



Machine Id
527006
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0097329	GFL0090871	GFL0078526
Sample Date		Client Info		02 Jan 2024	05 Sep 2023	28 Apr 2023
Machine Age	hrs	Client Info		0	0	13837
Oil Age	hrs	Client Info		14956	14406	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)	>120	12	14	13
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	3	3	3
Titanium	ppm	ASTM D5185(m)	>2	0	<1	<1
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	5	7	9
Lead	ppm	ASTM D5185(m)	>40	<1	2	2
Copper	ppm	ASTM D5185(m)	>330	2	2	3
Tin	ppm	ASTM D5185(m)	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

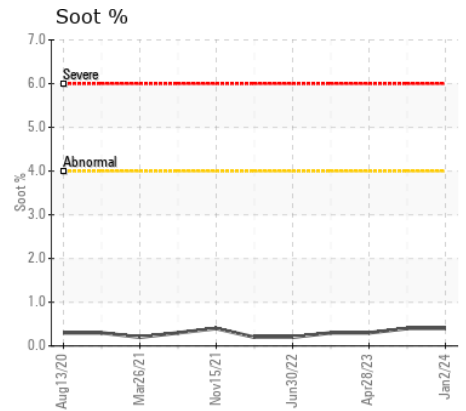
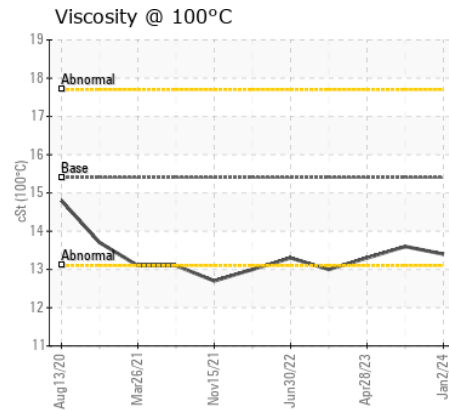
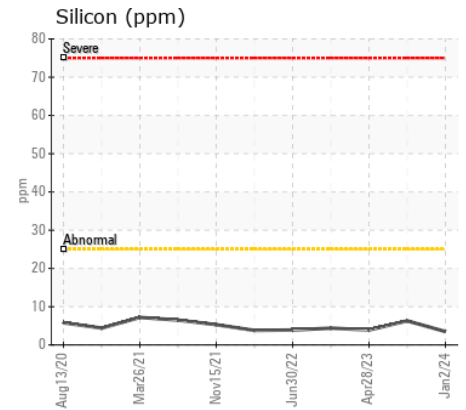
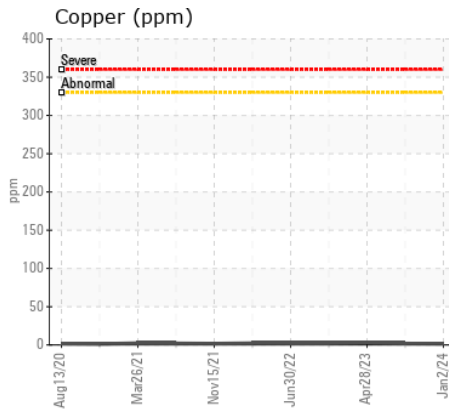
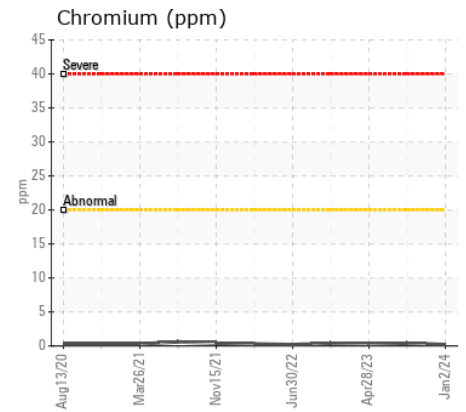
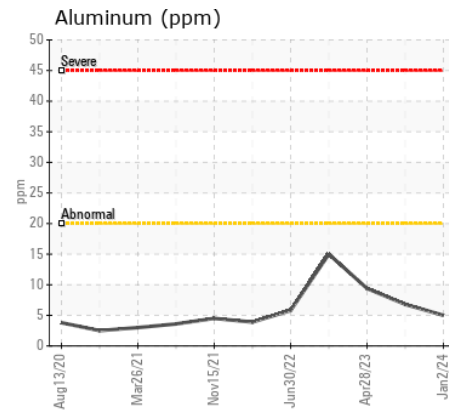
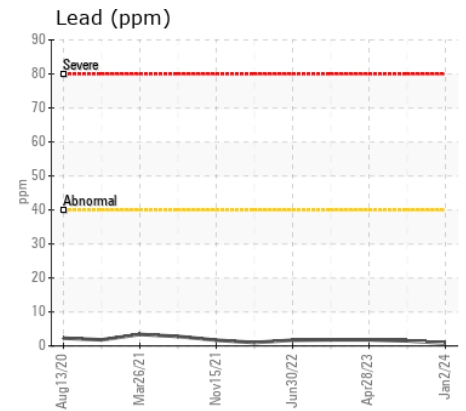
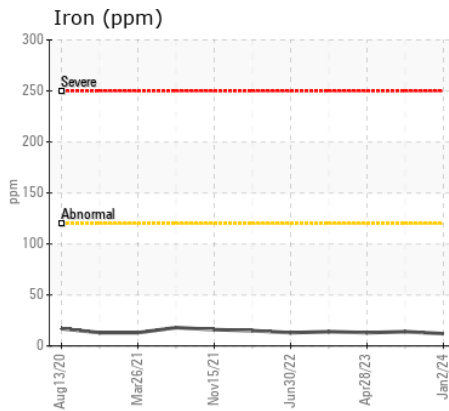
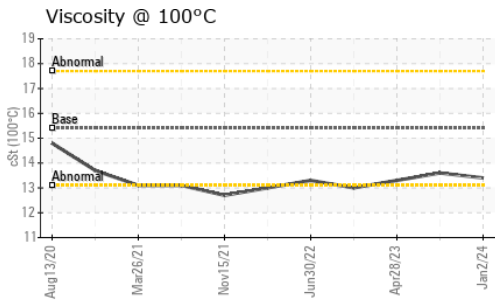
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	4	6	4
Potassium	ppm	ASTM D5185(m)	>20	10	16	23
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	0.0
Soot %	%	ASTM D7844*	>4	0.4	0.4	0.3
Nitration	Abs/cm	ASTM D7624*	>20	8.8	9.1	8.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.0	22.7	21.4
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)		7	9	11
Boron	ppm	ASTM D5185(m)	0	4	3	3
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	60	59	61
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	951	967	980
Calcium	ppm	ASTM D5185(m)	1070	1082	1053	1146
Phosphorus	ppm	ASTM D5185(m)	1150	959	985	1052
Zinc	ppm	ASTM D5185(m)	1270	1191	1185	1210
Sulfur	ppm	ASTM D5185(m)	2060	2404	2156	2264
Oxidation	Abs/.1mm	ASTM D7414*	>25	17.4	17.6	18.0
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	13.4	13.6	13.3



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 246 - Windsor**
Sample No. : GFL0097329 **Received** : 05 Jan 2024 2700 Deziel Dr
Lab Number : 02606722 **Diagnosed** : 05 Jan 2024 Windsor, ON
Unique Number : 5707808 **Diagnostician** : Wes Davis CA N8W 5H8
Test Package : MOB 1 Contact: Dave Varga
 dvarga@gflenv.com
 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.