



CONSTRUCTION EQUIPMENT

SWO-064209 EPIROC T45-11SF AVO14A1117 - DIESEL ENGINE



Sample No: VCP415931
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SWO-064209



SAMPLE INFORMATION

Sample Number	VCP415931	VCP402456	VCP279739	VCP253658
Sample Date	24 Jul 2023	16 Mar 2023	19 Aug 2020	25 Jun 2020
Machine Hours	11559	10872	9280	8983
Oil Hours	0	0	500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL

WHITAKER CONTRACTING

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OIL CONDITION

Visc @ 100°C	cSt	12.8	13.2	11.9	14.1
Base Number (BN)	mg KOH/g	10.1	9.9	---	---
Oxidation (PA)	%	80	84	55	58

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. All component wear rates are normal. Elemental level of silicon (Si) above normal. 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 %	%	1	0.8	0.7	0.8
Nitration (PA)	%	69	82	74	85
Sulfation (PA)	%	64	64	56	57
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	▲ 26	5	4	6
Sodium	ppm	7	0	3	3
Potassium	ppm	3	3	2	7



WEAR METALS

Iron	ppm	31	4	7	12
Copper	ppm	6	<1	<1	<1
Lead	ppm	<1	<1	<1	0
Tin	ppm	2	<1	<1	0
Aluminum	ppm	3	1	0	4
Chromium	ppm	<1	0	<1	<1
Molybdenum	ppm	44	21	4	9
Nickel	ppm	<1	0	<1	<1
Titanium	ppm	<1	0	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	1	<1	<1	<1
Vanadium	ppm	<1	0	<1	0



ADDITIVES

Calcium	ppm	1711	1486	1269	1574
Magnesium	ppm	554	518	681	727
Zinc	ppm	1170	826	799	877
Phosphorus	ppm	937	692	696	798
Barium	ppm	0	0	0	0
Boron	ppm	24	82	55	42

Depot: WHIGUN
Unique No: 10576315
Signed: Don Baldrige
Report Date: 31 Jul 2023



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VOLVO GRAPHS

