

Machine Id HINO BX-4

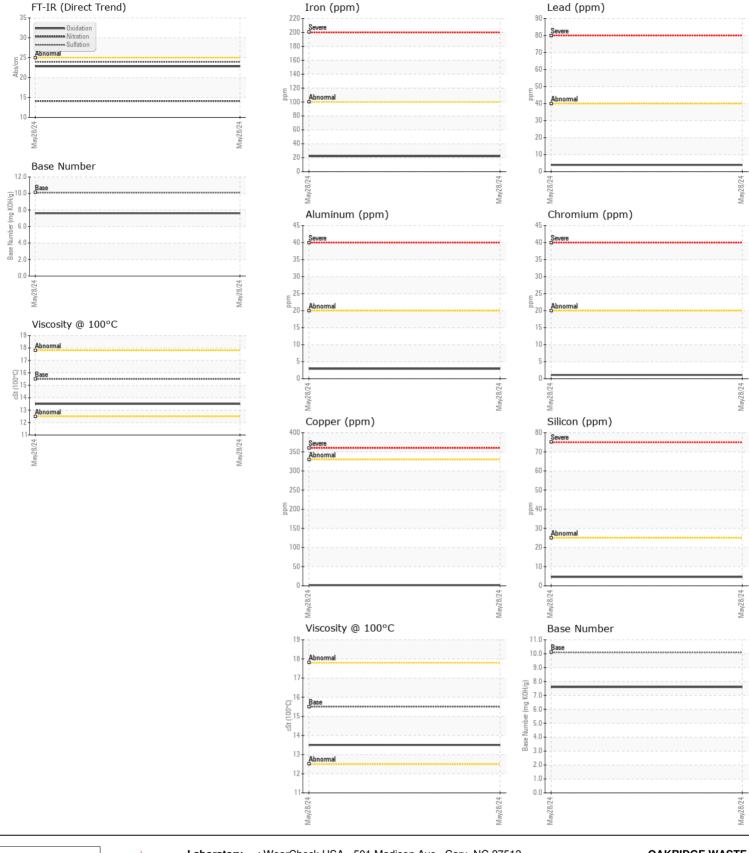
Component Diesel Engine

GIBRALTAR 15W/40 SUPER S-3 LX (--- GAL)

| GIBRALIAR ISW/40 SUPER 5-3 LX (GAL) | | | | | | | |
|---|------------------|----------|-------------|-----------|-------------|----------|----------|
| RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
| Resample at the next service interval to monitor. | Sample Number | | Client Info | | WC0875510 | | |
| | Sample Date | | Client Info | | 28 May 2024 | | |
| | Machine Age | hrs | Client Info | | 11688 | | |
| | Oil Age | hrs | Client Info | | 600 | | |
| | Filter Age | hrs | Client Info | | 600 | | |
| | Oil Changed | | Client Info | | Changed | | |
| | Filter Changed | | Client Info | | Changed | | |
| | Sample Status | | | | NORMAL | | |
| WEAR | Iron | ppm | ASTM D5185m | >100 | 22 | | |
| | Chromium | ppm | ASTM D5185m | >20 | 1 | | |
| Metal levels are typical for a new component breaking in. | Nickel | ppm | ASTM D5185m | >4 | 0 | | |
| | Titanium | ppm | ASTM D5185m | | <1 | | |
| | Silver | ppm | ASTM D5185m | >3 | <1 | | |
| | Aluminum | ppm | ASTM D5185m | >20 | 3 | | |
| | Lead | ppm | ASTM D5185m | >40 | 4 | | |
| | Copper | ppm | ASTM D5185m | >330 | 2 | | |
| | Tin | ppm | ASTM D5185m | >15 | 0 | | |
| | Vanadium | ppm | ASTM D5185m | | <1 | | |
| | White Metal | scalar | *Visual | NONE | NONE | | |
| | Yellow Metal | scalar | *Visual | NONE | NONE | | |
| CONTAMINATION | Silicon | ppm | ASTM D5185m | >25 | 5 | | |
| | Potassium | ppm | ASTM D5185m | >20 | 1 | | |
| There is no indication of any contamination in the oil. | Fuel | | WC Method | >5 | <1.0 | | |
| | Water | | WC Method | >0.2 | NEG | | |
| | Glycol | | WC Method | | NEG | | |
| | Soot % | % | *ASTM D7844 | >3 | 1.4 | | |
| | Nitration | Abs/cm | *ASTM D7624 | >20 | 14.1 | | |
| | Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 23.9 | | |
| | 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 | | 6 | | |
| | Boron | ppm | ASTM D5185m | | 6 | | |
| 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 | | <1 | | |
| | Molybdenum | ppm | ASTM D5185m | 66 | 83 | | |
| | Manganese | ppm | ASTM D5185m | | <1 | | |
| | Magnesium | ppm | ASTM D5185m | 1000 | 944 | | |
| | Calcium | ppm | ASTM D5185m | 1050 | 1404 | | |
| | Phosphorus | ppm | ASTM D5185m | 1150 | 1160 | | |
| | Zinc | ppm | ASTM D5185m | 1270 | 1377 | | |
| | Sulfur | ppm | ASTM D5185m | | 3979 | | |
| | Oxidation | Abs/.1mm | *ASTM D7414 | | 22.8 | | |
| | Base Number (BN) | mg KOH/g | ASTM D2896 | 10.1 | 7.6 | | |
| | Vier @ 10000 | - 01 | | 45 5 | 40 5 | | |

Visc @ 100°C cSt ASTM D445 15.5

13.5



OAKRIDGE WASTE Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : WC0875510 Received : 28 Jun 2024 307 WHITE ST Lab Number : 06223193 Tested : 28 Jun 2024 DANBURY, CT Unique Number : 11101390 Diagnosed : 28 Jun 2024 - Wes Davis US 06810 Test Package : MOB 1 (Additional Tests: TBN) Contact: CHRIS CONTI Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. chris.conti@oakridgewaste.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: F: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)