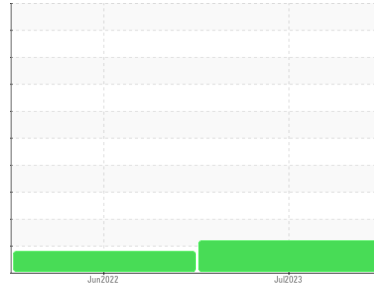




PROBLEM SUMMARY

Area
[569909]
 Machine Id
PALFINGER 100430767
 Component
Hydraulic System
 Fluid
AW HYDRAULIC OIL ISO 68 (--- GAL)

Sample Rating Trend



VISCOSITY

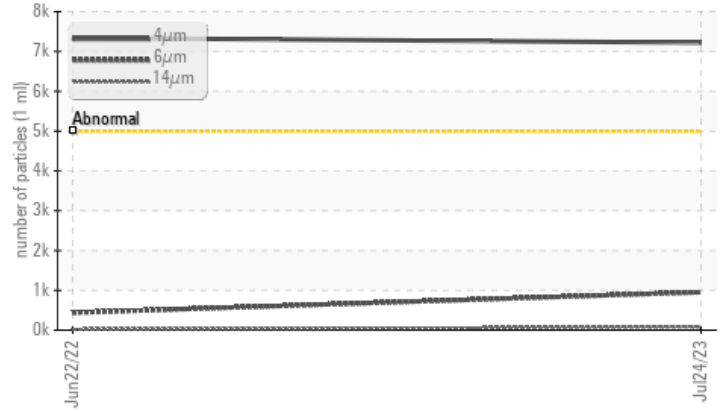


COMPONENT CONDITION SUMMARY

▲ Viscosity @ 40°C



▲ Particle Trend



RECOMMENDATION

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

| Sample Status | | | | ATTENTION | ATTENTION | --- |
|-----------------|-----|--------------|-----------|------------|------------|-----|
| Particles >4µm | | ASTM D7647 | >5000 | ▲ 7221 | ▲ 7342 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ▲ 20/17/13 | ▲ 20/16/11 | --- |
| Visc @ 40°C | cSt | ASTM D445 | 68 | ▲ 52.2 | 52.1 | --- |

Customer Id: PALWESWC
 Sample No.: WC0780321
 Lab Number: 05937827
 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Don Baldrige +1
don.b505@comcast.net

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

22 Jun 2022 Diag: Jonathan Hester

ISO



No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report





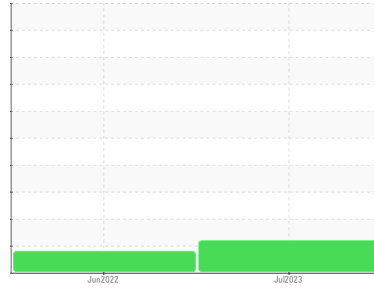
OIL ANALYSIS REPORT

Sample Rating Trend

VISCOSITY



Area
[569909]
 Machine Id
PALFINGER 100430767
 Component
Hydraulic System
 Fluid
AW HYDRAULIC OIL ISO 68 (--- GAL)



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

The oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|----------|
| Sample Number | Client Info | | WC0780321 | WC0383198 | --- |
| Sample Date | Client Info | | 24 Jul 2023 | 22 Jun 2022 | --- |
| Machine Age | hrs | Client Info | 4746 | 0 | --- |
| Oil Age | hrs | Client Info | 0 | 0 | --- |
| Oil Changed | Client Info | | Not Changed | N/A | --- |
| Sample Status | | | ATTENTION | ATTENTION | --- |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >20 | 3 | 2 | --- |
| Chromium | ppm | ASTM D5185m >10 | <1 | <1 | --- |
| Nickel | ppm | ASTM D5185m >10 | 0 | 0 | --- |
| Titanium | ppm | ASTM D5185m | 0 | 0 | --- |
| Silver | ppm | ASTM D5185m | 0 | 0 | --- |
| Aluminum | ppm | ASTM D5185m >10 | 3 | 0 | --- |
| Lead | ppm | ASTM D5185m >10 | 0 | <1 | --- |
| Copper | ppm | ASTM D5185m >75 | <1 | 1 | --- |
| Tin | ppm | ASTM D5185m >10 | 0 | 0 | --- |
| Vanadium | ppm | ASTM D5185m | 0 | 0 | --- |
| Cadmium | ppm | ASTM D5185m | 0 | 0 | --- |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|------------------|-------------|----------|----------|
| Boron | ppm | ASTM D5185m 5 | 0 | 0 | --- |
| Barium | ppm | ASTM D5185m 5 | 0 | 2 | --- |
| Molybdenum | ppm | ASTM D5185m 5 | 0 | <1 | --- |
| Manganese | ppm | ASTM D5185m | 0 | 0 | --- |
| Magnesium | ppm | ASTM D5185m 25 | 4 | 3 | --- |
| Calcium | ppm | ASTM D5185m 200 | 78 | 78 | --- |
| Phosphorus | ppm | ASTM D5185m 300 | 362 | 324 | --- |
| Zinc | ppm | ASTM D5185m 370 | 451 | 421 | --- |
| Sulfur | ppm | ASTM D5185m 2500 | 1362 | 997 | --- |

CONTAMINANTS

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

FLUID CLEANLINESS

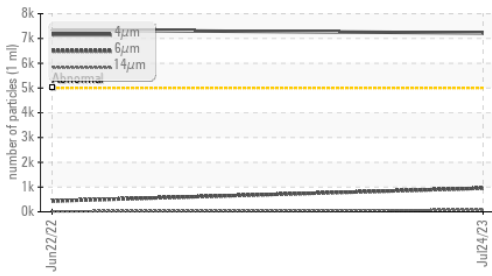
| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|------------|----------|
| Particles >4µm | ASTM D7647 | >5000 | ▲ 7221 | ▲ 7342 | --- |
| Particles >6µm | ASTM D7647 | >1300 | 953 | 438 | --- |
| Particles >14µm | ASTM D7647 | >160 | 78 | 18 | --- |
| Particles >21µm | ASTM D7647 | >40 | 24 | 4 | --- |
| Particles >38µm | ASTM D7647 | >10 | 2 | 0 | --- |
| Particles >71µm | ASTM D7647 | >3 | 0 | 0 | --- |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | ▲ 20/17/13 | ▲ 20/16/11 | --- |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.57 | 0.29 | 0.29 | --- |

OIL ANALYSIS REPORT

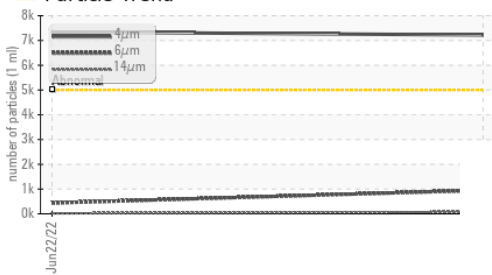
▲ Particle Trend



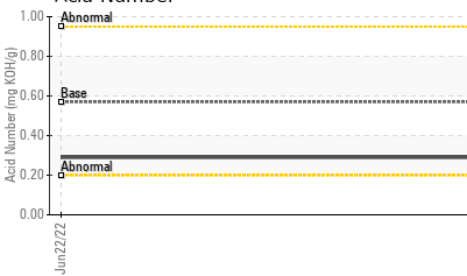
▲ Viscosity @ 40°C



▲ Particle Trend



Acid Number



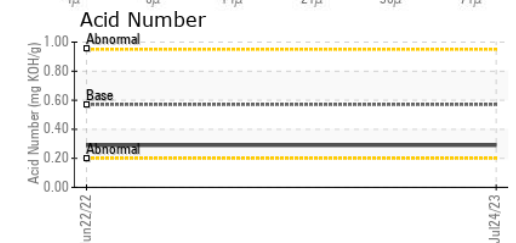
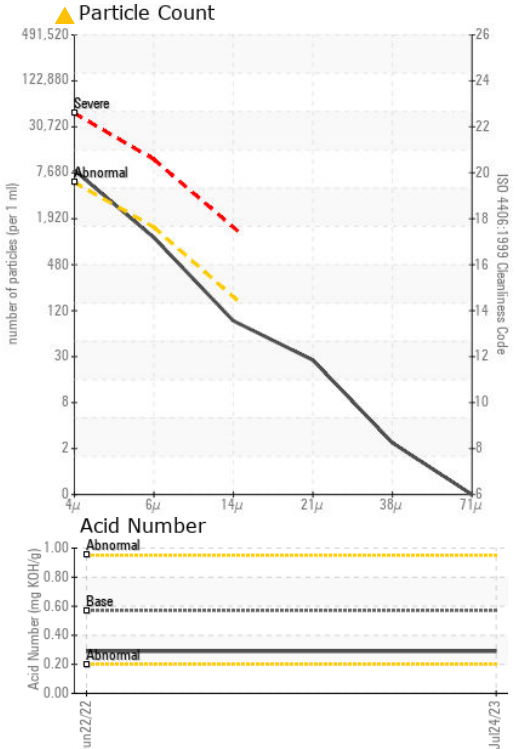
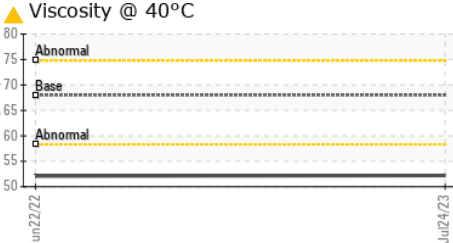
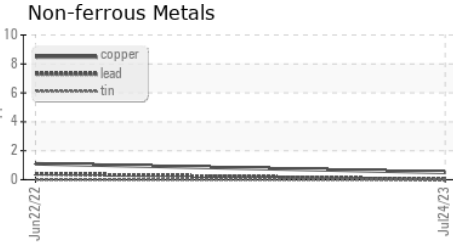
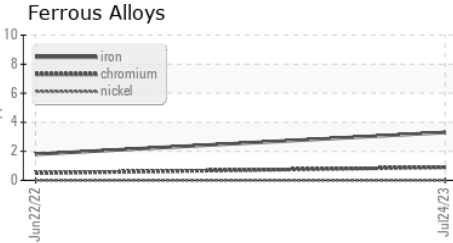
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- |
| Precipitate | scalar | *Visual | NONE | NONE | --- |
| Silt | scalar | *Visual | NONE | NONE | --- |
| Debris | scalar | *Visual | NONE | NONE | VLITE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | --- |
| Appearance | scalar | *Visual | NORML | NORML | --- |
| Odor | scalar | *Visual | NORML | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.1 | NEG | --- |
| Free Water | scalar | *Visual | | NEG | --- |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 68 | ▲ 52.2 | 52.1 | --- |

SAMPLE IMAGES

| method | limit/base | current | history1 | history2 |
|--------|------------|---------|----------|----------|
| Color | | | | no image |
| Bottom | | | | no image |

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0780321 **Received** : 29 Aug 2023
Lab Number : **05937827** **Diagnosed** : 31 Aug 2023
Unique Number : 10628439 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: PQ)

PALFINGER - BRANCH 290
 13176 43RD RD N
 WEST PALM BEACH, FL
 US 33411
 Contact: DENIS PINNOCK
 denispinnock95@gmail.com
 T: (407)236-2433
 F:

Certificate L2367
 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)