MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area
RIG 1
Machine Id
CATERPILLAR 3512 R1-G-02-NKL
Component
Diesel Engine
Fluid
CHEVRON 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

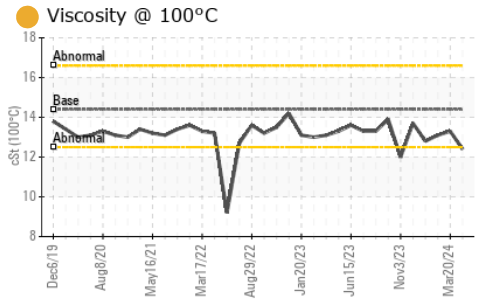
CONTAMINATION

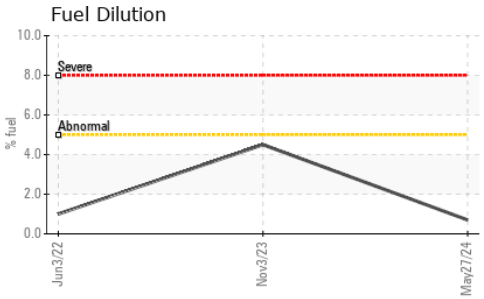
Fuel content negligible. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

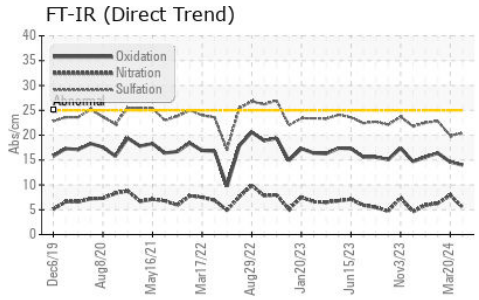
FLUID CONDITION

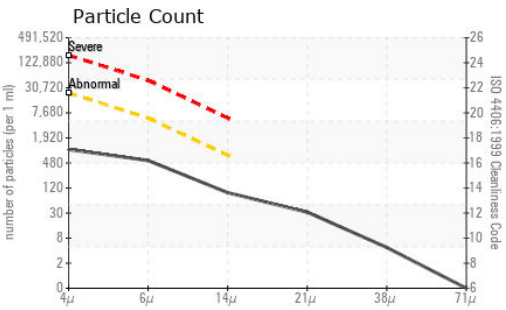
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

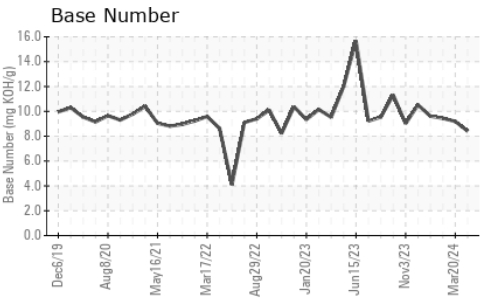
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0014259	KL0013872	KL0013835
Sample Date		Client Info		27 May 2024	20 Mar 2024	16 Feb 2024
Machine Age	days	Client Info		45416	45362	45338
Oil Age	days	Client Info		0	0	0
Filter Age	days	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	8	3	<1
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>2	<1	9	0
Silver	ppm	ASTM D5185m	>2	1	0	0
Aluminum	ppm	ASTM D5185m	>25	2	2	4
Lead	ppm	ASTM D5185m	>40	1	0	<1
Copper	ppm	ASTM D5185m	>330	14	2	1
Tin	ppm	ASTM D5185m	>15	1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	11	20	6
Potassium	ppm	ASTM D5185m	>20	2	4	<1
Fuel	%	ASTM D3524	>5	0.7	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	5.5	7.9	6.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.4	19.9	22.8
Particles >4µm		ASTM D7647	>20000	887	1305	4672
Particles >6µm		ASTM D7647	>5000	483	711	2545
Particles >14µm		ASTM D7647	>640	82	121	433
Particles >21µm		ASTM D7647	>160	28	41	146
Particles >38µm		ASTM D7647	>40	4	6	23
Particles >71µm		ASTM D7647	>10	0	1	2
Oil Cleanliness		ISO 4406 (c)	>21/19/16	17/16/14	18/17/14	19/19/16
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	>50	9	0	<1
Boron	ppm	ASTM D5185m		426	197	328
Barium	ppm	ASTM D5185m		1	0	0
Molybdenum	ppm	ASTM D5185m		81	63	120
Manganese	ppm	ASTM D5185m		1	0	<1
Magnesium	ppm	ASTM D5185m		485	664	650
Calcium	ppm	ASTM D5185m		1372	1442	1456
Phosphorus	ppm	ASTM D5185m		958	818	706
Zinc	ppm	ASTM D5185m		1183	857	837
Sulfur	ppm	ASTM D5185m		3415	3228	2546
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.0	14.6	16.4
Base Number (BN)	mg KOH/g	ASTM D2896		8.41	9.19	9.44
Visc @ 100°C	cSt	ASTM D445	14.4	12.4	13.3	13.1

