

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### [(354956)] LIEBHERR A922 128674-1509 - Hydraulic System

Sample No: LH0274095

Oil Type: PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL



#### SAMPLE INFORMATION

| Sample Number | LH0274095   | LH0238909   | LH0225267   | LH0225484   |
|---------------|-------------|-------------|-------------|-------------|
| Sample Date   | 01 Sep 2023 | 20 Jan 2023 | 24 May 2022 | 20 May 2022 |
| Machine Hours | 2993        | 2095        | 6980        | 1163        |
| Oil Hours     | 0           | 0           | 0           | 0           |
| Oil Changed   | Not Changd  | Not Changd  | N/A         | N/A         |
| Sample Status | ABNORMAL    | ABNORMAL    | NORMAL      | NORMAL      |

**Transec Common Inc.**  
2075 Boul. Fortin  
Laval, QC  
CA H7S 1P4  
Contact: Service Manager



#### OIL CONDITION

| Visc @ 40°C | cSt | 23.6 | 24.3 | 44.6 | 25.2 |
|-------------|-----|------|------|------|------|
|-------------|-----|------|------|------|------|

T:  
F:



#### CONTAMINATION

| Water             | %   | ---      | 0.005    | ---      | ---      |
|-------------------|-----|----------|----------|----------|----------|
| Particles >4µm    |     | 6259     | 4866     | 8929     | 18164    |
| Particles >6µm    |     | 1070     | 987      | 1064     | 1026     |
| Particles >14µm   |     | 26       | 35       | 14       | 13       |
| ISO 4406:1999 (c) |     | 20/17/12 | 19/17/12 | 20/17/11 | 21/17/11 |
| Silicon           | ppm | 5        | 4        | 4        | 4        |
| Sodium            | ppm | <1       | <1       | 2        | 0        |
| Potassium         | ppm | 1        | <1       | <1       | <1       |

#### Diagnosis

Confirm the source of the lubricant being utilized for top-up/fill. 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. Viscosity of sample indicates oil is within ISO 22 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.



#### WEAR METALS

|            |     |    |    |    |    |
|------------|-----|----|----|----|----|
| Iron       | ppm | 8  | 6  | 13 | 4  |
| Copper     | ppm | 4  | 4  | 3  | 4  |
| Lead       | ppm | <1 | <1 | <1 | <1 |
| Tin        | ppm | 0  | 0  | <1 | 0  |
| Aluminum   | ppm | <1 | <1 | <1 | <1 |
| Chromium   | ppm | 1  | <1 | 1  | <1 |
| Molybdenum | ppm | 0  | 0  | <1 | 0  |
| Nickel     | ppm | <1 | <1 | 0  | 0  |
| Titanium   | ppm | 0  | 0  | 0  | 0  |
| Silver     | ppm | 0  | 0  | 0  | <1 |
| Manganese  | ppm | 0  | 0  | <1 | 0  |
| Vanadium   | ppm | 0  | 0  | 0  | 0  |



#### ADDITIVES

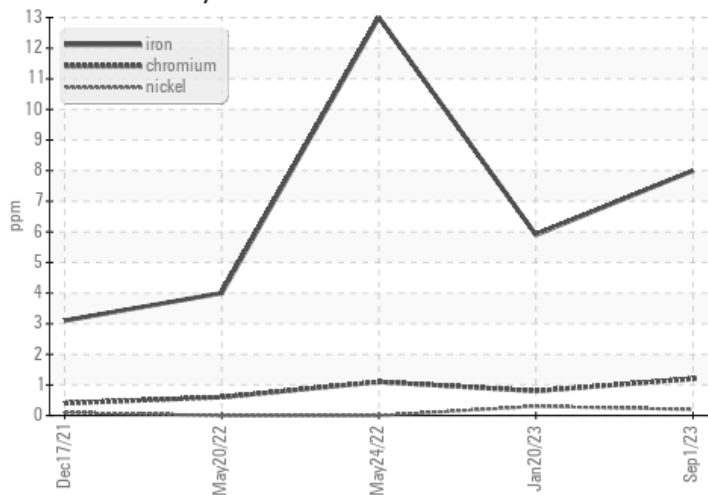
|            |     |    |    |      |    |
|------------|-----|----|----|------|----|
| Calcium    | ppm | 3  | 2  | 1246 | 5  |
| Magnesium  | ppm | <1 | 0  | 14   | 0  |
| Zinc       | ppm | 39 | 19 | 927  | 10 |
| Phosphorus | ppm | 72 | 72 | 757  | 75 |
| Barium     | ppm | 0  | 0  | 0    | 0  |
| Boron      | ppm | <1 | 0  | 2    | <1 |

Depot: TRA207LAV  
Unique No: 5644695  
Signed: Bill Quesnel  
Report Date: 20 Sep 2023

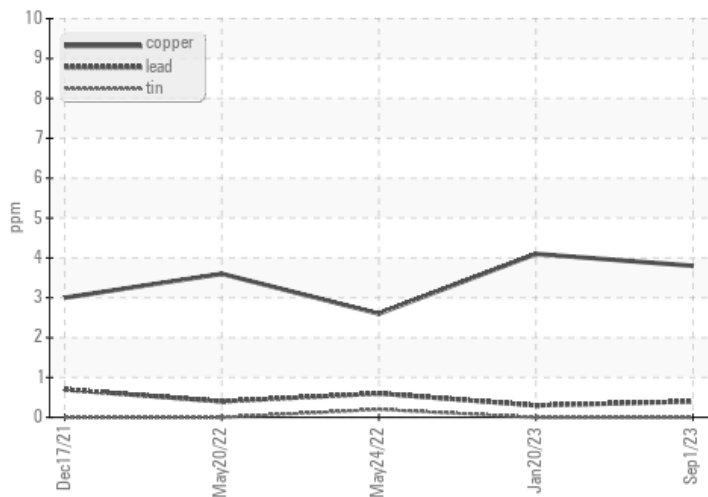


### GRAPHS

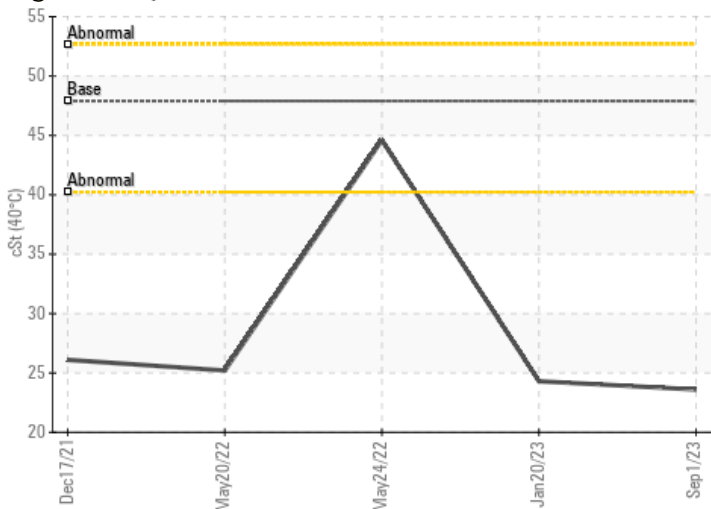
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C



#### Particle Count

