

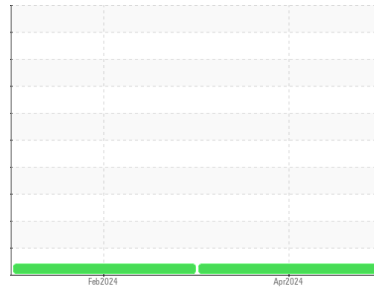


OIL ANALYSIS REPORT



Area
(61AATE4)
 Machine Id
214009
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



VISCOSITY



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0115820	GFL0113687	---
Sample Date	Client Info	05 Apr 2024	22 Feb 2024	---
Machine Age	hrs	Client Info	404	144
Oil Age	hrs	Client Info	404	0
Oil Changed	Client Info	N/A	N/A	---
Sample Status			ATTENTION	ATTENTION

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<1.0	0.6	---
Water	WC Method >0.2	NEG	NEG	---
Glycol	WC Method	NEG	NEG	---

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >120	63	52	---
Chromium	ppm ASTM D5185m >20	2	1	---
Nickel	ppm ASTM D5185m >5	<1	0	---
Titanium	ppm ASTM D5185m >2	<1	<1	---
Silver	ppm ASTM D5185m >2	0	0	---
Aluminum	ppm ASTM D5185m >20	10	8	---
Lead	ppm ASTM D5185m >40	1	0	---
Copper	ppm ASTM D5185m >330	73	51	---
Tin	ppm ASTM D5185m >15	<1	0	---
Vanadium	ppm ASTM D5185m	<1	0	---
Cadmium	ppm ASTM D5185m	0	0	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	47	57	---
Barium	ppm ASTM D5185m 0	6	5	---
Molybdenum	ppm ASTM D5185m 60	40	44	---
Manganese	ppm ASTM D5185m 0	5	5	---
Magnesium	ppm ASTM D5185m 1010	525	553	---
Calcium	ppm ASTM D5185m 1070	1565	1474	---
Phosphorus	ppm ASTM D5185m 1150	718	755	---
Zinc	ppm ASTM D5185m 1270	880	940	---
Sulfur	ppm ASTM D5185m 2060	2568	2537	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	27	26	---
Sodium	ppm ASTM D5185m	8	7	---
Potassium	ppm ASTM D5185m >20	26	12	---

INFRA-RED

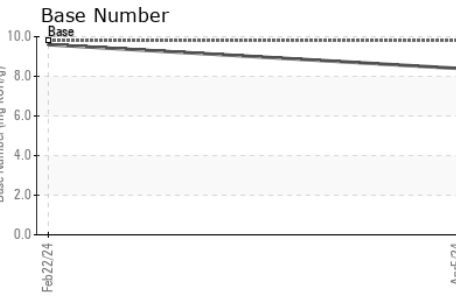
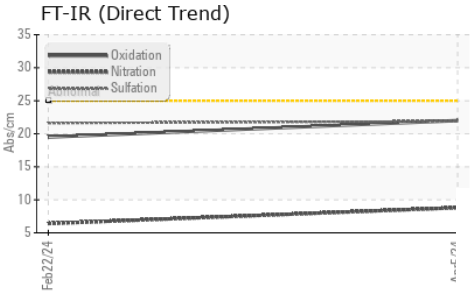
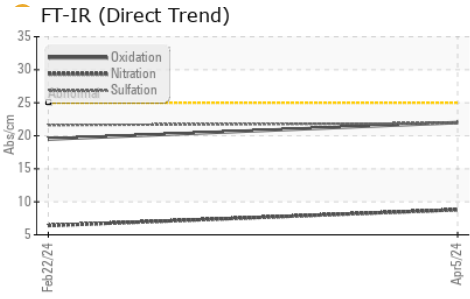
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	0.2	0.1	---
Nitration	Abs/cm *ASTM D7624 >20	8.8	6.4	---
Sulfation	Abs/.1mm *ASTM D7415 >30	21.9	21.6	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	22.0	19.5	---
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.4	9.6	---



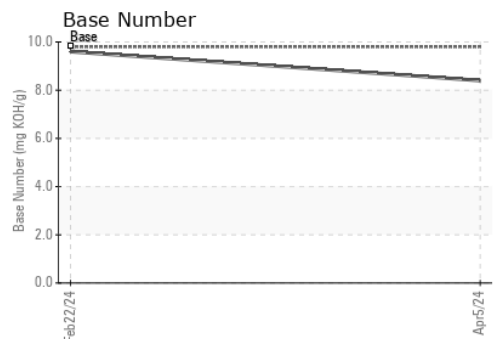
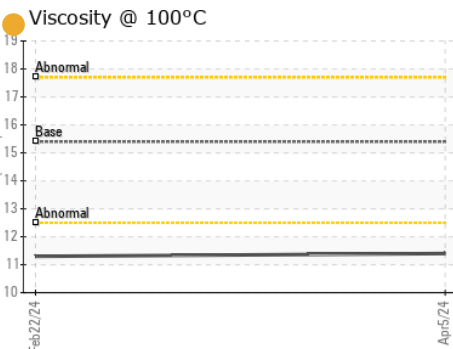
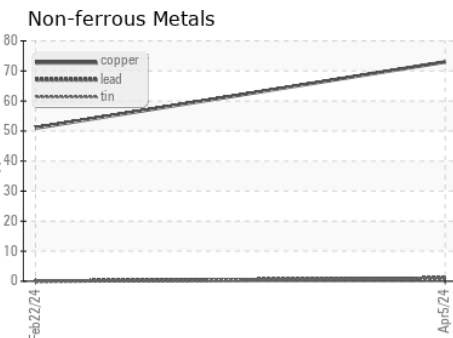
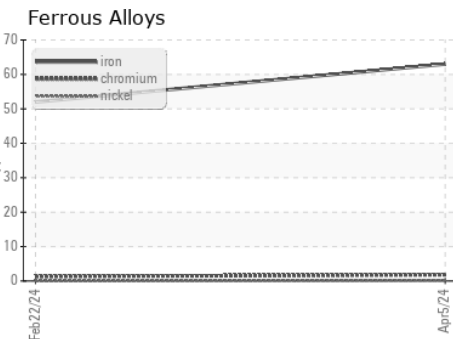
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	● 11.4	● 11.3	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0115820 **Received** : 16 Apr 2024
Lab Number : 06151000 **Tested** : 17 Apr 2024
Unique Number : 10981078 **Diagnosed** : 19 Apr 2024 - Sean Felton
Test Package : FLEET

GFL Environmental - 868 - Childersburg Fines Hauling (Alpine)
 13737 Plant Rd
 Childersburg, AL 35044
 Contact: JONATHAN WILLIAMS
 jonathan.williams@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)