MOB I LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
INTERNATIONAL 823033
Component
Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

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. No other corrective action is recommended at this time.

WEAR

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

CONTAMINATION

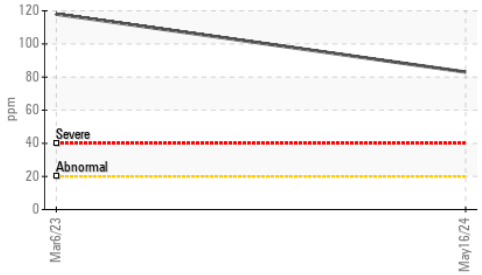
Light fuel dilution occurring. Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative. No other contaminants were detected in the oil.

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 30 range, advise investigate. 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).

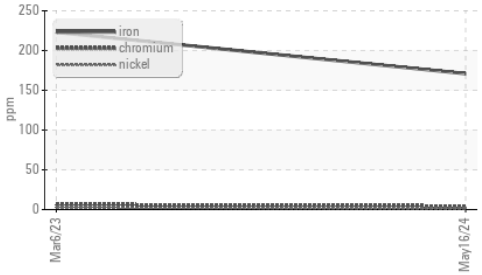
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0122275	GFL0071125	---
Sample Date		Client Info		16 May 2024	06 Mar 2023	---
Machine Age	hrs	Client Info		15542	15094	---
Oil Age	hrs	Client Info		282	0	---
Filter Age	hrs	Client Info		282	0	---
Oil Changed		Client Info		Changed	N/A	---
Filter Changed		Client Info		Changed	N/A	---
Sample Status				SEVERE	SEVERE	---
PQ		ASTM D8184*		18	27	---
Iron	ppm	ASTM D5185(m)	>100	▲ 171	▲ 223	---
Chromium	ppm	ASTM D5185(m)	>20	4	6	---
Nickel	ppm	ASTM D5185(m)	>4	1	2	---
Titanium	ppm	ASTM D5185(m)		0	<1	---
Silver	ppm	ASTM D5185(m)	>3	0	0	---
Aluminum	ppm	ASTM D5185(m)	>20	▲ 83	▲ 118	---
Lead	ppm	ASTM D5185(m)	>40	<1	2	---
Copper	ppm	ASTM D5185(m)	>330	6	9	---
Tin	ppm	ASTM D5185(m)	>15	0	1	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
Silicon	ppm	ASTM D5185(m)	>25	10	17	---
Potassium	ppm	ASTM D5185(m)	>20	▲ 51	▲ 29	---
Fuel	%	ASTM D7593*	>2.0	1.6	▲ 2.5	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol	%	ASTM D7922*		0.0	▲ 0.01	---
Soot %	%	ASTM D7844*	>3	0.9	2.2	---
Nitration	Abs/cm	ASTM D7624*	>20	10.7	15.1	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.0	27.0	---
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	---
Sodium	ppm	ASTM D5185(m)		● 259	● 119	---
Boron	ppm	ASTM D5185(m)	0	6	3	---
Barium	ppm	ASTM D5185(m)	0	0	0	---
Molybdenum	ppm	ASTM D5185(m)	60	82	73	---
Manganese	ppm	ASTM D5185(m)	0	2	3	---
Magnesium	ppm	ASTM D5185(m)	1010	998	1012	---
Calcium	ppm	ASTM D5185(m)	1070	1110	1173	---
Phosphorus	ppm	ASTM D5185(m)	1150	1037	1140	---
Zinc	ppm	ASTM D5185(m)	1270	1221	1263	---
Sulfur	ppm	ASTM D5185(m)	2060	2619	2691	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.0	20.4	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	▲ 11.8	12.1	---

Aluminum (ppm)

