



CONSTRUCTION EQUIPMENT

371715 VOLVO L45HS 422197 - DIESEL ENGINE



Sample No: VCP392445
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 371715



SAMPLE INFORMATION

Sample Number	VCP392445	VCP392398	VCP379567	VCP353121
Sample Date	17 Jul 2023	25 Apr 2023	14 Mar 2023	14 Mar 2023
Machine Hours	1656	1054	731	731
Oil Hours	500	0	731	731
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	ABNORMAL	ABNORMAL

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OIL CONDITION

Visc @ 40°C	cSt	---	---	▲ 28.3	---
Visc @ 100°C	cSt	■ 12.8	■ 12.7	▲ 5.5	▲ 10.8
Viscosity Index (VI)	Scale	---	---	■ 134	---
Oxidation (PA)	%	■ 85	80	57	82

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 condition of the oil is acceptable for the time in service.

CONTAMINATION

Soot %	%	■ 0.2	■ 0	■ 0	■ 0.1
Nitration (PA)	%	■ 58	51	27	61
Sulfation (PA)	%	■ 65	62	60	70
Glycol	%	■ NEG	NEG	■ 0.0	NEG
Fuel	%	■ <1.0	<1.0	▲ 4.7	■ 0.5
Silicon	ppm	■ 12	■ 8	■ 5	■ 23
Sodium	ppm	■ 3	■ 2	■ 4	■ 3
Potassium	ppm	■ <1	■ <1	■ 7	■ <1

WEAR METALS

Iron	ppm	■ 20	■ 13	■ 45	■ 53
Copper	ppm	■ 3	■ 2	■ <1	■ 10
Lead	ppm	■ <1	■ 0	■ 0	■ 2
Tin	ppm	■ 1	■ <1	■ 0	■ 3
Aluminum	ppm	■ 2	■ 3	■ <1	■ 15
Chromium	ppm	■ <1	■ <1	■ <1	■ 3
Molybdenum	ppm	■ 41	■ 39	■ 0	■ 34
Nickel	ppm	■ <1	■ 0	■ 0	■ <1
Titanium	ppm	<1	<1	1	<1
Silver	ppm	■ 0	■ 0	■ 0	■ 0
Manganese	ppm	■ <1	■ 1	■ <1	■ 6
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	■ 1680	■ 1708	▲ 214	■ 1520
Magnesium	ppm	■ 523	■ 498	▲ 2	■ 575
Zinc	ppm	■ 1079	■ 1044	▲ 55	■ 1039
Phosphorus	ppm	■ 967	■ 957	▲ 249	■ 977
Barium	ppm	■ 0	■ 0	■ 3	■ 3
Boron	ppm	■ 33	■ 52	■ 75	■ 49

Depot: VOLVO9652
Unique No: 5616247
Signed: Wes Davis
Report Date: 20 Jul 2023



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GRAPHS

