CONST

LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR LH50M 1216-98638
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 5W40 (7 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

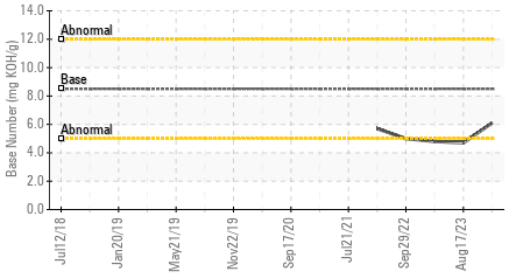
There is no indication of any contamination in the oil.

FLUID CONDITION

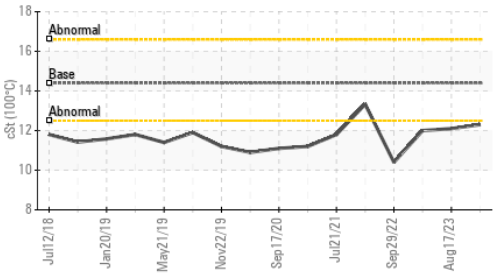
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0268267	LH0263932	LH0244986
Sample Date		Client Info		25 Jan 2024	17 Aug 2023	29 Mar 2023
Machine Age	hrs	Client Info		13406	12191	11277
Oil Age	hrs	Client Info		500	0	0
Filter Age	hrs	Client Info		500	0	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	3	7	9
Chromium	ppm	ASTM D5185m	>5	0	<1	0
Nickel	ppm	ASTM D5185m	>5	<1	0	0
Titanium	ppm	ASTM D5185m		87	63	76
Silver	ppm	ASTM D5185m	>3	<1	<1	0
Aluminum	ppm	ASTM D5185m	>15	2	1	1
Lead	ppm	ASTM D5185m	>30	<1	0	<1
Copper	ppm	ASTM D5185m	>125	0	3	1
Tin	ppm	ASTM D5185m	>5	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>60	8	8	10
Potassium	ppm	ASTM D5185m	>20	3	2	2
Fuel	%	ASTM D3524	>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	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	10.2	12.3	12.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.8	24.9	27.6
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	>44	3	2	2
Boron	ppm	ASTM D5185m	250	58	12	38
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	2	17	5
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	711	781	631
Calcium	ppm	ASTM D5185m	3000	1241	1237	1330
Phosphorus	ppm	ASTM D5185m	1150	943	948	860
Zinc	ppm	ASTM D5185m	1350	1166	1184	1128
Sulfur	ppm	ASTM D5185m	4250	3378	3749	3419
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.3	21.8	24.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.1	4.7	4.8
Visc @ 100°C	cSt	ASTM D445	14.4	12.3	12.1	12.0

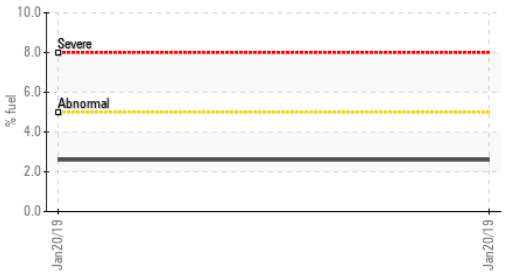
Base Number



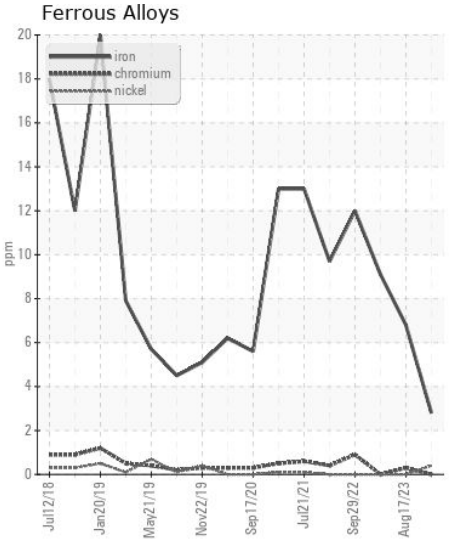
Viscosity @ 100°C



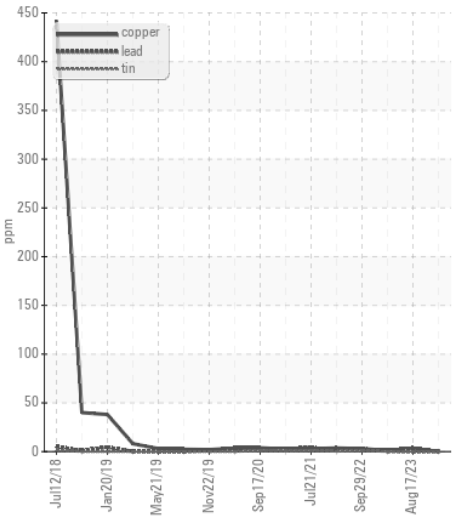
Fuel Dilution



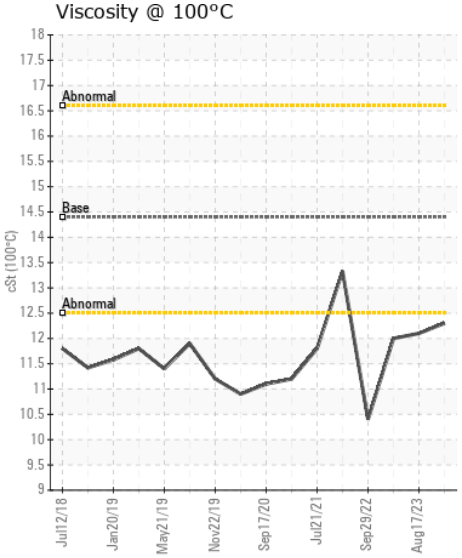
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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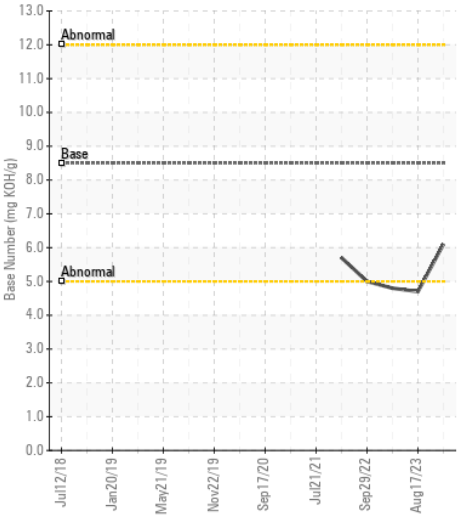

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0268267 **Recieved** : 30 Jan 2024
Lab Number : 06074309 **Diagnosed** : 31 Jan 2024
Unique Number : 10856400 **Diagnostician** : Sean Felton
Test Package : CONST (Additional Tests: FuelDilution, TBN)

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)

AMERICAN STATE EQUIPMENT CO.
2055 SOUTH 108TH STREET
MILWAUKEE, WI
US 53227
Contact: RAY SCHMIDT
RSCHMIDT@AMSTATE.COM
T: (414)234-0854
F: (414)541-1892