

Machine Id **1781** Component **Diesel Engine** Filuid **DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

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We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

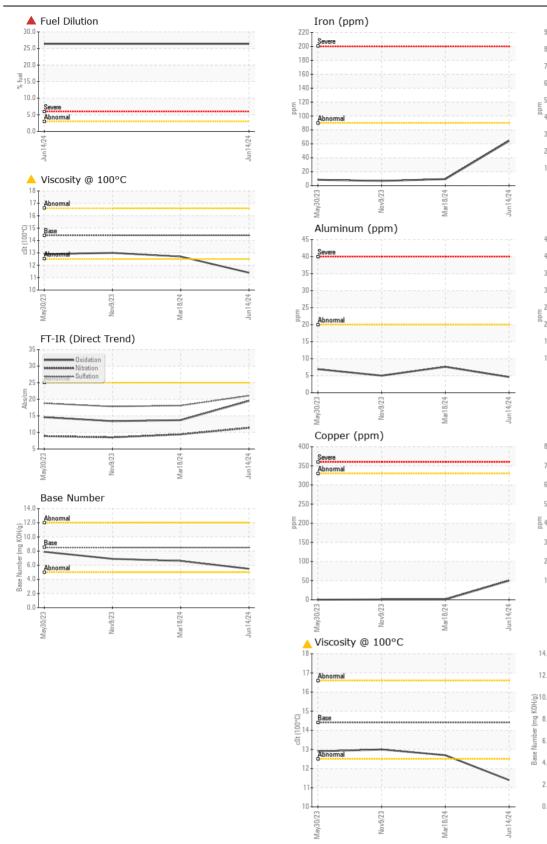
CONTAMINATION

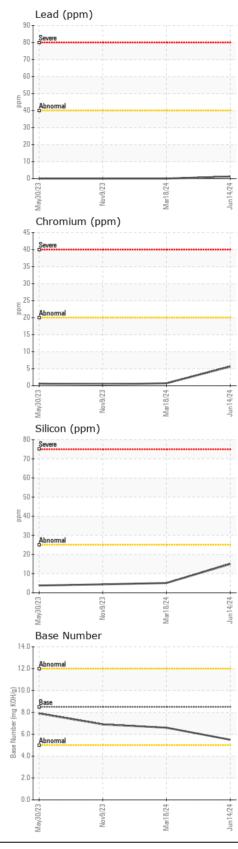
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

| Sample Date Client Info 14 Jun 2024 18 Mar 2024 09 Nov 2023 Machine Age mls Client Info 84372 79148 69301 Oil Age mls Client Info 0 0 0 0 Filter Age mls Client Info 0 0 0 0 Oil Changed Client Info Not Changd Not Changd Not Changd Not Changd Not Changd Filter Changed Client Info Not Changd Not Changd Not Changd Not Changd Not Changd Sample Status V SEVERE NORMAL NORMAL NORMAL Iron ppm ASTM D5185m<>90 64 9 7 Chromium ppm ASTM D5185m<>20 6 <1 | | | | | | | |
|---|------------------|----------|-------------|-----------|-------------|----------|-------------|
| Sample Number Client Info WC0948958 WC0905783 WC0870761 Sample Date Client Info 14 Jun 2024 18 Mar 2024 09 Nov 2023 Machine Age mls Client Info 0 0 0 Oil Age mls Client Info 0 0 0 Filter Age mls Client Info Not Changd Not Changd Not Changd Filter Changed Client Info Not Changd Not Changd Not Changd Not Changd Sample Status | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
| Sample Date Client Info 14 Jun 2024 18 Mar 2024 09 Nov 2023 Machine Age mis Client Info 0 0 0 Oil Age mis Client Info 0 0 0 Oil Age mis Client Info Not Change Not Change Not Change Filter Age Client Info Not Change Not Change Not Change Not Change Sample Status SEVERE NORMAL Not Change Not Change Iron ppm ASTM D5185m<>20 6 <1 <1 Nickel ppm ASTM D5185m<>2 0 <1 0 Silver ppm ASTM D5185m<>2 0 <1 0 0 Clooper ppm ASTM D5185m<>20 5 8 5 1 0 <1 1 0 0 0 0 0 1 0 0 0 0 0 0 0 1 1 1 1 1 | Sample Number | | Client Info | | WC0948958 | , | WC0870761 |
| Machine Age mis Client Info 84372 79148 69301 Oil Age mis Client Info 0 0 0 Filter Age mis Client Info Not Changd Not Changd Not Changd Oil Changed Client Info Not Changd Not Changd Not Changd Not Changd Sample Status Client Info Not Changd Not Changd Not Changd Not Changd Iron ppm ASTM D5185m >20 6 <1 <1 Nickel ppm ASTM D5185m >22 0 0 0 Silver ppm ASTM D5185m >20 0 0 0 Aluminum ppm ASTM D5185m >20 5 8 5 Lead ppm ASTM D5185m >30 0 <1 0 Vanadium ppm ASTM D5185m >25 15 5 4 Potassium ppm ASTM D5185m >20 3 < | | | | | | | 09 Nov 2023 |
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| Sample Status SEVERE NORMAL NORMAL Iron ppm ASTM D5185m<>90 64 9 7 Chromium ppm ASTM D5185m<>20 6 <1 <1 Nickel ppm ASTM D5185m<>2 0 0 0 Silver ppm ASTM D5185m<>2 0 0 0 Aluminum ppm ASTM D5185m<>20 5 8 5 Lead ppm ASTM D5185m<>330 50 <1 <1 Vianadium ppm ASTM D5185m<>330 50 <1 0 Vanadium ppm ASTM D5185m<>330 50 <1 <1 Visual NONE NONE NONE NONE NONE Silicon ppm ASTM D5185m<>20 3 6 4 Puelassium ppm ASTM D5185m<>20 3 6 4 Puelassium ppm ASTM D5185m<>20 3 6 4 Silicon so | • | | | | • | 0 | U |
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| Chromium ppm ASTM D5185m >20 6 <1 | | | | | | | |
| Nickel ppm ASTM D5185m >2 0 0 0 Titanium ppm ASTM D5185m >2 0 <1 0 Silver ppm ASTM D5185m >20 5 8 5 Lead ppm ASTM D5185m >40 1 0 0 Copper ppm ASTM D5185m >40 1 0 0 Vanadium ppm ASTM D5185m >40 1 0 0 Vanadium ppm ASTM D5185m >40 <1 0 <1 <1 White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Silicon ppm ASTM D5185m >20 3 6 4 Fuel % ASTM D5185m >20 11.4 9.4 8.5 Sulfation Abs/m TM TMT | Iron | ppm | ASTM D5185m | >90 | 64 | 9 | 7 |
| Titanium ppm ASTM D5185m >2 0 <1 | Chromium | ppm | ASTM D5185m | >20 | 6 | <1 | <1 |
| Titanium ppm ASTM D5185m >2 0 <1 | Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >20 5 8 5 Lead ppm ASTM D5185m >40 1 0 0 Copper ppm ASTM D5185m >15 0 <1 | Titanium | | ASTM D5185m | >2 | 0 | <1 | 0 |
| Aluminum ppm ASTM D5185m >20 5 8 5 Lead ppm ASTM D5185m >40 1 0 0 Copper ppm ASTM D5185m >330 50 <1 <1 Tin ppm ASTM D5185m >15 0 <1 0 Vanadium ppm ASTM D5185m >15 0 <1 <1 White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Silicon ppm ASTM D5185m<>225 15 5 4 Potassium ppm ASTM D5185m<>220 3 6 4 Fuel % ASTM D5185m<>220 3 6 4 Glycol WC Method >0.2 NEG NEG NEG NEG S Sulfation <th>Silver</th> <th></th> <th>ASTM D5185m</th> <th>>2</th> <th>0</th> <th>0</th> <th>0</th> | Silver | | ASTM D5185m | >2 | 0 | 0 | 0 |
| Lead ppm ASTM D5185m >40 1 0 0 Copper ppm ASTM D5185m >330 50 <1 <1 Tin ppm ASTM D5185m >15 0 <1 0 Vanadium ppm ASTM D5185m 0 <1 <1 0 White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Silicon ppm ASTM D5185m<>20 3 6 4 Fuel % ASTM D5185m<>20 3 6 4 Fuel % ASTM D5185m<>20 3 6 4 Fuel % ASTM D5185m<>20 3 6 4 Glycol WC Method >0.2 NEG NEG NEG Glycol WC Method NORE NONE NONE NONE Sul | Aluminum | | ASTM D5185m | >20 | 5 | 8 | 5 |
| Copper ppm ASTM D5185m >330 50 <1 | | | | | - | | |
| Tin ppm ASTM D5185m >15 0 <1 | | | | >330 | 50 | | <1 |
| Vanadium ppm ASTM D5185m 0 <1 | | | | | | | |
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| Yellow Metal scalar *Visual NONE NONE NONE NONE Silicon ppm ASTM D5185m<>25 15 5 4 Potassium ppm ASTM D5185m<>20 3 6 4 Fuel % ASTM D5185m<>20 3 6 4 Water WC Method >0.2 NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG Soot % % *ASTM D7844<>6 0.8 0.3 0.3 Nitration Abs/cm *ASTM D7624<>20 11.4 9.4 8.5 Sulfation Abs/Imm<*ASTM D7415<>30 21.1 18.1 17.8 Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NORE NORML NORML NORML Appearance scalar *Visual NORML NORML NORML NORML Gor scalar *Visual | | | | NONF | - | | |
