MOBIL LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
7108
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (31 LTR)

RECOMMENDATION

Check for low coolant level. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

Iron ppm levels are severe. Chromium ppm levels are abnormal. Cylinder, crank, or cam shaft wear is indicated. Ring wear is indicated.

CONTAMINATION

There is a moderate amount of fuel present in the oil. Water treatment chemicals present, indicating slow coolant leak. Light concentration of carbon/soot present in the oil. Test for glycol is negative. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

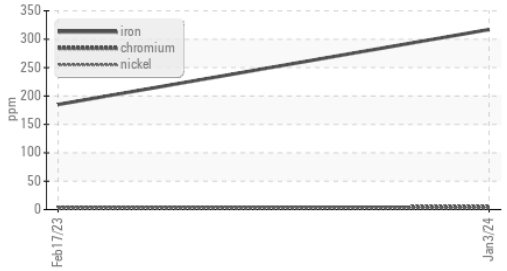
The oil is no longer serviceable as a result of the abnormal and/or severe wear. The condition of the oil is acceptable for the time in service (see recommendation).

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**GFL0059111**	GFL0059094	---
Sample Date		Client Info		**03 Jan 2024**	17 Feb 2023	---
Machine Age	hrs	Client Info		**0**	0	---
Oil Age	hrs	Client Info		**600**	600	---
Filter Age	hrs	Client Info		**600**	600	---
Oil Changed		Client Info		**Changed**	Changed	---
Filter Changed		Client Info		**Changed**	Changed	---
Sample Status				**SEVERE**	SEVERE	---
PQ		ASTM D8184*	>30	**0**	▲ 35	---
Iron	ppm	ASTM D5185(m)	>110	⬢ **317**	⬢ 185	---
Chromium	ppm	ASTM D5185(m)	>4	▲ **4**	3	---
Nickel	ppm	ASTM D5185(m)	>2	**2**	1	---
Titanium	ppm	ASTM D5185(m)		**0**	<1	---
Silver	ppm	ASTM D5185(m)	>2	**<1**	<1	---
Aluminum	ppm	ASTM D5185(m)	>25	**3**	4	---
Lead	ppm	ASTM D5185(m)	>45	**14**	▲ 51	---
Copper	ppm	ASTM D5185(m)	>85	**170**	336	---
Tin	ppm	ASTM D5185(m)	>4	**<1**	2	---
Vanadium	ppm	ASTM D5185(m)		**0**	0	---
Silicon	ppm	ASTM D5185(m)	>30	**12**	23	---
Potassium	ppm	ASTM D5185(m)	>20	▲ **268**	▲ 1334	---
Fuel	%	ASTM D7593*	>5	▲ **6.2**	▲ 4.1	---
Water		WC Method	>0.2	**NEG**	NEG	---
Glycol	%	ASTM D7922*		**0.0**	0.0	---
Soot %	%	ASTM D7844*	>3	▲ **3.1**	1	---
Nitration	Abs/cm	ASTM D7624*	>20	**10.7**	10.8	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	**24.4**	23.9	---
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	---
Sodium	ppm	ASTM D5185(m)		**60**	▲ 270	---
Boron	ppm	ASTM D5185(m)	0	**3**	2	---
Barium	ppm	ASTM D5185(m)	0	**0**	0	---
Molybdenum	ppm	ASTM D5185(m)	60	**89**	201	---
Manganese	ppm	ASTM D5185(m)	0	**2**	2	---
Magnesium	ppm	ASTM D5185(m)	1010	**836**	868	---
Calcium	ppm	ASTM D5185(m)	1070	**951**	1059	---
Phosphorus	ppm	ASTM D5185(m)	1150	**800**	953	---
Zinc	ppm	ASTM D5185(m)	1270	**1003**	1073	---
Sulfur	ppm	ASTM D5185(m)	2060	**1850**	2300	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	**15.7**	15.7	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.4	**12.4**	12.6	---

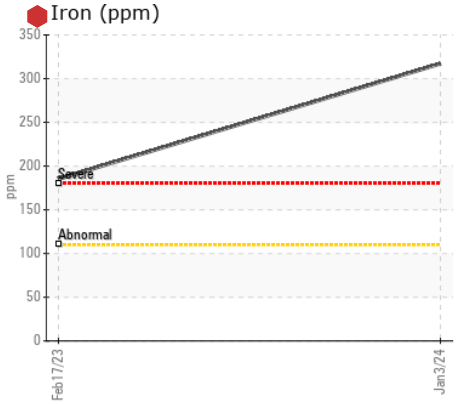
Report Id: GFL570 [WCAMIS] 02608346 (Generated: 01/16/2024 10:34:12) Rev: 1

Submitted By: Wes Davis

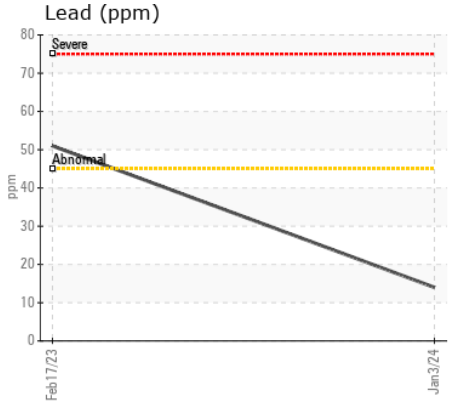
Ferrous Alloys



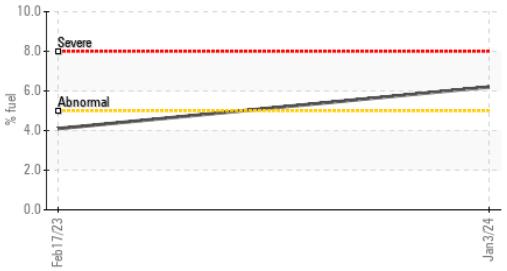
Iron (ppm)



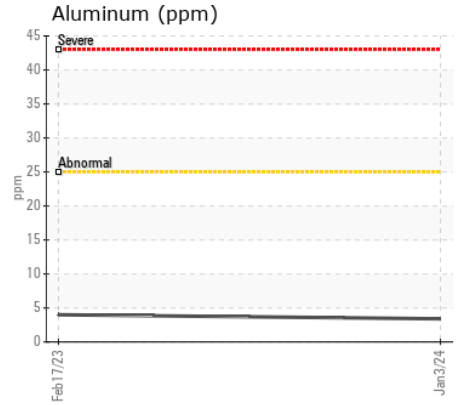
Lead (ppm)



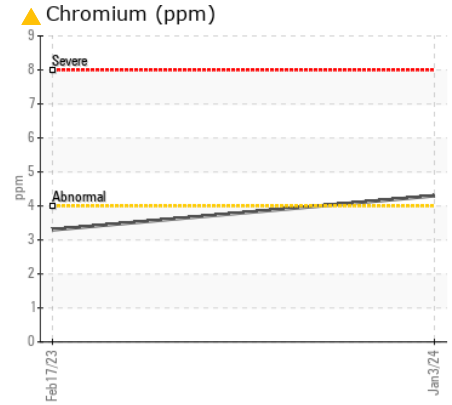
Fuel Dilution



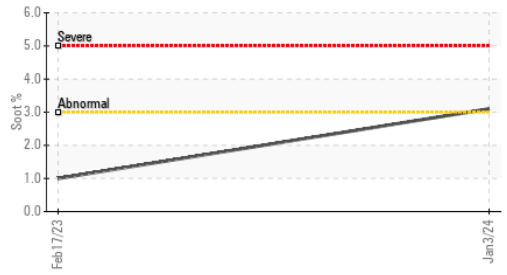
Aluminum (ppm)



