



# OIL ANALYSIS REPORT

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

Machine Id  
**ENGEL EN1000/03**  
 Component  
**Hydraulic System**  
 Fluid  
**SHELL TELLUS S2 M 46 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please note that this is a corrected copy for data entry updates.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TLC0001371</b>	TLC0001105	---
Sample Date		Client Info		<b>01 Feb 2024</b>	04 Dec 2023	---
Machine Age	hrs	Client Info		<b>0</b>	0	---
Oil Age	hrs	Client Info		<b>0</b>	0	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>N/A</b>	N/A	---
Filter Changed		Client Info		<b>N/A</b>	N/A	---
Sample Status				<b>NORMAL</b>	NORMAL	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	---
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Aluminum	ppm	ASTM D5185m	>10	<b>0</b>	0	---
Lead	ppm	ASTM D5185m	>10	<b>2</b>	0	---
Copper	ppm	ASTM D5185m	>75	<b>2</b>	3	---
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

## CONTAMINATION

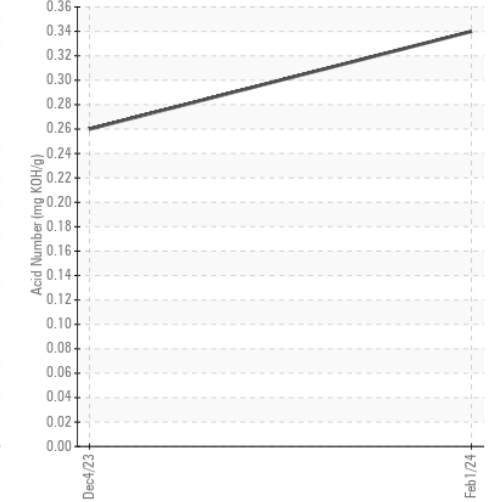
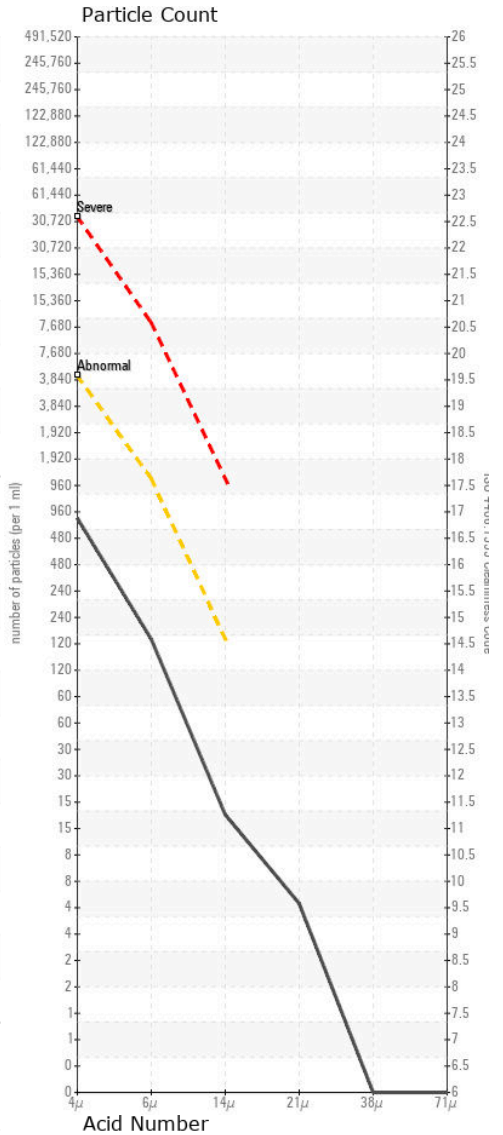
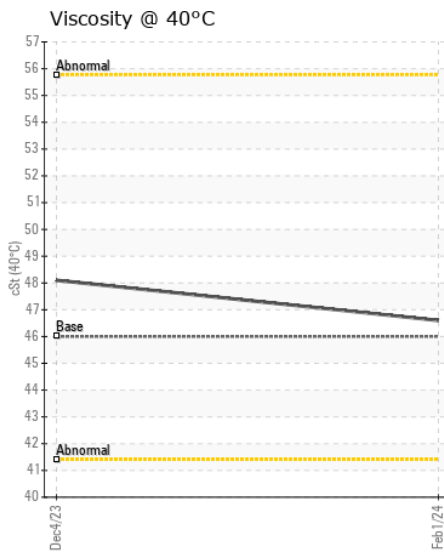
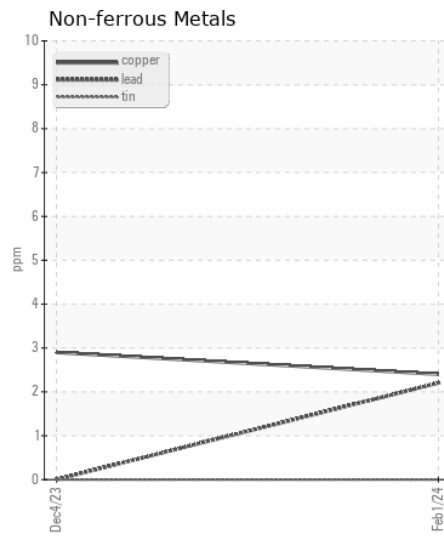
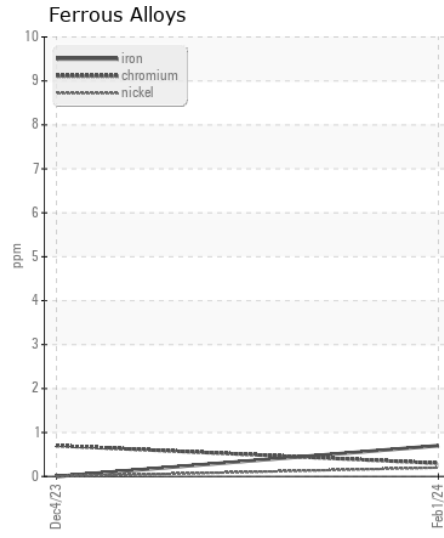
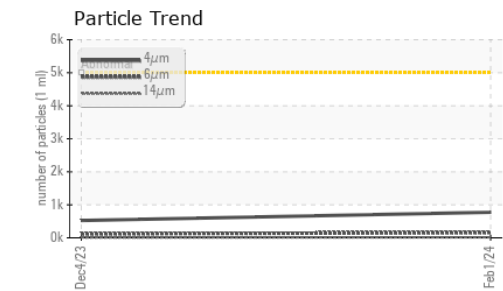
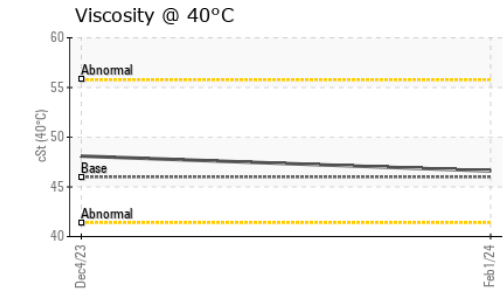
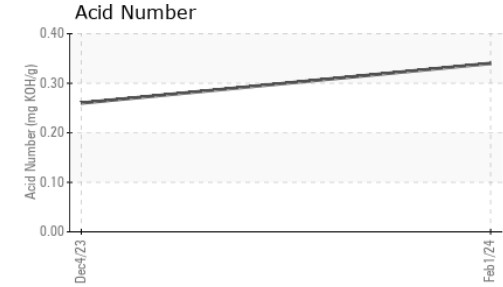
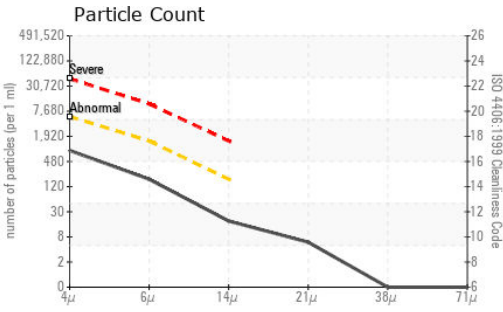
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>8</b>	0	---
