

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50M 1216-118289 - Diesel Engine

Sample No: LH06135426

Oil Type: DIESEL ENGINE OIL SAE 30



KOVALCHICK CORP
1060 WAYNE AVENUE
INDIANA, PA
US 15701
Contact: Service Manager



Sample Information

Sample Number	LH06135426	LH05693122	LH05370547	---
Sample Date	31 Mar 2024	13 Nov 2022	10 Oct 2021	---
Machine Hours	5050	0	1635	---
Oil Hours	0	0	0	---
Oil Changed	Not Chngd	N/A	Changed	---
Sample Status	NORMAL	NORMAL	ABNORMAL	---



Oil Condition

Visc @ 100°C	cSt	11.5	11.6	11.7	---
Base Number (BN)	mg KOH/g	7.4	9.9	---	---
Oxidation (PA)	%	119	92	192	---

T:
F:



Contamination

Water	%	NEG	0.104	0.111	---
Soot %	%	0.2	0.1	0.1	---
Nitration (PA)	%	202	157	138	---
Sulfation (PA)	%	75	68	108	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	1.2	---
Silicon	ppm	7	7	9	---
Sodium	ppm	3	1	4	---
Potassium	ppm	4	1	9	---

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 acceptable for the time in service.



Wear Metals

Iron	ppm	24	21	22	---
Copper	ppm	6	10	57	---
Lead	ppm	5	4	18	---
Tin	ppm	<1	1	2	---
Aluminum	ppm	3	3	6	---
Chromium	ppm	<1	<1	<1	---
Molybdenum	ppm	1	11	32	---
Nickel	ppm	0	0	<1	---
Titanium	ppm	0	0	<1	---
Silver	ppm	0	<1	<1	---
Manganese	ppm	0	<1	1	---
Vanadium	ppm	0	0	<1	---



Additives

Calcium	ppm	4421	3886	1901	---
Magnesium	ppm	51	109	746	---
Zinc	ppm	1171	1094	951	---
Phosphorus	ppm	1081	998	745	---
Barium	ppm	0	0	46	---
Boron	ppm	178	156	76	---

Depot: KOVIND
Unique No: 10954891
Signed: Sean Felton
Report Date: 04 Apr 2024



Graphs

