

## **OIL ANALYSIS REPORT**



Machine Id

**DR-101** Component Hydraulic System AW HYDRAULIC OIL ISO 10 (--- GAL)

### DIAGNOSIS

#### Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

### Contamination

Moderate concentration of visible dirt/debris present in the oil.

#### Fluid Condition

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

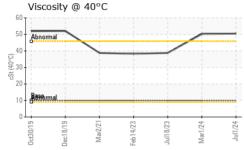
| SAMPLE INFORM   |   | method  | limit/base  | current  | history1  | history2  |
|---|---|---|---|--|---|---|
| Sample Number   |   | Client Info   |   | WC0909535  | WC0909390   | WC0705224   |
| Sample Date   |   | Client Info   |   | 01 Jul 2024  | 01 Mar 2024   | 18 Jul 2023   |
| Machine Age   | hrs   | Client Info   |   | 2409   | 2214  | 1965  |
| Oil Age   | hrs   | Client Info   |   | 0  | 0   | 1965  |
| Oil Changed   |   | Client Info   |   | N/A  | 0<br>N/A  | Not Changd  |
| Sample Status   |   |   |   | ABNORMAL   | NORMAL  | NORMAL  |
|   |   | method  | limit/base  | current  | -   | history2  |
| Water   | 4   | WC Method   |   | NEG  | history1<br>NEG   | NEG   |
|   |   |   | -   | -  | -   |   |
| WEAR METALS   |   | method  | limit/base  | current  | history1  | history2  |
| Iron  | ppm   | ASTM D5185m   | >20   | 6  | 5   | 3   |
| Chromium  | ppm   | ASTM D5185m   |   | 0  | 0   | 0   |
| Nickel  | ppm   | ASTM D5185m   | >10   | 0  | 0   | 0   |
| Titanium  | ppm   | ASTM D5185m   |   | 0  | <1  | <1  |
| Silver  | ppm   | ASTM D5185m   |   | 0  | 0   | 0   |
| Aluminum  | ppm   | ASTM D5185m   |   | 8  | 7   | 0   |
| Lead  | ppm   | ASTM D5185m   | >10   | 0  | 0   | 0   |
| Copper  | ppm   | ASTM D5185m   | >75   | 0  | <1  | 3   |
| Tin   | ppm   | ASTM D5185m   | >10   | 0  | 0   | 0   |
| Vanadium  | ppm   | ASTM D5185m   |   | 0  | <1  | 0   |
| Cadmium   | ppm   | ASTM D5185m   |   | 0  | 0   | 0   |
| ADDITIVES   |   | method  | limit/base  | current  | history1  | history2  |
| Boron   | ppm   | ASTM D5185m   | 5   | 0  | 0   | 0   |
| Barium  | ppm   | ASTM D5185m   | 5   | 0  | 3   | 0   |
| Molybdenum  | ppm   | ASTM D5185m   | 5   | 0  | 2   | <1  |
| Manganese   | ppm   | ASTM D5185m   |   | 0  | 0   | 0   |
| Magnesium   | ppm   | ASTM D5185m   | 25  | 1  | 15  | 0   |
| Calcium   | ppm   | ASTM D5185m   | 200   | 74   | 107   | 483   |
| Phosphorus  | ppm   | ASTM D5185m   | 300   | 123  | 153   | 338   |
| Zinc  | ppm   | ASTM D5185m   | 370   | 59   | 91  | 497   |
| Sulfur  | ppm   |   |   |  | 31  | 497   |
|   | ppm   | ASTM D5185m   | 2500  | 1156   | 1456  | 1331  |
| CONTAMINANTS  | ppm   | ASTM D5185m<br>method   | 2500<br>limit/base  | 1156<br>current  |   |   |
| CONTAMINANTS<br>Silicon   | ppm   |   | limit/base  |  | 1456  | 1331  |
| Silicon   |   | method  | limit/base  | current  | 1456<br>history1  | 1331<br>history2  |
|   | ppm   | method<br>ASTM D5185m   | limit/base<br>>20   | current<br>20  | 1456<br>history1<br>18  | 1331<br>history2<br>4   |
| Silicon<br>Sodium   | ppm<br>ppm  | method<br>ASTM D5185m<br>ASTM D5185m  | limit/base<br>>20   | current<br>20<br>13  | 1456<br>history1<br>18<br>9   | 1331<br>history2<br>4<br>2  |
| Silicon<br>Sodium<br>Potassium<br>VISUAL<br>White Metal   | ppm<br>ppm<br>ppm<br>scalar   | method<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>method<br>*Visual  | limit/base<br>>20<br>>20<br>limit/base<br>NONE  | current<br>20<br>13<br>8<br>current<br>NONE  | 1456<br>history1<br>18<br>9<br>6<br>history1<br>NONE  | 1331<br>history2<br>4<br>2<br><1<br>history2<br>NONE  |
| Silicon<br>Sodium<br>Potassium<br>VISUAL<br>White Metal<br>Yellow Metal   | ppm<br>ppm<br>ppm   | method<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br><b>method</b><br>*Visual   | limit/base<br>>20<br>>20<br>limit/base  | current<br>20<br>13<br>8<br>current<br>NONE<br>NONE  | 1456<br>history1<br>18<br>9<br>6<br>history1<br>NONE<br>NONE  | 1331<br>history2<br>4<br>2<br><1<br>history2<br>NONE<br>NONE                                    |
| Silicon<br>Sodium<br>Potassium<br>VISUAL<br>White Metal<br>Yellow Metal<br>Precipitate  | ppm<br>ppm<br>ppm<br>scalar<br>scalar<br>scalar                               | method<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>*Visual<br>*Visual<br>*Visual  | limit/base<br>>20<br>>20<br>limit/base<br>NONE<br>NONE<br>NONE  | Current<br>20<br>13<br>8<br>Current<br>NONE<br>NONE<br>NONE  | 1456<br>history1<br>18<br>9<br>6<br>history1<br>NONE<br>NONE<br>NONE  | 1331<br>history2<br>4<br>2<br><1<br>history2<br>NONE<br>NONE<br>NONE                            |
| Silicon<br>Sodium<br>Potassium<br>VISUAL<br>White Metal<br>Yellow Metal<br>Precipitate<br>Silt                                      | ppm<br>ppm<br>ppm<br>scalar<br>scalar   | method<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>*Visual<br>*Visual<br>*Visual<br>*Visual   | limit/base<br>>20<br>>20<br>limit/base<br>NONE<br>NONE  | current<br>20<br>13<br>8<br>current<br>NONE<br>NONE  | 1456<br>history1<br>18<br>9<br>6<br>history1<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE                        | 1331<br>history2<br>4<br>2<br><1<br>history2<br>NONE<br>NONE                                    |
| Silicon<br>Sodium<br>Potassium<br>VISUAL<br>White Metal<br>Yellow Metal<br>Precipitate<br>Silt                                      | ppm<br>ppm<br>ppm<br>scalar<br>scalar<br>scalar                               | method<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>*Visual<br>*Visual<br>*Visual  | limit/base<br>>20<br>>20<br>limit/base<br>NONE<br>NONE<br>NONE  | Current<br>20<br>13<br>8<br>Current<br>NONE<br>NONE<br>NONE  | 1456<br>history1<br>18<br>9<br>6<br>history1<br>NONE<br>NONE<br>NONE  | 1331<br>history2<br>4<br>2<br><1<br>history2<br>NONE<br>NONE<br>NONE                            |
| Silicon<br>Sodium<br>Potassium<br>VISUAL<br>White Metal<br>Yellow Metal<br>Precipitate<br>Silt<br>Debris                            | ppm<br>ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar                     | method<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>*Visual<br>*Visual<br>*Visual<br>*Visual   | limit/base<br>>20<br>>20<br>limit/base<br>NONE<br>NONE<br>NONE<br>NONE                                | Current<br>20<br>13<br>8<br>Current<br>NONE<br>NONE<br>NONE<br>NONE                                | 1456<br>history1<br>18<br>9<br>6<br>history1<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE                        | 1331<br>history2<br>4<br>2<br><1<br>history2<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE            |
| Silicon<br>Sodium<br>Potassium<br>VISUAL<br>White Metal<br>Yellow Metal<br>Precipitate<br>Silt<br>Debris<br>Sand/Dirt               | ppm<br>ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar           | method<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual                       | limit/base<br>>20<br>>20<br>limit/base<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE                        | Current<br>20<br>13<br>8<br>Current<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE                | 1456<br>history1<br>18<br>9<br>6<br>history1<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE                | 1331<br>history2<br>4<br>2<br><1<br>history2<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE    |
| Silicon<br>Sodium<br>Potassium<br>VISUAL<br>White Metal<br>Yellow Metal<br>Precipitate<br>Silt<br>Debris<br>Sand/Dirt<br>Appearance | ppm<br>ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar | method<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual            | limit/base<br>>20<br>>20<br>limit/base<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE                | Current<br>20<br>13<br>8<br>Current<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE        | 1456<br>history1<br>18<br>9<br>6<br>history1<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE        | 1331<br>history2<br>4<br>2<br><1<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NON |
| Silicon<br>Sodium<br>Potassium  | ppm<br>ppm<br>ppm<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar<br>scalar | method<br>ASTM D5185m<br>ASTM D5185m<br>ASTM D5185m<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual<br>*Visual | limit/base<br>>20<br>>20<br>limit/base<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NON | Current<br>20<br>13<br>8<br>Current<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NON | 1456<br>history1<br>18<br>9<br>6<br>history1<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NON | 1331<br>history2<br>4<br>2<br><1<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NONE<br>NON |

Report Id: ECPROA [WUSCAR] 06236672 (Generated: 07/17/2024 14:06:20) Rev: 1

Contact/Location: EDDIE SECO - ECPROA



# **OIL ANALYSIS REPORT**



| FLUID PROPER                    | TIES             | method              | limit/base                   | current   | history1 | history2                             |
|---------------------------------|------------------|---------------------|------------------------------|-----------|----------|--------------------------------------|
| Visc @ 40°C                     | cSt              | ASTM D445           | 10                           | 50.5      | 50.2     | 38.8                                 |
| SAMPLE IMAGE                    | S                | method              | limit/base                   | current   | history1 | history2                             |
| Color                           |                  |                     |                              | no image  | no image | no image                             |
| Bottom                          |                  |                     |                              | no image  | no image | no image                             |
| GRAPHS                          |                  |                     |                              |           |          |                                      |
| Ferrous Alloys                  |                  |                     |                              |           |          |                                      |
| 10<br>9 iron                    |                  |                     |                              |           |          |                                      |
| 8 - nickel                      |                  |                     |                              |           |          |                                      |
| 6-                              | ~                |                     |                              |           |          |                                      |
| 5                               | $\sim$           | 1                   |                              |           |          |                                      |
| 3                               |                  | $\checkmark$        |                              |           |          |                                      |
| 2                               |                  |                     |                              |           |          |                                      |
|                                 | 0                | 4 3                 | 4                            |           |          |                                      |
| Dec18/19 -                      | Feb14/23         | Jul18/23<br>Mar1/24 | Jul1/24                      |           |          |                                      |
| Non-ferrous Meta                |                  |                     |                              |           |          |                                      |
| 10<br>9 copper                  |                  |                     |                              |           |          |                                      |
| 8 - second lead                 |                  |                     |                              |           |          |                                      |
| 6-                              |                  |                     |                              |           |          |                                      |
| 5-                              |                  |                     |                              |           |          |                                      |
| 3                               |                  |                     |                              |           |          |                                      |
| 2                               |                  | $\backslash$        |                              |           |          |                                      |
| 51 33 30                        | C.               | 24                  | 4                            |           |          |                                      |
| 0ct30/19<br>Dec18/19<br>Mar2/21 | Feb14/23         | Jul18/23<br>Mar1/24 | Jul1/24                      |           |          |                                      |
| Viscosity @ 40°C                |                  |                     |                              |           |          |                                      |
| 55                              |                  |                     | -                            |           |          |                                      |
| 45 Abnormal                     |                  | /                   |                              |           |          |                                      |
| 40                              |                  | -                   |                              |           |          |                                      |
| 3 35 -<br>£ 30 -<br>8 25 -      |                  |                     |                              |           |          |                                      |
| 20                              |                  |                     |                              |           |          |                                      |
| 15 - Race .                     |                  |                     |                              |           |          |                                      |
| 10 - <b>Hilling mal</b>         |                  |                     |                              |           |          |                                      |
| 0ct30/19<br>Dec18/19<br>Mar2/21 | Feb14/23         | Jul18/23<br>Mar1/24 | Jul1/24                      |           |          |                                      |
| 0 0 -                           | æ                |                     |                              |           |          |                                      |
| WearCheck USA - 50<br>WC0909535 | Receiv           | <b>/ed</b> : 15     | 5 Jul 2024                   |           | 1811     | E. <b>C. PACE CO</b><br>I HOLLINS RE |
| 06236672<br>11125506            | Testec<br>Diagno |                     | 5 Jul 2024<br>Jul 2024 - Don | Baldridge |          | ROANOKE, V<br>US 2401                |
| FLEET                           | Diagin           |                     |                              | - 2001090 | Contact  | EDDIE SEC                            |

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)

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Certificate L2367