



# CONSTRUCTION EQUIPMENT

## SWO-065699 VOLVO EC380EL 310021 - HYDRAULIC SYSTEM



**Sample No:** VCP431087  
**Oil Type:** AW HYDRAULIC OIL ISO 46  
**Job No:** SWO-065699



### SAMPLE INFORMATION

Sample Number	<b>VCP431087</b>	VCP407505	VCP356244	VCP357683
Sample Date	<b>07 Sep 2023</b>	18 May 2023	03 Nov 2022	29 Mar 2022
Machine Hours	<b>10247</b>	9662	9133	8385
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Not Changd	Not Changd	Not Changd
Sample Status	<b>NORMAL</b>	ATTENTION	NORMAL	NORMAL

### WHITAKER CONTRACTING

692 CONVICT CAMP RD  
 GUNTERVILLE, AL  
 US 35976  
 Contact: BROTHER WHITAKER  
 BrotherWhitaker@whitaker-contracting.com  
 T: (256)298-3905  
 F:



### OIL CONDITION

Visc @ 40°C	cSt	<b>45.0</b>	44.2	44.4	44.6
Acid Number (AN)	mg KOH/g	<b>0.37</b>	0.36	0.36	0.38



### CONTAMINATION

Particles >4µm		<b>21572</b>	53088	22636	11150
Particles >6µm		<b>2884</b>	12131	1367	2846
Particles >14µm		<b>34</b>	335	93	214
ISO 4406:1999 (c)		<b>22/19/12</b>	23/21/16	22/18/14	21/19/15
Silicon	ppm	<b>7</b>	12	13	9
Sodium	ppm	<b>3</b>	3	<1	<1
Potassium	ppm	<b>2</b>	2	2	<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>8</b>	14	15	10
Copper	ppm	<b>9</b>	15	17	14
Lead	ppm	<b>0</b>	0	<1	<1
Tin	ppm	<b>&lt;1</b>	0	<1	<1
Aluminum	ppm	<b>&lt;1</b>	6	6	4
Chromium	ppm	<b>1</b>	2	2	2
Molybdenum	ppm	<b>0</b>	2	2	2
Nickel	ppm	<b>0</b>	0	0	0
Titanium	ppm	<b>&lt;1</b>	<1	<1	<1
Silver	ppm	<b>0</b>	0	<1	<1
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>134</b>	136	165	177
Magnesium	ppm	<b>4</b>	9	10	10
Zinc	ppm	<b>453</b>	406	432	439
Phosphorus	ppm	<b>392</b>	369	358	411
Barium	ppm	<b>0</b>	0	2	0
Boron	ppm	<b>0</b>	<1	3	4

**Depot:** WHIGUN  
**Unique No:** 10646029  
**Signed:** Wes Davis  
**Report Date:** 15 Sep 2023

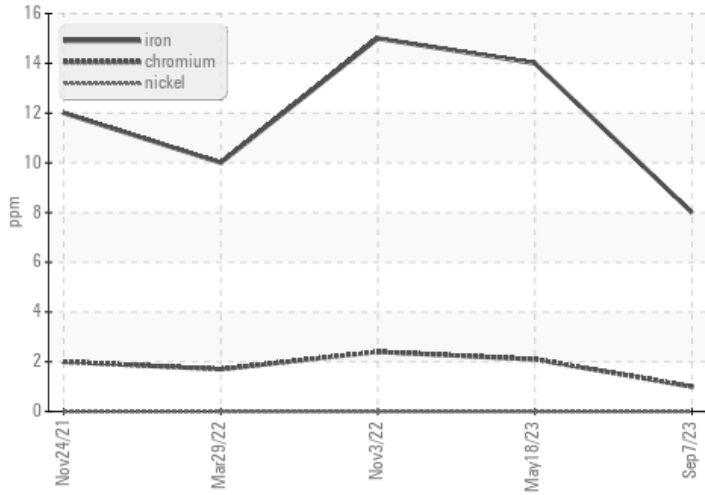


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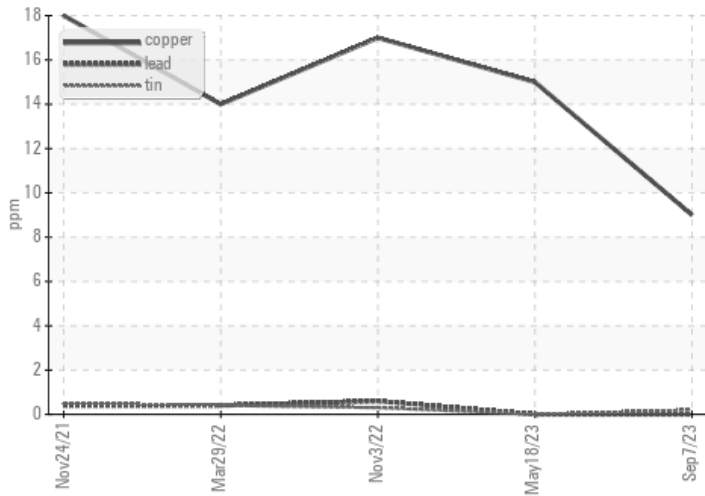


