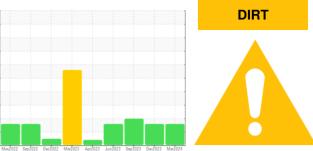


# **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

# **ENTWISTLE STAND**

Component Hydraulic System Fluid MILITARY MIL-H-83282C (50 GAL)

## DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

## Wear

All component wear rates are normal.

### Contamination

Elemental level of silicon (Si) above normal. The system cleanliness is acceptable for your target SAE AS4059 (replaces NAS 1638) cleanliness code. Chlorine measured at 14.2 ppm.

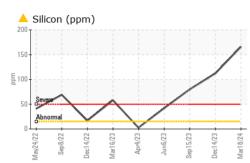
#### Fluid Condition

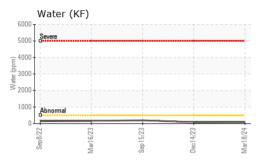
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

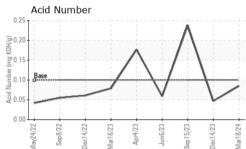
| Sample NumberClient InfoWC0768766WC0874945WC0768843Sample DateClient Info18 Mar 202414 Dec 202315 Sep 2023Machine AgehrsClient Info085740Oil AgeClient InfoN/AFilteredFilteredSample StatusClient InfoN/AFilteredFilteredSample StatusmethodImutbasecurrenthistory1history2IronppmASTM 05165>20000ChromiumppmASTM 05165>20000NickelppmASTM 05165>20000NickelppmASTM 05165>20000NickelppmASTM 0516520000AuminumppmASTM 0516520000AuminumppmASTM 0516520000CopperppmASTM 0516520000AudinumppmASTM 0516520000AnadumppmASTM 051650000AnadumppmASTM 051650000AnadumppmASTM 051650000AnadumppmASTM 051650000AnadumppmASTM 051650000AnadumppmASTM 05165000 <td< th=""><th>SAMPLE INFORM</th><th>IATION</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></td<>   | SAMPLE INFORM  | IATION | method      | limit/base | current      | history1    | history2    |
|--|----------------|--------|-------------|------------|--------------|-------------|-------------|
| Sample Date     in     Client Info     0     8574     0       Machine Age     hrs     Client Info     0     8574     0       Oil Age     hrs     Client Info     0     1000     0       Oil Age     hrs     Client Info     N/A     Filtered     Filtered       Sample Status     Im     Im     ABNORMAL     ABNORMAL     ABNORMAL     ABNORMAL       WEAR METALS     method     Imit/base     current     history1     ABNORMAL       Chromium     ppm     ASTM 05185n     >20     0     0     0       Nickel     ppm     ASTM 05185n     >20     0     0     0       Auminum     ppm     ASTM 05185n     >20     0     0     0       Cadmium     ppm     ASTM 05185n     >20     0     0     0       Cadmium     ppm     ASTM 05185n     >20     0     0     0       Cadmium     ppm     ASTM 05185n     >20     0     0     0  <  | Sample Number  |        | Client Info |            | WC0768786    |             | WC0768843   |
| Machine Age     hrs     Client Info     0     8574     0       Oil Age     hrs     Client Info     N/A     Filtered     Filtered       Sample Status     Image     Client Info     N/A     Filtered     Filtered       Sample Status     Image     Client Info     N/A     Filtered     Filtered       WEAR METALS     method     Imit/base     current     history1     history2       Iron     ppm     ASTM 05185m     >20     0     0     0       Nickel     ppm     ASTM 05185m     >20     0     0     0       Status     ppm     ASTM 05185m     >20     0     0     0       Cadmium     ppm     ASTM 05185m     >20     0     0     0       Cadmium     ppm     ASTM 05185m     >20     0     0     0       Cadmium     ppm     ASTM 05185m     >20     0     0     0       Astm 05185m     20     0     0     0     0     0  | •              |        |             |            | 18 Mar 2024  | 14 Dec 2023 |             |
| Oil Age     hrs     Client Info     0     1000     0       Oil Changed     Client Info     N/A     Filtered     Filtered       Sample Status     Client Info     ABNORMAL     ABNORMAL |                | hrs    |             |            |              |             |             |
| Oil Changed<br>Sample StatusClient InfoN/AFiltered<br>ABNORMALFiltered<br>ABNORMALFiltered<br>ABNORMALWEAR METALSmethodlimit/basecurrenthistory1ABNORMALWEAR METALSmethodlimit/basecurrenthistory1history2IronppmASTM D5185m<br>SATM D5185m>20000OthorniumppmASTM D5185m<br>ASTM D5185m>20000OthorniumppmASTM D5185m<br>ASTM D5185m>20000ItaliamppmASTM D5185m<br>ASTM D5185m>20000LeadppmASTM D5185m<br>ASTM D5185m>20000CadmiumppmASTM D5185m<br>ASTM D5185m20000ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m0000BariumppmASTM D5185m0000MolybdenumppmASTM D5185m0000MagnesiumppmASTM D5185m0000MagnesiumppmASTM D5185m0000MolybdenumppmASTM D5185m0000SulfarppmASTM D5185m0000BariumppmASTM D5185m0000BariumppmASTM D5185m0 <t< th=""><th>•</th><th>hrs</th><th>Client Info</th><th></th><th></th><th>1000</th><th>0</th></t<>   | •              | hrs    | Client Info |            |              | 1000        | 0           |
| Sample Status     method     imit/base     current     ABNORMAL     ABNORMAL       WEAR METALS     method     imit/base     current     history1     history2       Iron     ppm     ASTM 05185m     >20     0     0     0       Nickel     ppm     ASTM 05185m     >20     0     0     0       Titanium     ppm     ASTM 05185m     >20     0     0     0       Aluminum     ppm     ASTM 05185m     >20     0     0     0       Lead     ppm     ASTM 05185m     >20     0     0     0     0       Copper     ppm     ASTM 05185m     >20     0     0     0     0       Cadmium     ppm     ASTM 05185m     >20     0     0     0     0       Cadmium     ppm     ASTM 05185m     >0     0     0     0     0       ADDITIVES     method     Imit/base     Current     history1     history2       Baruam     ppm     ASTM  | -              |        | Client Info |            | N/A          | Filtered    | Filtered    |
| IronppmASTM D5185n>20000ChromiumppmASTM D5185n>200000NickelppmASTM D5185n>200000SilverppmASTM D5185n00000AluminumppmASTM D5185n>200000AluminumppmASTM D5185n>200000CopperppmASTM D5185n>200000CadmiumppmASTM D5185n>200000VanadiumppmASTM D5185n>200000Astm D5185n>20000000Astm D5185n>20000000Astm D5185n>0000000BariumppmASTM D5185n00000MarganeseppmASTM D5185n00000MolybdenumppmASTM D5185n00000SulfurppmASTM D5185n706708654112& 80SulfurppmASTM D5185n>16112& 80SulfurppmASTM D5185n>200000SulfurppmASTM D5185n>200000   | -              |        |             |            | ABNORMAL     | ABNORMAL    | ABNORMAL    |
| Chromium     ppm     ASTM D5185m     >20     0     0     0       Nickel     ppm     ASTM D5185m     20     0     0     0       Titanium     ppm     ASTM D5185m     0     0     0     0       Silver     ppm     ASTM D5185m     >20     0     0     0       Aluminum     ppm     ASTM D5185m     >20     0     0     0       Copper     ppm     ASTM D5185m     >20     0     0     0       Vanadium     ppm     ASTM D5185m     >20     0     0     0       Cadmium     ppm     ASTM D5185m     >20     0     0     0       Admium     ppm     ASTM D5185m     0     0     0     0       Boron     ppm     ASTM D5185m     0     0     0     0       Magnese     ppm     ASTM D5185m     0     0     0     0       Molybdenum     pm     ASTM D5185m     0     0     0     0   | WEAR METALS    |        | method      | limit/base | current      | history1    | history2    |
| Nickel     ppm     ASTM D5185m     >20     0     0     0       Titanium     ppm     ASTM D5185m     0     0     0       Silver     ppm     ASTM D5185m     >20     0     0     0       Lead     ppm     ASTM D5185m     >20     0     0     0       Copper     ppm     ASTM D5185m     >20     0     0     0       Cadmium     ppm     ASTM D5185m     >20     0     0     0       Cadmium     ppm     ASTM D5185m     0     0     0     0       Cadmium     ppm     ASTM D5185m     0     0     0     0       Boron     ppm     ASTM D5185m     0     0     0     0       Cadium     ppm     ASTM D5185m     0     0     -1     1       Calcium     ppm     ASTM D5185m     0     0     0     -1       Calcium     ppm     ASTM D5185m     0     0     0     0       <  | Iron           | ppm    | ASTM D5185m | >20        | 0            | 0           | 0           |
| Titanium     ppm     ASTM D5185m     0     0     0       Silver     ppm     ASTM D5185m     >20     0     0     0       Aluminum     ppm     ASTM D5185m     >20     0     0     0       Lead     ppm     ASTM D5185m     >20     0     0     <1   | Chromium       | ppm    | ASTM D5185m | >20        | 0            | 0           | 0           |
