



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(BD38786)
Machine Id
413055
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0095368	---	---
Sample Date		Client Info		09 Jan 2024	---	---
Machine Age	hrs	Client Info		365	---	---
Oil Age	hrs	Client Info		185	---	---
Filter Age	hrs	Client Info		185	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

Valve wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	19	---	---
Chromium	ppm	ASTM D5185m	>20	1	---	---
Nickel	ppm	ASTM D5185m	>5	▲ 23	---	---
Titanium	ppm	ASTM D5185m	>2	<1	---	---
Silver	ppm	ASTM D5185m	>2	<1	---	---
Aluminum	ppm	ASTM D5185m	>20	8	---	---
Lead	ppm	ASTM D5185m	>40	0	---	---
Copper	ppm	ASTM D5185m	>330	11	---	---
Tin	ppm	ASTM D5185m	>15	<1	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

There is no indication of any contamination in the oil.

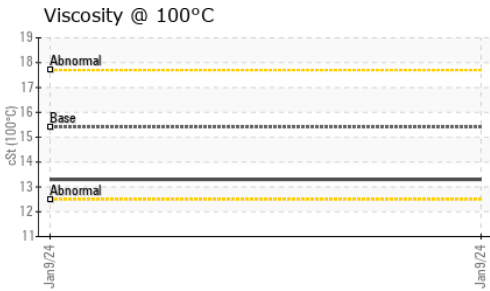
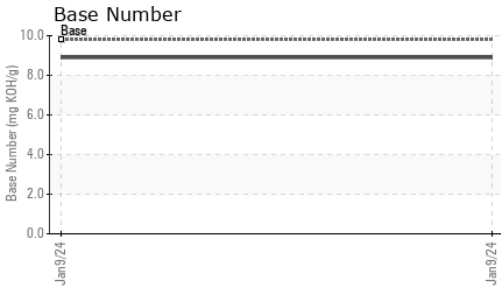
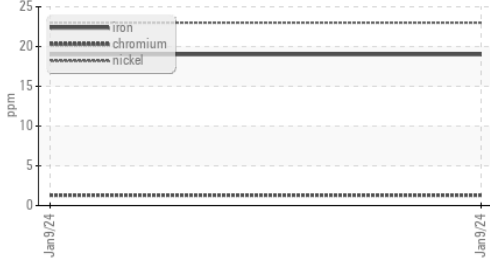
Silicon	ppm	ASTM D5185m	>25	11	---	---
Potassium	ppm	ASTM D5185m	>20	23	---	---
Fuel		WC Method	>3.0	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>4	0.1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	6.4	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.7	---	---
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	---	---

FLUID CONDITION

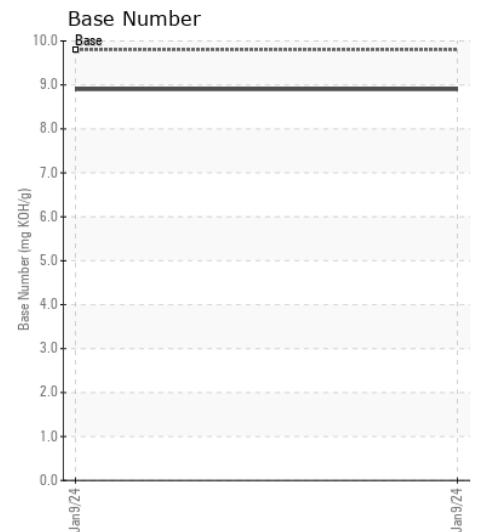
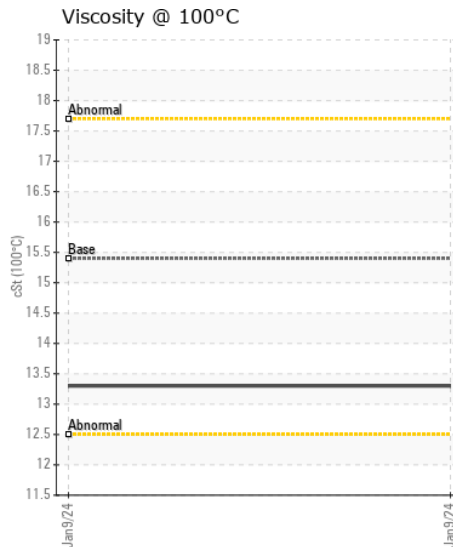
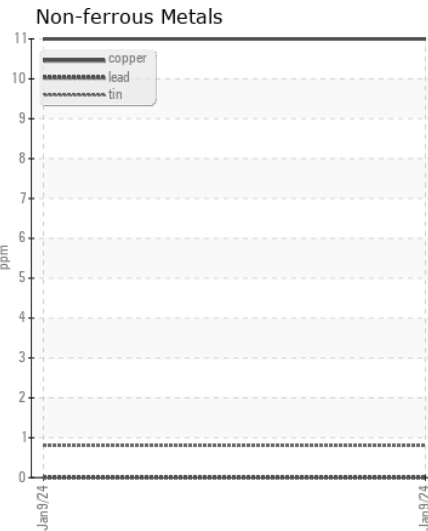
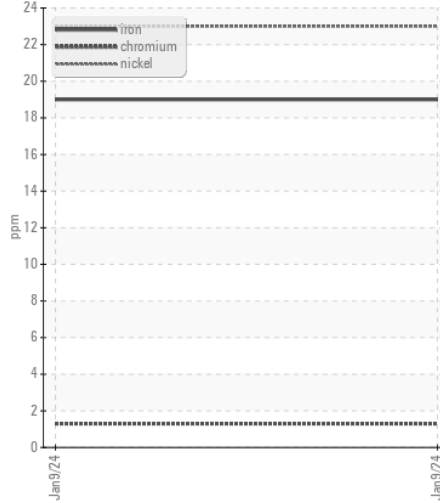
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		5	---	---
Boron	ppm	ASTM D5185m	0	38	---	---
Barium	ppm	ASTM D5185m	0	0	---	---
Molybdenum	ppm	ASTM D5185m	60	65	---	---
Manganese	ppm	ASTM D5185m	0	2	---	---
Magnesium	ppm	ASTM D5185m	1010	881	---	---
Calcium	ppm	ASTM D5185m	1070	1214	---	---
Phosphorus	ppm	ASTM D5185m	1150	1007	---	---
Zinc	ppm	ASTM D5185m	1270	1215	---	---
Sulfur	ppm	ASTM D5185m	2060	3165	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.6	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.9	---	---
Visc @ 100°C	cSt	ASTM D445	15.4	13.3	---	---

▲ Ferrous Alloys



▲ Ferrous Alloys



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0095368
Lab Number : 06061816
Unique Number : 10833198
Test Package : FLEET

GFL Environmental - 412 - Northern Michigan TS
 348 US-41
 Negaunee, MI
 US 49866
 Contact: Service Manager

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: