



# CONSTRUCTION EQUIPMENT

## 594171 VOLVO L220H 3372 - DIESEL ENGINE



**Sample No:** VCP415304  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 594171



### SAMPLE INFORMATION

Sample Number	<b>VCP415304</b>	VCP408137	VCP382851	VCP367775
Sample Date	<b>15 Aug 2023</b>	12 May 2023	01 Feb 2023	04 Nov 2022
Machine Hours	<b>2021</b>	1558	1039	526
Oil Hours	<b>500</b>	500	500	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	MARGINAL	ABNORMAL

### FERROUS PROCESSING AND TRADING

3400 E LAFAYETTE  
 DETROIT, MI  
 US 48207

Contact: KEITH HALL  
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 T:  
 F:



### OIL CONDITION

Visc @ 100°C	cSt	<b>14.1</b>	14.0	13.5	▲ 10.9
Base Number (BN)	mg KOH/g	<b>8.8</b>	9.3	8.1	6.3
Oxidation (PA)	%	<b>53</b>	57	59	63

### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.



### CONTAMINATION

Soot %	%	<b>0.1</b>	0.1	0.2	0.2
Nitration (PA)	%	<b>50</b>	54	62	88
Sulfation (PA)	%	<b>49</b>	52	54	57
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	0.5
Silicon	ppm	<b>3</b>	4	7	23
Sodium	ppm	<b>1</b>	1	<1	<1
Potassium	ppm	<b>3</b>	<1	2	5



### WEAR METALS

Iron	ppm	<b>5</b>	5	9	14
Copper	ppm	<b>3</b>	14	▲ 72	▲ 441
Lead	ppm	<b>&lt;1</b>	0	<1	1
Tin	ppm	<b>&lt;1</b>	<1	2	3
Aluminum	ppm	<b>&lt;1</b>	<1	1	3
Chromium	ppm	<b>0</b>	0	<1	0
Molybdenum	ppm	<b>59</b>	59	64	86
Nickel	ppm	<b>&lt;1</b>	0	2	1
Titanium	ppm	<b>&lt;1</b>	0	0	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	3
Vanadium	ppm	<b>&lt;1</b>	0	<1	0



### ADDITIVES

Calcium	ppm	<b>1046</b>	1094	1170	2156
Magnesium	ppm	<b>997</b>	973	848	20
Zinc	ppm	<b>1223</b>	1268	1235	1165
Phosphorus	ppm	<b>998</b>	1030	1023	970
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>0</b>	<1	3	43

**Depot:** FERDET  
**Unique No:** 10616582  
**Signed:** Sean Felton  
**Report Date:** 24 Aug 2023

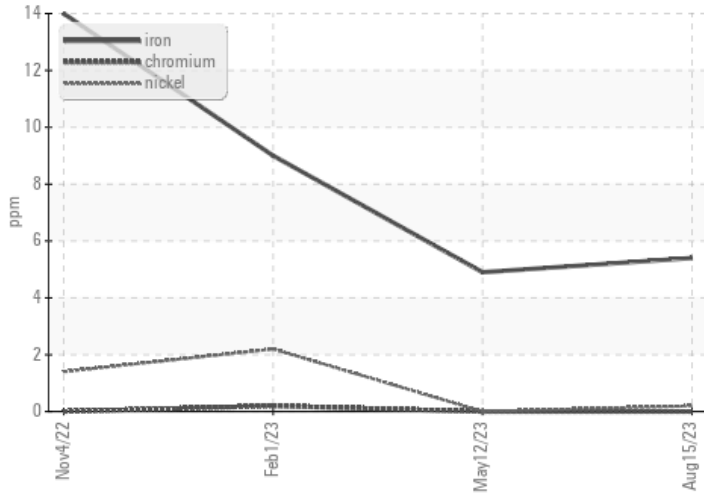


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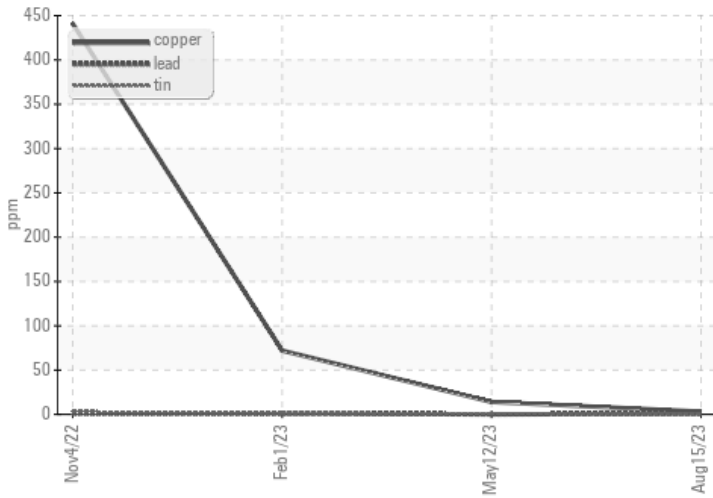


## GRAPHS

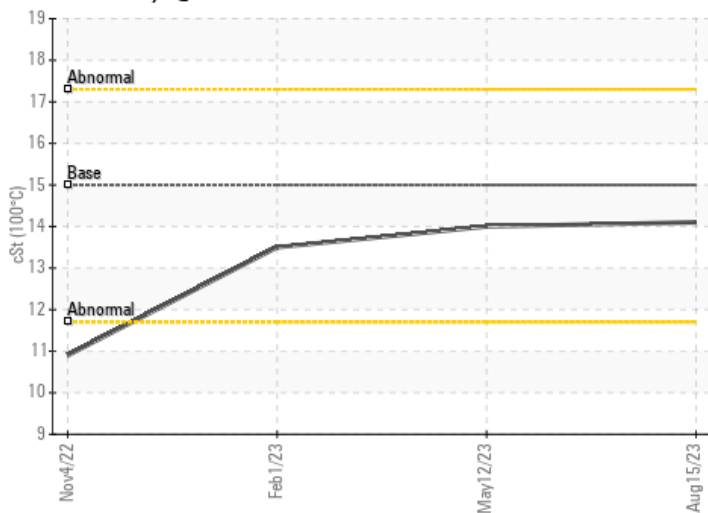
### Ferrous Alloys



### Non-ferrous Metals



### Viscosity @ 100°C



### Base Number

