

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### 061467-1007 - Hydraulic System

Sample No: LH0237703

Oil Type: PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL



#### SAMPLE INFORMATION

|               |                    |             |             |             |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | <b>LH0237703</b>   | LH0242297   | LH0130157   | LH0055198   |
| Sample Date   | <b>20 Oct 2023</b> | 03 Nov 2022 | 06 Aug 2018 | 28 Jul 2016 |
| Machine Hours | <b>18659</b>       | 17844       | 12577       | 8425        |
| Oil Hours     | <b>0</b>           | 0           | 0           | 0           |
| Oil Changed   | <b>Not Changd</b>  | Not Changd  | Not Changd  | Not Changd  |
| Sample Status | <b>NORMAL</b>      | ATTENTION   | ABNORMAL    | ABNORMAL    |

#### American Iron and Metal

2555 Sheffield Road  
Ottawa, ON  
CA K1B 3V6  
Contact: Dan Dupelle  
ddupelle@aim-rg.com  
T: (613)228-9380  
F: (613)745-0692



#### OIL CONDITION

|             |     |             |      |      |      |
|-------------|-----|-------------|------|------|------|
| Visc @ 40°C | cSt | <b>44.6</b> | 42.9 | 41.0 | 37.5 |
|-------------|-----|-------------|------|------|------|



#### CONTAMINATION

|                   |     |                 |          |          |          |
|-------------------|-----|-----------------|----------|----------|----------|
| Particles >4µm    |     | <b>4425</b>     | 31992    | 102244   | 3817     |
| Particles >6µm    |     | <b>147</b>      | 2528     | 23723    | 909      |
| Particles >14µm   |     | <b>13</b>       | 90       | 27       | 73       |
| ISO 4406:1999 (c) |     | <b>19/14/11</b> | 22/19/14 | 24/22/12 | 19/17/13 |
| Silicon           | ppm | <b>3</b>        | 2        | <1       | 1        |
| Sodium            | ppm | <b>3</b>        | 2        | <1       | 4        |
| Potassium         | ppm | <b>&lt;1</b>    | 0        | 0        | 0        |

#### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The condition of the oil is acceptable for the time in service.



#### WEAR METALS

|            |     |              |    |    |    |
|------------|-----|--------------|----|----|----|
| Iron       | ppm | <b>14</b>    | 13 | 31 | 41 |
| Copper     | ppm | <b>4</b>     | 4  | 6  | 8  |
| Lead       | ppm | <b>&lt;1</b> | <1 | 4  | 1  |
| Tin        | ppm | <b>0</b>     | <1 | 0  | <1 |
| Aluminum   | ppm | <b>&lt;1</b> | <1 | <1 | <1 |
| Chromium   | ppm | <b>2</b>     | 2  | 3  | 3  |
| Molybdenum | ppm | <b>13</b>    | 10 | 0  | 0  |
| Nickel     | ppm | <b>&lt;1</b> | <1 | <1 | <1 |
| Titanium   | ppm | <b>0</b>     | <1 | 0  | 0  |
| Silver     | ppm | <b>&lt;1</b> | 0  | 0  | 0  |
| Manganese  | ppm | <b>0</b>     | <1 | <1 | <1 |
| Vanadium   | ppm | <b>0</b>     | 0  | 0  | 0  |



#### ADDITIVES

|            |     |            |     |     |     |
|------------|-----|------------|-----|-----|-----|
| Calcium    | ppm | <b>474</b> | 387 | 272 | 210 |
| Magnesium  | ppm | <b>171</b> | 107 | 2   | 3   |
| Zinc       | ppm | <b>783</b> | 706 | 234 | 425 |
| Phosphorus | ppm | <b>661</b> | 656 | 201 | 347 |
| Barium     | ppm | <b>0</b>   | 0   | 0   | <1  |
| Boron      | ppm | <b>18</b>  | 12  | 0   | 0   |

