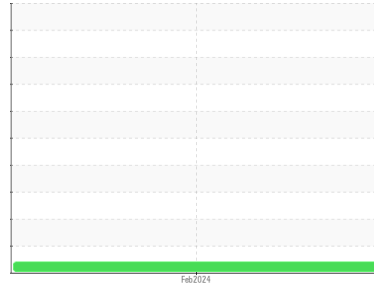




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id
814018

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Fuel content negligible. 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	GFL0110890	---	---
Sample Date	Client Info	19 Feb 2024	---	---
Machine Age	hrs	Client Info	184	---
Oil Age	hrs	Client Info	0	---
Oil Changed	Client Info	Changed	---	---
Sample Status		ATTENTION	---	---

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	>100	11	---
Chromium	ppm	ASTM D5185m	>20	<1	---
Nickel	ppm	ASTM D5185m	>4	5	---
Titanium	ppm	ASTM D5185m		0	---
Silver	ppm	ASTM D5185m	>3	0	---
Aluminum	ppm	ASTM D5185m	>20	6	---
Lead	ppm	ASTM D5185m	>40	1	---
Copper	ppm	ASTM D5185m	>330	10	---
Tin	ppm	ASTM D5185m	>15	2	---
Vanadium	ppm	ASTM D5185m		<1	---
Cadmium	ppm	ASTM D5185m		0	---

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	0	442	---
Barium	ppm	ASTM D5185m	0	<1	---
Molybdenum	ppm	ASTM D5185m	60	121	---
Manganese	ppm	ASTM D5185m	0	4	---
Magnesium	ppm	ASTM D5185m	1010	712	---
Calcium	ppm	ASTM D5185m	1070	1518	---
Phosphorus	ppm	ASTM D5185m	1150	728	---
Zinc	ppm	ASTM D5185m	1270	857	---
Sulfur	ppm	ASTM D5185m	2060	2363	---

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	67	---
Sodium	ppm	ASTM D5185m		3	---
Potassium	ppm	ASTM D5185m	>20	6	---
Fuel	%	ASTM D3524	>5	0.2	---

INFRA-RED

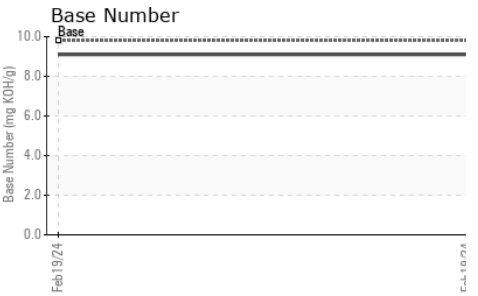
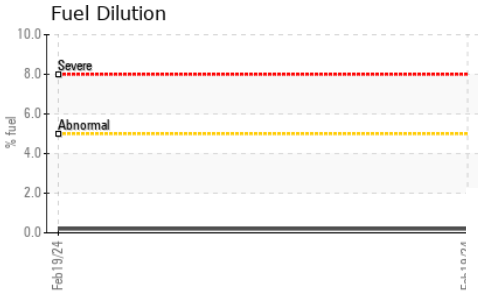
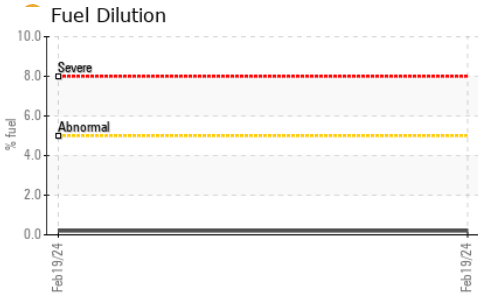
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	6.9	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.5	---

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.6	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.1	---



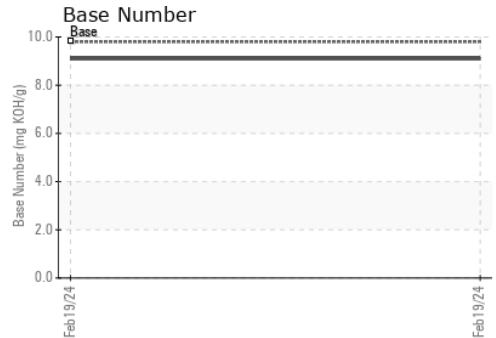
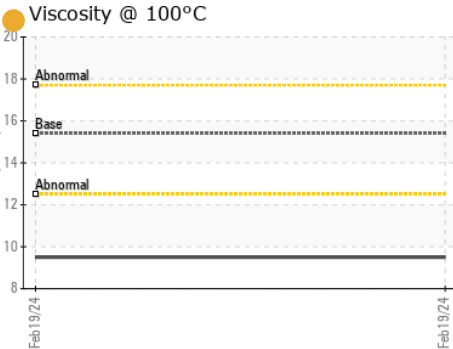
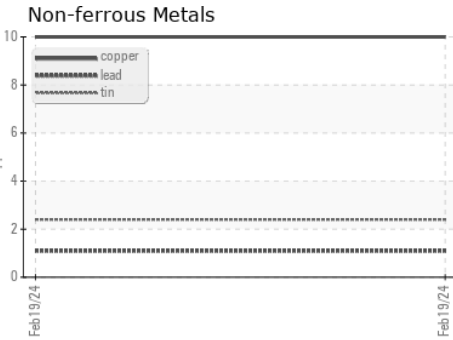
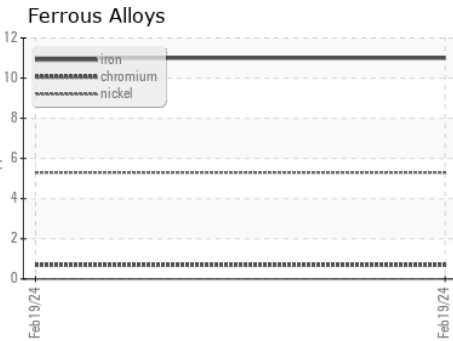
OIL ANALYSIS REPORT



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. : GFL0110890 **Received** : 26 Feb 2024
Lab Number : 06100773 **Tested** : 29 Feb 2024
Unique Number : 10899003 **Diagnosed** : 29 Feb 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 814 - Little Rock Hauling
 4005 Hwy 161 N.
 Little Rock, AR
 US 72117
 Contact: Brad Koenig
 bkoenig@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)

T:
F: