

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR PR776 15946 - Diesel Engine

Sample No: LH0220501

Oil Type: MOBIL DELVAC 1300 SUPER 10W30



**LIEBHERR MINING EQUIPMENT CO**  
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#### SAMPLE INFORMATION

Sample Number	LH0220501	LH0220569	LHMC147220	LHMC147906
Sample Date	14 Oct 2023	10 May 2023	24 Oct 2019	18 Jul 2019
Machine Hours	8488	9275	1129	73
Oil Hours	0	0	112	73
Oil Changed	Changed	Not Changd	Not Changd	Not Changd
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



#### OIL CONDITION

Visc @ 100°C	cSt	11.7	12.5	12.1	11.9
Base Number (BN)	mg KOH/g	9.8	7.1	---	---
Oxidation (PA)	%	73	57	45	88



#### CONTAMINATION

Soot %	%	0.8	1.3	0.4	0.1
Nitration (PA)	%	51	75	78	63
Sulfation (PA)	%	61	58	45	64
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	7	9	4	8
Sodium	ppm	0	4	4	2
Potassium	ppm	2	3	1	0



#### WEAR METALS

Iron	ppm	8	35	16	3
Copper	ppm	1	3	7	9
Lead	ppm	<1	0	0	1
Tin	ppm	0	<1	0	0
Aluminum	ppm	2	4	2	2
Chromium	ppm	<1	2	<1	<1
Molybdenum	ppm	38	20	4	6
Nickel	ppm	<1	<1	<1	<1
Titanium	ppm	<1	2	2	<1
Silver	ppm	0	<1	<1	<1
Manganese	ppm	<1	1	<1	<1
Vanadium	ppm	0	<1	0	0



#### ADDITIVES

Calcium	ppm	1577	1498	4098	2164
Magnesium	ppm	514	747	49	140
Zinc	ppm	902	952	1120	747
Phosphorus	ppm	733	803	949	626
Barium	ppm	3	0	2	3
Boron	ppm	50	46	195	24

#### 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: LIEGIL  
 Unique No: 10712326  
 Signed: Wes Davis  
 Report Date: 26 Oct 2023

Contact/Location: TED PILZ - LIEGIL



### GRAPHS

