MOBIL 1 WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
LOADER 10018
Component
Diesel Engine
Fluid
MOBIL 15W40 (--- GAL)

RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you check the fuel injection system. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

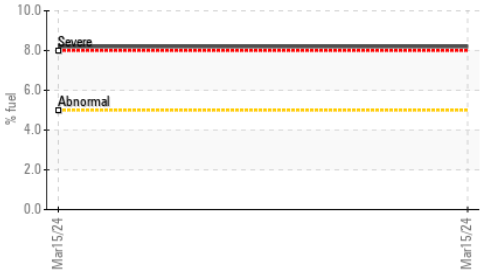
Calcium and/or magnesium levels higher than normal indicating possible contamination with cement dust, advise investigate. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

Calcium ppm levels are abnormally high. Visc @ 100°C is abnormally low. The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity.

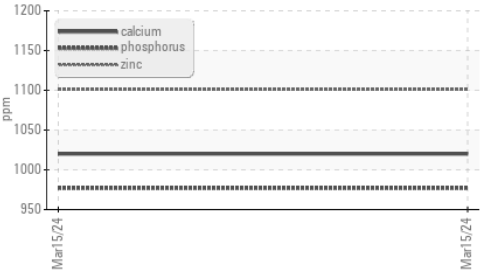
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0906194	---	---
Sample Date		Client Info		15 Mar 2024	---	---
Machine Age	hrs	Client Info		1413	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				SEVERE	---	---
Iron	ppm	ASTM D5185m	>100	11	---	---
Chromium	ppm	ASTM D5185m	>20	1	---	---
Nickel	ppm	ASTM D5185m	>4	1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	<1	---	---
Aluminum	ppm	ASTM D5185m	>20	2	---	---
Lead	ppm	ASTM D5185m	>40	1	---	---
Copper	ppm	ASTM D5185m	>330	3	---	---
Tin	ppm	ASTM D5185m	>15	1	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Silicon	ppm	ASTM D5185m	>25	5	---	---
Potassium	ppm	ASTM D5185m	>20	1	---	---
Fuel	%	ASTM D3524	>5	▲ 8.2	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.2	---	---
Nitration	Abs/cm	*ASTM D7624	>20	8.6	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.4	---	---
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	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---
Sodium	ppm	ASTM D5185m	>118	2	---	---
Boron	ppm	ASTM D5185m		5	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		54	---	---
Manganese	ppm	ASTM D5185m		1	---	---
Magnesium	ppm	ASTM D5185m		826	---	---
Calcium	ppm	ASTM D5185m		▲ 1020	---	---
Phosphorus	ppm	ASTM D5185m		977	---	---
Zinc	ppm	ASTM D5185m		1101	---	---
Sulfur	ppm	ASTM D5185m		2974	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.8	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		7.8	---	---
Visc @ 100°C	cSt	ASTM D445		▲ 11.8	---	---

Fuel Dilution

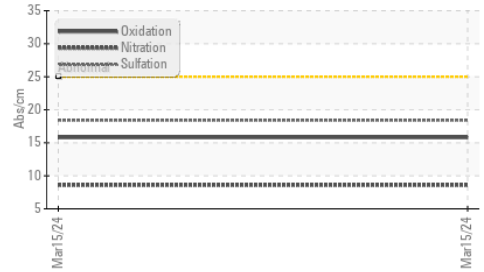


Viscosity @ 100°C

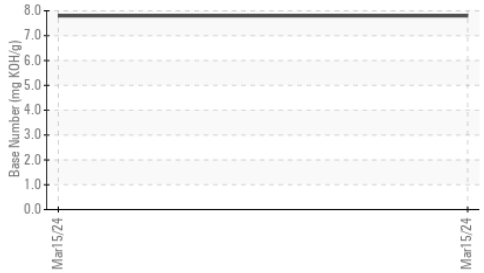
Additives



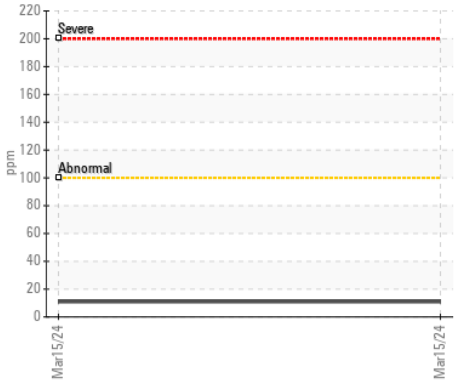
FT-IR (Direct Trend)



