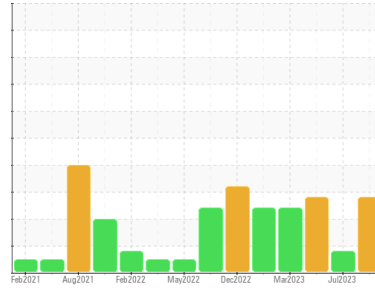




PROBLEM SUMMARY

Sample Rating Trend



FUEL

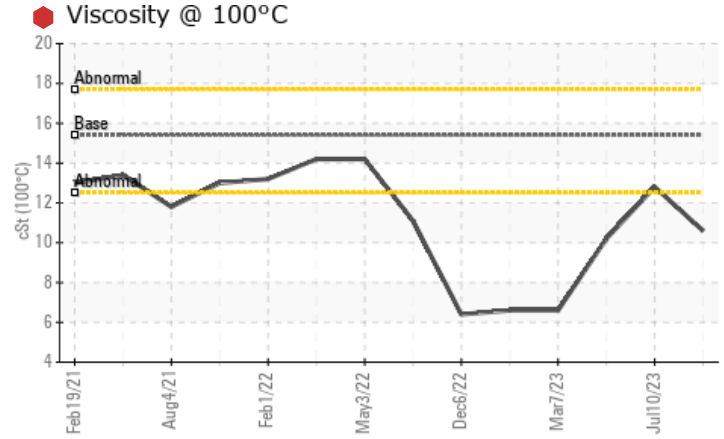
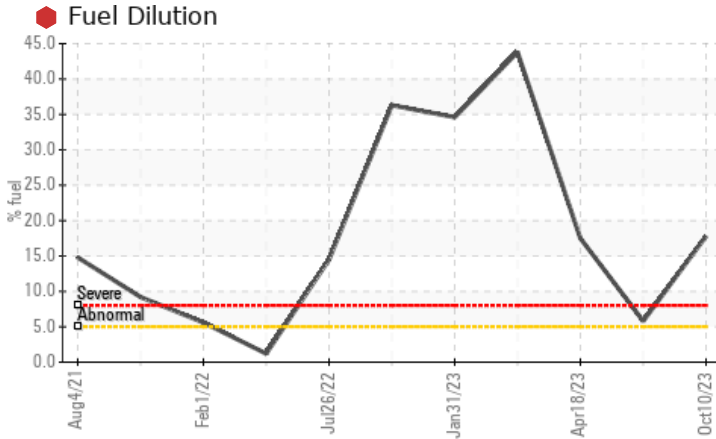


Machine Id
827036-1040

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	ABNORMAL	SEVERE
Fuel	%	ASTM D3524	>5	17.8	5.8	17.5
Visc @ 100°C	cSt	ASTM D445	15.4	10.6	12.8	10.2

Customer Id: GFL622
Sample No.: GFL0090528
Lab Number: 05980128
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

10 Jul 2023 Diag: Jonathan Hester

FUEL



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Discrete particle counts [100 ml] 5-15µm = 165400, 15-25µm = 2000, 25-50µm = 400, 50-100µm = 0, >100µm = 0. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



18 Apr 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. All component wear rates are normal. 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 due to the presence of contaminants.

view report



07 Mar 2023 Diag: Doug Bogart

FUEL



We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a very high amount of fuel present 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.

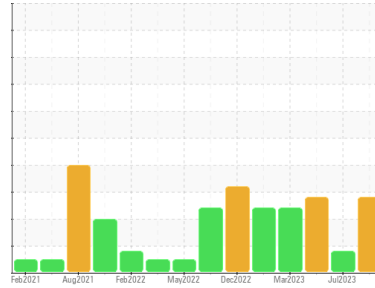
view report





OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
827036-1040

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	GFL0090528	GFL0083984	GFL0078709
Sample Date	Client Info	10 Oct 2023	10 Jul 2023	18 Apr 2023
Machine Age	hrs	13910	13467	12847
Oil Age	hrs	580	600	600
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		SEVERE	ABNORMAL	SEVERE

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 >80	15	19	11
Chromium	ppm	ASTM D5185m >5	1	<1	<1
Nickel	ppm	ASTM D5185m >2	<1	<1	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >30	1	1	<1
Lead	ppm	ASTM D5185m >30	<1	<1	0
Copper	ppm	ASTM D5185m >150	<1	<1	0
Tin	ppm	ASTM D5185m >5	<1	<1	0
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	10	7
Barium	ppm	ASTM D5185m 0	3	0	0
Molybdenum	ppm	ASTM D5185m 60	48	65	49
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	701	983	744
Calcium	ppm	ASTM D5185m 1070	833	1118	871
Phosphorus	ppm	ASTM D5185m 1150	803	1072	788
Zinc	ppm	ASTM D5185m 1270	943	1306	997
Sulfur	ppm	ASTM D5185m 2060	2275	3734	2645

