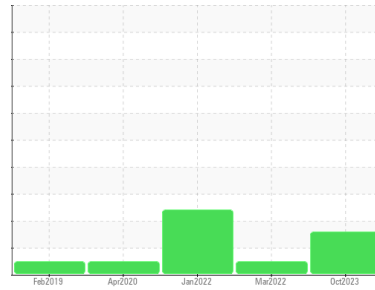




PROBLEM SUMMARY

Sample Rating Trend



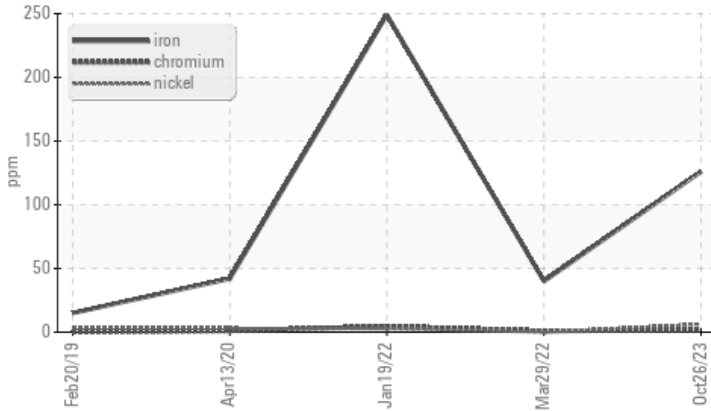
WEAR



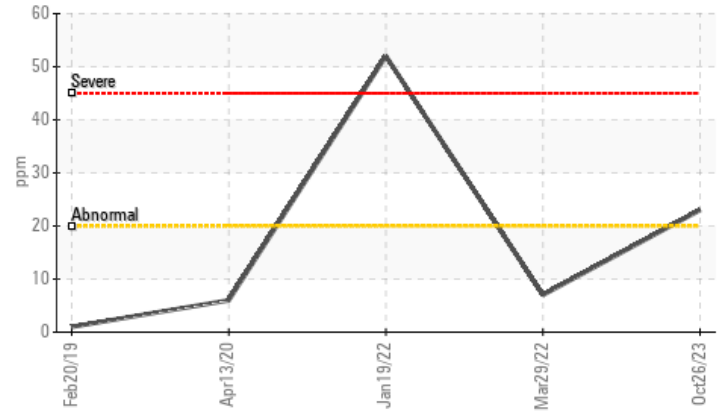
Machine Id
720014-361495
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Ferrous Alloys



▲ Aluminum (ppm)



RECOMMENDATION

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.

PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185m >120	▲ 126	40	▲ 249
Aluminum	ppm	ASTM D5185m >20	▲ 23	7	▲ 52

Customer Id: GFL834
 Sample No.: GFL0046116
 Lab Number: 05997235
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Don Baldrige +1
don.b505@comcast.net

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	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.

HISTORICAL DIAGNOSIS

29 Mar 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. 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](#)



19 Jan 2022 Diag: Don Baldrige

WEAR



We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Piston, ring and cylinder wear is indicated. There is an abnormal amount of solids and carbon present in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

[view report](#)



13 Apr 2020 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. No other corrective action is recommended at this time. The fluid was not specified, however, a fluid match indicates that this fluid is SAE 40 Diesel Engine Oil. Please confirm the oil type and grade, and specify the brand of the oil on your next sample. All component wear rates are normal. Fuel content negligible. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

[view report](#)





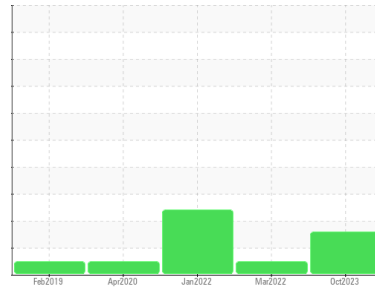
OIL ANALYSIS REPORT

Sample Rating Trend

WEAR



Machine Id
720014-361495
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)



DIAGNOSIS

Recommendation

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.

Wear

Piston, ring and cylinder wear is indicated.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0046116	GFL0046106	GFL0039537
Sample Date	Client Info		26 Oct 2023	29 Mar 2022	19 Jan 2022
Machine Age	hrs	Client Info	0	450	450
Oil Age	hrs	Client Info	0	0	450
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			ABNORMAL	NORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	▲ 126	40	▲ 249
Chromium	ppm	ASTM D5185m >20	2	<1	5
Nickel	ppm	ASTM D5185m >5	6	0	3
Titanium	ppm	ASTM D5185m >2	<1	0	<1
Silver	ppm	ASTM D5185m >2	0	<1	0
Aluminum	ppm	ASTM D5185m >20	▲ 23	7	▲ 52
Lead	ppm	ASTM D5185m >40	6	1	8
Copper	ppm	ASTM D5185m >330	6	4	22
Tin	ppm	ASTM D5185m >15	2	<1	4
Antimony	ppm	ASTM D5185m	---	---	0
Vanadium	ppm	ASTM D5185m	0	<1	<1
Cadmium	ppm	ASTM D5185m	0	<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	5	9	11
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 60	62	67	69
Manganese	ppm	ASTM D5185m 0	2	<1	2
Magnesium	ppm	ASTM D5185m 1010	841	746	760
Calcium	ppm	ASTM D5185m 1070	1106	1344	1441
Phosphorus	ppm	ASTM D5185m 1150	973	1034	1044
Zinc	ppm	ASTM D5185m 1270	1216	1274	1196
Sulfur	ppm	ASTM D5185m 2060	2627	2829	2671
Lithium	ppm	ASTM D5185m	---	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	14	5	21
Sodium	ppm	ASTM D5185m	10	6	27
Potassium	ppm	ASTM D5185m >20	2	2	8

INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	2.7	1.2	▲ 4.2
Nitration	Abs/cm	*ASTM D7624 >20	17.2	14.1	20.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	32.3	24.5	40.3

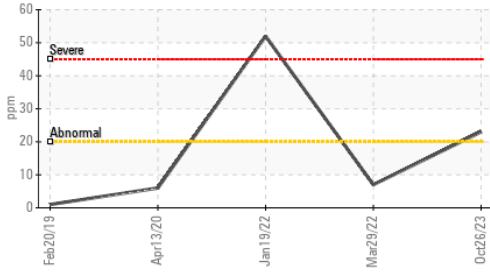
FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	30.6	20.9	37.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	6.3	8.3	4

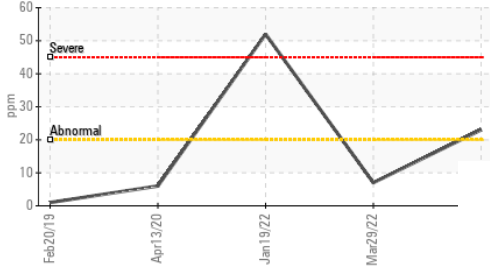


OIL ANALYSIS REPORT

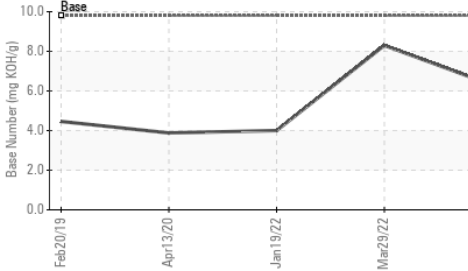
▲ Aluminum (ppm)



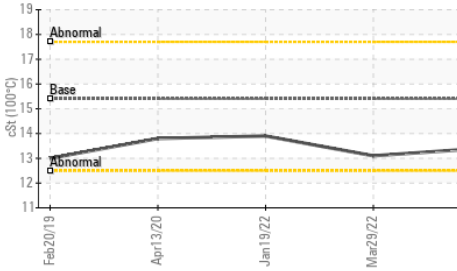
▲ Aluminum (ppm)



Base Number



Viscosity @ 100°C



VISUAL

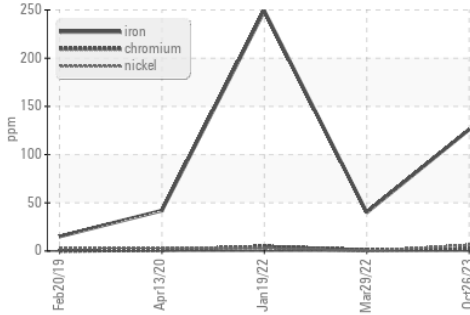
	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*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

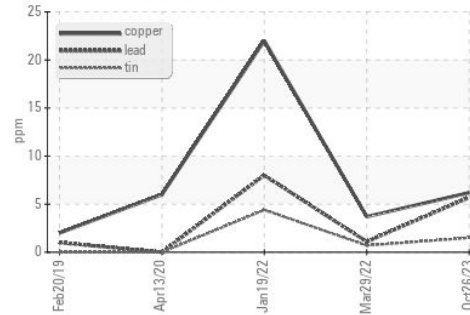
	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.4	13.1

GRAPHS

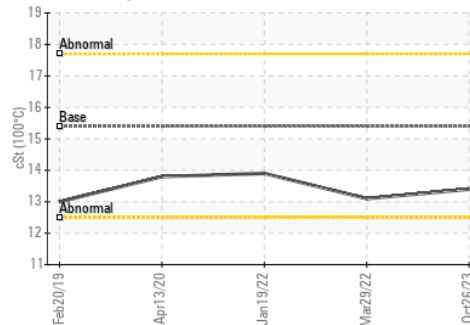
▲ Ferrous Alloys



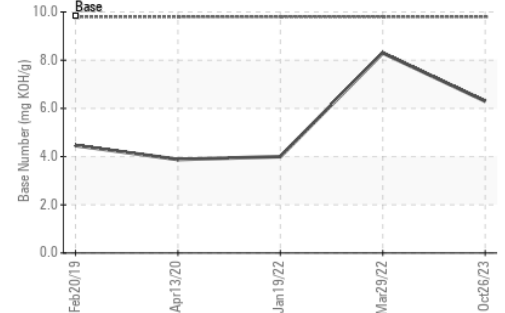
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0046116 Received : 02 Nov 2023
 Lab Number : 05997235 Diagnosed : 05 Nov 2023
 Unique Number : 10725595 Diagnostician : Don Baldrige
 Test Package : FLEET

GFL Environmental - 834 - Chillicothe Hauling
 201 Mitchell Road
 Chillicothe, MO
 US 64601
 Contact: Terry McKiddy
 tmckiddy@gflenv.com
 T: (816)225-6699
 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)