



CONSTRUCTION EQUIPMENT

SWA538927 - DIESEL ENGINE



Sample No: VCP438874
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SWA538927



SAMPLE INFORMATION

Sample Number	VCP438874	VCP436039	VCP413404	---
Sample Date	19 Apr 2024	04 Nov 2023	26 Aug 2023	---
Machine Hours	4611	3520	2904	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	MARGINAL	NORMAL	NORMAL	---

PALM BEACH AGGREGATES INC
 PO BOX 700, 20125 STATE RD 80
 LOXAHATCHEE, FL
 US 33470
 Contact: WILLIAM GONZALEZ
 wgonzalez@palmbeachag.com
 T: (561)723-0194
 F: (561)798-5380



OIL CONDITION

Visc @ 100°C	cSt	▲ 12.3	■ 12.9	■ 13.4	---
Base Number (BN)	mg KOH/g	■ 8.3	■ 8.6	■ 9.1	---
Oxidation (PA)	%	57	57	55	---

Diagnosis

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Fuel content negligible. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.



CONTAMINATION

Water	%	NEG	NEG	NEG	---
Soot %	%	■ 0.2	■ 0.2	■ 0.2	---
Nitration (PA)	%	66	61	55	---
Sulfation (PA)	%	52	52	51	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	■ 2.4	<1.0	<1.0	---
Silicon	ppm	■ 3	■ 3	■ 3	---
Sodium	ppm	■ 1	■ <1	■ 2	---
Potassium	ppm	■ 0	■ 0	■ <1	---



WEAR METALS

Iron	ppm	■ 4	■ 5	■ 5	---
Copper	ppm	■ <1	■ 2	■ 3	---
Lead	ppm	■ 0	■ <1	■ 0	---
Tin	ppm	■ 1	■ <1	■ <1	---
Aluminum	ppm	■ 3	■ 2	■ 2	---
Chromium	ppm	■ <1	■ 0	■ <1	---
Molybdenum	ppm	■ 63	■ 58	■ 61	---
Nickel	ppm	■ 0	■ 0	■ 0	---
Titanium	ppm	0	0	0	---
Silver	ppm	■ 0	■ 0	■ 0	---
Manganese	ppm	■ <1	■ 0	■ <1	---
Vanadium	ppm	0	0	0	---



ADDITIVES

Calcium	ppm	■ 1116	■ 1058	■ 1150	---
Magnesium	ppm	■ 979	■ 1015	■ 1041	---
Zinc	ppm	■ 1254	■ 1322	■ 1379	---
Phosphorus	ppm	■ 1060	■ 1050	■ 1100	---
Barium	ppm	■ 0	■ 0	■ 0	---
Boron	ppm	■ 2	■ 0	■ <1	---

Depot: PALLOX
Unique No: 10992772
Signed: Jonathan Hester
Report Date: 25 Apr 2024



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GRAPHS

