



# CONSTRUCTION EQUIPMENT

## 3589BR JG ENVIRON VOLVO ECR235E 311390 - HYDRAULIC SYSTEM



**Sample No:** VCP349902  
**Oil Type:** VOLVO SUPER HYDRAULIC OIL 46  
**Job No:** 3589BR JG ENVIRON



### SAMPLE INFORMATION

Sample Number	<b>VCP349902</b>	VCP426548	VCP311936	---
Sample Date	<b>11 Jan 2024</b>	11 May 2023	04 Aug 2021	---
Machine Hours	<b>3651</b>	3836	1069	---
Oil Hours	<b>3651</b>	0	0	---
Oil Changed	<b>Not Chngd</b>	Changed	Not Chngd	---
Sample Status	<b>ABNORMAL</b>	ATTENTION	NORMAL	---

**HIGHWAY EQUIPMENT AND SUPPLY CO**  
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### OIL CONDITION

Visc @ 40°C	cSt	<b>45.3</b>	42.5	44.7	---
Acid Number (AN)	mg KOH/g	<b>0.37</b>	0.57	0.590	---



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Particles >4µm		<b>▲ 138521</b>	▲ 64383	■ 11477	---
Particles >6µm		<b>▲ 38277</b>	▲ 15450	■ 2511	---
Particles >14µm		<b>■ 484</b>	■ 815	■ 141	---
ISO 4406:1999 (c)		<b>24/22/16</b>	23/21/17	21/19/14	---
Silicon	ppm	<b>■ 8</b>	■ 3	■ 2	---
Sodium	ppm	<b>■ 11</b>	■ 2	■ <1	---
Potassium	ppm	<b>■ 2</b>	■ <1	■ 0	---

### Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. The chromium level is abnormal. All other component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



### WEAR METALS

Iron	ppm	<b>■ 2</b>	■ 6	■ 4	---
Copper	ppm	<b>■ 16</b>	■ 20	■ 21	---
Lead	ppm	<b>■ &lt;1</b>	■ 0	■ <1	---
Tin	ppm	<b>■ 0</b>	■ 0	■ <1	---
Aluminum	ppm	<b>■ 3</b>	■ 4	■ <1	---
Chromium	ppm	<b>▲ 13</b>	■ 5	■ <1	---
Molybdenum	ppm	<b>■ 0</b>	■ <1	■ <1	---
Nickel	ppm	<b>■ 0</b>	■ 0	■ 0	---
Titanium	ppm	<b>5</b>	2	0	---
Silver	ppm	<b>0</b>	0	<1	---
Manganese	ppm	<b>■ 0</b>	■ <1	■ <1	---
Vanadium	ppm	<b>0</b>	0	0	---



### ADDITIVES

Calcium	ppm	<b>■ 109</b>	■ 125	■ 123	---
Magnesium	ppm	<b>■ 4</b>	■ 5	■ 3	---
Zinc	ppm	<b>■ 468</b>	■ 598	■ 630	---
Phosphorus	ppm	<b>■ 385</b>	■ 471	■ 484	---
Barium	ppm	<b>■ 0</b>	■ 0	■ 0	---
Boron	ppm	<b>■ 0</b>	■ <1	■ 5	---

