



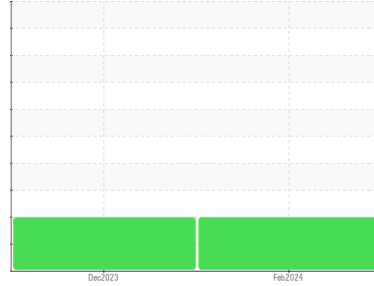
OIL ANALYSIS REPORT

Sample Rating Trend

DIRT



Machine Id
814025
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (8 GAL)



DIAGNOSIS

Recommendation

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

Wear

All component wear rates are normal.

Contamination

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		GFL0105222	GFL0105129	---
Sample Date	Client Info		02 Feb 2024	09 Dec 2023	---
Machine Age	hrs	Client Info	249	126	---
Oil Age	hrs	Client Info	249	126	---
Oil Changed	Client Info		Not Chngd	Not Chngd	---
Sample Status			ABNORMAL	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 >120	20	16	---
Chromium	ppm	ASTM D5185m >20	<1	<1	---
Nickel	ppm	ASTM D5185m >5	2	2	---
Titanium	ppm	ASTM D5185m >2	<1	0	---
Silver	ppm	ASTM D5185m >2	0	0	---
Aluminum	ppm	ASTM D5185m >20	6	5	---
Lead	ppm	ASTM D5185m >40	<1	0	---
Copper	ppm	ASTM D5185m >330	11	10	---
Tin	ppm	ASTM D5185m >15	2	<1	---
Vanadium	ppm	ASTM D5185m	<1	<1	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	393	401	---
Barium	ppm	ASTM D5185m 0	0	0	---
Molybdenum	ppm	ASTM D5185m 60	122	123	---
Manganese	ppm	ASTM D5185m 0	4	4	---
Magnesium	ppm	ASTM D5185m 1010	662	683	---
Calcium	ppm	ASTM D5185m 1070	1405	1504	---
Phosphorus	ppm	ASTM D5185m 1150	689	721	---
Zinc	ppm	ASTM D5185m 1270	803	813	---
Sulfur	ppm	ASTM D5185m 2060	2375	2417	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	▲ 75	▲ 75	---
Sodium	ppm	ASTM D5185m	4	2	---
Potassium	ppm	ASTM D5185m >20	6	3	---
Fuel	%	ASTM D3524 >3.0	<1.0	0.4	---

INFRA-RED

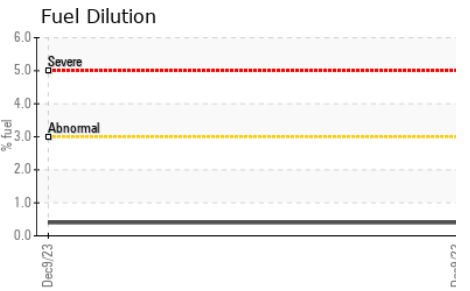
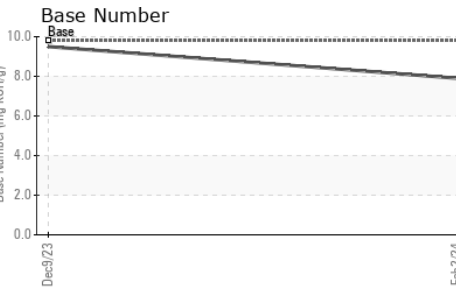
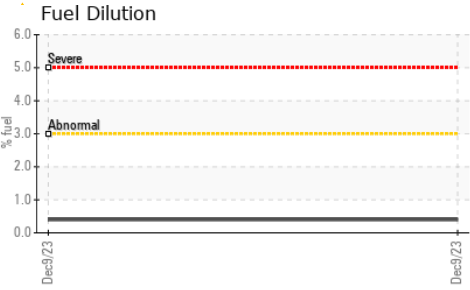
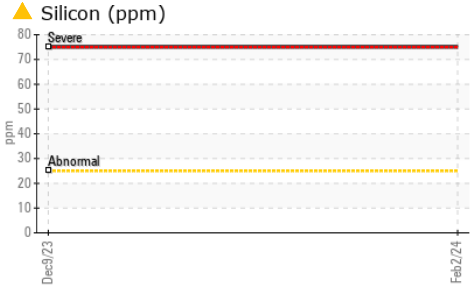
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.1	0.1	---
Nitration	Abs/cm	*ASTM D7624 >20	7.2	6.5	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	25.2	26.2	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	20.6	20.7	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.9	9.5	---



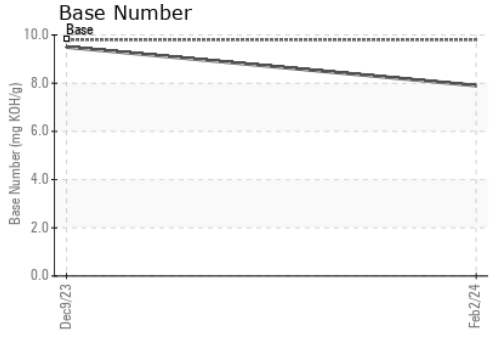
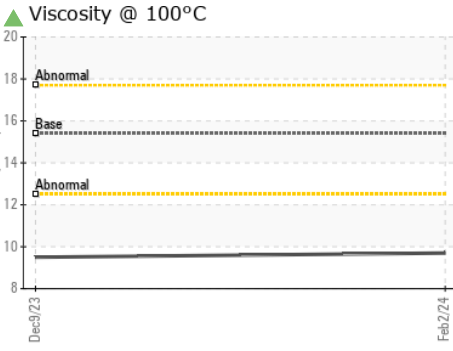
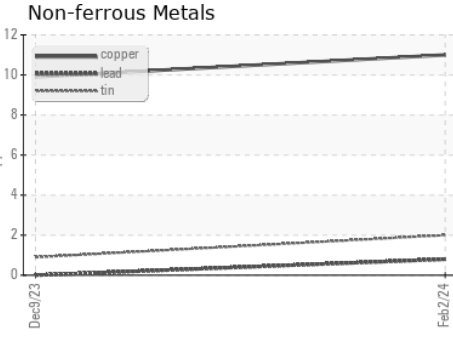
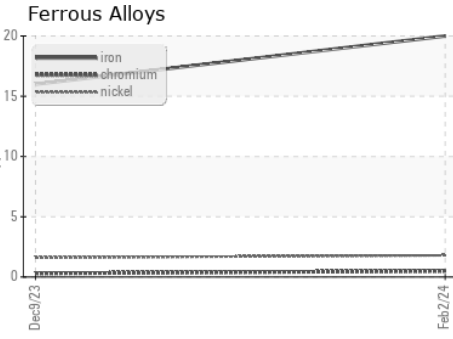
OIL ANALYSIS REPORT



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	▲ 9.7	▲ 9.5

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0105222 **Received** : 06 Feb 2024
Lab Number : 06081077 **Tested** : 07 Feb 2024
Unique Number : 10863168 **Diagnosed** : 07 Feb 2024 - Don Baldrige
Test Package : FLEET (Additional Tests: FuelDilution)

GFL Environmental - 821 - Ozarks Hauling
 33924 Olath Drive
 Lebanon, MO
 US 65536
 Contact: Landen Johnson
 landen.johnson@gflenv.com
 T: (417)664-0010
 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)