MOB I WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	SEVERE

Machine Id
1639
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

We advise that you check the fuel injection system. 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

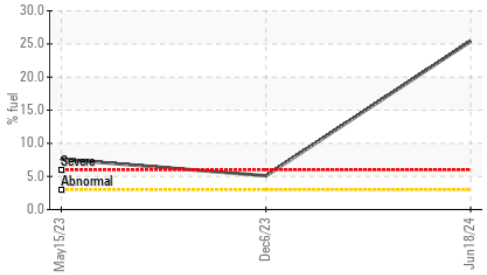
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

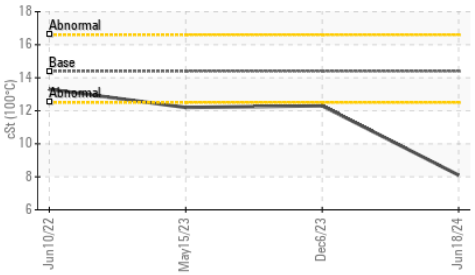
The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0948913	WC0870716	WC0821356
Sample Date		Client Info		18 Jun 2024	06 Dec 2023	15 May 2023
Machine Age	mls	Client Info		214142	204230	199248
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				SEVERE	ABNORMAL	SEVERE
Iron	ppm	ASTM D5185m	>90	63	11	10
Chromium	ppm	ASTM D5185m	>20	6	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	4	4
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	49	<1	<1
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	15	4	4
Potassium	ppm	ASTM D5185m	>20	3	6	4
Fuel	%	ASTM D3524	>3.0	▲ 25.4	▲ 5.1	▲ 7.6
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.8	0.4	0.6
Nitration	Abs/cm	*ASTM D7624	>20	11.4	9.0	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.1	17.9	19.9
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m	>158	4	6	2
Boron	ppm	ASTM D5185m	250	35	38	25
Barium	ppm	ASTM D5185m	10	1	3	0
Molybdenum	ppm	ASTM D5185m	100	64	78	80
Manganese	ppm	ASTM D5185m		2	0	<1
Magnesium	ppm	ASTM D5185m	450	166	96	136
Calcium	ppm	ASTM D5185m	3000	1400	1818	2134
Phosphorus	ppm	ASTM D5185m	1150	704	929	1029
Zinc	ppm	ASTM D5185m	1350	812	1080	1262
Sulfur	ppm	ASTM D5185m	4250	2645	3572	4334
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.5	13.7	15.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	5.4	6.7	7.2
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 8.1	▲ 12.3	▲ 12.2

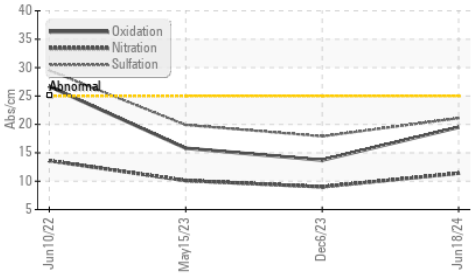
Fuel Dilution



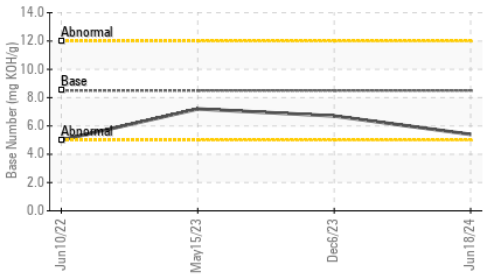
Viscosity @ 100°C



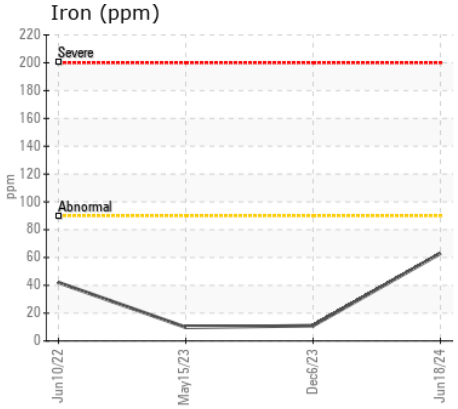
FT-IR (Direct Trend)



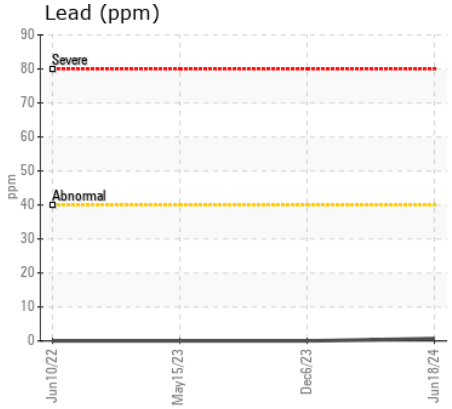
Base Number



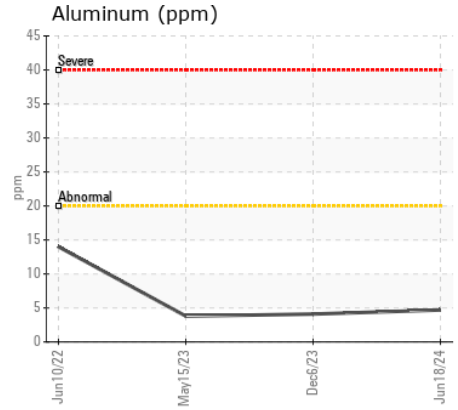
Iron (ppm)



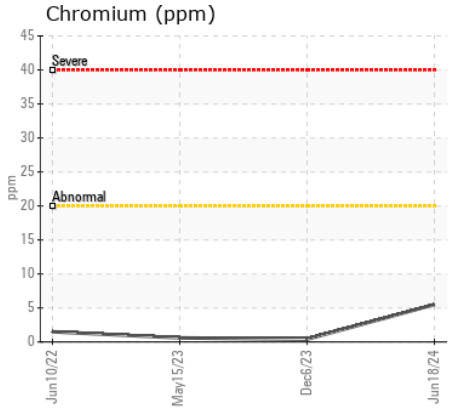
Lead (ppm)



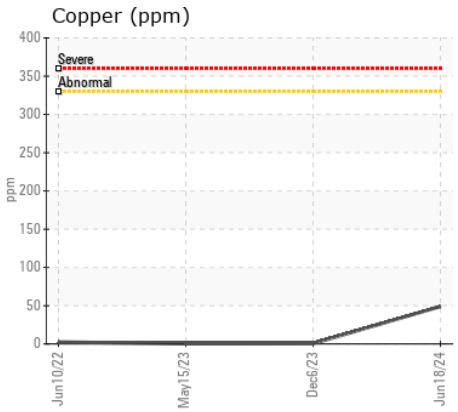
Aluminum (ppm)



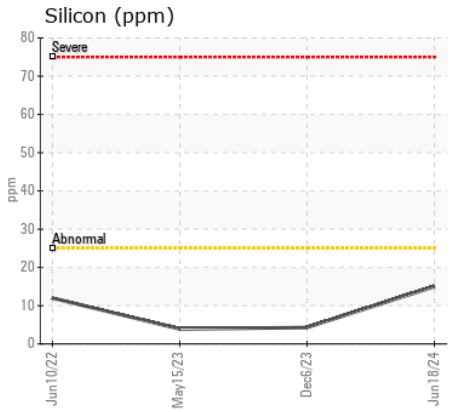
Chromium (ppm)



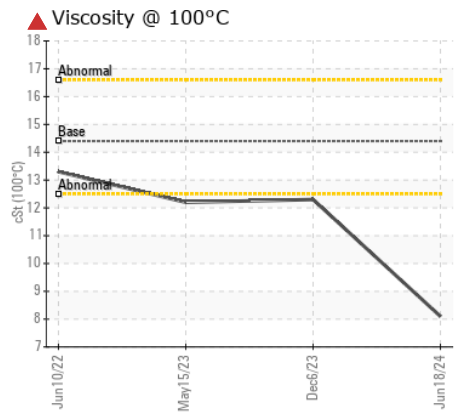
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



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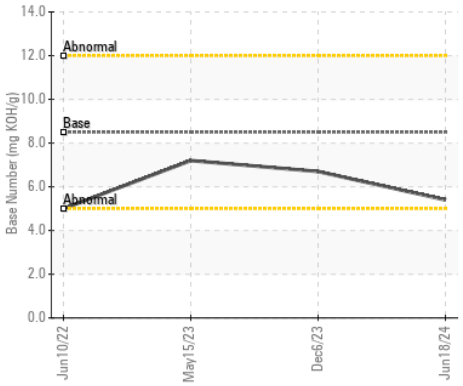

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0948913
Lab Number : 06220853
Unique Number : 11099050
Test Package : MOB 1 (Additional Tests: PercentFuel, TBN)

Received : 26 Jun 2024
Tested : 28 Jun 2024
Diagnosed : 28 Jun 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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