

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR TA 230 145963-1513 - Diesel Engine

Sample No: LH0235889

Oil Type: NOT GIVEN



**NUECES POWER EQUIPMENT**  
 7667 N SAM HOUSTON PKWY EAST  
 HUMBLE, TX  
 US 77396  
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 T: (713)247-0066  
 F: (713)941-2262



#### SAMPLE INFORMATION

Sample Number	LH0235889	---	---	---
Sample Date	01 Aug 2023	---	---	---
Machine Hours	555	---	---	---
Oil Hours	200	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---



#### OIL CONDITION

Visc @ 100°C	cSt	11.3	---	---	---
Base Number (BN)	mg KOH/g	6.7	---	---	---
Oxidation (PA)	%	69	---	---	---



#### CONTAMINATION

Soot %	%	0.1	---	---	---
Nitration (PA)	%	73	---	---	---
Sulfation (PA)	%	56	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	1.3	---	---	---
Silicon	ppm	33	---	---	---
Sodium	ppm	0	---	---	---
Potassium	ppm	0	---	---	---



#### WEAR METALS

Iron	ppm	38	---	---	---
Copper	ppm	359	---	---	---
Lead	ppm	0	---	---	---
Tin	ppm	2	---	---	---
Aluminum	ppm	15	---	---	---
Chromium	ppm	2	---	---	---
Molybdenum	ppm	1	---	---	---
Nickel	ppm	0	---	---	---
Titanium	ppm	1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	2	---	---	---
Vanadium	ppm	0	---	---	---



#### ADDITIVES

Calcium	ppm	1358	---	---	---
Magnesium	ppm	794	---	---	---
Zinc	ppm	897	---	---	---
Phosphorus	ppm	755	---	---	---
Barium	ppm	<1	---	---	---
Boron	ppm	64	---	---	---

#### Diagnosis

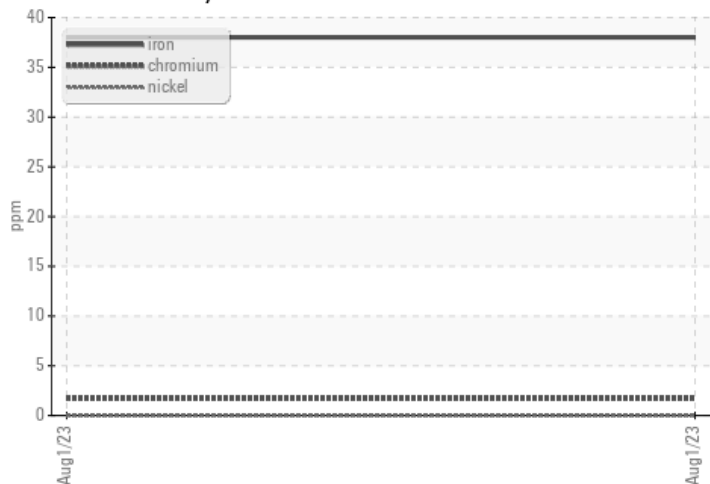
The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking in. Fuel content negligible. 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 acceptable for the time in service.

**Depot:** NUEHUM  
**Unique No:** 10605200  
**Signed:** Jonathan Hester  
**Report Date:** 17 Aug 2023

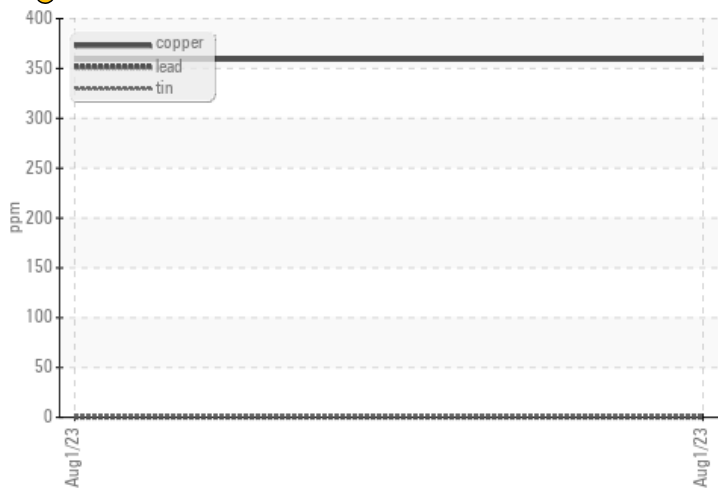


### GRAPHS

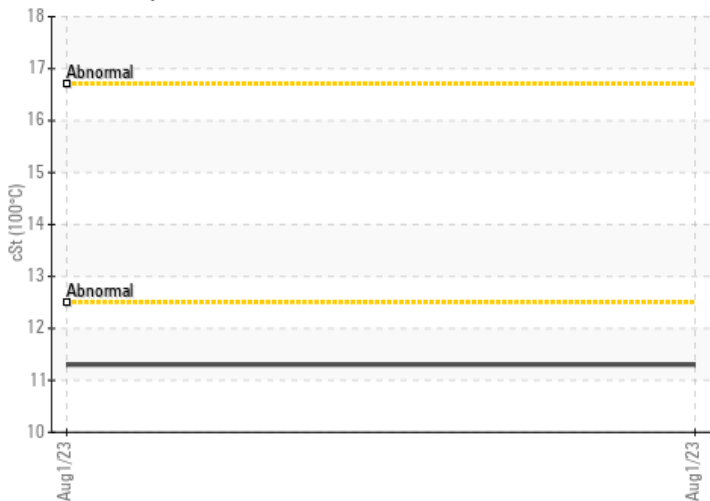
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number

