



# CONSTRUCTION EQUIPMENT

## SWO-066023 APAC TREM VOLVO L180H 5494 - HYDRAULIC SYSTEM



**Sample No:** VCP435383  
**Oil Type:** AW HYDRAULIC OIL ISO 46  
**Job No:** SWO-066023 APAC TREM



### SAMPLE INFORMATION

Sample Number	<b>VCP435383</b>	VCP424592	VCP410121	VCP369027
Sample Date	<b>21 Sep 2023</b>	07 Jul 2023	03 Apr 2023	10 Nov 2022
Machine Hours	<b>4058</b>	3620	3078	2519
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Not Changd	Not Changd	Not Changd
Sample Status	<b>SEVERE</b>	ABNORMAL	ATTENTION	ABNORMAL

### COWIN EQUIPMENT COMPANY

2238 PINSON VALLEY PARKWAY  
 BIRMINGHAM, AL  
 US 35217  
 Contact: BRANTLY CLAY  
 bclay@cowin.com  
 T:  
 F: (205)856-2106



### OIL CONDITION

Visc @ 40°C	cSt	<b>43.0</b>	47.0	43.0	43.8
Acid Number (AN)	mg KOH/g	<b>0.36</b>	0.54	0.32	0.34



### CONTAMINATION

Particles >4µm	<b>60522</b>	16852	5700	12819	
Particles >6µm	<b>25473</b>	4920	722	3138	
Particles >14µm	<b>2124</b>	195	13	232	
ISO 4406:1999 (c)	<b>23/22/18</b>	21/19/15	20/17/11	21/19/15	
Silicon	ppm	<b>3</b>	<1	3	2
Sodium	ppm	<b>1</b>	<1	0	0
Potassium	ppm	<b>&lt;1</b>	<1	1	2



### WEAR METALS

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



### ADDITIVES

Calcium	ppm	<b>59</b>	175	71	58
Magnesium	ppm	<b>&lt;1</b>	27	2	2
Zinc	ppm	<b>421</b>	472	443	453
Phosphorus	ppm	<b>336</b>	376	322	332
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>0</b>	3	0	<1

### Diagnosis

We advise that you check all areas where contaminants can enter the system. The oil change at the time of sampling has been noted. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. All component wear rates are normal. There is a high amount of particulates (2 to 100 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:** 10662405  
**Signed:** Wes Davis  
**Report Date:** 27 Sep 2023

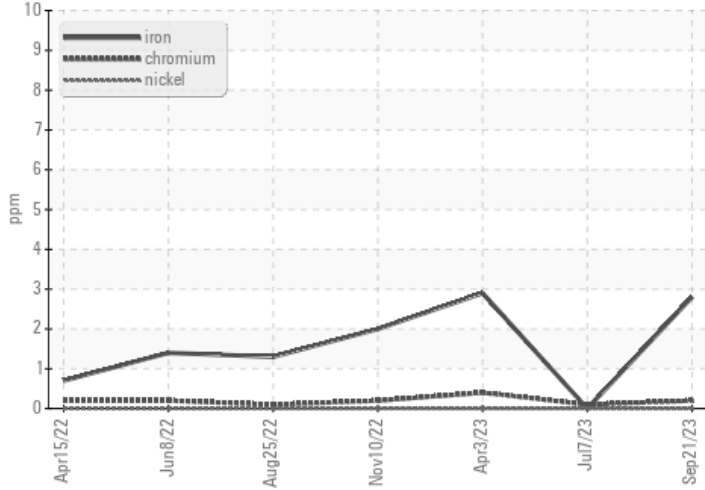


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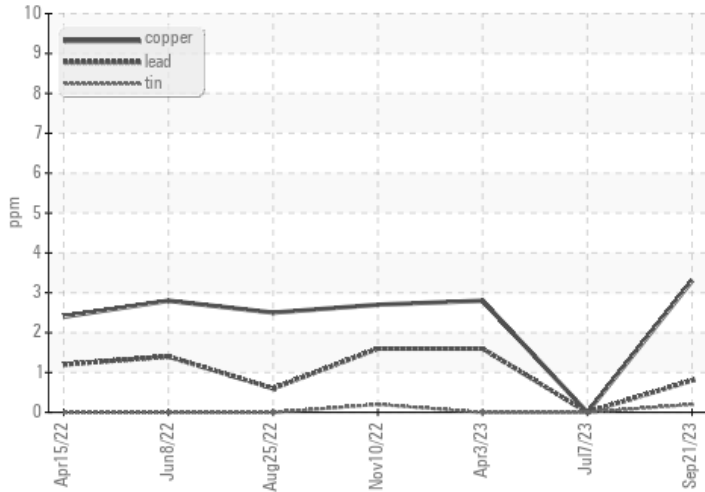