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	---
Water	%	ASTM D6304	>0.1	<b>NEG</b>	NEG	---
Particles >4µm		ASTM D7647	>5000	<b>775</b>	525	---
Particles >6µm		ASTM D7647	>1300	<b>159</b>	117	---
Particles >14µm		ASTM D7647	>160	<b>16</b>	10	---
Particles >21µm		ASTM D7647	>40	<b>5</b>	2	---
Particles >38µm		ASTM D7647	>10	<b>0</b>	0	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>17/14/11</b>	16/14/10	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	---

## FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	2	---
Boron	ppm	ASTM D5185m		<b>0</b>	0	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m		<b>34</b>	10	---
Calcium	ppm	ASTM D5185m		<b>26</b>	41	---
Phosphorus	ppm	ASTM D5185m		<b>279</b>	252	---
Zinc	ppm	ASTM D5185m		<b>358</b>	299	---
Sulfur	ppm	ASTM D5185m		<b>1126</b>	2436	---
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.34</b>	0.26	---
Visc @ 40°C	cSt	ASTM D445	46.0	<b>46.6</b>	48.1	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TLC0001371 **Received** : 21 May 2024  
**Lab Number** : 06186686 **Tested** : 23 May 2024  
**Unique Number** : 11043438 **Diagnosed** : 30 May 2024 - Doug Bogart  
**Test Package** : PLANT

**WIRTHWEIN**  
 800 WOODSIDE AVE  
 FOUNTAIN INN, SC  
 US 29644  
 Contact: Service Manager

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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F: