MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Area
RIG 5
Machine Id
CATERPILLAR 3512 R5-G-02 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.

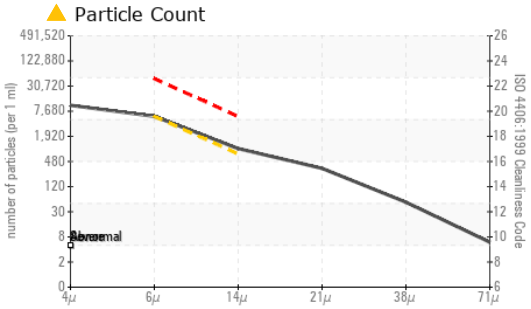
CONTAMINATION

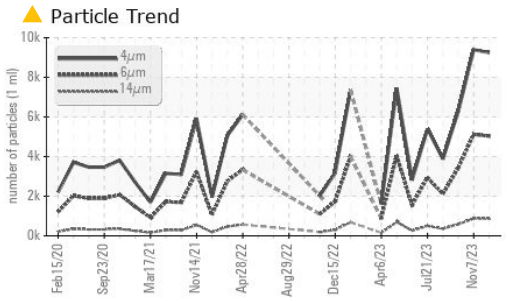
There is a moderate amount of particulates present in the oil.

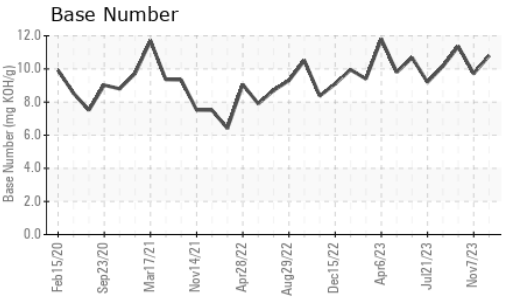
FLUID CONDITION

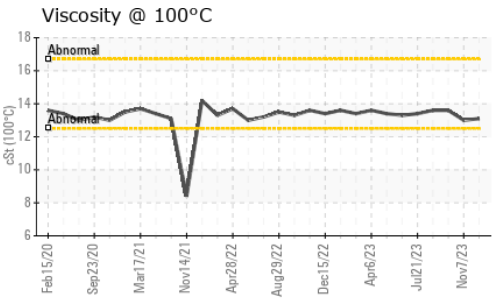
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

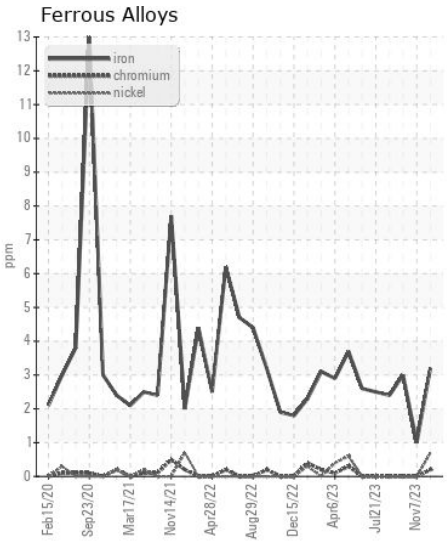
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0013982	KL0013091	KL0012991
Sample Date		Client Info		12 Dec 2023	07 Nov 2023	29 Sep 2023
Machine Age	days	Client Info		45272	45233	55196
Oil Age	days	Client Info		0	0	0
Filter Age	days	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	ATTENTION	NORMAL
Iron	ppm	ASTM D5185m	>100	3	1	3
Chromium	ppm	ASTM D5185m	>20	<1	0	0
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	4	8
Lead	ppm	ASTM D5185m	>40	<1	0	0
Copper	ppm	ASTM D5185m	>330	<1	1	1
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	7	6	6
Potassium	ppm	ASTM D5185m	>20	2	0	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	0.1	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.4	7.2	5.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.4	23.7	22.1
Particles >4µm		ASTM D7647		9248	9396	6281
Particles >6µm		ASTM D7647	>5000	▲ 5038	▲ 5118	3422
Particles >14µm		ASTM D7647	>640	▲ 857	▲ 871	582
Particles >21µm		ASTM D7647	>160	▲ 289	▲ 293	196
Particles >38µm		ASTM D7647	>40	▲ 45	▲ 45	30
Particles >71µm		ASTM D7647	>10	5	5	3
Oil Cleanliness		ISO 4406 (c)	>19/16	▲ 20/17	▲ 20/17	19/16
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		0	<1	1
Boron	ppm	ASTM D5185m		390	339	356
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		133	128	123
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		714	694	616
Calcium	ppm	ASTM D5185m		1618	1550	1361
Phosphorus	ppm	ASTM D5185m		716	727	650
Zinc	ppm	ASTM D5185m		886	866	771
Sulfur	ppm	ASTM D5185m		2751	2539	2514
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.0	17.3	15.1
Base Number (BN)	mg KOH/g	ASTM D2896		10.80	9.72	11.35
Visc @ 100°C	cSt	ASTM D445		13.1	13.0	13.6

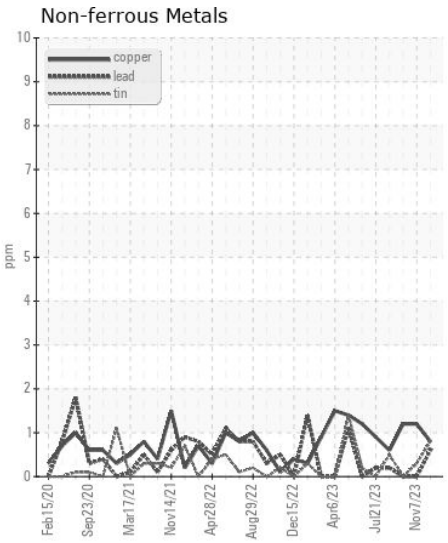


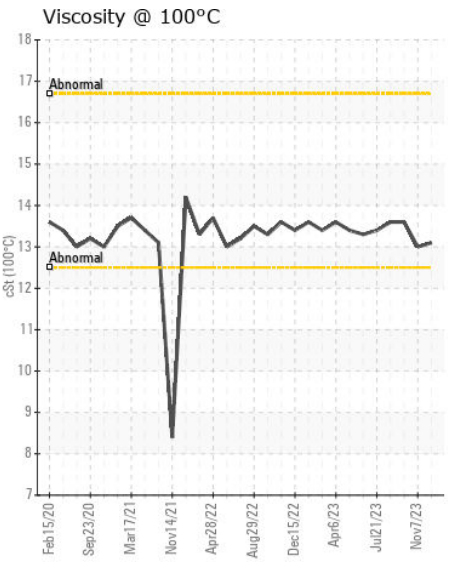


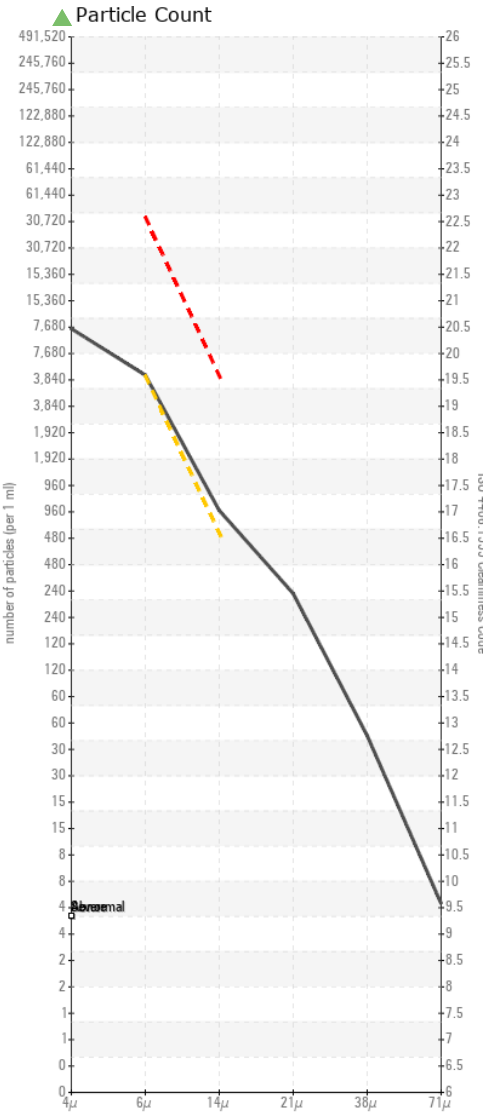


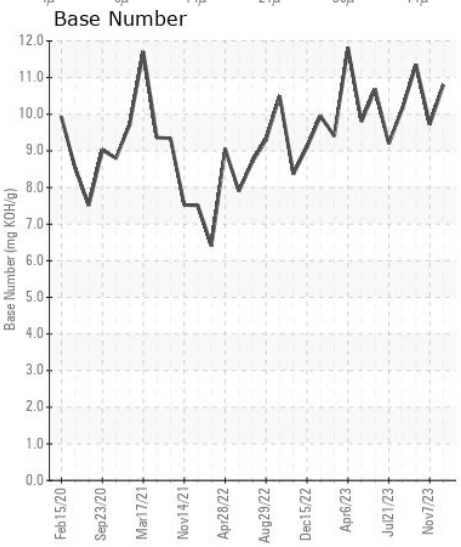












Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013982 **Recieved** : 08 Jan 2024
Lab Number : 06055023 **Diagnosed** : 10 Jan 2024
Unique Number : 10820972 **Diagnostician** : Sean Felton
Test Package : MOB 2 (Additional Tests: PrtCount)

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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