

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH30 1200-72683 - Diesel Engine

Sample No: LH06062318

Oil Type: DIESEL ENGINE OIL SAE 15W40



SPARTAN RECYCLING
3071 HOWARD ST
SPARTANBURG, SC
US 29303
Contact: SERVICE MANAGER



SAMPLE INFORMATION

Sample Number	LH06062318	LH0235763	LH0217614	LHMC133022
Sample Date	12 Jan 2024	27 Sep 2023	23 Mar 2023	06 Sep 2022
Machine Hours	14822	14249	13667	12693
Oil Hours	0	0	1000	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ATTENTION	NORMAL	NORMAL	ABNORMAL



OIL CONDITION

Visc @ 100°C	cSt	11.7	12.3	13.4	12.7
Base Number (BN)	mg KOH/g	16.3	16.1	7.2	9.1
Oxidation (PA)	%	43	43	61	56



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.2	0.1	0.2	0.5
Nitration (PA)	%	98	82	84	96
Sulfation (PA)	%	42	41	54	65
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	0.6	<1.0	<1.0
Silicon	ppm	9	7	9	10
Sodium	ppm	14	5	18	103
Potassium	ppm	2	0	4	18



WEAR METALS

Iron	ppm	17	9	13	37
Copper	ppm	3	10	2	15
Lead	ppm	<1	1	0	3
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	3	0	5	5
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	3	10	82	10
Nickel	ppm	0	0	0	0
Titanium	ppm	0	<1	<1	1
Silver	ppm	0	<1	0	<1
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	<1	<1	0



ADDITIVES

Calcium	ppm	4408	3768	2327	2713
Magnesium	ppm	31	111	53	69
Zinc	ppm	1218	1219	1183	1083
Phosphorus	ppm	1071	1028	1016	874
Barium	ppm	0	0	2	0
Boron	ppm	232	234	82	71

T:
F:

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. 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. Confirm oil type.

Depot: SPASPALH
Unique No: 10833700
Signed: Don Baldrige
Report Date: 18 Jan 2024

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GRAPHS