| Silicon ppm ASTM D5185m<>25 15 5 4 Potassium ppm ASTM D5185m<>20 3 6 4 Fuel % ASTM D3524<>3.0 ▲ 26.4 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG Soot % % *ASTM D7844<>6 0.8 0.3 0.3 Nitration Abs/cm *ASTM D7624<>20 11.4 9.4 8.5 Sulfation Abs/cm *ASTM D7815<>30 21.1 18.1 17.8 Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NORE NORML NORML NORML NORML Appearance scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual NORML NORML NORML NORML | | | | - | - | | |
| Potassium ppm ASTM D5185m >20 3 6 4 Fuel % ASTM D3524 >3.0 ▲ 26.4 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG Soot % % *ASTM D7844 >6 0.8 0.3 0.3 Nitration Abs/.mm *ASTM D7624 >20 11.4 9.4 8.5 Sulfation Abs/.mm *ASTM D7624 >20 11.4 9.4 8.5 Sulfation Abs/.im *ASTM D7624 >20 11.4 9.4 8.5 Sulfation Abs/.im *ASTM D7624 >20 11.4 9.4 8.5 Sulfation Abs/.im *ASTM D7615 >30 21.1 18.1 17.8 Solit scalar *Visual NONE NONE NONE NORML Appearance scalar *Visual NO2 | | Jouran | , iouu | | | | HORL |
| Fuel % ASTM D3524 >3.0 ▲ 26.4 <1.0 | Silicon | ppm | ASTM D5185m | >25 | 15 | 5 | 4 |
| Water WC Method >0.2 NEG NEG NEG Glycol WC Method NEG NEG NEG NEG Soot % % *ASTM D7844 >6 0.8 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 11.4 9.4 8.5 Sulfation Abs/tmm *ASTM D7615 >30 21.1 18.1 17.8 Silt scalar *Visual NONE NONE NONE NORML Appearance scalar *Visual NORML NORML NORML NORML Odo scalar *Visual | Potassium | ppm | ASTM D5185m | >20 | 3 | 6 | 4 |
| Glycol WC Method NEG NEG NEG NEG Soot % % *ASTM D7844 >6 0.8 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 11.4 9.4 8.5 Sulfation Abs/tmm *ASTM D7624 >20 11.4 9.4 8.5 Sulfation Abs/tmm *ASTM D7615 >30 21.1 18.1 17.8 Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NOR NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML NORML Emulsified Water scalar *Visual >0.2 NEG NEG NEG Sodium ppm ASTM D5185m >158 3 2 1 </th <th>Fuel</th> <th>%</th> <th>ASTM D3524</th> <th>>3.0</th> <th>26.4</th> <th><1.0</th> <th><1.0</th> | Fuel | % | ASTM D3524 | >3.0 | 26.4 | <1.0 | <1.0 |
| Soot % % *ASTM D7844 >6 0.8 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 11.4 9.4 8.5 Sulfation Abs/lmm *ASTM D7415 >30 21.1 18.1 17.8 Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NOR NOR NONE NONE NONE Appearance scalar *Visual NOR NORML NORML NORML NORML Odor scalar *Visual NOR NORML NORML NORML Emulsified Water scalar *Visual >0.2 NEG NEG NEG Sodium ppm ASTM D5185m >158 3 2 1 Boron ppm ASTM D5185m 100 63 84 | Water | | WC Method | >0.2 | NEG | NEG | NEG |
| NitrationAbs/cm*ASTM D7624>2011.49.48.5SulfationAbs/.1mm*ASTM D7415>3021.118.117.8Siltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNORENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLOdorscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m>158321BoronppmASTM D5185m250354845BariumppmASTM D5185m100100MalganeseppmASTM D5185m100638480ManganeseppmASTM D5185m3000139119432011PhosphorusppmASTM D5185m11507078791003ZincppmASTM D5185m135080811191177SulfurppmASTM D5185m4250264634573545OxidationAbs/.1mm*ASTM D7414>2519.56.66.9 | Glycol | | WC Method | | NEG | NEG | NEG |
| SulfationAbs/.1mm*ASTM D7415>3021.118.117.8Siltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMNORMLNORMLNORMLNORMLOdorscalar*VisualNORMNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m>158321BoronppmASTM D5185m25035448450BariumppmASTM D5185m1006384800ManganeseppmASTM D5185m100101114CalciumppmASTM D5185m11507078791003ZincppmASTM D5185m135080811191177SulfurppmASTM D5185m4250264634573545OxidationAbs/.1mm*ASTM D7144>2519.56.66.9 | Soot % | % | *ASTM D7844 | >6 | 0.8 | 0.3 | 0.3 |
| Siltscalar*VisualNONENONENONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m>158321BoronppmASTM D5185m250354845BariumppmASTM D5185m10100MolybdenumppmASTM D5185m100638480ManganeseppmASTM D5185m3000139119432011PhosphorusppmASTM D5185m11507078791003ZincppmASTM D5185m135080811191177SulfurppmASTM D5185m4250264634573545OxidationAbs/.1mm*ASTM D21864.555.56.66.9 | Nitration | Abs/cm | *ASTM D7624 | >20 | 11.4 | 9.4 | 8.5 |
| Debrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m>158321BoronppmASTM D5185m250354845BariumppmASTM D5185m10100MolybdenumppmASTM D5185m100638480ManganeseppmASTM D5185m100167101114CalciumppmASTM D5185m3000139119432011PhosphorusppmASTM D5185m11507078791003ZincppmASTM D5185m135080811191177SulfurppmASTM D5185m4250264634573545OxidationAbs/.1mm*ASTM D28968.55.56.66.9 | Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 21.1 | 18.1 | 17.8 |
| Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m>158321BoronppmASTM D5185m2503548455BariumppmASTM D5185m10100MolybdenumppmASTM D5185m10063384480ManganeseppmASTM D5185m1001671011144CalciumppmASTM D5185m3000139119432011PhosphorusppmASTM D5185m135080811191177SulfurppmASTM D5185m4250264634573545OxidationAbs/Imm*ASTM D28968.55.56.66.9 | Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m>158321BoronppmASTM D5185m250354845BariumppmASTM D5185m10100MolybdenumppmASTM D5185m100638480ManganeseppmASTM D5185m10063842011CalciumppmASTM D5185m3000139119432011PhosphorusppmASTM D5185m11507078791003ZincppmASTM D5185m135080811191177SulfurppmASTM D5185m4250264634573545OxidationAbs/1mm*ASTM D28968.55.56.66.9 | Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Odor scalar *Visual NORML NOR NORML NOR NORML < | Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Odor scalar *Visual NORML < | Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Sodium ppm ASTM D5185m >158 3 2 1 Boron ppm ASTM D5185m 250 35 48 45 Barium ppm ASTM D5185m 10 1 0 0 Molybdenum ppm ASTM D5185m 100 633 844 80 Manganese ppm ASTM D5185m 100 633 844 80 Manganesum ppm ASTM D5185m 100 633 844 80 Manganesum ppm ASTM D5185m 100 633 844 80 Magnesium ppm ASTM D5185m 100 633 844 80 Phosphorus ppm ASTM D5185m 450 167 101 114 Calcium ppm ASTM D5185m 150 707 879 1003 Zinc ppm ASTM D5185m 1350 808 1119 1177 Sulfur ppm ASTM D5185m <t< th=""><th>Odor</th><th>scalar</th><th>*Visual</th><th>NORML</th><th>NORML</th><th>NORML</th><th>NORML</th></t<> | Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Boron ppm ASTM D5185m 250 35 48 45 Barium ppm ASTM D5185m 10 1 0 0 Molybdenum ppm ASTM D5185m 100 63 84 80 Manganese ppm ASTM D5185m 100 63 84 80 Magnesium ppm ASTM D5185m 100 63 84 80 Magnesium ppm ASTM D5185m 100 63 84 80 Magnesium ppm ASTM D5185m 100 63 84 80 Phosphorus ppm ASTM D5185m 450 167 101 114 Calcium ppm ASTM D5185m 3000 1391 1943 2011 Phosphorus ppm ASTM D5185m 1350 808 1119 1177 Sulfur ppm ASTM D5185m 4250 2646 3457 3545 Oxidation Abs/.1mm<*ASTM D7414 2 | Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | NEG |
| Boron ppm ASTM D5185m 250 35 48 45 Barium ppm ASTM D5185m 10 1 0 0 Molybdenum ppm ASTM D5185m 100 63 84 80 Manganese ppm ASTM D5185m 100 63 84 80 Magnesium ppm ASTM D5185m 100 63 84 80 Magnesium ppm ASTM D5185m 100 63 84 80 Magnesium ppm ASTM D5185m 100 63 84 80 Phosphorus ppm ASTM D5185m 450 167 101 114 Calcium ppm ASTM D5185m 3000 1391 1943 2011 Phosphorus ppm ASTM D5185m 1350 808 1119 1177 Sulfur ppm ASTM D5185m 4250 2646 3457 3545 Oxidation Abs/.1mm<*ASTM D7414 2 | | | | | | | |
| Barium ppm ASTM D5185m 10 1 0 0 Molybdenum ppm ASTM D5185m 100 63 84 80 Manganese ppm ASTM D5185m 100 63 84 80 Magnesium ppm ASTM D5185m 2 0 0 Magnesium ppm ASTM D5185m 450 167 101 114 Calcium ppm ASTM D5185m 3000 1391 1943 2011 Phosphorus ppm ASTM D5185m 1150 707 879 1003 Zinc ppm ASTM D5185m 1350 808 1119 1177 Sulfur ppm ASTM D5185m 4250 2646 3457 3545 Oxidation Abs./1mm<*ASTM D7414 | Sodium | ppm | | | 3 | 2 | 1 |
| Molybdenum ppm ASTM D5185m 100 63 84 80 Manganese ppm ASTM D5185m 2 0 0 Magnesium ppm ASTM D5185m 450 167 101 114 Calcium ppm ASTM D5185m 3000 1391 1943 2011 Phosphorus ppm ASTM D5185m 1150 707 879 1003 Zinc ppm ASTM D5185m 1350 808 1119 1177 Sulfur ppm ASTM D5185m 4250 2646 3457 3545 Oxidation Abs./1mm<*ASTM D7414 >25 19.5 13.7 13.4 Base Number (BN) mg KOH/g ASTM D2896 8.5 5.5 6.6 6.9 | | ppm | ASTM D5185m | 250 | 35 | 48 | 45 |
| Manganese ppm ASTM D5185m 2 0 0 Magnesium ppm ASTM D5185m 450 167 101 114 Calcium ppm ASTM D5185m 3000 1391 1943 2011 Phosphorus ppm ASTM D5185m 1150 707 879 1003 Zinc ppm ASTM D5185m 1350 808 1119 1177 Sulfur ppm ASTM D5185m 4250 2646 3457 3545 Oxidation Abs/.1mm<*ASTM D7414 >25 19.5 13.7 13.4 Base Number (BN) mg KOH/g ASTM D2896 8.5 5.5 6.6 6.9 | | ppm | | | | | |
| Magnesium ppm ASTM D5185m 450 167 101 114 Calcium ppm ASTM D5185m 3000 1391 1943 2011 Phosphorus ppm ASTM D5185m 1150 707 879 1003 Zinc ppm ASTM D5185m 1350 808 1119 1177 Sulfur ppm ASTM D5185m 4250 2646 3457 3545 Oxidation Abs/.1mm *ASTM D7414 >25 19.5 13.7 13.4 Base Number (BN) mg KOH/g ASTM D2896 8.5 5.5 6.6 6.9 | , | ppm | ASTM D5185m | 100 | 63 | 84 | 80 |
| Calcium ppm ASTM D5185m 3000 1391 1943 2011 Phosphorus ppm ASTM D5185m 1150 707 879 1003 Zinc ppm ASTM D5185m 1350 808 1119 1177 Sulfur ppm ASTM D5185m 4250 2646 3457 3545 Oxidation Abs/.1mm *ASTM D7414 >25 19.5 13.7 13.4 Base Number (BN) mg KOH/g ASTM D2896 8.5 5.5 6.6 6.9 | • | ppm | | | | | |
| Phosphorus ppm ASTM D5185m 1150 707 879 1003 Zinc ppm ASTM D5185m 1350 808 1119 1177 Sulfur ppm ASTM D5185m 4250 2646 3457 3545 Oxidation Abs/.1mm *ASTM D7414 >25 19.5 13.7 13.4 Base Number (BN) mg KOH/g ASTM D2896 8.5 5.5 6.6 6.9 | Magnesium | ppm | ASTM D5185m | | 167 | 101 | |
| Zinc ppm ASTM D5185m 1350 808 1119 1177 Sulfur ppm ASTM D5185m 4250 2646 3457 3545 Oxidation Abs/.1mm *ASTM D7414 >25 19.5 13.7 13.4 Base Number (BN) mg KOH/g ASTM D2896 8.5 5.5 6.6 6.9 | Calcium | ppm | ASTM D5185m | 3000 | 1391 | 1943 | 2011 |
| Sulfur ppm ASTM D5185m 4250 2646 3457 3545 Oxidation Abs/.1mm *ASTM D7414 >25 19.5 13.7 13.4 Base Number (BN) mg KOH/g ASTM D2896 8.5 5.5 6.6 6.9 | Phosphorus | ppm | ASTM D5185m | 1150 | 707 | 879 | 1003 |
| Oxidation Abs/.1mm *ASTM D7414 >25 19.5 13.7 13.4 Base Number (BN) mg KOH/g ASTM D2896 8.5 5.5 6.6 6.9 | Zinc | ppm | ASTM D5185m | 1350 | 808 | 1119 | 1177 |
| Base Number (BN) mg KOH/g ASTM D2896 8.5 5.5 6.6 6.9 | Sulfur | ppm | ASTM D5185m | 4250 | 2646 | 3457 | 3545 |
| | Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 19.5 | 13.7 | 13.4 |
| Visc @ 100°C cSt ASTM D445 14.4 🔺 11.4 / 12.7 13.0 | Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | 5.5 | 6.6 | 6.9 |
| | Visc @ 100°C | cSt | ASTM D445 | 14.4 | 🔺 11.4 🌙 | 12.7 | 13.0 |





WAKE COUNTY PUBLIC SCHOOL SYSTEM Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : WC0948958 Received 1551 ROCK QUARRY ROAD : 26 Jun 2024 Lab Number : 06220868 Tested : 28 Jun 2024 RALEIGH, NC Unique Number : 11099065 : 28 Jun 2024 - Wes Davis US 27610 Diagnosed Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN) Contact: DEVIN WEBER Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. dweber@wcpss.net * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (919)856-8076 F: x: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Contact/Location: DEVIN WEBER - WCPRAL Page 2 of 2