MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
RIG 3
Machine Id
CATERPILLAR 3512 R3-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

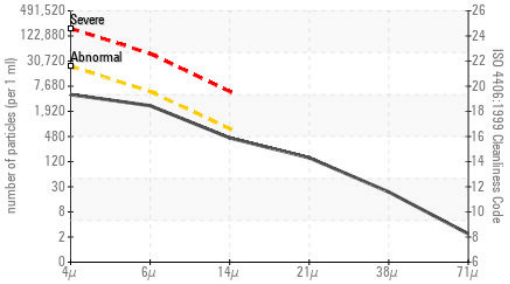
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

FLUID CONDITION

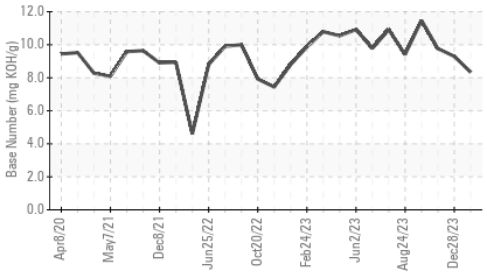
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**KL0014012**	KL0014066	KL0013116
Sample Date		Client Info		**17 Jan 2024**	28 Dec 2023	27 Oct 2023
Machine Age	days	Client Info		**43803**	45288	45225
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				**NORMAL**	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	**6**	7	0
Chromium	ppm	ASTM D5185m	>20	**0**	<1	0
Nickel	ppm	ASTM D5185m	>2	**0**	<1	0
Titanium	ppm	ASTM D5185m	>2	**0**	<1	0
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**3**	2	4
Lead	ppm	ASTM D5185m	>40	**2**	6	<1
Copper	ppm	ASTM D5185m	>330	**<1**	3	0
Tin	ppm	ASTM D5185m	>15	**0**	<1	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	**9**	15	7
Potassium	ppm	ASTM D5185m	>20	**0**	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**	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	**8.4**	9.7	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**24.0**	25.1	23.9
Particles >4µm		ASTM D7647	>20000	**4211**	4385	6499
Particles >6µm		ASTM D7647	>5000	**2294**	2389	3540
Particles >14µm		ASTM D7647	>640	**390**	407	603
Particles >21µm		ASTM D7647	>160	**131**	137	203
Particles >38µm		ASTM D7647	>40	**20**	21	31
Particles >71µm		ASTM D7647	>10	**2**	2	3
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**19/18/16**	19/18/16	20/19/16
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	**1**	0	2
Boron	ppm	ASTM D5185m		**316**	315	398
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**128**	140	133
Manganese	ppm	ASTM D5185m		**<1**	<1	0
Magnesium	ppm	ASTM D5185m		**682**	741	718
Calcium	ppm	ASTM D5185m		**1621**	1736	1685
Phosphorus	ppm	ASTM D5185m		**743**	727	724
Zinc	ppm	ASTM D5185m		**887**	939	891
Sulfur	ppm	ASTM D5185m		**2593**	2708	2499
Oxidation	Abs/.1mm	*ASTM D7414	>25	**19.1**	21.3	17.5
Base Number (BN)	mg KOH/g	ASTM D2896		**8.34**	9.30	9.76
Visc @ 100°C	cSt	ASTM D445	14.4	**13.8**	13.7	13.3

