

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L546 054052-1560 - Diesel Engine

Sample No: LH0169036

Oil Type: DIESEL ENGINE OIL SAE 15W40



SAMPLE INFORMATION

Sample Number	LH0169036	LH	LH0169023	LH0169015
Sample Date	11 Jan 2024	18 May 2023	15 Sep 2022	15 Jul 2022
Machine Hours	6623	0	4420	3877
Oil Hours	500	0	0	0
Oil Changed	Changed	N/A	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

MOOREFIELD EXCAVATING LTD.
 6297 WELLINGTON RD. 109S, RR #3
 HARRISTON, ON
 CA N0G 1Z0
 Contact: John Landman
 info@moorefieldex.ca
 T: (519)343-3571
 F: (519)510-3277



OIL CONDITION

Visc @ 100°C	cSt	12.4	9.9	10.8	11.3
Oxidation (PA)	%	55	59	59	57



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.3	0.1	0
Nitration (PA)	%	81	93	80	78
Sulfation (PA)	%	51	57	54	53
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	5	6	4	4
Sodium	ppm	3	10	4	4
Potassium	ppm	2	3	1	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 condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	8	35	8	6
Copper	ppm	2	65	<1	<1
Lead	ppm	<1	3	<1	0
Tin	ppm	0	0	<1	0
Aluminum	ppm	4	6	4	2
Chromium	ppm	0	<1	0	0
Molybdenum	ppm	87	85	85	82
Nickel	ppm	<1	<1	0	0
Titanium	ppm	0	<1	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	2122	2137	2203	2124
Magnesium	ppm	29	32	22	53
Zinc	ppm	1141	1118	1176	1156
Phosphorus	ppm	1021	1068	1045	968
Barium	ppm	<1	0	0	0
Boron	ppm	56	50	34	50

Depot: MOOPAL
 Unique No: 5724437
 Signed: Wes Davis
 Report Date: 13 Feb 2024



GRAPHS