| Silver     ppm     ASTM D5185m     0     0     0       Aluminum     ppm     ASTM D5185m     >20     0     0     0       Lead     ppm     ASTM D5185m     >20     0     0     0       Copper     ppm     ASTM D5185m     >20     0     0     0       Vanadium     ppm     ASTM D5185m     >20     0     0     0       Vanadium     ppm     ASTM D5185m     20     0     0     0       Cadmium     ppm     ASTM D5185m     0     0     0     0       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0     0     0       Maganese     ppm     ASTM D5185m     0     0     1     1       Calcium     ppm     ASTM D5185m     0     0     4     2       Sulfur     ppm     ASTM D5185m     0     0     0     2   | Nickel         | ppm    | ASTM D5185m | >20        | 0            | 0           | 0           |
| Aluminum     ppm     ASTM D5185m     >20     0     0     0       Lead     ppm     ASTM D5185m     >20     0     0     <1   | Titanium       | ppm    | ASTM D5185m |            | 0            | 0           | 0           |
| Lead     ppm     ASTM D5185m     >20     0     0        Copper     ppm     ASTM D5185m     >20     0     0     <1  | Silver         | ppm    | ASTM D5185m |            | 0            | 0           | 0           |
| Copper     ppm     ASTM D5185m     >20     0     0     <1       Tin     ppm     ASTM D5185m     >20     0     0     0       Vanadium     ppm     ASTM D5185m      0     0     0       Cadmium     ppm     ASTM D5185m     0     0     0     0       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0     0     0       Marganese     ppm     ASTM D5185m     0     0     <11  | Aluminum       | ppm    | ASTM D5185m | >20        | 0            | 0           | 0           |
| Tin     ppm     ASTM D5185m     >20     0     0     0       Vanadium     ppm     ASTM D5185m     0     0     0     0       ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0     0     0       Barium     ppm     ASTM D5185m     0     0     0     0       Magnese     ppm     ASTM D5185m     0     0     0     0       Magnesium     ppm     ASTM D5185m     0     0     0     11     Calcium       Ppm     ASTM D5185m     0     0     3     -1       Phosphorus     ppm     ASTM D5185m     706     708     654       Zinc     ppm     ASTM D5185m     0     0     0     2       Silicon     ppm     ASTM D5185m     >15     166     112     80       Sodium     ppm     ASTM D5185m     >20     0     0     0     0  | Lead           | ppm    | ASTM D5185m | >20        | 0            | 0           | 0           |
| Vanadium     ppm     ASTM D5185m             0     <   | Copper         | ppm    | ASTM D5185m | >20        | 0            | 0           | <1          |
| CadmiumppmASTM D5185m000ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m000BariumppmASTM D5185m000MolybdenumppmASTM D5185m000MarganeseppmASTM D5185m0-<1  | Tin            | ppm    | ASTM D5185m | >20        | 0            | 0           | 0           |
| ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0     0       Barium     ppm     ASTM D5185m     0     0     0       Molybdenum     ppm     ASTM D5185m     0     0     0       Magnese     ppm     ASTM D5185m     0     0     1       Magnese     ppm     ASTM D5185m     0     -<1  | Vanadium       | ppm    | ASTM D5185m |            | <1           | 0           | 0           |
| Boron     ppm     ASTM D5185m     0     0     0       Barium     ppm     ASTM D5185m     0     0     0       Molybdenum     ppm     ASTM D5185m     0     0     0       Manganese     ppm     ASTM D5185m     0     -1     1       Calcium     ppm     ASTM D5185m     0     -1     1       Calcium     ppm     ASTM D5185m     0     -1     1       Calcium     ppm     ASTM D5185m     0     3     <1       Phosphorus     ppm     ASTM D5185m     0     0     0     0       Sulfur     ppm     ASTM D5185m     0     0     0     4       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >15     166     112     & 80       Sodium     ppm     ASTM D5185m     >20     0     0     0       Solicon     ppm     ASTM D5185m     >20   | Cadmium        | ppm    | ASTM D5185m |            | 0            | 0           | 0           |
| Barium     ppm     ASTM D5185m     0     0     0       Molybdenum     ppm     ASTM D5185m     0     0     0       Maganese     ppm     ASTM D5185m     0     0     <1       Magnesium     ppm     ASTM D5185m     0     <1     1       Calcium     ppm     ASTM D5185m     0     3     <1       Phosphorus     ppm     ASTM D5185m     0     0     0     0       Sulfur     ppm     ASTM D5185m     706     708     6544       Zinc     ppm     ASTM D5185m     0     0     0     0       Sulfur     ppm     ASTM D5185m     0     0     0     4       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >20     0     0     0     0       Sodium     ppm     ASTM D5185m     >20     0     0     0.019     0     0     0     0   | ADDITIVES      |        | method      | limit/base | current      | history1    | history2    |
| Molybdenum     ppm     ASTM D5185m     0     0     0       Magnesium     ppm     ASTM D5185m     0     <1     1       Calcium     ppm     ASTM D5185m     0     3     <1       Calcium     ppm     ASTM D5185m     0     3     <1       Calcium     ppm     ASTM D5185m     706     708     6544       Zinc     ppm     ASTM D5185m     706     0     0     0       Sulfur     ppm     ASTM D5185m     0     0     0     4       CONTAMINANTS     method     limit/base     current     history1     history2       Sulfur     ppm     ASTM D5185m     >15     166     112     & 80       Sodium     ppm     ASTM D5185m     >20     0     0     0       Potassium     ppm     ASTM D5185m     >20     0.008     0.019       ppm Water     pm     ASTM D580     >0.05     0.009     0.008     0.019       particles >4µm     ASTM D7   | Boron          | ppm    | ASTM D5185m |            | 0            | 0           | 0           |
| Manganese     ppm     ASTM D5185m     0     <1       Magnesium     ppm     ASTM D5185m     0     <1  | Barium         | ppm    | ASTM D5185m |            | 0            | 0           | 0           |
| Magnesium     ppm     ASTM D5185m     0     <1     1       Calcium     ppm     ASTM D5185m     0     3     <1  | Molybdenum     | ppm    | ASTM D5185m |            | 0            | 0           | 0           |
| Calcium     ppm     ASTM D5185m     0     3     <1       Phosphorus     ppm     ASTM D5185m     706     708     654       Zinc     ppm     ASTM D5185m     0     0     0       Sulfur     ppm     ASTM D5185m     0     0     4       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >15     ▲     166     ▲     112     ▲     80       Sodium     ppm     ASTM D5185m     >15     ▲     166     ▲     112     ▲     80       Sodium     ppm     ASTM D5185m     >20     0     0     0     0       Potassium     ppm     ASTM D5185m     >20     0     0     0     0       Vater     %     ASTM D5185m     >20     0     0.008     0.019       ppm Water     ppm     ASTM D6304     >0.05     95     80     194.4       FLUID CLEANLINESS  | Manganese      | ppm    | ASTM D5185m |            | 0            | 0           | <1          |
| PhosphorusppmASTM D5185m706708654ZincppmASTM D5185m000SulfurppmASTM D5185m004CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>1516611280SodiumppmASTM D5185m>1516611280SodiumppmASTM D5185m>20000Chlorine ContentppmASTM D5185m>2000.0080.019ppm Water%ASTM D6304>0.050.0090.0080.019ppm WaterppmASTM D6304>5009580194.4FLUID CLEANLINESSmethodlimit/basecurrenthistory1history2Particles >4µmASTM D7647>16000173Particles >6µmIASTM D7647>285020Particles >14µmKaSTM D7647>50620Particles 515µmcount*NAS 1638>600708225956197Particles 515µmcount*NAS 1638>26010513141280Particles 25.00µmcount*NAS 1638>20000NAS 1638>6640720000Particles >100µmcount*NAS 1638>6647Particles >100µmcount*NAS 1638<   | Magnesium      | ppm    |             |            | 0            |             | 1           |
| Zinc     ppm     ASTM D5185m     0     0     0     0       Sulfur     ppm     ASTM D5185m     0     0     4       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >15     166     112     80       Sodium     ppm     ASTM D5185m     >15     1666     112     80       Sodium     ppm     ASTM D5185m     >15     1666     112     80       Sodium     ppm     ASTM D5185m     >20     0     0     0       Potassium     ppm     ASTM D5185m     >20     0     0     0       Chlorine Content     ppm     ASTM D5185m     >20     0     0.008     0.019       ppm Water     %     ASTM D6304     >0.05     0.009     0.008     0.019       ppm Water     ppm     ASTM D647     >500     95     80     194.4       FLUID CLEANLINESS     Method     limit/base     current <th>Calcium</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th>0</th> <th>3</th> <th>&lt;1</th>  | Calcium        | ppm    | ASTM D5185m |            | 0            | 3           | <1          |
| Sulfur     ppm     ASTM D5185m     0     0     4       CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >15     166     112     80       Sodium     ppm     ASTM D5185m     >15     166     112     80       Sodium     ppm     ASTM D5185m     >20     0     0     0       Potassium     ppm     ASTM D5185m     >20     0     0     0       Vater     %     ASTM D5185m     >20     0.009     0.008     0.019       ppm Water     ppm     ASTM D6304     >0.05     0.009     0.008     0.019       ppm Water     ppm     ASTM D6304     >500     95     80     194.4       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >16000       173       Particles >14µm     ASTM D7647     >2850   | Phosphorus     | ppm    |             |            | 706          | 708         | 654         |
| CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >15     ▲ 166     ▲ 112     ▲ 80       Sodium     ppm     ASTM D5185m     >15     ▲ 166     ▲ 112     ▲ 80       Sodium     ppm     ASTM D5185m     >20     0     0     2       Potassium     ppm     ASTM D5185m     >20     0     0     0       Chlorine Content     ppm     ASTM D5185m     >20     0     0     0       Water     %     ASTM D5185m      14.2     28.6        Water     %     ASTM D6304     >0.05     0.009     0.008     0.019       ppm Water     ppm     ASTM D6304     >500     95     80     194.4       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >16000       173       Particles >14µm     ASTM D7647     >506 </td <th>-</th> <td>ppm</td> <td></td> <td></td> <th>-</th> <td></td> <td></td>  | -              | ppm    |             |            | -            |             |             |
| Silicon   ppm   ASTM D5185m   >15   ▲ 166   ▲ 112   ▲ 80     Sodium   ppm   ASTM D5185m   <1   0   2     Potassium   ppm   ASTM D5185m   >20   0   0   0     Chlorine Content   ppm   ASTM D5185m   >20   0   0   0     Chlorine Content   ppm   ASTM D5304   >0.05   0.009   0.008   0.019     ppm Water   ppm   ASTM D6304   >500   95   80   194.4     FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4µm   ASTM D7647   >16000     173     Particles >6µm   ASTM D7647   >2850     20     Particles >14µm   ASTM D7647   >2850    7   20     Particles >21µm   ASTM D7647   >506    7   20     Particles 5-15µm   count   *NAS 1638   >1051   314   1280     Particles 25-50µm   count   *NAS 1638   5   | Sulfur         | ppm    | ASTM D5185m |            | 0            | 0           | 4           |
| Sodium     ppm     ASTM D5185m     <1  | CONTAMINANTS   |        | method      | limit/base | current      | history1    | history2    |
| Potassium     ppm     ASTM D5185m     >20     0     0     0       Chlorine Content     ppm     ASTM D5185m     14.2     28.6        Water     %     ASTM D6304     >0.05     0.009     0.008     0.019       ppm Water     ppm     ASTM D6304     >500     95     80     194.4       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647       173       Particles >6µm     ASTM D7647     >16000       88       Particles >14µm     ASTM D7647     >2850       20       Particles >21µm     ASTM D7647     >506      7     7       Particles 5-15µm     count     *NAS 1638     >16000     7082     2595     6197       Particles 25-50µm     count     *NAS 1638     >2850     1051     314     1280       Particles 50-100µm     count     *NAS 1638     >00     0 </th <th>Silicon</th> <th>ppm</th> <th>ASTM D5185m</th> <th>&gt;15</th> <th><b>A</b> 166</th> <th><b>1</b>12</th> <th><b>A</b> 80</th>   | Silicon        | ppm    | ASTM D5185m | >15        | <b>A</b> 166 | <b>1</b> 12 | <b>A</b> 80 |
| Chlorine Content     ppm     ASTM D5185m     14.2     28.6        Water     %     ASTM D6304     >0.05     0.009     0.008     0.019       ppm Water     ppm     ASTM D6304     >500     95     80     194.4       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647       173       Particles >6µm     ASTM D7647     >16000       88       Particles >14µm     ASTM D7647     >2850       20       Particles >21µm     ASTM D7647     >506       7       Particles 5-15µm     count     *NAS 1638     >16000     7082     2595     6197       Particles 15-25µm     count     *NAS 1638     >2850     1051     314     1280       Particles 25-50µm     count     *NAS 1638     >00     0     20     20       Particles >100µm     count     *NAS 1638     >0     0<   | Sodium         | ppm    | ASTM D5185m |            | <1           | 0           |             |
| Water     %     ASTM D6304     >0.05     0.009     0.008     0.019       ppm Water     ppm     ASTM D6304     >500     95     80     194.4       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647       173       Particles >6µm     ASTM D7647     >16000       88       Particles >14µm     ASTM D7647     >2850       20       Particles >21µm     ASTM D7647     >506       7       Particles 5-15µm     count     *NAS 1638     >16000     7082     2595     6197       Particles 25-50µm     count     *NAS 1638     >2850     1051     314     1280       Particles 50-100µm     count     *NAS 1638     >00     20     0     20       Particles >100µm     count     *NAS 1638     >0     0     0     0       Particles >100µm     count     *NAS 1638     >16  | Potassium      | ppm    |             | >20        | -            |             | 0           |
| ppm Water     ppm     ASTM D6304     >500     95     80     194.4       FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647       173       Particles >6µm     ASTM D7647     >16000       88       Particles >14µm     ASTM D7647     >2850       20       Particles >14µm     ASTM D7647     >2850       77       Particles >21µm     ASTM D7647     >506       70       Particles 5-15µm     count     *NAS 1638     >16000     7082     2595     6197       Particles 15-25µm     count     *NAS 1638     >2850     1051     314     1280       Particles 25-50µm     count     *NAS 1638     >90     20     0     20       Particles 50-100µm     count     *NAS 1638     >90     20     0     20       Particles >100µm     count     *NAS 1638     >16 <th< th=""><th></th><th>ppm</th><th></th><th></th><th></th><th></th><th></th></th<>  |                | ppm    |             |            |              |             |             |
| FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4µm   ASTM D7647     173     Particles >6µm   ASTM D7647   >16000     88     Particles >14µm   ASTM D7647   >2850    20     Particles >14µm   ASTM D7647   >2850    7     Particles >21µm   ASTM D7647   >506    7     Particles 5-15µm   count   *NAS 1638   >16000   7082   2595   6197     Particles 15-25µm   count   *NAS 1638   >2850   1051   314   1280     Particles 25-50µm   count   *NAS 1638   >506   498   67   641     Particles 50-100µm   count   *NAS 1638   >90   20   0   20     Particles >100µm   count   *NAS 1638   >6   0   0   0     NAS 1638   >6   6   4   7  |                | %      | ASTM D6304  | >0.05      | 0.009        | 0.008       | 0.019       |
| Particles >4μm   ASTM D7647    173     Particles >6μm   ASTM D7647   >16000    88     Particles >14μm   ASTM D7647   >2850    20     Particles >14μm   ASTM D7647   >2850    7     Particles >21μm   ASTM D7647   >506    7     Particles 5-15μm   count   *NAS 1638   >16000   7082   2595   6197     Particles 15-25μm   count   *NAS 1638   >2850   1051   314   1280     Particles 25-50μm   count   *NAS 1638   >506   498   67   641     Particles 50-100μm   count   *NAS 1638   >90   20   0   20     Particles >100μm   count   *NAS 1638   >16   0   0   0     NAS 1638   Class   *NAS 1638   >6   6   4   7   | ppm Water      | ppm    | ASTM D6304  | >500       | 95           | 80          | 194.4       |
| Particles >6μm     ASTM D7647     >16000      88       Particles >14μm     ASTM D7647     >2850      20       Particles >14μm     ASTM D7647     >2850      20       Particles >21μm     ASTM D7647     >506      7       Particles >21μm     ASTM D7647     >506      7       Particles 5-15μm     count     *NAS 1638     >16000     7082     2595     6197       Particles 15-25μm     count     *NAS 1638     >2850     1051     314     1280       Particles 25-50μm     count     *NAS 1638     >506     498     67     641       Particles 50-100μm     count     *NAS 1638     >90     20     0     20       Particles >100μm     count     *NAS 1638     >16     0     0     0       NAS 1638     Class     *NAS 1638     >6     6     4     7  | FLUID CLEANLIN | ESS    | method      | limit/base | current      | history1    | history2    |
| Particles >14μm   ASTM D7647   >2850     20     Particles >21μm   ASTM D7647   >506    7     Particles 5-15μm   count   *NAS 1638   >16000   7082   2595   6197     Particles 15-25μm   count   *NAS 1638   >2850   1051   314   1280     Particles 25-50μm   count   *NAS 1638   >506   498   67   641     Particles 50-100μm   count   *NAS 1638   >90   20   0   20     Particles >100μm   count   *NAS 1638   >16   0   0   0     NAS 1638   Class   *NAS 1638   >6   6   4   7  |                |        |             |            |              |             | 173         |
| Particles >21μm     ASTM D7647     >506      7       Particles 5-15μm     count     *NAS 1638     >16000 <b>7082</b> 2595     6197       Particles 15-25μm     count     *NAS 1638     >2850 <b>1051</b> 314     1280       Particles 25-50μm     count     *NAS 1638     >506 <b>498</b> 67     641       Particles 50-100μm     count     *NAS 1638     >90 <b>20</b> 0     20       Particles >100μm     count     *NAS 1638     >16 <b>0</b> 0     0       NAS 1638     Class     *NAS 1638     >6 <b>6</b> 4     7  |                |        | ASTM D7647  | >16000     |              |             |             |
| Particles 5-15μm     count     *NAS 1638     >16000 <b>7082</b> 2595     6197       Particles 15-25μm     count     *NAS 1638     >2850 <b>1051</b> 314     1280       Particles 25-50μm     count     *NAS 1638     >506 <b>498</b> 67     641       Particles 50-100μm     count     *NAS 1638     >90 <b>20</b> 0     20       Particles >100μm     count     *NAS 1638     >16 <b>0</b> 0     0       NAS 1638     Class     *NAS 1638     >6 <b>6</b> 4     7   | 1              |        |             |            |              |             |             |
| Particles 15-25μm     count     *NAS 1638     >2850     1051     314     1280       Particles 25-50μm     count     *NAS 1638     >506     498     67     641       Particles 50-100μm     count     *NAS 1638     >90     20     0     20       Particles >100μm     count     *NAS 1638     >16     0     0     0       NAS 1638     Class     *NAS 1638     >6     6     4     7  |                |        |             |            |              |             |             |
| Particles 25-50μm     count     *NAS 1638     >506     498     67     641       Particles 50-100μm     count     *NAS 1638     >90     20     0     20       Particles >100μm     count     *NAS 1638     >16     0     0     0       NAS 1638     Class     *NAS 1638     >6     6     4     7  |                |        |             |            |              |             |             |
| Particles 50-100μm     count     *NAS 1638     >90     20     0     20       Particles >100μm     count     *NAS 1638     >16     0     0     0       NAS 1638     Class     *NAS 1638     >6     6     4     7  |                |        |             |            |              |             |             |
| Particles >100μm     count     *NAS 1638     >16     0     0     0       NAS 1638     Class     *NAS 1638     >6     6     4     7   |                |        |             |            |              |             |             |
| NAS 1638 Class *NAS 1638 >6 6 4 7  |                |        |             |            |              |             |             |
| NAS 1638 Class *NAS 1638 >6 6 4 7<br>(103:29) Rev: 2 Class *NAS 1638 >6 Contact/Location: JIM ALLEN - NORPLAMA   |                |        |             |            |              |             | 0           |
|  | NAS 1638       | Class  | *NAS 1638   | >6         | 6            | 1           | 7           |

