



OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Machine Id
425161

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

All component wear rates are normal.

▲ Contamination

There is a light concentration of water present 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	GFL0093109	---	---
Sample Date	Client Info	31 Dec 2023	---	---
Machine Age	hrs	0	---	---
Oil Age	hrs	0	---	---
Oil Changed	Client Info	Changed	---	---
Sample Status		MARGINAL	---	---

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	---	---

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	23	---	---
Chromium	ppm ASTM D5185m >20	<1	---	---
Nickel	ppm ASTM D5185m >2	<1	---	---
Titanium	ppm ASTM D5185m >2	<1	---	---
Silver	ppm ASTM D5185m >2	0	---	---
Aluminum	ppm ASTM D5185m >25	2	---	---
Lead	ppm ASTM D5185m >40	2	---	---
Copper	ppm ASTM D5185m >330	3	---	---
Tin	ppm ASTM D5185m >15	2	---	---
Vanadium	ppm ASTM D5185m	0	---	---
Cadmium	ppm ASTM D5185m	0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	31	---	---
Barium	ppm ASTM D5185m 0	0	---	---
Molybdenum	ppm ASTM D5185m 60	67	---	---
Manganese	ppm ASTM D5185m 0	<1	---	---
Magnesium	ppm ASTM D5185m 1010	845	---	---
Calcium	ppm ASTM D5185m 1070	1167	---	---
Phosphorus	ppm ASTM D5185m 1150	970	---	---
Zinc	ppm ASTM D5185m 1270	1167	---	---
Sulfur	ppm ASTM D5185m 2060	3216	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	15	---	---
Sodium	ppm ASTM D5185m	<1	---	---
Potassium	ppm ASTM D5185m >20	4	---	---
Water	% ASTM D6304 >0.2	▲ 0.180	---	---
ppm Water	ppm ASTM D6304 >2000	▲ 1800	---	---
Glycol	% *ASTM D2982	NEG	---	---

INFRA-RED

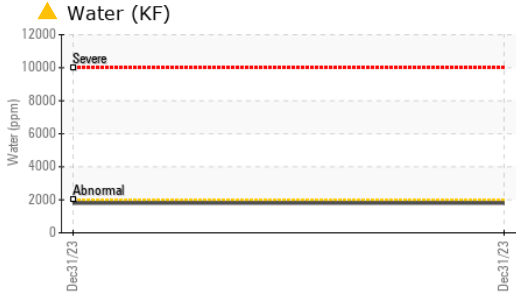
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.1	---	---
Nitration	Abs/cm *ASTM D7624 >20	6.9	---	---
Sulfation	Abs/.1mm *ASTM D7415 >30	17.9	---	---

FLUID DEGRADATION

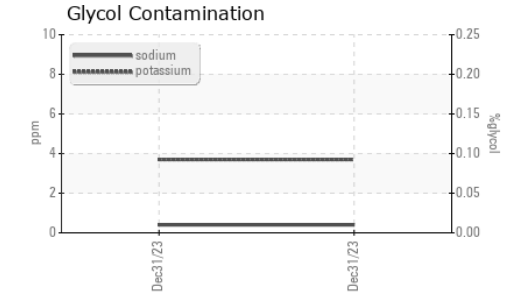
method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	13.8	---	---
Base Number (BN)	mg KOH/g ASTM D2896 9.8	8.9	---	---



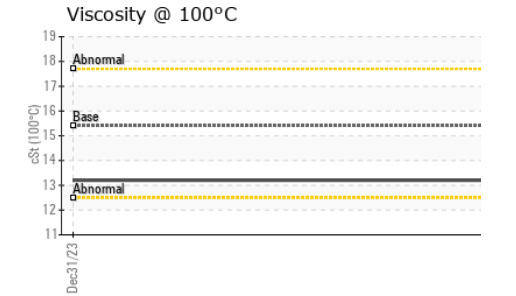
OIL ANALYSIS REPORT



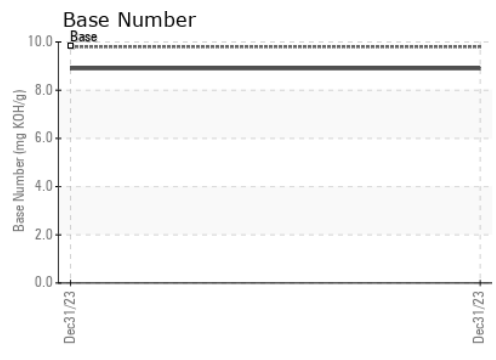
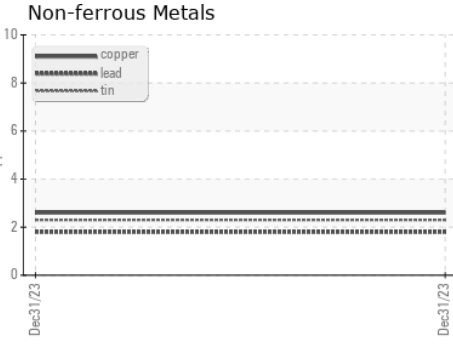
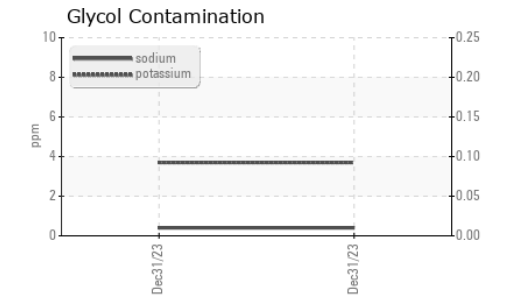
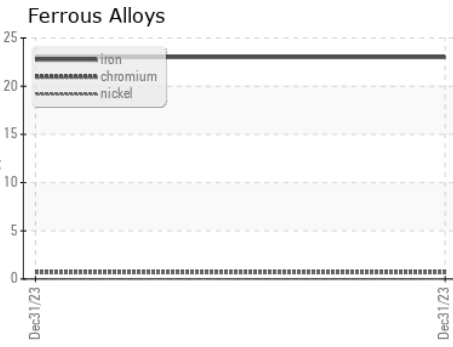
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	LIGHT	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	▲ 0.2%	---
Free Water	scalar	*Visual		NEG	---



FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	---



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0093109 **Received** : 24 Jan 2024
Lab Number : 06069363 **Diagnosed** : 26 Jan 2024
Unique Number : 10846040 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol, KF)

GFL Environmental - 401 - Fort Wayne Hauling
 4429 ALLEN MARTIN DR
 FORT WAYNE, IN
 US 46806
 Contact: Zachory Roehm
 zroehm@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: