



CONSTRUCTION EQUIPMENT

728849 NORTH STAR SENNEBOGEN 850 3139 - DIESEL ENGINE



Sample No: VCP454895
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 728849 NORTH STAR



SAMPLE INFORMATION

Sample Number	VCP454895	VCP446980	VCP445852	VCP418188
Sample Date	13 Jun 2024	05 Apr 2024	13 Feb 2024	08 Nov 2023
Machine Hours	4105	3595	3118	2471
Oil Hours	500	500	500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

ALTA EQUIPMENT COMPANY - METRO WEST
56195 PONTIAC TRAIL
NEW HUDSON, MI
US 48165
Contact: PAUL CONZ
paul.conz@altg.com
T: (313)348-8861
F: (248)356-2029



OIL CONDITION

Visc @ 100°C	cSt	12.8	13.5	13.2	13.3
Base Number (BN)	mg KOH/g	10.4	9.1	8.4	8.4
Oxidation (PA)	%	59	69	71	74

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.



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.2	0.2
Nitration (PA)	%	75	68	77	76
Sulfation (PA)	%	50	55	57	58
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	3	2	3	4
Sodium	ppm	3	2	4	2
Potassium	ppm	6	1	5	20



WEAR METALS

Iron	ppm	5	8	11	14
Copper	ppm	0	<1	<1	0
Lead	ppm	0	0	0	0
Tin	ppm	0	0	<1	<1
Aluminum	ppm	3	1	3	6
Chromium	ppm	0	0	<1	<1
Molybdenum	ppm	40	58	60	57
Nickel	ppm	<1	0	0	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	<1	0	0



ADDITIVES

Calcium	ppm	2244	1045	1123	1201
Magnesium	ppm	714	956	928	943
Zinc	ppm	1339	1166	1106	1298
Phosphorus	ppm	1137	982	996	1034
Barium	ppm	0	0	0	0
Boron	ppm	79	<1	1	11

Depot: VOLVO2990
Unique No: 11088274
Signed: Wes Davis
Report Date: 21 Jun 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS

