

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR A944CHD 058904-194 - Diesel Engine

Sample No: LH0269960

Oil Type: PETRO CANADA 10W40



ARCELORMITTAL LONG PRODUITS CANADA  
3185 ROUTE MARIE-VICTORIN  
CONTRECOEUR, QC  
CA J0L 1C0  
Contact: Danny Drouin  
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T:  
F:



#### INFORMATION SUR L'ÉCHANTILLON

| Numéro d'échant.     | LH0269960   | LH0256286   | LH0242871   | LH0133435   |
|----------------------|-------------|-------------|-------------|-------------|
| Date d'échant.       | 29 Jul 2023 | 20 May 2023 | 29 Jan 2023 | 20 Nov 2018 |
| Heures de la Machine | 24455       | 25040       | 24201       | 0           |
| Heures de l'huile    | 0           | 0           | 0           | 0           |
| Huile changée        | Changed     | Changed     | Changed     | Changed     |
| Statut de l'échant.  | NORMAL      | NORMAL      | NORMAL      | NORMAL      |



#### ÉTAT D'HUILE

|                |     |      |      |      |      |
|----------------|-----|------|------|------|------|
| Visc 100°C     | cSt | 13.9 | 13.6 | 12.1 | 13.7 |
| Oxydation (PA) | %   | 173  | 168  | 61   | 57   |



#### CONTAMINATION

|                  |     |      |      |      |      |
|------------------|-----|------|------|------|------|
| % de suie        | %   | 1.9  | 2.1  | 0.7  | 1    |
| Nitration (PA)   | %   | 93   | 102  | 76   | 76   |
| Sulfatation (PA) | %   | 116  | 113  | 59   | 55   |
| Glycol           | %   | NEG  | NEG  | 0.0  | NEG  |
| Essence          | %   | <1.0 | <1.0 | <1.0 | <1.0 |
| Silicium         | ppm | 7    | 7    | 8    | 8    |
| Sodium           | ppm | 6    | 15   | 39   | 2    |
| Potassium        | ppm | 1    | 1    | 1    | 0    |



#### MÉTAUX D'USURE

|           |     |     |     |     |    |
|-----------|-----|-----|-----|-----|----|
| Fer       | ppm | 46  | 45  | 28  | 12 |
| Cuivre    | ppm | 119 | 265 | 342 | 2  |
| Plomb     | ppm | 4   | 8   | 8   | <1 |
| Étain     | ppm | 1   | 2   | 2   | 0  |
| Aluminium | ppm | 3   | 2   | 2   | 2  |
| Chrome    | ppm | <1  | <1  | <1  | <1 |
| Molybdène | ppm | 54  | 50  | 45  | 69 |
| Nickel    | ppm | 0   | <1  | <1  | <1 |
| Titane    | ppm | <1  | <1  | <1  | 0  |
| Argent    | ppm | <1  | 0   | <1  | 0  |
| Manganèse | ppm | <1  | 1   | 2   | <1 |
| Vanadium  | ppm | 0   | 0   | 0   | 0  |



#### ADDITIFS

|           |     |      |      |      |      |
|-----------|-----|------|------|------|------|
| Calcium   | ppm | 1200 | 1278 | 1850 | 1642 |
| Magnésium | ppm | 996  | 870  | 724  | 466  |
| Zinc      | ppm | 1359 | 1216 | 1174 | 1210 |
| Phosphore | ppm | 1191 | 1056 | 1152 | 1030 |
| Baryum    | ppm | <1   | 2    | 11   | 0    |
| Bore      | ppm | 42   | 33   | 51   | 19   |

#### Diagnostic

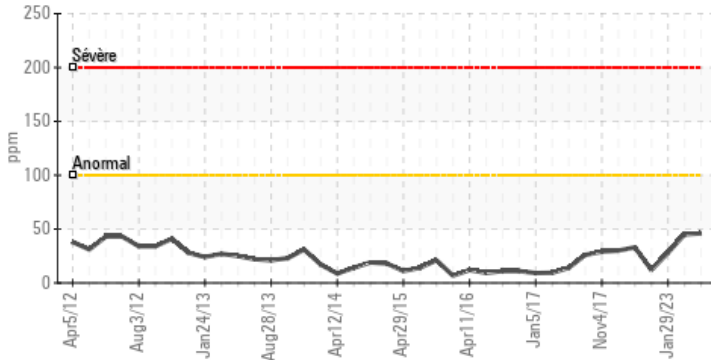
Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition. Les taux d'usure de tous les composants sont normaux. Il n'y a aucun indice de contamination dans l'huile. L'état de l'huile est acceptable pour la durée de service.

