MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
RIG 8
Machine Id
R8-G-002
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

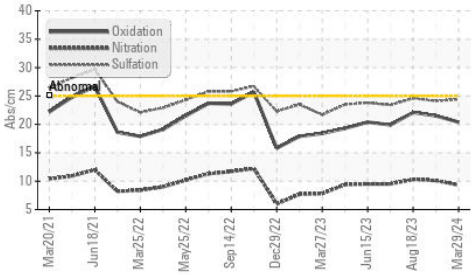
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

FLUID CONDITION

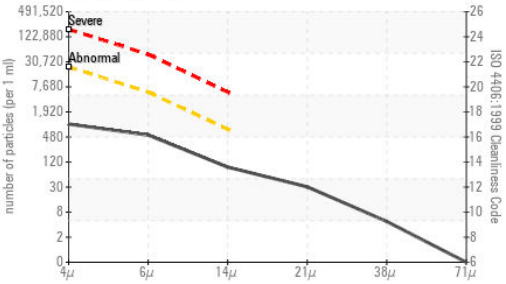
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0013930	KL0013845	KL0012532
Sample Date		Client Info		29 Mar 2024	28 Feb 2024	18 Aug 2023
Machine Age	days	Client Info		45371	0	45155
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	MARGINAL	NORMAL
Iron	ppm	ASTM D5185m	>100	27	31	31
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	3	<1
Lead	ppm	ASTM D5185m	>40	6	8	7
Copper	ppm	ASTM D5185m	>330	21	20	25
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
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	4	5	4
Potassium	ppm	ASTM D5185m	>20	2	<1	1
Fuel	%	ASTM D3524	>5	<1.0	▲ 2.1	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.5	0.6
Nitration	Abs/cm	*ASTM D7624	>20	9.3	10.1	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.4	24.1	24.6
Particles >4µm		ASTM D7647	>20000	861	1322	1966
Particles >6µm		ASTM D7647	>5000	469	720	1071
Particles >14µm		ASTM D7647	>640	80	123	182
Particles >21µm		ASTM D7647	>160	27	41	61
Particles >38µm		ASTM D7647	>40	4	6	9
Particles >71µm		ASTM D7647	>10	0	1	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	17/16/13	18/17/14	18/17/15
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	>216	2	4	2
Boron	ppm	ASTM D5185m	250	200	114	117
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	109	106	101
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	615	665	656
Calcium	ppm	ASTM D5185m	3000	1450	1414	1479
Phosphorus	ppm	ASTM D5185m	1150	832	771	710
Zinc	ppm	ASTM D5185m	1350	895	944	876
Sulfur	ppm	ASTM D5185m	4250	2963	2775	3192
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.4	21.5	22.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.73	6.41	7.11
Visc @ 100°C	cSt	ASTM D445	14.4	12.4	12.0	12.3

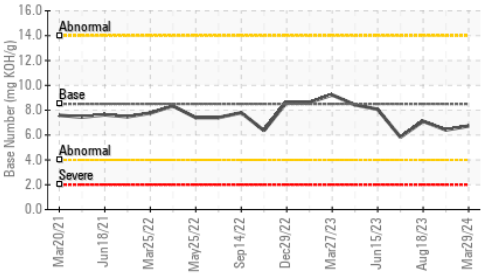
FT-IR (Direct Trend)



