

LAB REPORT

Unit id
UTILITY VEHICLE
Component
Diesel engine



Lab number: 1700865

Machine type
Lorry/Truck

Manufacturer
Mercedes

Oil brand name
SAE 5W-40

Oil quantity in system
32 l

Sample Report
Scope of Analysis: Analysis Kit 2

Wear metals are only present in negligible concentration. Therefore, hardly any abrasive or corrosive wear is evident. If no oil change has been performed yet, continued use of the oil under similar operating conditions while maintaining routine maintenance work would be possible. According to your information, the oil has already been changed. I advise you: Send us the next sample at your next maintenance or on the occasion of the routine inspection to monitor the trend behavior.



NORMAL

Carsten Heine

| ANALYSIS RESULTS | | | Current sample | Previous samples → | | | | |
|-----------------------------|----|-------|-------------------|--------------------|--|--|--|--|
| Lab number | | | 1700865 | 1700866 | | | | |
| SAMPLE RATING | | | | | | | | |
| Date of examination | | | 12.12.2025 | 27.10.2025 | | | | |
| Date of sample taken | | | 22.11.2025 | 18.10.2025 | | | | |
| Date of last oil change | | | 22.11.2025 | 18.10.2025 | | | | |
| Top-up since change | | | 0 l | 0 l | | | | |
| Operating time since change | | | 26000 km | 32662 km | | | | |
| Total operating time | | | 58586 km | 32662 km | | | | |
| Oil changed | | | yes | yes | | | | |
| WEAR | | | | | | | | |
| Iron | Fe | mg/kg | 10 | 37 | | | | |
| Chrome | Cr | mg/kg | 0 | 0 | | | | |
| Tin | Sn | mg/kg | 0 | 0 | | | | |
| Aluminum | Al | mg/kg | 5 | 15 | | | | |
| Nickel | Ni | mg/kg | 0 | 0 | | | | |
| Copper | Cu | mg/kg | 4 | 3 | | | | |
| Lead | Pb | mg/kg | 1 | 1 | | | | |
| PQ index | - | - | < 25 | < 25 | | | | |
| CONTAMINATION | | | | | | | | |
| Silicon | Si | mg/kg | 4 | 3 | | | | |
| Potassium | K | mg/kg | 14 | 6 | | | | |
| Sodium | Na | mg/kg | 0 | 4 | | | | |
| Water | | % | < 0.10 | < 0.10 | | | | |
| IR Glycol | | - | negative | negative | | | | |
| Diesel fuel | | % | < 0.3 | 0.3 | | | | |
| Biodiesel | | % | < 0.3 | < 0.3 | | | | |
| Soot content | | % | 0.2 | < 0.1 | | | | |

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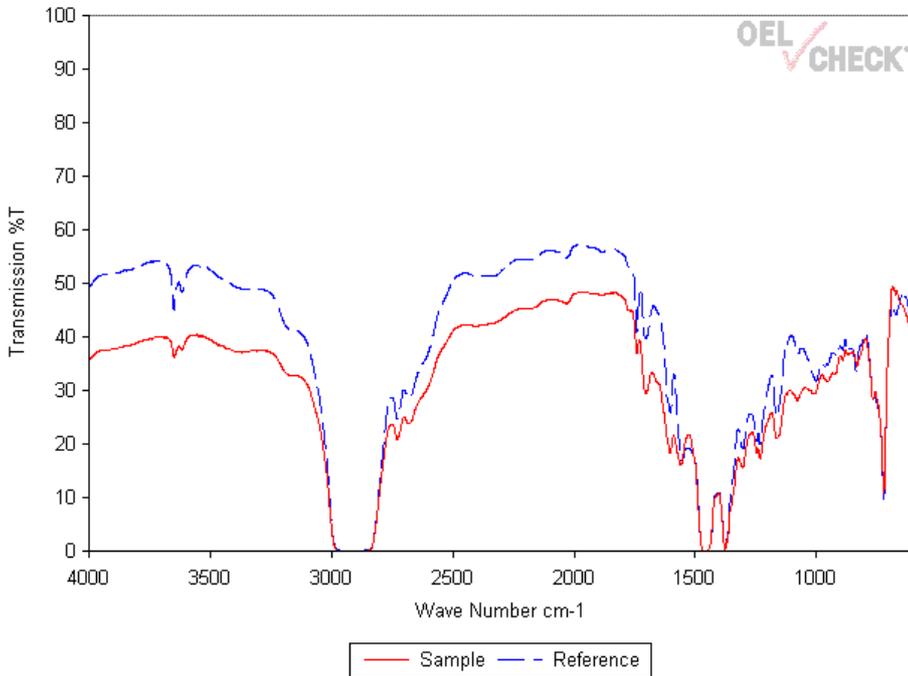


| ANALYSIS RESULTS (...) | | Current sample | Previous samples → | | | |
|-------------------------|--------------------|----------------|--------------------|-------|--|--|
| Lab number | | 1700865 | 1700866 | | | |
| SAMPLE RATING | | ✓ | ✓ | | | |
| Date of examination | | 12.12.2025 | 27.10.2025 | | | |
| Date of sample taken | | 22.11.2025 | 18.10.2025 | | | |
| OIL CONDITION | | | | | | |
| Viscosity at 40 °C | mm ² /s | 92.76 | 92.32 | | | |
| Viscosity at 100 °C | mm ² /s | 13.11 | 14.18 | | | |
| Viscosity index | - | 140 | 158 | | | |
| Oxidation | A/cm | 14 | 12 | | | |
| Nitration | A/cm | 8 | 6 | | | |
| Sulfation | A/cm | 0 | 0 | | | |
| IR index | - | 96.08 | 98.83 | | | |
| Dispersancy | % | 89 | 97 | | | |
| ADDITIVES | | | | | | |
| Calcium | Ca | mg/kg | 2674 | 3893 | | |
| Magnesium | Mg | mg/kg | 369 | 10 | | |
| Boron | B | mg/kg | 270 | 108 | | |
| Zinc | Zn | mg/kg | 958 | 1245 | | |
| Phosphorus | P | mg/kg | 839 | 1115 | | |
| Barium | Ba | mg/kg | 0 | 0 | | |
| Molybdenum | Mo | mg/kg | 19 | 120 | | |
| Sulphur | S | mg/kg | 5565 | 6761 | | |
| ADDITIONAL TESTS | | | | | | |
| BN | | mgKOH/g | 15.45 | 14.63 | | |

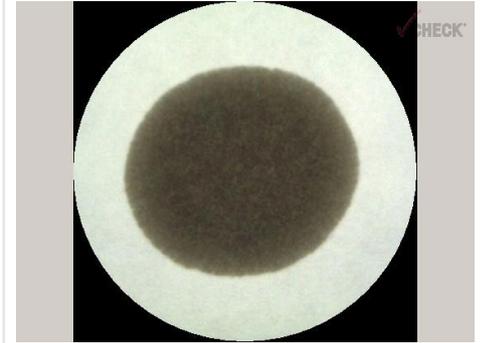
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SAMPLE IMAGES (LABORATORY NUMBER: 1700865)



INFRARED SPECTRUM



CCD OIL SPOT



BOTTLE AND CAP



Any questions?

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sample/1700865