



CONSTRUCTION EQUIPMENT

SWA303245-20 VOLVO L110H 631591 - DIESEL ENGINE



Sample No: VCP407103
Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40
Job No: SWA303245-20



SAMPLE INFORMATION

Sample Number	VCP407103	VCP409635	VCP374133	VCP332070
Sample Date	28 Jul 2023	27 Feb 2023	06 Jun 2022	21 Feb 2022
Machine Hours	7541	6936	5931	5432
Oil Hours	0	500	500	500
Oil Changed	Not Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	SEVERE	ABNORMAL	ABNORMAL

DENALI WE CARE

400 TORNE RD
 HILLBURN, NY
 US 10931
 Contact: Service Manager



OIL CONDITION

Visc @ 100°C	cSt	13.0	4	13.4	13.2
Base Number (BN)	mg KOH/g	10.3	8.7	11.0	11.4
Oxidation (PA)	%	85	55	87	89

T:
F:

Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



CONTAMINATION

Soot %	%	0.4	0.2	0.3	0.3
Nitration (PA)	%	67	58	65	71
Sulfation (PA)	%	63	48	65	68
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	1.3	51.8	<1.0	<1.0
Silicon	ppm	43	33	48	43
Sodium	ppm	3	1	3	1
Potassium	ppm	0	<1	1	0



WEAR METALS

Iron	ppm	11	11	9	10
Copper	ppm	1	2	2	2
Lead	ppm	0	<1	<1	<1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	5	3	3	3
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	43	24	41	41
Nickel	ppm	0	0	<1	0
Titanium	ppm	0	<1	<1	0
Silver	ppm	0	0	<1	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	0	<1	0



ADDITIVES

Calcium	ppm	1746	845	1695	1770
Magnesium	ppm	531	289	483	510
Zinc	ppm	1076	585	1194	1077
Phosphorus	ppm	913	484	964	973
Barium	ppm	0	2	0	0
Boron	ppm	38	25	43	59

Depot: DENHIL
Unique No: 10617100
Signed: Jonathan Hester
Report Date: 25 Aug 2023



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VOLVO GRAPHS

