

# **OIL ANALYSIS REPORT**



Machine Id LINK-BELT 218V V2L4-7706

Component Boom Hoist Fluid

GEAR OIL SAE 90 (3 GAL)

### Recommendation

Resample at the next service interval to monitor. 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 Rating Trend



| Sample NumberClient InfoLB C000022Sample DateClient Info04 Apr 2024Machine AgehrsClient Info100Ol AgehrsClient Info100Ol Changed'Client InfoNot ChangdCONTAMINATIONmethodInit/Dasecurrenthistory1history2CONTAMINATIONmethodInit/Dasecurrenthistory1history2WaterWC Method>.0.1NEGWEAR METALSmethodInit/Dasecurrenthistory1history2IronppmASTMD51655>5-1NickelppmASTMD51655>6SilverppmASTMD51655>102ItaniumppmASTMD51655>102AuminumppmASTMD51655>10ItaniumppmASTMD51655>10CopperppmASTMD51655>10ItaniumppmASTMD51655>10AuminumppmASTMD5165510ItaniumppmASTMD5165510ManadamesppmASTMD5165510 <th>SAMPLE INFORM</th> <th>IATION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>                                  | SAMPLE INFORM    | IATION | method      | limit/base | current     | history1 | history2 |
|--|------------------|--------|-------------|------------|-------------|----------|----------|
| Machine Age     hrs     Client Info     100         Oil Age     hrs     Client Info     100         Oil Changed     Client Info     Not Changd         Sample Status     Imit/bass     current     history1        Vater     WC Method     >0.1     NEG         WEAR METALS     method     Imit/bass     current     history1        VEAR METALS     method     Imit/bass     current     history1        Nickel     ppm     ASTM D5185m     >300     5         Silver     ppm     ASTM D5185m     >4     0         Auminum     ppm     ASTM D5185m     >10     2         Copper     ppm     ASTM D5185m     >120     0         Auminum     ppm     ASTM D5185m     200     2         Copper     ppm   | Sample Number    |        | Client Info |            | LBC0000022  |          |          |
| Oil Age     hrs     Client Info     100         Oil Changed     Client Info     Not Changd         Sample Status     imit/bass     current     history1     imit/bass       CONTAMINATION     method     imit/bass     current     history1     history2       Water     WC Method     >0.1     NEG         WEAR METALS     method     imit/bass     current     history1     history2       Iron     ppm     ASTM D5185m     >5     -1         Nickel     ppm     ASTM D5185m     >4     0         Aduminum     ppm     ASTM D5185m     >10     2         Aduminum     ppm     ASTM D5185m     >10          Aduminum     ppm     ASTM D5185m     >10          Copper     ppm     ASTM D5185m     >10         Adminum  | Sample Date      |        | Client Info |            | 04 Apr 2024 |          |          |
| Oli Changed     Client Info     Not Changd<br>NORMAL         Sample Status     I     Net of<br>NorMAL      Initration       CONTAMINATION     method     init/base     current     history1     history2       Water     WC Method     >0.1     NEG         WEAR METALS     method     init/base     current     history1     history2       Iron     ppm     ASTM D5185m     >300     5   | Machine Age      | hrs    | Client Info |            | -           |          |          |
| Oli Changed     Client Info     Not Changd<br>NORMAL         Sample Status     I     Net of<br>NorMAL      Initration       CONTAMINATION     method     init/base     current     history1     history2       Water     WC Method     >0.1     NEG         WEAR METALS     method     init/base     current     history1     history2       Iron     ppm     ASTM D5185m     >300     5   | Oil Age          | hrs    | Client Info |            | 100         |          |          |
| Sample Status     method     imit/base     current.     history1     history2       Water     WC Method     >0.1     NEG         WEAR METALS     method     imit/base     current     history1     history2       Iron     ppm     ASTM D5165m     >300     5         Chromium     ppm     ASTM D5165m     >300     5         Titanium     ppm     ASTM D5165m     >4     0         Silver     ppm     ASTM D5165m     >10     2         Lead     ppm     ASTM D5165m     >10     2         Tin     ppm     ASTM D5165m     >10          Cadmium     ppm     ASTM D5165m     90     <1         ASTM D5165m     120     0          ASTM D5165m     120     2 </th <th>-</th> <th></th> <th>Client Info</th> <th></th> <th>Not Changd</th> <th></th> <th></th> | -                |        | Client Info |            | Not Changd  |          |          |
| CONTAMINATION     method     limit/base     current     history1     history2       Water     WC Method     >0.1     NEG         WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM DS165m     >300     5         Chromium     ppm     ASTM DS165m     >4     0         Nickel     ppm     ASTM DS165m     <1          Aluminum     ppm     ASTM DS165m     >10     2         Lead     ppm     ASTM DS165m     >10     2         Copper     ppm     ASTM DS165m     >200     <1         Cadmium     ppm     ASTM DS165m     200     <1         ADDITIVES     method     limit/base     current     history1     history2       Barium     ppm     ASTM DS165m     15     0                              | -                |        |             |            | NORMAL      |          |          |
| Water     WC Method     >0.1     NEG         WEAR METALS     method     linit/base     current     history1     history2       Iron     ppm     ASTM D5165m     >300     5         Nickel     ppm     ASTM D5165m     >4     0         Nickel     ppm     ASTM D5165m     >4     0         Silver     ppm     ASTM D5165m     >10     2         Lead     ppm     ASTM D5165m     >10     2         Copper     ppm     ASTM D5165m     >10          Cadmium     ppm     ASTM D5165m     >10          ADDITIVES     method     limit/base     current     history1     history2       Barium     ppm     ASTM D5165m     120     6         Maganesse     ppm     ASTM D5165m     12     0     -  | -                | N      | method      | limit/base | current     | history1 | history2 |
