

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### 054212-1007 - Diesel Engine

Sample No: LH0168241

Oil Type: TOTAL FINA RUBIA TIR 7900 15W40



#### SAMPLE INFORMATION

| Sample Number | LH0168241   | LH0105752   | LH0100631   | LH0063723   |
|---------------|-------------|-------------|-------------|-------------|
| Sample Date   | 20 Oct 2020 | 16 Sep 2016 | 25 Apr 2016 | 01 Oct 2015 |
| Machine Hours | 17497       | 6712        | 6218        | 5681        |
| Oil Hours     | 0           | 0           | 0           | 0           |
| Oil Changed   | Not Chngd   | Changed     | Changed     | Changed     |
| Sample Status | NORMAL      | NORMAL      | ABNORMAL    | NORMAL      |

**American Iron and Metal**  
251 CHEMIN DES ILES  
LEVIS, QC  
CA G6V 1M5  
Contact: Bobby Rochette



#### OIL CONDITION

|                      |       |      |      |      |      |
|----------------------|-------|------|------|------|------|
| Visc @ 40°C          | cSt   | ---  | ---  | 75.2 | 85.8 |
| Visc @ 100°C         | cSt   | 14.5 | 13.3 | 11.3 | 12.4 |
| Viscosity Index (VI) | Scale | ---  | ---  | 141  | 140  |
| Oxidation (PA)       | %     | 57   | 54   | 57   | 57   |

T: (418)649-1000  
F:

#### Diagnosis

Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition. Les taux d'usure de tous les composants sont normaux. Il n'y a aucun indice de contamination dans le l'huile. L'état de l'huile est acceptable pour la durée de service.



#### CONTAMINATION

|                |     |      |      |     |     |
|----------------|-----|------|------|-----|-----|
| Water          | %   | NEG  | NEG  | NEG | NEG |
| Soot %         | %   | 1.6  | 1.9  | 1.6 | 2.9 |
| Nitration (PA) | %   | 79   | 82   | 72  | 79  |
| Sulfation (PA) | %   | 59   | 69   | 66  | 71  |
| Glycol         | %   | NEG  | NEG  | NEG | NEG |
| Fuel           | %   | <1.0 | <1.0 | 0.0 | 0.0 |
| Silicon        | ppm | 5    | 7    | 6   | 9   |
| Sodium         | ppm | 3    | 3    | 4   | 3   |
| Potassium      | ppm | 1    | 0    | <1  | <1  |



#### WEAR METALS

|            |     |    |    |    |    |
|------------|-----|----|----|----|----|
| Iron       | ppm | 8  | 21 | 43 | 57 |
| Copper     | ppm | 2  | 6  | 5  | 10 |
| Lead       | ppm | <1 | 2  | 1  | 2  |
| Tin        | ppm | <1 | <1 | <1 | <1 |
| Aluminum   | ppm | 3  | 2  | 2  | 2  |
| Chromium   | ppm | <1 | <1 | <1 | <1 |
| Molybdenum | ppm | 91 | 7  | 38 | 44 |
| Nickel     | ppm | 0  | 0  | <1 | <1 |
| Titanium   | ppm | <1 | <1 | <1 | <1 |
| Silver     | ppm | 0  | 0  | 0  | 0  |
| Manganese  | ppm | <1 | <1 | <1 | <1 |
| Vanadium   | ppm | <1 | 0  | 0  | 0  |



#### ADDITIVES

|            |     |      |      |      |      |
|------------|-----|------|------|------|------|
| Calcium    | ppm | 2170 | 2113 | 1447 | 1341 |
| Magnesium  | ppm | 102  | 101  | 765  | 835  |
| Zinc       | ppm | 1291 | 1039 | 1357 | 1376 |
| Phosphorus | ppm | 1063 | 863  | 1085 | 1080 |
| Barium     | ppm | 0    | <1   | <1   | <1   |
| Boron      | ppm | 44   | 3    | 5    | 3    |

Depot: AMELEV  
Unique No: 5122407  
Signed: Wes Davis  
Report Date: 22 Oct 2020



### GRAPHS

