

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L580 1414-56018 - Diesel Engine

Sample No: LH05890698

Oil Type: LIEBHERR MOTOROIL 5W30



SAMPLE INFORMATION

Sample Number	LH05890698	LH0158427	LH05835718	LH05816817
Sample Date	05 Jul 2023	26 Jun 2023	01 May 2023	10 Apr 2023
Machine Hours	13517	8250	13020	12524
Oil Hours	0	0	0	0
Oil Changed	Not Changd	N/A	Changed	Not Changd
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

VERSO CORP - QUINNESEC MILL
W6791 US HWY 2
QUINNESEC, MI
US 49876
Contact: ERIC LARSON
eric.larson@versoco.com
T:
F:



OIL CONDITION

Visc @ 100°C	cSt	● 12.0	● 11.9	● 12.8	● 12.7
Base Number (BN)	mg KOH/g	● 12.5	● 13.9	● 4.7	● 5.8
Oxidation (PA)	%	70	57	90	72



CONTAMINATION

Soot %	%	● 0.3	● 0.2	● 0.4	● 0.3
Nitration (PA)	%	135	102	102	83
Sulfation (PA)	%	60	49	65	60
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	● 8	● 6	● 9	● 6
Sodium	ppm	● 3	● 3	● 2	● 2
Potassium	ppm	● 2	● <1	● 0	● 1

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.



WEAR METALS

Iron	ppm	● 13	● 7	● 19	● 9
Copper	ppm	● 2	● <1	● 2	● 1
Lead	ppm	● 1	● <1	● 1	● <1
Tin	ppm	● 1	● 0	● 0	● <1
Aluminum	ppm	● 0	● 4	● 2	● 0
Chromium	ppm	● 1	● <1	● <1	● <1
Molybdenum	ppm	● <1	● <1	● 0	● 0
Nickel	ppm	● 0	● 0	● 0	● 0
Titanium	ppm	<1	0	<1	<1
Silver	ppm	● 0	● 0	● 0	● 0
Manganese	ppm	● <1	● 0	● <1	● <1
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	● 4408	● 3510	● 1843	● 1357
Magnesium	ppm	153	128	● 813	● 710
Zinc	ppm	● 1295	● 1051	● 1058	● 868
Phosphorus	ppm	● 1081	● 892	● 887	● 742
Barium	ppm	● 0	● 4	● 0	● 2
Boron	ppm	● 234	● 220	● 70	● 50

Depot: VERQUI
Unique No: 10546508
Signed: Wes Davis
Report Date: 06 Jul 2023

LIEBHERR

CONSTRUCTION EQUIPMENT



GRAPHS

