

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR A934C 065053-1007 - Diesel Engine

Sample No: LH0180310
 Oil Type: IRVING 15W40



CHALEUR SAWMILLS L.P.
 1921 MAIN STREET
 BELLEDUNE, NB
 CA E8G 2H8
 Contact: Michael Vienneau
 michael.vienneau@interfor.com
 T: (506)522-0225
 F: (506)522-5361



SAMPLE INFORMATION

| Sample Number | LH0180310 | LH0123820 | LH0194810 | LH0195005 |
|---------------|-------------|-------------|-------------|-------------|
| Sample Date | 29 Aug 2023 | 10 Jan 2023 | 29 Nov 2021 | 18 May 2021 |
| Machine Hours | 30500 | 30000 | 29492 | 28974 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | Changed | Changed | Changed | Changed |
| Sample Status | NORMAL | NORMAL | NORMAL | NORMAL |



OIL CONDITION

| Visc @ 100°C | cSt | 14.0 | 13.8 | 14.6 | 13.9 |
|----------------|-----|------|------|------|------|
| Oxidation (PA) | % | 58 | 54 | 55 | 50 |



CONTAMINATION

| Soot % | % | 2 | 2 | 2.5 | 1.9 |
|----------------|-----|------|------|------|------|
| Nitration (PA) | % | 85 | 87 | 90 | 78 |
| Sulfation (PA) | % | 65 | 67 | 70 | 62 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | <1.0 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | 6 | 9 | 6 | 6 |
| Sodium | ppm | 2 | 2 | 2 | 2 |
| Potassium | ppm | <1 | <1 | 1 | <1 |



WEAR METALS

| | | | | | |
|------------|-----|----|----|----|----|
| Iron | ppm | 16 | 15 | 13 | 10 |
| Copper | ppm | 2 | 4 | 2 | 2 |
| Lead | ppm | <1 | <1 | <1 | <1 |
| Tin | ppm | 0 | <1 | <1 | <1 |
| Aluminum | ppm | 2 | 2 | 2 | 2 |
| Chromium | ppm | <1 | <1 | <1 | <1 |
| Molybdenum | ppm | 6 | 10 | 5 | 4 |
| Nickel | ppm | <1 | 0 | <1 | <1 |
| Titanium | ppm | 0 | <1 | 0 | 0 |
| Silver | ppm | 0 | 0 | 0 | 0 |
| Manganese | ppm | <1 | <1 | <1 | <1 |
| Vanadium | ppm | 0 | 0 | 0 | <1 |



ADDITIVES

| | | | | | |
|------------|-----|------|------|------|------|
| Calcium | ppm | 2138 | 2183 | 2088 | 2091 |
| Magnesium | ppm | 54 | 112 | 69 | 28 |
| Zinc | ppm | 1175 | 1120 | 1120 | 1160 |
| Phosphorus | ppm | 1050 | 1036 | 981 | 935 |
| Barium | ppm | 0 | 0 | 0 | <1 |
| Boron | ppm | 25 | 32 | 30 | 34 |

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.

Depot: CHABEL
 Unique No: 5642367
 Signed: Kevin Marson
 Report Date: 11 Sep 2023

LIEBHERR

CONSTRUCTION EQUIPMENT



GRAPHS

