MOB II WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
2013 FREIGHTLINER 35135
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

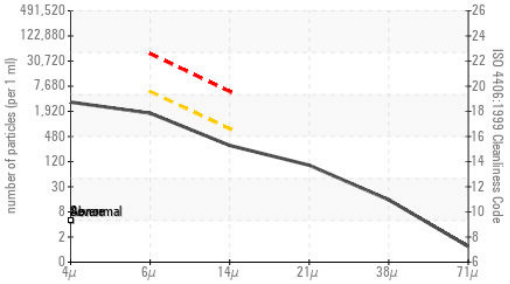
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

FLUID CONDITION

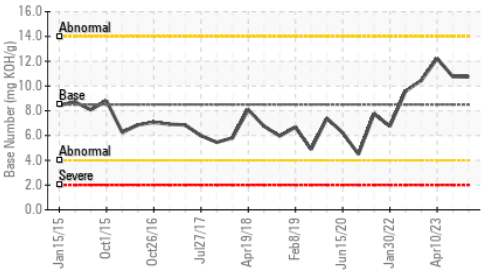
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0014022	KL0012058	KLM2339397
Sample Date		Client Info		30 Jan 2024	27 Jul 2023	10 Apr 2023
Machine Age	mls	Client Info		0	0	278744
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	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	ATTENTION	NORMAL
Iron	ppm	ASTM D5185m	>100	10	6	5
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	1	0
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	7	2	1
Tin	ppm	ASTM D5185m	>15	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	5	4	5
Potassium	ppm	ASTM D5185m	>20	4	1	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	0.5	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	7.9	6.5	6.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.6	19.1	19.6
Particles >4µm		ASTM D7647		2784	7438	2706
Particles >6µm		ASTM D7647	>5000	1517	4052	1474
Particles >14µm		ASTM D7647	>640	258	▲ 690	251
Particles >21µm		ASTM D7647	>160	87	▲ 232	84
Particles >38µm		ASTM D7647	>40	13	36	13
Particles >71µm		ASTM D7647	>10	1	4	1
Oil Cleanliness		ISO 4406 (c)	>19/16	18/15	▲ 19/17	18/15
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	>158	4	3	2
Boron	ppm	ASTM D5185m	250	48	97	107
Barium	ppm	ASTM D5185m	10	11	0	0
Molybdenum	ppm	ASTM D5185m	100	60	62	60
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	976	1100	1094
Calcium	ppm	ASTM D5185m	3000	924	1051	1003
Phosphorus	ppm	ASTM D5185m	1150	949	1083	1063
Zinc	ppm	ASTM D5185m	1350	1160	1308	1299
Sulfur	ppm	ASTM D5185m	4250	3477	4337	4332
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.6	14.8	14.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	10.73	10.76	12.21
Visc @ 100°C	cSt	ASTM D445	14.4	13.8	14.2	14.4

