



Machine Id
401215
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0090388	GFL0090410	GFL0071498
Sample Date		Client Info		15 Jan 2024	02 Nov 2023	23 Jun 2023
Machine Age	kms	Client Info		441037	423725	401215
Oil Age	kms	Client Info		0	0	401215
Filter Age	kms	Client Info		0	0	0
Oil Changed		Client Info		Changed	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)	>120	9	8	6
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>15	0	0	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>20	2	<1	<1
Lead	ppm	ASTM D5185(m)	>40	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>330	1	1	<1
Tin	ppm	ASTM D5185(m)	>15	<1	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

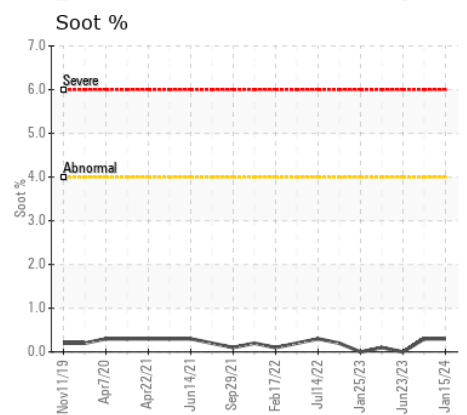
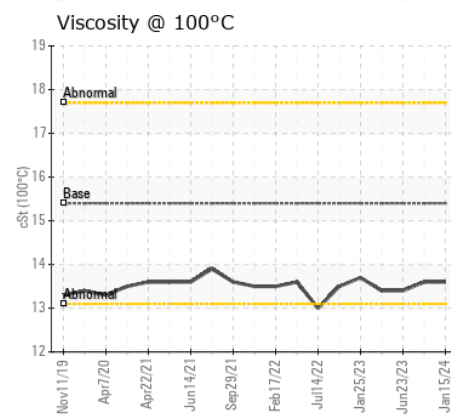
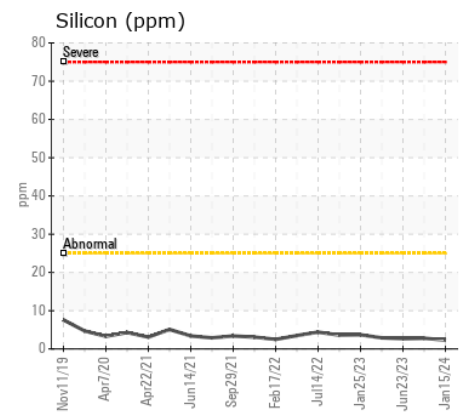
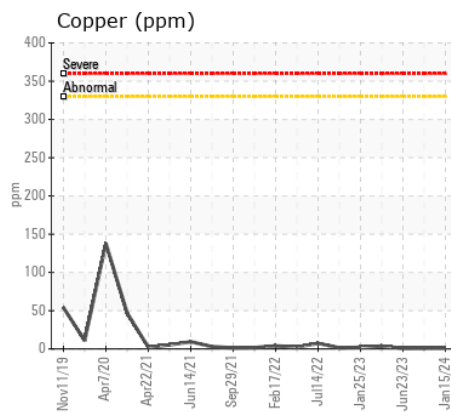
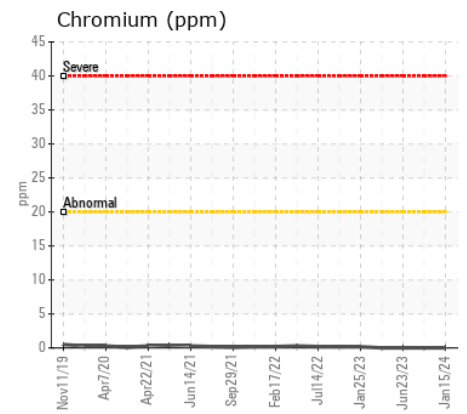
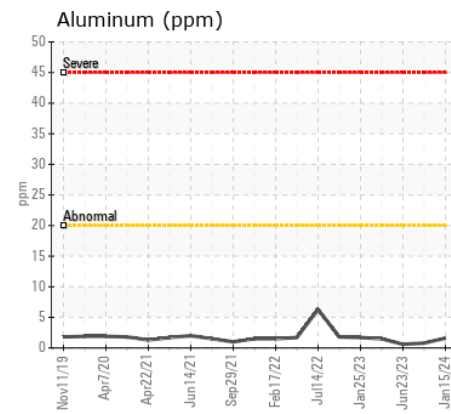
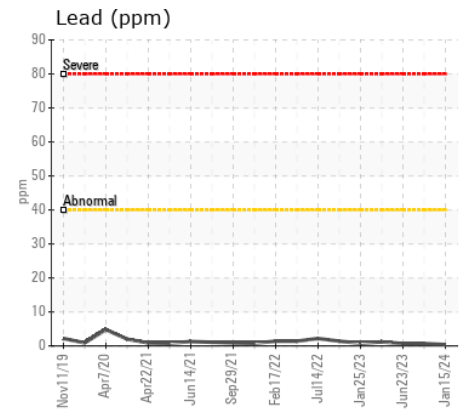
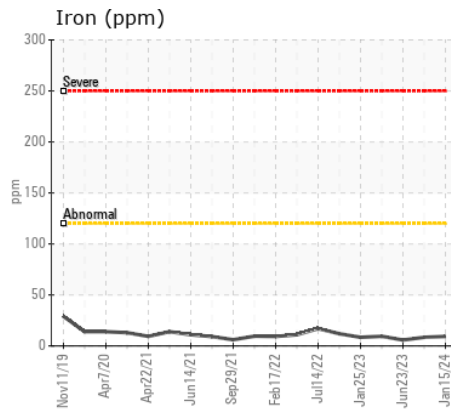
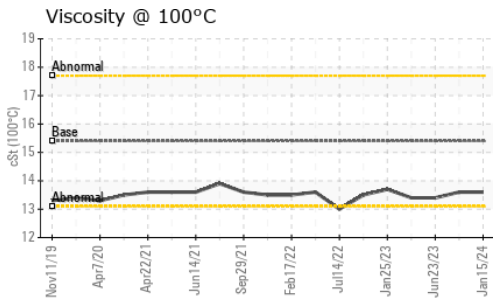
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	2	3	3
Potassium	ppm	ASTM D5185(m)	>20	<1	0	<1
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>4	0.3	0.3	0
Nitration	Abs/cm	ASTM D7624*	>20	7.7	7.0	6.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.5	19.2	18.8
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)		2	3	3
Boron	ppm	ASTM D5185(m)	0	2	2	2
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	58	60	58
Manganese	ppm	ASTM D5185(m)	0	0	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	962	965	971
Calcium	ppm	ASTM D5185(m)	1070	1041	1044	1044
Phosphorus	ppm	ASTM D5185(m)	1150	984	950	1035
Zinc	ppm	ASTM D5185(m)	1270	1155	1175	1174
Sulfur	ppm	ASTM D5185(m)	2060	2576	2391	2474
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.2	14.8	15.1
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	13.6	13.6	13.4



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0090388 **Received** : 17 Jan 2024
Lab Number : 02609202 **Diagnosed** : 17 Jan 2024
Unique Number : 5710288 **Diagnostician** : Kevin Marson
Test Package : MOB 1

GFL Environmental - 216M
 2475 Beryl Drive
 Oakville, ON
 CA L6J 7X4
 Contact: Matthew Guinness
 mgunness@gflenv.com

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.

T:
F: