

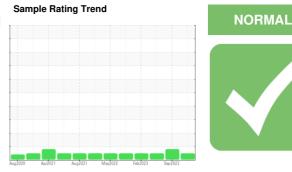
OIL ANALYSIS REPORT

OKLAHOMA/109/EG - PAVING EQUIPMENT 87.93 [OKLAHOMA^109^EG - PAVING EQUIPMENT] Component Diesel Engine

Fluic

MOBIL DELVAC 1300 SUPER15W40 (4 GAL)

SAMPLE INFORMATION method





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

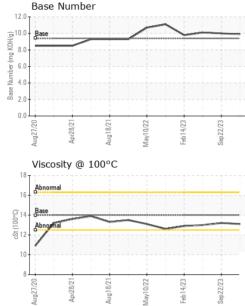
Fluid Condition

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

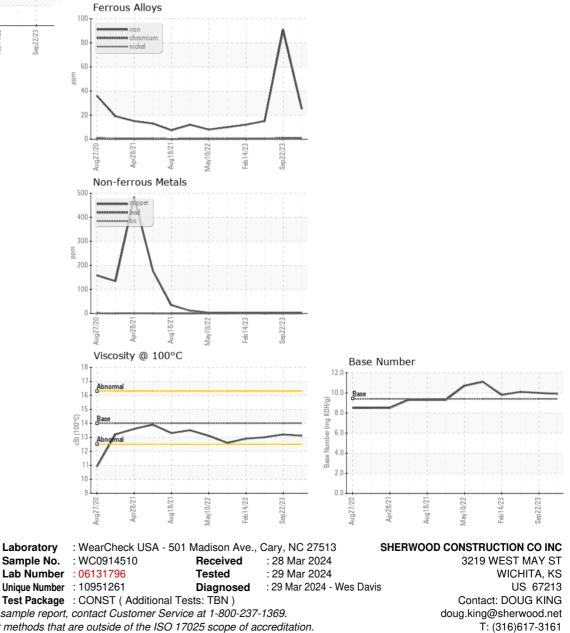
| | AHON | methou | | Current | TIIStory I | |
|---|--|--|--|---|--|--|
| Sample Number | | Client Info | | WC0914510 | WC0819985 | WC0808042 |
| Sample Date | | Client Info | | 21 Mar 2024 | 22 Sep 2023 | 11 May 2023 |
| Machine Age | hrs | Client Info | | 8640 | 4125 | 3592 |
| Oil Age | hrs | Client Info | | 250 | 4125 | 540 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | MARGINAL | NORMAL |
| ÷ | | | | | | |
| CONTAMINATION | ١ | method | limit/base | current | history1 | history2 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| WEAR METALS | | method | limit/base | current | history1 | history2 |
| Iron | ppm | ASTM D5185m | >100 | 25 | 4 91 | 15 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | | >2 | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | | 8 | 2 | 6 |
| Lead | ppm | | >40 | ۲ ۲ | <1 | 0 |
| Copper | ppm | ASTM D5185m | | 2 | 2 | <1 |
| Tin | | | >15 | ے <1 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | >15 | <1 | <1 | 0 |
| | ppm | | | | | |
| Cadmium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| | | | | | | |
| ADDITIVES | | method | limit/base | current | history1 | history2 |
| Boron | ppm | ASTM D5185m | limit/base | current 45 | 36 | 45 |
| | ppm ppm | ASTM D5185m | | | | |
| Boron | | ASTM D5185m | 0 | 45 | 36 | 45 |
| Boron Barium | ppm | ASTM D5185m ASTM D5185m | 0 | 45 0 | 36 0 | 45 0 |
| Boron Barium Molybdenum | ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m | 0 | 45 0 44 | 36 0 42 | 45 0 42 |
| Boron Barium Molybdenum Manganese | ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 0 | 45 0 44 <1 | 36 0 42 <1 | 45 0 42 <1 |
| Boron Barium Molybdenum Manganese Magnesium | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 0 | 45 0 44 <1 501 | 36 0 42 <1 522 | 45 0 42 <1 549 |
| Boron Barium Molybdenum Manganese Magnesium Calcium | ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 0 | 45 0 44 <1 501 1738 | 36 0 42 <1 522 1713 | 45 0 42 <1 549 1765 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus | ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 0 | 45 0 44 <1 501 1738 778 | 36 0 42 <1 522 1713 753 | 45 0 42 <1 549 1765 787 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc | ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 0 | 45 0 44 <1 501 1738 778 944 | 36 0 42 <1 522 1713 753 927 | 45 0 42 <1 549 1765 787 990 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 0 0 0 limit/base | 45 0 44 <1 501 1738 778 944 2622 | 36 0 42 <1 522 1713 753 927 2572 | 45 0 42 <1 549 1765 787 990 3256 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS | ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 0 0 0 limit/base | 45 0 44 <1 501 1738 778 944 2622 current 7 | 36 0 42 <1 522 1713 753 927 2572 history1 | 45 0 42 <1 549 1765 787 990 3256 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon | ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m | 0 0 0 0 0 limit/base | 45 0 44 <1 501 1738 778 944 2622 current | 36 0 42 <1 522 1713 753 927 2572 history1 5 | 45 0 42 <1 549 1765 787 990 3256 history2 6 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium | ppm | ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m | 0 0 0 0 ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! | 45 0 44 <1 501 1738 778 944 2622 current 7 5 | 36 0 42 <1 522 1713 753 927 2572 history1 5 5 | 45 0 42 <1 549 1765 787 990 3256 history2 6 2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED | ppm | ASTM D5185m ASTM D5185m | 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 45 0 44 <1 501 1738 778 944 2622 current 7 5 4 X | 36 0 42 <1 522 1713 753 927 2572 history1 5 5 5 <1 history1 | 45 0 42 <1 549 1765 787 990 3256 history2 6 2 2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 0 0 0 0 limit/base >25 >20 limit/base >3 | 45 0 44 <1 501 1738 778 944 2622 current 7 5 4 current 0.3 | 36 0 42 <1 522 1713 753 927 2572 history1 5 5 5 <1 history1 0.3 | 45 0 42 <1 549 1765 787 990 3256 history2 6 2 2 2 history2 0.3 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration | ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 45 0 44 <1 501 1738 778 944 2622 <i>current</i> 7 5 4 <i>current</i> 0.3 7.4 | 36 0 42 <1 522 1713 753 927 2572 history1 5 5 5 <1 history1 0.3 7.3 | 45 0 42 <1 549 1765 787 990 3256 history2 6 2 2 2 history2 0.3 7.7 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D5185m | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 45 0 44 <1 501 1738 778 944 2622 <u>current</u> 7 5 4 <u>current</u> 0.3 7.4 22.0 | 36 0 42 <1 522 1713 753 927 2572 history1 5 5 5 <1 history1 0.3 7.3 22.1 | 45 0 42 <1 549 1765 787 990 3256 history2 6 2 2 2 history2 0.3 7.7 22.7 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415 | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 45 0 44 <1 501 1738 778 944 2622 current 7 5 4 current 0.3 7.4 22.0 current | 36 0 42 <1 522 1713 753 927 2572 history1 5 5 5 <1 history1 0.3 7.3 22.1 history1 | 45 0 42 <1 549 1765 787 990 3256 history2 6 2 2 history2 0.3 7.7 22.7 history2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA Oxidation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7415 | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 45 0 44 <1 501 1738 778 944 2622 <u>current</u> 7 5 4 <u>current</u> 0.3 7.4 22.0 <u>current</u> | 36 0 42 <1 522 1713 753 927 2572 history1 5 5 5 <1 history1 0.3 7.3 22.1 history1 2.9 | 45 0 42 <1 549 1765 787 990 3256 history2 6 2 2 history2 0.3 7.7 22.7 history2 2 |
| Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation | ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm | ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415 | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 45 0 44 <1 501 1738 778 944 2622 current 7 5 4 current 0.3 7.4 22.0 current | 36 0 42 <1 522 1713 753 927 2572 history1 5 5 5 <1 history1 0.3 7.3 22.1 history1 | 45 0 42 <1 549 1765 787 990 3256 history2 6 2 2 history2 0.3 7.7 22.7 history2 |



OIL ANALYSIS REPORT



| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|-----------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| 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 |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |
| FLUID PROPERT | TIES | method | limit/base | current | history1 | history2 |
| Visc @ 100°C | cSt | ASTM D445 | 14 | 13.1 | 13.2 | 13.0 |
| GRAPHS | | | | | | |





Test Package : CONST (Additional Tests: TBN) Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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