



OIL ANALYSIS REPORT

Sample Rating Trend

WEAR



Machine Id
814008
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- QTS)



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

Exhaust valve wear is indicated.

Contamination

Tests indicate that there is no fuel present in the oil. 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	GFL0092544	---	---
Sample Date	Client Info	25 Mar 2024	---	---
Machine Age	hrs Client Info	596	---	---
Oil Age	hrs Client Info	596	---	---
Oil Changed	Client Info	Changed	---	---
Sample Status		ABNORMAL	---	---

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.2	NEG	---	---
Glycol	WC Method	NEG	---	---

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm	ASTM D5185m >120	52	---	---
Chromium ppm	ASTM D5185m >20	2	---	---
Nickel ppm	ASTM D5185m >5	▲ 27	---	---
Titanium ppm	ASTM D5185m >2	<1	---	---
Silver ppm	ASTM D5185m >2	<1	---	---
Aluminum ppm	ASTM D5185m >20	7	---	---
Lead ppm	ASTM D5185m >40	<1	---	---
Copper ppm	ASTM D5185m >330	155	---	---
Tin ppm	ASTM D5185m >15	4	---	---
Vanadium ppm	ASTM D5185m	<1	---	---
Cadmium ppm	ASTM D5185m	<1	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron ppm	ASTM D5185m 0	204	---	---
Barium ppm	ASTM D5185m 0	1	---	---
Molybdenum ppm	ASTM D5185m 60	128	---	---
Manganese ppm	ASTM D5185m 0	5	---	---
Magnesium ppm	ASTM D5185m 1010	675	---	---
Calcium ppm	ASTM D5185m 1070	1417	---	---
Phosphorus ppm	ASTM D5185m 1150	695	---	---
Zinc ppm	ASTM D5185m 1270	834	---	---
Sulfur ppm	ASTM D5185m 2060	2196	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm	ASTM D5185m >25	69	---	---
Sodium ppm	ASTM D5185m	7	---	---
Potassium ppm	ASTM D5185m >20	8	---	---
Fuel %	ASTM D3524 >3.0	0.3	---	---

INFRA-RED

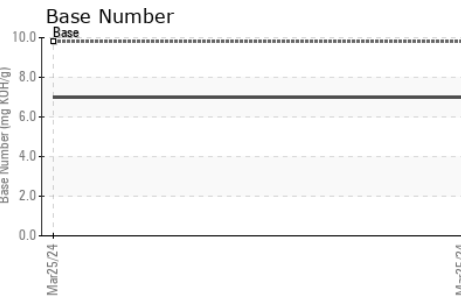
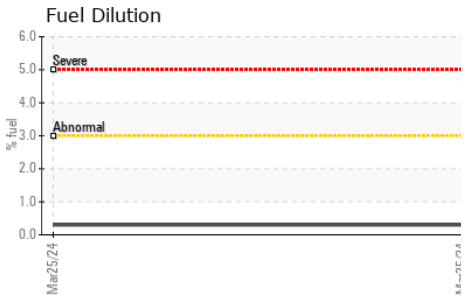
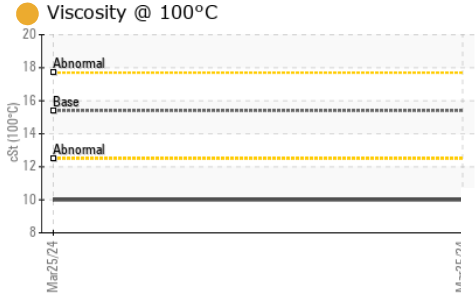
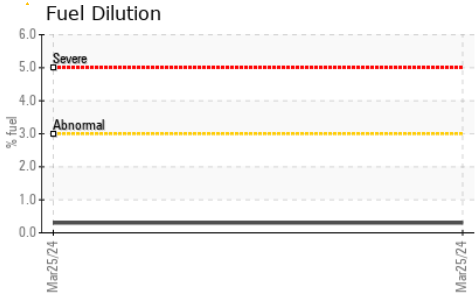
method	limit/base	current	history1	history2
Soot %	*ASTM D7844 >4	0.7	---	---
Nitration	*ASTM D7624 >20	10.9	---	---
Sulfation	*ASTM D7415 >30	24.8	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	23.2	---	---
Base Number (BN)	mg KOH/g ASTM D2896 9.8	7.0	---	---



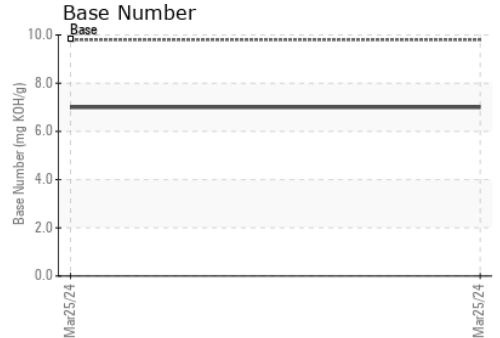
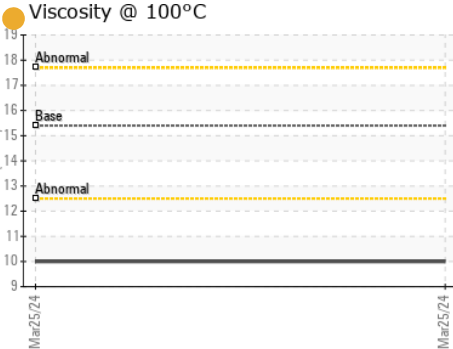
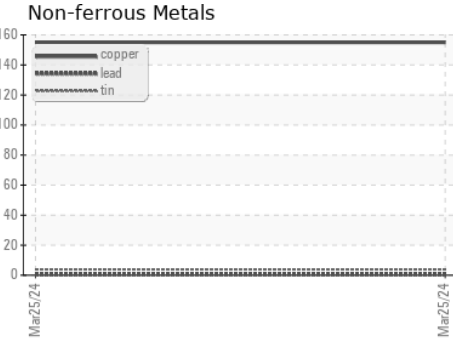
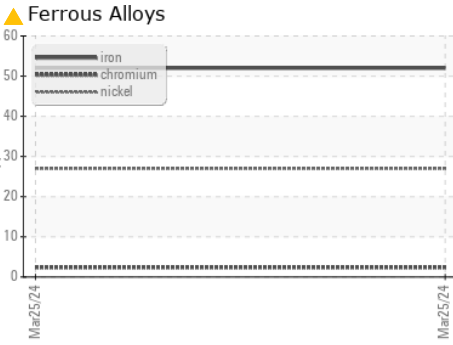
OIL ANALYSIS REPORT



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	● 10.0	---	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0092544

Lab Number : 06133886

Unique Number : 10953351

Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 29 Mar 2024

Tested : 03 Apr 2024

Diagnosed : 03 Apr 2024 - Sean Felton

GFL Environmental - 935 - Omro HC

250 Alder Avenue

Omro, WI

US 54963

Contact: Tim Kieffer

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T: (608)219-0288

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)