



# CONSTRUCTION EQUIPMENT

## 9848 VOLVO ECR145 315091 - HYDRAULIC SYSTEM



**Sample No:** VCP437460  
**Oil Type:** VOLVO SUPER HYDRAULIC OIL 46  
**Job No:** 9848



### SAMPLE INFORMATION

|               |                    |             |             |             |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | <b>VCP437460</b>   | VCP427184   | VCP406581   | VCP366206   |
| Sample Date   | <b>10 Jan 2024</b> | 04 Aug 2023 | 10 Apr 2023 | 21 Sep 2022 |
| Machine Hours | <b>2869</b>        | 2365        | 1864        | 1394        |
| Oil Hours     | <b>0</b>           | 0           | 0           | 0           |
| Oil Changed   | <b>Not Chngd</b>   | Not Chngd   | Changed     | Not Chngd   |
| Sample Status | <b>NORMAL</b>      | NORMAL      | NORMAL      | NORMAL      |

**JON M HALL COMPANY**  
 1920 BOOTHE CIRCLE SUITE 110  
 LONGWOOD, FL  
 US 32750  
 Contact: SERVICE MANAGER



### OIL CONDITION

|                  |          |             |      |      |      |
|------------------|----------|-------------|------|------|------|
| Visc @ 40°C      | cSt      | <b>42.1</b> | 42.1 | 42.5 | 42.9 |
| Acid Number (AN) | mg KOH/g | <b>0.51</b> | 0.48 | 0.52 | 0.50 |

T: (407)215-0410  
 F:



### CONTAMINATION

|                   |     |                 |          |          |          |
|-------------------|-----|-----------------|----------|----------|----------|
| Water             | %   | <b>NEG</b>      | NEG      | NEG      | NEG      |
| Particles >4µm    |     | <b>20335</b>    | 2763     | 928      | 469      |
| Particles >6µm    |     | <b>7323</b>     | 361      | 316      | 79       |
| Particles >14µm   |     | <b>1044</b>     | 13       | 46       | 8        |
| ISO 4406:1999 (c) |     | <b>22/20/17</b> | 19/16/11 | 17/15/13 | 16/13/10 |
| Silicon           | ppm | <b>6</b>        | 5        | 7        | 7        |
| Sodium            | ppm | <b>1</b>        | 1        | 1        | 0        |
| Potassium         | ppm | <b>0</b>        | 0        | 1        | <1       |

**Diagnosis**  
 Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



### WEAR METALS

|            |     |           |    |    |    |
|------------|-----|-----------|----|----|----|
| Iron       | ppm | <b>3</b>  | 2  | 1  | 2  |
| Copper     | ppm | <b>16</b> | 15 | 22 | 23 |
| Lead       | ppm | <b>0</b>  | 0  | 0  | <1 |
| Tin        | ppm | <b>0</b>  | 0  | 0  | 0  |
| Aluminum   | ppm | <b>0</b>  | <1 | 0  | <1 |
| Chromium   | ppm | <b>0</b>  | 0  | 0  | 0  |
| Molybdenum | ppm | <b>0</b>  | 0  | 0  | 0  |
| Nickel     | ppm | <b>0</b>  | 0  | 0  | 0  |
| Titanium   | ppm | <b>0</b>  | 0  | 0  | 0  |
| Silver     | ppm | <b>0</b>  | 0  | 0  | 0  |
| Manganese  | ppm | <b>0</b>  | 0  | <1 | 0  |
| Vanadium   | ppm | <b>0</b>  | <1 | 0  | 0  |



### ADDITIVES

|            |     |            |     |     |     |
|------------|-----|------------|-----|-----|-----|
| Calcium    | ppm | <b>50</b>  | 64  | 62  | 70  |
| Magnesium  | ppm | <b>0</b>   | 1   | 2   | 0   |
| Zinc       | ppm | <b>431</b> | 467 | 466 | 482 |
| Phosphorus | ppm | <b>355</b> | 396 | 390 | 356 |
| Barium     | ppm | <b>0</b>   | 0   | 0   | 0   |
| Boron      | ppm | <b>0</b>   | 0   | 0   | 0   |

