

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

Machine Id CR1224 - INNER Component Front Left Planetary Fluid GEAR OIL ISO 220 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

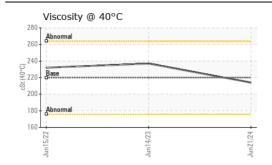
There is no indication of any contamination in the oil.

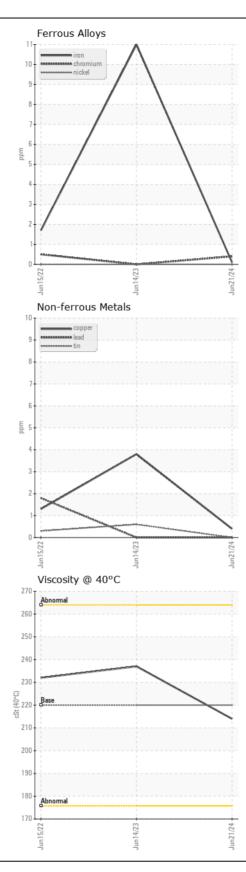
FLUID CONDITION

The condition of the oil is acceptable for the time in service.

| Sample DateClient Into21 Jun 202414 Jun 202315 Jun 2024Machine AgehrsClient Into24951680825Oil AgehrsClient Into010000Oil ChangedClient IntoCChangedChangedChangedFilter AgehrsClient IntoCChangedChangedChangedSample StatusClient IntoNo ChangedChangedChangedChangedSample StatusSomple StatusSomple StatusNORMALNORMALNORMALIronppmASTM D5185mSol0<11112ChromiumppmASTM D5185mSol0000NickelppmASTM D5185mSol0000AluminumppmASTM D5185mSol000LeadppmASTM D5185mSol141TinppmASTM D5185mSol141VanadiumppmASTM D5185mSol142Vellow Metalscalar"VisualNONENONENONENONESiliconppmASTM D5185mSol142Vellow Metalscalar"VisualNONENONENONENONESiliconppmASTM D5185mSol142SiliconppmASTM D5185mSolNONENONENONESoliconppmASTM D5185m <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th></t<> | | | | | | | |
|--|------------------|--------|-------------|-----------|---------------------------------------|-------------|-------------|
| Sample DateClient Info21 Jun 202414 Jun 202315 Jun 2022Machine AgehrsClient Info24951680825Oil AgehrsClient Info010000Oil ChangedClient InfoCChangedChangedChangedFilter AgehrsClient InfoCChangedChangedChangedFilter ChangedClient InfoNot ChangedChangedChangedChangedSample StatusClient InfoNot ChangedChangedChangedChangedSample StatusStatu Dist85>500<11112ChangedIronppmASTM D5185>100000NickelppmASTM D5185>100000AluminumppmASTM D5185>253000AluminumppmASTM D5185>100<1<11VanadiumppmASTM D5185>100<1<11VanadiumppmASTM D5185>100<1<1<1VanadiumppmASTM D5185>100<1<1<1<1VanadiumppmASTM D5185>100<1<1<1<1<1VanadiumppmASTM D5185>2530NONENONENONENONENONENONENONENONENONENONENONENONENONE </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 AgehrsClient Info24951680825Oil AgehrsClient Info010000Oil ChangedKrsClient InfoChangedChangedChangedFilter ChangedClient InfoNot ChangedChangedChangedFilter ChangedClient InfoNot ChangedChangedChangedSample StatusVerticeNORMALNORMALNORMALIronppmASTM D5185m>500<11112ChromiumppmASTM D5185m>10<10<1NickelppmASTM D5185m>10000TitaniumppmASTM D5185m>25300SilverppmASTM D5185m>75<141TinppmASTM D5185m>75<141VanadiumppmASTM D5185m>75<141VanadiumppmASTM D5185m>75<132PotassiumppmASTM D5185m>75<132PotassiumppmASTM D5185m>75<132SiliconppmASTM D5185m>75<132PotassiumppmASTM D5185m>75<132PotassiumppmASTM D5185m>75<132SiliconppmASTM D5185m>75<132Potassiumppm< | Sample Number | | Client Info | | WC0951995 | WC0809376 | WC0704392 |
| Oil Age Filter AgehrsClient InfoAllB151000825Filter AgehrsClient InfoONot ChangedChangedChangedChangedFilter ChangedAClient InfoNot ChangedChangedChangedChangedSample StatusStill D5185>500<11112IronppmASTM D5185>500<11112ChromiumppmASTM D5185>1000<1NickelppmASTM D518500<1<1SilverppmASTM D5185525300LeadppmASTM D5185>25002CopperppmASTM D5185>100<1<1TinppmASTM D5185>100<1<1VanduimppmASTM D5185>100<1<1Veltow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185>75<132PotassiumppmASTM D5185>201426SiliconppmASTM D5185>201426SiliconppmASTM D5185>75<132PotassiumppmASTM D5185>201426SiliconppmASTM D5185>201426SiliconppmASTM D5185>20 | Sample Date | | Client Info | | 21 Jun 2024 | 14 Jun 2023 | 15 Jun 2022 |
| Filter Age Oli ChangedIvisClient Info010000Oil ChangedClient InfoKangedChangedChangedChangedChangedFilter ChangedClient InfoNot ChangedChangedChangedChangedSample StatusNORMALNORMALNORMALNORMALNORMALIronppmASTM D5185m>500<11112ChromiumppmASTM D5185m>10O0<1NickelppmASTM D5185m>10O00TitaniumppmASTM D5185m>25300AluminumppmASTM D5185m>25300LeadppmASTM D5185m>75<141TinppmASTM D5185m>75<141VanadiumppmASTM D5185m>75<132Vellow Metalscalar'VisualNONENONENONENONESiliconppmASTM D5185m>75<132PotassiumppmASTM D5185m>75<132Solitscalar'VisualNONENONENONENONESiliconppmASTM D5185m>75<132PotassiumppmASTM D5185m>75<132Solitscalar'VisualNONENONENONENONESilitscalar'Visual <td< th=""><th>Machine Age</th><th>hrs</th><th>Client Info</th><th></th><th>2495</th><th>1680</th><th>825</th></td<> | Machine Age | hrs | Client Info | | 2495 | 1680 | 825 |
| Oli ChangedClient InfoKnamedChangedChangedChangedChangedChangedFilter ChangedClient InfoNot ChangedNorRMALNORMALNORMALNORMALIronppmASTM D5185m>500<11112ChromiumppmASTM D5185m>10<10<1NickelppmASTM D5185m>1000<1NickelppmASTM D5185m>100<1<1SilverppmASTM D5185m>25300AluminumppmASTM D5185m>25002CopperppmASTM D5185m>100<1<1TinppmASTM D5185m>100<1<1VanadiumppmASTM D5185m>100<1<1VanadiumppmASTM D5185m>75<132PotassiumppmASTM D5185m>75<132PotassiumppmASTM D5185m>201426SiliconppmASTM D5185m>75<132PotassiumppmASTM D5185m>75<132PotassiumppmASTM D5185m>75<132SoliconppmASTM D5185m>75<132PotassiumppmASTM D5185m>75<132SoliconppmASTM D5185m | Oil Age | hrs | Client Info | | 815 | 1000 | 825 |
| Filter ChangedClient InfoNot ChangedChangedChangedChangedSample StatusClient InfoNORMALNORMALNORMALNORMALIronppmASTM D5185m>500<11112ChromiumppmASTM D5185m>1000<1NickelppmASTM D5185m>100<1<1NickelppmASTM D5185m>100<1<1SilverppmASTM D5185m>25300AluminumppmASTM D5185m>25300LeadppmASTM D5185m>25002CopperppmASTM D5185m>100<1<1TinppmASTM D5185m>75<141VanadiumppmASTM D5185m>75<132Vellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>75<132PotassiumppmASTM D5185m>201426WaterVisualNONENONENONENONENONESilitscalar*VisualNONENONENONENONESelidonppmASTM D5185m>201426WaterVisualNONENONENONENONENONESolidonppmASTM D5185m>2014 | Filter Age | hrs | Client Info | | 0 | 1000 | 0 |
| Sample StatusNORMALNORMALNORMALNORMALIronppmASTM D5185m>500<11112ChromiumppmASTM D5185m>1000<1NickelppmASTM D5185m>100<1<1NickelppmASTM D5185m>100<1<1SilverppmASTM D5185m>25300<1AluminumppmASTM D5185m>25300<1LeadppmASTM D5185m>250<1<1<1TinppmASTM D5185m>25300<1<1YanadiumppmASTM D5185m>75<141<1<1YanadiumppmASTM D5185m>75<132<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1<1< | Oil Changed | | Client Info | | Changed | Changed | Changed |
| Iron ppm ASTM D5185m >500 <1 | Filter Changed | | Client Info | | Not Changd | Changed | Changed |
| Chromium ppm ASTM D5185m >10 <1 | Sample Status | | | | NORMAL | NORMAL | NORMAL |
| Chromium ppm ASTM D5185m >10 <1 | | | | | · · · · · · · · · · · · · · · · · · · | | |
| Nickel ppm ASTM D5185m >10 0 0 0 Titanium ppm ASTM D5185m 0 0 0 0 Silver ppm ASTM D5185m >25 3 0 0 Aluminum ppm ASTM D5185m >25 0 0 2 Copper ppm ASTM D5185m >75 <1 4 1 Tin ppm ASTM D5185m >10 0 <1 <1 Vanadium ppm ASTM D5185m >75 <1 3 2 Vanadium ppm ASTM D5185m >20 1 4 26 Silicon ppm ASTM D5185m >20 1 4 | - | | | | | | _ |
| Titanium ppm ASTM D5185m 0 <1 | | | | | | - | |
| Silver ppm ASTM D5185m O 0 0 Aluminum ppm ASTM D5185m >25 3 0 0 Lead ppm ASTM D5185m >25 0 0 2 Copper ppm ASTM D5185m >75 <1 4 1 Tin ppm ASTM D5185m >10 0 <1 <1 Vanadium ppm ASTM D5185m >10 0 <1 <1 Vanadium ppm ASTM D5185m >10 0 <1 <1 Vanadium ppm ASTM D5185m >75 <1 3 2 Yellow Metal scalar *Visual NONE NONE NONE NONE Silicon ppm ASTM D5185m >75 <1 3 2 Potassium ppm ASTM D5185m >20 1 4 26 Silicon scalar *Visual NONE NONE NONE | | | | >10 | - | - | |
| Aluminum ppm ASTM D5185m >25 3 0 0 Lead ppm ASTM D5185m >25 0 0 2 Copper ppm ASTM D5185m >75 <1 | | | | | | | |
| Lead ppm ASTM D5185m >25 0 0 2 Copper ppm ASTM D5185m >75 <1 | | | | 05 | - | - | ÷ |
| Copper ppm ASTM D5185m >75 <1 | | | | | | | |
| TinppmASTM D5185m>100<1 | | | | | - | | |
| VanadiumppmASTM D5185m0<1 | | ppm | | | | | |
| White Metalscalar*VisualNONENONENONENONENONEYellow Metalscalar*VisualNONENONENONENONENONENONESiliconppmASTM D5185m>75<132PotassiumppmASTM D5185m>201426WaterWC Method>0.2NEGNEGNEGSilitscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m15002BariumppmASTM D5185m1500<MaganeseppmASTM D5185m500<<11ManganeseppmASTM D5185m50000PhosphorusppmASTM D5185m100000PhosphorusppmASTM D5185m100000SulfurppmASTM D5185m100000SulfurppmASTM D5185m125006892549762 | | | | >10 | - | | |
| Yellow Metalscalar*VisualNONENONENONENONESiliconppmASTM D5185m>75<132PotassiumppmASTM D5185m>201426WaterWC Method>0.2NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLBoronppmASTM D5185m50202BariumppmASTM D5185m15001ManganeseppmASTM D5185m50013MagnesiumppmASTM D5185m500001PhosphorusppmASTM D5185m35011564773131ZincppmASTM D5185m100000< | | | | | | | |
| SiliconppmASTM D5185m>75<1 | | | | | - | - | |
| PotassiumppmASTM D5185m>201426WaterWC Method>0.2NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLBoronppmASTM D5185m50202BariumppmASTM D5185m15000MolybdenumppmASTM D5185m500<113CalciumppmASTM D5185m50000PhosphorusppmASTM D5185m50000PhosphorusppmASTM D5185m100000SulfurppmASTM D5185m100000SulfurppmASTM D5185m125006892549762 | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| WaterWC Method>0.2NEGNEGNEGSiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m50202BariumppmASTM D5185m1500<11MagnesiumppmASTM D5185m500<113CalciumppmASTM D5185m50000PhosphorusppmASTM D5185m50000PhosphorusppmASTM D5185m115647731ZincppmASTM D5185m125006892549762 | Silicon | ppm | ASTM D5185m | >75 | <1 | 3 | 2 |
| Siltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m50202BariumppmASTM D5185m15000MalganeseppmASTM D5185m500<113CalciumppmASTM D5185m50000PhosphorusppmASTM D5185m50000PhosphorusppmASTM D5185m1100000SulfurppmASTM D5185m125006892549762 | Potassium | ppm | ASTM D5185m | >20 | 1 | 4 | 26 |
| Debrisscalar*VisualNONENONENONENONENONESand/Dirtscalar*VisualNONENONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m50202BoronppmASTM D5185m15000MolybdenumppmASTM D5185m1500<1ManganeseppmASTM D5185m500<13CalciumppmASTM D5185m500000PhosphorusppmASTM D5185m350115647731ZincppmASTM D5185m100000SulfurppmASTM D5185m125006892549762 | Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGSodiumppmASTM D5185m50202BoronppmASTM D5185m15000MolybdenumppmASTM D5185m1500<1ManganeseppmASTM D5185m500<13CalciumppmASTM D5185m50000<1PhosphorusppmASTM D5185m350115647731ZincppmASTM D5185m125006892549762 | Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearancescalar*VisualNORML< | Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Odor scalar *Visual NORML NEG | Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Emulsified Water scalar *Visual >0.2 NEG NEG NEG Sodium ppm ASTM D5185m 50 2 5 10 Boron ppm ASTM D5185m 50 2 0 2 Barium ppm ASTM D5185m 15 0 0 0 Molybdenum ppm ASTM D5185m 15 0 0 <11 Manganese ppm ASTM D5185m 50 0 <11 0 Magnesium ppm ASTM D5185m 50 0 <11 3 Calcium ppm ASTM D5185m 50 0 0 0 Phosphorus ppm ASTM D5185m 50 0 0 0 Incc ppm ASTM D5185m 50 0 0 0 0 Magnesium ppm ASTM D5185m 350 1156 477 31 Zinc ppm ASTM D5185m 100 | Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Sodium ppm ASTM D5185m 2 5 10 Boron ppm ASTM D5185m 50 2 0 2 Barium ppm ASTM D5185m 15 0 0 0 Molybdenum ppm ASTM D5185m 15 0 0 <11 Manganese ppm ASTM D5185m 50 0 <11 0 Magnesium ppm ASTM D5185m 50 0 <11 33 Calcium ppm ASTM D5185m 50 0 0 0 Phosphorus ppm ASTM D5185m 50 0 0 0 Inc ppm ASTM D5185m 50 0 0 0 0 Phosphorus ppm ASTM D5185m 50 0 0 0 0 Phosphorus ppm ASTM D5185m 350 1156 477 31 Zinc ppm ASTM D5185m 12500 689 <th>Odor</th> <th>scalar</th> <th>*Visual</th> <th>NORML</th> <th>NORML</th> <th>NORML</th> <th>NORML</th> | Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Boron ppm ASTM D5185m 50 2 0 2 Barium ppm ASTM D5185m 15 0 0 0 Molybdenum ppm ASTM D5185m 15 0 0 <1 Manganese ppm ASTM D5185m 50 0 <1 0 Magnesium ppm ASTM D5185m 50 0 <1 3 Calcium ppm ASTM D5185m 50 0 <1 3 Phosphorus ppm ASTM D5185m 50 0 0 0 Phosphorus ppm ASTM D5185m 350 1156 477 31 Zinc ppm ASTM D5185m 100 0 0 0 Sulfur ppm ASTM D5185m 12500 689 2549 762 | Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | NEG |
| Boron ppm ASTM D5185m 50 2 0 2 Barium ppm ASTM D5185m 15 0 0 0 Molybdenum ppm ASTM D5185m 15 0 0 <1 Manganese ppm ASTM D5185m 50 0 <1 0 Magnesium ppm ASTM D5185m 50 0 <1 3 Calcium ppm ASTM D5185m 50 0 <1 3 Phosphorus ppm ASTM D5185m 50 0 0 0 Phosphorus ppm ASTM D5185m 350 1156 477 31 Zinc ppm ASTM D5185m 100 0 0 0 Sulfur ppm ASTM D5185m 12500 689 2549 762 | Sodium | ppm | ASTM D5185m | | 2 | 5 | 10 |
| Barium ppm ASTM D5185m 15 0 0 0 Molybdenum ppm ASTM D5185m 15 0 0 <1 | | | | 50 | | | |
| Manganese ppm ASTM D5185m 0 <1 | Barium | | ASTM D5185m | 15 | 0 | 0 | |
| Manganese ppm ASTM D5185m 0 <1 | | | | | | 0 | <1 |
| Magnesium ppm ASTM D5185m 50 0 <1 | | | | | | <1 | |
| Calcium ppm ASTM D5185m 50 0 0 0 Phosphorus ppm ASTM D5185m 350 1156 47 31 Zinc ppm ASTM D5185m 100 0 0 0 Sulfur ppm ASTM D5185m 12500 689 2549 762 | Magnesium | | ASTM D5185m | 50 | 0 | <1 | 3 |
| Phosphorus ppm ASTM D5185m 350 1156 47 31 Zinc ppm ASTM D5185m 100 0 0 0 Sulfur ppm ASTM D5185m 12500 689 2549 762 | - | | | | | | |
| Zinc ppm ASTM D5185m 100 0 0 0 Sulfur ppm ASTM D5185m 12500 689 2549 762 | | | | | | | |
| Sulfur ppm ASTM D5185m 12500 689 2549 762 | | | | | | | |
| | Sulfur | | | 12500 | | 2549 | 762 |
| | | cSt | | 220 | 214 | | |

Contact/Location: MICHAEL LAWSON - BUCGRA





BUCKNER HEAVY LIFT : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 02 Jul 2024 4732 NC 54 EAST Tested : 03 Jul 2024 GRAHAM, NC Diagnosed : 05 Jul 2024 - Wes Davis US 27253-9215 Contact: MICHAEL LAWSON To discuss this sample report, contact Customer Service at 1-800-237-1369. michaell@bucknercompanies.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (336)376-8888 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (336)376-4090

Certificate L2367

Laboratory

Sample No.

Lab Number : 06226633

Unique Number : 11110126

Test Package : CONST

: WC0951995

Contact/Location: MICHAEL LAWSON - BUCGRA Page 2 of 2