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >20	7	5	2
Sodium	ppm	ASTM D5185m	3	5	<1
Potassium	ppm	ASTM D5185m >20	2	4	0
Fuel	%	ASTM D3524 >5	17.8	5.8	17.5

INFRA-RED

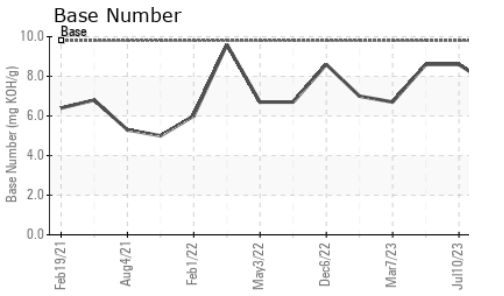
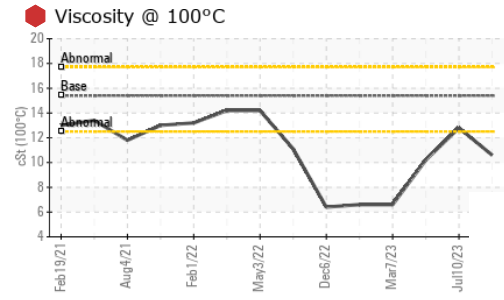
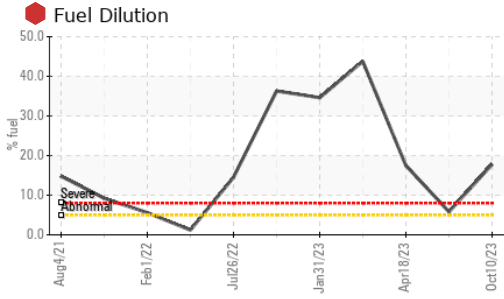
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >3	0.2	0.4	0.5
Nitration	Abs/cm	*ASTM D7624 >20	10.3	10.9	10.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.1	21.1	19.6

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	19.2	19.6	19.1
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.5	8.6	8.6



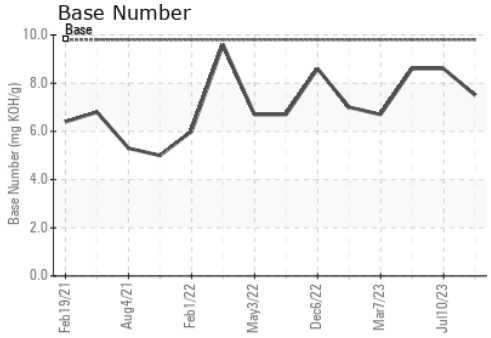
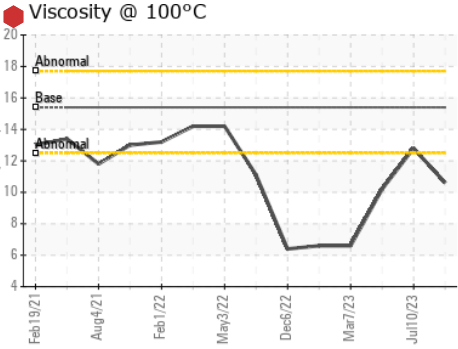
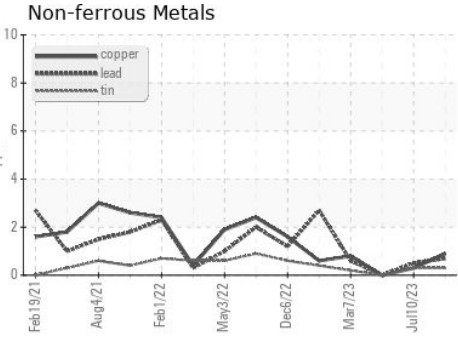
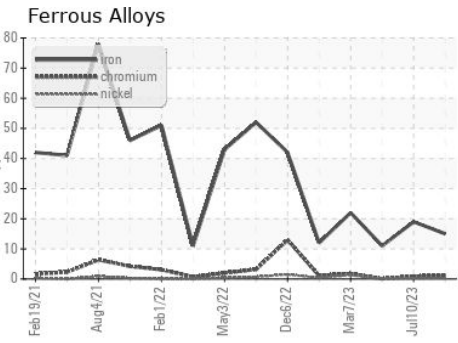
OIL ANALYSIS REPORT



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	10.6	12.8

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0090528 **Received** : 16 Oct 2023
Lab Number : 05980128 **Diagnosed** : 17 Oct 2023
Unique Number : 10697423 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 622 - Traverse City Hauling
 160 Hughes Dr
 Traverse City, MI
 US 49686
 Contact: GARY BREWER

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)

T:
F: