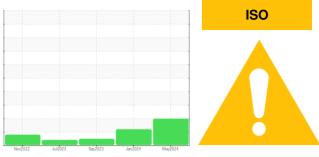


# **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

#### 24-057 Component Hydraulic System Fluid BENZ OIL ULTRA GUARD 552 (300 GAL)

### DIAGNOSIS

#### A 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.

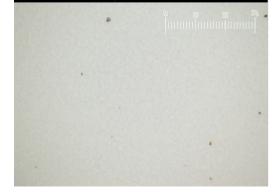
## Contamination

There is a high amount of particulates present in the oil.

#### Fluid Condition

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

Particle Filter (Magn: 200 x)

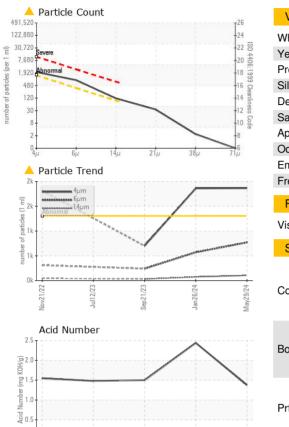


| SAMPLE INFORM        | <b>MATION</b> | method                                    | limit/base | current         | history1    | history2    |  |
|----------------------|---------------|---|------------|-----------------|-------------|-------------|--|
| Sample Number        |               | Client Info                               |            | PH0000241       | PH0000238   | PH0000306   |  |
| Sample Date          |               | Client Info                               |            | 29 May 2024     | 26 Jan 2024 | 21 Sep 2023 |  |
| Machine Age          | hrs           | Client Info                               |            | 0               | 14164       | 0           |  |
| Dil Age              | hrs           | Client Info                               |            | 16132           | 14164       | 12124       |  |
| Oil Changed          |               | Client Info                               |            | Filtered        | Filtered    | Filtered    |  |
| Sample Status        |               |   |            | ABNORMAL        | ATTENTION   | NORMAL      |  |
| CONTAMINATIO         | N             | method                                    | limit/base | current         | history1    | history2    |  |
| Water                |               | WC Method                                 | >0.05      | NEG             | NEG         | NEG         |  |
| WEAR METALS          |               | method                                    | limit/base | current         | history1    | history2    |  |
| ron                  | ppm           | ASTM D5185m                               | >20        | 0               | <1          | <1          |  |
| Chromium             | ppm           | ASTM D5185m                               | >20        | 0               | <1          | 0           |  |
| Nickel               | ppm           | ASTM D5185m                               | >20        | 0               | 0           | 0           |  |
| Fitanium             | ppm           | ASTM D5185m                               |            | 0               | 0           | 0           |  |
| Silver               | ppm           | ASTM D5185m                               |            | 0               | 0           | 0           |  |
| Aluminum             | ppm           | ASTM D5185m                               | >20        | 0               | 0           | 0           |  |
| ₋ead                 | ppm           | ASTM D5185m                               | >20        | 0               | 0           | 0           |  |
| Copper               | ppm           | ASTM D5185m                               | >20        | <1              | 2           | <1          |  |
| Γin                  | ppm           | ASTM D5185m                               | >20        | 0               | <1          | <1          |  |
| /anadium             | ppm           | ASTM D5185m                               |            | 0               | 0           | 0           |  |
| Cadmium              | ppm           | ASTM D5185m                               |            | 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               | <1          | 0           |  |
| Manganese            | ppm           | ASTM D5185m                               |            | 0               | <1          | <1          |  |
| Magnesium            | ppm           | ASTM D5185m                               |            | 0               | 0           | 2           |  |
| Calcium              | ppm           | ASTM D5185m                               |            | 0               | 0           | 5           |  |
| Phosphorus           | ppm           | ASTM D5185m                               |            | 370             | 334         | 328         |  |
| Zinc                 | ppm           | ASTM D5185m                               |            | 10              | 0           | 4           |  |
| Sulfur               | ppm           | ASTM D5185m                               |            | 1559            | 1383        | 1183        |  |
| CONTAMINANTS         | 6             | method                                    | limit/base | current         | history1    | history2    |  |
| Silicon              | ppm           | ASTM D5185m                               | >15        | 2               | 2           | 2           |  |
| Sodium               | ppm           | ASTM D5185m                               |            | 0               | 0           | <1          |  |
| Potassium            | ppm           | ASTM D5185m                               | >20        | 0               | 0           | <1          |  |
| FLUID CLEANLIN       | IESS          | method                                    | limit/base | current         | history1    | history2    |  |
| Particles >4µm       |               | ASTM D7647                                | >1300      | <b>1865</b>     | 1860        | 700         |  |
| Particles >6µm       |               | ASTM D7647                                | >320       | 🔺 769           | 570         | 240         |  |
| Particles >14µm      |               | ASTM D7647                                | >80        | <u> </u>        | 75          | 31          |  |
| Particles >21µm      |               | ASTM D7647                                | >20        | <u> </u>        | 21          | 10          |  |
| ·<br>Particles >38μm |               | ASTM D7647                                | >4         | 2               | 1           | 1           |  |
| Particles >71µm      |               | ASTM D7647                                | >3         | 0               | 0           | 0           |  |
| Dil Cleanliness      |               | ISO 4406 (c)                              | >17/15/13  | <b>18/17/14</b> | 18/16/13    | 17/15/12    |  |
| FLUID DEGRADA        |               | method                                    | limit/base | current         | history1    | history2    |  |
| Acid Number (AN)     | mg KOH/g      | ASTM D8045                                |            | 1.377           | 2.44        | 1.50        |  |
| 51:07) Rev: 1        | ing non ing   | Contact/Location: BRANDON KUHNKE - DEELIN |            |                 |             |             |  |

