

LAB REPORT

Unit id
HYDRAULIC EXCAVATOR
Component
Hydraulics

Lab number: 1700812

Machine type
A 904

Manufacturer
Liebherr

Oil brand name
Liebherr Hydraulic HVI

Sample Report
Scope of Analysis: Analysis Kit 2

Oil quantity in system
320 l

Iron has increased slightly. The purity class of the oil meets the requirements. Only minor deviations in additive content are detectable compared to the previous sample. You should monitor the further change based on the next analysis. If the oil meets the Liebherr specification, please send us the next sample after another 1000 hours for trend observation. Otherwise, the oil should be changed.



NORMAL

Dipl.-Ing. Andy Böhme (MLA II + CLS)

ANALYSIS RESULTS		Current sample					
Lab number		1700812					
SAMPLE RATING							
Date of examination		04.07.2025					
Date of sample taken		18.06.2025					
Date of last oil change		11.07.2023					
Top-up since change		50 l					
Operating time since change		3000 h					
Total operating time		3000 h					
Oil changed		no					
WEAR							
Iron	Fe	mg/kg	26				
Chrome	Cr	mg/kg	4				
Tin	Sn	mg/kg	0				
Aluminum	Al	mg/kg	0				
Nickel	Ni	mg/kg	0				
Copper	Cu	mg/kg	7				
Lead	Pb	mg/kg	1				
Molybdenum	Mo	mg/kg	0				
PQ index	-	-	< 25				
CONTAMINATION							
Silicon	Si	mg/kg	2				
Potassium	K	mg/kg	2				
Sodium	Na	mg/kg	3				
Water		%	< 0.10				
OIL CONDITION							
Viscosity at 40 °C		mm ² /s	41.60				
Viscosity at 100 °C		mm ² /s	7.47				
Viscosity index		-	147				
Oxidation		A/cm	1				
IR index		-	99.62				

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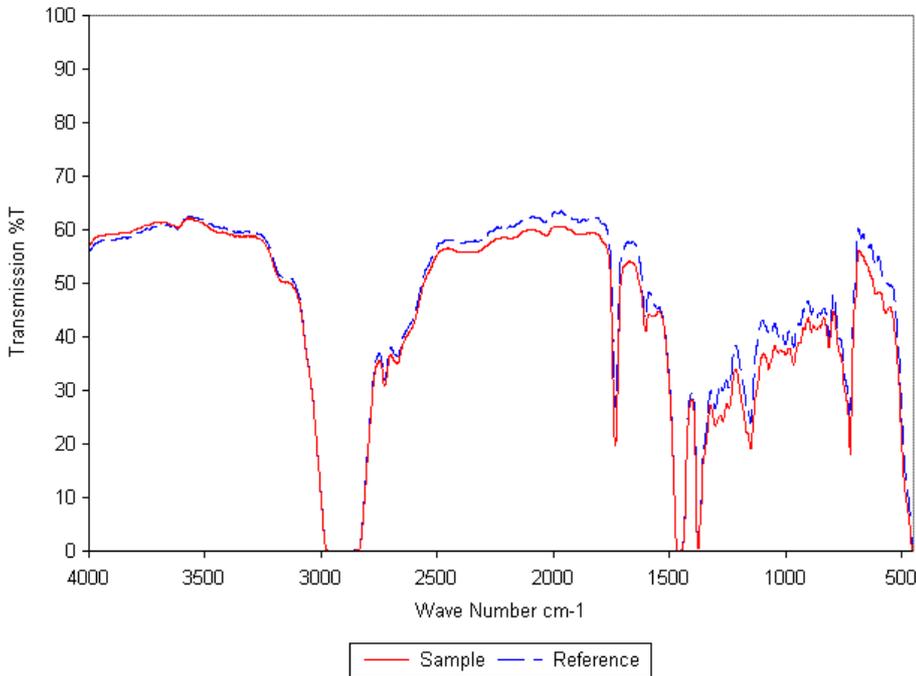
ANALYSIS RESULTS (...)		Current sample					
Lab number		1700812					
SAMPLE RATING		✓					
Date of examination		04.07.2025					
Date of sample taken		18.06.2025					
ADDITIVES							
Calcium	Ca	mg/kg	820				
Magnesium	Mg	mg/kg	3				
Boron	B	mg/kg	2				
Zinc	Zn	mg/kg	344				
Phosphorus	P	mg/kg	323				
Barium	Ba	mg/kg	0				
Sulphur	S	mg/kg	5663				
ADDITIONAL TESTS							
Cleanliness class	ISO 4406		18/16/12				
A: >4µm = ISO >4µm	Anzahl/100ml		160350				
B: >6µm = ISO >6µm	Anzahl/100ml		40610				
C: >14µm = ISO >14µm	Anzahl/100ml		3840				
D: >21µm	Anzahl/100ml		1150				
E: >38µm	Anzahl/100ml		110				
F: >70µm	Anzahl/100ml		20				
Cleanliness class	SAE AS 4059		8A				



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SAMPLE IMAGES (LABORATORY NUMBER: 1700812)



INFRARED SPECTRUM



BOTTLE AND CAP



Any questions?

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sample/1700812](http://www.lab.report/sample/1700812)