## VOLVO GRAPHS

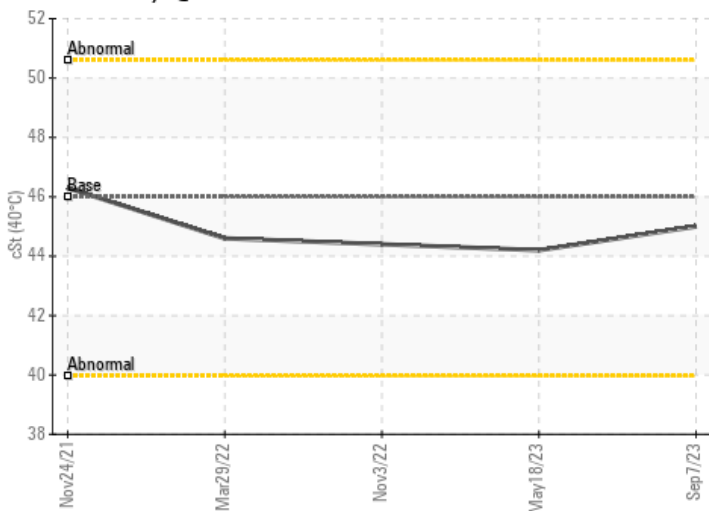
### Ferrous Alloys



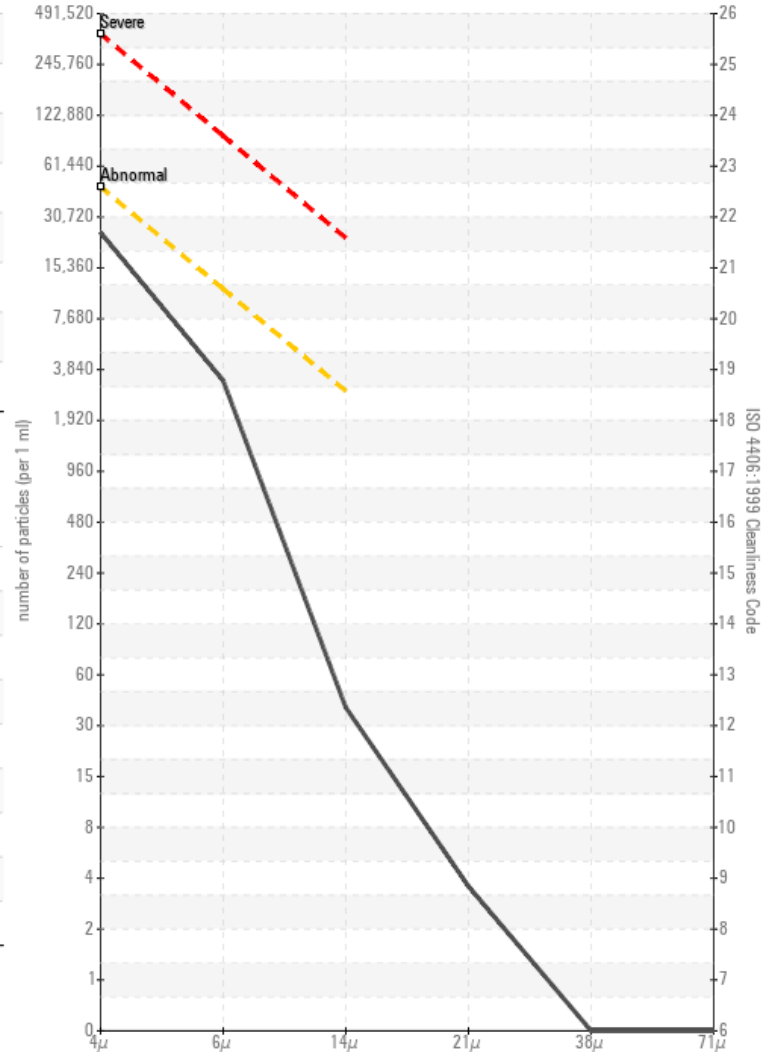
### Non-ferrous Metals



### Viscosity @ 40°C



### Particle Count



### Acid Number