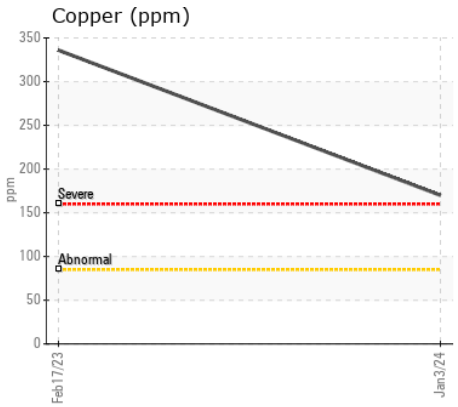
Chromium (ppm)



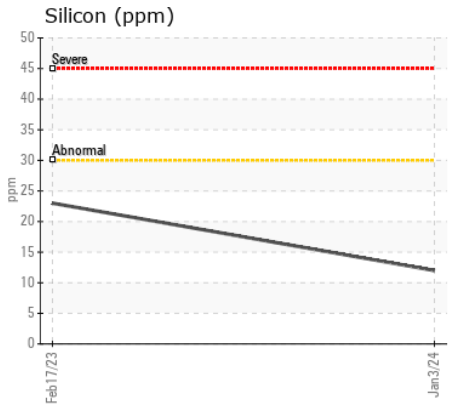
Soot %



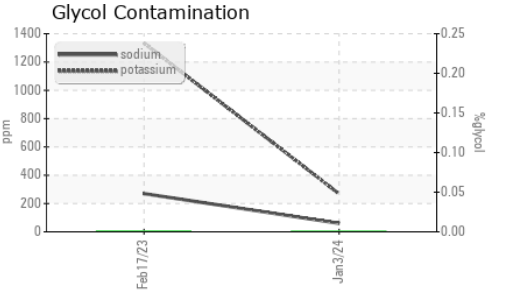
Copper (ppm)



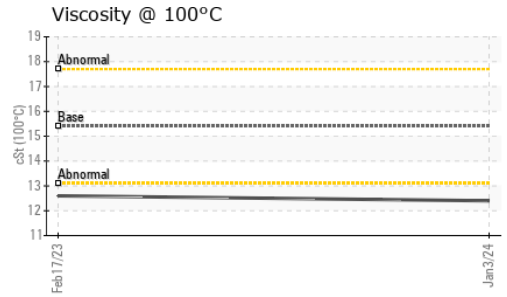
Silicon (ppm)



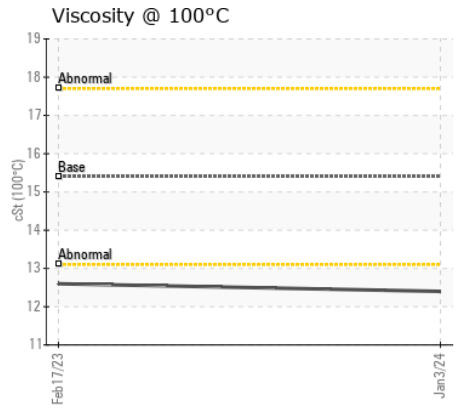
Glycol Contamination



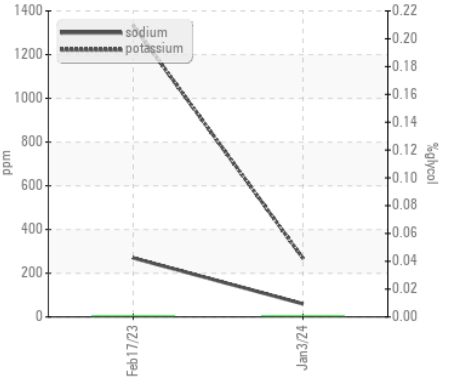
Viscosity @ 100°C



Viscosity @ 100°C



Glycol Contamination



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 570 - Thunder Bay**
Sample No. : GFL0059111 **Recieved** : 12 Jan 2024
Lab Number : 02608346 **Diagnosed** : 16 Jan 2024
Unique Number : 5709432 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, PercentFuel, PQ)

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CA P7J 0G8
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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.