



# LIEBHERR

## OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**LIEBHERR LH30M 121854-1253**  
Component  
**Diesel Engine**  
Fluid  
**CHEVRON DELO LE 5W40 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0272748</b>	LH0272577	LH0263824
Sample Date		Client Info		<b>02 Jan 2024</b>	27 Oct 2023	08 Aug 2023
Machine Age	hrs	Client Info		<b>6976</b>	6481	6007
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>66	<b>4</b>	3	5
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>85</b>	80	72
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>8	<b>2</b>	1	<1
Lead	ppm	ASTM D5185m	>10	<b>&lt;1</b>	1	<1
Copper	ppm	ASTM D5185m	>74	<b>2</b>	2	3
Tin	ppm	ASTM D5185m	>4	<b>2</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>2</b>	1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

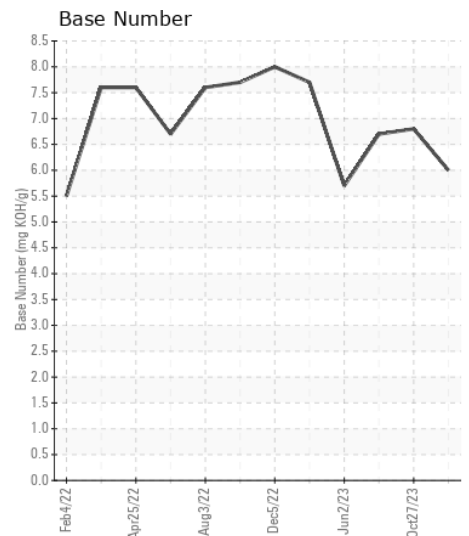
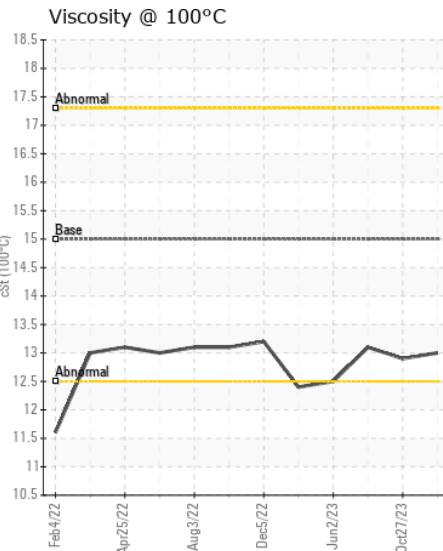
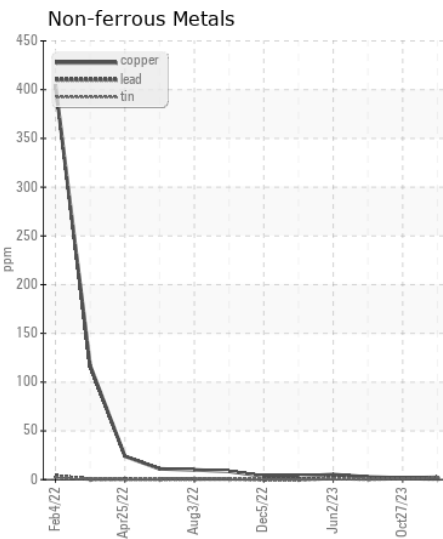
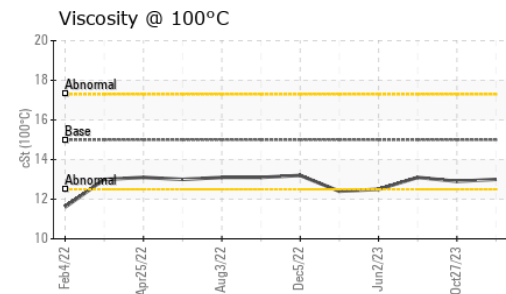
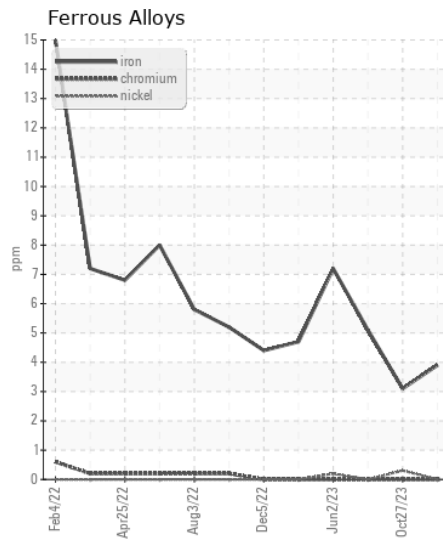
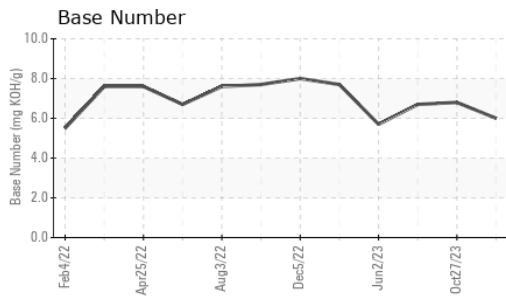
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>15	<b>8</b>	9	8
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	3	3
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.8</b>	9.0	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.1</b>	20.3	19.1
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

### 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.

Sodium	ppm	ASTM D5185m		<b>3</b>	1	2
Boron	ppm	ASTM D5185m	66	<b>101</b>	79	70
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	70	<b>6</b>	5	13
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1230	<b>712</b>	722	760
Calcium	ppm	ASTM D5185m	930	<b>1292</b>	1267	1383
Phosphorus	ppm	ASTM D5185m	1230	<b>967</b>	974	1002
Zinc	ppm	ASTM D5185m	1310	<b>1196</b>	1242	1239
Sulfur	ppm	ASTM D5185m	3460	<b>3550</b>	3669	4186
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.7</b>	14.8	14.1
Base Number (BN)	mg KOH/g	ASTM D2896		<b>6.0</b>	6.8	6.7
Visc @ 100°C	cSt	ASTM D445	15	<b>13.0</b>	12.9	13.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LH0272748 **Received** : 16 Jan 2024  
**Lab Number** : 06061846 **Diagnosed** : 17 Jan 2024  
**Unique Number** : 10833228 **Diagnostician** : Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

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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)