MOB I LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
ST253
Component
Diesel Engine
Fluid
PETRO CANADA DURON UHP 5W40 (8 LTR)

RECOMMENDATION

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

WEAR

Copper ppm levels are abnormal. Lead ppm levels are noted. Bearing wear is indicated.

CONTAMINATION

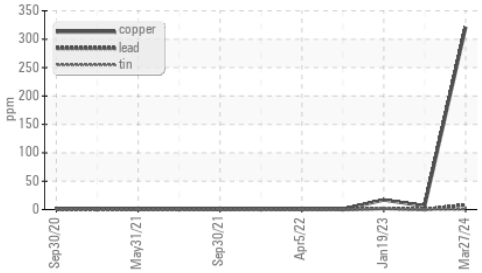
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

FLUID CONDITION

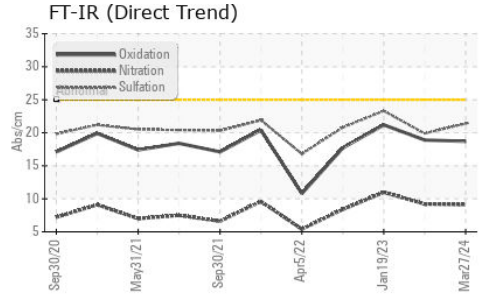
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0082685	PC0078297	PC0071444
Sample Date		Client Info		27 Mar 2024	13 Feb 2024	19 Jan 2023
Machine Age	hrs	Client Info		34250	33870	32000
Oil Age	hrs	Client Info		0	0	500
Filter Age	hrs	Client Info		0	0	500
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185(m)	>100	30	21	15
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	4	4	2
Lead	ppm	ASTM D5185(m)	>40	● 8	<1	2
Copper	ppm	ASTM D5185(m)	>330	▲ 321	6	17
Tin	ppm	ASTM D5185(m)	>15	<1	0	1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Silicon	ppm	ASTM D5185(m)	>25	2	9	5
Potassium	ppm	ASTM D5185(m)	>20	6	1	<1
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	0.4	0	0
Nitration	Abs/cm	ASTM D7624*	>20	9.1	9.2	11.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.4	19.9	23.3
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)		4	4	4
Boron	ppm	ASTM D5185(m)	65	36	48	21
Barium	ppm	ASTM D5185(m)	0	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	65	57	60	57
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1160	1089	1014	1085
Calcium	ppm	ASTM D5185(m)	820	809	836	859
Phosphorus	ppm	ASTM D5185(m)	1160	964	972	1053
Zinc	ppm	ASTM D5185(m)	1260	1174	1111	1207
Sulfur	ppm	ASTM D5185(m)	3000	2581	2838	2692
Oxidation	Abs/.1mm	ASTM D7414*	>25	18.7	18.9	21.2
Visc @ 40°C	cSt	ASTM D7279(m)	95.1	82.3	82.5	80.6
Visc @ 100°C	cSt	ASTM D7279(m)	14.3	13.4	13.4	13.0
Viscosity Index (VI)	Scale	ASTM D2270*	169	165	165	162

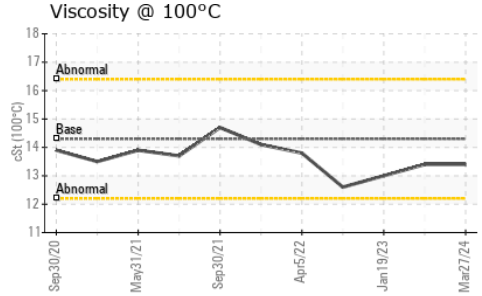
Non-ferrous Metals



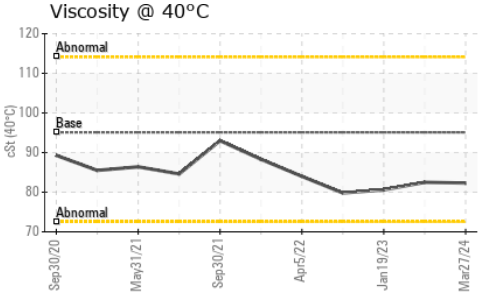
FT-IR (Direct Trend)



