

Machine Id **34108** Component **Diesel Engine** Fluid **DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

| RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|--|------------------|--------------|-------------|-----------|-------------|----------|----------|
| Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample. | Sample Number | | Client Info | | WC0852161 | | |
| | Sample Date | | Client Info | | 05 Jan 2024 | | |
| | Machine Age | mls | Client Info | | 1988 | | |
| | Oil Age | mls | Client Info | | 0 | | |
| | Filter Age | mls | Client Info | | 0 | | |
| | Oil Changed | | Client Info | | Changed | | |
| | Filter Changed | | Client Info | | Changed | | |
| | Sample Status | | | | NORMAL | | |
| WEAR | Iron | nnm | ASTM D5185m | > 100 | 3 | | |
| WEAN | Chromium | ppm | ASTM D5185m | | 3 <1 | | |
| Metal levels are typical for a new component breaking in. | Nickel | ppm | ASTM D5185m | | 0 | | |
| | Titanium | ppm ppm | ASTM D5185m | >4 | ۰ <1 | | |
| | Silver | ppm | ASTM D5185m | .2 | 0 | | |
| | Aluminum | ppm | ASTM D5185m | | 2 | | |
| | Lead | ppm | ASTM D5185m | | 0 | | |
| | Copper | ppm | ASTM D5185m | | 17 | | |
| | Tin | ppm | ASTM D5185m | | <1 | | |
| | Vanadium | ppm | ASTM D5185m | 210 | <1 | | |
| | White Metal | scalar | *Visual | NONE | NONE | | |
| | Yellow Metal | scalar | *Visual | NONE | NONE | | |
| | | | | | | | |
| CONTAMINATION | Silicon | ppm | ASTM D5185m | >25 | 4 | | |
| There is no indication of any contamination in the oil. | Potassium | ppm | ASTM D5185m | >20 | 2 | | |
| | Fuel | | WC Method | >5 | <1.0 | | |
| | Water | | WC Method | >0.2 | NEG | | |
| | Glycol | | WC Method | | NEG | | |
| | Soot % | % | *ASTM D7844 | >3 | 0.1 | | |
| | Nitration | Abs/cm | *ASTM D7624 | >20 | 5.5 | | |
| | Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.4 | | |
| | Silt | scalar | *Visual | NONE | NONE | | |
| | Debris | scalar | *Visual | NONE | NONE | | |
| | Sand/Dirt | scalar | *Visual | NONE | NONE | | |
| | Appearance | scalar | *Visual | NORML | NORML | | |
| | Odor | scalar | *Visual | NORML | NORML | | |
| | Emulsified Water | scalar | *Visual | >0.2 | NEG | | |
| FLUID CONDITION | Sodium | ppm | ASTM D5185m | >158 | <1 | | |
| | Boron | | ASTM D5185m | | 230 | | |
| The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service. | Barium | ppm | ASTM D5185m | | 0 | | |
| | Molybdenum | ppm | ASTM D5185m | | 84 | | |
| | Manganese | ppm | ASTM D5185m | | <1 | | |
| | Magnesium | ppm | ASTM D5185m | 450 | 607 | | |
| | Calcium | ppm | ASTM D5185m | | 1265 | | |
| | Phosphorus | ppm | ASTM D5185m | | 1013 | | |
| | Zinc | ppm | ASTM D5185m | | 1198 | | |
| | Sulfur | ppm | ASTM D5185m | | 3212 | | |
| | Ovidation | Ales/ durant | | . OE | 12.0 | | |

Oxidation

Visc @ 100°C cSt

13.2

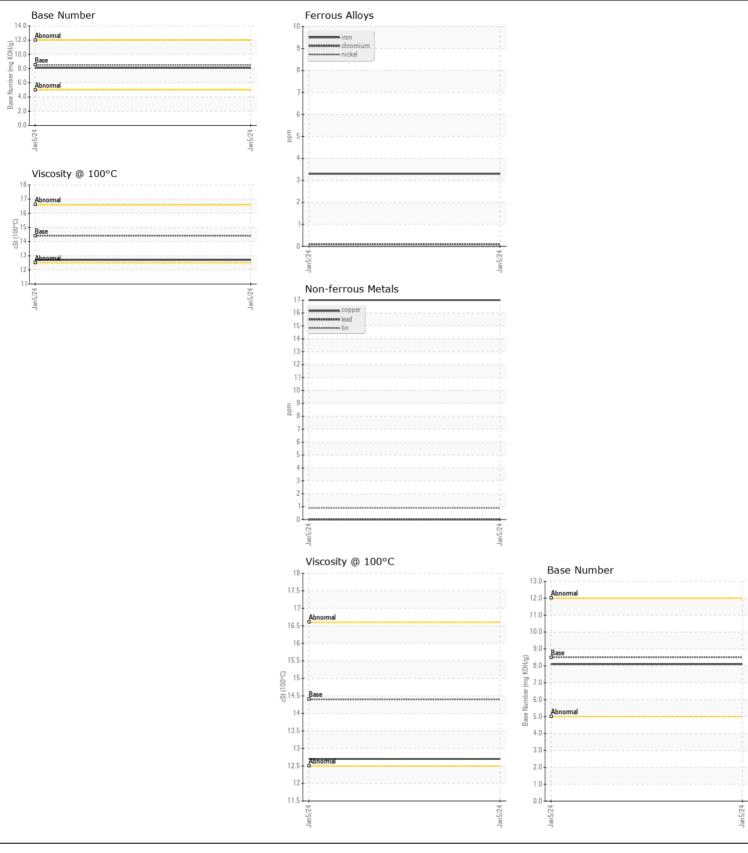
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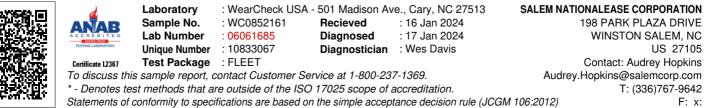
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Abs/.1mm *ASTM D7414 >25

ASTM D445 14.4

Base Number (BN) mg KOH/g ASTM D2896 8.5





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