



# CONSTRUCTION EQUIPMENT

## VOLVO A45G 352071 - HYDRAULIC SYSTEM



**Sample No:** VCP431891  
**Oil Type:** AW HYDRAULIC OIL ISO 46  
**Job No:**



### SAMPLE INFORMATION

|               |                    |             |             |             |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | <b>VCP431891</b>   | VCP427479   | VCP413109   | VCP382590   |
| Sample Date   | <b>30 Oct 2023</b> | 09 Oct 2023 | 12 Jul 2023 | 12 Apr 2023 |
| Machine Hours | <b>7148</b>        | 7028        | 6523        | 6049        |
| Oil Hours     | <b>0</b>           | 0           | 0           | 0           |
| Oil Changed   | <b>Changed</b>     | Not Changd  | Changed     | Not Changd  |
| Sample Status | <b>NORMAL</b>      | ABNORMAL    | NORMAL      | NORMAL      |

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### OIL CONDITION

|                  |          |             |      |      |      |
|------------------|----------|-------------|------|------|------|
| Visc @ 40°C      | cSt      | <b>43.8</b> | 42.0 | 43.2 | 44.8 |
| Acid Number (AN) | mg KOH/g | <b>0.74</b> | 0.75 | 0.38 | 0.44 |

### CONTAMINATION

|                   |     |                 |          |          |          |
|-------------------|-----|-----------------|----------|----------|----------|
| Particles >4µm    |     | <b>1179</b>     | 17267    | 1229     | 4721     |
| Particles >6µm    |     | <b>134</b>      | 6929     | 104      | 995      |
| Particles >14µm   |     | <b>10</b>       | 821      | 8        | 52       |
| ISO 4406:1999 (c) |     | <b>17/14/10</b> | 21/20/17 | 17/14/10 | 19/17/13 |
| Silicon           | ppm | <b>3</b>        | 4        | 4        | 3        |
| Sodium            | ppm | <b>0</b>        | 2        | 0        | 1        |
| Potassium         | ppm | <b>1</b>        | 2        | <1       | 0        |

**Diagnosis**  
 Resample at the next service interval to monitor. All component wear rates are normal. The amount and size of particulates present in the system are acceptable. There is no indication of any contamination 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>6</b>     | 4  | 9  | 7  |
| Copper     | ppm | <b>2</b>     | 2  | 3  | 4  |
| Lead       | ppm | <b>2</b>     | 3  | 2  | 0  |
| Tin        | ppm | <b>0</b>     | <1 | <1 | 0  |
| Aluminum   | ppm | <b>&lt;1</b> | 1  | <1 | <1 |
| Chromium   | ppm | <b>&lt;1</b> | <1 | 1  | 4  |
| Molybdenum | ppm | <b>1</b>     | <1 | <1 | <1 |
| Nickel     | ppm | <b>0</b>     | <1 | 0  | 0  |
| Titanium   | ppm | <b>0</b>     | 0  | 0  | 0  |
| Silver     | ppm | <b>0</b>     | 0  | 0  | 0  |
| Manganese  | ppm | <b>0</b>     | <1 | 0  | <1 |
| Vanadium   | ppm | <b>0</b>     | 0  | 0  | 0  |

### ADDITIVES

|            |     |            |     |     |     |
|------------|-----|------------|-----|-----|-----|
| Calcium    | ppm | <b>66</b>  | 91  | 86  | 99  |
| Magnesium  | ppm | <b>218</b> | 249 | 10  | 15  |
| Zinc       | ppm | <b>682</b> | 798 | 461 | 532 |
| Phosphorus | ppm | <b>547</b> | 616 | 346 | 394 |
| Barium     | ppm | <b>7</b>   | 0   | 2   | 0   |
| Boron      | ppm | <b>0</b>   | <1  | 0   | 0   |