**Depot:** INSEPH  
**Unique No:** 10861823  
**Signed:** Jonathan Hester  
**Report Date:** 07 Feb 2024

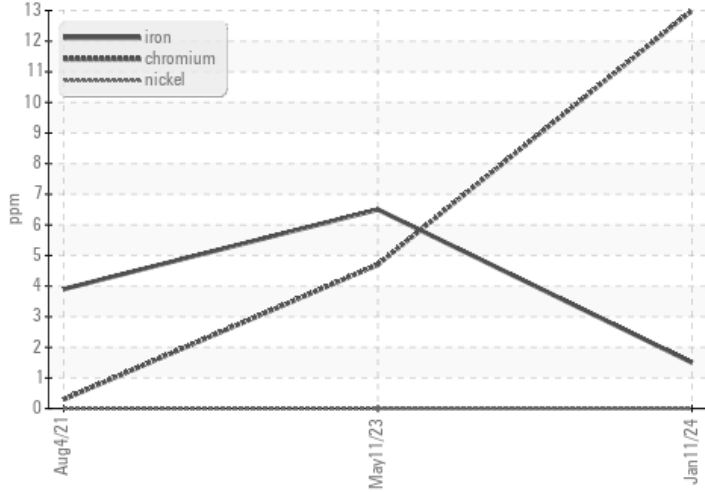


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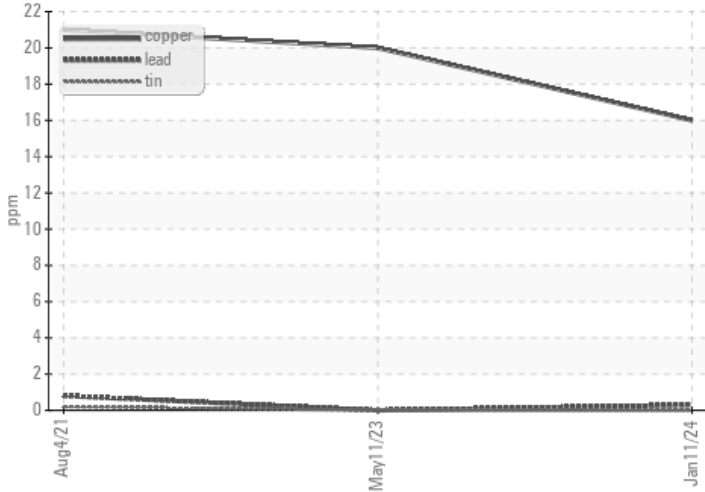


## GRAPHS

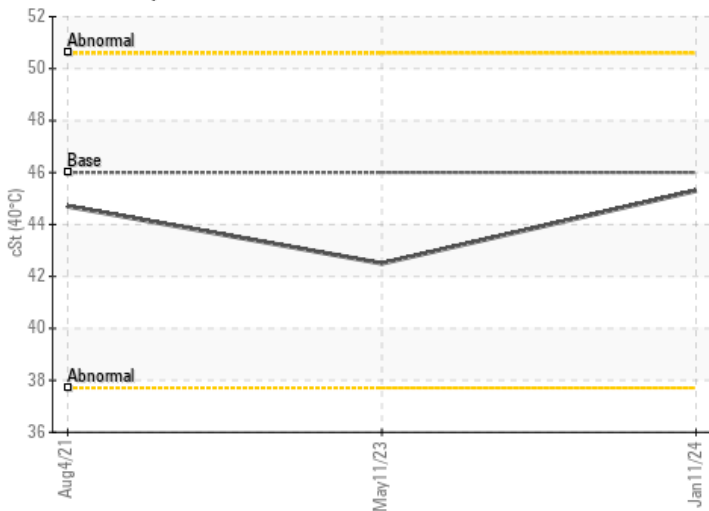
### ▲ Ferrous Alloys



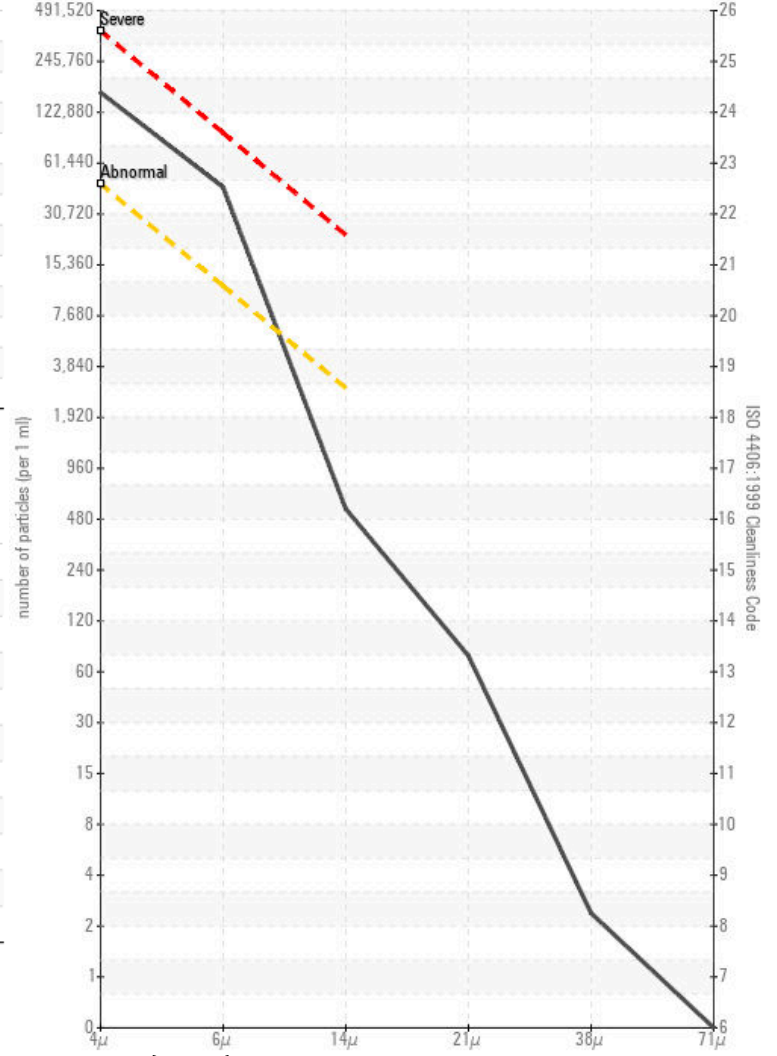
### Non-ferrous Metals



### Viscosity @ 40°C



### ▲ Particle Count



### Acid Number