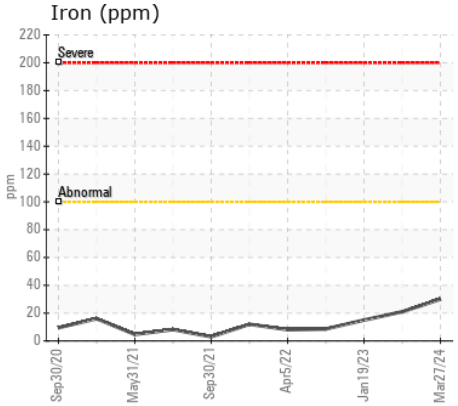
Viscosity @ 100°C



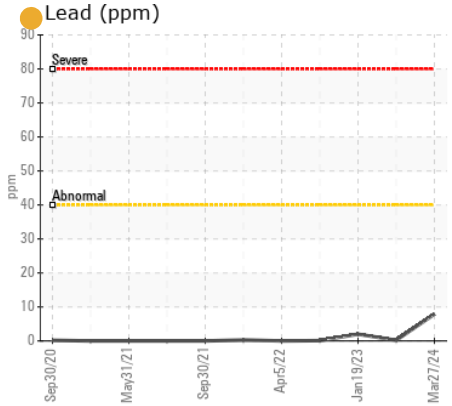
Viscosity @ 40°C



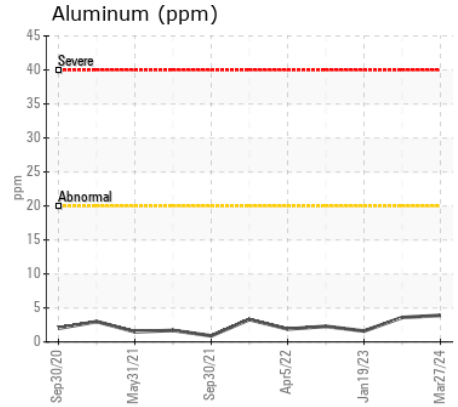
Iron (ppm)



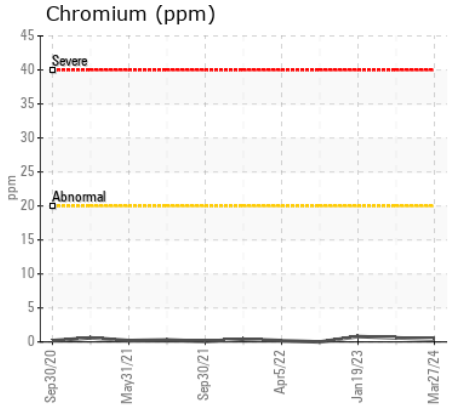
Lead (ppm)



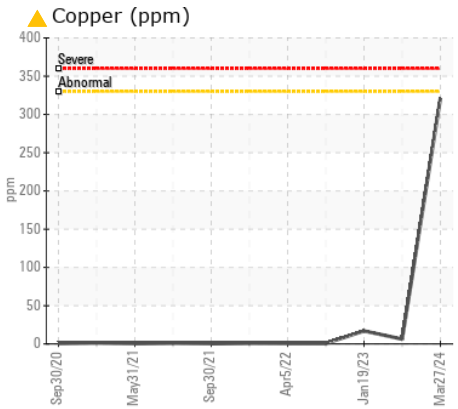
Aluminum (ppm)



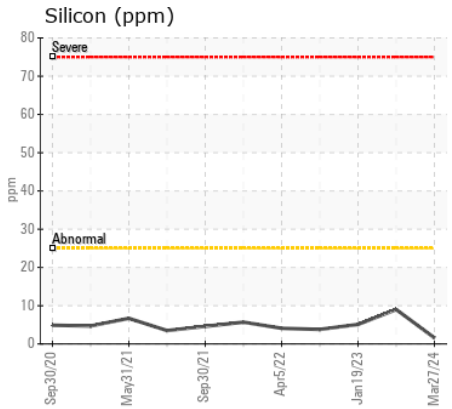
Chromium (ppm)



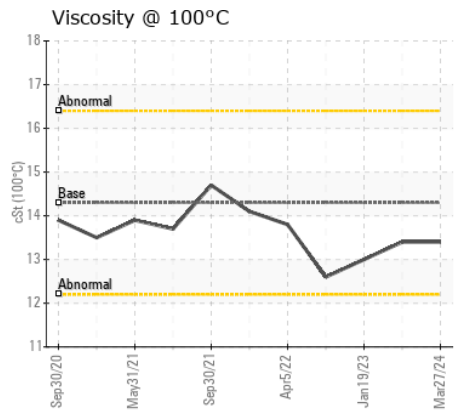
Copper (ppm)



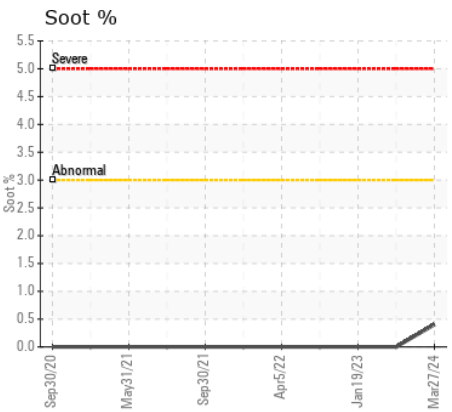
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0082685 **Received** : 10 Apr 2024
Lab Number : 02627831 **Tested** : 10 Apr 2024
Unique Number : 5760963 **Diagnosed** : 10 Apr 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: KV40, VI, Visual)

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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