



Machine Id
925009
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0113255	GFL0102858	GFL0097301
Sample Date		Client Info		04 Mar 2024	11 Jan 2024	08 Dec 2023
Machine Age	kms	Client Info		0	0	0
Oil Age	kms	Client Info		20535	20174	19954
Filter Age	kms	Client Info		0	0	19954
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>120	5	3	10
Chromium	ppm	ASTM D5185(m)	>20	0	0	0
Nickel	ppm	ASTM D5185(m)	>5	2	1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	2	2	3
Lead	ppm	ASTM D5185(m)	>40	0	0	1
Copper	ppm	ASTM D5185(m)	>330	<1	<1	2
Tin	ppm	ASTM D5185(m)	>15	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

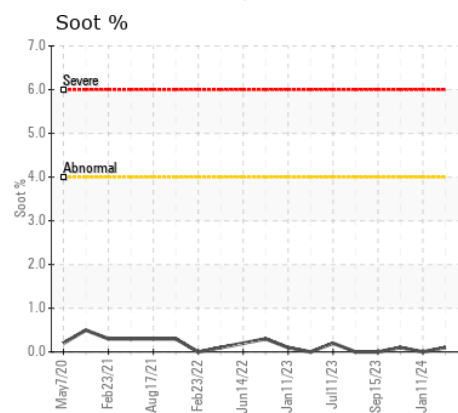
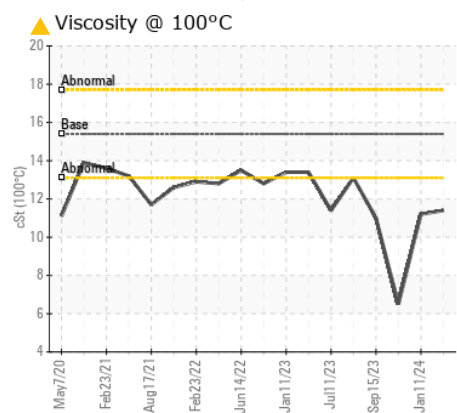
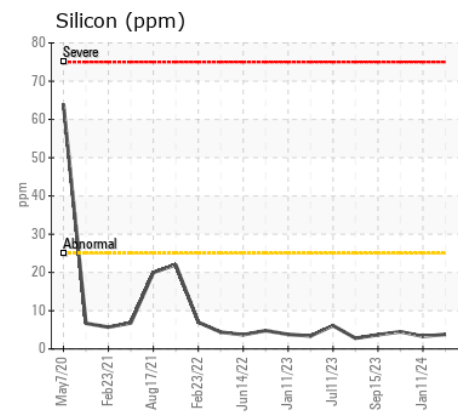
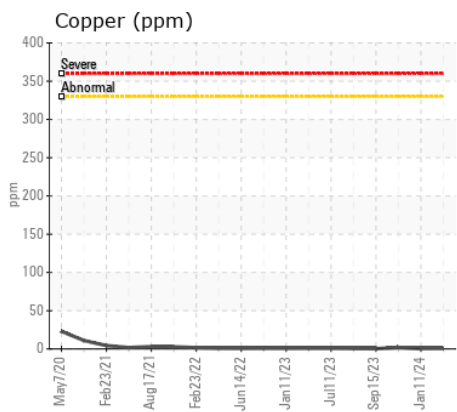
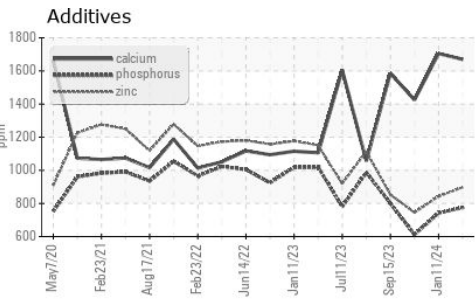
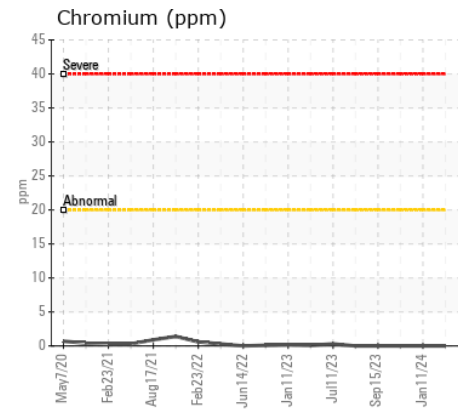
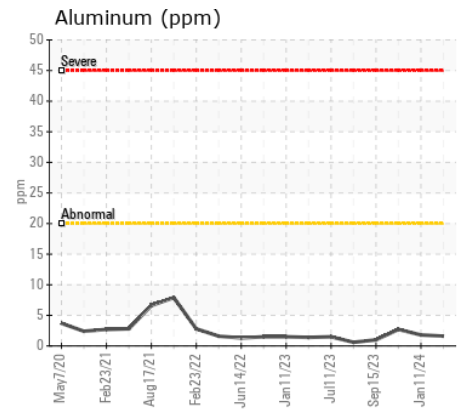
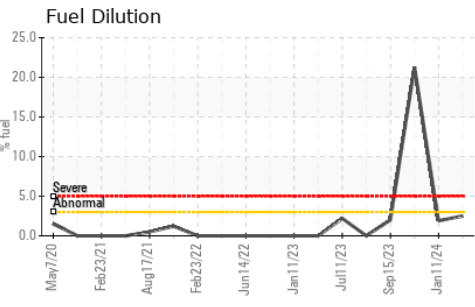
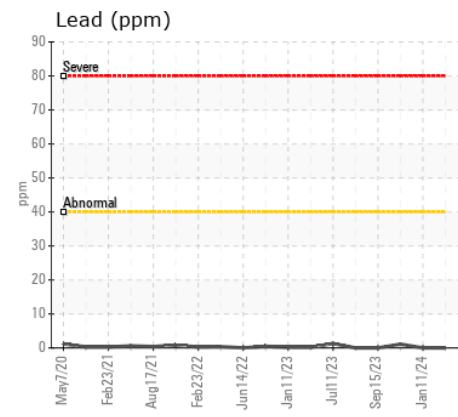
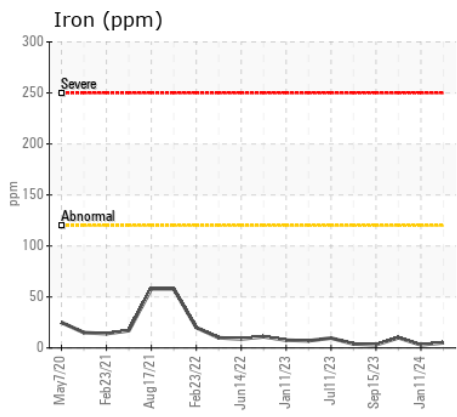
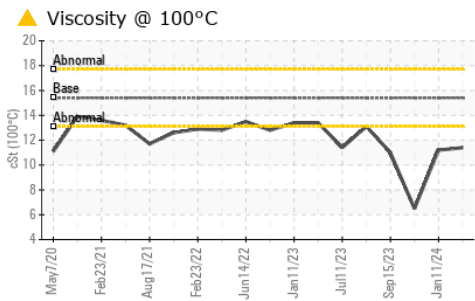
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185(m)	>25	4	3	4
Potassium	ppm	ASTM D5185(m)	>20	1	<1	4
Fuel	%	ASTM D7593*	>3.0	2.5	1.9	▲ 21.3
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>4	0.1	0	0.1
Nitration	Abs/cm	ASTM D7624*	>20	9.0	6.5	8.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.6	22.0	20.3
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		2	2	6
Boron	ppm	ASTM D5185(m)	0	36	52	37
Barium	ppm	ASTM D5185(m)	0	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	60	45	42	27
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	1010	512	455	303
Calcium	ppm	ASTM D5185(m)	1070	1670	1705	1425
Phosphorus	ppm	ASTM D5185(m)	1150	775	742	612
Zinc	ppm	ASTM D5185(m)	1270	897	842	745
Sulfur	ppm	ASTM D5185(m)	2060	2323	2240	1787
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.8	19.6	17.4
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 11.4	▲ 11.2	▲ 6.5



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0113255 **Received** : 05 Mar 2024
Lab Number : 02619836 **Tested** : 07 Mar 2024
Unique Number : 5736946 **Diagnosed** : 07 Mar 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: FUELDILUTION, PercentFuel)

GFL Environmental - 246 - Windsor
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 Windsor, ON
 CA N8W 5H8
 Contact: Dave Varga
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 T: (519)944-8009
 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.