



Machine Id
720038

Component
Diesel Engine

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

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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		GFL0102128	---	---
Sample Date		Client Info		08 Jan 2024	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		600	---	---
Filter Age	hrs	Client Info		600	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

The nickel level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	79	---	---
Chromium	ppm	ASTM D5185m	>20	2	---	---
Nickel	ppm	ASTM D5185m	>5	▲ 26	---	---
Titanium	ppm	ASTM D5185m	>2	<1	---	---
Silver	ppm	ASTM D5185m	>2	0	---	---
Aluminum	ppm	ASTM D5185m	>20	3	---	---
Lead	ppm	ASTM D5185m	>40	2	---	---
Copper	ppm	ASTM D5185m	>330	65	---	---
Tin	ppm	ASTM D5185m	>15	3	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

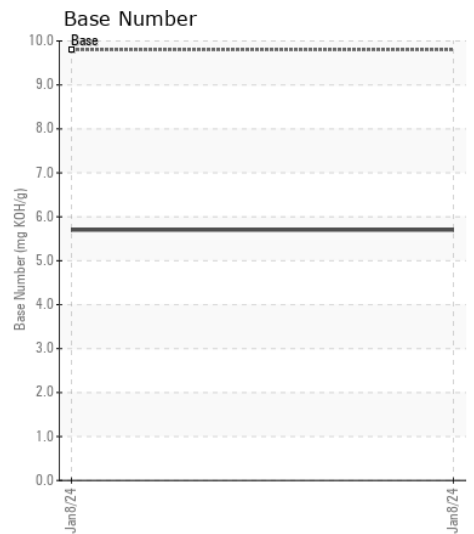
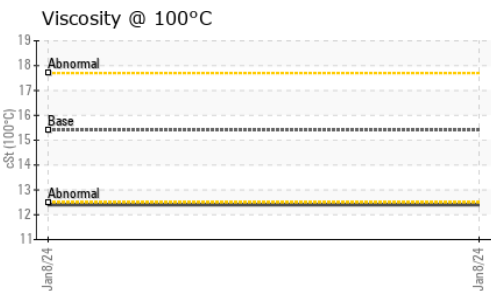
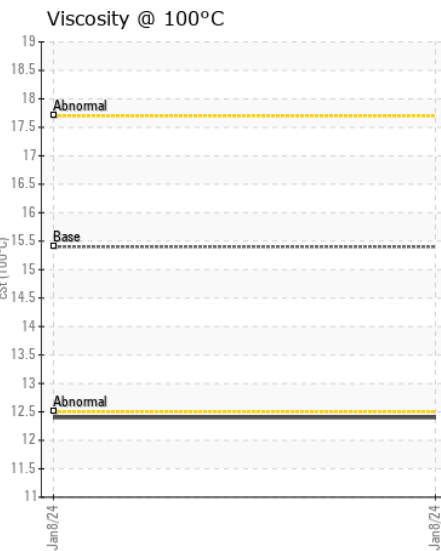
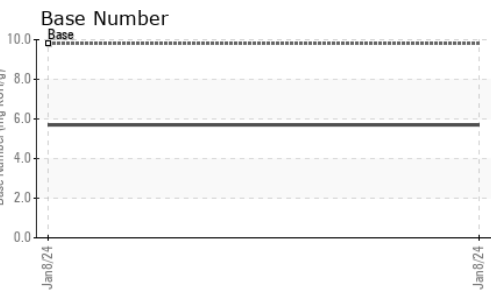
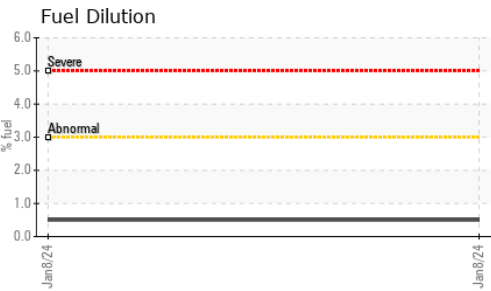
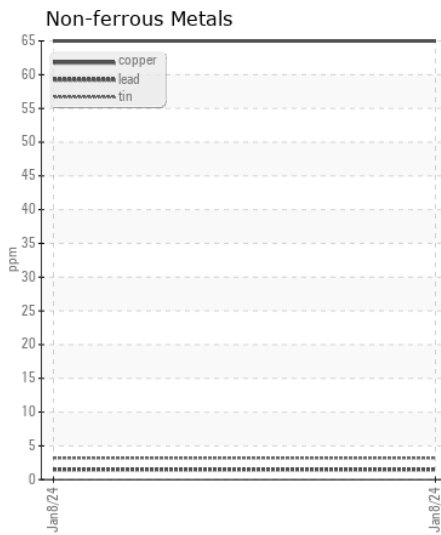
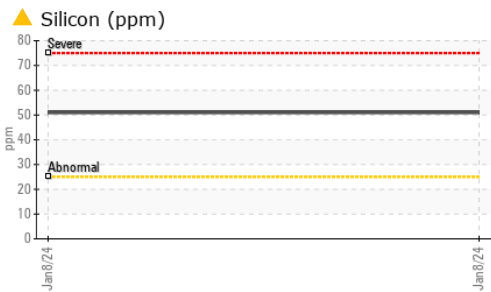
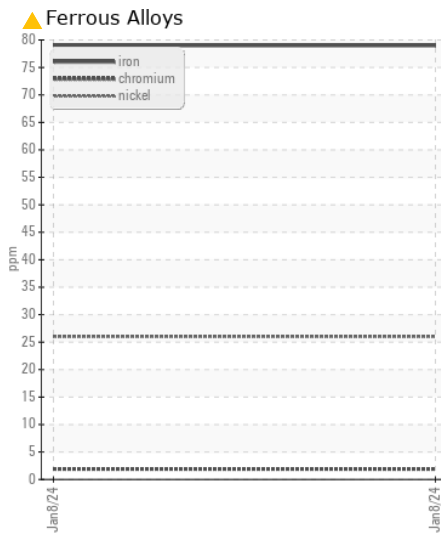
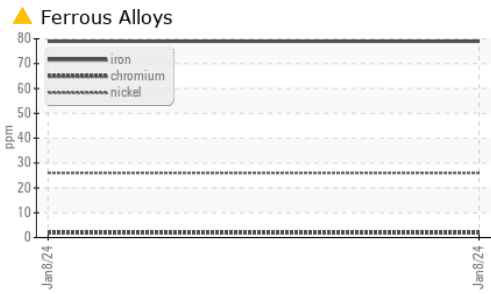
Fuel content negligible. Elemental level of silicon (Si) above normal indicating possible ingress of seal material.

