

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH80M 1218-157090 - Diesel Engine

Sample No: LH0282891

Oil Type: DIESEL ENGINE OIL SAE 15W40



KINDER MORGAN
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 TRINITY, AL
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Sample Information

Sample Number	LH0282891	LH0282883	LH0282869	LH0282894
Sample Date	03 May 2024	19 Apr 2024	28 Mar 2024	19 Mar 2024
Machine Hours	1198	997	711	545
Oil Hours	0	0	205	0
Oil Changed	Not Changd	Changed	Not Changd	Changed
Sample Status	NORMAL	NORMAL	NORMAL	ABNORMAL



Oil Condition

Visc @ 100°C	cSt	12.7	12.4	12.6	12.2
Base Number (BN)	mg KOH/g	7.4	6.0	7.4	4.6
Oxidation (PA)	%	63	86	80	186



Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	53	70	59	92
Sulfation (PA)	%	58	65	64	102
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	9	9	8	11
Sodium	ppm	3	<1	1	0
Potassium	ppm	3	<1	3	3



Wear Metals

Iron	ppm	4	5	3	10
Copper	ppm	9	54	39	218
Lead	ppm	<1	2	0	2
Tin	ppm	<1	0	0	2
Aluminum	ppm	3	2	3	2
Chromium	ppm	<1	0	<1	1
Molybdenum	ppm	80	79	78	52
Nickel	ppm	<1	0	0	<1
Titanium	ppm	<1	0	0	<1
Silver	ppm	1	0	0	0
Manganese	ppm	<1	<1	0	1
Vanadium	ppm	<1	0	0	<1



Additives

Calcium	ppm	1273	1492	1351	1329
Magnesium	ppm	405	524	455	804
Zinc	ppm	1121	1263	1157	939
Phosphorus	ppm	961	1059	1036	831
Barium	ppm	2	5	0	22
Boron	ppm	403	301	348	143

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 suitable for further service.

Depot: KINTRI
 Unique No: 11048761
 Signed: Wes Davis
 Report Date: 29 May 2024



Graphs