**Depot:** JONLON  
**Unique No:** 10832360  
**Signed:** Jonathan Hester  
**Report Date:** 17 Jan 2024

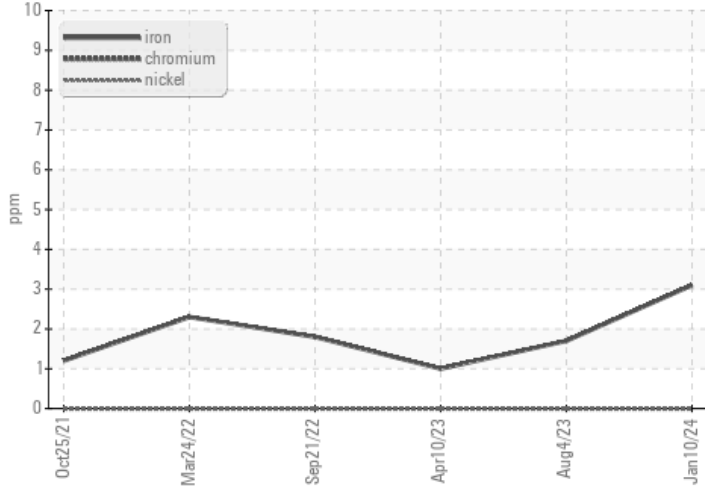


# CONSTRUCTION EQUIPMENT

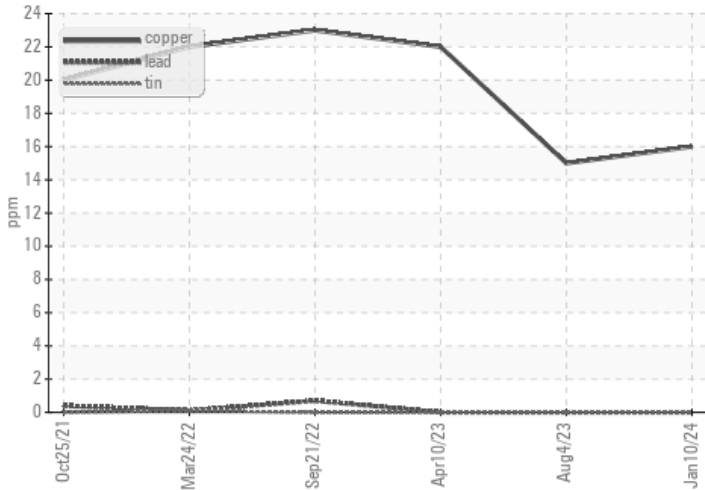


## VOLVO GRAPHS

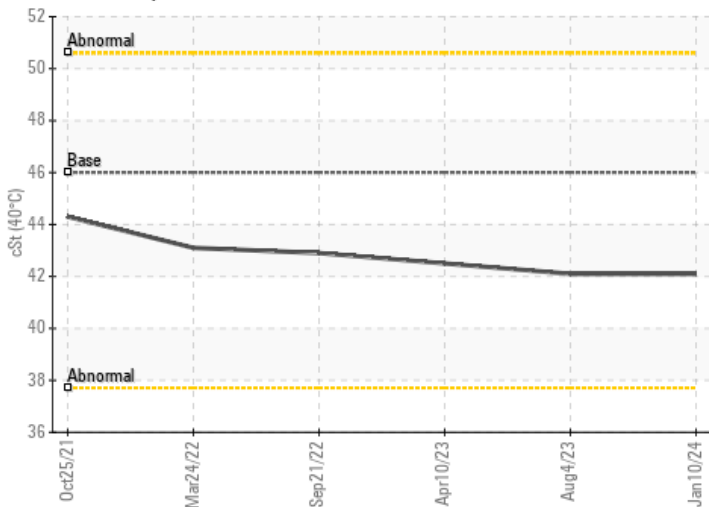
### Ferrous Alloys



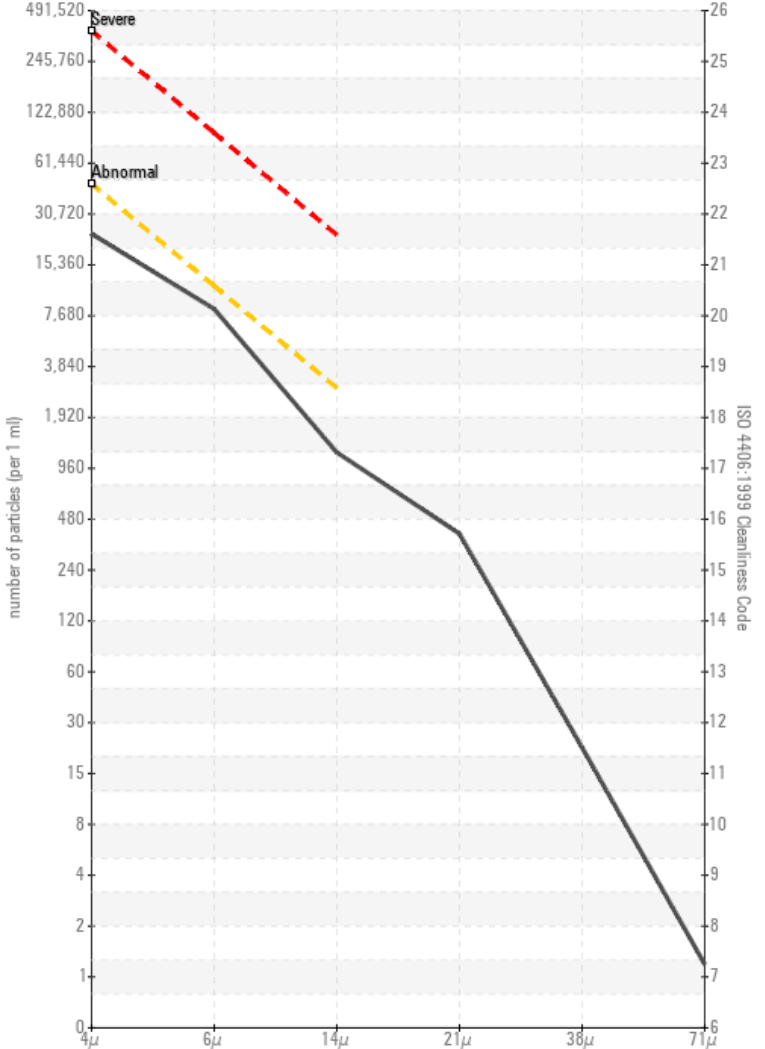
### Non-ferrous Metals



### Viscosity @ 40°C



### Particle Count



### Acid Number

