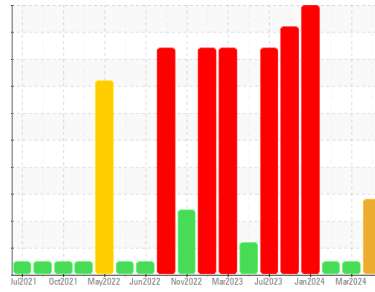




PROBLEM SUMMARY

Sample Rating Trend



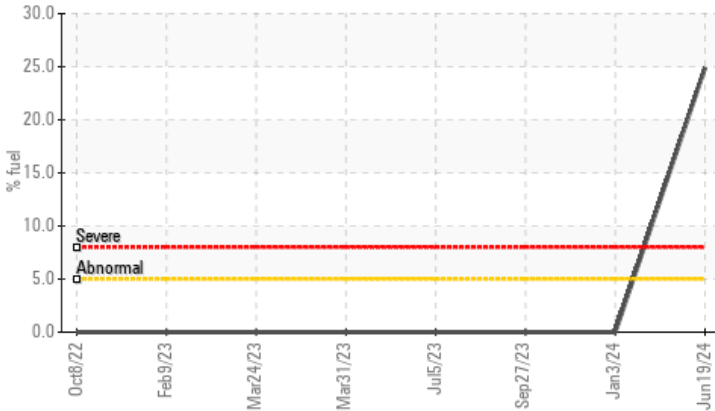
FUEL



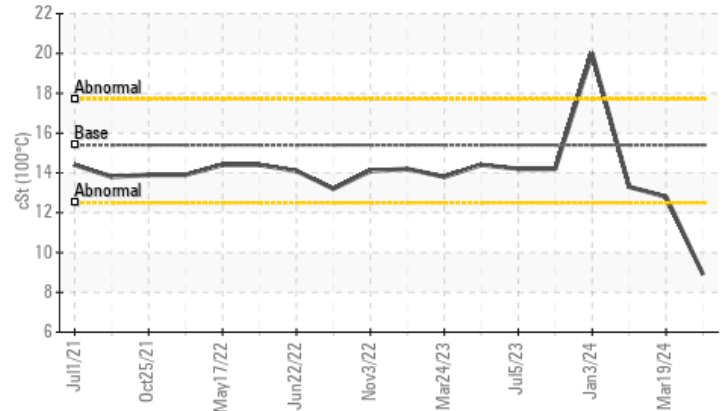
Machine Id
727109-36
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

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	▲ 24.9	<1.0	<1.0
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 8.9	12.8	13.3

Customer Id: GFL657
 Sample No.: GFL0070954
 Lab Number: 06215655
 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

NORMAL



19 Mar 2024 Diag: Wes Davis

Resample at the next service interval to monitor. 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



NORMAL



12 Mar 2024 Diag: Jonathan Hester

Resample at the next service interval to monitor. All component wear rates are normal. No evidence of coolant present in the oil. 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



GLYCOL



03 Jan 2024 Diag: Jonathan Hester

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. All component wear rates are normal. Sodium and/or potassium levels are high. There is a high concentration of glycol present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material. The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants.

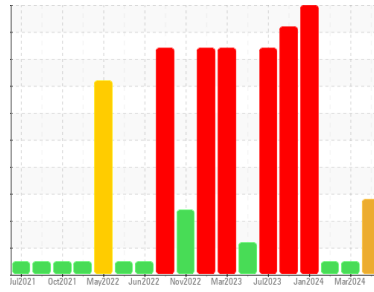
view report





OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
727109-36
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

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		GFL0070954	GFL0070962	GFL0058061
Sample Date	Client Info		19 Jun 2024	19 Mar 2024	12 Mar 2024
Machine Age	hrs	Client Info	12071	60	11800
Oil Age	hrs	Client Info	0	60	50
Oil Changed	Client Info		Not Chngd	Not Chngd	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	>80	28	17	15
Chromium	ppm	ASTM D5185m	>5	1	<1	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	6	7	7
Lead	ppm	ASTM D5185m	>30	<1	0	0
Copper	ppm	ASTM D5185m	>150	1	<1	0
Tin	ppm	ASTM D5185m	>5	0	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	10	20	17
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	45	54	57
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	726	861	885
Calcium	ppm	ASTM D5185m	1070	889	1000	1022
Phosphorus	ppm	ASTM D5185m	1150	812	956	999
Zinc	ppm	ASTM D5185m	1270	1009	1160	1173
Sulfur	ppm	ASTM D5185m	2060	2747	3396	3355

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>20	12	10	10
Sodium	ppm	ASTM D5185m		3	3	0
Potassium	ppm	ASTM D5185m	>20	8	7	4
Fuel	%	ASTM D3524	>5	▲ 24.9	<1.0	<1.0

INFRA-RED

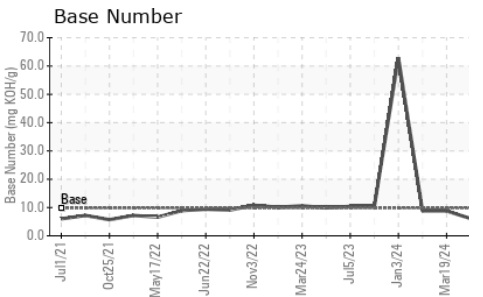
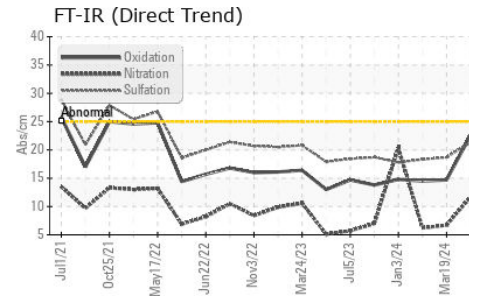
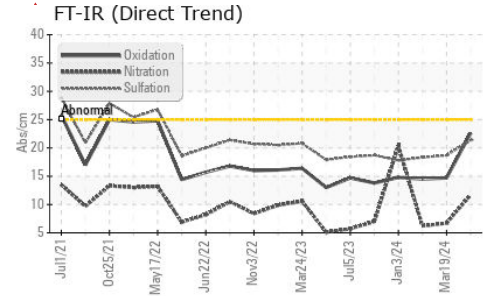
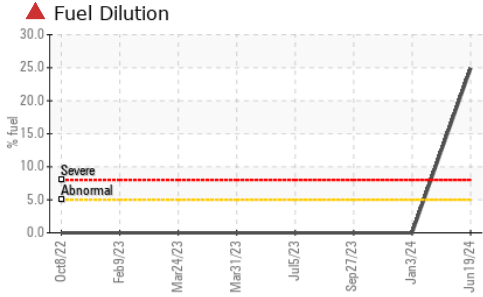
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.6	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	11.7	6.7	6.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	18.7	18.3

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.6	14.7	14.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.1	8.8	8.8



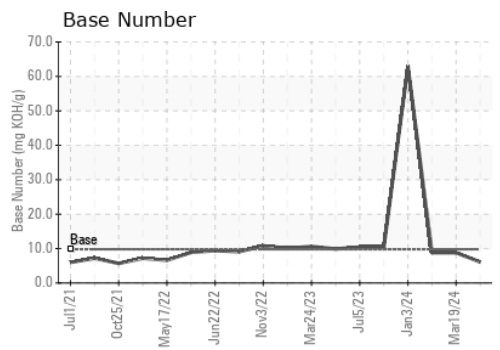
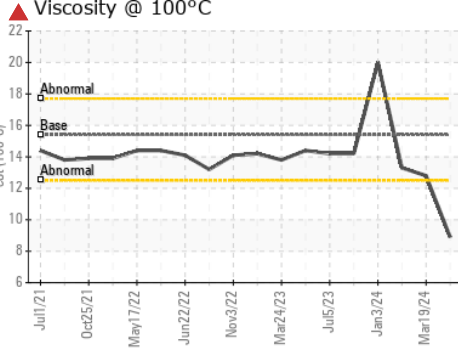
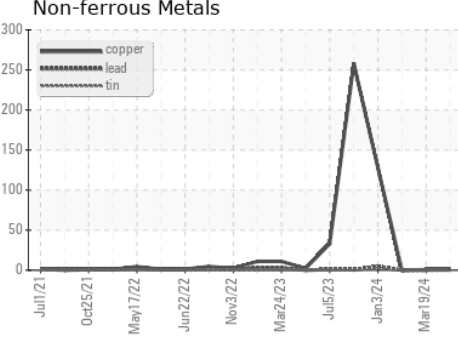
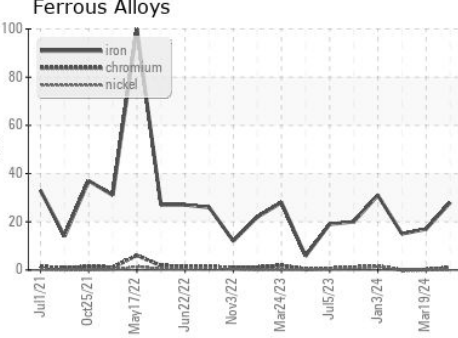
OIL ANALYSIS REPORT



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 ▲ 8.9	12.8	13.3

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0070954 **Received** : 20 Jun 2024
Lab Number : 06215655 **Tested** : 24 Jun 2024
Unique Number : 11088519 **Diagnosed** : 24 Jun 2024 - Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 657 - Charlottesville Hauling
 5498 Richmond Road
 Troy, VA
 US 22974
 Contact: Brian Ulickas
 bulickas@gflenv.com

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)