



# OIL ANALYSIS REPORT

WEAR  
CONTAMINATION  
FLUID CONDITION

**ATTENTION**  
**ABNORMAL**  
**NORMAL**

Machine Id  
**LIEBHERR 31226**  
Component  
**Right Final Drive**  
Fluid  
**GEAR OIL LS 80W90 (1 QTS)**

## RECOMMENDATION

We advise that you check all areas where dirt can enter the system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

## CONTAMINATION

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

## FLUID CONDITION

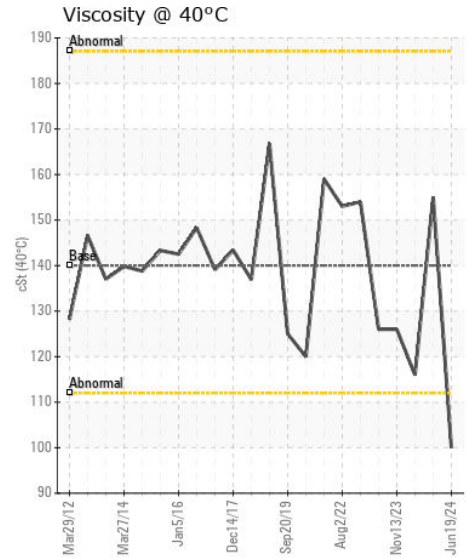
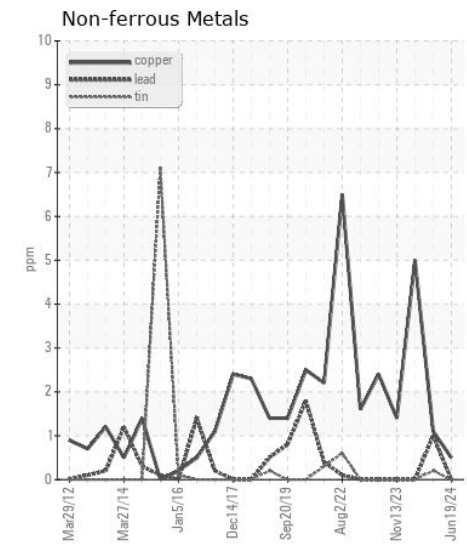
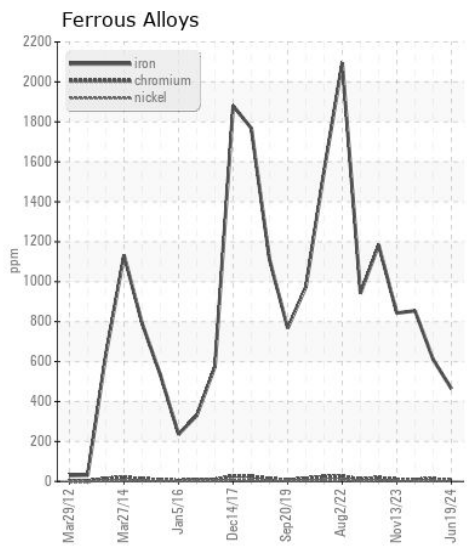
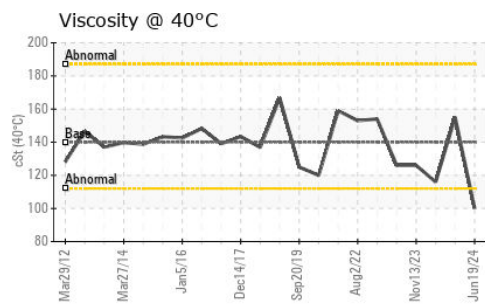
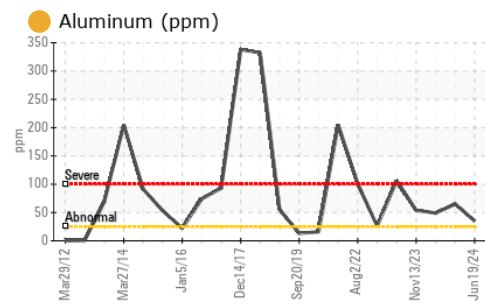
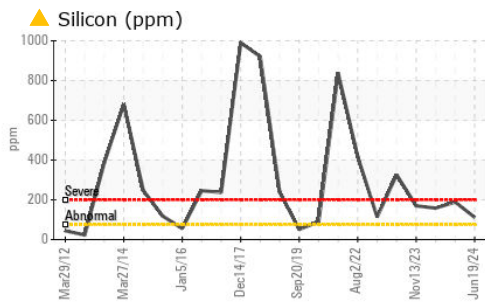
The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0950704</b>	WC0905138	WC0905353
Sample Date		Client Info		<b>19 Jun 2024</b>	04 Mar 2024	16 Feb 2024
Machine Age	hrs	Client Info		<b>12913</b>	12671	12652
Oil Age	hrs	Client Info		<b>750</b>	50	500
Filter Age	hrs	Client Info		<b>750</b>	0	500
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

Iron	ppm	ASTM D5185m	>500	<b>464</b>	▲ 610	▲ 854
Chromium	ppm	ASTM D5185m	>10	<b>7</b>	▲ 11	▲ 10
Nickel	ppm	ASTM D5185m	>10	<b>2</b>	3	2
Titanium	ppm	ASTM D5185m		<b>2</b>	4	2
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>35</b>	● 65	● 49
Lead	ppm	ASTM D5185m	>25	<b>0</b>	1	0
Copper	ppm	ASTM D5185m	>50	<b>&lt;1</b>	1	5
Tin	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

Silicon	ppm	ASTM D5185m	>75	▲ <b>112</b>	▲ 189	▲ 158
Potassium	ppm	ASTM D5185m	>20	<b>9</b>	16	14
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>LIGHT</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

Sodium	ppm	ASTM D5185m		<b>4</b>	9	0
Boron	ppm	ASTM D5185m	150	<b>115</b>	127	78
Barium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185m		<b>14</b>	7	11
Manganese	ppm	ASTM D5185m		<b>3</b>	6	6
Magnesium	ppm	ASTM D5185m	10	<b>73</b>	21	25
Calcium	ppm	ASTM D5185m	70	<b>182</b>	80	86
Phosphorus	ppm	ASTM D5185m	2000	<b>4046</b>	4721	2660
Zinc	ppm	ASTM D5185m	50	<b>186</b>	46	69
Sulfur	ppm	ASTM D5185m	20000	<b>16435</b>	42678	18119
Visc @ 40°C	cSt	ASTM D445	140	<b>100</b>	155	116



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0950704  
**Lab Number** : 06220095  
**Unique Number** : 11098292  
**Test Package** : CONST

**SULLIVAN EASTERN INC-LIEBHERR**  
 2860 C SLATER RD  
 MORRISVILLE, NC  
 US 27560  
 Contact: CHRIS CALTON

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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