Report Id: DEELIN [WUSCAR] 06208704 (Generated: 06/22/2024 21:51:07) Rev: 1

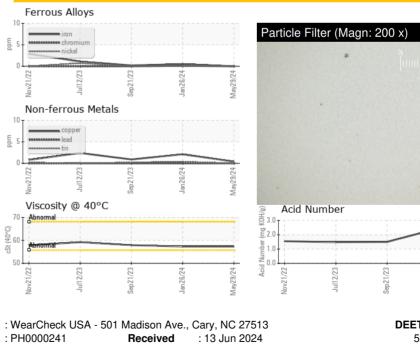
Contact/Location: BRANDON KUHNKE - DEELIN

# **OIL ANALYSIS REPORT**



| 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 PROPERTIES |        | method    | limit/base | current | history1 | history2 |
| Visc @ 40°C      | cSt    | ASTM D445 |            | 57.3    | 57.3     | 57.9     |
| SAMPLE IMAGES    |        | method    | limit/base | current | history1 | history2 |
| Color            |        |           |            |         |          |          |
| Bottom           |        |           |            |         |          |          |
| PrtFilter        |        |           |            |         |          |          |

Nov21/22 Sen21/23 Jan26/24 Viscosity @ 40°C 70 Abnormal 68 66 ()\_064 ()\_000 62 55 60 58 56 Abnormal 54 Sen21/23 Jan 26/24 Vov21/22



: 19 Jun 2024

: 19 Jun 2024 - Jonathan Hester

Tested

Diagnosed

# **DEETER FOUNDRY**

Jan 26/24

Aav29/24

5945 N 70TH ST LINCOLN, NE US 68507 Contact: BRANDON KUHNKE brandon.kuhnke@groupnei.com T: (402)464-7466 F:

Sample No. Lab Number : 06208704 Unique Number : 11076165 Test Package : PLANT (Additional Tests: PrtFilter) Certificate 12367 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)

Laboratory

/lay29/24

GRAPHS

Report Id: DEELIN [WUSCAR] 06208704 (Generated: 06/22/2024 21:51:08) Rev: 1

Contact/Location: BRANDON KUHNKE - DEELIN