



CONSTRUCTION EQUIPMENT

TRANSPORT LEASING VOLVO L220H 2280 - DIESEL ENGINE



Sample No: VCP429831
Oil Type: MOBIL 15W40
Job No: TRANSPORT LEASING



SAMPLE INFORMATION

Sample Number	VCP429831	VCP368338	VCP371227	VCP402500
Sample Date	26 Jan 2024	14 Nov 2023	10 Oct 2023	18 Apr 2023
Machine Hours	22180	21662	21192	20706
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	N/A	N/A
Sample Status	MARGINAL	NORMAL	NORMAL	NORMAL

ARNOLD MACHINERY COMPANY
 464 WASHINGTON STREET S
 TWIN FALLS, ID
 US 83301
 Contact: JANA E HYMAS
 jhymas@arnoldmachinery.com
 T: (208)733-1715
 F: (775)356-7152



OIL CONDITION

Visc @ 100°C	cSt	▲ 12.4	■ 13.2	■ 13.3	■ 12.8
Base Number (BN)	mg KOH/g	■ 9.4	■ 9.6	■ 9.4	■ 8.7
Oxidation (PA)	%	55	55	59	59

Diagnosis

Oil and filter 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	NEG
Soot %	%	■ 0.2	■ 0.3	■ 0.6	■ 0.3
Nitration (PA)	%	53	51	61	62
Sulfation (PA)	%	50	52	54	53
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	■ 0.4	<1.0	<1.0	<1.0
Silicon	ppm	■ 3	■ 3	■ 4	■ 2
Sodium	ppm	■ 0	■ 0	■ 1	■ 1
Potassium	ppm	■ <1	■ 1	■ 0	■ 0



WEAR METALS

Iron	ppm	■ 4	■ 4	■ 9	■ 3
Copper	ppm	■ 2	■ 1	■ 2	■ 1
Lead	ppm	■ 1	■ 0	■ 0	■ 0
Tin	ppm	■ 1	■ <1	■ <1	■ 0
Aluminum	ppm	■ 3	■ 1	■ 2	■ 2
Chromium	ppm	■ <1	■ 0	■ 0	■ 0
Molybdenum	ppm	■ 66	■ 62	■ 62	■ 66
Nickel	ppm	■ 1	■ 0	■ 0	■ 0
Titanium	ppm	<1	<1	0	0
Silver	ppm	■ <1	■ 0	■ 0	■ 0
Manganese	ppm	■ 1	■ 0	■ 0	■ <1
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	■ 1104	1108	1146	1137
Magnesium	ppm	■ 1010	■ 918	971	■ 944
Zinc	ppm	■ 1294	■ 1205	■ 1298	■ 1269
Phosphorus	ppm	■ 1037	■ 984	■ 1062	■ 1002
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 6	■ 3	■ 6	■ 6

Depot: VOLVO1835
Unique No: 10869638
Signed: Jonathan Hester
Report Date: 09 Feb 2024



CONSTRUCTION EQUIPMENT



GRAPHS