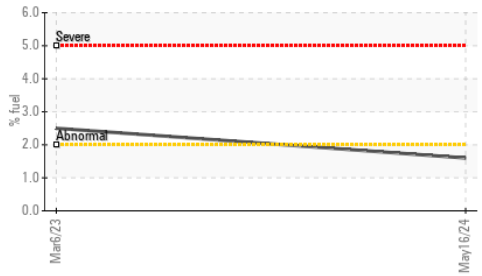


Viscosity @ 100°C

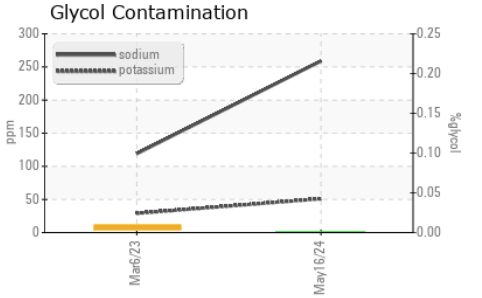
Ferrous Alloys



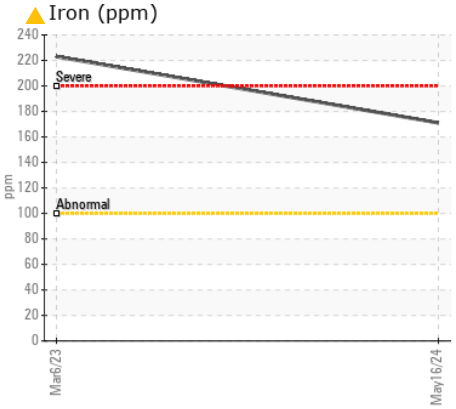
Fuel Dilution



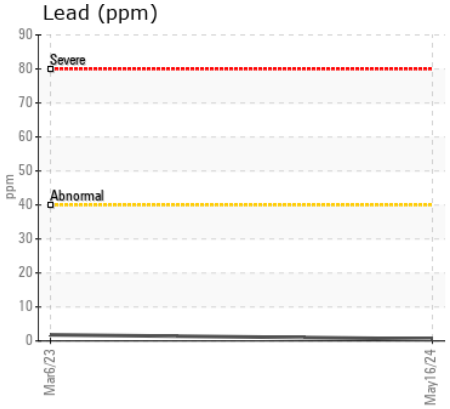
Glycol Contamination



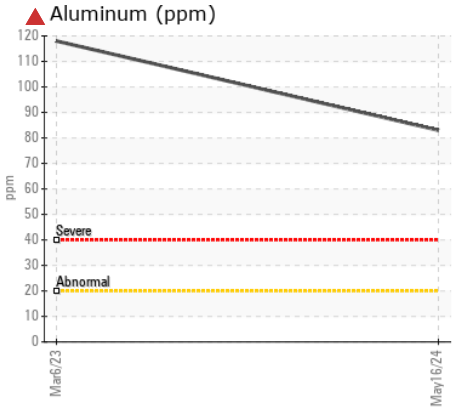
Iron (ppm)



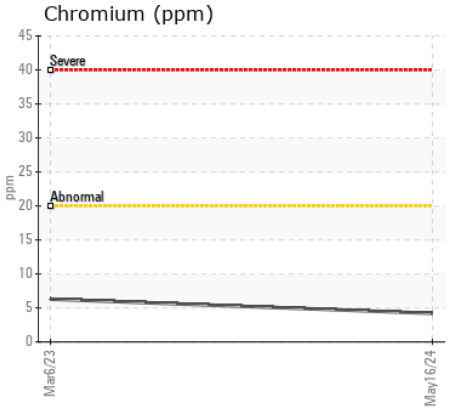
Lead (ppm)



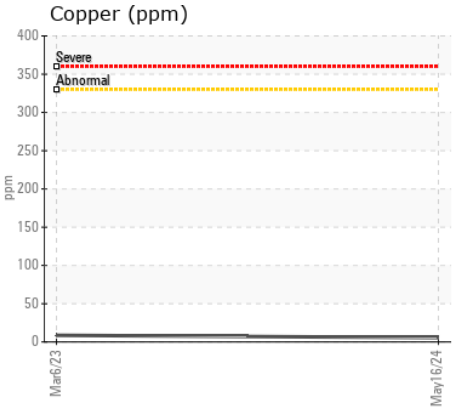
Aluminum (ppm)



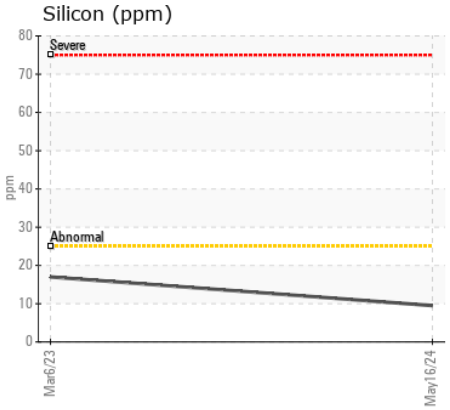
Chromium (ppm)



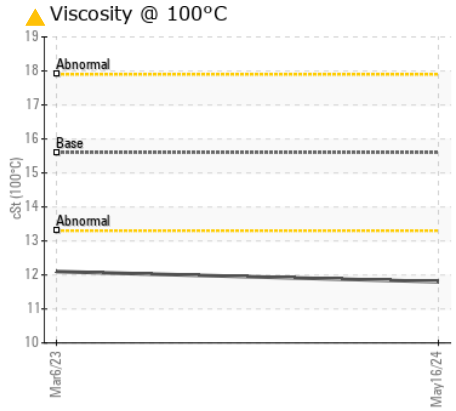
Copper (ppm)



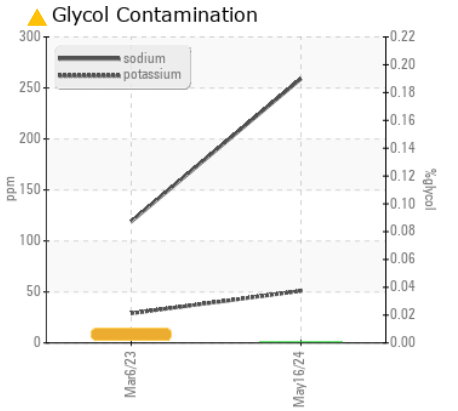
Silicon (ppm)



Viscosity @ 100°C



Glycol Contamination



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0122275
Lab Number : 02637362
Unique Number : 5786524
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, PercentFuel, PQ)

Received : 24 May 2024
Tested : 27 May 2024
Diagnosed : 27 May 2024 - 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 - 987 - Charlottetown
7 Superior Crescent
Charlottetown, PE
CA C1A 7N5
Contact: Vicki Metcalfe
vmetcalfe@gflenv.com
T: (782)377-5918
F: (506)453-9490