

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L556 053290-1332 - Diesel Engine

Sample No: LH0274160

Oil Type: PETRO CANADA DURON UHP 5W30



SAMPLE INFORMATION

| Sample Number | LH0274160 | LH0274161 | LH0256273 | LH0242139 |
|---------------|-------------|-------------|-------------|-------------|
| Sample Date | 21 Nov 2023 | 11 Oct 2023 | 24 May 2023 | 10 Feb 2023 |
| Machine Hours | 18029 | 17000 | 14888 | 14000 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | N/A | N/A | N/A | Changed |
| Sample Status | NORMAL | NORMAL | NORMAL | NORMAL |

Resolute Forest Products

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Baie-Comeau, QC
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OIL CONDITION

| Visc @ 40°C | cSt | --- | --- | --- | 74.1 |
|----------------------|-------|------|------|------|------|
| Visc @ 100°C | cSt | 12.1 | 12.0 | 11.8 | 11.8 |
| Viscosity Index (VI) | Scale | --- | --- | --- | 154 |
| Oxidation (PA) | % | 96 | 96 | 95 | 17 |



CONTAMINATION

| Water | % | NEG | NEG | NEG | NEG |
|----------------|-----|------|------|------|------|
| Soot % | % | 0 | 0 | 0 | 0 |
| Nitration (PA) | % | 88 | 90 | 92 | 21 |
| Sulfation (PA) | % | 62 | 64 | 63 | 26 |
| Glycol | % | NEG | NEG | 0.0 | NEG |
| Fuel | % | <1.0 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | 8 | 7 | 25 | 7 |
| Sodium | ppm | 5 | 5 | 6 | 5 |
| Potassium | ppm | 0 | 0 | 6 | <1 |



WEAR METALS

| | | | | | |
|------------|-----|----|----|----|----|
| Iron | ppm | 5 | 6 | 8 | 5 |
| Copper | ppm | 2 | 3 | 3 | 2 |
| Lead | ppm | <1 | <1 | <1 | <1 |
| Tin | ppm | 0 | <1 | <1 | <1 |
| Aluminum | ppm | <1 | 1 | 7 | 2 |
| Chromium | ppm | <1 | <1 | 1 | 0 |
| Molybdenum | ppm | 58 | 59 | 65 | 62 |
| Nickel | ppm | <1 | 0 | <1 | 0 |
| Titanium | ppm | 0 | 0 | <1 | <1 |
| Silver | ppm | <1 | <1 | 0 | 0 |
| Manganese | ppm | 0 | 0 | <1 | <1 |
| Vanadium | ppm | 0 | 0 | 0 | 0 |



ADDITIVES

| | | | | | |
|------------|-----|------|------|------|------|
| Calcium | ppm | 839 | 843 | 910 | 881 |
| Magnesium | ppm | 1163 | 1162 | 1196 | 1177 |
| Zinc | ppm | 1245 | 1265 | 1323 | 1276 |
| Phosphorus | ppm | 1036 | 1047 | 1171 | 1147 |
| Barium | ppm | <1 | <1 | 0 | 0 |
| Boron | ppm | 25 | 18 | 30 | 28 |

Depot: RESBAI
Unique No: 5695290
Signed: Wes Davis
Report Date: 11 Dec 2023



GRAPHS

