

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50 1216-131051 - Transmission (Manual)

Sample No: LH0213096

Oil Type: DIESEL ENGINE OIL SAE 5W40



BOISE WHITE PAPER
 3RD AVE AND HWY 11, 400 2ND ST
 INTERNATIONAL FALLS, MN
 US 56649
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SAMPLE INFORMATION

Sample Number	LH0213096	LH0213026	LH0213110	LH0213012
Sample Date	30 Aug 2023	25 Apr 2023	24 Jan 2023	03 Dec 2021
Machine Hours	9736	0	7995	1664
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



OIL CONDITION

Visc @ 40°C	cSt	43.9	44.0	44.1	43.2



CONTAMINATION

Element	Unit	5	5	6	4
Silicon	ppm	5	5	6	4
Sodium	ppm	7	8	14	48
Potassium	ppm	<1	3	0	4



WEAR METALS

Element	Unit	41	55	81	44
Iron	ppm	41	55	81	44
Copper	ppm	12	15	27	42
Lead	ppm	0	0	1	<1
Tin	ppm	<1	<1	1	<1
Aluminum	ppm	2	4	4	6
Chromium	ppm	0	<1	<1	<1
Molybdenum	ppm	3	3	<1	<1
Nickel	ppm	0	0	<1	0
Titanium	ppm	75	54	0	<1
Silver	ppm	0	0	0	<1
Manganese	ppm	6	9	14	37
Vanadium	ppm	<1	<1	0	<1



ADDITIVES

Element	Unit	1462	1595	1572	3356
Calcium	ppm	1462	1595	1572	3356
Magnesium	ppm	672	736	579	11
Zinc	ppm	1081	1143	868	1159
Phosphorus	ppm	949	977	762	1150
Barium	ppm	0	0	<1	<1
Boron	ppm	161	137	68	7

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 condition of the oil is acceptable for the time in service.

Depot: BOIINT
 Unique No: 10633809
 Signed: Don Baldrige
 Report Date: 08 Sep 2023



GRAPHS

