MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Area
RIG 5
Machine Id
CATERPILLAR 3512 R5-G-01 NKL
Component
Diesel Engine
Fluid
{not provided} (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

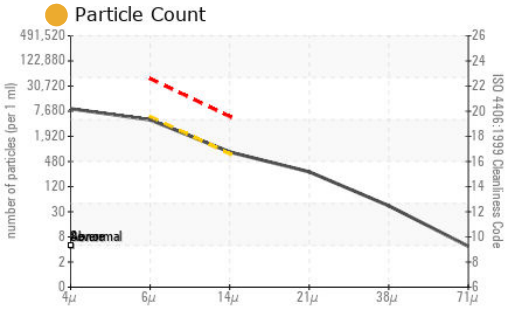
CONTAMINATION

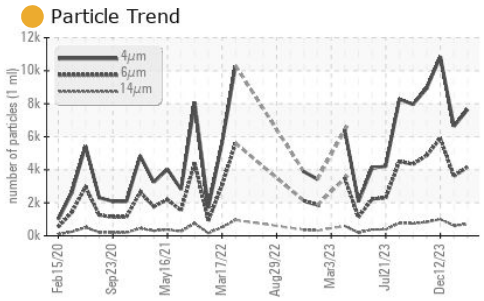
There is a moderate amount of particulates present in the oil.

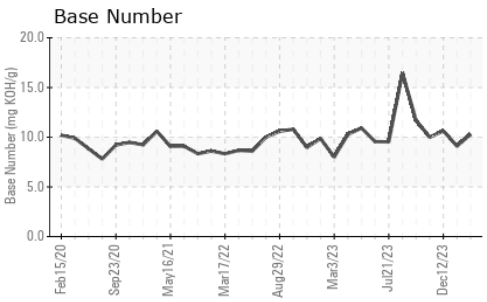
FLUID CONDITION

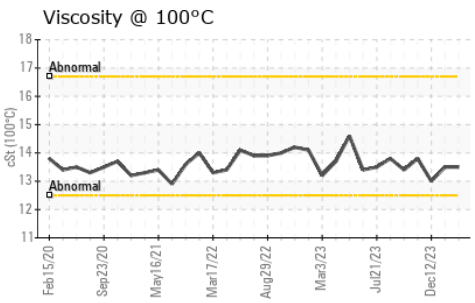
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

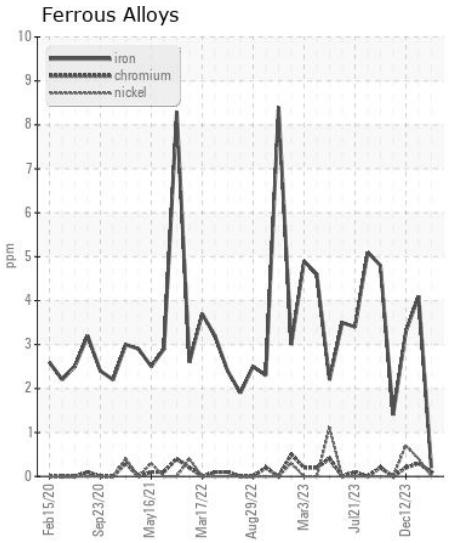
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0013843	KL0013189	KL0013983
Sample Date		Client Info		16 Feb 2024	11 Jan 2024	12 Dec 2023
Machine Age	days	Client Info		45338	45303	45272
Oil Age	days	Client Info		0	0	0
Filter Age	days	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	NORMAL	ATTENTION
Iron	ppm	ASTM D5185m	>100	<1	4	3
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	4	3	2
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	<1	12	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
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	8	6	6
Potassium	ppm	ASTM D5185m	>20	1	2	2
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	0.1	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	5.6	6.5	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.6	23.5	23.7
Particles >4µm		ASTM D7647		7656	6629	10849
Particles >6µm		ASTM D7647	>5000	4170	3611	5910
Particles >14µm		ASTM D7647	>640	710	615	1006
Particles >21µm		ASTM D7647	>160	239	207	339
Particles >38µm		ASTM D7647	>40	37	32	52
Particles >71µm		ASTM D7647	>10	4	3	5
Oil Cleanliness		ISO 4406 (c)	>19/16	19/17	19/16	20/17
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		<1	0	0
Boron	ppm	ASTM D5185m		329	370	368
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		121	123	128
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		643	645	690
Calcium	ppm	ASTM D5185m		1434	1505	1570
Phosphorus	ppm	ASTM D5185m		703	741	714
Zinc	ppm	ASTM D5185m		832	837	854
Sulfur	ppm	ASTM D5185m		2440	2769	2829
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.0	16.9	17.6
Base Number (BN)	mg KOH/g	ASTM D2896		10.29	9.10	10.63
Visc @ 100°C	cSt	ASTM D445		13.5	13.5	13.0

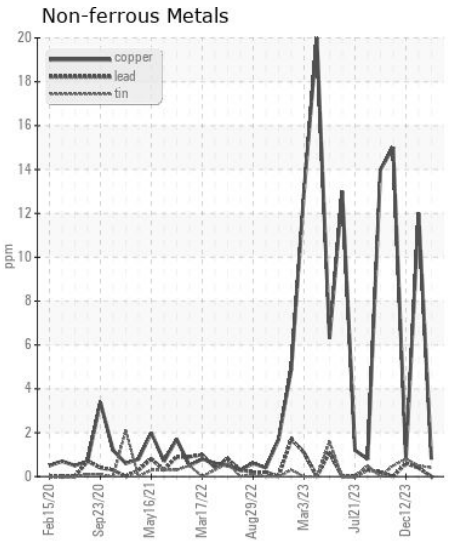


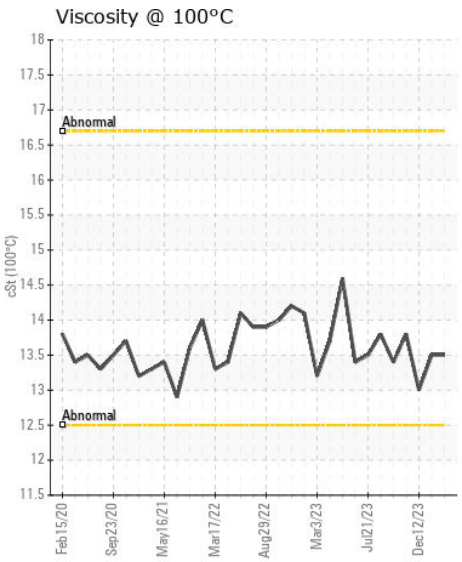


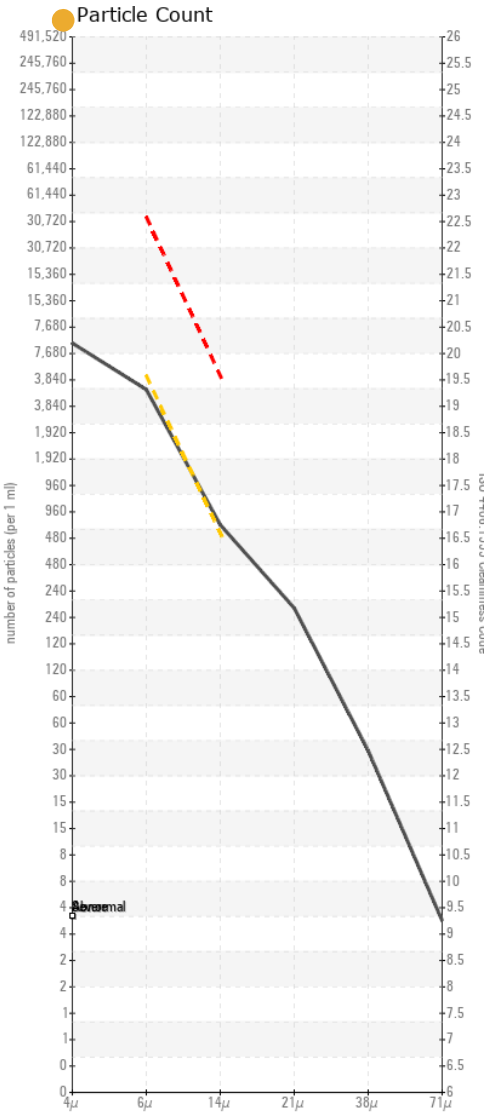


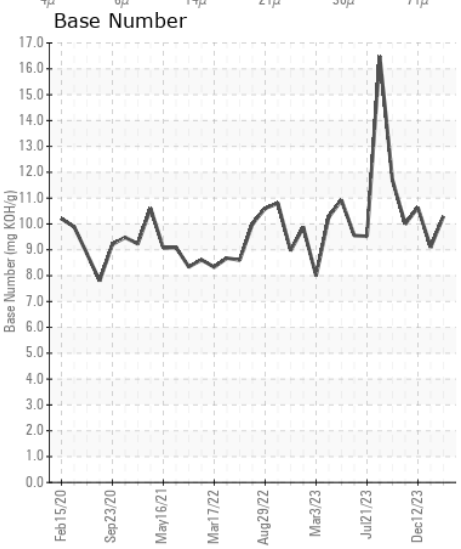












Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013843
Lab Number : 06105413
Unique Number : 10903643
Test Package : MOB 2 (Additional Tests: PrtCount)

Received : 29 Feb 2024
Tested : 06 Mar 2024
Diagnosed : 06 Mar 2024 - Jonathan Hester

Certificate L2367

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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