MOBIL LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id
MACK 122-1200
Component
Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (--- GAL)

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

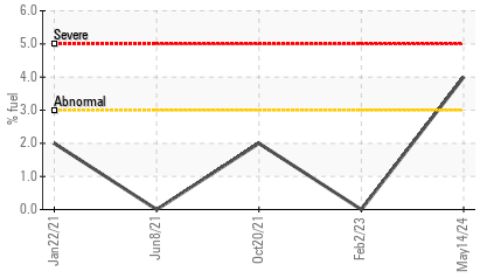
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

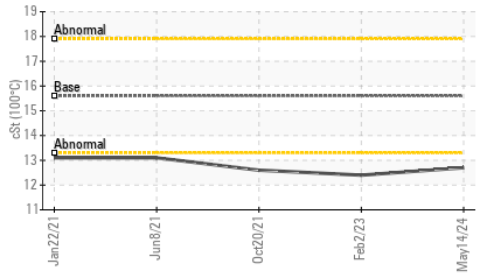
Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PC0088733	PC0065590	PC0042908
Sample Date		Client Info		14 May 2024	02 Feb 2023	20 Oct 2021
Machine Age	kms	Client Info		0	0	528000
Oil Age	kms	Client Info		0	0	8000
Filter Age	kms	Client Info		0	0	8000
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185(m)	>120	22	29	14
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	4	▲ 5	1
Titanium	ppm	ASTM D5185(m)	>2	0	<1	0
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	8	8	7
Lead	ppm	ASTM D5185(m)	>40	<1	2	2
Copper	ppm	ASTM D5185(m)	>330	7	22	3
Tin	ppm	ASTM D5185(m)	>15	<1	1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Silicon	ppm	ASTM D5185(m)	>25	8	6	5
Potassium	ppm	ASTM D5185(m)	>20	9	15	15
Fuel	%	ASTM D7593*	>3.0	▲ 4	<1.0	2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>4	0.8	0.8	0.5
Nitration	Abs/cm	ASTM D7624*	>20	11.0	12.4	10.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.5	24.6	22.3
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)		5	8	2
Boron	ppm	ASTM D5185(m)	0	2	2	2
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	56	58	59
Manganese	ppm	ASTM D5185(m)	0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	886	891	988
Calcium	ppm	ASTM D5185(m)	1070	1028	1042	1029
Phosphorus	ppm	ASTM D5185(m)	1150	876	923	1047
Zinc	ppm	ASTM D5185(m)	1270	1089	1093	1201
Sulfur	ppm	ASTM D5185(m)	2060	2274	2234	2436
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.9	18.8	17.6
Visc @ 40°C	cSt	ASTM D7279(m)	118.2	89.1	89.8	92.6
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	▲ 12.7	12.4	12.6
Viscosity Index (VI)	Scale	ASTM D2270*	139	139	133	131

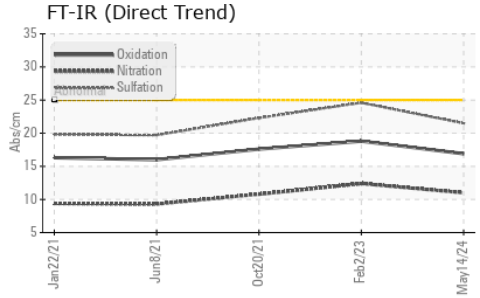
Fuel Dilution



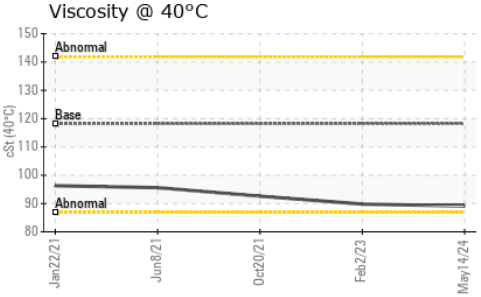
Viscosity @ 100°C



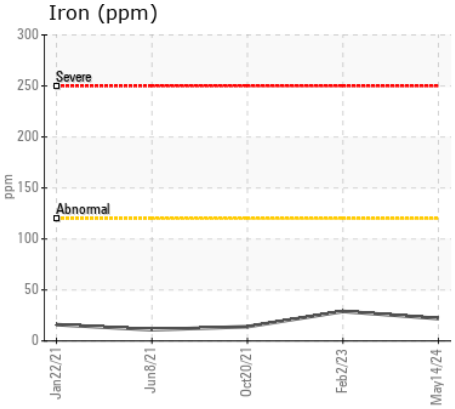
FT-IR (Direct Trend)



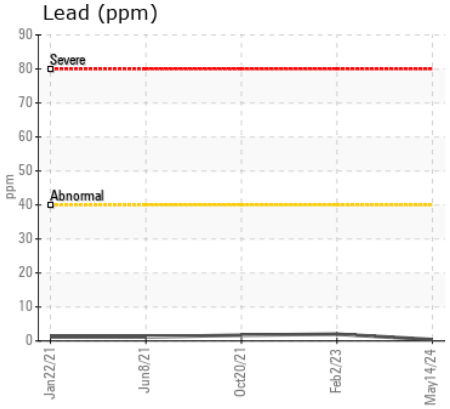
Viscosity @ 40°C



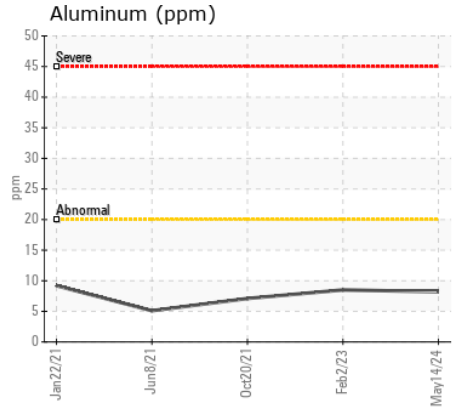
Iron (ppm)



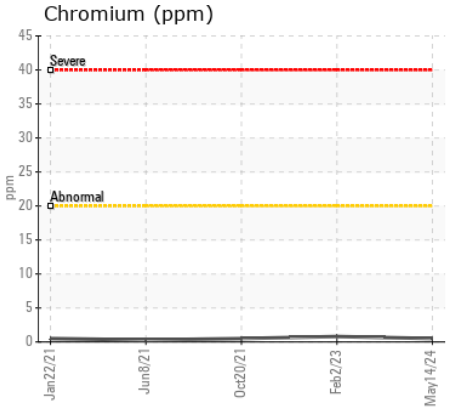
Lead (ppm)



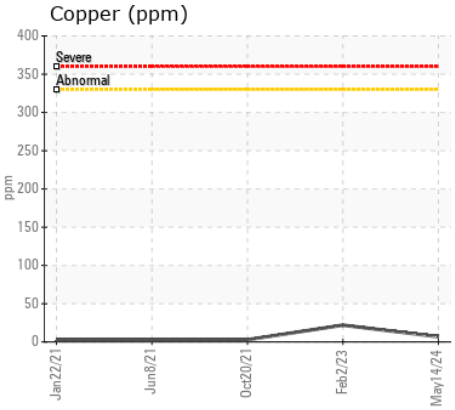
Aluminum (ppm)



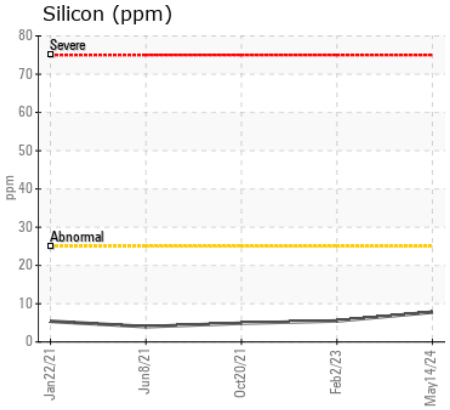
Chromium (ppm)



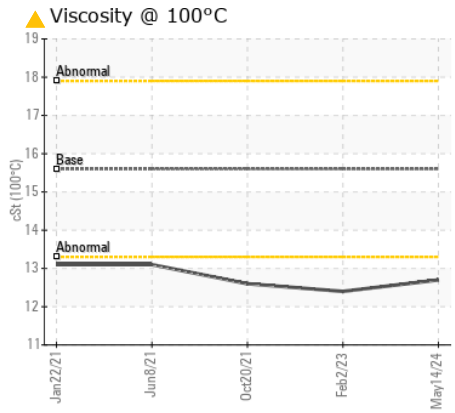
Copper (ppm)



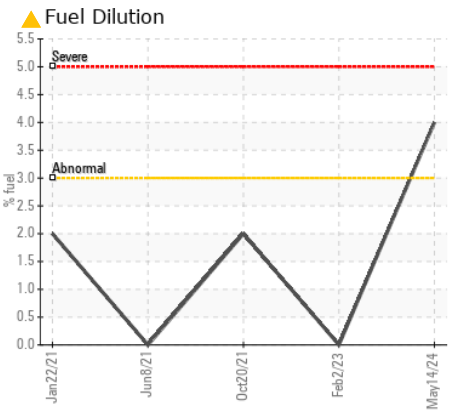
Silicon (ppm)



Viscosity @ 100°C



Fuel Dilution



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0088733 **Received** : 15 May 2024
Lab Number : 02635593 **Tested** : 16 May 2024
Unique Number : 5776746 **Diagnosed** : 16 May 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: FuelDilution, KV40, PercentFuel, VI)

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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