

OIL ANALYSIS REPORT

Sample Rating Trend





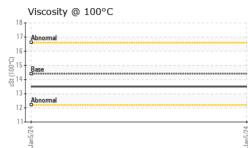
CATERPILLAR Hopkins 313 (S/N HDK10030) Component **Diesel Engine**

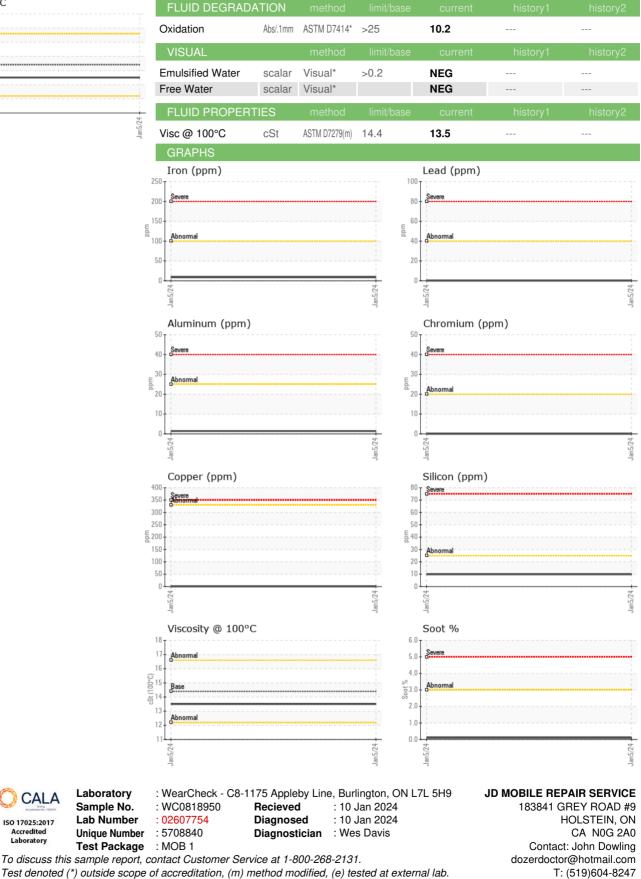
Fluid **DIESEL ENGINE OIL SAE 15W40 (8 LTR)**

| DIAGNOSIS | SAMPLE INFORM | | method | limit/base | current | history1 | history2 |
|---|---------------|---------------|--------------------------------|------------|-------------|----------|----------|
| | | | | - min base | | | |
| Recommendation | Sample Number | | Client Info | | WC0818950 | | |
| Resample at the next service interval to monitor. | Sample Date | | Client Info | | 05 Jan 2024 | | |
| Wear | Machine Age | hrs | Client Info | | 6295 | | |
| All component wear rates are normal. | Oil Age | hrs | Client Info | | 250 | | |
| Contamination | Oil Changed | | Client Info | | Changed | | |
| There is no indication of any contamination in the | Sample Status | | | | NORMAL | | |
| oil. | CONTAMINATIO | N | method | limit/base | current | history1 | history2 |
| Fluid Condition The condition of the oil is acceptable for the time in | Fuel | | WC Method | >5 | <1.0 | | |
| service. | Water | | WC Method | >0.2 | NEG | | |
| | Glycol | | WC Method | | NEG | | |
| | WEAR METALS | | method | limit/base | current | history1 | history2 |
| | Iron | ppm | ASTM D5185(m) | >100 | 9 | | |
| | Chromium | ppm | ASTM D5185(m) | | 0 | | |
| | Nickel | ppm | ASTM D5185(m) | | 0 | | |
| | Titanium | ppm | ASTM D5185(m) | | 0 | | |
| | Silver | | ASTM D5185(m) ASTM D5185(m) | | 0 | | |
| | Aluminum | ppm ppm | ASTM D5185(m) | | 1 | | |
| | Lead | | ASTM D5185(m) | | ، <1 | | |
| | | ppm | ASTM D5185(m) | | <1 | | |
| | Copper Tin | ppm | | | < 1 0 | | |
| | | ppm | ASTM D5185(m) | >15 | | | |
| | Antimony | ppm | ASTM D5185(m) | | 0 | | |
| | Vanadium | ppm | ASTM D5185(m) | | 0 | | |
| | Beryllium | ppm | ASTM D5185(m) | | 0 | | |
| | Cadmium | ppm | ASTM D5185(m) | | 0 | | |
| | ADDITIVES | | method | limit/base | current | history1 | history2 |
| | Boron | ppm | ASTM D5185(m) | 250 | 4 | | |
| | Barium | ppm | ASTM D5185(m) | 10 | 0 | | |
| | Molybdenum | ppm | ASTM D5185(m) | 100 | 1 | | |
| | Manganese | ppm | ASTM D5185(m) | | 0 | | |
| | Magnesium | ppm | ASTM D5185(m) | 450 | 26 | | |
| | Calcium | ppm | ASTM D5185(m) | 3000 | 2269 | | |
| | Phosphorus | ppm | ASTM D5185(m) | 1150 | 877 | | |
| | Zinc | ppm | ASTM D5185(m) | 1350 | 1016 | | |
| | Sulfur | ppm | ASTM D5185(m) | 4250 | 3130 | | |
| | Lithium | ppm | ASTM D5185(m) | | <1 | | |
| | CONTAMINANTS | 6 | method | limit/base | current | history1 | history2 |
| | Silicon | ppm | ASTM D5185(m) | >25 | 10 | | |
| | Sodium | ppm | ASTM D5185(m) | | 1 | | |
| | Potassium | ppm | ASTM D5185(m) | | 2 | | |
| | INFRA-RED | | method | limit/base | current | history1 | history2 |
| | Soot % | % | ASTM D7844* | >3 | 0.1 | | |
| | Nitration | Abs/cm | | | 7.1 | | |
| | Sulfation | Abs/.1mm | | | 17.5 | | |
| | Sunation | / 100/.111111 | | 200 | 17.5 | | |



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Validity of results and interpretation are based on the sample and information as supplied.

CALA

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