**Depot:** SAIBIR  
**Unique No:** 10743355  
**Signed:** Don Baldrige  
**Report Date:** 19 Nov 2023

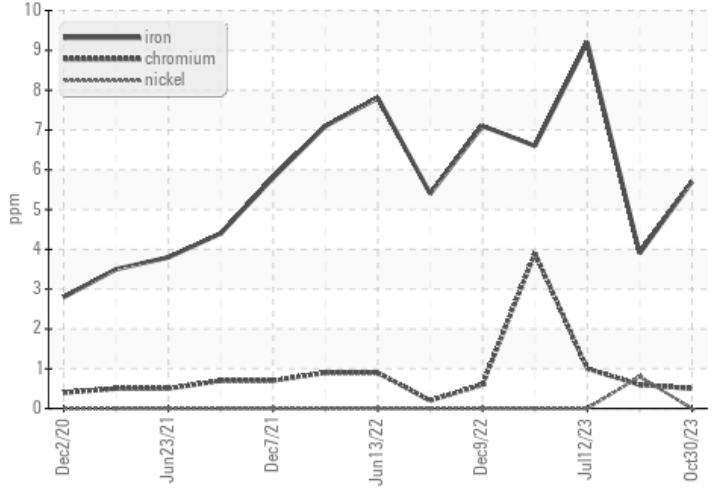


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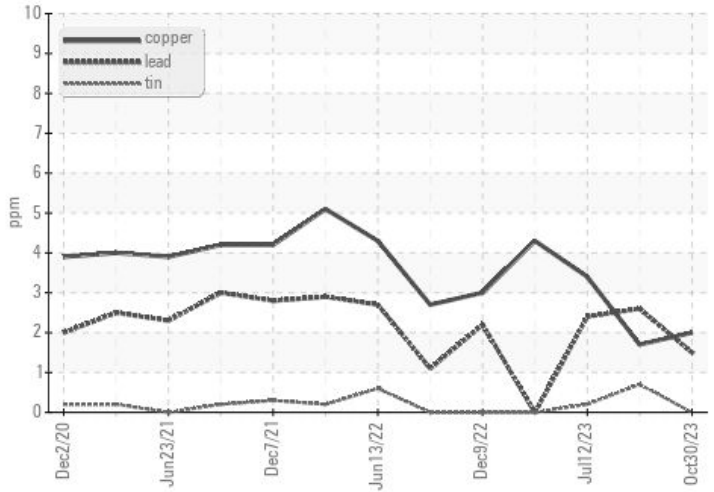


## GRAPHS

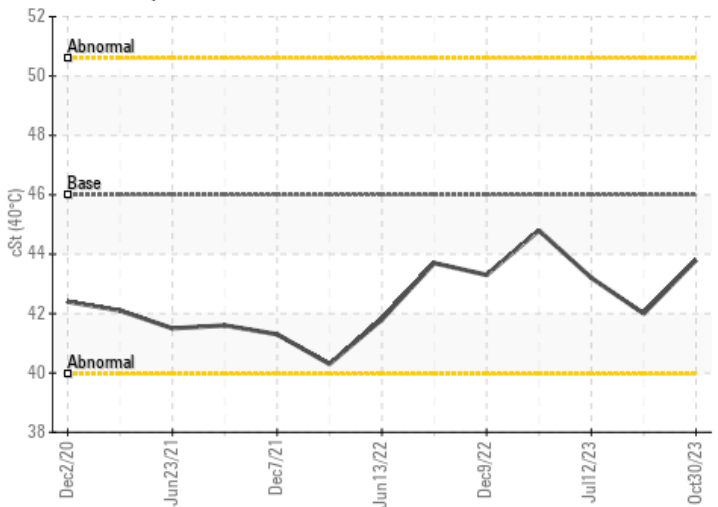
### Ferrous Alloys



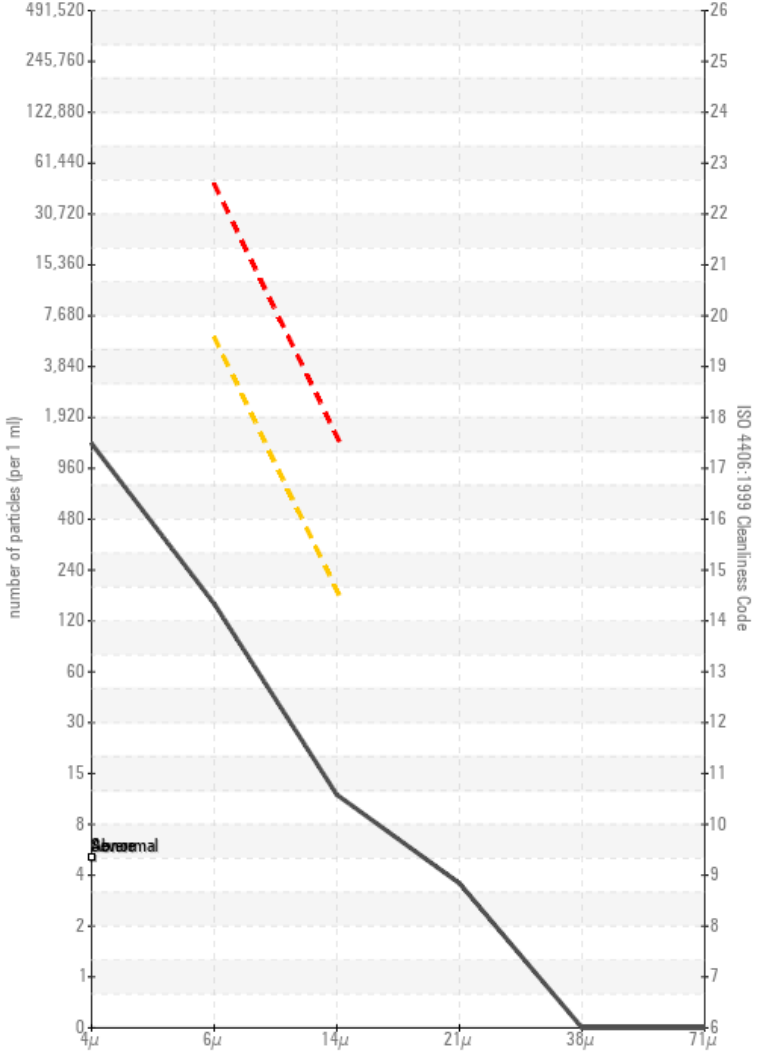
### Non-ferrous Metals



### Viscosity @ 40°C



### Particle Count



### Acid Number

