

Machine Id **4583** Component **Diesel Engine** Filuid **CITGO CITGUARD 600 15W40 (--- GAL)**

| CIIGO CIIGUARD 600 15W40 (GAL) | | | | | | | |
|---|------------------|----------|-------------|------------|-------------|-------------|----------|
| RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
| No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. | Sample Number | 00101 | Client Info | Ennio/ ton | WC0901423 | WC0901408 | , |
| | Sample Date | | Client Info | | 27 Jun 2024 | 24 Apr 2024 | |
| | Machine Age | mls | Client Info | | 559017 | 16331 | |
| | Oil Age | mls | Client Info | | 14957 | 16331 | |
| | Filter Age | mls | Client Info | | 14957 | 16331 | |
| | Oil Changed | 1110 | Client Info | | Changed | Changed | |
| | Filter Changed | | Client Info | | Changed | Changed | |
| | Sample Status | | | | ATTENTION | NORMAL | |
| | Gampie Glatas | | | | | | |
| WEAR | Iron | ppm | ASTM D5185m | >100 | 6 | 4 | |
| All component wear rates are normal. | Chromium | ppm | ASTM D5185m | >20 | <1 | 0 | |
| | Nickel | ppm | ASTM D5185m | >4 | 0 | 0 | |
| | Titanium | ppm | ASTM D5185m | | <1 | 2 | |
| | Silver | ppm | ASTM D5185m | >3 | 0 | 0 | |
| | Aluminum | ppm | ASTM D5185m | >20 | 2 | 2 | |
| | Lead | ppm | ASTM D5185m | >40 | <1 | 0 | |
| | Copper | ppm | ASTM D5185m | >330 | 1 | 0 | |
| | Tin | ppm | ASTM D5185m | >15 | <1 | <1 | |
| | Vanadium | ppm | ASTM D5185m | | 0 | 0 | |
| | White Metal | scalar | *Visual | NONE | NONE | NONE | |
| | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | |
| | | | | | | | |
| CONTAMINATION | Silicon | ppm | ASTM D5185m | | 5 | 5 | |
| Fuel content negligible. There is no indication of any contamination in the oil. | Potassium | ppm | ASTM D5185m | | 0 | 0 | |
| | Fuel | % | ASTM D3524 | | 0.2 | <1.0 | |
| | Water | | WC Method | >0.2 | NEG | NEG | |
| | Glycol | | WC Method | | NEG | NEG | |
| | Soot % | % | *ASTM D7844 | | 0.1 | 0.2 | |
| | Nitration | Abs/cm | *ASTM D7624 | >20 | 7.1 | 7.7 | |
| | Sulfation | Abs/.1mm | *ASTM D7415 | | 17.6 | 18.6 | |
| | Silt | scalar | *Visual | NONE | NONE | NONE | |
| | Debris | scalar | *Visual | NONE | NONE | NONE | |
| | Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | |
| | Appearance | scalar | *Visual | NORML | NORML | NORML | |
| | Odor | scalar | *Visual | NORML | NORML | NORML | |
| | Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | |
| FLUID CONDITION | Sodium | ppm | ASTM D5185m | | <1 | 0 | |
| | Boron | ppm | ASTM D5185m | 13 | 5 | 9 | |
| The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type. | Barium | ppm | ASTM D5185m | | 0 | 0 | |
| | Molybdenum | ppm | ASTM D5185m | | 22 | 76 | |
| | Manganese | ppm | ASTM D5185m | - | <1 | 0 | |
| | Magnesium | ppm | ASTM D5185m | 825 | 157 | 466 | |
| | Calcium | ppm | ASTM D5185m | | 2359 | 1761 | |
| | Phosphorus | ppm | ASTM D5185m | | 989 | 1068 | |
| | Zinc | ppm | ASTM D5185m | | 1195 | 1244 | |
| | Sulfur | ppm | ASTM D5185m | | 4437 | 3665 | |
| | | | | | | | |

Oxidation

Visc @ 100°C cSt

Abs/.1mm *ASTM D7414 >25

ASTM D445 15.4

Base Number (BN) mg KOH/g ASTM D2896 11.0

15.1

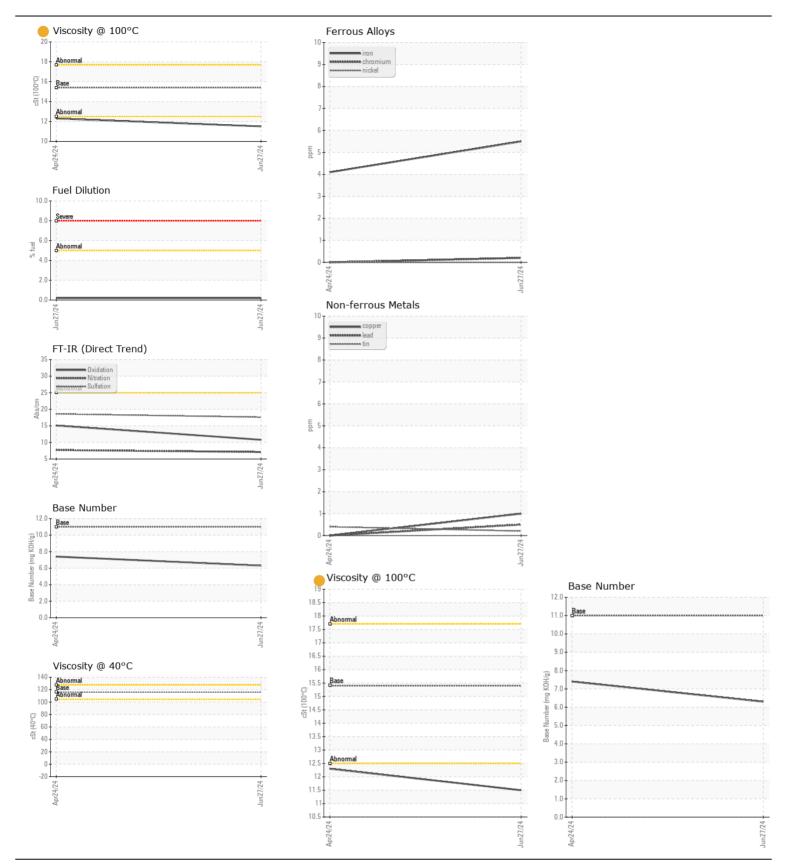
7.4

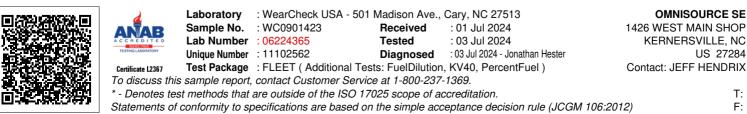
12.3

10.8

6.3

11.5





Contact/Location: JEFF HENDRIX - OMNKER Page 2 of 2