# LIEBHERR

**CONSTRUCTION EQUIPMENT** 

### [MITCHELL METALS] LIEBHERR R92254275 - Diesel Engine

Sample No: LH0260500

Oil Type: PETRO CANADA 10W40

SAMPLEI	NFORMATION				
Sample Number	LH0260500	LH0238608			
Sample Date	31 Jul 2023	22 Feb 2023			
Machine Hours	1546	518			
Oil Hours	0	0			
Oil Changed	Changed	Changed			
Sample Status	NORMAL	ABNORMAL			
OIL CONDITION					
Visc @ 100°C cSt	<b>13.8</b>	0 12.1			

-		_	_	
Oxidation (PA)	%	60	171	 
-4				
CON	TAMIN	ATION		
- CON	IAMIN	AHON		
Soot %	%	<b>0</b>	0	 
Nitration (PA)	%	55	91	 
Sulfation (PA)	%	57	102	 
Glycol	%	NEG	NEG	 
Fuel	%	<1.0	0.5	 
Silicon	ppm	<b>22</b>	<b>S</b> 56	 
Sodium	ppm	<b>2</b>	<b>9</b>	 
Potassium	maa	<b>0</b> <1	0 4	 

WEA	R METALS			
		0.40	0.44	
Iron	ppm	<b>13</b>	<b>44</b>	 
Copper	ppm	<b>6</b>	O 117	 
Lead	ppm	<b></b> <1	<b>4</b>	 
Tin	ppm	<b>0</b>	O <1	 
Aluminum	ppm	<b>1</b>	<b>5</b>	 
Chromium	ppm	<b>O</b> <1	<b>1</b>	 
Molybdenum	ppm	<b>59</b>	<b>37</b>	 
Nickel	ppm	<b>0</b>	O 0	 
Titanium	ppm	0	<1	 
Silver	ppm	<b>0</b>	O 0	 
Manganese	ppm	<b></b> <1	4	 
Vanadium	ppm	0	0	 

ADDITIVES					
Calcium	ppm	<b>1038</b>	O 1806		
Magnesium	ppm	1007	○ 805		
Zinc	ppm	<b>1191</b>	948		
Phosphorus	ppm	<b>1027</b>	O 851		
Barium	ppm	<b>0</b>	<b>4</b>		
Boron	ppm	<b>2</b>	O 104		



#### Liebherr Canada

140 - 21320 Gordon Way Richmond, BC CA V6W 1J8 Contact: Kevin Steer kevin.steer@liebherr.com

T:

F: (604)270-3254

#### 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.

Depot:LIERICUnique No:5632325Signed:Wes DavisReport Date:30 Aug 2023

Contact/Location: Kevin Steer - LIERIC

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### **GRAPHS**

