

Machine Id
501123
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0056780	GFL0042428	GFL0030864
Sample Date		Client Info		01 Sep 2022	02 Mar 2022	15 Oct 2021
Machine Age	kms	Client Info		399323	375118	3322456
Oil Age	kms	Client Info		0	0	45772
Filter Age	kms	Client Info		0	0	45772
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>80	12	32	23
Chromium	ppm	ASTM D5185(m)	>5	4	3	2
Nickel	ppm	ASTM D5185(m)	>2	0	<1	<1
Titanium	ppm	ASTM D5185(m)		<1	0	0
Silver	ppm	ASTM D5185(m)		<1	0	<1
Aluminum	ppm	ASTM D5185(m)	>30	10	15	7
Lead	ppm	ASTM D5185(m)	>30	0	<1	<1
Copper	ppm	ASTM D5185(m)	>150	5	13	8
Tin	ppm	ASTM D5185(m)	>5	<1	1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

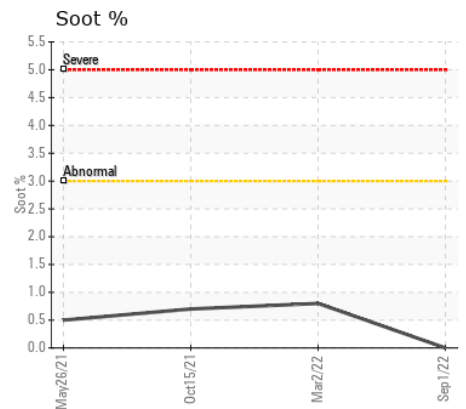
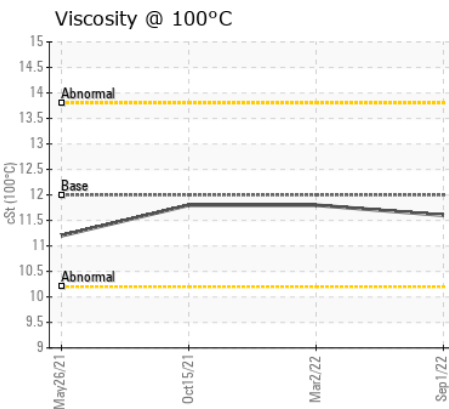
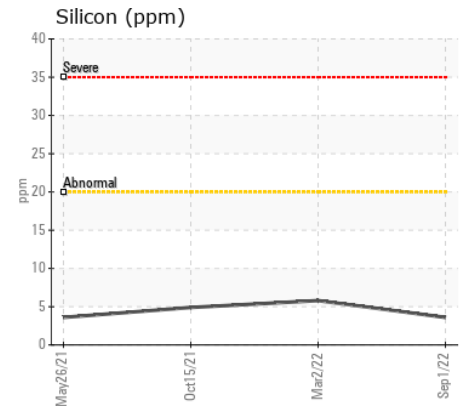
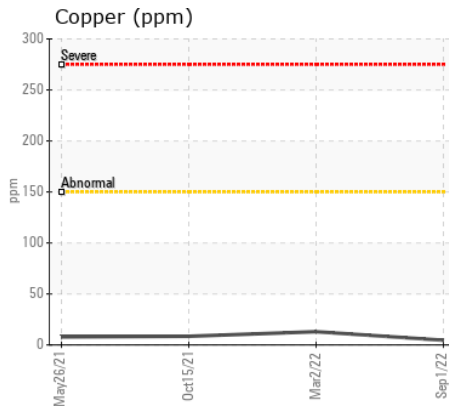
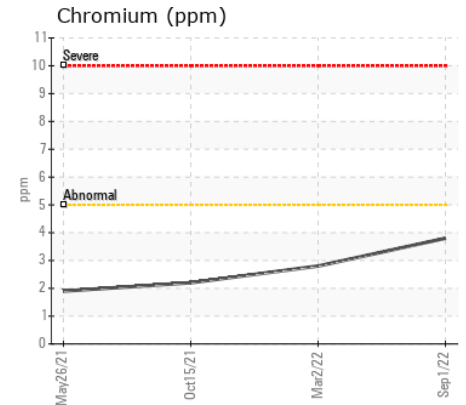
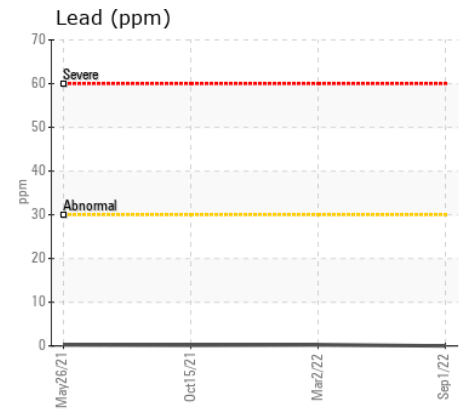
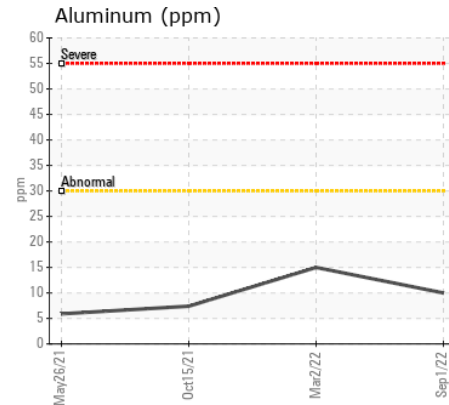
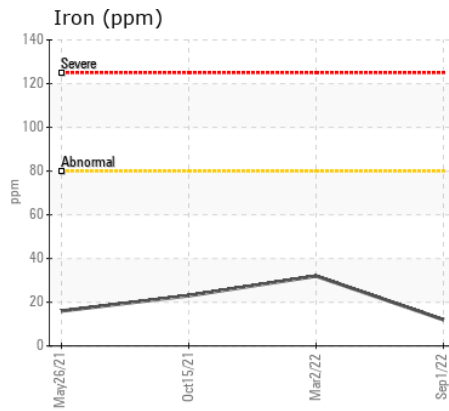
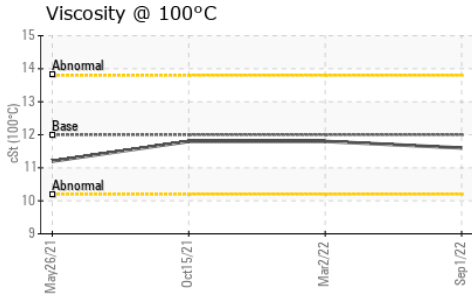
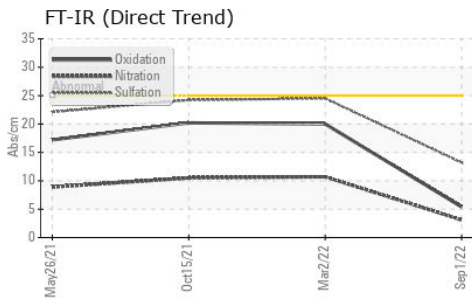
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>20	4	6	5
