



CONSTRUCTION EQUIPMENT

660308 MOSAIC CO VOLVO A45G 342286 - DIESEL ENGINE



Sample No: VCP428796
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 660308 MOSAIC CO



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SAMPLE INFORMATION

Sample Number	VCP428796	VCP414729	VCP411587	VCP409309
Sample Date	16 Jan 2024	29 Sep 2023	05 Jun 2023	15 Feb 2023
Machine Hours	3868	7665	7102	6453
Oil Hours	500	500	500	500
Oil Changed	Changed	Changed	Changed	N/A
Sample Status	NORMAL	ATTENTION	ATTENTION	NORMAL



OIL CONDITION

Visc @ 100°C	cSt	12.8	12.3	11.7	12.6
Base Number (BN)	mg KOH/g	9.8	9.8	9.2	9.9
Oxidation (PA)	%	80	78	84	80



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.2	0.2	0.1	0.2
Nitration (PA)	%	61	58	71	61
Sulfation (PA)	%	60	59	61	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	0.6	<1.0
Silicon	ppm	4	4	4	4
Sodium	ppm	2	2	2	2
Potassium	ppm	0	<1	<1	<1



WEAR METALS

Iron	ppm	4	2	4	5
Copper	ppm	<1	1	2	1
Lead	ppm	0	1	1	<1
Tin	ppm	<1	1	<1	<1
Aluminum	ppm	1	2	2	1
Chromium	ppm	0	<1	0	<1
Molybdenum	ppm	41	42	45	44
Nickel	ppm	0	<1	<1	0
Titanium	ppm	0	0	<1	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	<1	0



ADDITIVES

Calcium	ppm	1765	1697	1623	1616
Magnesium	ppm	536	504	473	488
Zinc	ppm	1186	1217	1015	1101
Phosphorus	ppm	1008	976	826	914
Barium	ppm	0	0	0	0
Boron	ppm	42	35	24	40

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 suitable for further service.

Depot: VOLVO0093
Unique No: 10861624
Signed: Wes Davis
Report Date: 06 Feb 2024



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GRAPHS

