# LIEBHERR

## **CONSTRUCTION EQUIPMENT**

# 042296-1491-Swing Drive

Sample No: LH0261395

Potassium

Oil Type: PETRO CANADA TRAXON 75W90 SYNTHETIC

0<1

ppm

| 5             |         |             |             |              |             |  |  |  |
|---------------|---------|-------------|-------------|--------------|-------------|--|--|--|
| SAM           | PLE INF | ORMATION    |             |              |             |  |  |  |
| Sample Number |         | LH0261395   | LH          | LH           | LH          |  |  |  |
| Sample Date   |         | 26 Jun 2023 | 16 Jul 2021 | 18 Mar 2021  | 23 Nov 2018 |  |  |  |
| Machine Hours |         | 7046        | 0           | 0            | 1984        |  |  |  |
| Oil Hours     |         | 0           | 0           | 0            | 0           |  |  |  |
| Oil Changed   |         | Changed     | Changed     | Changed      | Changed     |  |  |  |
| Sample Status |         | ABNORMAL    | NORMAL      | NORMAL       | NORMAL      |  |  |  |
|               |         |             |             |              |             |  |  |  |
| OIL CONDITION |         |             |             |              |             |  |  |  |
| Visc @ 40°C   | cSt     | <b>96.9</b> | 170         | O 104        | <b>137</b>  |  |  |  |
| CONTAMINATION |         |             |             |              |             |  |  |  |
| Silicon       | ppm     | <b>4</b>    | O <1        | <b>3</b>     | <b>5</b>    |  |  |  |
| Sodium        | nnm     | <u> </u>    | 0.4         | $\bigcirc$ 4 | 03          |  |  |  |

| WE!        | AR META | LS           |          |           |            |
|------------|---------|--------------|----------|-----------|------------|
| PQ         |         | <b>0</b> 0   |          |           |            |
| Iron       | ppm     | <b>0</b> 846 | O 194    | ○ 343     | <b>207</b> |
| Copper     | ppm     | <b>94</b>    | O 104    | <b>58</b> | <b>47</b>  |
| Lead       | ppm     | <b>2</b>     | O 2      | <b>1</b>  | O 1        |
| Tin        | ppm     | <b>3</b>     | <b>4</b> | <1        | O 0        |
| Aluminum   | ppm     | <b>○</b> <1  | O 0      | O <1      | O <1       |
| Chromium   | ppm     | <b>7</b>     | O 2      | <b>4</b>  | 02         |
| Molybdenum | ppm     | <b>○</b> <1  | O <1     | <1        | O <1       |
| Nickel     | ppm     | <b>O</b> <1  | O <1     | <1        | O <1       |
| Titanium   | ppm     | 0            | 0        | 0         | 0          |
| Silver     | ppm     | 0            | <1       | <1        | 0          |
| Manganese  | ppm     | <b>6</b>     | O 2      | <b>3</b>  | O 1        |
| Vanadium   | ppm     | 0            | 0        | 0         | 0          |
|            |         |              |          |           |            |

| Marigariosc  | ppiii |             | 0 2      |             |             |  |  |  |
|--|-------|-------------|----------|-------------|-------------|--|--|--|
| Vanadium   | ppm   | 0           | 0        | 0           | 0           |  |  |  |
| THE STATE OF THE S |       |             |          |             |             |  |  |  |
| ADDITIVES  |       |             |          |             |             |  |  |  |
|  |       |             |          |             |             |  |  |  |
| Calcium  | ppm   | <b>5</b>    | <b>6</b> | 0 8         | <b>4</b>    |  |  |  |
| Magnesium  | ppm   | <b>0</b> <1 | O <1     | <b>1</b>    | <b>1</b>    |  |  |  |
| Zinc   | ppm   | <b>11</b>   | O 12     | 0 8         | <b>6</b>    |  |  |  |
| Phosphorus   | ppm   | <b>1379</b> | 2300     | <b>1065</b> | <b>1069</b> |  |  |  |
| Barium   | ppm   | <b>0</b>    | O 0      | 0           | O 0         |  |  |  |
| Boron  | ppm   | <b>51</b>   | 55       | <b>160</b>  | <b>256</b>  |  |  |  |
|  |       |             |          |             |             |  |  |  |





#### **Delsan - American Iron and Metal**

2187 Montee Masson

Laval, QC CA H7B 0A6

Contact: MANNY MARQUES mmarques@delsan-aim.com

T: F:

#### Diagnosis

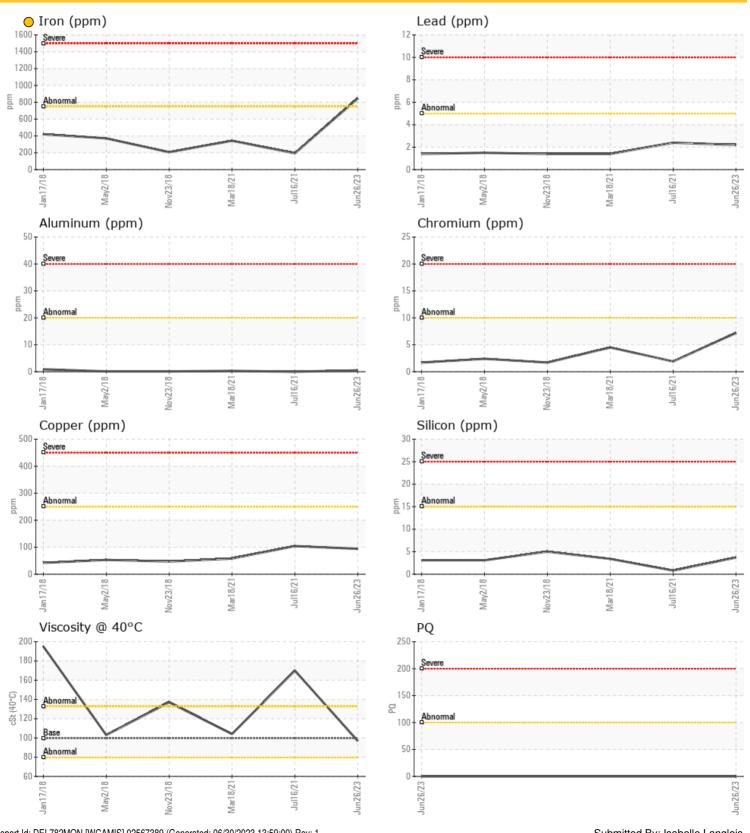
The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Iron ppm levels are abnormal. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. There is no indication of any contamination in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot:DEL782MONUnique No:5604435Signed:Kevin MarsonReport Date:30 Jun 2023





### **GRAPHS**



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Submitted By: Isabelle Langlois