Potassium	ppm	ASTM D5185(m)	>20	27	4	5
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	0.0
Soot %	%	ASTM D7844*	>3	0	0.8	0.7
Nitration	Abs/cm	ASTM D7624*	>20	3.1	10.7	10.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	13.2	24.5	24.2
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)		3	3	2
Boron	ppm	ASTM D5185(m)	2	20	3	2
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	50	56	64	62
Manganese	ppm	ASTM D5185(m)	0	1	<1	<1
Magnesium	ppm	ASTM D5185(m)	950	883	1045	998
Calcium	ppm	ASTM D5185(m)	1050	1105	1111	1108
Phosphorus	ppm	ASTM D5185(m)	995	952	1055	1059
Zinc	ppm	ASTM D5185(m)	1180	1117	1276	1281
Sulfur	ppm	ASTM D5185(m)	2600	2663	2256	2087
Oxidation	Abs/.1mm	ASTM D7414*	>25	5.4	20.0	20.2
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	11.6	11.8	11.8



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0056780
Lab Number : 02508935
Unique Number : 5449905
Test Package : MOB 1
Received : 06 Sep 2022
Tested : 06 Sep 2022
Diagnosed : 06 Sep 2022 - Wes Davis

GFL Environmental - 245 - BJ Bear
 2616 Cedar Creek Road
 Ayr, ON
 CA N0B 1E0
 Contact: Erik Prpic
 eppric@gflenv.com
 T: (519)570-9000
 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.