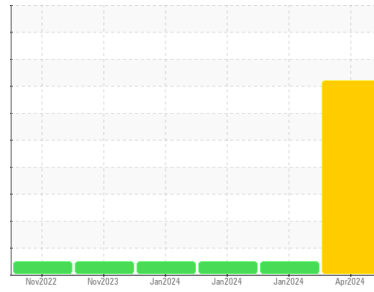




PROBLEM SUMMARY

Sample Rating Trend



DIRT



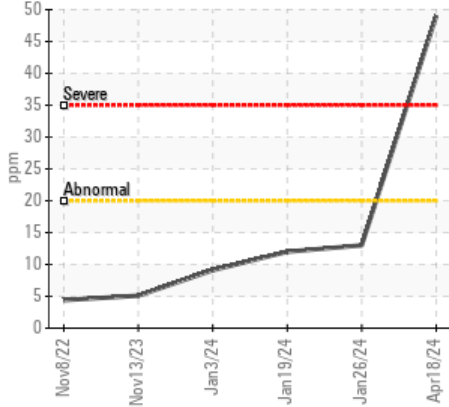
Machine Id
427112-430

Component
Diesel Engine

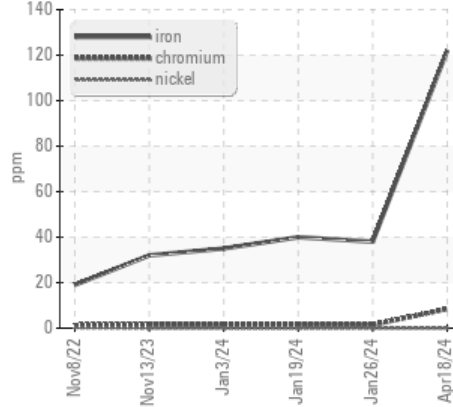
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

COMPONENT CONDITION SUMMARY

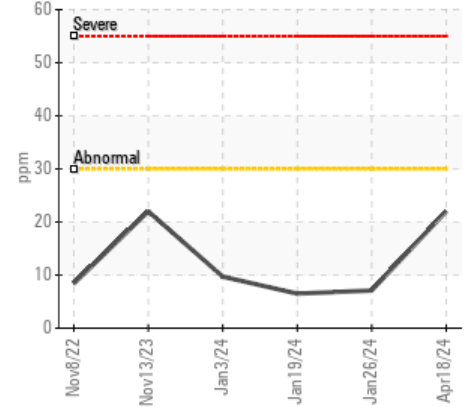
▲ Silicon (ppm)



▲ Ferrous Alloys



● Aluminum (ppm)



RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>80	▲ 122	38	40
Chromium	ppm	ASTM D5185m	>5	▲ 8	2	2
Silicon	ppm	ASTM D5185m	>20	▲ 49	13	12

Customer Id: GFL904
Sample No.: GFL0108461
Lab Number: 06158898
Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

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 and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Dirt Access	---	---	?	We advise that you check the air filter, air induction system, and any areas where dirt may enter the component.

HISTORICAL DIAGNOSIS

NORMAL



26 Jan 2024 Diag: Wes Davis

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



NORMAL



19 Jan 2024 Diag: Wes Davis

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



NORMAL



03 Jan 2024 Diag: Wes Davis

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.

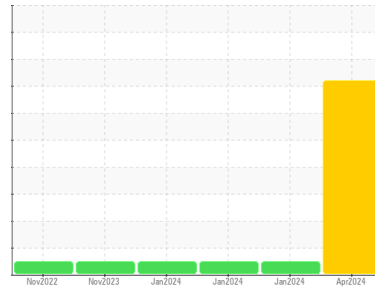
view report





OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
427112-430

Component
Diesel Engine

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

DIAGNOSIS

▲ Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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.

▲ Wear

Piston, ring and cylinder wear is indicated.

▲ Contamination

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0108461	GFL0108533	GFL0108532
Sample Date	Client Info	18 Apr 2024	26 Jan 2024	19 Jan 2024
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		SEVERE	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	<1.0	<1.0
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	▲ 122	38	40
Chromium	ppm ASTM D5185m >5	▲ 8	2	2
Nickel	ppm ASTM D5185m >2	0	0	0
Titanium	ppm ASTM D5185m	<1	<1	<1
Silver	ppm ASTM D5185m >3	0	<1	0
Aluminum	ppm ASTM D5185m >30	● 22	7	6
Lead	ppm ASTM D5185m >30	0	0	0
Copper	ppm ASTM D5185m >150	19	3	1
Tin	ppm ASTM D5185m >5	1	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	4	9	10
Barium	ppm ASTM D5185m 0	0	25	0
Molybdenum	ppm ASTM D5185m 60	60	58	61
Manganese	ppm ASTM D5185m 0	2	0	<1
Magnesium	ppm ASTM D5185m 1010	1017	861	986
Calcium	ppm ASTM D5185m 1070	1121	1021	1091
Phosphorus	ppm ASTM D5185m 1150	1036	1021	1124
Zinc	ppm ASTM D5185m 1270	1264	1125	1272
Sulfur	ppm ASTM D5185m 2060	3183	3181	3241

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >20	▲ 49	13	12
Sodium	ppm ASTM D5185m	5	0	1
Potassium	ppm ASTM D5185m >20	5	5	<1

INFRA-RED

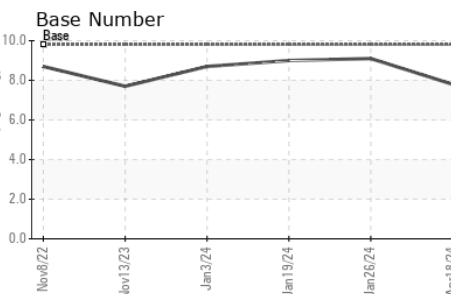
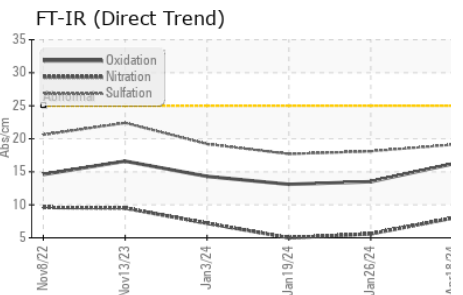
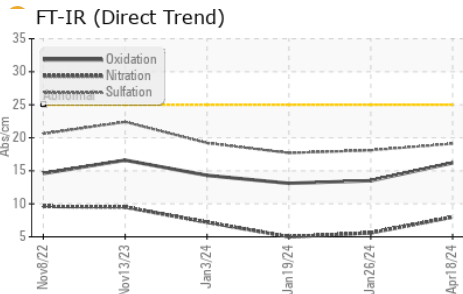
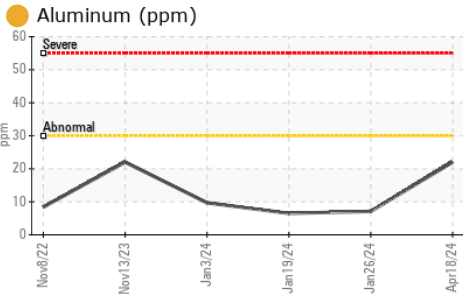
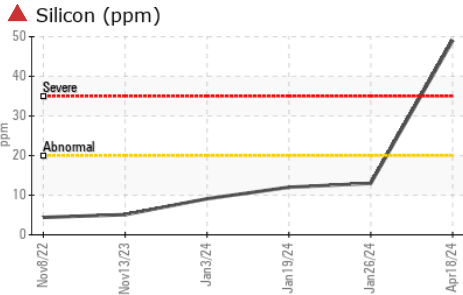
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.2	0.2	0.2
Nitration	Abs/cm *ASTM D7624 >20	8.0	5.6	5.0
Sulfation	Abs/.1mm *ASTM D7415 >30	19.1	18.1	17.7

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	16.2	13.5	13.1
Base Number (BN)	mg KOH/g ASTM D2896 9.8	7.8	9.1	9.0



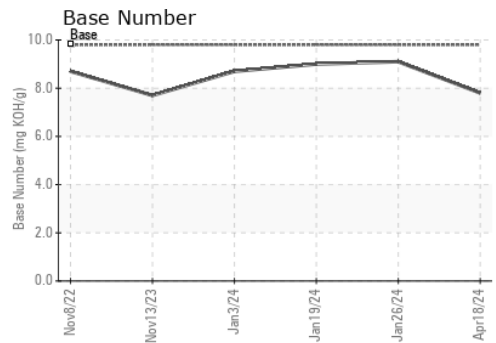
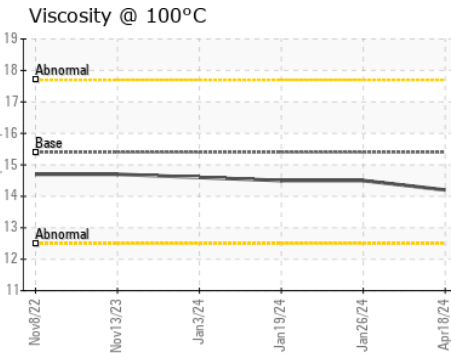
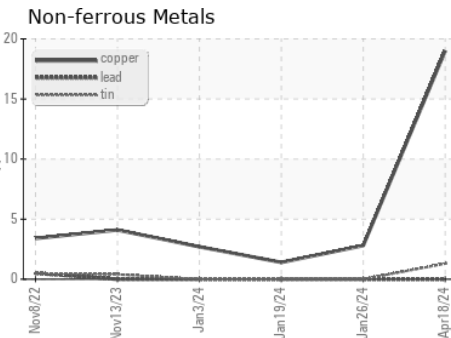
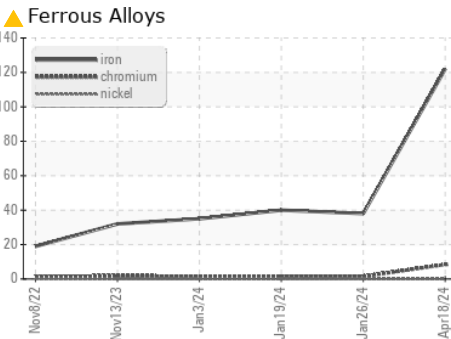
OIL ANALYSIS REPORT



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	14.2	14.5	14.5

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0108461
Lab Number : 06158898
Unique Number : 10994321
Test Package : FLEET

Received : 24 Apr 2024
Tested : 25 Apr 2024
Diagnosed : 26 Apr 2024 - Jonathan Hester

GFL Environmental - 904 - Chippewa Falls HC
 11888 & 11863 30th Avenue
 Chippewa Falls, WI
 US 54729
 Contact: Andy Kane

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: (715)202-3420

F: