



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
9133
 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		GFL0097249	GFL0064877	GFL0064884
Sample Date		Client Info		27 Dec 2023	22 Sep 2023	11 Aug 2023
Machine Age	hrs	Client Info		6227	5735	5526
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>110	32	15	41
Chromium	ppm	ASTM D5185(m)	>4	1	<1	2
Nickel	ppm	ASTM D5185(m)	>2	<1	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>25	6	4	12
Lead	ppm	ASTM D5185(m)	>45	<1	0	0
Copper	ppm	ASTM D5185(m)	>85	3	1	2
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

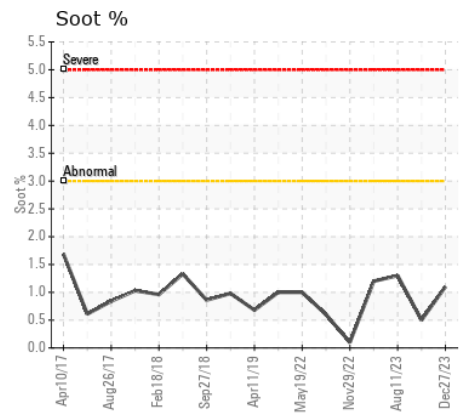
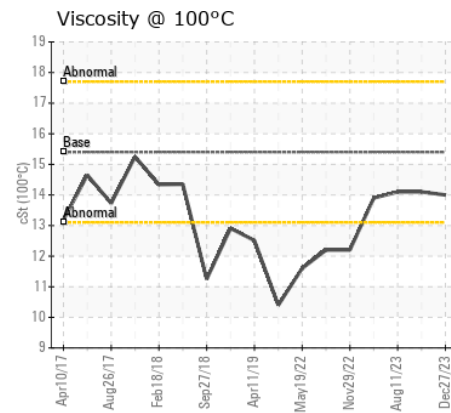
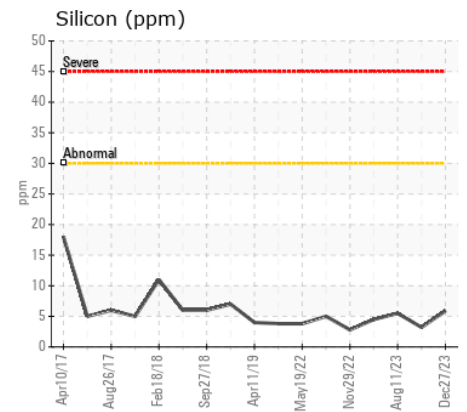
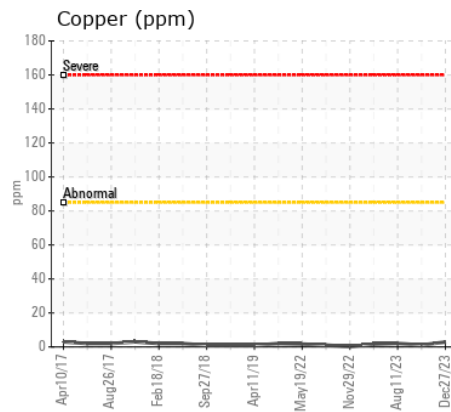
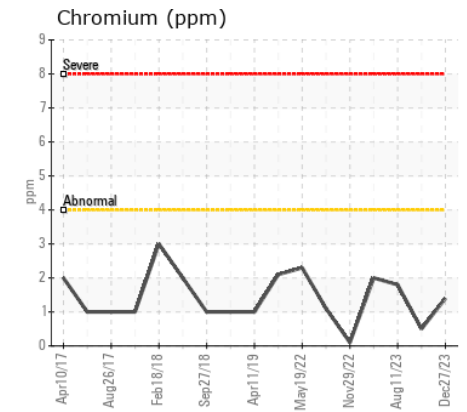
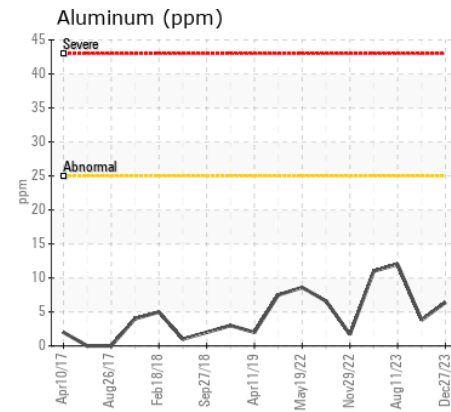
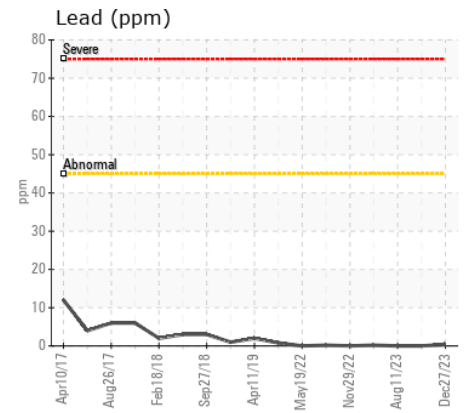
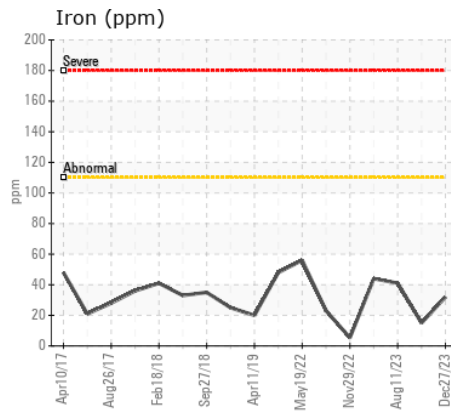
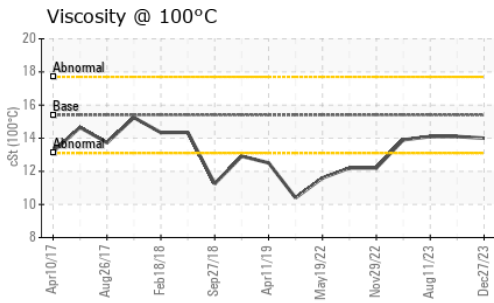
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>30	6	3	6
Potassium	ppm	ASTM D5185(m)	>20	13	8	29
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	1.1	0.5	1.3
Nitration	Abs/cm	ASTM D7624*	>20	10.9	7.3	11.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.5	20.3	25.3
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)		6	4	6
Boron	ppm	ASTM D5185(m)	0	2	6	4
Barium	ppm	ASTM D5185(m)	0	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	60	60	57	59
Manganese	ppm	ASTM D5185(m)	0	0	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	968	935	971
Calcium	ppm	ASTM D5185(m)	1070	1079	997	1057
Phosphorus	ppm	ASTM D5185(m)	1150	1020	971	1069
Zinc	ppm	ASTM D5185(m)	1270	1198	1148	1198
Sulfur	ppm	ASTM D5185(m)	2060	2656	2472	2489
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.5	15.4	20.6
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	14.0	14.1	14.1



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 558 - Grand Prairie
Sample No. : GFL0097249 **Received** : 04 Jan 2024
Lab Number : 02606477 **Diagnosed** : 05 Jan 2024
Unique Number : 5707563 **Diagnostician** : Wes Davis
Test Package : MOB 1

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.

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