Depot: MITCON  
Unique No: 5618400  
Signed: Kevin Marson  
Report Date: 01 Aug 2023

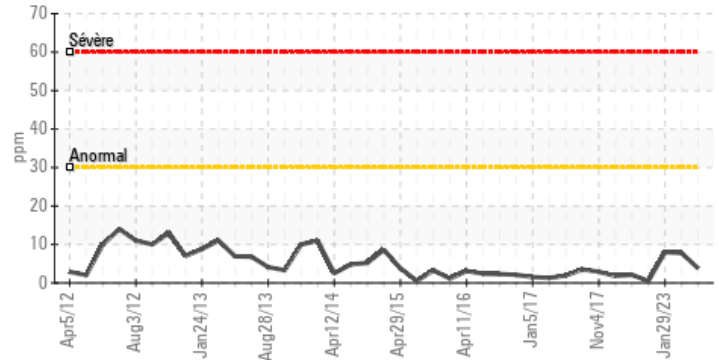


### GRAPHS

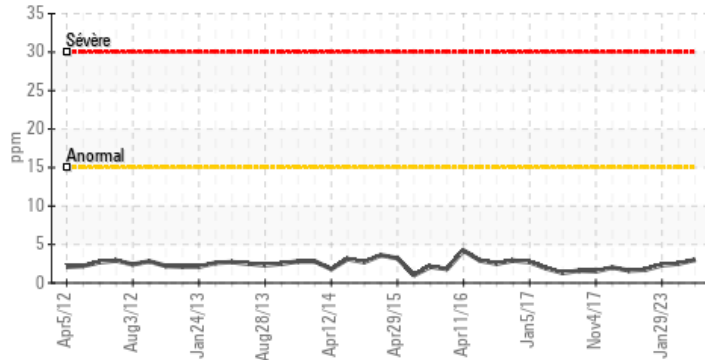
Fer (ppm)



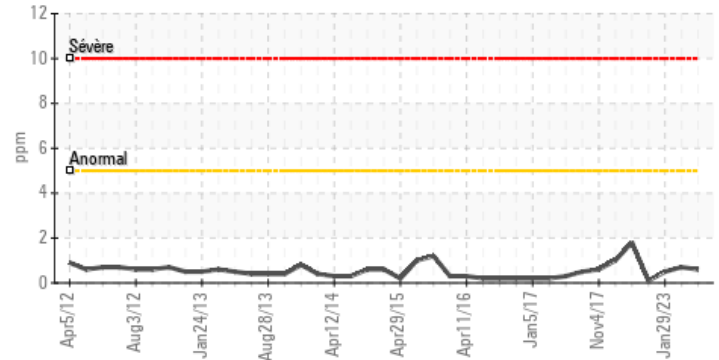
Plomb (ppm)



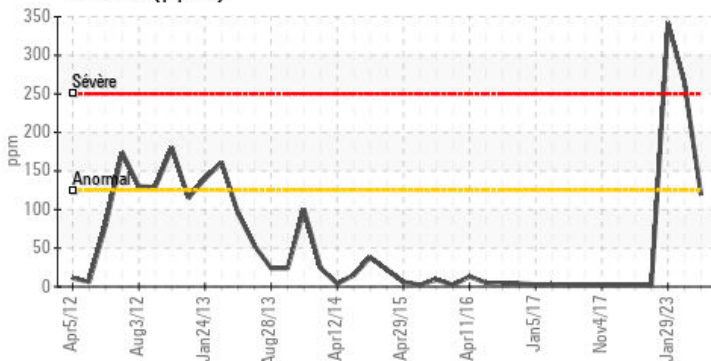
Aluminium (ppm)



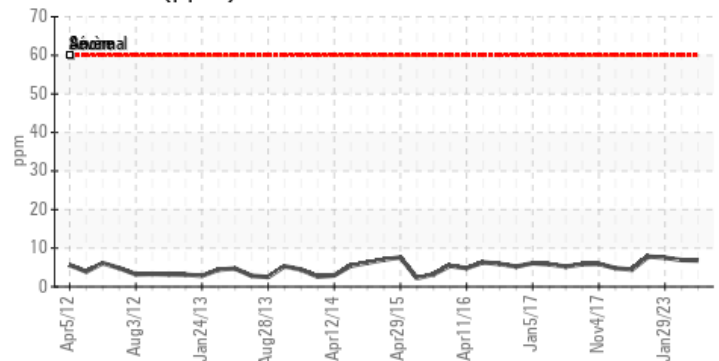
Chrome (ppm)



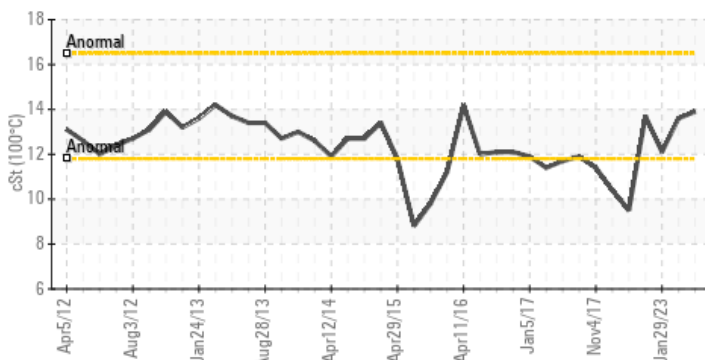
Cuivre (ppm)



Silicium (ppm)



Viscosité 100°C



% de suie

