

Machine Id **A-430** Component **Diesel Engine** Fluid **DURAMAX 15W40 (--- QTS)**

| RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|------------------|----------|-------------|-----------|-------------|-------------|-------------|
| | Sample Number | | Client Info | | DC0030728 | DC0030732 | DC0029735 |
| Resample at the next service interval to monitor. Please specify the component make and model with your next sample. | Sample Date | | Client Info | | 06 Mar 2024 | 18 Nov 2023 | 19 Aug 2023 |
| | Machine Age | hrs | Client Info | | 1992 | 1348 | 672 |
| | Oil Age | hrs | Client Info | | 644 | 676 | 672 |
| | Filter Age | hrs | Client Info | | 644 | 676 | 672 |
| | Oil Changed | | Client Info | | N/A | Changed | Changed |
| | Filter Changed | | Client Info | | N/A | Changed | Changed |
| | Sample Status | | | | NORMAL | NORMAL | ATTENTION |
| WEAR | Iron | ppm | ASTM D5185m | >100 | 19 | 24 | 44 |
| WEAR | Chromium | ppm | ASTM D5185m | | 0 | <1 | 1 |
| All component wear rates are normal. | Nickel | ppm | ASTM D5185m | | 0 | <1 | <1 |
| | Titanium | ppm | ASTM D5185m | ~1 | 0 | <1 | <1 |
| | Silver | ppm | ASTM D5185m | -3 | 0 | 0 | 0 |
| | Aluminum | ppm | ASTM D5185m | | 3 | 3 | 9 |
| | Lead | ppm | ASTM D5185m | | 0 | 1 | 2 |
| | Copper | ppm | ASTM D5185m | | 14 | 64 | 24 |
| | Tin | ppm | ASTM D5185m | | 0 | <1 | 1 |
| | Vanadium | ppm | ASTM D5185m | 10 | 0 | 0 | <1 |
| | White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| | | | | | | | |
| CONTAMINATION | Silicon | ppm | ASTM D5185m | >25 | 6 | 16 | 14 |
| There is no indication of any contamination in the oil. | Potassium | ppm | ASTM D5185m | >20 | 4 | 11 | 37 |
| | Fuel | | WC Method | >5 | <1.0 | <1.0 | 0.6 |
| | Water | | WC Method | >0.2 | NEG | NEG | NEG |
| | Glycol | | WC Method | | NEG | NEG | NEG |
| | Soot % | % | *ASTM D7844 | >3 | 0.7 | 0.7 | 0.7 |
| | Nitration | Abs/cm | *ASTM D7624 | >20 | 8.0 | 8.1 | 8.2 |
| | Sulfation | Abs/.1mm | *ASTM D7415 | | 19.6 | 19.7 | 21.0 |
| | 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 | | 2 | <1 | 7 |
| | Boron | ppm | ASTM D5185m | | 13 | 4 | 63 |
| 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 | | 0 | 0 | 12 |
| | Molybdenum | ppm | ASTM D5185m | | 10 | 8 | 63 |
| | Manganese | ppm | ASTM D5185m | | <1 | 1 | 5 |
| | Magnesium | ppm | ASTM D5185m | | 94 | 77 | 401 |
| | Calcium | ppm | ASTM D5185m | | 2309 | 2245 | 1731 |
| | Phosphorus | ppm | ASTM D5185m | | 919 | 875 | 1000 |
| | Zinc | ppm | ASTM D5185m | | 1081 | 1032 | 1269 |
| | Sulfur | ppm | ASTM D5185m | | 4060 | 3303 | 3015 |
| | Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 11.7 | 12.1 | 16.9 |
| | | | | | | | |

Base Number (BN) mg KOH/g ASTM D2896

ASTM D445

Visc @ 100°C cSt

5.9

13.5

7.4

11.3

6.2

13.3

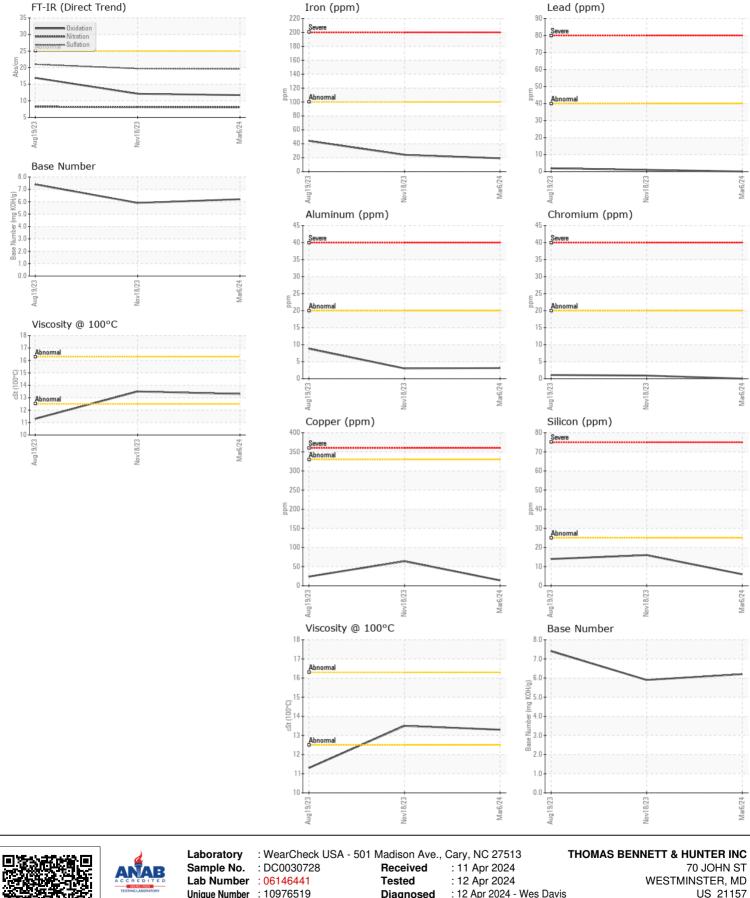
NORMAL

NORMAL

NORMAL

WEAR

CONTAMINATION FLUID CONDITION



 Unique Number
 : 10976519
 Diagnosed
 : 12 Apr 2024 - Wes Davis
 US 21157

 Centificate 12367
 Test Package
 : MOB 1 (Additional Tests: TBN)
 Contact: JOE STEPHAN

 To discuss this sample report, contact Customer Service at 1-800-237-1369.
 istephan@tbhconcrete.com

 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 T: (410)848-9030

 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)
 F: (410)848-9032

Contact/Location: JOE STEPHAN - THOWESMD Page 2 of 2