



# OIL ANALYSIS REPORT

WEAR  
CONTAMINATION  
FLUID CONDITION

**ABNORMAL**  
**SEVERE**  
**NORMAL**

Machine Id  
**LIEBHERR 31250**

Component  
**Swing Drive**

Fluid  
**CHEVRON DELO GEAR ESI OIL 80W90 (--- GAL)**

## RECOMMENDATION

We advise that you check for the source of water entry. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

## WEAR

Gear wear is indicated.

## CONTAMINATION

There is a high concentration of water present in the oil.

## FLUID CONDITION

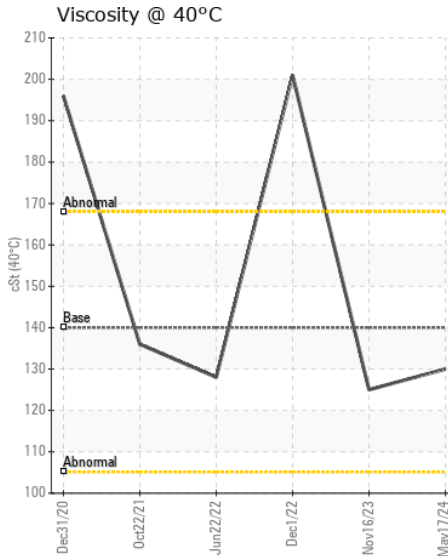
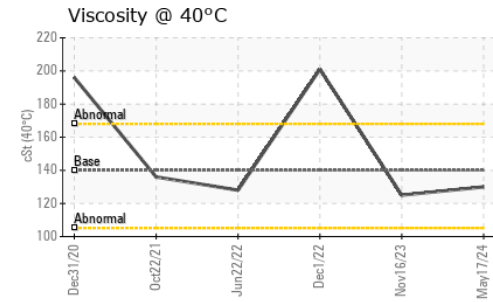
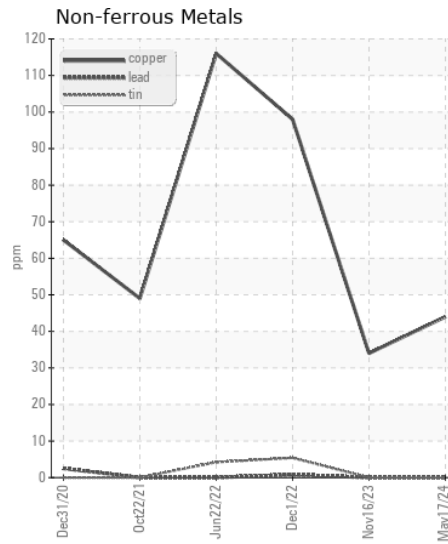
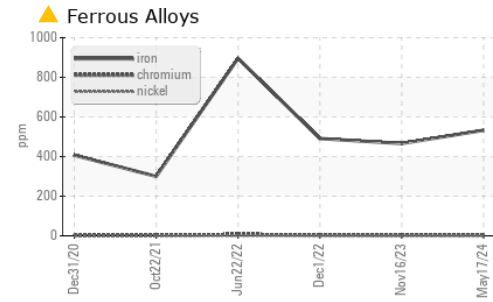
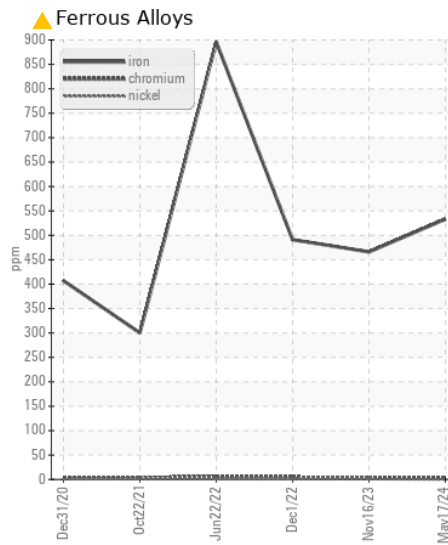
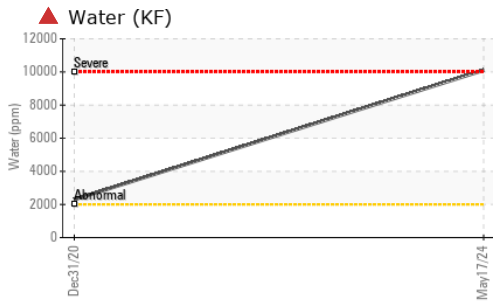
The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0924392</b>	WC0846326	WC0756518
Sample Date		Client Info		<b>17 May 2024</b>	16 Nov 2023	01 Dec 2022
Machine Age	hrs	Client Info		<b>4738</b>	4230	3141
Oil Age	hrs	Client Info		<b>2000</b>	250	900
Filter Age	hrs	Client Info		<b>2000</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	N/A
Sample Status				<b>SEVERE</b>	ABNORMAL	NORMAL

Iron	ppm	ASTM D5185m	>400	<b>▲ 533</b>	▲ 466	491
Chromium	ppm	ASTM D5185m	>10	<b>3</b>	3	4
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>0</b>	1	4
Lead	ppm	ASTM D5185m	>50	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>200	<b>44</b>	34	98
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	5
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	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	>50	<b>2</b>	2	4
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	0
Water	%	ASTM D6304	>0.2	<b>▲ 1.01</b>	---	---
ppm Water	ppm	ASTM D6304	>2000	<b>▲ 10100</b>	---	---
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>▲ 0.2%</b>	NEG	NEG

Sodium	ppm	ASTM D5185m		<b>0</b>	0	1
Boron	ppm	ASTM D5185m	15	<b>99</b>	175	35
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>10</b>	10	<1
Manganese	ppm	ASTM D5185m		<b>3</b>	3	4
Magnesium	ppm	ASTM D5185m	0	<b>12</b>	18	5
Calcium	ppm	ASTM D5185m	5	<b>228</b>	70	31
Phosphorus	ppm	ASTM D5185m	600	<b>1280</b>	1393	2132
Zinc	ppm	ASTM D5185m	0	<b>127</b>	55	20
Sulfur	ppm	ASTM D5185m	22000	<b>22323</b>	18701	25056
Visc @ 40°C	cSt	ASTM D445	140	<b>130</b>	125	201



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0924392  
**Lab Number** : 06186580  
**Unique Number** : 11043332  
**Test Package** : CONST ( Additional Tests: KF )

**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)

T: (919)484-2136  
 F: (919)484-2136