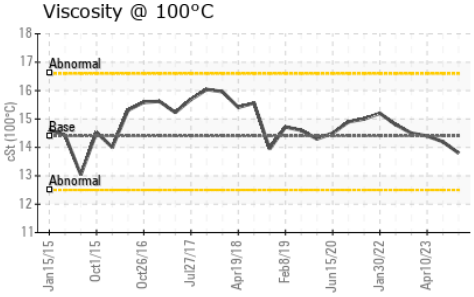
Particle Count



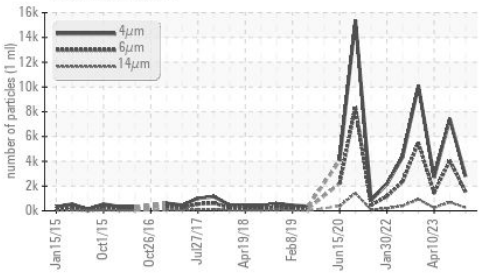
Base Number



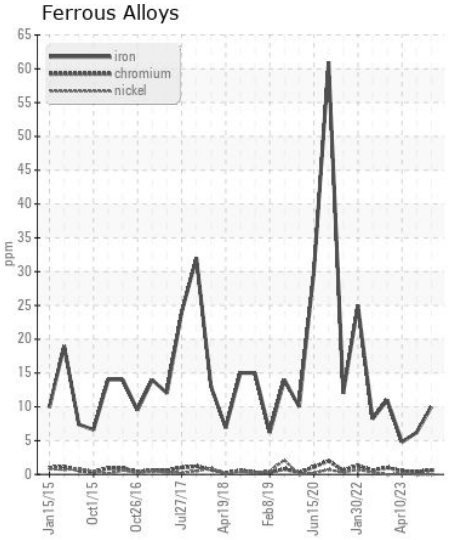
Viscosity @ 100°C



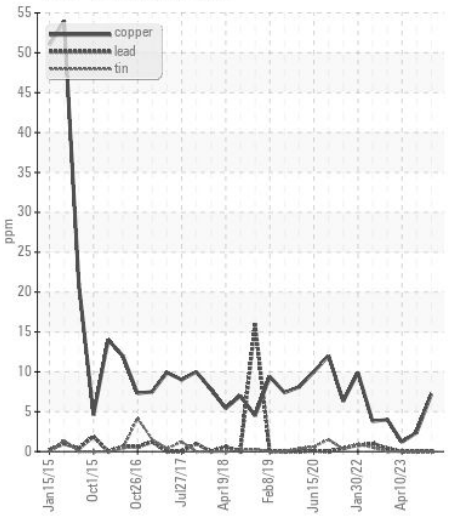
Particle Trend



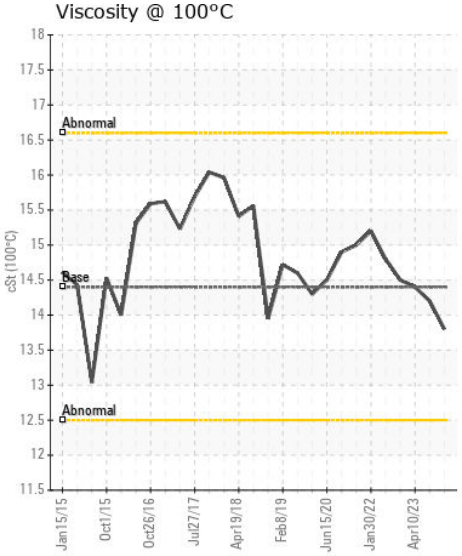
Ferrous Alloys



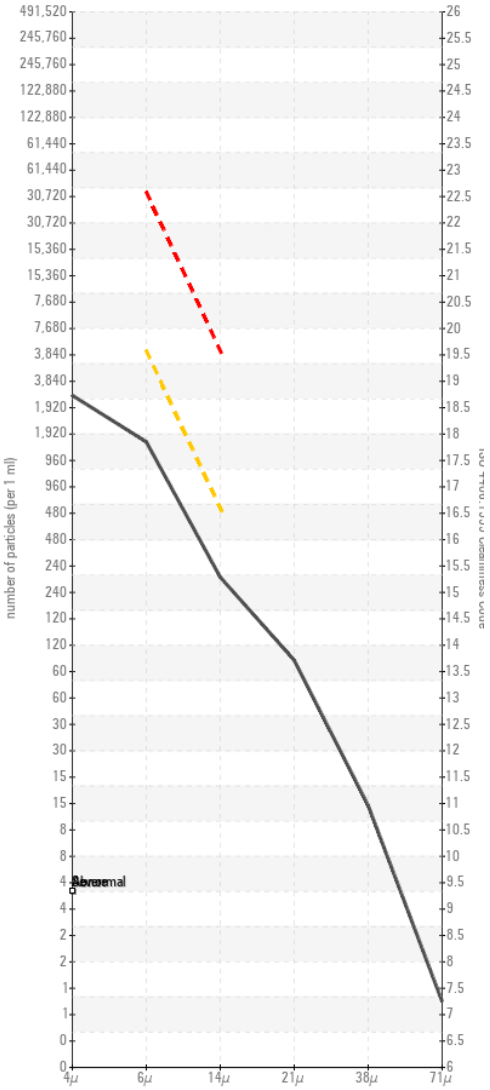
Non-ferrous Metals



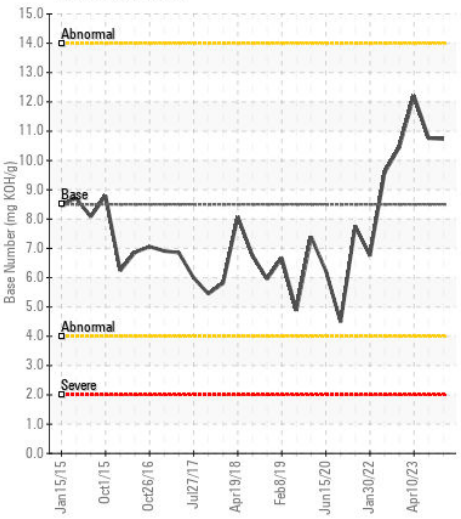
Viscosity @ 100°C



Particle Count



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0014022
Lab Number : 06089637
Unique Number : 10877082
Test Package : MOB 2 (Additional Tests: PrtCount)

Received : 14 Feb 2024
Tested : 16 Feb 2024
Diagnosed : 16 Feb 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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Submitted By: Mike Richardson