

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50M 120737-1216 - Diesel Engine

Sample No: LHMC104641

Oil Type: CHEVRON URSA SUPER PLUS EC 15W40



STAIMAN RECYCLING

201 HEPBURN ST
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US 17701

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SAMPLE INFORMATION

| | | | | |
|---------------|-------------|-----|-----|-----|
| Sample Number | LHMC104641 | --- | --- | --- |
| Sample Date | 04 Sep 2020 | --- | --- | --- |
| Machine Hours | 308 | --- | --- | --- |
| Oil Hours | 308 | --- | --- | --- |
| Oil Changed | Changed | --- | --- | --- |
| Sample Status | ABNORMAL | --- | --- | --- |



OIL CONDITION

| | | | | | |
|----------------|-----|------|-----|-----|-----|
| Visc @ 100°C | cSt | 12.1 | --- | --- | --- |
| Oxidation (PA) | % | 173 | --- | --- | --- |



CONTAMINATION

| | | | | | |
|----------------|-----|-----|-----|-----|-----|
| Soot % | % | 0.1 | --- | --- | --- |
| Nitration (PA) | % | 82 | --- | --- | --- |
| Sulfation (PA) | % | 100 | --- | --- | --- |
| Glycol | % | NEG | --- | --- | --- |
| Fuel | % | 1.0 | --- | --- | --- |
| Silicon | ppm | 9 | --- | --- | --- |
| Sodium | ppm | 2 | --- | --- | --- |
| Potassium | ppm | 3 | --- | --- | --- |



WEAR METALS

| | | | | | |
|------------|-----|-----|-----|-----|-----|
| Iron | ppm | 8 | --- | --- | --- |
| Copper | ppm | 235 | --- | --- | --- |
| Lead | ppm | 4 | --- | --- | --- |
| Tin | ppm | 1 | --- | --- | --- |
| Aluminum | ppm | 1 | --- | --- | --- |
| Chromium | ppm | <1 | --- | --- | --- |
| Molybdenum | ppm | 51 | --- | --- | --- |
| Nickel | ppm | 0 | --- | --- | --- |
| Titanium | ppm | <1 | --- | --- | --- |
| Silver | ppm | <1 | --- | --- | --- |
| Manganese | ppm | 2 | --- | --- | --- |
| Vanadium | ppm | 0 | --- | --- | --- |



ADDITIVES

| | | | | | |
|------------|-----|------|-----|-----|-----|
| Calcium | ppm | 1408 | --- | --- | --- |
| Magnesium | ppm | 815 | --- | --- | --- |
| Zinc | ppm | 926 | --- | --- | --- |
| Phosphorus | ppm | 744 | --- | --- | --- |
| Barium | ppm | 25 | --- | --- | --- |
| Boron | ppm | 107 | --- | --- | --- |

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking in. Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. Confirm oil type.

Depot: STAWILLH

Unique No: 9178061

Signed: Jonathan Hester

Report Date: 21 Sep 2020



GRAPHS

