

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR R920 050017-1705 - Swing Drive

Sample No: LH0258275

Oil Type: LIEBHERR HYPOID 85W-140 EP



#### SAMPLE INFORMATION

Sample Number	<b>LH0258275</b>	LH0229827	LH0243925	LH0229732
Sample Date	<b>24 Aug 2023</b>	04 Apr 2023	24 Jan 2023	26 Oct 2022
Machine Hours	<b>3122</b>	2127	1614	1042
Oil Hours	<b>500</b>	500	500	498
Oil Changed	<b>Changed</b>	Changed	Not Changd	Changed
Sample Status	<b>ABNORMAL</b>	NORMAL	NORMAL	ABNORMAL

#### POTOMAC METALS

42702 DULLES TRADE CT  
STERLING, VA  
US 20166  
Contact: JEREMY WONG  
JEREMY.WONG@POTOMACMETALS.COM  
T: (703)430-3667  
F:



#### OIL CONDITION

Visc @ 40°C	cSt	<b>179</b>	288	352	349
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#### CONTAMINATION

Water	%	---	---	0.136	0.212
Silicon	ppm	<b>6</b>	4	2	2
Sodium	ppm	<b>3</b>	2	2	2
Potassium	ppm	<b>2</b>	0	0	0



#### WEAR METALS

Iron	ppm	<b>130</b>	463	640	368
Copper	ppm	<b>17</b>	38	84	79
Lead	ppm	<b>0</b>	0	0	<1
Tin	ppm	<b>2</b>	1	3	1
Aluminum	ppm	<b>1</b>	<1	<1	1
Chromium	ppm	<b>1</b>	4	5	3
Molybdenum	ppm	<b>0</b>	<1	<1	<1
Nickel	ppm	<b>&lt;1</b>	0	0	0
Titanium	ppm	<b>1</b>	0	0	<1
Silver	ppm	<b>&lt;1</b>	0	0	0
Manganese	ppm	<b>2</b>	3	4	3
Vanadium	ppm	<b>0</b>	0	0	0



#### ADDITIVES

Calcium	ppm	<b>47</b>	5	4	20
Magnesium	ppm	<b>&lt;1</b>	5	5	<1
Zinc	ppm	<b>53</b>	0	22	45
Phosphorus	ppm	<b>1934</b>	1737	1349	1234
Barium	ppm	<b>0</b>	0	0	6
Boron	ppm	<b>0</b>	0	4	0

#### Diagnosis

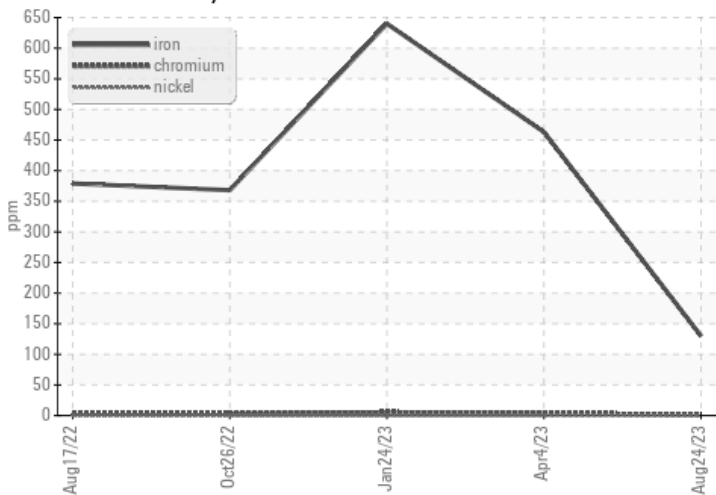
We suspect abnormal contamination may be due to sampling method. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The condition of the oil is acceptable for the time in service.

Depot: POTSTE  
Unique No: 10708580  
Signed: Jonathan Hester  
Report Date: 26 Oct 2023

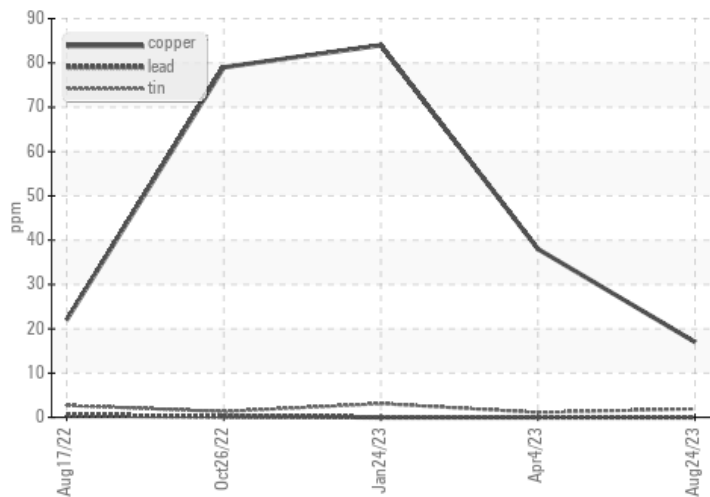


### GRAPHS

#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C

