

# **OIL ANALYSIS REPORT**

[1092248] Machine Id PRESS 1 - Y0198FM

#### Component Hydraulic System

AW HYDRAULIC OIL ISO 46 (750 GAL)

# DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable.

## Fluid Condition

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



Sample Rating Trend



NORMAL

|                 |         |             |            | May2016     |          |          |
|-----------------|---------|-------------|------------|-------------|----------|----------|
| SAMPLE INFOR    | RMATION | method      | limit/base | current     | history1 | history2 |
| Sample Number   |         | Client Info |            | WCI2286837  |          |          |
| Sample Date     |         | Client Info |            | 03 May 2016 |          |          |
| Machine Age     | hrs     | Client Info |            | 0           |          |          |
| Oil Age         | hrs     | Client Info |            | 0           |          |          |
| Oil Changed     |         | Client Info |            | N/A         |          |          |
| Sample Status   |         |             |            | NORMAL      |          |          |
| CONTAMINATIO    | ON      | method      | limit/base | current     | history1 | history2 |
| Water           |         | WC Method   | >0.05      | NEG         |          |          |
| WEAR METALS     |         | method      | limit/base | current     | history1 | history2 |
| Iron            | ppm     | ASTM D5185m | >40        | 1           |          |          |
| Chromium        | ppm     | ASTM D5185m | >4         | 0           |          |          |
| Nickel          | ppm     | ASTM D5185m |            | 0           |          |          |
| Titanium        | ppm     | ASTM D5185m |            | 0           |          |          |
| Silver          | ppm     | ASTM D5185m |            | 0           |          |          |
| Aluminum        | ppm     | ASTM D5185m | >4         | <1          |          |          |
| Lead            | ppm     | ASTM D5185m | >10        | <1          |          |          |
| Copper          | ppm     | ASTM D5185m | >60        | 2           |          |          |
| Tin             | ppm     | ASTM D5185m | >4         | 0           |          |          |
| Antimony        | ppm     | ASTM D5185m |            | 0           |          |          |
| Vanadium        | ppm     | ASTM D5185m |            | 0           |          |          |
| Cadmium         | ppm     | ASTM D5185m |            | 0           |          |          |
| ADDITIVES       |         | method      | limit/base | current     | history1 | history2 |
| Boron           | ppm     | ASTM D5185m | 5          | 0           |          |          |
| Barium          | ppm     | ASTM D5185m | 5          | 0           |          |          |
| Molybdenum      | ppm     | ASTM D5185m | 5          | 0           |          |          |
| Manganese       | ppm     | ASTM D5185m |            | 0           |          |          |
| Magnesium       | ppm     | ASTM D5185m | 25         | 0           |          |          |
| Calcium         | ppm     | ASTM D5185m | 200        | 52          |          |          |
| Phosphorus      | ppm     | ASTM D5185m | 300        | 255         |          |          |
| Zinc            | ppm     | ASTM D5185m | 370        | 364         |          |          |
| Sulfur          | ppm     | ASTM D5185m | 2500       | 1497        |          |          |
| CONTAMINANT     | S       | method      | limit/base | current     | history1 | history2 |
| Silicon         | ppm     | ASTM D5185m | >20        | 1           |          |          |
| Sodium          | ppm     | ASTM D5185m |            | 2           |          |          |
| Potassium       | ppm     | ASTM D5185m | >20        | 0           |          |          |
| FLUID CLEANLI   | INESS   | method      | limit/base | current     | history1 | history2 |
| Particles >4µm  |         | ASTM D7647  | >5000      | 2400        |          |          |
| Particles >6µm  |         | ASTM D7647  | >1300      | 335         |          |          |
| Particles >14µm |         | ASTM D7647  | >160       | 32          |          |          |
| Particles >21µm |         | ASTM D7647  | >40        | 10          |          |          |
| Particles >38µm |         | ASTM D7647  | >10        | 2           |          |          |
|                 |         |             |            |             |          |          |