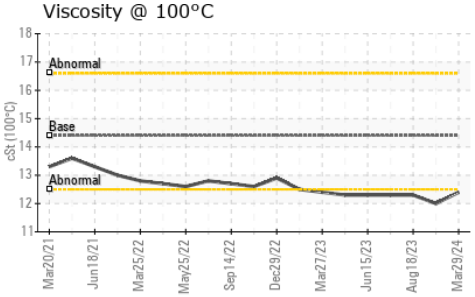
Particle Count



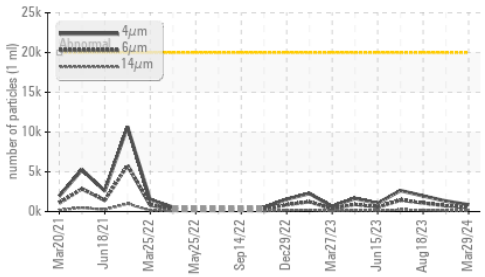
Base Number



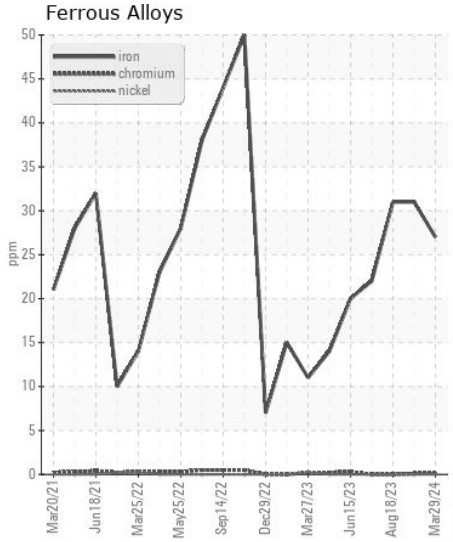
Viscosity @ 100°C



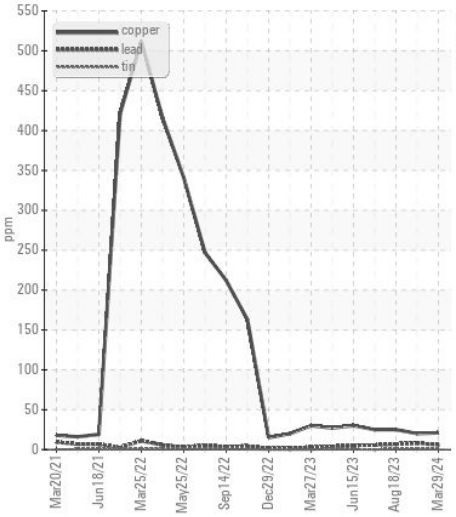
Particle Trend



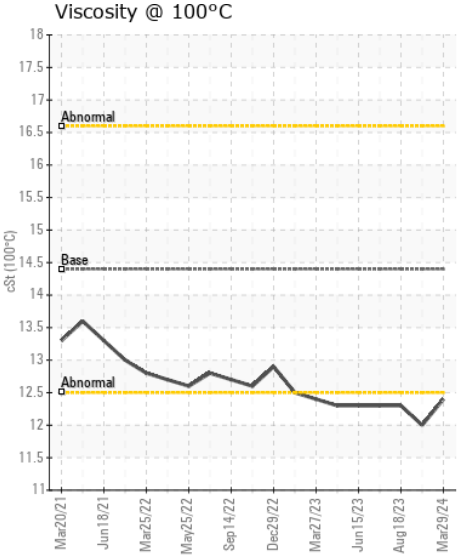
Ferrous Alloys



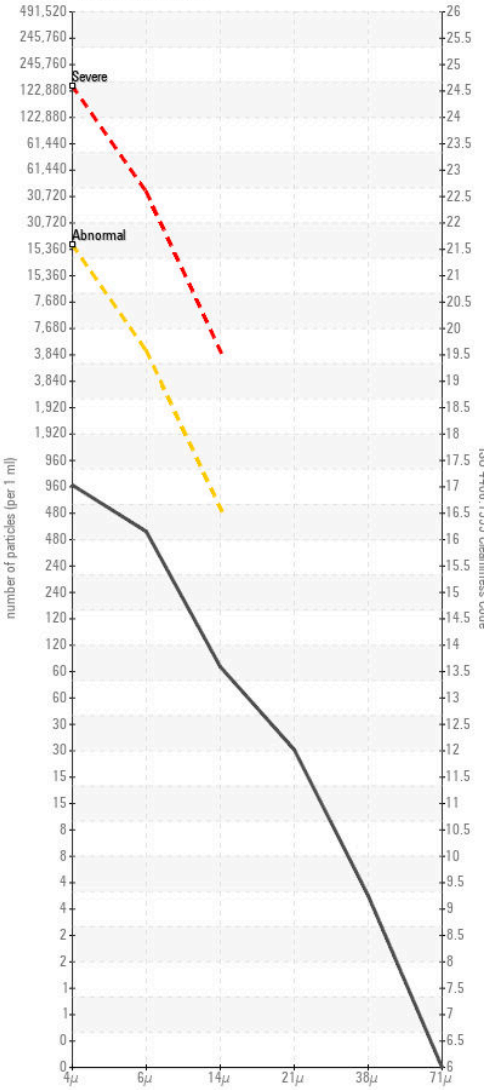
Non-ferrous Metals



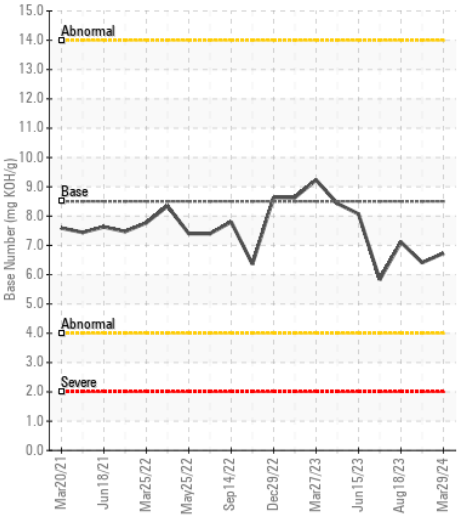
Viscosity @ 100°C



Particle Count



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013930
Lab Number : 06145357
Unique Number : 10970165
Test Package : MOB 2 (Additional Tests: FuelDilution, PrtCount)

Received : 10 Apr 2024
Tested : 15 Apr 2024
Diagnosed : 15 Apr 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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