

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L586 068244 - Diesel Engine

Sample No: LH0278467

Oil Type: PETRO CANADA SUPREME 5W30



Sample Information

| | | | | |
|---------------|-------------|-------------|-------------|-------------|
| Sample Number | LH0278467 | LH0224308 | LH0278516 | LH |
| Sample Date | 22 Mar 2024 | 21 Feb 2024 | 22 Dec 2023 | 15 Sep 2023 |
| Machine Hours | 8517 | 8026 | 7142 | 0 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | Changed | Changed | Changed | Changed |
| Sample Status | NORMAL | NORMAL | NORMAL | NORMAL |

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Oil Condition

| | | | | | |
|----------------|-----|------|------|------|------|
| Visc @ 100°C | cSt | 11.8 | 11.9 | 11.4 | 13.5 |
| Oxidation (PA) | % | 73 | 67 | 79 | 59 |



Contamination

| | | | | | |
|----------------|-----|------|------|------|------|
| Water | % | NEG | NEG | NEG | NEG |
| Soot % | % | 0 | 0 | 0 | 0 |
| Nitration (PA) | % | 70 | 64 | 83 | 55 |
| Sulfation (PA) | % | 54 | 52 | 54 | 50 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | <1.0 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | 4 | 4 | 5 | 9 |
| Sodium | ppm | 4 | 4 | 3 | 2 |
| Potassium | ppm | <1 | 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 | 3 | 4 | 5 | 3 |
| Copper | ppm | 2 | 3 | 6 | 2 |
| Lead | ppm | 0 | 0 | <1 | <1 |
| Tin | ppm | 0 | 0 | <1 | 0 |
| Aluminum | ppm | <1 | 1 | 2 | 1 |
| Chromium | ppm | 0 | <1 | <1 | 0 |
| Molybdenum | ppm | 60 | 57 | 57 | 57 |
| Nickel | ppm | 0 | 0 | <1 | 0 |
| Titanium | ppm | 0 | 0 | 0 | 0 |
| Silver | ppm | 0 | 0 | 0 | <1 |
| Manganese | ppm | 0 | 0 | 0 | 0 |
| Vanadium | ppm | 0 | 0 | 0 | 0 |



Additives

| | | | | | |
|------------|-----|------|------|------|------|
| Calcium | ppm | 816 | 870 | 867 | 1035 |
| Magnesium | ppm | 1108 | 1050 | 1042 | 922 |
| Zinc | ppm | 1216 | 1179 | 1168 | 1159 |
| Phosphorus | ppm | 1006 | 1005 | 1031 | 987 |
| Barium | ppm | 0 | 0 | 0 | <1 |
| Boron | ppm | 43 | 27 | 23 | 2 |

Depot: MANSEL
 Unique No: 5760344
 Signed: Wes Davis
 Report Date: 08 Apr 2024



Graphs

