



# CONSTRUCTION EQUIPMENT

## SWO-063645 APAC/MIDS VOLVO L180H 5494 - HYDRAULIC SYSTEM



**Sample No:** VCP424592  
**Oil Type:** AW HYDRAULIC OIL ISO 46  
**Job No:** SWO-063645 APAC/MIDS



### SAMPLE INFORMATION

|               |                    |             |             |             |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | <b>VCP424592</b>   | VCP410121   | VCP369027   | VCP365467   |
| Sample Date   | <b>07 Jul 2023</b> | 03 Apr 2023 | 10 Nov 2022 | 25 Aug 2022 |
| Machine Hours | <b>3620</b>        | 3078        | 2519        | 3182        |
| Oil Hours     | <b>0</b>           | 0           | 0           | 0           |
| Oil Changed   | <b>Not Chngd</b>   | Not Chngd   | Not Chngd   | Not Chngd   |
| Sample Status | <b>ABNORMAL</b>    | ATTENTION   | ABNORMAL    | ABNORMAL    |

### COWIN EQUIPMENT COMPANY

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### OIL CONDITION

|                  |          |             |      |      |      |
|------------------|----------|-------------|------|------|------|
| Visc @ 40°C      | cSt      | <b>47.0</b> | 43.0 | 43.8 | 43.9 |
| Acid Number (AN) | mg KOH/g | <b>0.54</b> | 0.32 | 0.34 | 0.33 |



### CONTAMINATION

|                   |     |                 |          |          |          |
|-------------------|-----|-----------------|----------|----------|----------|
| Particles >4µm    |     | <b>16852</b>    | 5700     | 12819    | 31247    |
| Particles >6µm    |     | <b>4920</b>     | 722      | 3138     | 5737     |
| Particles >14µm   |     | <b>195</b>      | 13       | 232      | 183      |
| ISO 4406:1999 (c) |     | <b>21/19/15</b> | 20/17/11 | 21/19/15 | 22/20/15 |
| Silicon           | ppm | <b>&lt;1</b>    | 3        | 2        | 2        |
| Sodium            | ppm | <b>&lt;1</b>    | 0        | 0        | <1       |
| Potassium         | ppm | <b>&lt;1</b>    | 1        | 2        | 0        |



### WEAR METALS

|            |     |              |    |    |    |
|------------|-----|--------------|----|----|----|
| Iron       | ppm | <b>0</b>     | 3  | 2  | 1  |
| Copper     | ppm | <b>0</b>     | 3  | 3  | 2  |
| Lead       | ppm | <b>0</b>     | 2  | 2  | <1 |
| Tin        | ppm | <b>0</b>     | 0  | <1 | 0  |
| Aluminum   | ppm | <b>0</b>     | 0  | 1  | <1 |
| Chromium   | ppm | <b>&lt;1</b> | <1 | <1 | <1 |
| Molybdenum | ppm | <b>2</b>     | <1 | 0  | 0  |
| Nickel     | ppm | <b>0</b>     | 0  | 0  | 0  |
| Titanium   | ppm | <b>0</b>     | 0  | 0  | 0  |
| Silver     | ppm | <b>0</b>     | 0  | 2  | 0  |
| Manganese  | ppm | <b>&lt;1</b> | 0  | 0  | 0  |
| Vanadium   | ppm | <b>&lt;1</b> | 0  | 0  | 0  |



### ADDITIVES

|            |     |            |     |     |     |
|------------|-----|------------|-----|-----|-----|
| Calcium    | ppm | <b>175</b> | 71  | 58  | 53  |
| Magnesium  | ppm | <b>27</b>  | 2   | 2   | 0   |
| Zinc       | ppm | <b>472</b> | 443 | 453 | 438 |
| Phosphorus | ppm | <b>376</b> | 322 | 332 | 339 |
| Barium     | ppm | <b>0</b>   | 0   | 0   | <1  |
| Boron      | ppm | <b>3</b>   | 0   | <1  | 0   |