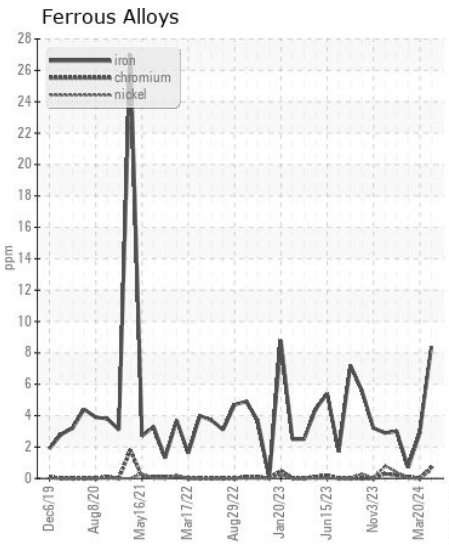


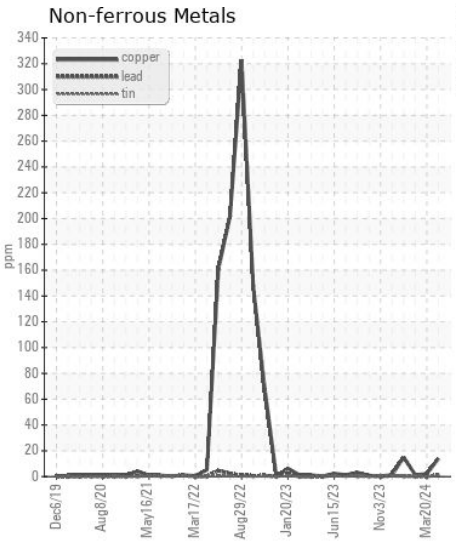


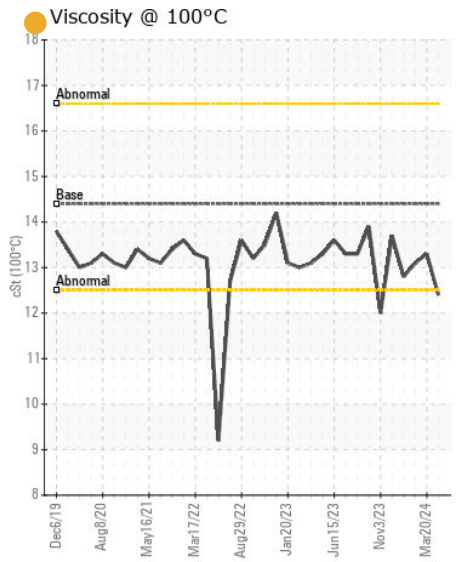


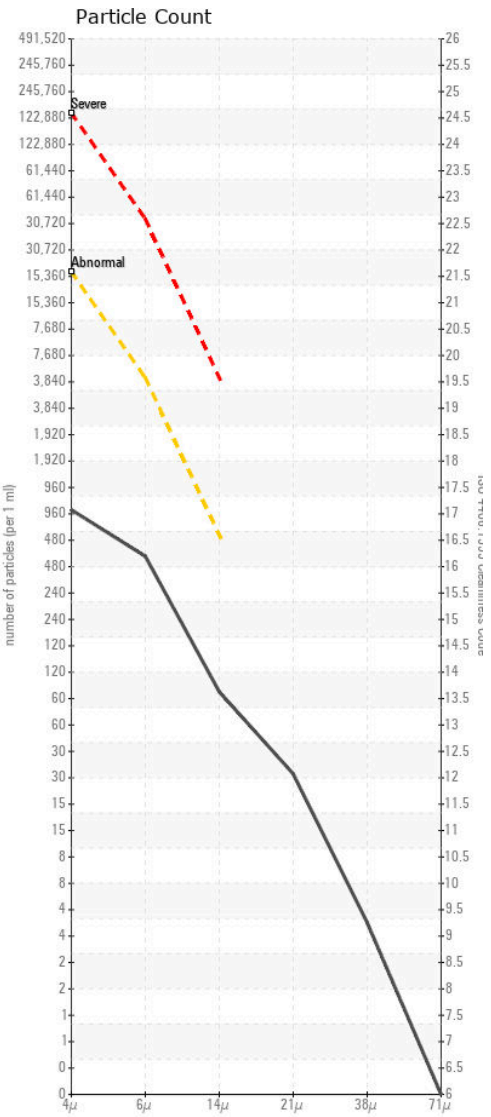


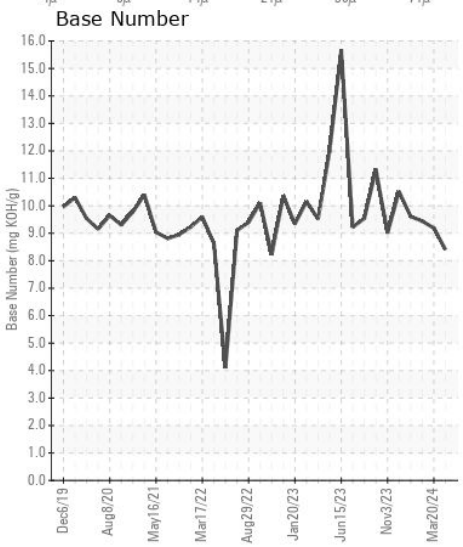












Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0014259
Lab Number : 06191198
Unique Number : 11047950
Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel, PrtCount)

Received : 24 May 2024
Tested : 03 Jun 2024
Diagnosed : 03 Jun 2024 - Don Baldridge

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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