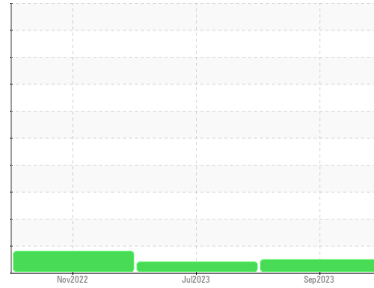




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
24-057

Component
Hydraulic System

Fluid
BENZ OIL ULTRA GUARD 552 (300 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

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

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | | PH0000306 | PH0000239 | PH0000215 |
| Sample Date | Client Info | | | 21 Sep 2023 | 12 Jul 2023 | 21 Nov 2022 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | | 12124 | 11092 | 60 |
| Oil Changed | Client Info | | | Filtered | Filtered | Filtered |
| Sample Status | | | | NORMAL | ABNORMAL | ATTENTION |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m | >20 | <1 | 1 | 3 |
| Chromium | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >20 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 1 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 0 | 0 | <1 |
| Lead | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >20 | <1 | 2 | <1 |
| Tin | ppm | ASTM D5185m | >20 | <1 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |

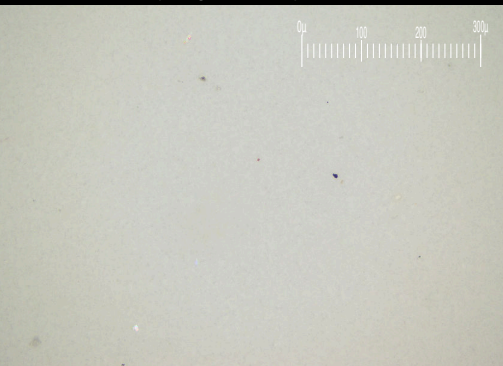
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 2 | 2 | 3 |
| Calcium | ppm | ASTM D5185m | | 5 | 2 | 4 |
| Phosphorus | ppm | ASTM D5185m | | 328 | 362 | 353 |
| Zinc | ppm | ASTM D5185m | | 4 | 8 | 4 |
| Sulfur | ppm | ASTM D5185m | | 1183 | 982 | 1248 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >15 | 2 | 2 | 1 |
| Sodium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | <1 | 3 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|----------|------------|
| Particles >4µm | | ASTM D7647 | >1300 | 700 | --- | ▲ 1815 |
| Particles >6µm | | ASTM D7647 | >320 | 240 | --- | 311 |
| Particles >14µm | | ASTM D7647 | >80 | 31 | --- | 44 |
| Particles >21µm | | ASTM D7647 | >20 | 10 | --- | 18 |
| Particles >38µm | | ASTM D7647 | >4 | 1 | --- | 2 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | --- | 1 |
| Oil Cleanliness | | ISO 4406 (c) | >17/15/13 | 17/15/12 | --- | ▲ 18/15/13 |

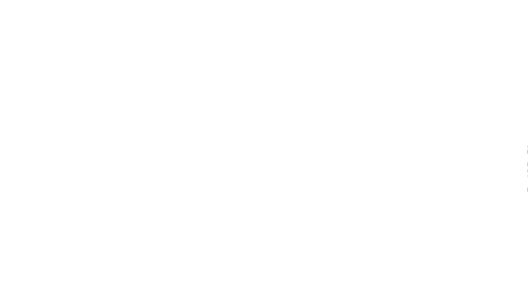
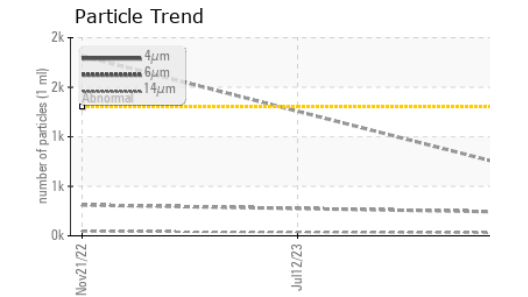
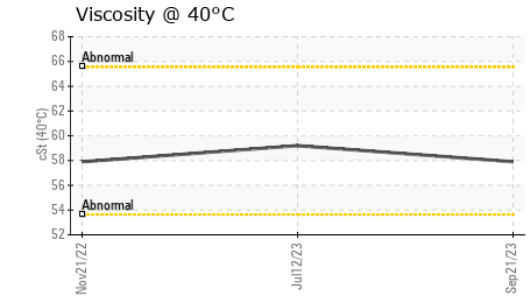
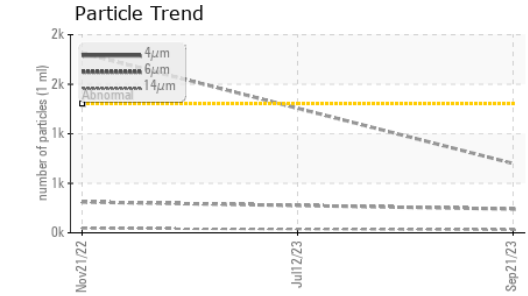
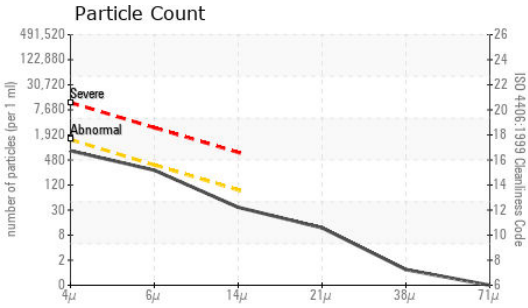
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 1.50 | 1.48 | 1.55 |

Particle Filter (Magn: 200 x)





OIL ANALYSIS REPORT



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PH0000306 **Received** : 27 Sep 2023
Lab Number : 05962212 **Diagnosed** : 28 Sep 2023
Unique Number : 10668763 **Diagnostician** : Doug Bogart
Test Package : PLANT (Additional Tests: PrtFilter)

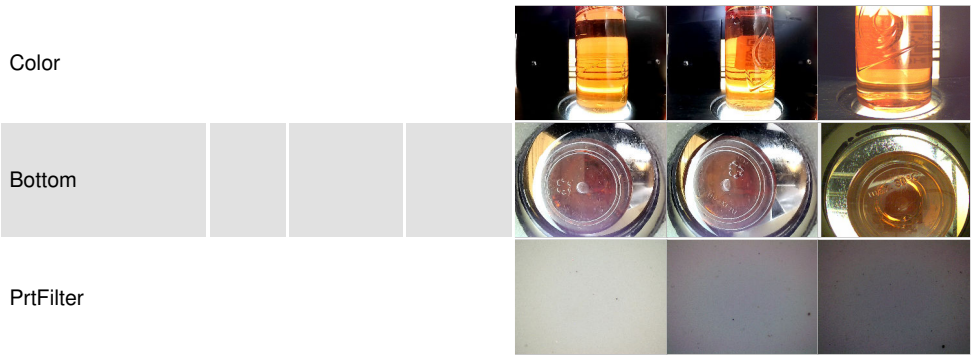
To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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

| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | ▲ MODER | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.05 | NEG | 0.2% |
| Free Water | scalar | *Visual | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 57.9 | 59.2 | 57.9 |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|



GRAPHS