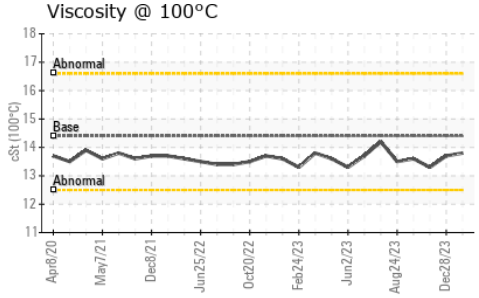
Particle Count



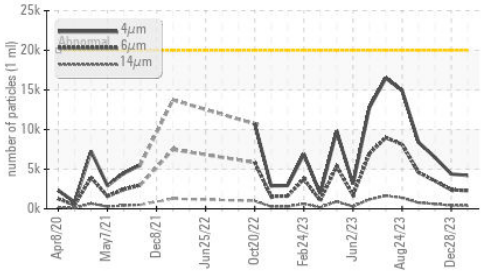
Base Number



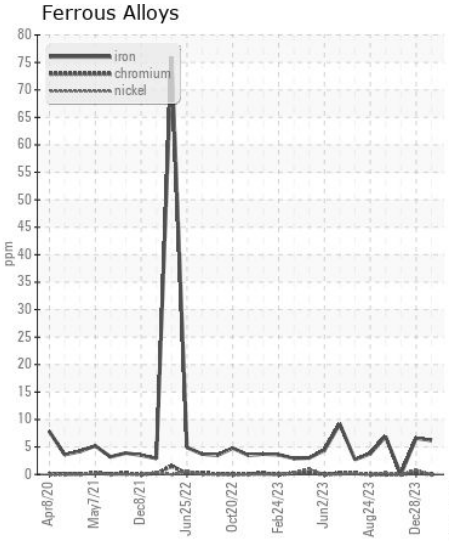
Viscosity @ 100°C



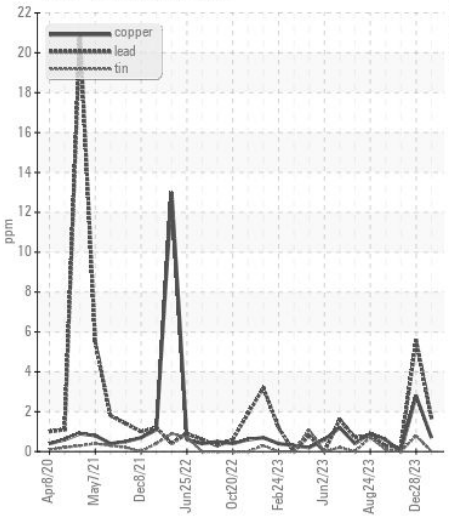
Particle Trend



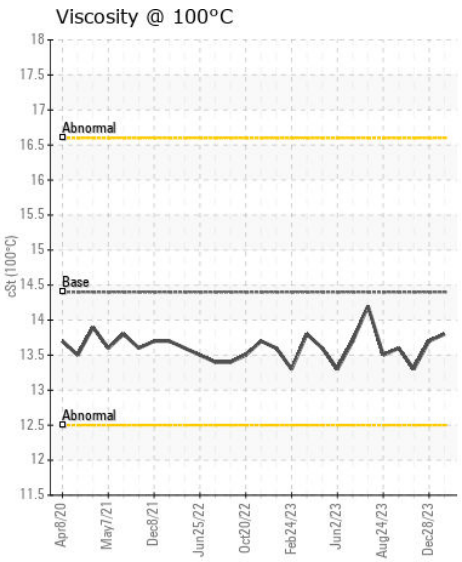
Ferrous Alloys



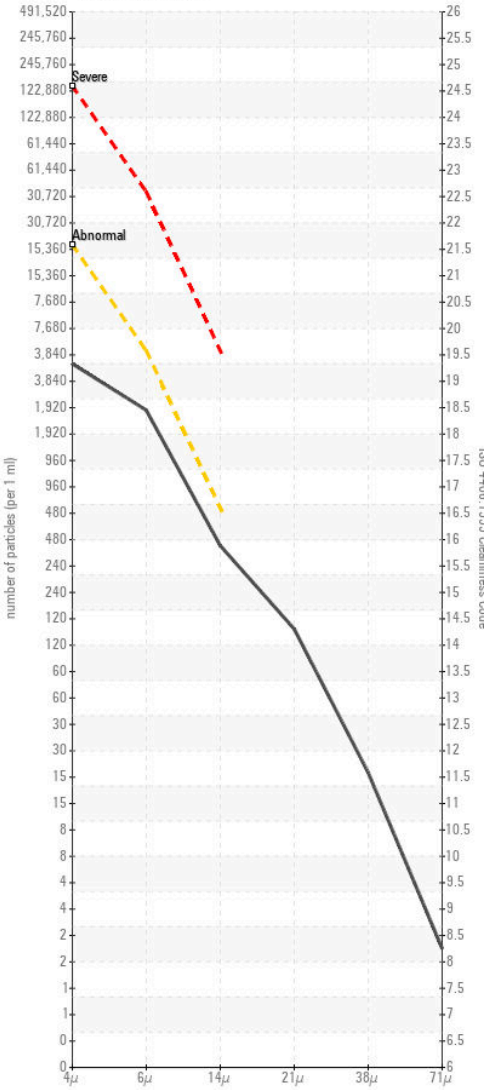
Non-ferrous Metals



Viscosity @ 100°C



Particle Count



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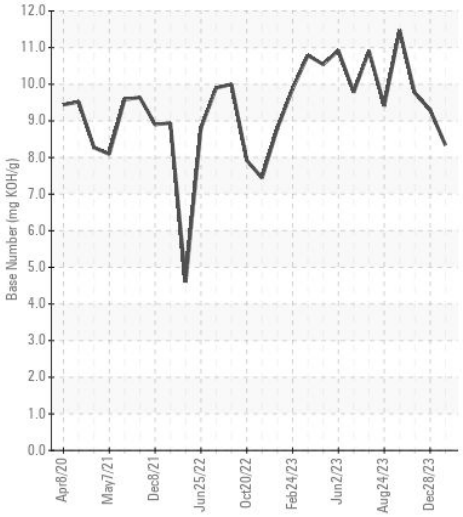

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0014012
Lab Number : 06083135
Unique Number : 10870580
Test Package : MOB 2 (Additional Tests: PrtCount)

Received : 07 Feb 2024
Tested : 08 Feb 2024
Diagnosed : 09 Feb 2024 - Sean Felton

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)

CITADEL DRILLING
7550 W I20
ODESSA, TX
US 79763
Contact: MIKE COMBDEN
mcombden@citadeldrilling.com
T: (780)955-5509
F: