



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Area
GFL891 ON HOLD

Machine Id
429075

Component
Diesel Engine

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

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0048374	GFL0093521	---
Sample Date		Client Info		11 Jan 2024	25 Sep 2023	---
Machine Age	hrs	Client Info		4788	4778	---
Oil Age	hrs	Client Info		250	4664	---
Filter Age	hrs	Client Info		250	114	---
Oil Changed		Client Info		Changed	Not Changd	---
Filter Changed		Client Info		Changed	Not Changd	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	78	83	---
Chromium	ppm	ASTM D5185m	>20	2	2	---
Nickel	ppm	ASTM D5185m	>4	<1	<1	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m	>3	<1	0	---
Aluminum	ppm	ASTM D5185m	>20	15	12	---
Lead	ppm	ASTM D5185m	>40	<1	<1	---
Copper	ppm	ASTM D5185m	>330	16	15	---
Tin	ppm	ASTM D5185m	>15	<1	<1	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

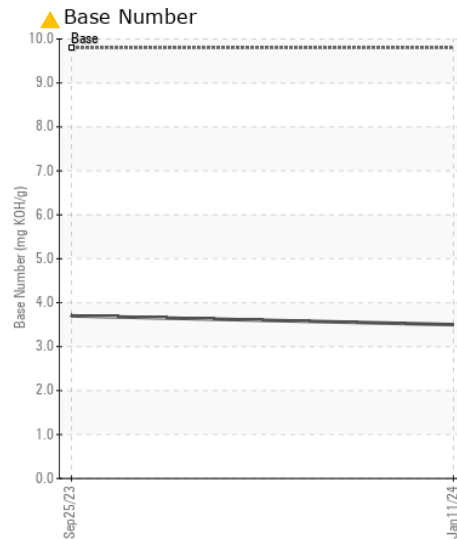
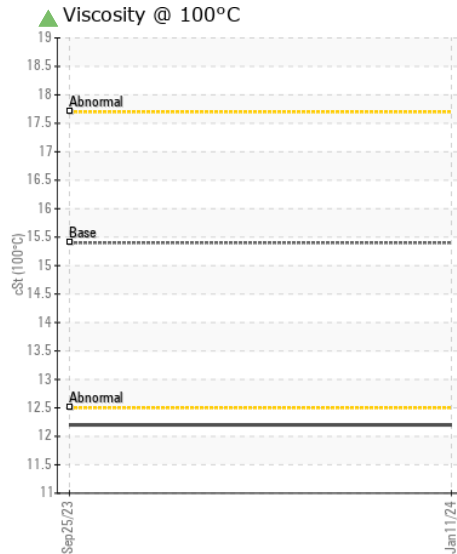
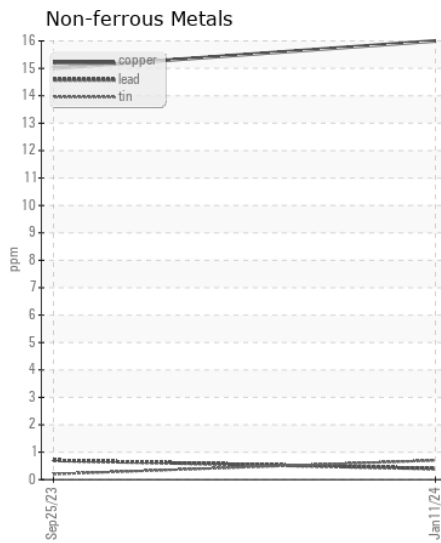
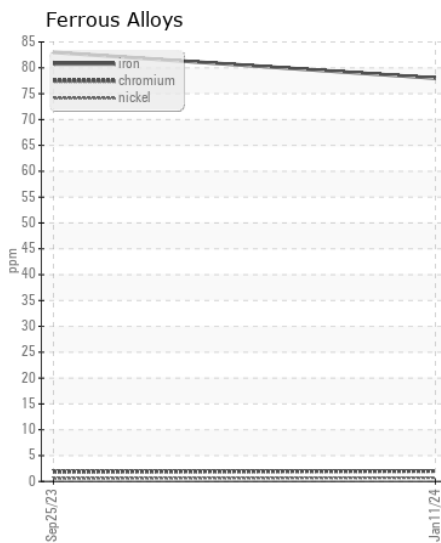
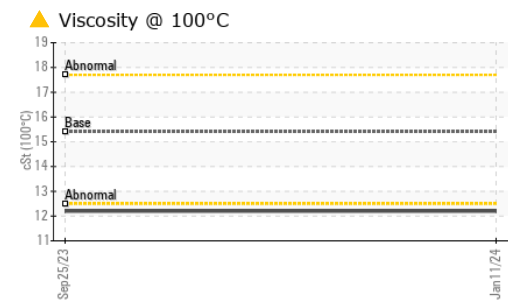
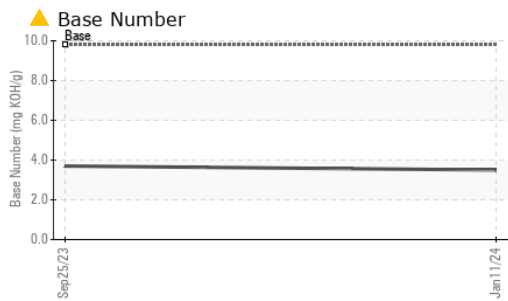
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	14	14	---
Potassium	ppm	ASTM D5185m	>20	25	28	---
Fuel		WC Method	>5	<1.0	▲ 3.7	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.8	0.8	---
Nitration	Abs/cm	*ASTM D7624	>20	13.3	13.6	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	30.7	30.8	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	---

FLUID CONDITION

The oil viscosity is lower than normal. The BN level is low. Confirm oil type.

Sodium	ppm	ASTM D5185m		3	7	---
Boron	ppm	ASTM D5185m	0	4	15	---
Barium	ppm	ASTM D5185m	0	0	0	---
Molybdenum	ppm	ASTM D5185m	60	68	69	---
Manganese	ppm	ASTM D5185m	0	4	3	---
Magnesium	ppm	ASTM D5185m	1010	249	256	---
Calcium	ppm	ASTM D5185m	1070	1819	2038	---
Phosphorus	ppm	ASTM D5185m	1150	908	919	---
Zinc	ppm	ASTM D5185m	1270	1154	1207	---
Sulfur	ppm	ASTM D5185m	2060	3247	4177	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	28.9	29.0	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	▲ 3.5	▲ 3.7	---
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 12.2	▲ 12.2	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0048374 **Recieved** : 12 Jan 2024
Lab Number : 06059035 **Diagnosed** : 15 Jan 2024
Unique Number : 10830417 **Diagnostician** : Don Baldrige
Test Package : FLEET

GFL Environmental - 891 - Oklahoma City Hauling
 1001 South Rockwell
 Oklahoma City, OK
 US 73128
 Contact: Andy Smith
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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)