

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR A944 038730-194 - Front Differential

Sample No: LH0264409

Oil Type: GEAR OIL SAE 80W90



#### SAMPLE INFORMATION

|               |             |             |     |     |
|---------------|-------------|-------------|-----|-----|
| Sample Number | LH0264409   | LH0185256   | --- | --- |
| Sample Date   | 28 Jun 2023 | 29 Jan 2021 | --- | --- |
| Machine Hours | 29970       | 27384       | --- | --- |
| Oil Hours     | 0           | 0           | --- | --- |
| Oil Changed   | Changed     | Changed     | --- | --- |
| Sample Status | NORMAL      | ABNORMAL    | --- | --- |

#### ALTER METAL

2080 SPINDT DR

WAUPACA, WI

US 54981

Contact: BRAD DORMADY

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T:

F:



#### OIL CONDITION

|             |     |       |       |     |     |
|-------------|-----|-------|-------|-----|-----|
| Visc @ 40°C | cSt | ● 143 | ● 172 | --- | --- |
|-------------|-----|-------|-------|-----|-----|



#### CONTAMINATION

|           |     |     |      |     |     |
|-----------|-----|-----|------|-----|-----|
| Silicon   | ppm | ● 1 | ● 6  | --- | --- |
| Sodium    | ppm | ● 0 | ● 3  | --- | --- |
| Potassium | ppm | ● 4 | ● 11 | --- | --- |



#### WEAR METALS

|            |     |      |       |     |     |
|------------|-----|------|-------|-----|-----|
| Iron       | ppm | ● 6  | ● 148 | --- | --- |
| Copper     | ppm | ● 4  | ● 186 | --- | --- |
| Lead       | ppm | ● <1 | ● 0   | --- | --- |
| Tin        | ppm | ● 0  | ● 0   | --- | --- |
| Aluminum   | ppm | ● 0  | ● 6   | --- | --- |
| Chromium   | ppm | ● 0  | ● 2   | --- | --- |
| Molybdenum | ppm | ● <1 | ● 2   | --- | --- |
| Nickel     | ppm | ● 0  | ● 1   | --- | --- |
| Titanium   | ppm | ● 0  | ● <1  | --- | --- |
| Silver     | ppm | ● 0  | ● 0   | --- | --- |
| Manganese  | ppm | ● <1 | ● 10  | --- | --- |
| Vanadium   | ppm | ● 0  | ● 0   | --- | --- |



#### ADDITIVES

|            |     |       |       |     |     |
|------------|-----|-------|-------|-----|-----|
| Calcium    | ppm | ● 26  | ● 116 | --- | --- |
| Magnesium  | ppm | ● 5   | ● 0   | --- | --- |
| Zinc       | ppm | ● 21  | ● 181 | --- | --- |
| Phosphorus | ppm | ● 646 | ● 823 | --- | --- |
| Barium     | ppm | ● 2   | ● 0   | --- | --- |
| Boron      | ppm | ● 5   | ● 5   | --- | --- |

#### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the fluid. The condition of the fluid is acceptable for the time in service.

Depot: ALTWAUWI

Unique No: 10546780

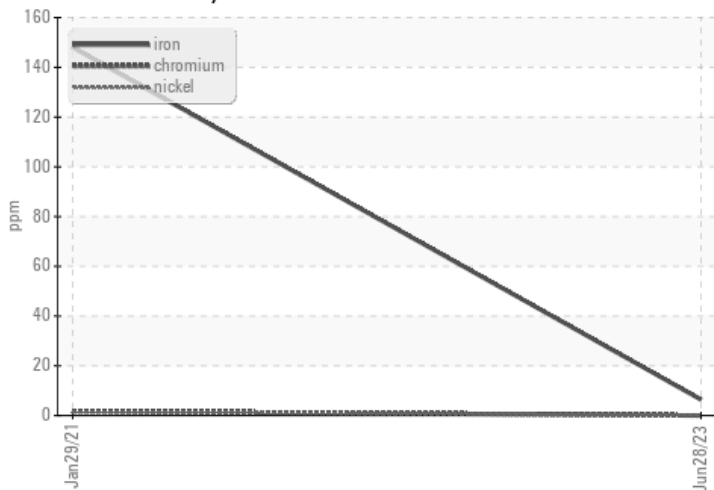
Signed: Angela Borella

Report Date: 07 Jul 2023

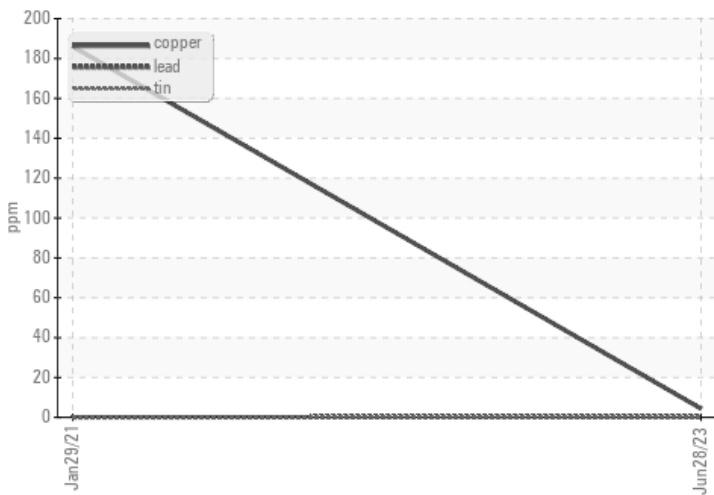


### GRAPHS

#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C