| Iron     ppm     ASTM D5185m     >300     5         Nickel     ppm     ASTM D5185m     >5     <1         Nickel     ppm     ASTM D5185m     >4     0         Silver     ppm     ASTM D5185m     >4     0         Aluminum     ppm     ASTM D5185m     >10     2         Lead     ppm     ASTM D5185m     >120     0         Copper     ppm     ASTM D5185m     >120     0         Vanadium     ppm     ASTM D5185m     >15     0         Vanadium     ppm     ASTM D5185m     0          ADDITIVES     method     Imit/base     current     history1     history2       Boron     ppm     ASTM D5185m     12     1         Magnese     ppm     ASTM D5185m     1   |                  |        | WC Method   | >0.1       | NEG         |          |          |
| Chromium     ppm     ASTM D5185m     >5     <1   | WEAR METALS      |        | method      | limit/base | current     | history1 | history2 |
| Nickel     ppm     ASTM D5185m     >4     0         Titanium     ppm     ASTM D5185m      <1   | Iron             | ppm    | ASTM D5185m | >300       | 5           |          |          |
| Nickel     ppm     ASTM D5185m     >4     0         Titanium     ppm     ASTM D5185m      <1   | Chromium         |        | ASTM D5185m | >5         | <1          |          |          |
| Titanium     ppm     ASTM D5185m     <1         Silver     ppm     ASTM D5185m     >10     2         Aluminum     ppm     ASTM D5185m     >10     2         Lead     ppm     ASTM D5185m     >120     0         Copper     ppm     ASTM D5185m     >15     0         Vanadium     ppm     ASTM D5185m     >15     0         Vanadium     ppm     ASTM D5185m     >15     0         ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     200     2         Magnese     ppm     ASTM D5185m     12     0         Magnesium     ppm     ASTM D5185m     12     <1  | Nickel           |        | ASTM D5185m | >4         | 0           |          |          |
| Silver     ppm     ASTM D5185m     >10     2         Aluminum     ppm     ASTM D5185m     >10     2         Lead     ppm     ASTM D5185m     >12.0     0         Copper     ppm     ASTM D5185m     >20.0     <1   | Titanium         |        | ASTM D5185m |            | -           |          |          |
| Atuminum     ppm     ASTM D5185m     >10     2         Lead     ppm     ASTM D5185m     >120     0         Copper     ppm     ASTM D5185m     >200     <1  | Silver           |        | ASTM D5185m |            | 0           |          |          |
| Lead     ppm     ASTM D5185m     >120     0         Copper     ppm     ASTM D5185m     >200     <1   |                  |        | ASTM D5185m | >10        | -           |          |          |
| Copper     ppm     ASTM D5185m     >200     <1         Tin     ppm     ASTM D5185m     >15     0         Vanadium     ppm     ASTM D5185m     0          Cadmium     ppm     ASTM D5185m     0          ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     200     2         Malybdenum     ppm     ASTM D5185m     200     2         Magnesse     ppm     ASTM D5185m     12     0         Magnesium     ppm     ASTM D5185m     12     <1   | Lead             |        |             |            | 0           |          |          |
| TinppmASTM D5185m>150VanadiumppmASTM D5185m0CadmiumppmASTM D5185m0ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m40089BariumppmASTM D5185m202MarganeseppmASTM D5185m120ManganeseppmASTM D5185m12<1   |                  |        |             |            | -           |          |          |
| VanadiumppmASTM D5185m<  | ••               |        |             |            |             |          |          |
| CadmiumppmASTM D5185m0ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m40089BariumppmASTM D5185m2002MolybdenumppmASTM D5185m120MagneseppmASTM D5185m12<1   |                  |        |             |            | -           |          |          |
| ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m40089BariumppmASTM D5185m2002MolybdenumppmASTM D5185m120ManganeseppmASTM D5185m12<1MagnesiumppmASTM D5185m12<1CalciumppmASTM D5185m15016PhosphorusppmASTM D5185m1259SulfurppmASTM D5185m1259SulfurppmASTM D5185m2250017374CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>755VSUALmethodlimit/basecurrenthistory1history2Vhite Metalscalar*VisualNONEVISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONESiltscalar*VisualNONENONESiltscalar*VisualNONENONESiltscalar*VisualNONENONEDe  |                  |        |             |            |             |          |          |
| Boron     ppm     ASTM D5185m     400     89         Barium     ppm     ASTM D5185m     200     2         Molybdenum     ppm     ASTM D5185m     12     0         Manganese     ppm     ASTM D5185m     12     <1         Magnesium     ppm     ASTM D5185m     12     <1         Calcium     ppm     ASTM D5185m     12     <1         Calcium     ppm     ASTM D5185m     150     16         Phosphorus     ppm     ASTM D5185m     125     9         Sulfur     ppm     ASTM D5185m     125     9         Sulfur     ppm     ASTM D5185m     125     9         Sulfur     ppm     ASTM D5185m     22500     17374         Sulfur     ppm     ASTM D5185m     >2   |                  | 1-1-   |             | limit/base | -           | history1 | history? |
| BariumppmASTM D5185m2002MolybdenumppmASTM D5185m120ManganeseppmASTM D5185m12<1MagnesiumppmASTM D5185m12<1CalciumppmASTM D5185m15016PhosphorusppmASTM D5185m1650554ZincppmASTM D5185m1259SulfurppmASTM D5185m2250017374SulfurppmASTM D5185m2250017374SodiumppmASTM D5185m>755YotassiumppmASTM D5185m>202VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONEYellow Metalscalar*VisualNONENONESiltscalar*VisualNONENONEDebrisscalar*VisualNONENONESand/Dirtscalar*VisualNONENONEQdorscalar*VisualNORMLNORML   |                  |        |             |            |             |          |          |
| MolybdenumppmASTM D5185m120ManganeseppmASTM D5185m12<1   |                  |        |             |            |             |          |          |
| ManganeseppmASTM D5185m<1MagnesiumppmASTM D5185m12<1   |                  |        |             |            |             |          |          |
