MOBIL LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
723002
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.

WEAR

All component wear rates are normal.

CONTAMINATION

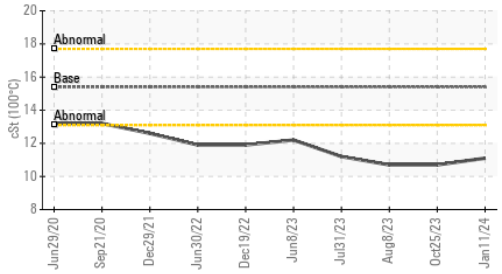
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Light fuel dilution occurring. No other contaminants were detected in the oil.

FLUID CONDITION

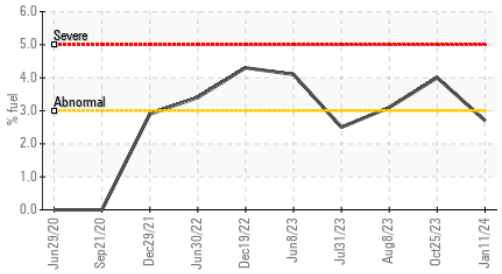
Viscosity of sample indicates oil is within SAE 30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**GFL0097330**	GFL0097317	GFL0090844
Sample Date		Client Info		**11 Jan 2024**	25 Oct 2023	08 Aug 2023
Machine Age	hrs	Client Info		**0**	0	28589
Oil Age	hrs	Client Info		**29507**	29211	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				**ABNORMAL**	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185(m)	>120	**8**	8	7
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	<1
Nickel	ppm	ASTM D5185(m)	>5	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	**0**	0	<1
Silver	ppm	ASTM D5185(m)	>2	**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	**4**	4	1
Lead	ppm	ASTM D5185(m)	>40	**<1**	<1	<1
Copper	ppm	ASTM D5185(m)	>330	**3**	<1	1
Tin	ppm	ASTM D5185(m)	>15	**0**	0	<1
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Silicon	ppm	ASTM D5185(m)	>25	**4**	5	4
Potassium	ppm	ASTM D5185(m)	>20	**11**	0	<1
Fuel	%	ASTM D7593*	>3.0	**2.7**	▲ 4	▲ 3.1
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG
Soot %	%	ASTM D7844*	>4	**0.1**	0.3	0.1
Nitration	Abs/cm	ASTM D7624*	>20	**9.5**	10.9	8.6
Sulfation	Abs/.1mm	ASTM D7415*	>30	**21.0**	21.5	22.3
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Sodium	ppm	ASTM D5185(m)		**2**	3	3
Boron	ppm	ASTM D5185(m)	0	**32**	17	26
Barium	ppm	ASTM D5185(m)	0	**0**	<1	0
Molybdenum	ppm	ASTM D5185(m)	60	**44**	38	40
Manganese	ppm	ASTM D5185(m)	0	**0**	0	<1
Magnesium	ppm	ASTM D5185(m)	1010	**526**	463	514
Calcium	ppm	ASTM D5185(m)	1070	**1585**	1577	1592
Phosphorus	ppm	ASTM D5185(m)	1150	**735**	682	772
Zinc	ppm	ASTM D5185(m)	1270	**858**	807	859
Sulfur	ppm	ASTM D5185(m)	2060	**2135**	1893	2066
Oxidation	Abs/.1mm	ASTM D7414*	>25	**20.3**	21.9	20.0
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	▲ **11.1**	▲ 10.7	▲ 10.7

