

LIEBHERR

CONSTRUCTION EQUIPMENT



HYUNDAI HYUNDAI -Hydraulic System

Sample No: LH0272965

Oil Type: SHELL HYDRAULIC S1 M 68



SAMPLE INFORMATION

Sample Number	LH0272965	---	---	---
Sample Date	03 Jan 2024	---	---	---
Machine Hours	0	---	---	---
Oil Hours	0	---	---	---
Oil Changed	N/A	---	---	---
Sample Status	ABNORMAL	---	---	---

Wilmington Iron & Metal Company Inc
 2149 US Route
 Wilmington, OH
 CA 45177
 Contact: Maintenance Manager



OIL CONDITION

Visc @ 40°C	cSt	● 62.1	---	---	---
Acid Number (AN)	mg KOH/g	● 0.40	---	---	---

T:
F:



CONTAMINATION

Water	%	● 0.717	---	---	---
Silicon	ppm	● <1	---	---	---
Sodium	ppm	● 0	---	---	---
Potassium	ppm	● <1	---	---	---

Diagnosis

We advise that you check for the source of water entry. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. Resample at the next service interval to monitor. There is too much water present in this sample to perform a particle count. All component wear rates are normal. Appearance is milky. There is a moderate concentration of water present in the oil. The AN level is acceptable for this fluid.



WEAR METALS

Iron	ppm	● 3	---	---	---
Copper	ppm	● <1	---	---	---
Lead	ppm	● 0	---	---	---
Tin	ppm	● <1	---	---	---
Aluminum	ppm	● 2	---	---	---
Chromium	ppm	● <1	---	---	---
Molybdenum	ppm	● <1	---	---	---
Nickel	ppm	● 0	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	● 0	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

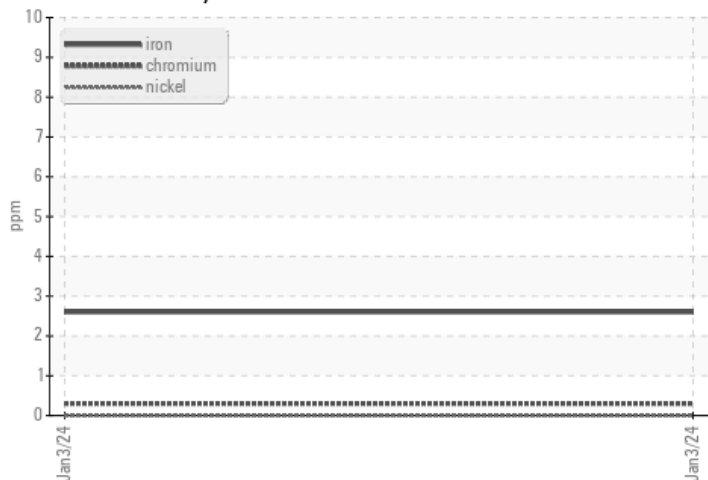
Calcium	ppm	● 16	---	---	---
Magnesium	ppm	60	---	---	---
Zinc	ppm	● 374	---	---	---
Phosphorus	ppm	● 330	---	---	---
Barium	ppm	● 0	---	---	---
Boron	ppm	● 0	---	---	---

Depot: WIL214WIL
Unique No: 10830096
Signed: Don Baldrige
Report Date: 14 Jan 2024

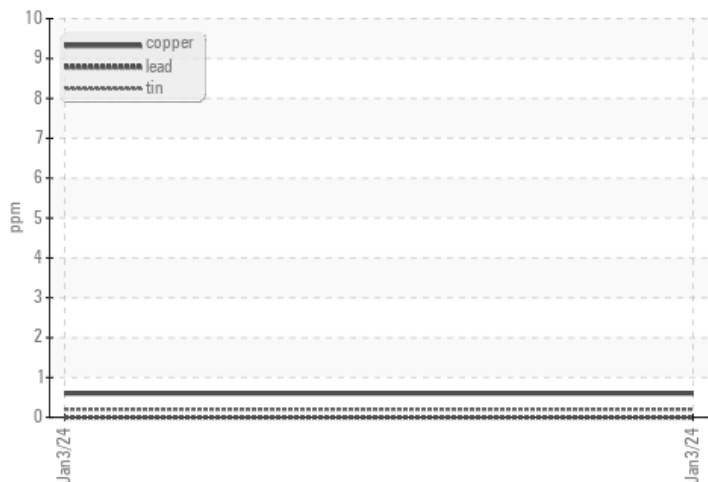


GRAPHS

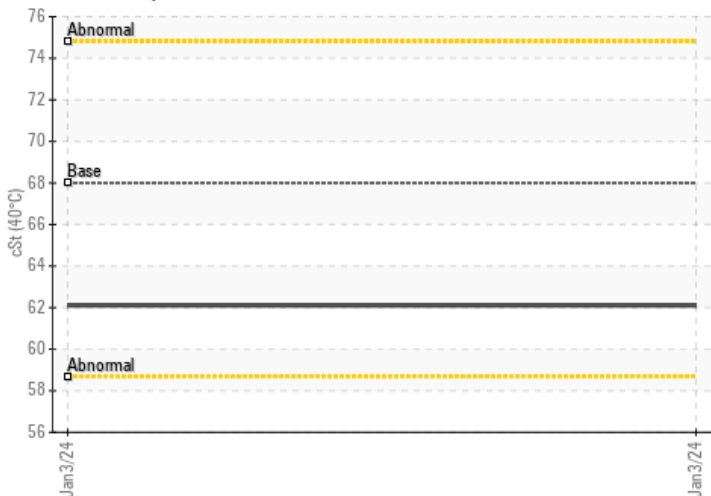
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Acid Number

