

Machine Id **19003** Component **Diesel Engine** Filuid **DIESEL ENGINE OIL SAE 40 (--- QTS)**

RECOMMENDATION

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm. Please specify the component make and model with your next sample.

WEAR

All component wear rates are normal.

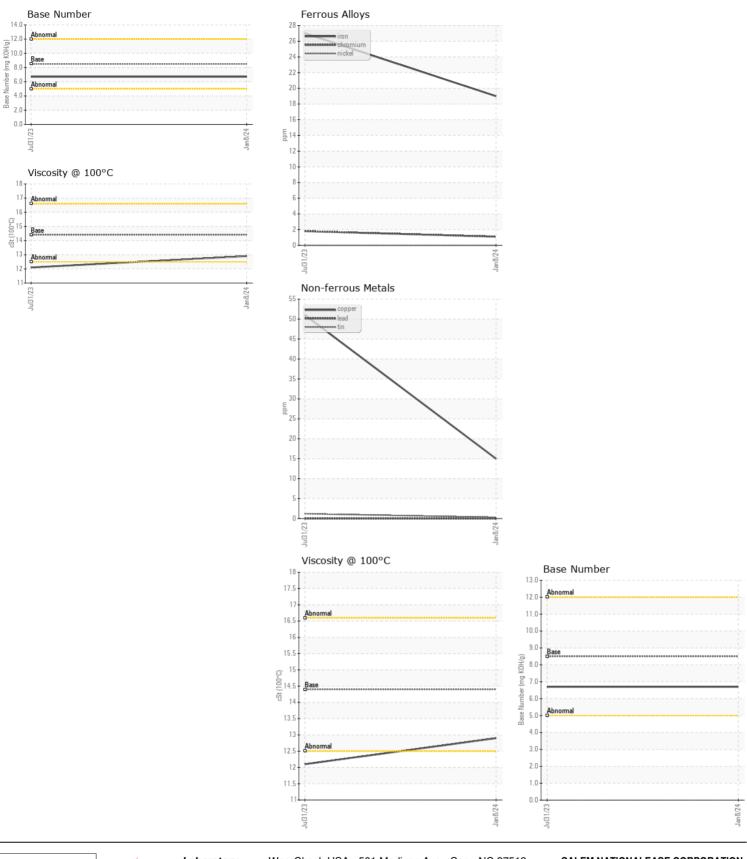
CONTAMINATION

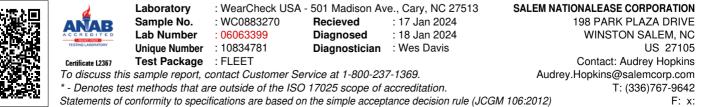
Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

| | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|--|------------------|----------|-------------|-----------|-------------|-------------|----------|
| | Sample Number | | Client Info | | WC0883270 | WC0795964 | |
| | Sample Date | | Client Info | | 08 Jan 2024 | 31 Jul 2023 | |
| | Machine Age | mls | Client Info | | 125697 | 66180 | |
| | Oil Age | mls | Client Info | | 0 | 28376 | |
| | Filter Age | mls | Client Info | | 0 | 28376 | |
| | Oil Changed | | Client Info | | Changed | Changed | |
| | Filter Changed | | Client Info | | Changed | Changed | |
| | Sample Status | | | | NORMAL | NORMAL | |
| | | | | 400 | 40 | 07 | |
| | Iron | ppm | ASTM D5185m | >100 | 19 | 27 | |
| | Chromium | ppm | ASTM D5185m | >20 | 1 | 2 | |
| | Nickel | ppm | ASTM D5185m | >4 | 0 | 0 | |
| | Titanium | ppm | ASTM D5185m | 0 | 0 | <1 | |
| | Silver | ppm | ASTM D5185m | >3 | <1 | 0 | |
| | Aluminum | ppm | ASTM D5185m | >20 | 10 | 28 | |
| | Lead | ppm | ASTM D5185m | >40 | 0 | 0 | |
| | Copper | ppm | ASTM D5185m | >330 | 15 | 51 | |
| | Tin | ppm | ASTM D5185m | >15 | <1 | 1 | |
| | Vanadium | ppm | ASTM D5185m | NONE | 0 | 0 | |
| | White Metal | scalar | *Visual | NONE | NONE | NONE | |
| | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | |
| | Silicon | ppm | ASTM D5185m | >25 | 6 | 5 | |
| | Potassium | ppm | ASTM D5185m | >20 | 18 | 59 | |
| | Fuel | | WC Method | >5 | <1.0 | 0.3 | |
| | Water | | WC Method | >0.2 | NEG | NEG | |
| | Glycol | | WC Method | | NEG | NEG | |
| | Soot % | % | *ASTM D7844 | >3 | 0.6 | 0.6 | |
| | Nitration | Abs/cm | *ASTM D7624 | >20 | 9.3 | 9.9 | |
| | Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 23.1 | 22.0 | |
| | 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 | |
| | ~ ··· | | | | • | | |
| | Sodium | ppm | ASTM D5185m | >216 | 2 | 2 | |
| | Boron | ppm | ASTM D5185m | 250 | 57 | 4 | |
| | Barium | ppm | ASTM D5185m | 10 | 0 | 0 | |
| | Molybdenum | ppm | ASTM D5185m | 100 | 69 | 66 | |
| | Manganese | ppm | ASTM D5185m | 450 | <1 | <1 | |
| | Magnesium | ppm | ASTM D5185m | 450 | 773 | 1009 | |
| | Calcium | ppm | ASTM D5185m | 3000 | 1232 | 1277 | |
| | Phosphorus | ppm | ASTM D5185m | 1150 | 1084 | 1015 | |
| | Zinc | ppm | ASTM D5185m | 1350 | 1276 | 1310 | |
| | Sulfur | ppm | ASTM D5185m | 4250 | 2686 | 3041 | |
| | Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 20.2 | 20.3 | |
| | Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | 6.7 | 6.7 | |
| | Visc @ 100°C | cSt | ASTM D445 | 14.4 | 12.9 | 12.1 | |

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.





Contact/Location: Audrey Hopkins - SALWIN