

LIEBHERR

CONSTRUCTION EQUIPMENT



124170-1216 - Diesel Engine

Sample No: LH0270248
 Oil Type: SAE 10W40



SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-------------|-------------|-------------|
| Sample Number | LH0270248 | LH0265976 | LH | LH0247441 |
| Sample Date | 25 Sep 2023 | 15 Jun 2023 | 30 Mar 2023 | 03 Jan 2023 |
| Machine Hours | 6769 | 6184 | 5575 | 5032 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | N/A | Changed | Changed | Changed |
| Sample Status | NORMAL | MARGINAL | ABNORMAL | ABNORMAL |

American Iron and Metal
 2009 Gore Road
 London, ON
 CA N5V 5A9
 Contact: Service Manager



OIL CONDITION

| | | | | | |
|----------------|-----|------|------|------|------|
| Visc @ 100°C | cSt | 12.9 | 12.9 | 12.7 | 11.2 |
| Oxidation (PA) | % | 61 | 63 | 65 | 81 |

T:
F:



CONTAMINATION

| | | | | | |
|----------------|-----|------|-----|------|-----|
| Soot % | % | 0 | 0 | 0 | 0 |
| Nitration (PA) | % | 68 | 71 | 75 | 88 |
| Sulfation (PA) | % | 51 | 51 | 59 | 62 |
| Glycol | % | NEG | NEG | 0.0 | NEG |
| Fuel | % | <1.0 | 2.3 | <1.0 | 2 |
| Silicon | ppm | 7 | 6 | 7 | 8 |
| Sodium | ppm | 2 | 1 | 2 | 4 |
| Potassium | ppm | 5 | <1 | <1 | <1 |

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.



WEAR METALS

| | | | | | |
|------------|-----|----|----|----|----|
| Iron | ppm | 4 | 5 | 6 | 6 |
| Copper | ppm | 3 | 3 | 2 | 3 |
| Lead | ppm | 1 | <1 | <1 | <1 |
| Tin | ppm | 0 | <1 | <1 | 0 |
| Aluminum | ppm | 1 | 1 | 1 | 2 |
| Chromium | ppm | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | 60 | 57 | 59 | 62 |
| Nickel | ppm | 0 | <1 | 0 | <1 |
| Titanium | ppm | 0 | <1 | <1 | <1 |
| Silver | ppm | <1 | 0 | 0 | 0 |
| Manganese | ppm | 0 | <1 | <1 | <1 |
| Vanadium | ppm | 0 | 0 | 0 | 0 |



ADDITIVES

| | | | | | |
|------------|-----|------|------|------|------|
| Calcium | ppm | 1056 | 1127 | 1175 | 890 |
| Magnesium | ppm | 999 | 947 | 974 | 1072 |
| Zinc | ppm | 1217 | 1226 | 1233 | 1139 |
| Phosphorus | ppm | 1030 | 1072 | 1071 | 1031 |
| Barium | ppm | <1 | 0 | 0 | 0 |
| Boron | ppm | 4 | 2 | 7 | 23 |

Depot: AIM200LON
 Unique No: 5646222
 Signed: Wes Davis
 Report Date: 26 Sep 2023



GRAPHS

