CONST

LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR LH50M 1216-109503
Component
Diesel Engine
Fluid
MOBIL DELVAC 1 5W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

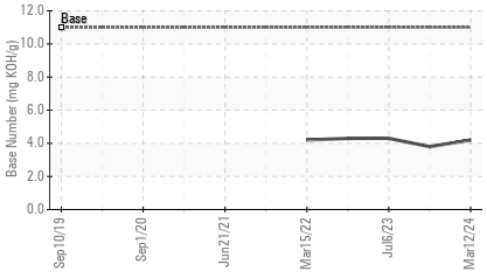
There is no indication of any contamination in the oil.

FLUID CONDITION

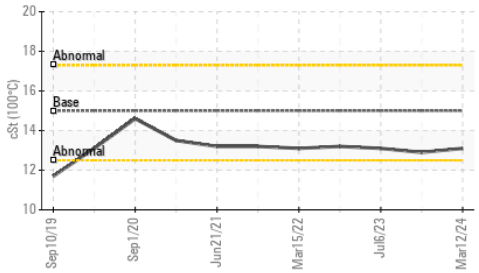
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LMMC162799	LHMC162800	LHMC162820
Sample Date		Client Info		12 Mar 2024	15 Sep 2023	06 Jul 2023
Machine Age	hrs	Client Info		7211	6608	5973
Oil Age	hrs	Client Info		601	634	574
Filter Age	hrs	Client Info		601	634	574
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	4	2	4
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>15	1	0	2
Lead	ppm	ASTM D5185m	>30	0	1	1
Copper	ppm	ASTM D5185m	>125	3	2	2
Tin	ppm	ASTM D5185m	>5	<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	>60	15	12	14
Potassium	ppm	ASTM D5185m	>20	0	<1	3
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	11.4	11.3	11.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	39.1	40.1	39.5
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		1	1	<1
Boron	ppm	ASTM D5185m	291	70	57	80
Barium	ppm	ASTM D5185m	0.0	0	0	1
Molybdenum	ppm	ASTM D5185m	8.0	45	45	47
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	624	863	916	951
Calcium	ppm	ASTM D5185m	2158	1016	1037	1064
Phosphorus	ppm	ASTM D5185m	1132	1016	1015	1066
Zinc	ppm	ASTM D5185m	1300	1211	1246	1332
Sulfur	ppm	ASTM D5185m	3616	3365	3621	3815
Oxidation	Abs/.1mm	*ASTM D7414	>25	47.5	49.3	48.0
Base Number (BN)	mg KOH/g	ASTM D2896	11.0	4.2	3.8	4.3
Visc @ 100°C	cSt	ASTM D445	15.0	13.1	12.9	13.1

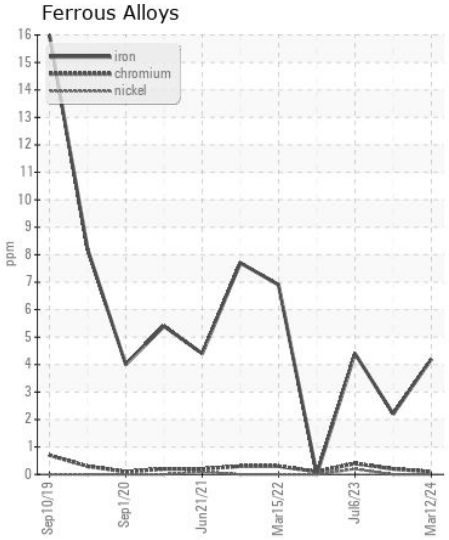
Base Number



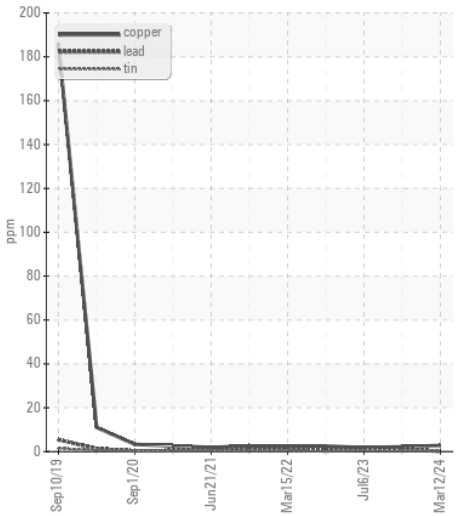
Viscosity @ 100°C



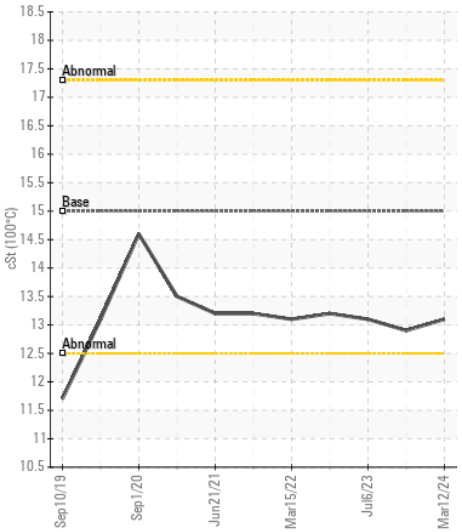
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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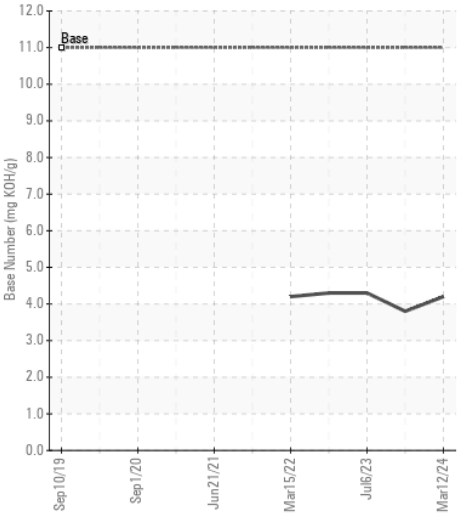

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LMMC162799
Lab Number : 06125563
Unique Number : 10939714
Test Package : CONST (Additional Tests: TBN)

Received : 21 Mar 2024
Tested : 22 Mar 2024
Diagnosed : 25 Mar 2024 - Don Baldridge

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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