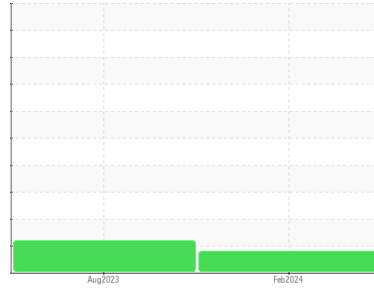




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
219012

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (3 GAL)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

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	GFL0109182	GFL0067098	---
Sample Date	Client Info	21 Feb 2024	30 Aug 2023	---
Machine Age	hrs	1420	1170	---
Oil Age	hrs	700	700	---
Oil Changed	Client Info	Changed	Changed	---
Sample Status		MARGINAL	ABNORMAL	---

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185m	>100	26	30	---
Chromium	ppm	ASTM D5185m	>20	1	1	---
Nickel	ppm	ASTM D5185m	>2	<1	<1	---
Titanium	ppm	ASTM D5185m	>2	<1	<1	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>25	7	8	---
Lead	ppm	ASTM D5185m	>40	0	<1	---
Copper	ppm	ASTM D5185m	>330	2	3	---
Tin	ppm	ASTM D5185m	>15	<1	0	---
Vanadium	ppm	ASTM D5185m		<1	0	---
Cadmium	ppm	ASTM D5185m		<1	0	---

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185m	0	4	28	---
Barium	ppm	ASTM D5185m	0	0	0	---
Molybdenum	ppm	ASTM D5185m	60	54	10	---
Manganese	ppm	ASTM D5185m	0	<1	<1	---
Magnesium	ppm	ASTM D5185m	1010	869	758	---
Calcium	ppm	ASTM D5185m	1070	953	1277	---
Phosphorus	ppm	ASTM D5185m	1150	979	1065	---
Zinc	ppm	ASTM D5185m	1270	1181	1239	---
Sulfur	ppm	ASTM D5185m	2060	2877	4013	---

CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185m	>25	7	13	---
Sodium	ppm	ASTM D5185m		2	3	---
Potassium	ppm	ASTM D5185m	>20	2	3	---
Fuel	%	ASTM D3524	>5	▲ 4.9	▲ 3.3	---

INFRA-RED

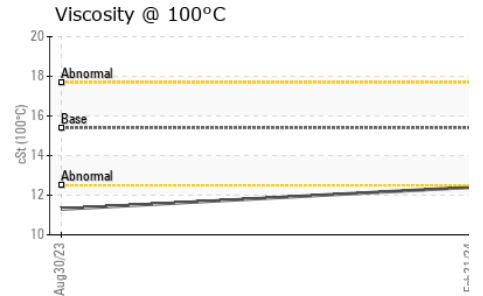
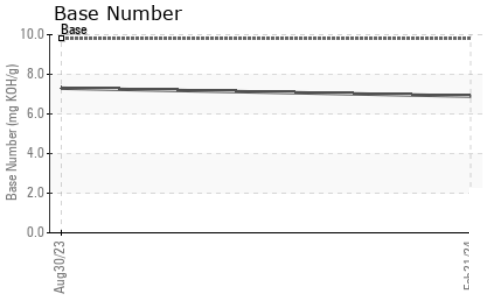
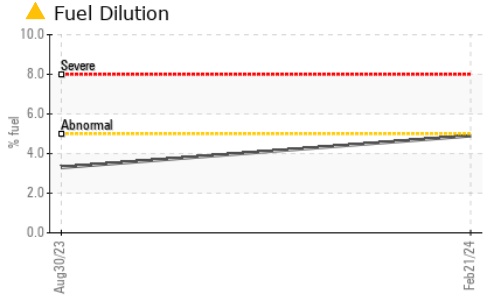
method	limit/base	current	history1	history2		
Soot %	%	*ASTM D7844	>3	0.3	0.4	---
Nitration	Abs/cm	*ASTM D7624	>20	10.0	10.4	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.5	21.4	---

FLUID DEGRADATION

method	limit/base	current	history1	history2		
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.9	15.8	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.9	7.3	---



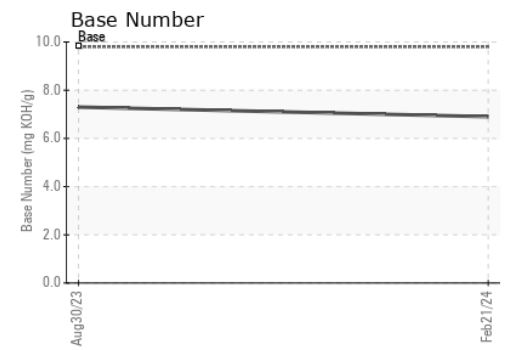
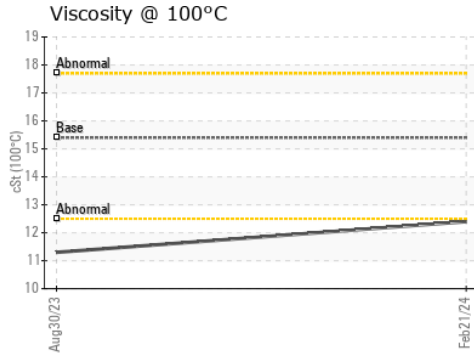
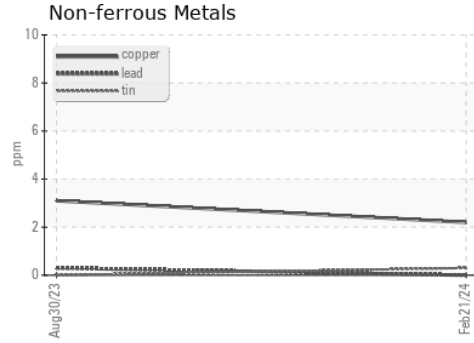
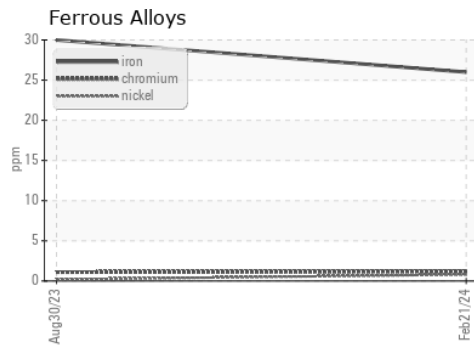
OIL ANALYSIS REPORT



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	12.4	▲ 11.3

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0109182 **Received** : 01 Mar 2024
Lab Number : 06105758 **Tested** : 05 Mar 2024
Unique Number : 10909255 **Diagnosed** : 05 Mar 2024 - Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 822 - Springfield Hauling
 2120 West Bennett Street
 Springfield, MO
 US 65807
 Contact: Dennis Moore
 dennis.moore@gflenv.com
 T: (417)403-3641
 F:

Certificate L2367
 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)