



OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
814057
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (39 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

Metal levels are typical for a new component breaking in.

Contamination

Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material.

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		GFL0096513	---	---
Sample Date	Client Info		13 Feb 2024	---	---
Machine Age	hrs	Client Info	594	---	---
Oil Age	hrs	Client Info	594	---	---
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	30	---	---
Chromium	ppm	ASTM D5185m >20	2	---	---
Nickel	ppm	ASTM D5185m >5	4	---	---
Titanium	ppm	ASTM D5185m >2	<1	---	---
Silver	ppm	ASTM D5185m >2	<1	---	---
Aluminum	ppm	ASTM D5185m >20	5	---	---
Lead	ppm	ASTM D5185m >40	<1	---	---
Copper	ppm	ASTM D5185m >330	79	---	---
Tin	ppm	ASTM D5185m >15	3	---	---
Vanadium	ppm	ASTM D5185m	<1	---	---
Cadmium	ppm	ASTM D5185m	<1	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	268	---	---
Barium	ppm	ASTM D5185m 0	0	---	---
Molybdenum	ppm	ASTM D5185m 60	119	---	---
Manganese	ppm	ASTM D5185m 0	4	---	---
Magnesium	ppm	ASTM D5185m 1010	640	---	---
Calcium	ppm	ASTM D5185m 1070	1359	---	---
Phosphorus	ppm	ASTM D5185m 1150	628	---	---
Zinc	ppm	ASTM D5185m 1270	769	---	---
Sulfur	ppm	ASTM D5185m 2060	2575	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	▲ 65	---	---
Sodium	ppm	ASTM D5185m	0	---	---
Potassium	ppm	ASTM D5185m >20	6	---	---
Fuel	%	ASTM D3524 >3.0	0.5	---	---

INFRA-RED

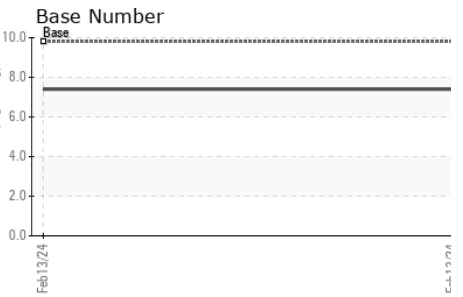
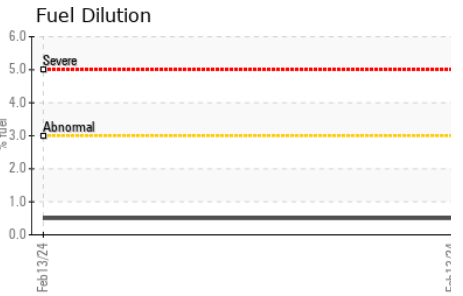
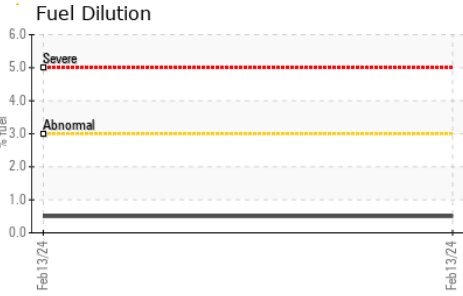
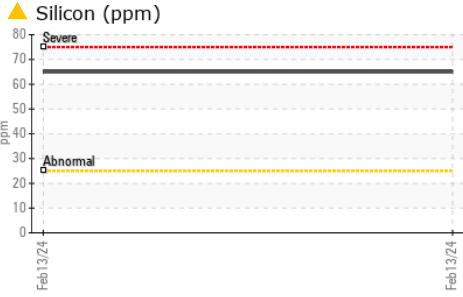
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.3	---	---
Nitration	Abs/cm	*ASTM D7624 >20	9.6	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	23.7	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	21.7	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.4	---	---



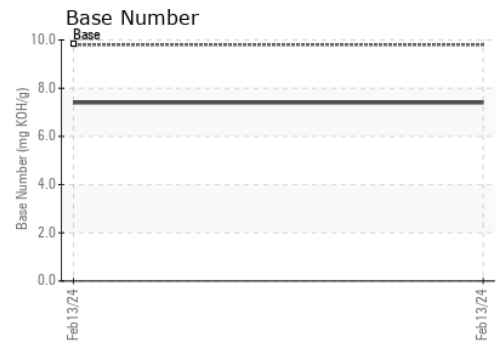
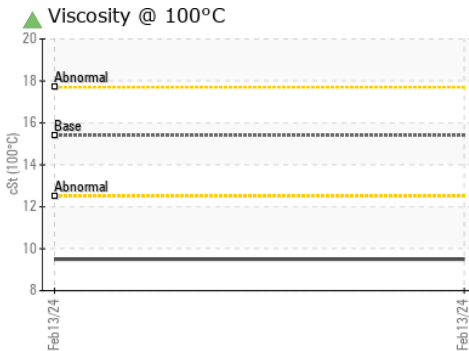
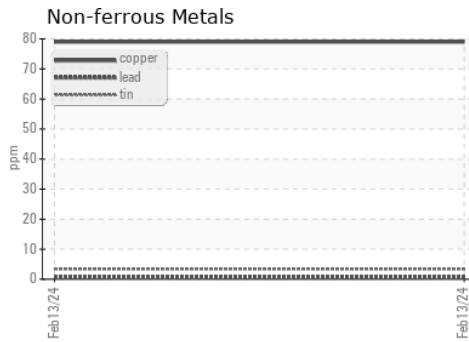
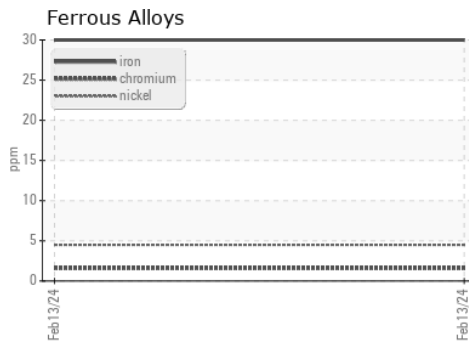
OIL ANALYSIS REPORT



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	▲ 9.5	---	---

GRAPHS



Certificate L2367

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

Sample No. : GFL0096513

Lab Number : 06092223

Unique Number : 10885076

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

Received : 16 Feb 2024

Tested : 20 Feb 2024

Diagnosed : 20 Feb 2024 - Don Baldrige

GFL Environmental - 656 - Culpeper Hauling

15490 Montanus Drive

Culpeper, VA

US 22701

Contact: Matt Hanna

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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)