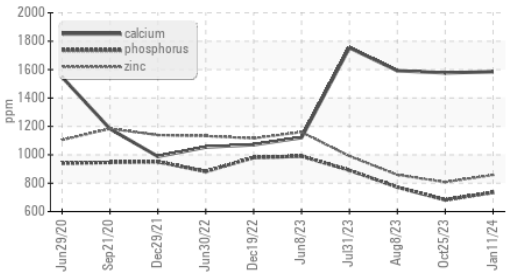
Viscosity @ 100°C



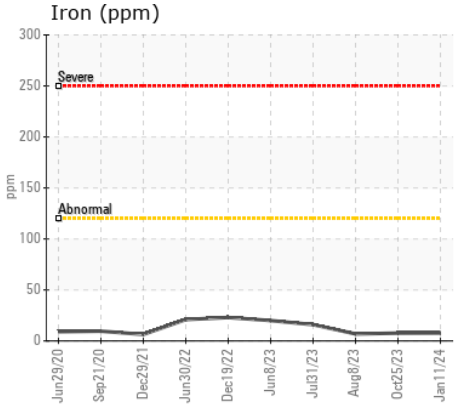
Fuel Dilution



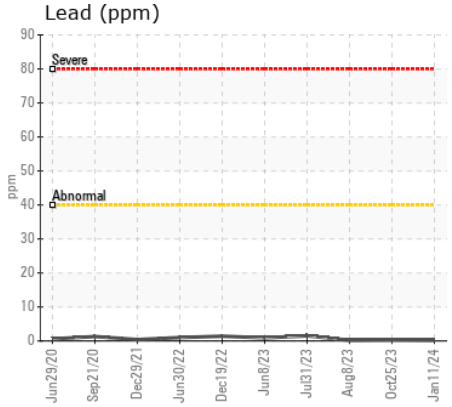
Additives



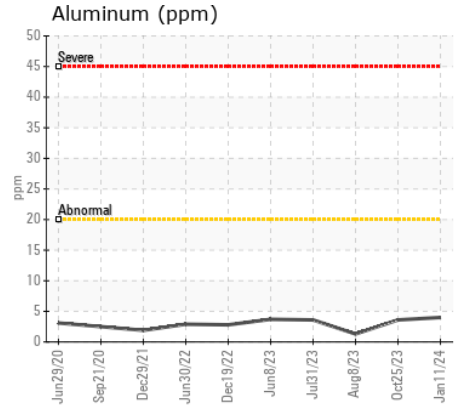
Iron (ppm)



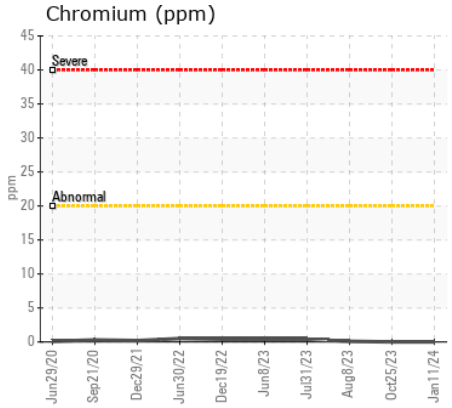
Lead (ppm)



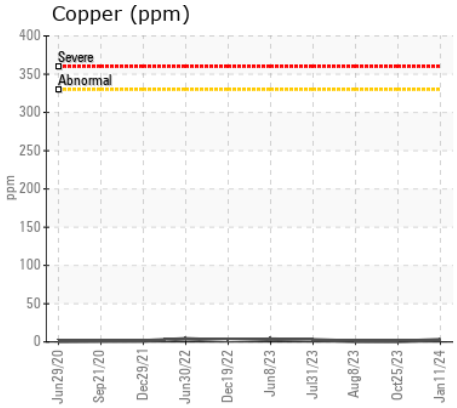
Aluminum (ppm)



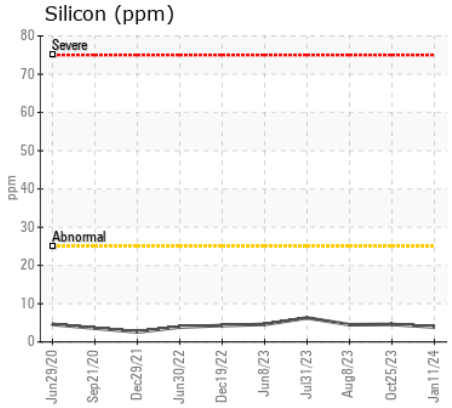
Chromium (ppm)



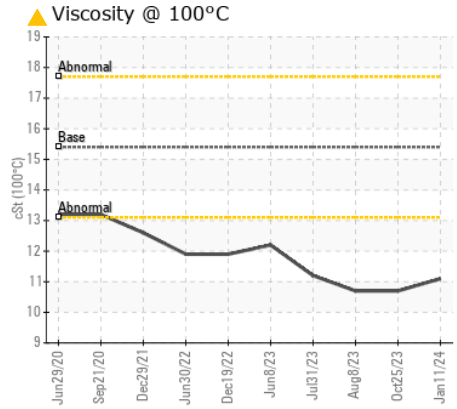
Copper (ppm)



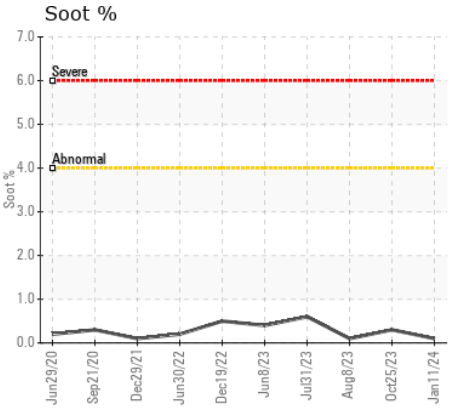
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0097330
Lab Number : 02608371
Unique Number : 5709457
Test Package : MOB 1 (Additional Tests: PercentFuel)

Recieved : 12 Jan 2024
Diagnosed : 15 Jan 2024
Diagnostician : Kevin Marson

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.

GFL Environmental - 246 - Windsor
2700 Deziel Dr
Windsor, ON
CA N8W 5H8
Contact: Dave Varga
dvarga@gflenv.com
T: (519)944-8009
F: