| | ES . | LEAHY-WOLF |
|---|------|---------------|
| 2 | | ALYSIS REPORT |

1129

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL



K5 CONSTRUCTION CORPORATION - HODGKINS IL

Component Diesel Engine

LEAHY WOLF PREMIUM 15W40 (3 GAL)

| | (• • • • • • • • • • • • • • • • • • • | | | | | | |
|--|--|----------|-------------|-----------|-------------|-------------|---------------|
| RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
| | Sample Number | | Client Info | | LW0009473 | LW0008088 | LW0007692 |
| Resample at the next service interval to monitor. | Sample Date | | Client Info | | 27 Jun 2024 | 11 Dec 2023 | 23 Aug 2023 |
| | Machine Age | hrs | Client Info | | 2626 | 1794 | 1502 |
| | Oil Age | hrs | Client Info | | 832 | 292 | 1024 |
| | Filter Age | hrs | Client Info | | 832 | 292 | 1024 |
| | Oil Changed | | Client Info | | Changed | Changed | Changed |
| | Filter Changed | | Client Info | | Changed | Changed | Changed |
| | Sample Status | | | | NORMAL | NORMAL | ABNORMAL |
| | | | | 4.00 | _ | | 4 |
| WEAR | Iron | ppm | ASTM D5185m | | 7 | 8 | 15 |
| All component wear rates are normal. | Chromium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| | Nickel | ppm | ASTM D5185m | | <1 | <1 | 0 |
| | Titanium | ppm | ASTM D5185m | | <1 | 1 | <1 |
| | Silver | ppm | ASTM D5185m | | <1 | 0 | 0 |
| | Aluminum | ppm | ASTM D5185m | | 3 | 2 | 1 |
| | Lead | ppm | ASTM D5185m | | <1 | 0 | 0 |
| | Copper | ppm | ASTM D5185m | | 1 | 2 | 3 |
| | Tin | ppm | ASTM D5185m | >15 | <1 | <1 | <1 |
| | Vanadium | ppm | ASTM D5185m | NONE | <1 | <1 | <1 |
| | White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| CONTAMINATION | Silicon | ppm | ASTM D5185m | >25 | 3 | 4 | 4 |
| | Potassium | ppm | ASTM D5185m | | 2 | 2 | 0 |
| There is no indication of any contamination in the oil. | Fuel | 1-1- | WC Method | | <1.0 | <1.0 | <1.0 |
| | Water | | WC Method | >0.2 | NEG | NEG | NEG |
| | Glycol | | WC Method | | NEG | NEG | NEG |
| | Soot % | % | *ASTM D7844 | >3 | 0.2 | 0.2 | 0.2 |
| | Nitration | Abs/cm | *ASTM D7624 | >20 | 8.5 | 8.7 | 11.3 |
| | Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.8 | 21.4 | 26.2 |
| | Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| | Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| | Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | NEG |
| | ····· | | | | | | |
| FLUID CONDITION | Sodium | ppm | ASTM D5185m | | <1 | 1 | 2 |
| The BN result indicates that there is suitable alkalinity remaining in the | Boron | ppm | ASTM D5185m | | 2 | 3 | 0 |
| oil. The condition of the oil is suitable for further service. | Barium | ppm | ASTM D5185m | | <1 | 13 | 0 |
| | Molybdenum | ppm | ASTM D5185m | | 61 | 70 | 64 |
| | Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| | Magnesium | ppm | ASTM D5185m | | 920 | 1124 | 1057 |
| | Calcium | ppm | ASTM D5185m | | 1129 | 1303 | 1175 |
| | Phosphorus | ppm | ASTM D5185m | | 947 | 1176 | 1061 |
| | Zinc | ppm | ASTM D5185m | | 1196 | 1476 | 1311 |
| | Sulfur | ppm | ASTM D5185m | 05 | 2515 | 3648 | 3329 |
| | Oxidation | Abs/.1mm | *ASTM D7414 | | 17.4 | 20.5 | ▲ 31.0 5 1 |
| | Base Number (BN) | mg KUH/g | ASTM D2896 | 9.8 | 8.0 | 7.5 | 5.1 |

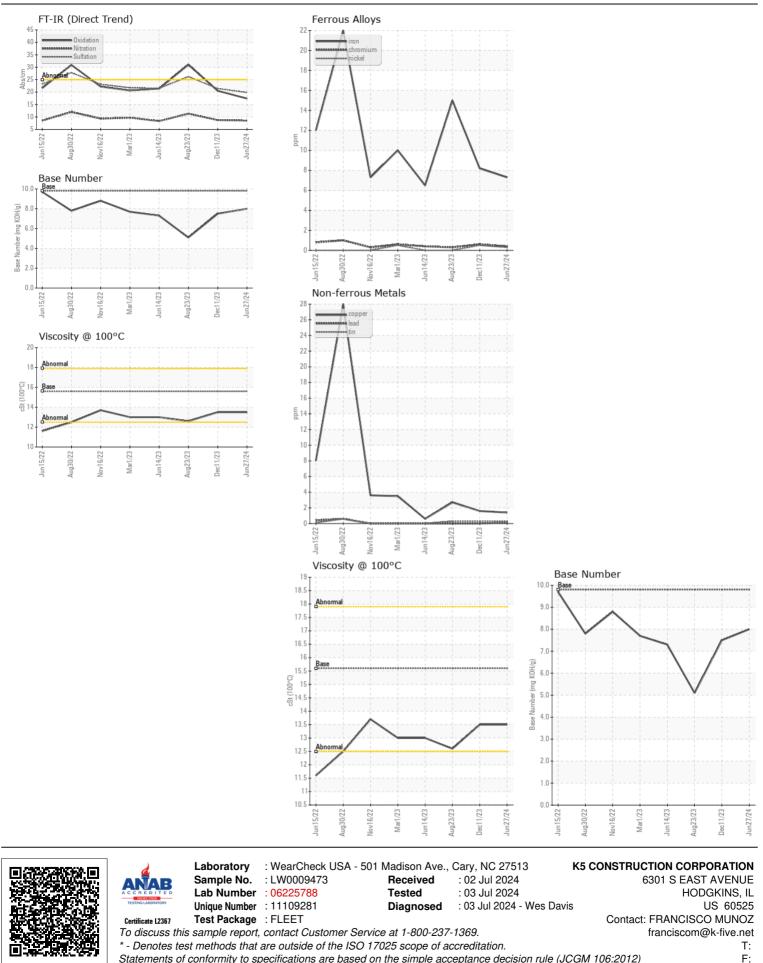
Visc @ 100°C cSt

ASTM D445 15.6

13.5

12.6

13.5



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)