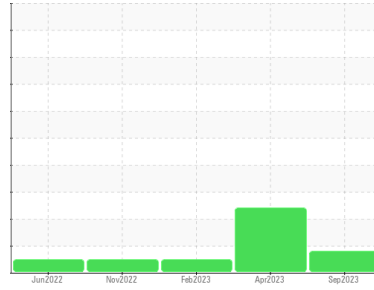




PROBLEM SUMMARY

Sample Rating Trend



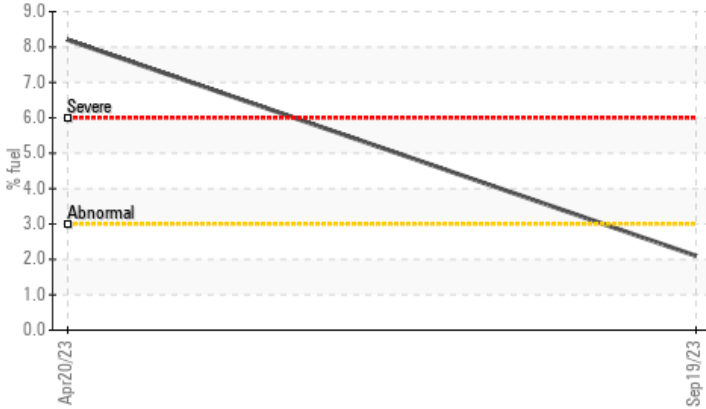
FUEL



Machine Id
4657M
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- QTS)

COMPONENT CONDITION SUMMARY

▲ Fuel Dilution



RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

PROBLEMATIC TEST RESULTS

Sample Status			MARGINAL	SEVERE	NORMAL	
Fuel	%	ASTM D3524	>3.0	▲ 2.1	● 8.2	<1.0

Customer Id: GFL405
 Sample No.: GFL0087256
 Lab Number: 05969994
 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

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

20 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



09 Feb 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. 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



14 Nov 2022 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. 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.

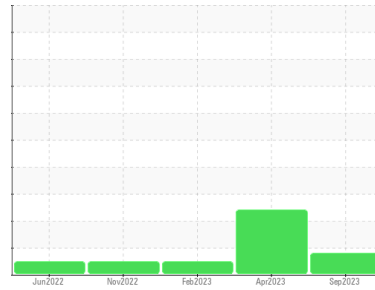
view report





OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
4657M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- QTS)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0087256	GFL0072886	GFL0072879
Sample Date	Client Info		19 Sep 2023	20 Apr 2023	09 Feb 2023
Machine Age	hrs	Client Info	15334	14009	13429
Oil Age	hrs	Client Info	628	580	704
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			MARGINAL	SEVERE	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 >90	43	9	6
Chromium	ppm	ASTM D5185m >20	1	<1	0
Nickel	ppm	ASTM D5185m >2	<1	0	0
Titanium	ppm	ASTM D5185m >2	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	3	1	<1
Lead	ppm	ASTM D5185m >40	0	0	0
Copper	ppm	ASTM D5185m >330	1	0	<1
Tin	ppm	ASTM D5185m >15	0	0	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<1	4	<1
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	58	54	60
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 1010	893	857	895
Calcium	ppm	ASTM D5185m 1070	1041	1002	1087
Phosphorus	ppm	ASTM D5185m 1150	994	856	978
Zinc	ppm	ASTM D5185m 1270	1211	1144	1212
Sulfur	ppm	ASTM D5185m 2060	2855	2859	2853

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	8	3	2
Sodium	ppm	ASTM D5185m	7	4	3
Potassium	ppm	ASTM D5185m >20	2	0	2
Fuel	%	ASTM D3524 >3.0	▲ 2.1	◆ 8.2	<1.0

INFRA-RED

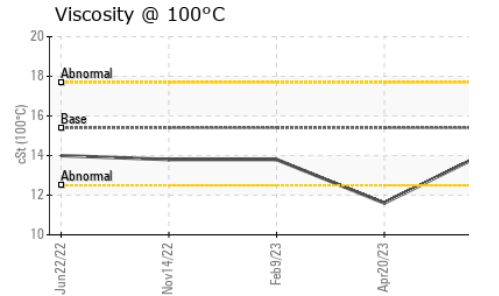
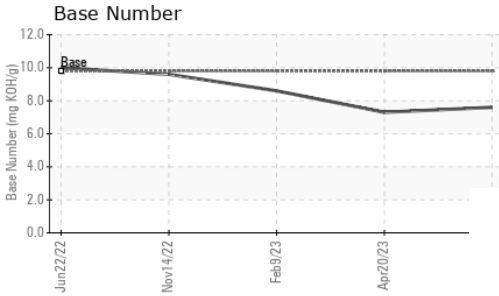
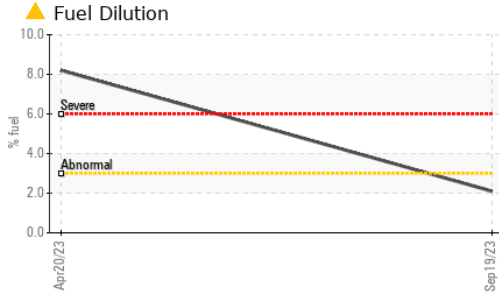
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >6	1.4	0.3	0.1
Nitration	Abs/cm	*ASTM D7624 >20	11.8	8.4	6.6
Sulfation	Abs/.1mm	*ASTM D7415 >30	22.4	17.6	18.6

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	18.8	16.7	14.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.6	7.3	8.6



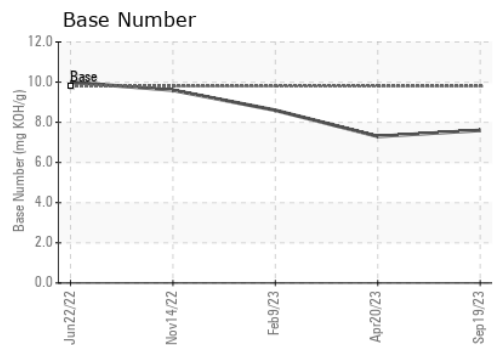
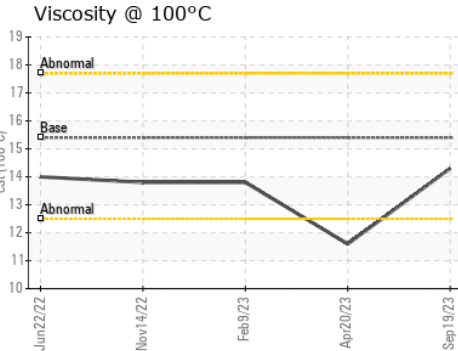
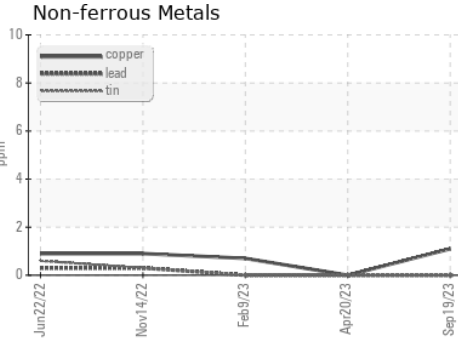
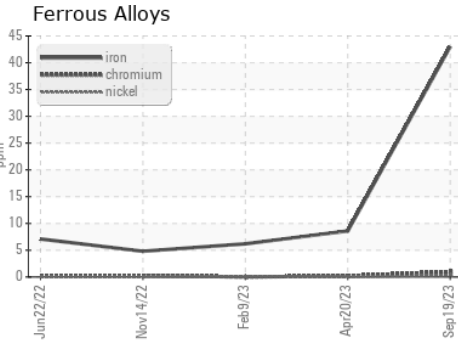
OIL ANALYSIS REPORT



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	14.3	▲ 11.6	13.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0087256 **Received** : 05 Oct 2023
Lab Number : **05969994** **Diagnosed** : 09 Oct 2023
Unique Number : 10681944 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 405 - Arbor Hills
 7400 Napier Rd
 NORTHVILLE, MI
 US 48168
 Contact: John Nahal
 jnahal@gflenv.com

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)