

Machine Id DHKCEBBWJN0002564 Component Left Travel Fluid

DOOSAN 80W90 (--- GAL)

RECOMMENDATION

We advise that you check for visible metal particles in the oil. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

| ۱۸ | | Λ | D |
|----|----|---|---|
| V | ᆞᄃ | А | Π |
| | | | |

Light concentration of visible metal present. Gear wear is indicated.

CONTAMINATION

There is no indication of any contamination in the oil.

| FLUID | CO | NDIT | ION |
|--------------|----|------|-----|
| | | | |

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

| TestUOMMethodLimit/MCurrentHistory1History2Sample NumberClient InfoWC089073135.92023Sample DateClient Info944570Machine AgehrsClient Info944570Oil AgehrsClient Info944570Filter AgehrsClient Info00Filter AngedClient InfoChangedNot ChangeFilter ChangedClient InfoNANorMALSample StatusClient InfoASMORMALNORMALFinonppmASTMD5186>202783316ChromiumppmASTMD5186>2021316NickelppmASTMD5186>50<1<SilverppmASTMD5186>100SilverppmASTMD5186>100AuminumppmASTMD5186>100NonduippmASTMD5186>50<100Yellow MetalscalaYisual*NONENONENONEYellow MetalscalaYisual*NONENONENONESiliconppmASTMD5186>10NONEYellow MetalscalaYisual*NONENONENONESiliconppm <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> | | | | | | | | |
|---|------------------|--------------|---------------|-----------|-------------|-------------|----------|--|
| Sample DateClient Into94 Stan 202415 Sep 2023Machine AgehrsClient Into944570Oil AgehrsClient Into944570Filter AgehrsClient Into00Oil ChangedClient IntoIChangedNot ChangeFilter ChangedClient IntoIVANot ChangeSample StatusClient IntoIVANot ChangeIronppmASTM D5185(m)>50278316ChromiumppmASTM D5185(m)>50C1<1<NickelppmASTM D5185(m)>50C1<1<SilverppmASTM D5185(m)>100AluminumppmASTM D5185(m)>100VanadiumppmASTM D5185(m)>100VanadiumppmASTM D5185(m)>100VanadiumppmASTM D5185(m)>100VanadiumppmASTM D5185(m)>100VanadiumppmASTM D5185(m)>108VanadiumppmASTM D5185(m)>108VanadiumppmASTM D5185(m)>2021VanadiumppmASTM D5185(m)>108 </th <th>Test</th> <th>UOM</th> <th>Method</th> <th>Limit/Abn</th> <th>Current</th> <th>History1</th> <th>History2</th> | Test | UOM | Method | Limit/Abn | Current | History1 | History2 | |
| Machine AgeIrssClient Info944570Oil AgehrsClient Info0670Filter AgehrsClient Info00Oil ChangedClient InfoNANot ChangeFilter Changed1Client InfoNANot ChangeSample StatusClient InfoNANot ChangeIronppmASTM05185(m500278316InfonppmASTM05185(m5002316ChromiumppmASTM05185(m5002316NickelppmASTM05185(m5002316SilverppmASTM05185(m5002316AluminumppmASTM05185(m51000AgenappmASTM05185(m510100CopperppmASTM05185(m510100VanadumppmASTM05185(m510108SilconppmASTM05185(m510108SilconppmASTM05185(m510108SilconppmASTM05185(m520121SilconppmASTM05185(m520108SilconppmASTM05185(m520121 <trr>SilconppmASTM0518(m<!--</th--><th>Sample Number</th><th></th><th>Client Info</th><th></th><th>WC0890731</th><th>WC0811314</th><th></th></trr> | Sample Number | | Client Info | | WC0890731 | WC0811314 | | |
| Oil Age Filter AgeInsClient Info944570Filter AgeInsClient Info00Oil ChangedClient InfoNANot ChangeFilter ChangedIntClient InfoNANot ChangeSample StatusStample StatusSamon278316IronppmASTM D5185(m)550278316ChromiumppmASTM D5185(m)550<1<1NickelppmASTM D5185(m)550<1<1SilverppmASTM D5185(m)510100<1AluminumppmASTM D5185(m)510100LeadppmASTM D5185(m)510100VanduimppmASTM D5185(m)510100VanduimppmASTM D5185(m)510100Valdue MetalscalarVisual*NONEIndenIndenVellow MetalscalarVisual*NONEIndenIndenSiliconppmASTM D5185(m)510108SiliconppmASTM D5185(m)520121SiliconppmASTM D5185(m)520121SiliconppmASTM D5185(m)ScalaNORENORESiliconppmASTM D5185(m)Scala <t< th=""><th>Sample Date</th><th></th><th>Client Info</th><th></th><th>05 Jan 2024</th><th>15 Sep 2023</th><th></th></t<> | Sample Date | | Client Info | | 05 Jan 2024 | 15 Sep 2023 | | |
| Filter Age OIInitial InitialInitial Init | Machine Age | hrs | Client Info | | 944 | 570 | | |
| Cli Changed Filter Changed Filter ChangedClient InfoChanged N/ANot ChangedFilter Changed Sample StatusClient InfoN/ANot ChangedIronppmASTM D518(m)>500278316ChromiumppmASTM D518(m)>5021316NickelppmASTM D518(m)>50<1<1NickelppmASTM D518(m)>50<1<1SilverppmASTM D518(m)>100<AluminumppmASTM D518(m)>100<LeadppmASTM D518(m)>5000VanadiumppmASTM D518(m)>5000VanadiumppmASTM D518(m)>5000VanadiumppmASTM D518(m)>5000VanadiumppmASTM D518(m)>5000VanadiumppmASTM D518(m)>50108ValencevcsularNONENONENONEValencevcsularNONENONENONEValencevcsularNONENONENONEValencevcsularNONENONENONEValencevcsularNONENONENONEValencevcsularNONENONENON | Oil Age | hrs | Client Info | | 944 | 570 | | |
| Filter ChangedClient InfoNANANot ChangedSample StatusClient InfoNANoChangedIronppmASTM D5185(m>500278316IronppmASTM D5185(m>2023NickelppmASTM D5185(m>5<1<1TitaniumppmASTM D5185(m>5<10<1SilverppmASTM D5185(m>100<AluminumppmASTM D5185(m>100<LeadppmASTM D5185(m>500<YanadiumppmASTM D5185(m>500<VanadiumppmASTM D5185(m>500<VanadiumppmASTM D5185(m>500<Yellow MetalscalarVisual*NONENONE<SiliconppmASTM D5185(m>50108SiliconppmASTM D5185(m>2021SiliconppmASTM D5185(m>2021SiliconppmASTM D5185(m>2021SiliconppmASTM D5185(m>2021SiliconppmASTM D5185(m>20NONENONESoliconppmASTM D5185(mNORENORENORE <th>Filter Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>0</th> <th>0</th> <th></th> | Filter Age | hrs | Client Info | | 0 | 0 | | |
| Sample StatusABNORIALNORMALNORMALIronppmASTM D5185(m)>500278316ChromiumppmASTM D5185(m)>2023NickelppmASTM D5185(m)>5<11<1TitaniumppmASTM D5185(m)>5<10<1SilverppmASTM D5185(m)>100AluminumppmASTM D5185(m)>100LeadppmASTM D5185(m)>100CopperppmASTM D5185(m)>500YanadiumppmASTM D5185(m)>500VanadiumppmASTM D5185(m)>500Yellow MetalscalarVisual*NONENONENONESiliconppmASTM D5185(m)>20221SiliconppmASTM D5185(m)>2021SiliconppmASTM D5185(m)>2021SiliconppmASTM D5185(m)>2021SiliconppmASTM D5185(m)>2021SiliconppmASTM D5185(m)>2021SiliconppmASTM D5185(m)NORENORENORESiliconppmASTM D5185(m)NORENORE <t< th=""><th>Oil Changed</th><th></th><th>Client Info</th><th></th><th>Changed</th><th>Not Changd</th><th></th></t<> | Oil Changed | | Client Info | | Changed | Not Changd | | |
| IronppmASTM D5185(m) >20278316ChromiumppmASTM D5185(m) >2023NickelppmASTM D5185(m) STM D5185(m)<1<1TitaniumppmASTM D5185(m)<0<1<SilverppmASTM D5185(m)<100<AluminumppmASTM D5185(m)>100<LeadppmASTM D5185(m)>100<CopperppmASTM D5185(m)>500YanadiumppmASTM D5185(m)>500Yellow MetalscalarVisual*NONEINONEYellow MetalscalarVisual*NONENONEINONESiliconppmASTM D5185(m)>108Yellow MetalscalarVisual*NONENONEInonSiliconppmASTM D5185(m)>201SiliconppmASTM D5185(m)>201SolidonppmASTM D5185(m)>20NORENONESolidonppmASTM D5185(m)>20NORENORESolidonppmASTM D5185(m)NORENORESolidonppmASTM D5185(m)NORENORESolidumppmASTM D5185(m)< | Filter Changed | | Client Info | | N/A | Not Changd | | |
| ChromiumppmASTM D5186(m)>=2023NickelppmASTM D5186(m)>55< | Sample Status | | | | ABNORMAL | NORMAL | | |
| ChromiumppmASTM D5186(m)>=2023NickelppmASTM D5186(m)>55< | Iron | nom | ASTM D5185(m) | >500 | 278 | 316 | | |
| NickelppmASTM D5185(m)>5<1 | | | | | - | | | |
| TitaniumppmASTM D5185(m)0<1 | | | · / | | _ | | | |
| SilverppmASTM D5185(m)00AluminumppmASTM D5185(m)>10022LeadppmASTM D5185(m)>1000CopperppmASTM D5185(m)>60<1<11TinppmASTM D5185(m)>5000VanadiumppmASTM D5185(m)>5000White MetalscalarVisual*NONELTMODNONEYellow MetalscalarVisual*NONE108SiliconppmASTM D5185(m)>10018PotassiumppmASTM D5185(m)>2021SilitscalarVisual*NONENONENONESilitscalarVisual*NONENONENONESand/DirtscalarVisual*NORNORENOREAppearancescalarVisual*NORNORMLNORMLGorscalarVisual*NORNORMLNORMLBoronppmASTM D5185(m)45BariumppmASTM D5185(m)24MolybdenumppmASTM D5185(m)24MagnesiumppmASTM D5185(m)31MagnesiumppmAST | | | | | | | | |
| Aluminum ppm ASTM D5185(m) >100 2 2 Lead ppm ASTM D5185(m) >10 0 0 Copper ppm ASTM D5185(m) >60 <1 <1 Tin ppm ASTM D5185(m) >5 0 0 Vanadium ppm ASTM D5185(m) >5 0 0 White Metal scalar Visual* NONE MONE Yellow Metal scalar Visual* NONE NONE Silicon ppm ASTM D5185(m) >10 8 Vater WC Method >.20 2 1 Vater wC Method >.20 NORE NONE Debris scalar Visual* NORE NONE Appearance scalar Visual* NORM NORML Appearance s | | | | | | | | |
| Lead ppm ASTM D5185(m) >10 0 0 | Aluminum | | | >100 | | | | |
| Copper ppm ASTM D5185(m) >60 <1 | | | (/ | | _ | | | |
| TinppmASTM D5185(m)>500VanadiumppmASTM D5185(m)MONE0White MetalscalarVisual*NONELTMODNONEYellow MetalscalarVisual*NONENONENONESiliconppmASTM D5185(m)>108PotassiumppmASTM D5185(m)>2021WaterWC Method>0.2NEGNEGSilitscalarVisual*NONENONENONEDebrisscalarVisual*NONENONENONESand/DirtscalarVisual*NONENORMNORMLAppearancescalarVisual*NORMNORMLNORMLGodorscalarVisual*NORMNORMLNORMLSodiumppmASTM D5185(m)45BariumppmASTM D5185(m)1310MaganeseppmASTM D5185(m)1310MagnesiumppmASTM D5185(m)1313PhosphorusppmASTM D5185(m)1513SodiumppmASTM D5185(m)13100SodiumppmASTM D5185(m)1310Bariumppm | Copper | | () | >60 | <1 | <1 | | |
| VanadiumppmASTM D5185(m)00White MetalscalarVisual*NONELTMODNONEYellow MetalscalarVisual*NONENONENONENONESiliconppmASTM D5185(m)>150108PotassiumppmASTM D5185(m)>2021WaterWC Method>0.2NEGNEGSiltscalarVisual*NONENONENONEDebrisscalarVisual*NONENONENONESand/DirtscalarVisual*NONENORMLNORMLAppearancescalarVisual*NORMNORMLNORMLOdorscalarVisual*NORNORMLNORMLSodiumppmASTM D5185(m)45BariumppmASTM D5185(m)45MolybdenumppmASTM D5185(m)24MaganeseppmASTM D5185(m)31MagnesiumppmASTM D5185(m)1310PhosphorusppmASTM D5185(m)1513SollfurppmASTM D5185(m)1513MagnesiumppmASTM D5185(m)1513PhosphorusppmASTM D5185(m)1513< | | | | | | | | |
| White MetalscalarVisual*NONELTMODNONEYellow MetalscalarVisual*NONENONENONESiliconppmASTM D5185(m)>150108PotassiumppmASTM D5185(m)>2021WaterWC Method>0.2NEGNEGSilitscalarVisual*NONENONENONEDebrisscalarVisual*NONENONENONESand/DirtscalarVisual*NONENONENONEAppearancescalarVisual*NORMNORMLNORMLOdorscalarVisual*NORMNORMLNORMLSodiumppmASTM D5185(m)45BariumppmASTM D5185(m)4ManganeseppmASTM D5185(m)24MagnesiumppmASTM D5185(m)1310PhosphorusppmASTM D5185(m)1513SulfurppmASTM D5185(m)1513 | Vanadium | | ASTM D5185(m) | | 0 | 0 | | |
| SiliconppmASTM D5185(m)>150108PotassiumppmASTM D5185(m)>2021WaterWC Method>0.2NEGNEGSiltscalarVisual*NONENONENONEDebrisscalarVisual*NONENONENONESand/DirtscalarVisual*NONENONENONEAppearancescalarVisual*NORMNORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLNORMLSodiumppmASTM D5185(m)-0.2NEGNEGBoronppmASTM D5185(m)-45BariumppmASTM D5185(m)-24ManganeseppmASTM D5185(m)-24MagnesiumppmASTM D5185(m)-1310PhosphorusppmASTM D5185(m)-1310SuffurppmASTM D5185(m)-1313007 | White Metal | | | NONE | LTMOD | NONE | | |
| PotassiumppmASTM D5185(m)>2021WaterWC Method>0.2NEGNEGSiltscalarVisual*NONENONENONEDebrisscalarVisual*NONENONENONESand/DirtscalarVisual*NONENONENONEAppearancescalarVisual*NORMNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLEmulsified WaterscalarVisual*NORMLNORMLNORMLSodiumppmASTM D5185(m)45BariumppmASTM D5185(m)< <td><1</td> MolybdenumppmASTM D5185(m)0<1MagnesiumppmASTM D5185(m)1310PhosphorusppmASTM D5185(m)1310PhosphorusppmASTM D5185(m)1313007SulfurppmASTM D5185(m)1513007 | <1 | Yellow Metal | scalar | Visual* | NONE | NONE | NONE | |
| PotassiumppmASTM D5185(m)>2021WaterWC Method>0.2NEGNEGSiltscalarVisual*NONENONENONEDebrisscalarVisual*NONENONENONESand/DirtscalarVisual*NONENONENONEAppearancescalarVisual*NORMNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLEmulsified WaterscalarVisual*NORMLNORMLNORMLSodiumppmASTM D5185(m)45BariumppmASTM D5185(m)< <td><1</td> MolybdenumppmASTM D5185(m)0<1MagnesiumppmASTM D5185(m)1310PhosphorusppmASTM D5185(m)1310PhosphorusppmASTM D5185(m)1313007SulfurppmASTM D5185(m)1513007 | <1 | | | | | | | |
| WaterWC Method>0.2NEGNEGSiltscalarVisual*NONENONENONEDebrisscalarVisual*NONENONENONESand/DirtscalarVisual*NONENONENONEAppearancescalarVisual*NORMNORMLNORMLOdorscalarVisual*NORMNORMLNORMLEmulsified WaterscalarVisual*>0.2NEGNEGSodiumppmASTM D5185(m)45BariumppmASTM D5185(m)<1<1MolybdenumppmASTM D5185(m)1310MagnesiumppmASTM D5185(m)1310PhosphorusppmASTM D5185(m)1313SulfurppmASTM D5185(m)1313MagnesiumppmASTM D5185(m)13PhosphorusppmASTM D5185(m)1313SulfurppmASTM D5185(m)1513SulfurppmASTM D5185(m)1513007 | Silicon | ppm | () | >150 | 10 | 8 | | |
| SiltscalarVisual*NONENONENONENONEDebrisscalarVisual*NONENONENONESand/DirtscalarVisual*NONENONENONEAppearancescalarVisual*NORMNORMLNORMLOdorscalarVisual*NORMNORMLNORMLEmulsified WaterscalarVisual*NORMNORMLNORMLSodiumppmASTM D5185(m)45BoronppmASTM D5185(m)< <td><1</td> <1BariumppmASTM D5185(m)<12MolybdenumppmASTM D5185(m)131MagnesiumppmASTM D5185(m)1310PhosphorusppmASTM D5185(m)1310IncppmASTM D5185(m)1310SulfurppmASTM D5185(m)1310 | <1 | | ppm | | | _ | | |
| DebrisscalarVisual*NONENONENONENONESand/DirtscalarVisual*NORNONENONEAppearancescalarVisual*NORMNORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*NORMNORMLNORMLSodiumppmASTM D5185(m)-45BoronppmASTM D5185(m)BariumppmASTM D5185(m)MolybdenumppmASTM D5185(m)-12< | | | | | | | | |
| Sand/DirtscalarVisual*NONENONENONEAppearancescalarVisual*NORMLNORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*>0.2NEGNEGSodiumppmASTM D5185(m)45BoronppmASTM D5185(m)41<BariumppmASTM D5185(m)111MolybdenumppmASTM D5185(m)24ManganeseppmASTM D5185(m)1310PhosphorusppmASTM D5185(m)1310PhosphorusppmASTM D5185(m)11513SulfurppmASTM D5185(m)11513SulfurppmASTM D5185(m)11513 | | | | | | | | |
| AppearancescalarVisual*NORMLNORMLNORMLNORMLNORMLINORMLINORMLINORMLINORMLINORMLINORMLINORMLINORMLINORMLINORMLINORMLINORMLINORMLINORMLIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII | | | | | | | | |
| OdorscalarVisual*NORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*>0.2NEGNEGSodiumppmASTM D5185(m)45BoronppmASTM D5185(m)<<1<1BariumppmASTM D5185(m)<<12MolybdenumppmASTM D5185(m)<<0<1<1ManganeseppmASTM D5185(m)24MagnesiumppmASTM D5185(m)31PhosphorusppmASTM D5185(m)130ZincppmASTM D5185(m)1513SulfurppmASTM D5185(m)2037413007 | | | | | - | | | |
| Emulsified Water scalar Visual* >0.2 NEG NEG Sodium ppm ASTM D5185(m) 4 5 Boron ppm ASTM D5185(m) 4 5 Boron ppm ASTM D5185(m) <1 <1 Barium ppm ASTM D5185(m) <1 2 Molybdenum ppm ASTM D5185(m) 0 <1 Manganese ppm ASTM D5185(m) 2 4 Magnesium ppm ASTM D5185(m) 3 1 Phosphorus ppm ASTM D5185(m) 13 10 Phosphorus ppm ASTM D5185(m) 2005 276 Zinc ppm ASTM D5185(m) 15 13 Sulfur ppm ASTM D5185(m) 20374 13007 | | | | | | | | |
| Sodium ppm ASTM D5185(m) 4 5 Boron ppm ASTM D5185(m) <1 <1 < Barium ppm ASTM D5185(m) <1 2 Barium ppm ASTM D5185(m) <1 2 Molybdenum ppm ASTM D5185(m) 0 <1 Manganese ppm ASTM D5185(m) 0 <1 Magnesium ppm ASTM D5185(m) 2 4 Calcium ppm ASTM D5185(m) 3 1 Phosphorus ppm ASTM D5185(m) 13 10 Zinc ppm ASTM D5185(m) 2005 276 Zinc ppm ASTM D5185(m) 15 13 Sulfur ppm ASTM D5185(m) 13007 | | | | | - | | | |
| Boron ppm ASTM D5185(m) <1 | Emulsified Water | scalar | Visual* | >0.2 | NEG | NEG | | |
| Barium ppm ASTM D5185(m) <1 | Sodium | ppm | ASTM D5185(m) | | 4 | 5 | | |
| Molybdenum ppm ASTM D5185(m) 0 <1 | Boron | ppm | ASTM D5185(m) | | <1 | <1 | | |
| Manganese ppm ASTM D5185(m) 2 4 Magnesium ppm ASTM D5185(m) 3 1 Calcium ppm ASTM D5185(m) 13 10 Phosphorus ppm ASTM D5185(m) 13 10 Zinc ppm ASTM D5185(m) 13 13 Sulfur ppm ASTM D5185(m) 15 13 | Barium | ppm | ASTM D5185(m) | | <1 | 2 | | |
| Magnesium ppm ASTM D5185(m) 3 1 Calcium ppm ASTM D5185(m) 13 10 Phosphorus ppm ASTM D5185(m) 2005 276 Zinc ppm ASTM D5185(m) 15 13 Sulfur ppm ASTM D5185(m) 20374 13007 | Molybdenum | ppm | ASTM D5185(m) | | 0 | <1 | | |
| Calcium ppm ASTM D5185(m) 13 10 Phosphorus ppm ASTM D5185(m) 2005 276 Zinc ppm ASTM D5185(m) 15 13 Sulfur ppm ASTM D5185(m) 13 | Manganese | ppm | ASTM D5185(m) | | 2 | 4 | | |
| Phosphorus ppm ASTM D5185(m) 2005 276 Zinc ppm ASTM D5185(m) 15 13 Sulfur ppm ASTM D5185(m) 20374 13007 | Magnesium | ppm | ASTM D5185(m) | | 3 | 1 | | |
| Zinc ppm ASTM D5185(m) 15 13 Sulfur ppm ASTM D5185(m) 20374 13007 | Calcium | ppm | ASTM D5185(m) | | 13 | 10 | | |
| Sulfur ppm ASTM D5185(m) 20374 13007 | Phosphorus | ppm | ASTM D5185(m) | | 2005 | 276 | | |
| | Zinc | ppm | ASTM D5185(m) | | 15 | 13 | | |
| Visc @ 40°C cSt ASTM D7279(m) 141 138 | Sulfur | ppm | ASTM D5185(m) | | 20374 | 13007 | | |
| | Visc @ 40°C | cSt | ASTM D7279(m) | | 141 | 138 | | |

Contact/Location: CG Equipment CG Guelph - CGEGUE