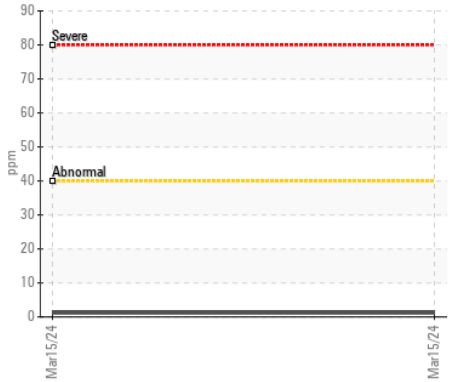
Base Number



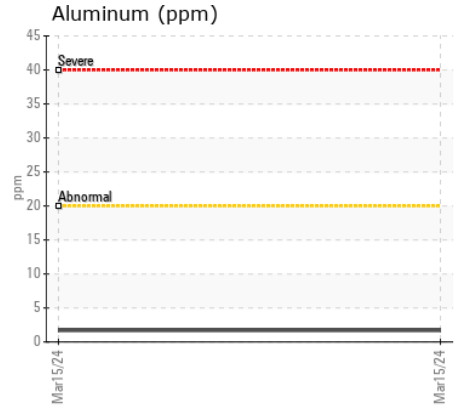
Iron (ppm)



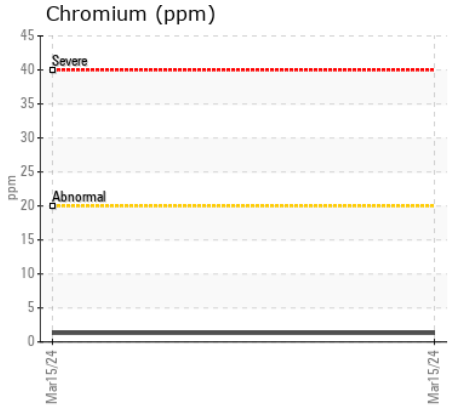
Lead (ppm)



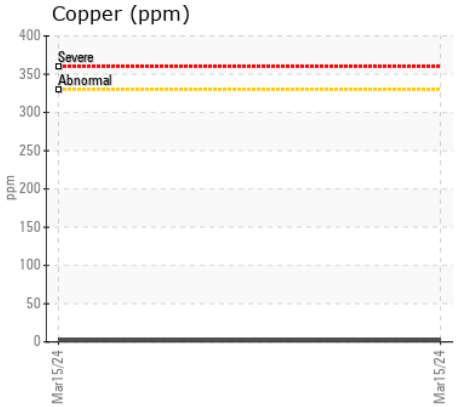
Aluminum (ppm)



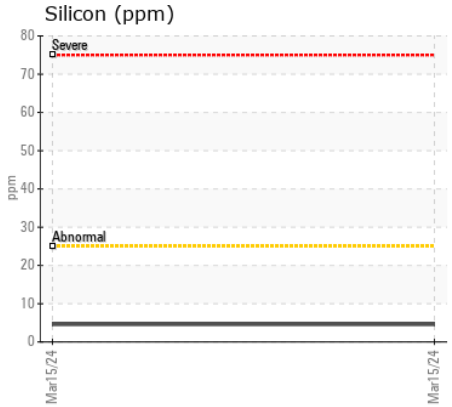
Chromium (ppm)



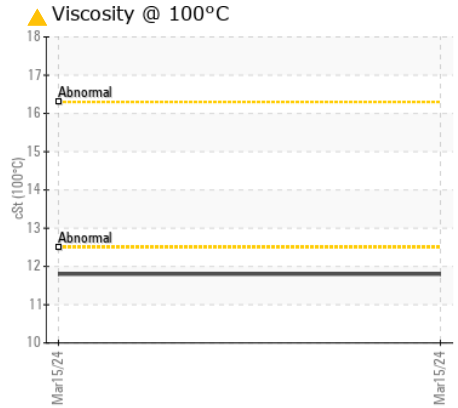
Copper (ppm)



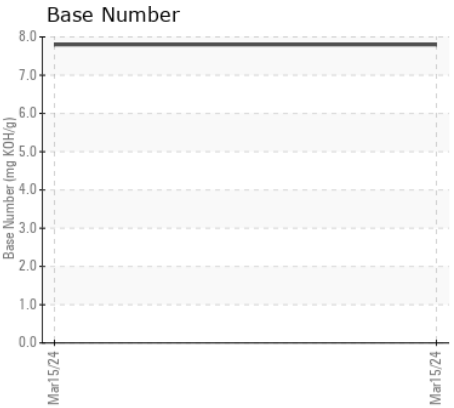
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0906194
Lab Number : 06152800
Unique Number : 10982878
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN)

Received : 18 Apr 2024
Tested : 22 Apr 2024
Diagnosed : 22 Apr 2024 - Wes Davis

To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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