### Diagnosis

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

**Depot:** VOLVO8528  
**Unique No:** 10559875  
**Signed:** Wes Davis  
**Report Date:** 17 Jul 2023

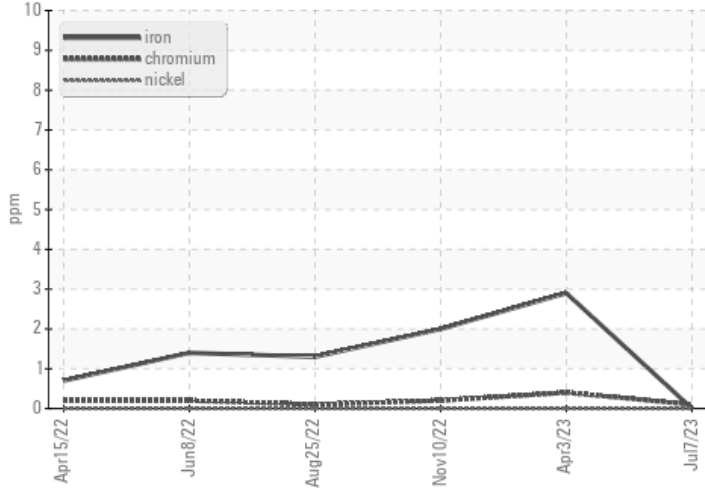


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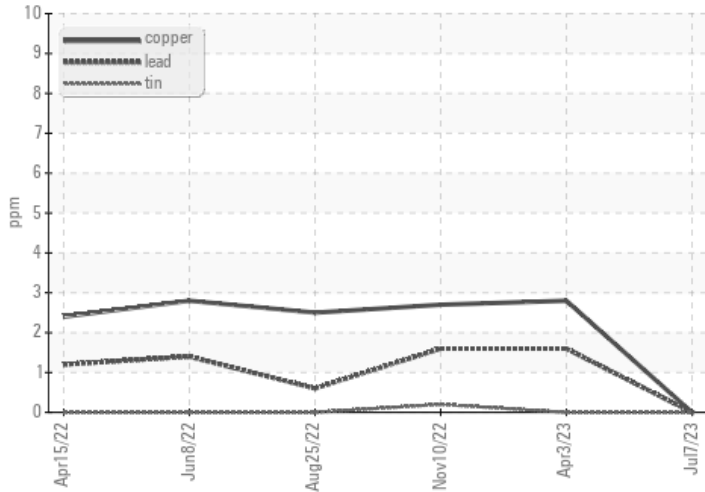


## VOLVO GRAPHS

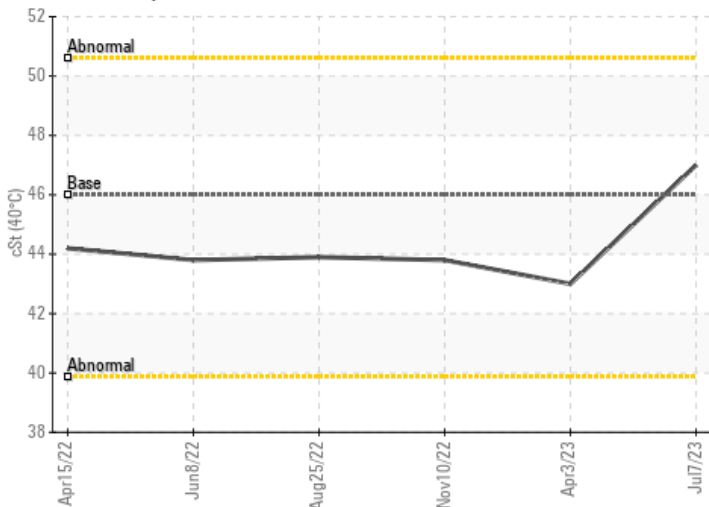
### Ferrous Alloys



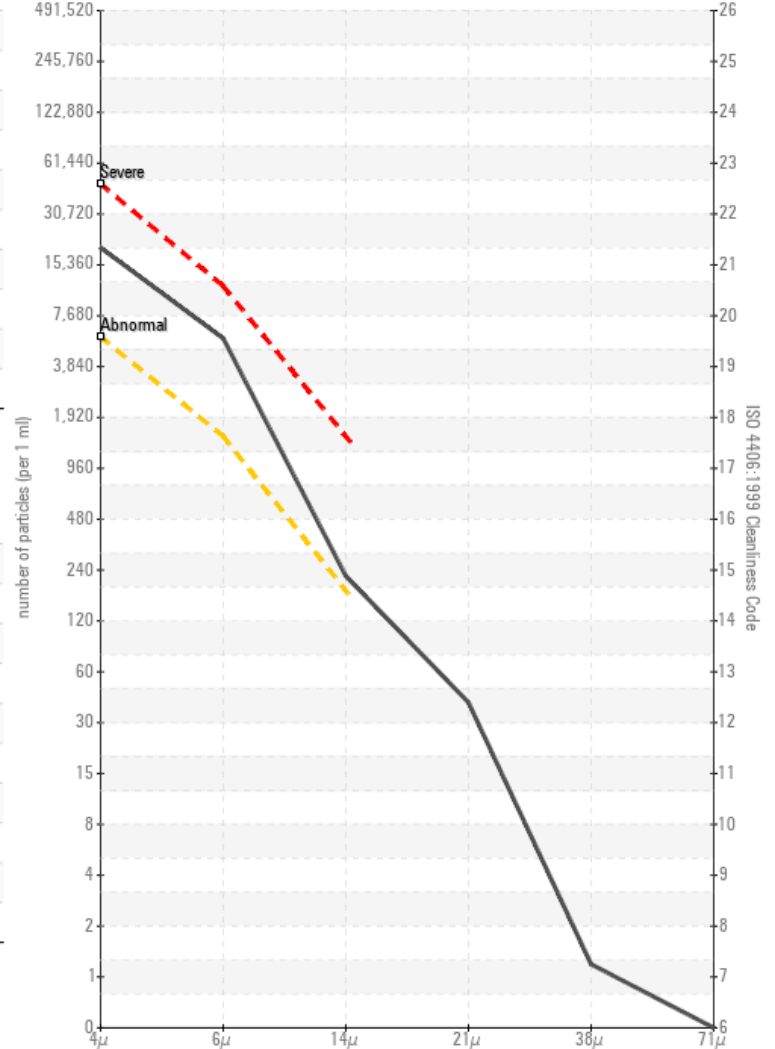
### Non-ferrous Metals



### Viscosity @ 40°C



### Particle Count



### Acid Number

