

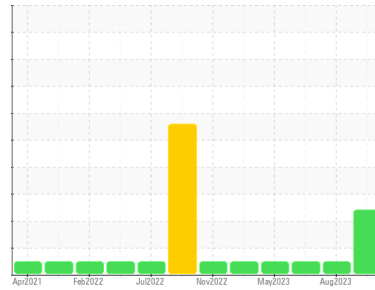


PROBLEM SUMMARY



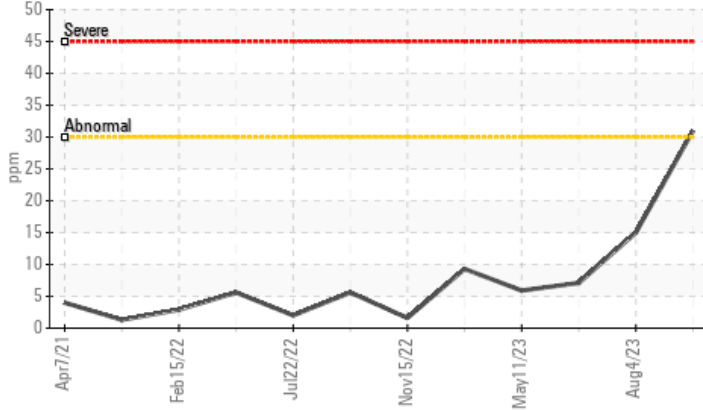
Area
{UNASSIGNED}
 Machine Id
2841
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON HP 15W40 (10 GAL)

Sample Rating Trend

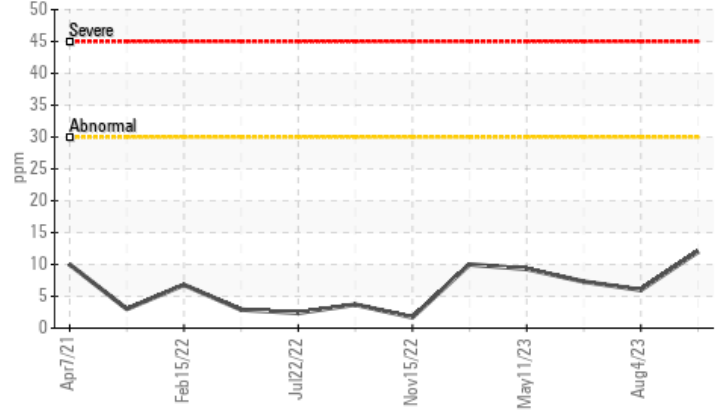


COMPONENT CONDITION SUMMARY

▲ Silicon (ppm)



▲ Aluminum (ppm)



RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	NORMAL	NORMAL
Aluminum	ppm	ASTM D5185m	>30	▲ 12	6	7
Silicon	ppm	ASTM D5185m	>30	▲ 31	15	7

Customer Id: GFL018
 Sample No.: GFL0080525
 Lab Number: 05982249
 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	---	---	?	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.
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

04 Aug 2023 Diag: Wes Davis

NORMAL



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



21 Jun 2023 Diag: Wes Davis

NORMAL



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



11 May 2023 Diag: Wes Davis

NORMAL



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



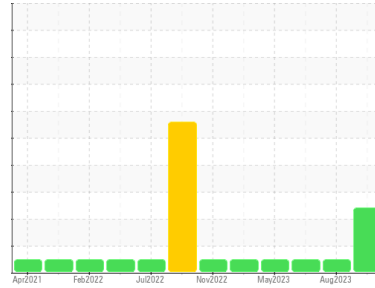


OIL ANALYSIS REPORT



Area
{UNASSIGNED}
Machine Id
2841
Component
Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (10 GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation
We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

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 condition of the oil is suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0080525	GFL0080580	GFL0066845
Sample Date	Client Info	17 Oct 2023	04 Aug 2023	21 Jun 2023
Machine Age	hrs	10497	10497	10497
Oil Age	hrs	10497	10497	10497
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		ABNORMAL	NORMAL	NORMAL

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 >200	75	33	26
Chromium	ppm ASTM D5185m >20	8	4	2
Nickel	ppm ASTM D5185m >2	0	<1	<1
Titanium	ppm ASTM D5185m >2	<1	<1	<1
Silver	ppm ASTM D5185m >2	0	<1	0
Aluminum	ppm ASTM D5185m >30	▲ 12	6	7
Lead	ppm ASTM D5185m >30	0	0	0
Copper	ppm ASTM D5185m >30	8	6	7
Tin	ppm ASTM D5185m >15	1	<1	<1
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	3	2	2
Barium	ppm ASTM D5185m	<1	0	0
Molybdenum	ppm ASTM D5185m	59	62	66
Manganese	ppm ASTM D5185m	1	<1	<1
Magnesium	ppm ASTM D5185m	930	899	918
Calcium	ppm ASTM D5185m	1025	1107	1173
Phosphorus	ppm ASTM D5185m	1011	1023	1014
Zinc	ppm ASTM D5185m	1258	1212	1268
Sulfur	ppm ASTM D5185m	2863	3029	3085

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	▲ 31	15	7
Sodium	ppm ASTM D5185m	1	0	0
Potassium	ppm ASTM D5185m >20	2	4	7