ASTM D7647 >3

ISO 4406 (c) >19/17/14

0

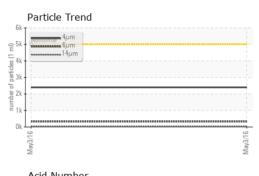
18/16/12

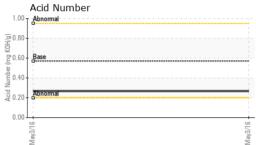
Particles >71µm

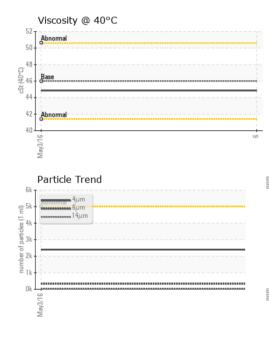
**Oil Cleanliness** 



# **OIL ANALYSIS REPORT**







| FLUID DEGRADA  | ATION   | method           |   |                               |          | history2          |
|--|---|------------------|---|-------------------------------|----------|-------------------|
| Acid Number (AN)   | mg KOH/g                                      | ASTM D8045       | 0.57  | 0.265                         |          |                   |
| VISUAL   |   | method           | limit/base  | current                       | history1 | history2          |
| Vhite Metal  | scalar  | *Visual          | NONE  | NONE                          |          |                   |
| ellow Metal  | scalar  | *Visual          | NONE  | NONE                          |          |                   |
| Precipitate  | scalar  | *Visual          | NONE  | NONE                          |          |                   |
| filt   | scalar  | *Visual          | NONE  | NONE                          |          |                   |
| Debris   | scalar  | *Visual          | NONE  | NONE                          |          |                   |
| and/Dirt   | scalar  | *Visual          | NONE  | NONE                          |          |                   |
| ppearance  | scalar  | *Visual          | NORML   | NORML                         |          |                   |
| Odor   | scalar  | *Visual          | NORML   | NORML                         |          |                   |
| mulsified Water  | scalar  | *Visual          | >0.05   | NEG                           |          |                   |
| ree Water  | scalar  | *Visual          |   | NEG                           |          |                   |
| FLUID PROPERT  | TIES  | method           | limit/base  | current                       | history1 | history2          |
| ïsc @ 40°C   | cSt   | ASTM D445        | 46  | 44.86                         |          |                   |
| SAMPLE IMAGE   | S   | method           | limit/base  | current                       | history1 | history2          |
| Color  |   |                  |   |                               | no image | no image          |
| ottom  |   |                  |   | 6)                            | no image | no image          |
| GRAPHS   |   |                  |   |                               |          |                   |
| Ferrous Alloys   |   |                  | 491,520   | Particle Count                |          | т26               |
| iron   |   |                  |   |                               |          |                   |
| nickel   |   |                  | 122,880   | Severe                        |          | -24               |
|  |   |                  | 30,720  | 1                             |          | -22               |
| 16   | ******  |                  | 은 = 7,680   | Abnormal                      |          | -20               |
| May3/1   |   |                  | (per 1 ml)<br>(per 1 ml)  |                               | <b>.</b> | -18               |
| –<br>Non-ferrous Metal                                   | c   |                  |   | 1                             |          | -18<br>-16<br>-14 |
|  |   |                  | 1.920<br>May 2.02<br>May 2.   |                               | <b>N</b> | -14               |
| copper   |   |                  | - I20   |                               |          |                   |
| tin  |   |                  | = 3(  | 1+                            |          | -12               |
|  |   |                  | 1   | 1                             |          | -10               |
| May3/16.   |   |                  | May3/16   | -                             |          |                   |
| May  |   |                  | May   | 4 <sub>μ</sub> 6 <sub>μ</sub> |          |                   |
| Viscosity @ 40°C   |   |                  |   |                               | 14μ 21μ  | 38µ 71µ           |
| Abnomal  |   |                  | (B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.00<br>(B)1.0 | Abnormal                      |          |                   |
| Abnormal   |   |                  | (mg K   | Base                          |          |                   |
| Base   |   |                  | ਸ਼ 0.50   | Abnormal                      |          |                   |
| Abnormal   |   |                  | <br>™ ∩ cir   |                               |          |                   |
| May3/16 -  |   |                  | May3/16 -   | May3/16                       |          | Mav2/16.          |
| WearCheck USA - 5<br>WCl2286837<br><mark>03981095</mark> | 501 Madia<br>Received<br>Diagnose<br>Diagnost | l :10 <br>ed :12 |   | 3                             |          |                   |

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)

Certificate L2367

Laboratory Sample No. Lab Number **Unique Number Test Package** 

F:

T: (850)873-8256