changed	Changed	Not Changed
Sample Status		SEVERE	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >100	24	26	36
Chromium	ppm	ASTM D5185m >20	<1	<1	1
Nickel	ppm	ASTM D5185m >4	0	0	<1
Titanium	ppm	ASTM D5185m	<1	<1	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	5	5	6
Lead	ppm	ASTM D5185m >40	<1	1	2
Copper	ppm	ASTM D5185m >330	2	4	3
Tin	ppm	ASTM D5185m >15	<1	<1	<1
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	8	0	0
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	52	60	57
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	801	959	869
Calcium	ppm	ASTM D5185m 1070	880	1073	1034
Phosphorus	ppm	ASTM D5185m 1150	888	1019	980
Zinc	ppm	ASTM D5185m 1270	1063	1219	1174
Sulfur	ppm	ASTM D5185m 2060	2848	3446	2570

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	8	6	7
Sodium	ppm	ASTM D5185m	36	19	17
Potassium	ppm	ASTM D5185m >20	7	0	2
Fuel	%	ASTM D3524 >5	10.6	<1.0	<1.0

INFRA-RED

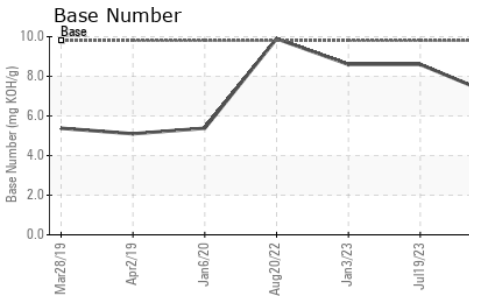
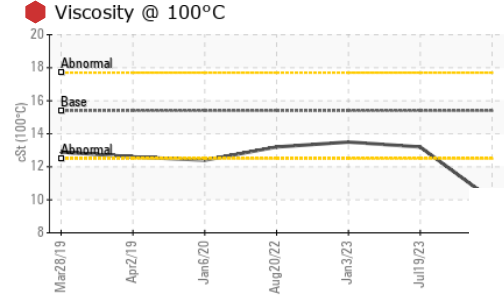
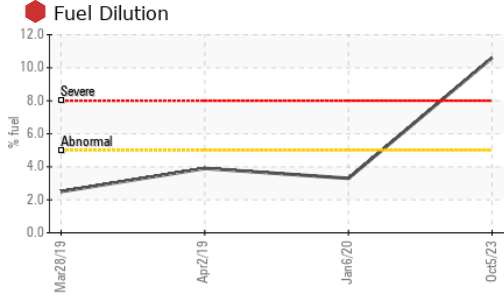
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	0.8	0.4	0.4
Nitration	Abs/cm	*ASTM D7624 >20	7.4	7.2	6.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.4	19.1	18.7

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.9	14.4	13.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.1	8.6	8.6



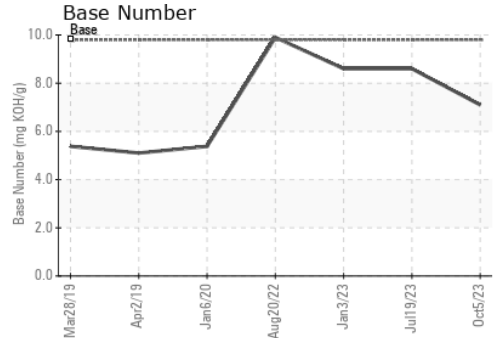
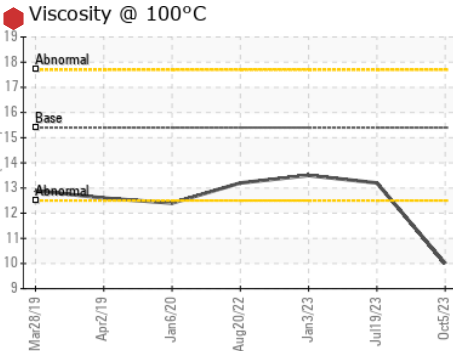
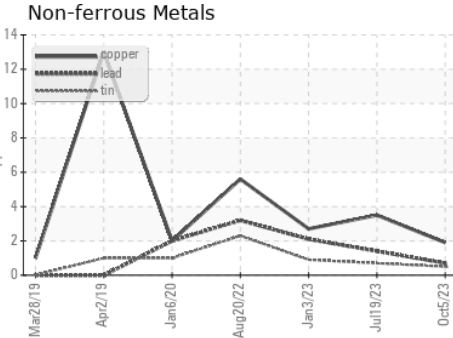
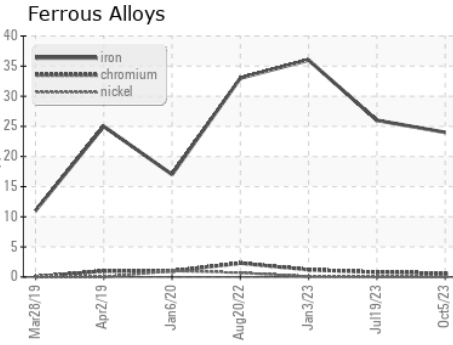
OIL ANALYSIS REPORT



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	10.0	13.2	13.5

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0090195 **Received** : 09 Oct 2023
Lab Number : 05972483 **Diagnosed** : 10 Oct 2023
Unique Number : 10684433 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 821 - Ozarks Hauling
 33924 Olath Drive
 Lebanon, MO
 US 65536
 Contact: Landen Johnson
 landen.johnson@gflenv.com
 T: (417)664-0010
 F:

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)