



CONSTRUCTION EQUIPMENT

VOLVO A45G 352808 - DIESEL ENGINE



Sample No: VCP420585
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP420585	VCP344115	VCP343055	VCP343818
Sample Date	25 Jul 2023	23 Jan 2022	15 Nov 2021	24 Oct 2021
Machine Hours	3280	0	542	482
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	NORMAL	NORMAL	ATTENTION

ALTA EQUIPMENT COMPANY
 5151 DR MARTIN LUTHER KING BLVD
 FORT MYERS, FL
 US 33905
 Contact: TODD LARK
 tlark@altaequipfl.com
 T:
 F: (239)481-3302



OIL CONDITION

Visc @ 100°C	cSt	█ 12.7	█ 12.5	█ 12.9	▲ 10.9
Base Number (BN)	mg KOH/g	█ 9.6	█ 11.3	---	---
Oxidation (PA)	%	78	83	76	62



CONTAMINATION

Soot %	%	█ 0.7	█ 0.2	█ 0.1	█ 0.3
Nitration (PA)	%	68	57	44	52
Sulfation (PA)	%	63	65	61	56
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	█ 0.2
Silicon	ppm	█ 5	█ 9	█ 9	█ 28
Sodium	ppm	█ 3	█ 2	█ 3	█ 3
Potassium	ppm	█ 0	█ <1	█ <1	█ 0



WEAR METALS

Iron	ppm	█ 13	█ 9	█ 6	█ 20
Copper	ppm	▲ 94	█ 2	█ 4	█ 24
Lead	ppm	█ 2	█ <1	█ <1	█ 2
Tin	ppm	█ 1	█ 1	█ <1	█ 0
Aluminum	ppm	█ 3	█ 4	█ 1	█ 2
Chromium	ppm	█ 0	█ <1	█ <1	█ <1
Molybdenum	ppm	█ 47	█ 45	█ 46	█ 55
Nickel	ppm	█ 2	█ 2	█ 2	█ 3
Titanium	ppm	0	<1	<1	<1
Silver	ppm	█ 0	█ <1	█ <1	█ 0
Manganese	ppm	█ <1	█ <1	█ <1	█ 2
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	█ 1767	█ 1733	█ 1775	█ 1827
Magnesium	ppm	█ 554	█ 523	█ 496	█ 366
Zinc	ppm	█ 1127	█ 1046	█ 1038	█ 1251
Phosphorus	ppm	█ 921	█ 954	█ 1002	█ 1030
Barium	ppm	█ 0	█ 0	█ 0	█ 0
Boron	ppm	█ 34	█ 58	█ 77	95

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. All other 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.

Depot: VOLVO0090
Unique No: 10577374
Signed: Don Baldrige
Report Date: 01 Aug 2023

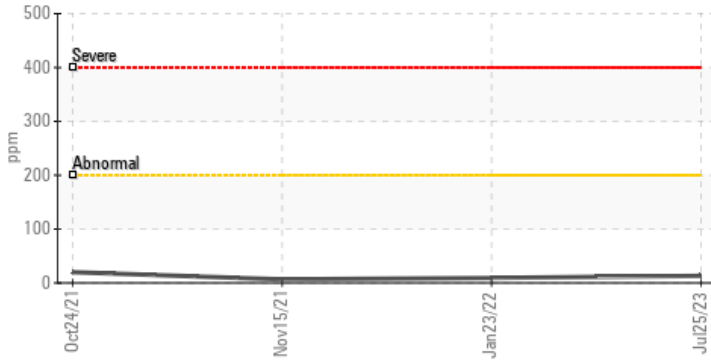


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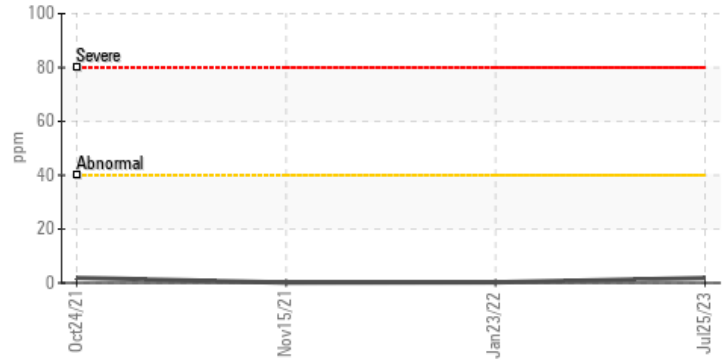


GRAPHS

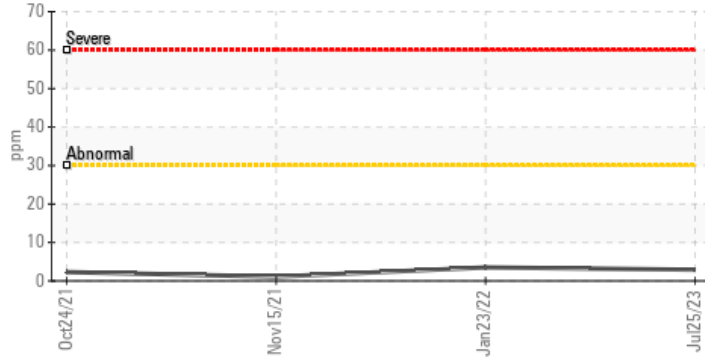
Iron (ppm)



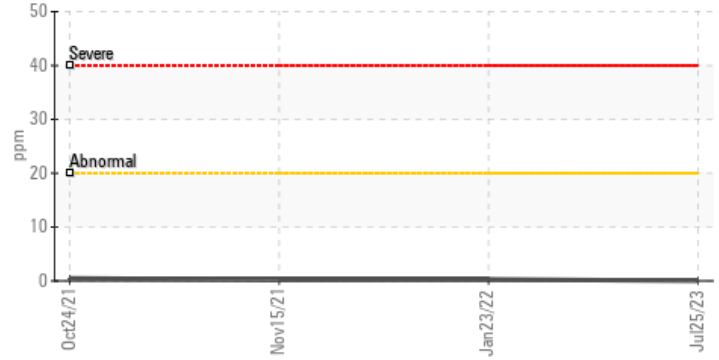
Lead (ppm)



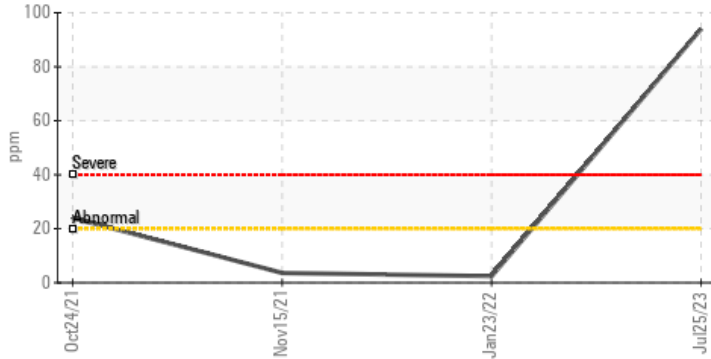
Aluminum (ppm)



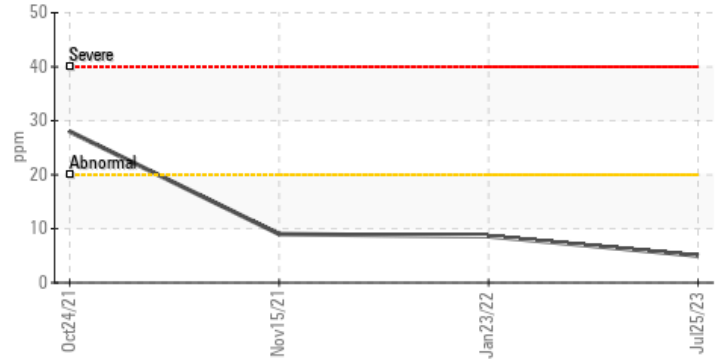
Chromium (ppm)



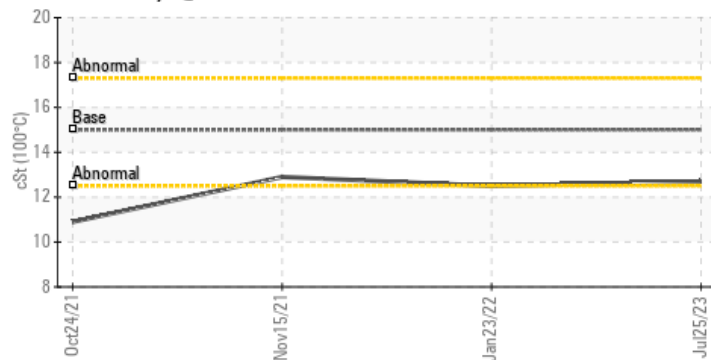
▲ Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

