



Machine Id
522001
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0082181	---	---
Sample Date		Client Info		20 Dec 2023	---	---
Machine Age	hrs	Client Info		18182	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				NORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	11	---	---
Chromium	ppm	ASTM D5185(m)	>20	<1	---	---
Nickel	ppm	ASTM D5185(m)	>5	2	---	---
Titanium	ppm	ASTM D5185(m)	>2	0	---	---
Silver	ppm	ASTM D5185(m)	>2	0	---	---
Aluminum	ppm	ASTM D5185(m)	>20	5	---	---
Lead	ppm	ASTM D5185(m)	>40	1	---	---
Copper	ppm	ASTM D5185(m)	>330	3	---	---
Tin	ppm	ASTM D5185(m)	>15	<1	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---

CONTAMINATION

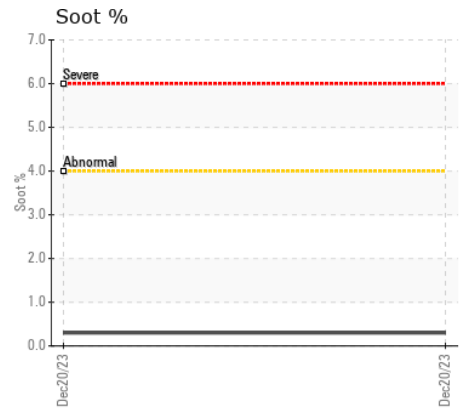
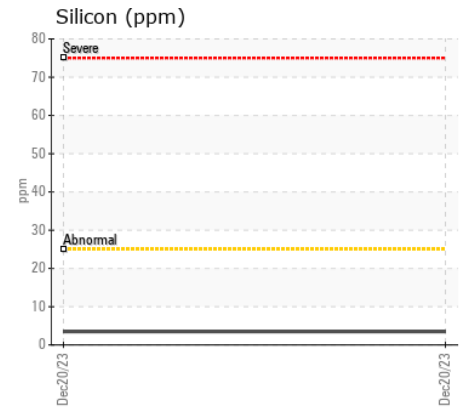
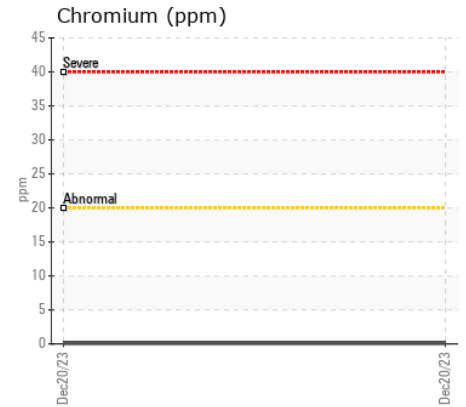
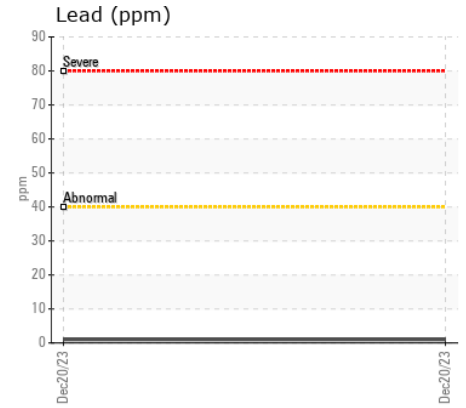
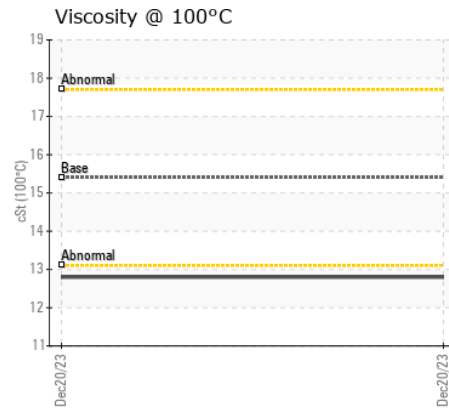
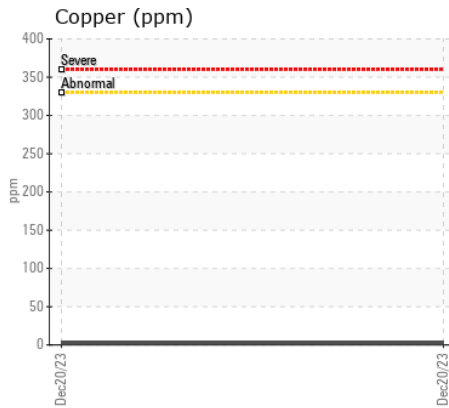
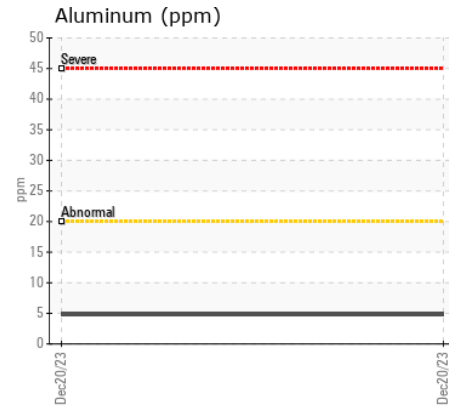
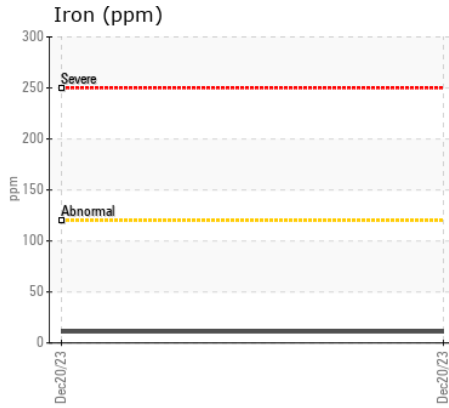
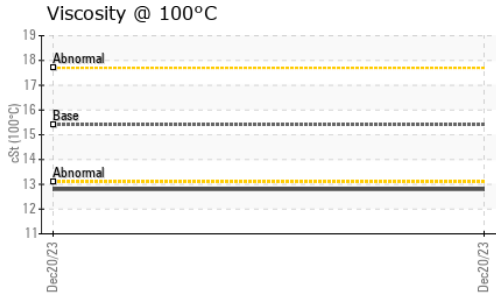
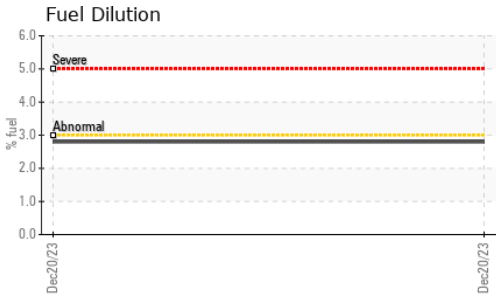
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185(m)	>25	4	---	---
Potassium	ppm	ASTM D5185(m)	>20	9	---	---
Fuel	%	ASTM D7593*	>3.0	2.8	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	ASTM D7844*	>4	0.3	---	---
Nitration	Abs/cm	ASTM D7624*	>20	10.0	---	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.8	---	---
Emulsified Water	scalar	Visual*	>0.2	NEG	---	---

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		6	---	---
Boron	ppm	ASTM D5185(m)	0	1	---	---
Barium	ppm	ASTM D5185(m)	0	0	---	---
Molybdenum	ppm	ASTM D5185(m)	60	56	---	---
Manganese	ppm	ASTM D5185(m)	0	0	---	---
Magnesium	ppm	ASTM D5185(m)	1010	890	---	---
Calcium	ppm	ASTM D5185(m)	1070	992	---	---
Phosphorus	ppm	ASTM D5185(m)	1150	916	---	---
Zinc	ppm	ASTM D5185(m)	1270	1084	---	---
Sulfur	ppm	ASTM D5185(m)	2060	2542	---	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.3	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	12.8	---	---



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0082181 **Received** : 11 Jan 2024
Lab Number : 02608098 **Diagnosed** : 12 Jan 2024
Unique Number : 5709184 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: FUELDILUTION, PercentFuel)

GFL Environmental - 593
 4421 Boban Drive
 Nanaimo, BC
 CA V9T 6A6
 Contact: Patrick Rutti
 prutti@gflenv.com
 T: (250)739-3345
 F:

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.