



# LIEBHERR

## OIL ANALYSIS REPORT

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

Machine Id  
**SENNEBOGEN 830E MS16**  
Component  
**Swing Drive**  
Fluid  
**GEAR OIL SAE 80W90 (--- GAL)**

### RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0244831</b>	LHMC79967	LHMC122825
Sample Date		Client Info		<b>16 Mar 2024</b>	07 Nov 2023	02 Aug 2023
Machine Age	hrs	Client Info		<b>7941</b>	7588	7131
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>Not Changed</b>	Not Changed	Not Changed
Filter Changed		Client Info		<b>Not Changed</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

### WEAR

The tin level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>400	<b>332</b>	▲ 778	▲ 674
Chromium	ppm	ASTM D5185m	>10	<b>3</b>	5	4
Nickel	ppm	ASTM D5185m	>10	<b>1</b>	2	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	<1	0
Lead	ppm	ASTM D5185m	>50	<b>1</b>	0	0
Copper	ppm	ASTM D5185m	>200	<b>107</b>	60	12
Tin	ppm	ASTM D5185m	>10	▲ <b>14</b>	▲ 25	▲ 19
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

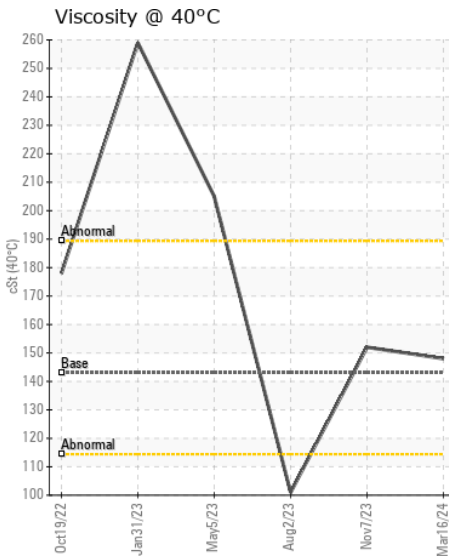
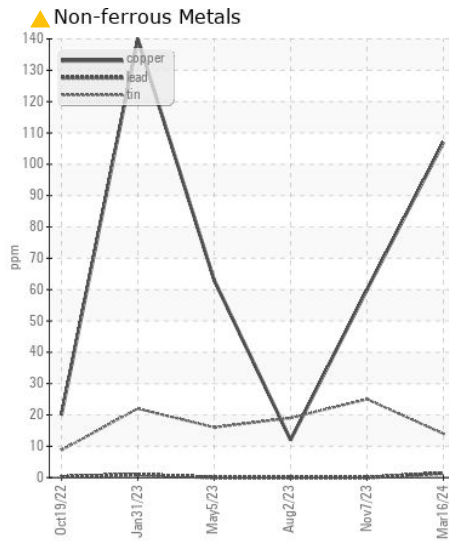
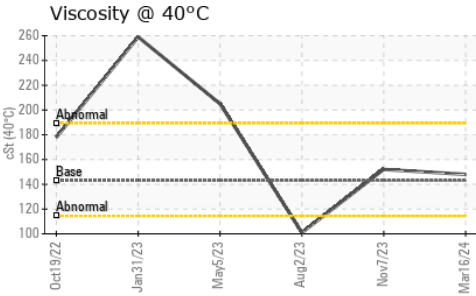
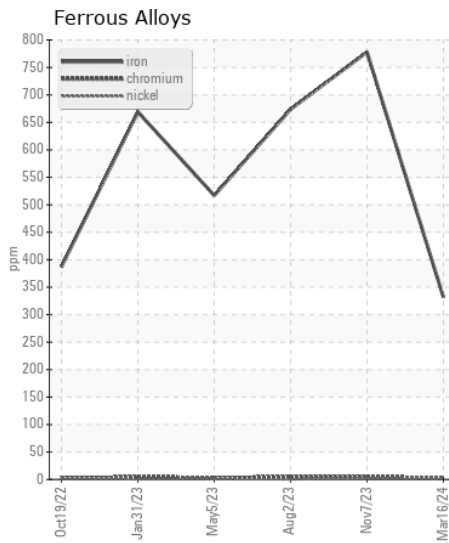
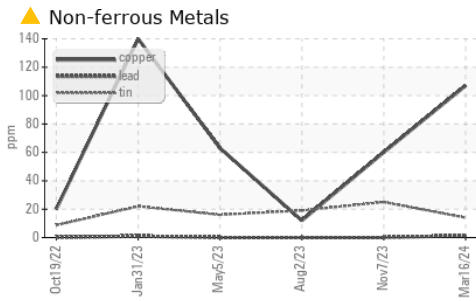
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	<b>5</b>	6	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	<1
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
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>	0.2%	NEG

### FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>170	<b>0</b>	2	<1
Boron	ppm	ASTM D5185m	400	<b>&lt;1</b>	12	2
Barium	ppm	ASTM D5185m	200	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	12	<b>1</b>	0	0
Manganese	ppm	ASTM D5185m		<b>4</b>	8	8
Magnesium	ppm	ASTM D5185m	12	<b>3</b>	3	2
Calcium	ppm	ASTM D5185m	150	<b>18</b>	186	4
Phosphorus	ppm	ASTM D5185m	1650	<b>484</b>	451	272
Zinc	ppm	ASTM D5185m	125	<b>24</b>	134	44
Sulfur	ppm	ASTM D5185m	22500	<b>34960</b>	5690	8445
Visc @ 40°C	cSt	ASTM D445	143	<b>148</b>	152	101



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LH0244831  
**Lab Number** : 06159926  
**Unique Number** : 10995349  
**Test Package** : CONST

**Received** : 24 Apr 2024  
**Tested** : 25 Apr 2024  
**Diagnosed** : 26 Apr 2024 - Sean Felton

**OSCAR WINSKI CO. INC**  
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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)