# CONSTRUCTION EQUIPMENT

L ENGINE

Sample No: VCP414069 Oil Type: VOLVO ULT

VOLVO

VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

Job No: D12844 WE ENERGIES

#### SAMPLE INFORMATION Sample Number VCP414069 VCP418966 Sample Date 27 Sep 2023 28 Jul 2023 Machine Hours 947 582 Oil Hours 379 582 Oil Changed Changed Changed Sample Status ABNORMAL ABNORMAL **OIL CONDITION** Visc @ 100°C cSt **12.2 1**1.2 Base Number (BN) mg KOH/g 5.7 8.1 Oxidation (PA) % 77 61 CONTAMINATION % 0.1 Soot % 0.1 Nitration (PA) % 68 81 Sulfation (DA) 0/ C 4 EЭ

Sullation (PA)	70	01	55	 	
Glycol	%	NEG	NEG	 	
Fuel	%	<1.0	0.7	 	
Silicon	ppm	<b>1</b> 3	23	 	
Sodium	ppm	2	0	 	
Potassium	ppm	0	6	 	

#### WEAR N

WEAR N	AFTAL2				
Iron	ppm	5	11	 	
Copper	ppm	<b>A</b> 141	<mark>▲</mark> 387	 	
Lead	ppm	0	< 1	 	
Tin	ppm	<b>1</b>	2	 	
Aluminum	ppm	□ <1	2	 	
Chromium	ppm	0	0	 	
Molybdenum	ppm	57	94	 	
Nickel	ppm		1	 	
Titanium	ppm	0	0	 	
Silver	ppm	0	<b></b> <1	 	
Manganese	ppm	2	3	 	
Vanadium	ppm	0	0	 	

Variaulu

ADDITIVES					
Calcium	ppm	<b>1905</b>	2253		
Magnesium	ppm	365	17		
Zinc	ppm	1245	1218		
Phosphorus	ppm	<b>1022</b>	1018		
Barium	ppm	0	3		
Boron	ppm	38	52		



ARING EQUIPMENT COMPANY INC - MAIN (MILWAUKEE) 13001 W SILVERE SPRING DR BUTLER, WI US 53007 Contact: GLENN OTTENBACHER gottenbacher@aring.com T: (262)282-0715 F: (262)781-5053

### Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

 Depot:
 VOLVO0069

 Unique No:
 10682085

 Signed:
 Don Baldridge

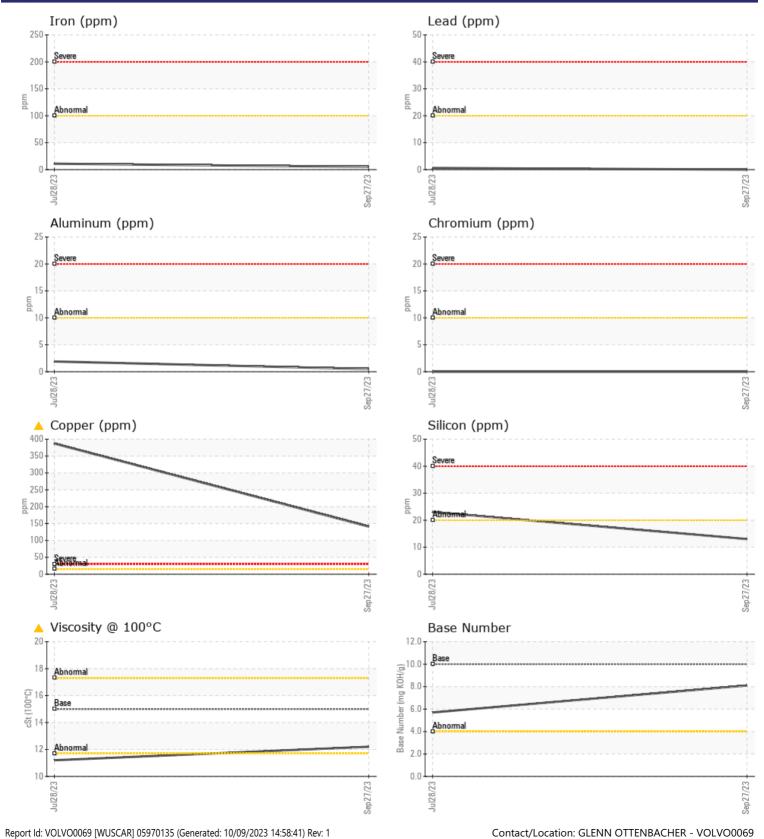
 Report Date:
 09 Oct 2023

## **CONSTRUCTION EQUIPMENT**



GRAPHS

VOLVO



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