



PROBLEM SUMMARY

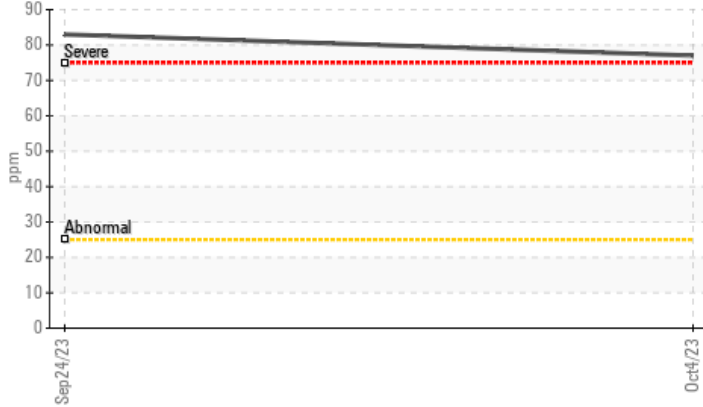
Sample Rating Trend



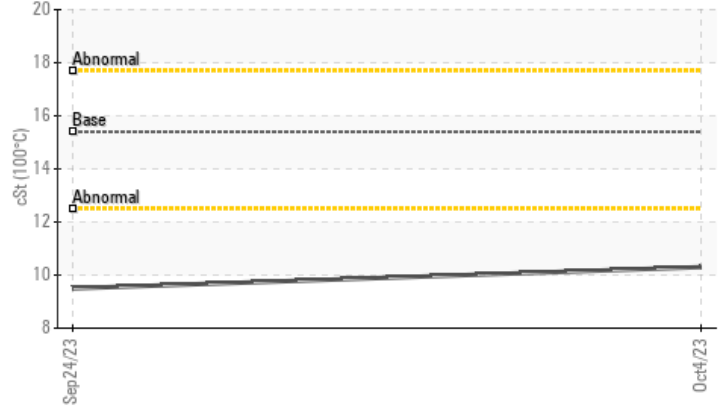
Machine Id
414047
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Silicon (ppm)



▲ Viscosity @ 100°C



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ABNORMAL	---
Silicon	ppm	ASTM D5185m	>25	▲ 77	▲ 83	---
Visc @ 100°C	cSt	ASTM D445	15.4	▲ 10.3	▲ 9.5	---

Customer Id: GFL821
 Sample No.: GFL0090211
 Lab Number: 05972493
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

24 Sep 2023 Diag: Don Baldrige

DIRT



Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

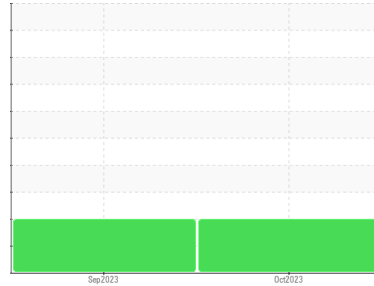
view report





OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
414047
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

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

Wear

Metal levels are typical for a new component breaking in.

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	GFL0090211	GFL0090223	---
Sample Date	Client Info	04 Oct 2023	24 Sep 2023	---
Machine Age	hrs	266	146	---
Oil Age	hrs	150	146	---
Oil Changed	Client Info	Not Changed	Not Changed	---
Sample Status		ABNORMAL	ABNORMAL	---

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >120	22	20	---
Chromium	ppm	ASTM D5185m >20	<1	<1	---
Nickel	ppm	ASTM D5185m >5	0	0	---
Titanium	ppm	ASTM D5185m >2	0	0	---
Silver	ppm	ASTM D5185m >2	1	<1	---
Aluminum	ppm	ASTM D5185m >20	12	11	---
Lead	ppm	ASTM D5185m >40	0	0	---
Copper	ppm	ASTM D5185m >330	83	46	---
Tin	ppm	ASTM D5185m >15	3	2	---
Vanadium	ppm	ASTM D5185m	0	0	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	276	335	---
Barium	ppm	ASTM D5185m 0	0	0	---
Molybdenum	ppm	ASTM D5185m 60	113	114	---
Manganese	ppm	ASTM D5185m 0	3	3	---
Magnesium	ppm	ASTM D5185m 1010	782	698	---
Calcium	ppm	ASTM D5185m 1070	1376	1385	---
Phosphorus	ppm	ASTM D5185m 1150	772	660	---
Zinc	ppm	ASTM D5185m 1270	934	795	---
Sulfur	ppm	ASTM D5185m 2060	2550	2328	---

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	▲ 77	▲ 83	---
Sodium	ppm	ASTM D5185m	6	4	---
Potassium	ppm	ASTM D5185m >20	27	23	---
Fuel	%	ASTM D3524 >3.0	<1.0	0.2	---

INFRA-RED

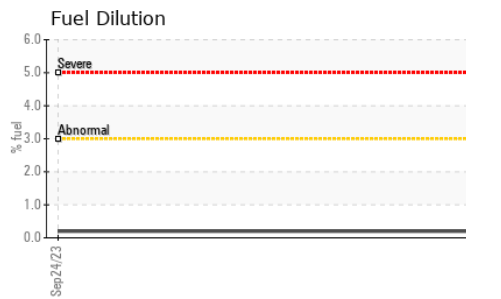
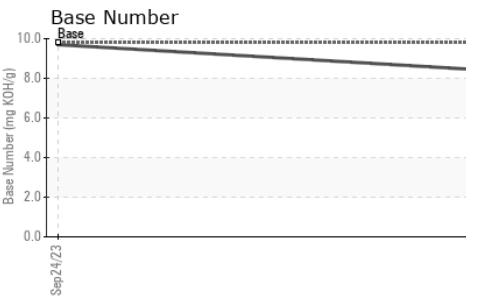
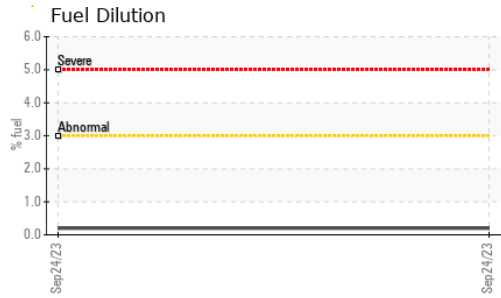
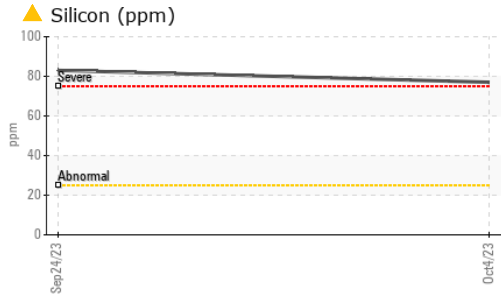
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >4	0.2	0.1	---
Nitration	Abs/cm	*ASTM D7624 >20	7.3	6.8	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	23.7	25.6	---

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	19.7	20.9	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.4	9.7	---



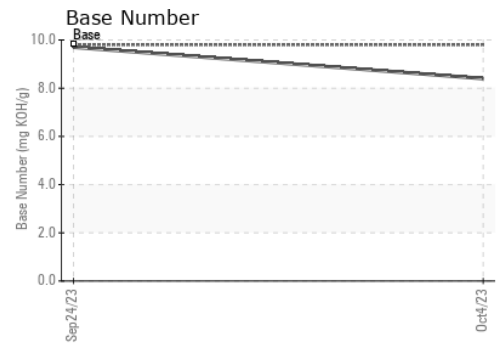
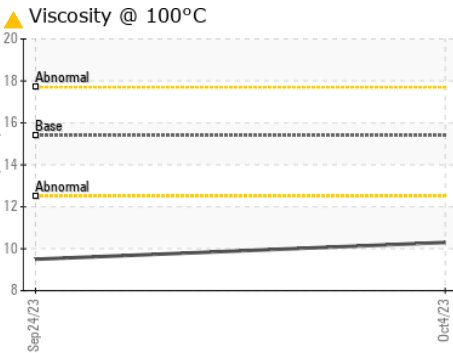
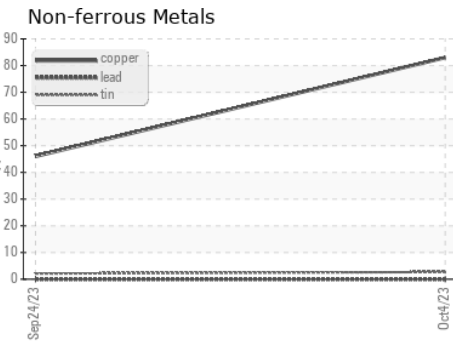
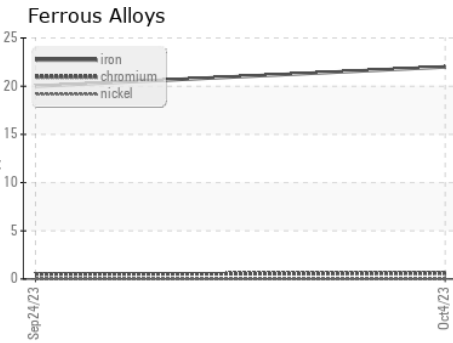
OIL ANALYSIS REPORT



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	▲ 10.3	▲ 9.5

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0090211 **Received** : 09 Oct 2023
Lab Number : 05972493 **Diagnosed** : 11 Oct 2023
Unique Number : 10684443 **Diagnostician** : Jonathan Hester
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)