



OIL ANALYSIS REPORT

Sample Rating Trend

DEGRADATION



Machine Id
227111

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 no indication of any contamination in the oil.

▲ Fluid Condition

The BN level is low. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0084797	---	---
Sample Date	Client Info	26 Feb 2024	---	---
Machine Age	hrs	Client Info	3314	---
Oil Age	hrs	Client Info	0	---
Oil Changed	Client Info	Changed	---	---
Sample Status		ABNORMAL	---	---

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	---	---
Water	WC Method >0.2	NEG	---	---
Glycol	WC Method	NEG	---	---

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	59	---	---
Chromium	ppm ASTM D5185m >20	1	---	---
Nickel	ppm ASTM D5185m >4	<1	---	---
Titanium	ppm ASTM D5185m	<1	---	---
Silver	ppm ASTM D5185m >3	0	---	---
Aluminum	ppm ASTM D5185m >20	5	---	---
Lead	ppm ASTM D5185m >40	<1	---	---
Copper	ppm ASTM D5185m >330	12	---	---
Tin	ppm ASTM D5185m >15	<1	---	---
Vanadium	ppm ASTM D5185m	0	---	---
Cadmium	ppm ASTM D5185m	0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	9	---	---
Barium	ppm ASTM D5185m 0	0	---	---
Molybdenum	ppm ASTM D5185m 60	48	---	---
Manganese	ppm ASTM D5185m 0	1	---	---
Magnesium	ppm ASTM D5185m 1010	901	---	---
Calcium	ppm ASTM D5185m 1070	1204	---	---
Phosphorus	ppm ASTM D5185m 1150	1013	---	---
Zinc	ppm ASTM D5185m 1270	1198	---	---
Sulfur	ppm ASTM D5185m 2060	2777	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	8	---	---
Sodium	ppm ASTM D5185m	3	---	---
Potassium	ppm ASTM D5185m >20	7	---	---

INFRA-RED

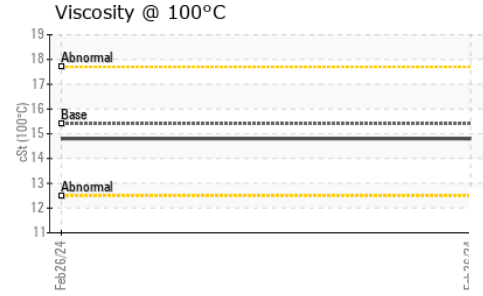
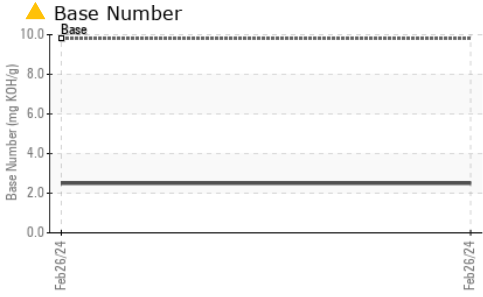
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.4	---	---
Nitration	Abs/cm *ASTM D7624 >20	15.5	---	---
Sulfation	Abs/.1mm *ASTM D7415 >30	28.7	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	33.3	---	---
Base Number (BN)	mg KOH/g ASTM D2896 9.8	▲ 2.5	---	---



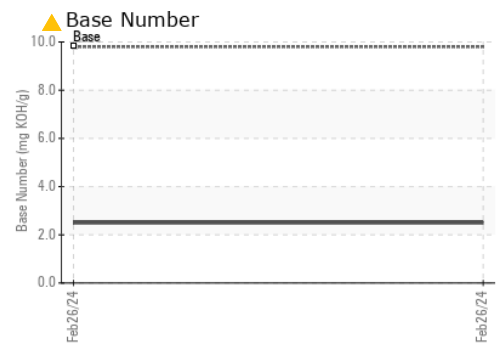
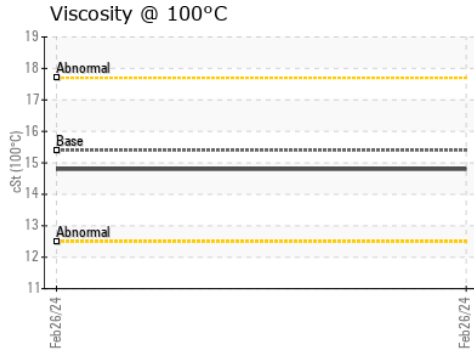
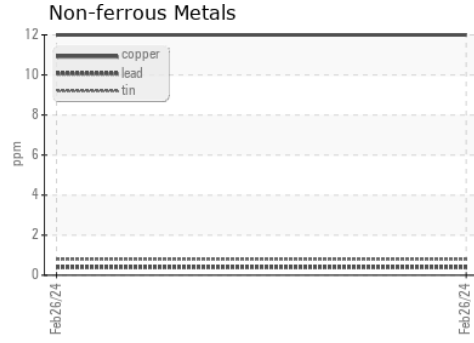
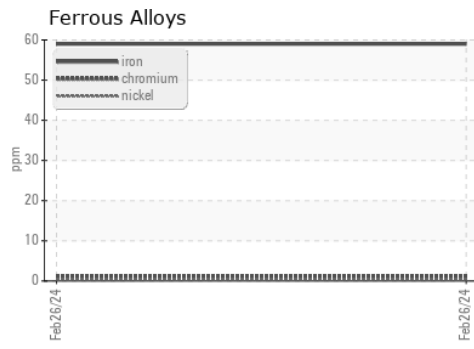
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VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	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	14.8	---	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0084797 **Received** : 21 Mar 2024
Lab Number : 06125509 **Tested** : 22 Mar 2024
Unique Number : 10939660 **Diagnosed** : 25 Mar 2024 - Don Baldrige
Test Package : FLEET

GFL Environmental - 959A - Urbana HC
 4808 cunningham Rd
 Urbana, IL
 US 61802
 Contact: Kristine Tryon
 Ktryon@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)