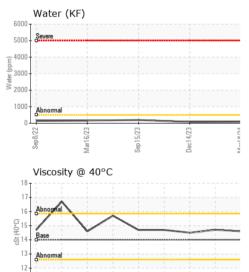


# **OIL ANALYSIS REPORT**









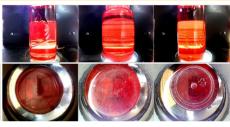
Mav24/22

Dec14/22 en8/77

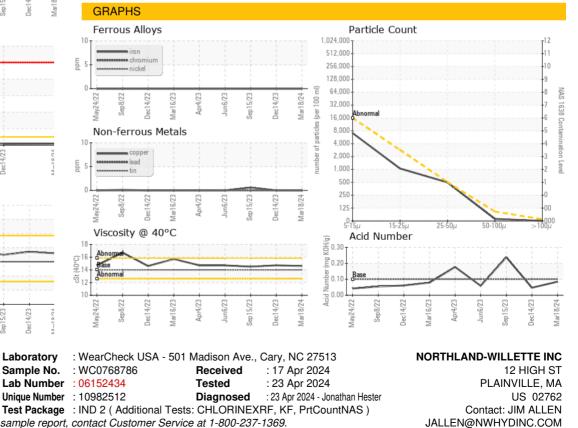
Vlar16/23

| FLUID DEGRADATION |          | method     | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|---------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D8045 | 0.1        | 0.085   | 0.047    | 0.238    |
| 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    | >0.05      | NEG     | NEG      | NEG      |
| Free Water        | scalar   | *Visual    |            | NEG     | NEG      | NEG      |
| FLUID PROPERT     | IES      | method     | limit/base | current | history1 | history2 |
| Visc @ 40°C       | cSt      | ASTM D445  | 14.0       | 14.6    | 14.71    | 14.5     |
| SAMPLE IMAGES     | 6        | method     | limit/base | current | history1 | history2 |

Color



Bottom



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) F: (508)699-4017

Report Id: NORPLAMA [WUSCAR] 06152434 (Generated: 04/23/2024 07:03:29) Rev: 2

Certificate 12367

Pr14/73 Sen

Contact/Location: JIM ALLEN - NORPLAMA

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