Silicon	ppm	ASTM D5185m	>25	▲ 51	---	---
Potassium	ppm	ASTM D5185m	>20	3	---	---
Fuel	%	ASTM D3524	>3.0	0.5	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>4	1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	10.7	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.6	---	---
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		6	---	---
Boron	ppm	ASTM D5185m	0	25	---	---
Barium	ppm	ASTM D5185m	0	<1	---	---
Molybdenum	ppm	ASTM D5185m	60	57	---	---
Manganese	ppm	ASTM D5185m	0	3	---	---
Magnesium	ppm	ASTM D5185m	1010	619	---	---
Calcium	ppm	ASTM D5185m	1070	1254	---	---
Phosphorus	ppm	ASTM D5185m	1150	831	---	---
Zinc	ppm	ASTM D5185m	1270	1083	---	---
Sulfur	ppm	ASTM D5185m	2060	2599	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.5	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	5.7	---	---
Visc @ 100°C	cSt	ASTM D445	15.4	12.4	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0102128 **Received** : 19 Jan 2024
Lab Number : 06065331 **Diagnosed** : 24 Jan 2024
Unique Number : 10836713 **Diagnostician** : Doug Bogart
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 960B - Pittsfield HC
 1335 W. Washington
 Pittsfield, IL
 US 62363
 Contact: David Bradshaw
 david.bradshaw@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)

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F: