

Area
[1236174]
Machine Id
810053
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0093960	GFL0093938	GFL0093925
Sample Date		Client Info		04 Mar 2024	18 Dec 2023	17 Sep 2023
Machine Age	hrs	Client Info		5147	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	21	27	25
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	6	10	8
Lead	ppm	ASTM D5185(m)	>40	0	<1	<1
Copper	ppm	ASTM D5185(m)	>330	2	2	2
Tin	ppm	ASTM D5185(m)	>15	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

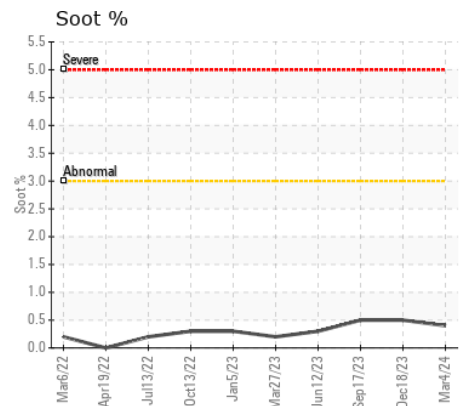
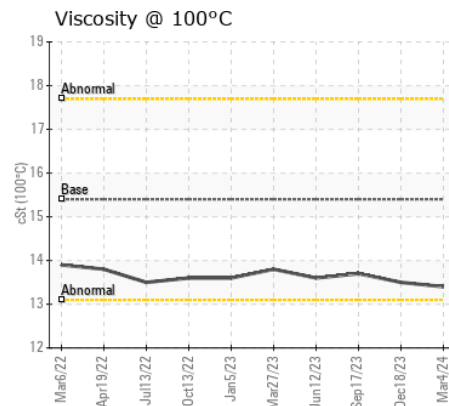
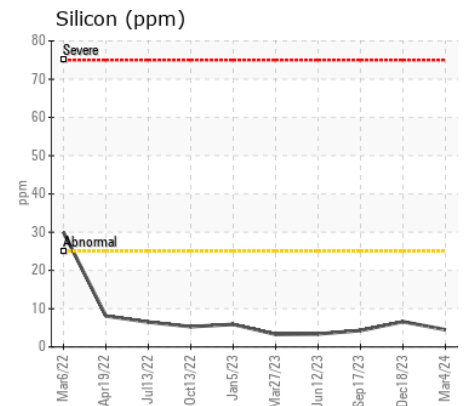
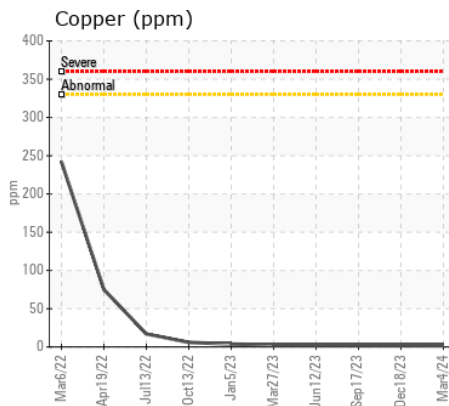
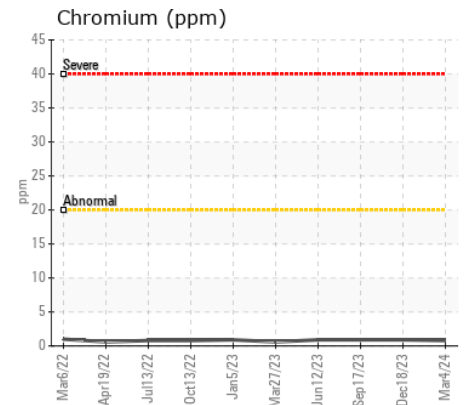
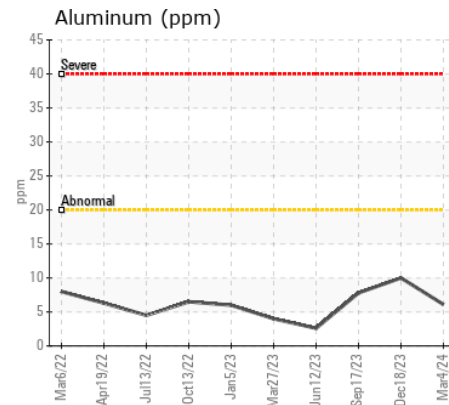
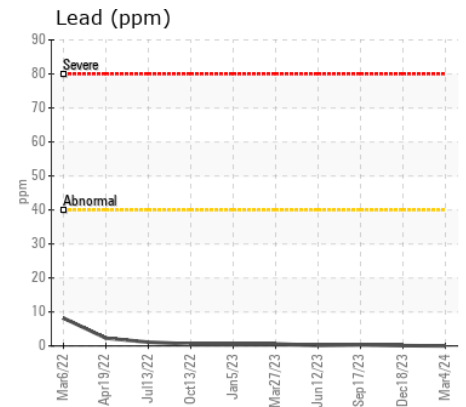
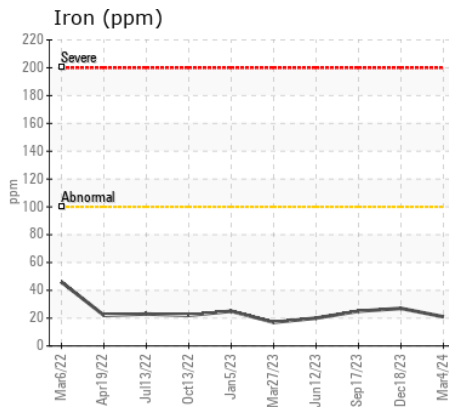
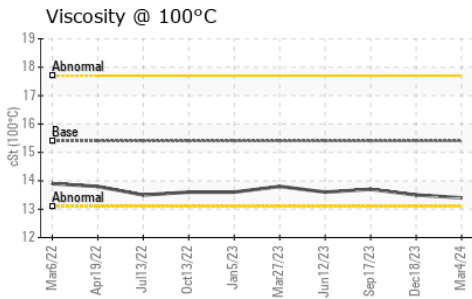
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	4	7	4
Potassium	ppm	ASTM D5185(m)	>20	7	13	12
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.4	0.5	0.5
Nitration	Abs/cm	ASTM D7624*	>20	9.7	9.8	9.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.5	21.0	21.0
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		9	9	9
Boron	ppm	ASTM D5185(m)	0	6	4	5
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	59	60	59
Manganese	ppm	ASTM D5185(m)	0	0	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	924	945	950
Calcium	ppm	ASTM D5185(m)	1070	1111	1169	1065
Phosphorus	ppm	ASTM D5185(m)	1150	987	1021	1058
Zinc	ppm	ASTM D5185(m)	1270	1150	1188	1187
Sulfur	ppm	ASTM D5185(m)	2060	2566	2610	2443
Oxidation	Abs/.1mm	ASTM D7414*	>25	17.7	17.8	17.8
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	13.4	13.5	13.7



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0093960
Lab Number : 02620744
Unique Number : 5737854
Test Package : MOB 1
Received : 08 Mar 2024
Tested : 08 Mar 2024
Diagnosed : 08 Mar 2024 - Wes Davis

GFL Environmental - 777 - Belleville-Municipal waste
 197 Putman Industrial Road
 Belleville, ON
 CA K8N 4Z6
 Contact: Andrea Michael
 amichael@gflenv.com
 T: (613)962-7144
 F: (613)962-1994

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.