Depot: BAKOTT  
Unique No: 5668559  
Signed: Wes Davis  
Report Date: 25 Oct 2023

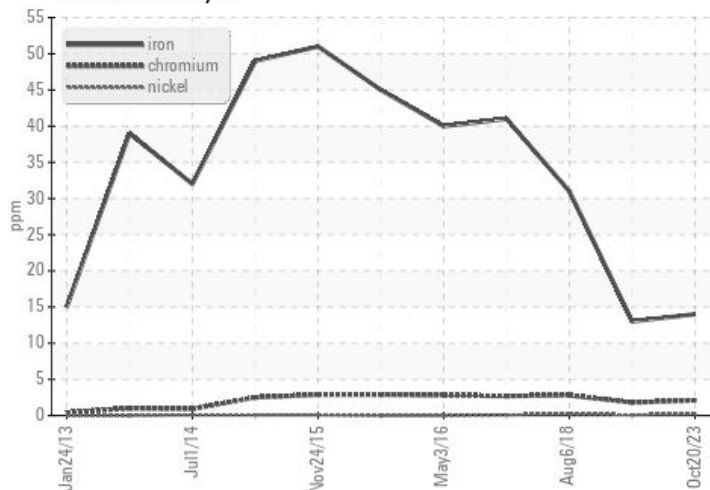
# LIEBHERR

## CONSTRUCTION EQUIPMENT

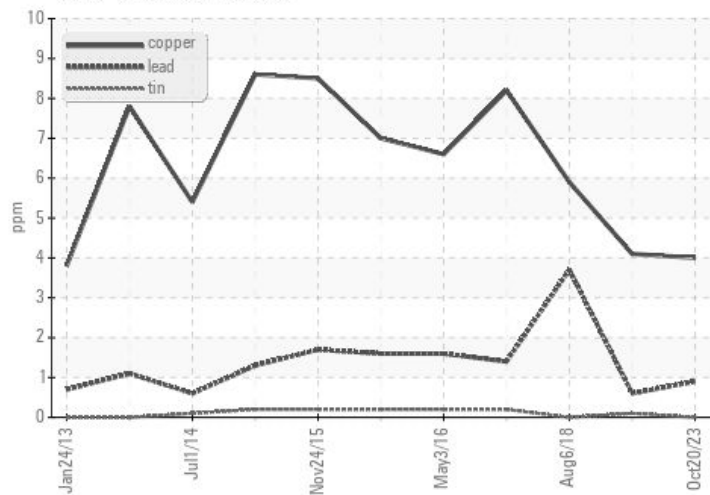


### GRAPHS

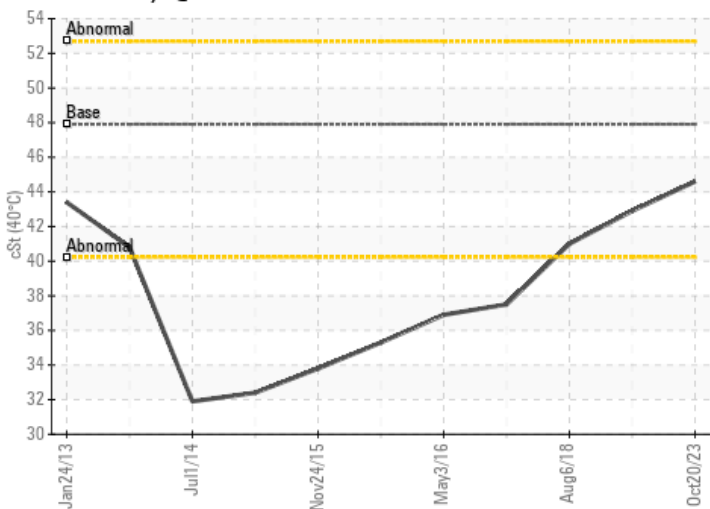
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C



#### Particle Count

