

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH80M 1218-157090 - Diesel Engine

Sample No: LH0282872

Oil Type: DIESEL ENGINE OIL SAE 15W40



KINDER MORGAN
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Sample Information

Sample Number	LH0282872	LH0282891	LH0282883	LH0282869
Sample Date	18 May 2024	03 May 2024	19 Apr 2024	28 Mar 2024
Machine Hours	1559	1198	997	711
Oil Hours	0	0	0	205
Oil Changed	Changed	Not Changd	Changed	Not Changd
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



Oil Condition

Visc @ 100°C	cSt	12.3	12.7	12.4	12.6
Base Number (BN)	mg KOH/g	6.7	7.4	6.0	7.4
Oxidation (PA)	%	70	63	86	80



Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	68	53	70	59
Sulfation (PA)	%	59	58	65	64
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	13	9	9	8
Sodium	ppm	4	3	<1	1
Potassium	ppm	4	3	<1	3



Wear Metals

Iron	ppm	7	4	5	3
Copper	ppm	14	9	54	39
Lead	ppm	1	<1	2	0
Tin	ppm	1	<1	0	0
Aluminum	ppm	5	3	2	3
Chromium	ppm	1	<1	0	<1
Molybdenum	ppm	106	80	79	78
Nickel	ppm	<1	<1	0	0
Titanium	ppm	<1	<1	0	0
Silver	ppm	1	1	0	0
Manganese	ppm	<1	<1	<1	0
Vanadium	ppm	<1	<1	0	0



Additives

Calcium	ppm	1695	1273	1492	1351
Magnesium	ppm	553	405	524	455
Zinc	ppm	1518	1121	1263	1157
Phosphorus	ppm	1295	961	1059	1036
Barium	ppm	3	2	5	0
Boron	ppm	420	403	301	348

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: 11048755
 Signed: Jonathan Hester
 Report Date: 30 May 2024



Graphs

