MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
RIG 2
Machine Id
R2-CHANGE SHACK-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

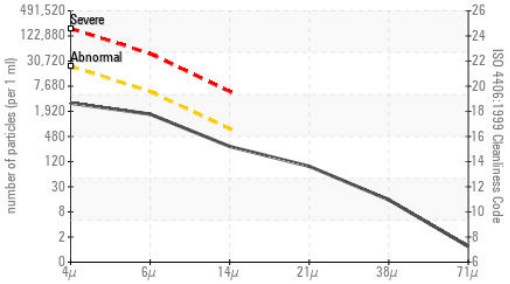
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

FLUID CONDITION

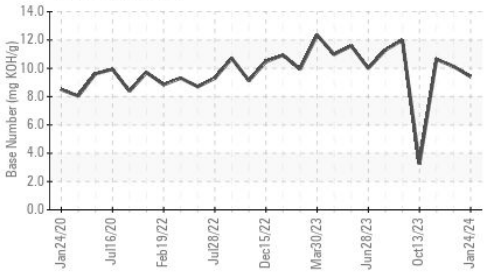
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**KL0013828**	KL0014046	KL0013105
Sample Date		Client Info		**24 Jan 2024**	29 Dec 2023	17 Nov 2023
Machine Age	days	Client Info		**0**	45290	45247
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	ABNORMAL
Iron	ppm	ASTM D5185m	>100	**30**	5	8
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	0
Nickel	ppm	ASTM D5185m	>4	**0**	<1	0
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**3**	3	3
Lead	ppm	ASTM D5185m	>40	**0**	<1	2
Copper	ppm	ASTM D5185m	>330	**7**	<1	2
Tin	ppm	ASTM D5185m	>15	**0**	<1	0
Vanadium	ppm	ASTM D5185m		**<1**	0	<1
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	**8**	6	8
Potassium	ppm	ASTM D5185m	>20	**<1**	1	0
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	0.4
Nitration	Abs/cm	*ASTM D7624	>20	**5.0**	5.1	8.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	**22.3**	22.7	23.8
Particles >4µm		ASTM D7647	>20000	**2636**	5577	▲ 22706
Particles >6µm		ASTM D7647	>5000	**1436**	3038	▲ 12369
Particles >14µm		ASTM D7647	>640	**244**	517	▲ 2105
Particles >21µm		ASTM D7647	>160	**82**	174	▲ 709
Particles >38µm		ASTM D7647	>40	**13**	27	▲ 109
Particles >71µm		ASTM D7647	>10	**1**	3	▲ 11
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**19/18/15**	20/19/16	▲ 22/21/18
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**	1	2
Boron	ppm	ASTM D5185m		**345**	382	338
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**124**	116	139
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m		**644**	617	747
Calcium	ppm	ASTM D5185m		**1411**	1443	1663
Phosphorus	ppm	ASTM D5185m		**691**	750	750
Zinc	ppm	ASTM D5185m		**809**	787	939
Sulfur	ppm	ASTM D5185m		**2752**	2912	2530
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.3**	15.9	18.8
Base Number (BN)	mg KOH/g	ASTM D2896		**9.41**	10.13	10.63
Visc @ 100°C	cSt	ASTM D445	14.4	**14.1**	13.8	13.6

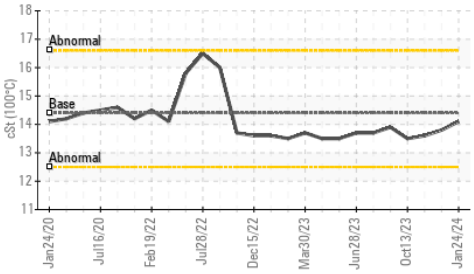
Particle Count



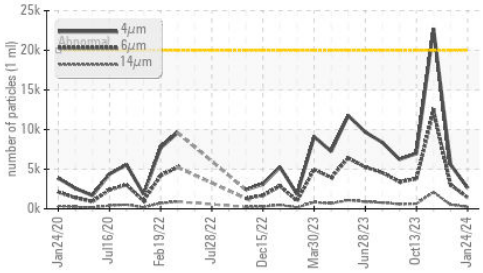
Base Number



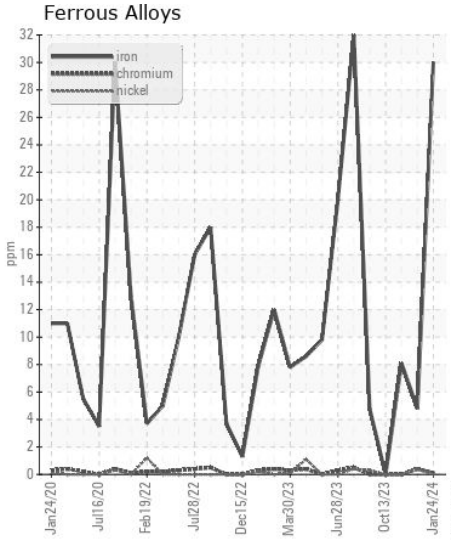
Viscosity @ 100°C



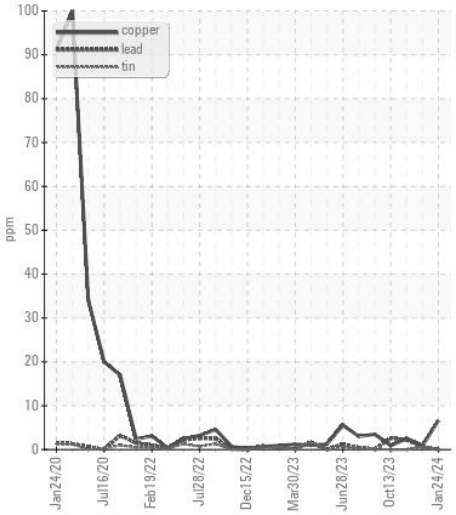
Particle Trend



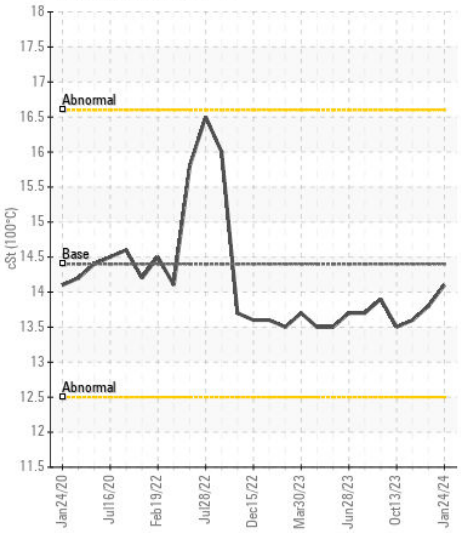
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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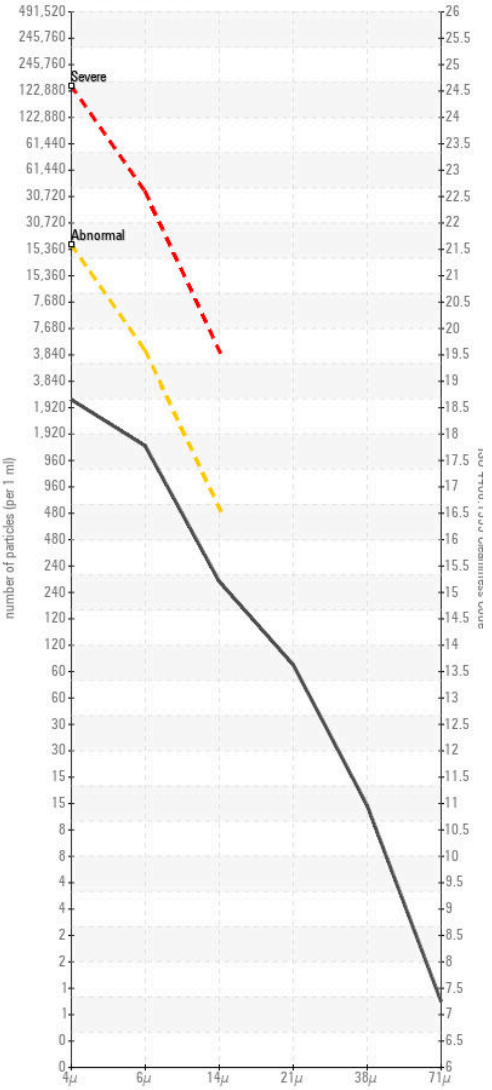
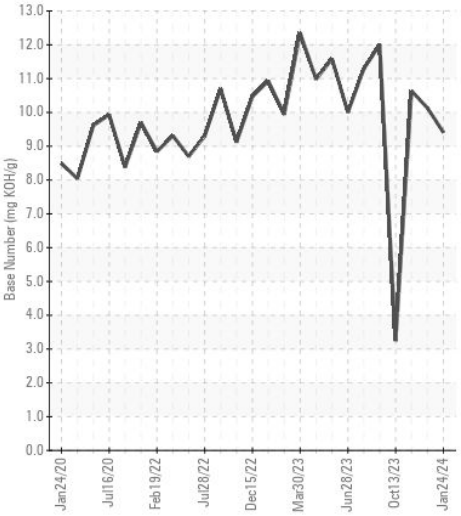


Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013828
Lab Number : 06083132
Unique Number : 10870577
Test Package : MOB 2 (Additional Tests: PrtCount)

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

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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