| MagnesiumppmASTM D5185m12<1CalciumppmASTM D5185m15016PhosphorusppmASTM D5185m1650554ZincppmASTM D5185m1259SulfurppmASTM D5185m2250017374CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>755SodiumppmASTM D5185m>202PotassiumppmASTM D5185m>202VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONEYellow Metalscalar*VisualNONENONESiltscalar*VisualNONENONESiltscalar*VisualNONENONESand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML  | -                |        |             | 12         | -           |          |          |
| CalciumppmASTM D5185m15016PhosphorusppmASTM D5185m1650554ZincppmASTM D5185m1259SulfurppmASTM D5185m1259SulfurppmASTM D5185m2250017374CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>755SodiumppmASTM D5185m>202PotassiumppmASTM D5185m>202VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONEYellow Metalscalar*VisualNONENONESiltscalar*VisualNONENONESiltscalar*VisualNONENONESand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML   | 0                |        |             |            |             |          |          |
| PhosphorusppmASTM D5185m1650554ZincppmASTM D5185m1259SulfurppmASTM D5185m2250017374CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>755SodiumppmASTM D5185m>755PotassiumppmASTM D5185m>202VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONEYellow Metalscalar*VisualNONENONESiltscalar*VisualNONENONESiltscalar*VisualNONENONESand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML   | U.S.             |        |             |            |             |          |          |
| ZincppmASTM D5185m1259SulfurppmASTM D5185m2250017374CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>755SodiumppmASTM D5185m>202PotassiumppmASTM D5185m>202VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONEYellow Metalscalar*VisualNONENONESiltscalar*VisualNONENONESiltscalar*VisualNONENONESand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML  |                  |        |             |            | -           |          |          |
| SulfurppmASTM D5185m2250017374CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>755SodiumppmASTM D5185m3PotassiumppmASTM D5185m>202VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONEYellow Metalscalar*VisualNONENONEPrecipitatescalar*VisualNONENONESiltscalar*VisualNONENONEDebrisscalar*VisualNONENONESand/Dirtscalar*VisualNORMLNORMLAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML   |                  | ppm    |             |            |             |          |          |
| CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>755SodiumppmASTM D5185m3PotassiumppmASTM D5185m>202VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONEYellow Metalscalar*VisualNONENONEPrecipitatescalar*VisualNONENONESiltscalar*VisualNONENONEDebrisscalar*VisualNONENONESand/Dirtscalar*VisualNORMLNOREAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML  |                  | ppm    |             |            | -           |          |          |
| SiliconppmASTM D5185m>755SodiumppmASTM D5185m3PotassiumppmASTM D5185m>202VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONEYellow Metalscalar*VisualNONENONEPrecipitatescalar*VisualNONENONESiltscalar*VisualNONENONEDebrisscalar*VisualNONENONESand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML  |                  |        | ASTM D5185m |            | 17374       |          |          |
| SodiumppmASTM D5185m3PotassiumppmASTM D5185m>202VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONEYellow Metalscalar*VisualNONENONEPrecipitatescalar*VisualNONENONESiltscalar*VisualNONENONEDebrisscalar*VisualNONENONESand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML   |                  |        |             |            |             | history1 | history2 |
| PotassiumppmASTM D5185m>202VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONEYellow Metalscalar*VisualNONENONEYellow Metalscalar*VisualNONENONEPrecipitatescalar*VisualNONENONESiltscalar*VisualNONENONEDebrisscalar*VisualNONENONESand/Dirtscalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML  |                  |        |             |            |             |          |          |
| VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONEYellow Metalscalar*VisualNONENONEPrecipitatescalar*VisualNONENONESiltscalar*VisualNONENONEDebrisscalar*VisualNONENONESand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML   | Sodium           | ppm    |             |            | 3           |          |          |
| White Metalscalar*VisualNONENONEYellow Metalscalar*VisualNONENONEPrecipitatescalar*VisualNONENONESiltscalar*VisualNONENONEDebrisscalar*VisualNONENONESand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML  |                  | ppm    | ASTM D5185m | >20        | 2           |          |          |
| Yellow Metalscalar*VisualNONENONEPrecipitatescalar*VisualNONENONESiltscalar*VisualNONENONEDebrisscalar*VisualNONENONESand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML  | VISUAL           |        | method      | limit/base |             | history1 | history2 |
| Precipitatescalar*VisualNONENONESiltscalar*VisualNONENONEDebrisscalar*VisualNONENONESand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML   | White Metal      | scalar | *Visual     | NONE       | NONE        |          |          |
| Siltscalar*VisualNONENONEDebrisscalar*VisualNONENONESand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML   | Yellow Metal     | scalar | *Visual     | NONE       | NONE        |          |          |
| Debrisscalar*VisualNONENONESand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML  | Precipitate      | scalar | *Visual     | NONE       | _           |          |          |
| Sand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML   |                  | scalar | *Visual     | NONE       | NONE        |          |          |
| Appearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORML   | Debris           | scalar | *Visual     | NONE       | NONE        |          |          |
| Odor scalar *Visual NORML NORML  | Sand/Dirt        | scalar | *Visual     | NONE       | NONE        |          |          |
|  | Appearance       | scalar | *Visual     | NORML      | NORML       |          |          |
| Emulsified Water scalar *Visual >0.1 NEG   | Odor             | scalar | *Visual     | NORML      | NORML       |          |          |
|  | Emulsified Water | scalar | *Visual     | >0.1       | NEG         |          |          |

NEG

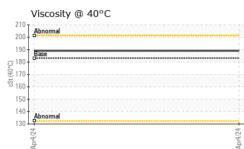
Report Id: LBCP103900 [WUSCAR] 06141774 (Generated: 04/09/2024 14:40:18) Rev: 1

Free Water

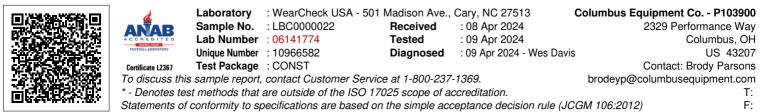
scalar \*Visual



## **OIL ANALYSIS REPORT**



| FLUID PROPER     | RTIES | method    | limit/base  | current  | history1 | history2 |
|------------------|-------|-----------|---|----------|----------|----------|
| Visc @ 40°C      | cSt   | ASTM D445 | 183   | 189      |          |          |
| SAMPLE IMAGE     | ES    | method    | limit/base  | current  | history1 | history2 |
| Color            |       |           |   | no image | no image | no image |
| Bottom           |       |           | -   | no image | no image | no image |
| GRAPHS           |       |           |   |          |          |          |
| Perrous Alloys   | als   |           | Apr4/24 |          |          |          |
| Viscosity @ 40°C | 2     |           | Apr   |          |          |          |
| Abnormal         |       |           |   |          |          |          |
| Base             |       |           |   |          |          |          |
| D                |       |           |   |          |          |          |
| D-               |       |           |   |          |          |          |
| D <b>-</b>       |       |           |   |          |          |          |
| Abnormal         |       |           | Apr4/24   |          |          |          |
| Apr4/24          |       |           |   |          |          |          |



Submitted By: Brody Parsons Page 2 of 2