MOBIL LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Area
GFL216
Machine Id
7177
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (21 LTR)

RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

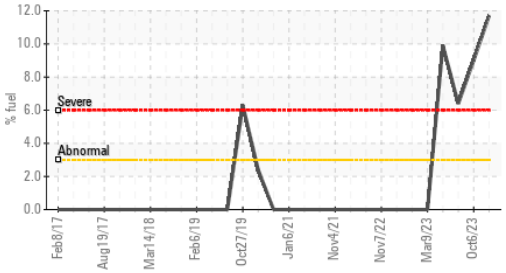
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

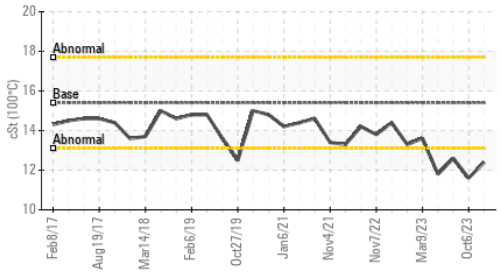
Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0108431	GFL0061108	GFL0088945
Sample Date		Client Info		17 Jan 2024	06 Oct 2023	28 Aug 2023
Machine Age	kms	Client Info		216654	17035	0
Oil Age	kms	Client Info		0	383	0
Filter Age	kms	Client Info		0	383	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				SEVERE	SEVERE	SEVERE
Iron	ppm	ASTM D5185(m)	>130	87	22	15
Chromium	ppm	ASTM D5185(m)	>10	5	1	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	0	0
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	6	3	2
Lead	ppm	ASTM D5185(m)	>20	1	<1	0
Copper	ppm	ASTM D5185(m)	>125	2	<1	<1
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Silicon	ppm	ASTM D5185(m)	>25	8	4	3
Potassium	ppm	ASTM D5185(m)	>20	6	4	2
Fuel	%	ASTM D7593*	>3.0	⬢ 11.7	⬢ 9	⬢ 6.4
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>6	1.6	0	0.4
Nitration	Abs/cm	ASTM D7624*	>20	21.4	2.8	11.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	34.3	11.9	21.8
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)		6	7	6
Boron	ppm	ASTM D5185(m)	0	5	5	4
Barium	ppm	ASTM D5185(m)	0	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	60	51	59	58
Manganese	ppm	ASTM D5185(m)	0	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	801	903	928
Calcium	ppm	ASTM D5185(m)	1070	919	988	1009
Phosphorus	ppm	ASTM D5185(m)	1150	844	937	1021
Zinc	ppm	ASTM D5185(m)	1270	989	1127	1140
Sulfur	ppm	ASTM D5185(m)	2060	2134	2337	2441
Oxidation	Abs/.1mm	ASTM D7414*	>25	47.2	4.0	18.6
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ 12.4	▲ 11.6	▲ 12.6

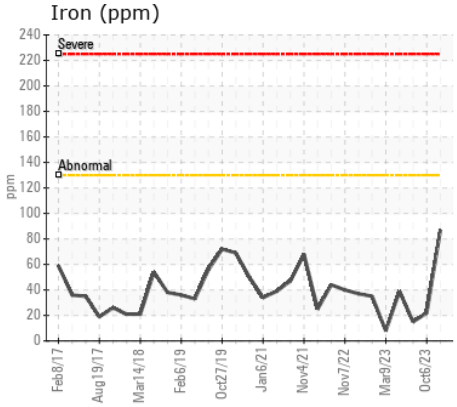
Fuel Dilution



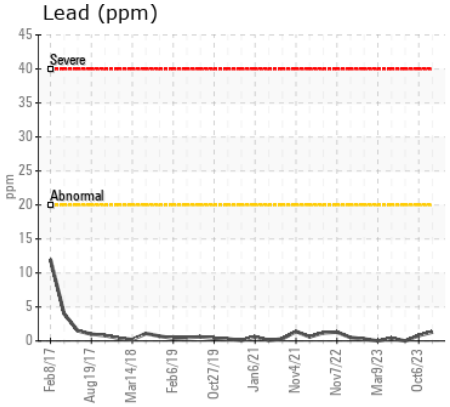
Viscosity @ 100°C



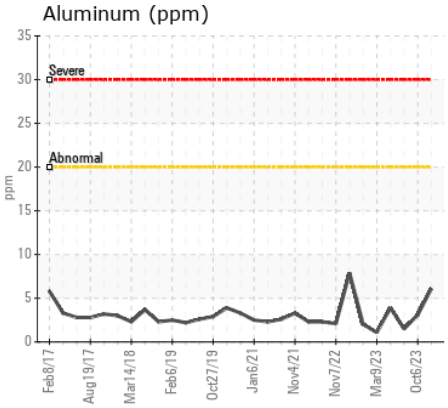
Iron (ppm)



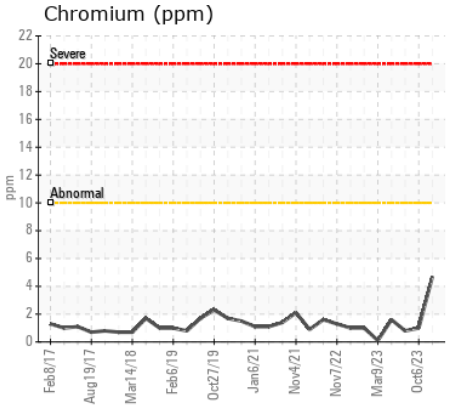
Lead (ppm)



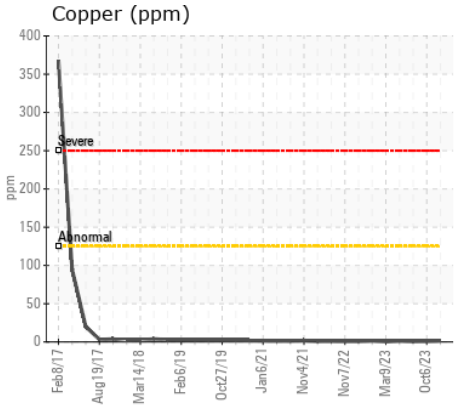
Aluminum (ppm)



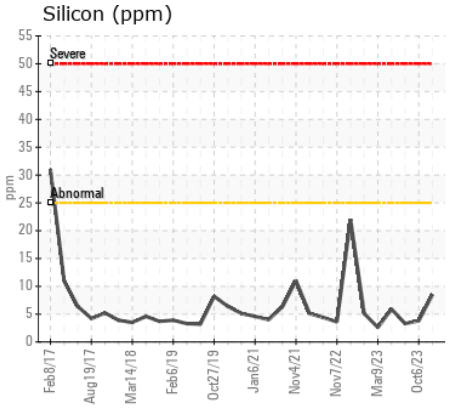
Chromium (ppm)



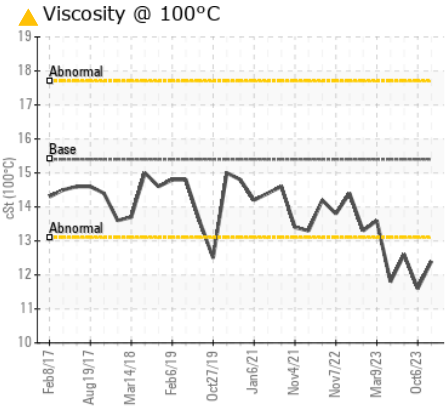
Copper (ppm)



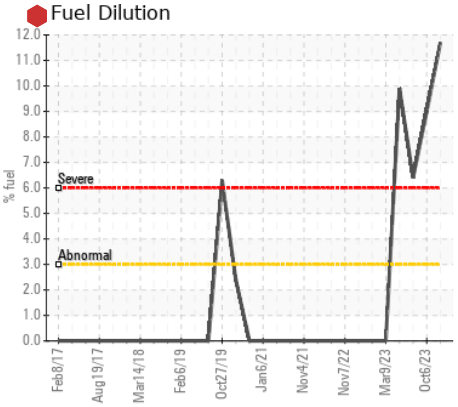
Silicon (ppm)



Viscosity @ 100°C



Fuel Dilution



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 252 - GTA Hauling**
Sample No. : GFL0108431 **Recieved** : 22 Jan 2024
Lab Number : 02610121 **Diagnosed** : 23 Jan 2024
Unique Number : 5711207 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: PercentFuel)

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T:
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.