## GRAPHS

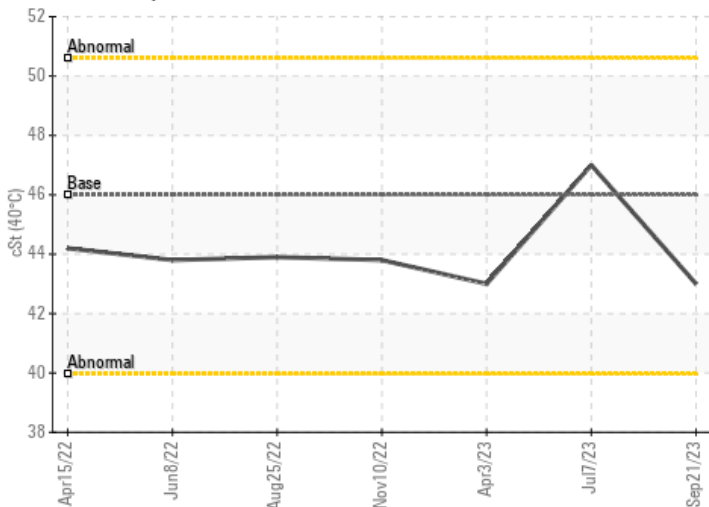
### Ferrous Alloys



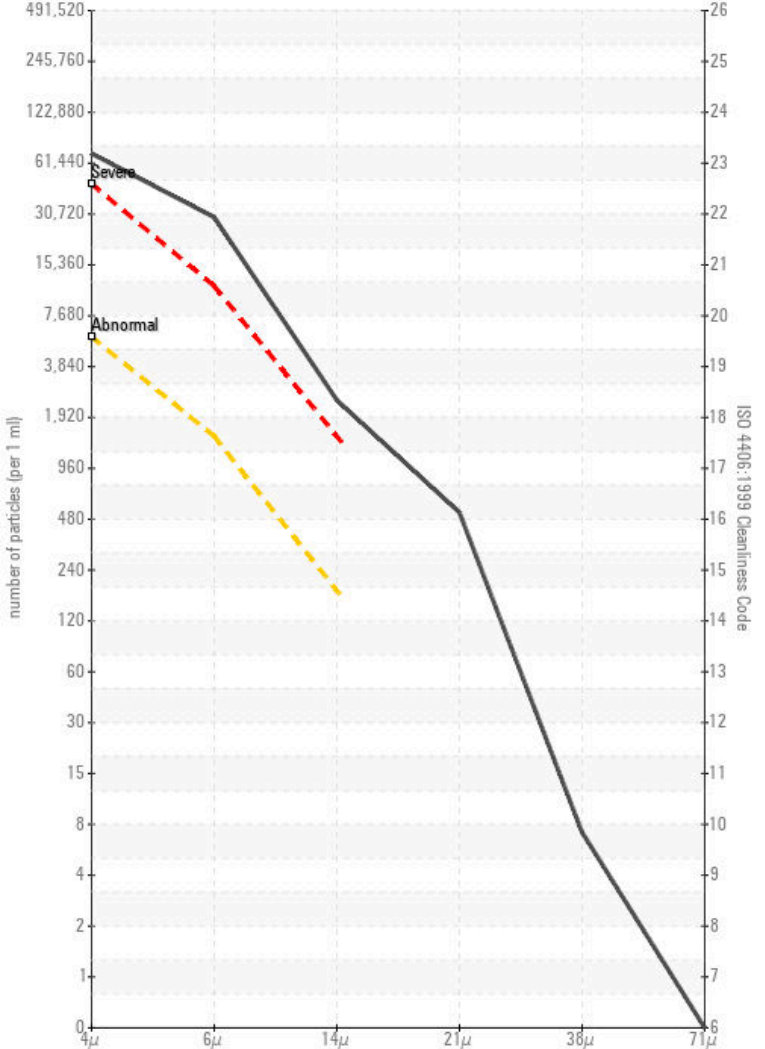
### Non-ferrous Metals



### Viscosity @ 40°C



### Particle Count



### Acid Number