INFRA-RED

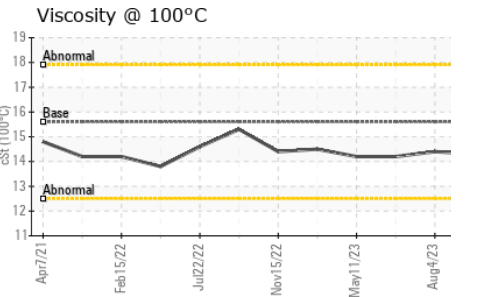
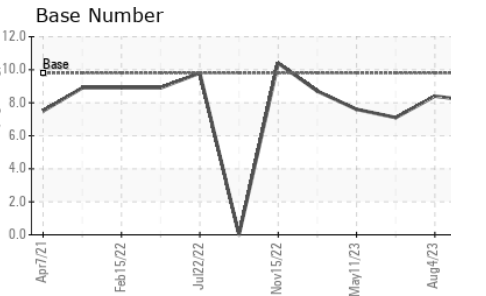
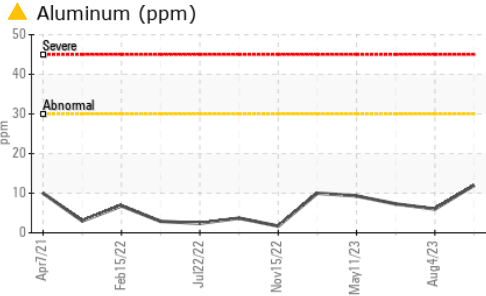
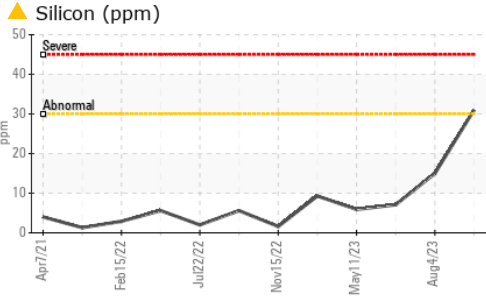
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.6	0.5	0.8
Nitration	Abs/cm *ASTM D7624 >20	7.3	6.8	9.9
Sulfation	Abs/.1mm *ASTM D7415 >30	18.6	18.5	21.6

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	14.0	13.8	17.1
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.1	8.4	7.1



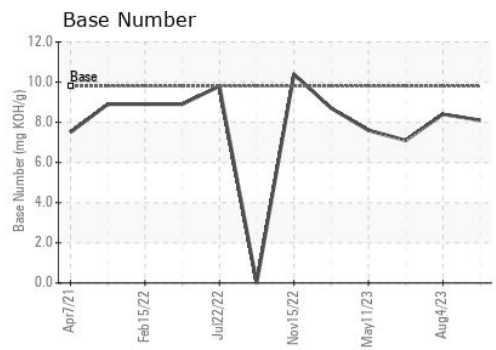
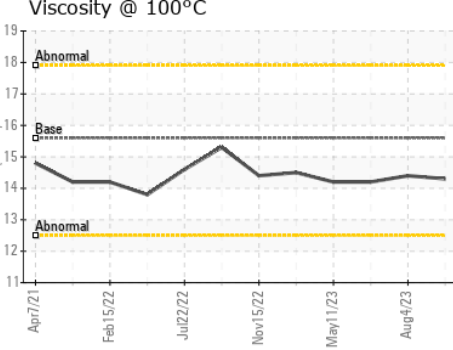
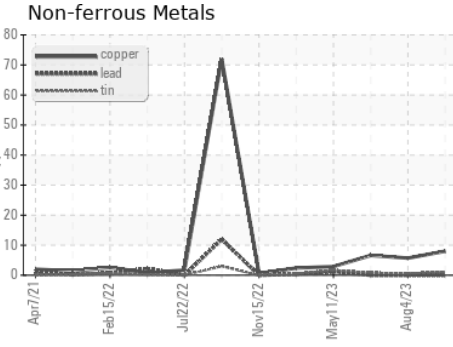
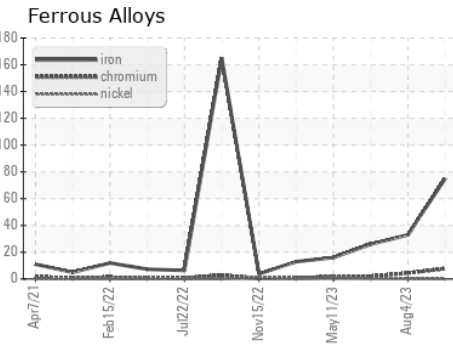
OIL ANALYSIS REPORT



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	15.6	14.3	14.4	14.2

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0080525 **Received** : 18 Oct 2023
Lab Number : **05982249** **Diagnosed** : 20 Oct 2023
Unique Number : 10699544 **Diagnostician** : Jonathan Hester
Test Package : FLEET

GFL Environmental - 018 - Fayetteville
 4621 Marracco Drive
 Hope Mills, NC
 US 28348
 Contact: Robert Carter
 robert.carter@gflenv.com
 T: (910)596-1170
 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)