## LIEBHERR

**CONSTRUCTION EQUIPMENT** 

### LIEBHERR A904 056759-005 - Diesel Engine

Sample No: LH

Oil Type: DIESEL ENGINE OIL SAE 40

Sample Number		LH	LH	 
Sample Date		04 Jan 2024	18 Oct 2023	 
Machine Hours		14788	14788	 
Oil Hours		0	0	 
Oil Changed		N/A	N/A	 
Sample Status		SEVERE	NORMAL	 
OILC	ONDITI	ON		
Visc @ 100°C	cSt	<u> </u>	O 13.1	 
Oxidation (PA)	%	51	63	 

CONTAMINATION						
Water	%	NEG	NEG			
Soot %	%	<b>0</b>	0.7	***		
Nitration (PA)	%	38	76			
Sulfation (PA)	%	48	65			
Glycol	%	<b>0.326</b>	NEG			
Fuel	%	<b>0.6</b>	<1.0			
Silicon	ppm	<b>8</b>	<b>7</b>			
Sodium	ppm	<b>24</b>	O 5			
Potassium	ppm	<b>2</b>	O 2			

(O) WE				
WEA	IR METALS			
Iron	ppm	<b>3</b>	O 18	 
Copper	ppm	<b>43</b>	O 5	 
Lead	ppm	<b>4</b>	O <1	 
Tin	ppm	<b>0</b>	O <1	 
Aluminum	ppm	<b>1</b>	<b>3</b>	 
Chromium	ppm	<b>0</b>	O <1	 
Molybdenum	ppm	<b>63</b>	O 12	 
Nickel	ppm	<b>0</b>	O <1	 
Titanium	ppm	<b></b> <1	O 74	 
Silver	ppm	<b>0</b>	O <1	 
Manganese	ppm	<b>0</b>	<b>0</b>	 
Vanadium	ppm	0	<1	 

ADE	DITIVES			
Calcium	ppm	<b>1065</b>	O 1704	 
Magnesium	ppm	<b>943</b>	O 444	 
Zinc	ppm	<b>1186</b>	<b>1099</b>	 
Phosphorus	ppm	<b>1023</b>	958	 
Barium	ppm	<b>2</b>	O <1	 
Boron	ppm	<b>11</b>	O 64	 



LIEBHERR CANADA LTEE
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#### Diagnosis

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition. All component wear rates are normal. Fuel content negligible. Test for glycol is positive. There is a high concentration of glycol present in the oil. There is a moderate concentration of water present in the oil. Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The oil is no longer serviceable due to the presence of contaminants.

Depot: LBADOL
Unique No: 5707777
Signed: Kevin Marson
Report Date: 08 Jan 2024

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CONSTRUCTION EQUIPMENT





#### **GRAPHS**

