



PROBLEM SUMMARY

Sample Rating Trend



ISO



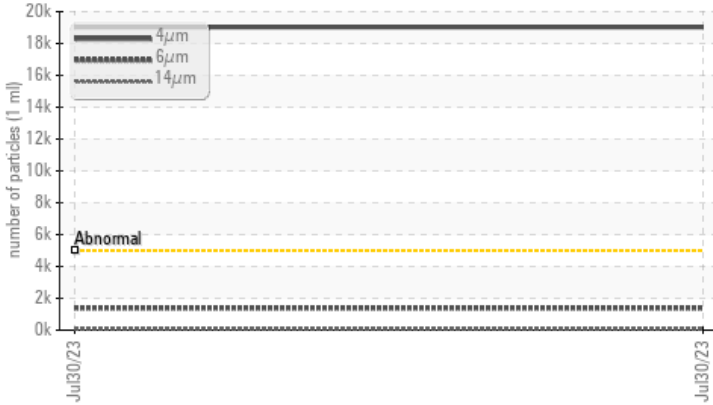
Machine Id
PALFINGER T71 - NATIONAL TRENCH

Component
Hydraulic System

Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) AW HYDRAULIC OIL ISO 46. Please confirm.

PROBLEMATIC TEST RESULTS

| Sample Status | | | ABNORMAL | --- | --- |
|-----------------|--------------|-----------|-------------------|-----|-----|
| Particles >4µm | ASTM D7647 | >5000 | ▲ 19027 | --- | --- |
| Particles >6µm | ASTM D7647 | >1300 | ▲ 1388 | --- | --- |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | ▲ 21/18/13 | --- | --- |

Customer Id: PALCAL
 Sample No.: WC0780062
 Lab Number: 05961720
 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

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

RECOMMENDED ACTIONS

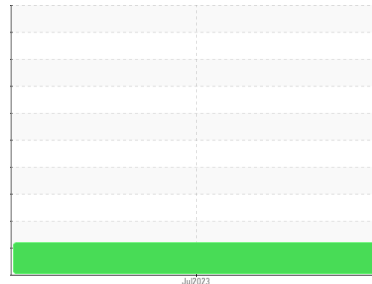
| Action | Status | Date | Done By | Description |
|----------------------|--------|------|---------|---|
| Resample | --- | --- | ? | We recommend an early resample to monitor this condition. |
| Alert | --- | --- | ? | The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) AW HYDRAULIC OIL ISO 46. Please confirm. |
| Information Required | --- | --- | ? | The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) AW HYDRAULIC OIL ISO 46. Please confirm. |

HISTORICAL DIAGNOSIS



OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
PALFINGER T71 - NATIONAL TRENCH

Component
Hydraulic System

Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

DIAGNOSIS

▲ Recommendation

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) AW HYDRAULIC OIL ISO 46. Please confirm.

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 AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-----------------|--------------------|----------|----------|
| Sample Number | Client Info | WC0780062 | --- | --- |
| Sample Date | Client Info | 30 Jul 2023 | --- | --- |
| Machine Age | mls Client Info | 104733 | --- | --- |
| Oil Age | mls Client Info | 0 | --- | --- |
| Oil Changed | Client Info | N/A | --- | --- |
| Sample Status | | ABNORMAL | --- | --- |

WEAR METALS

| method | limit/base | current | history1 | history2 |
|--------------|-----------------|--------------|----------|----------|
| Iron ppm | ASTM D5185m >20 | 6 | --- | --- |
| Chromium ppm | ASTM D5185m >10 | 0 | --- | --- |
| Nickel ppm | ASTM D5185m >10 | 0 | --- | --- |
| Titanium ppm | ASTM D5185m | <1 | --- | --- |
| Silver ppm | ASTM D5185m | 0 | --- | --- |
| Aluminum ppm | ASTM D5185m >10 | 3 | --- | --- |
| Lead ppm | ASTM D5185m >10 | 0 | --- | --- |
| Copper ppm | ASTM D5185m >75 | 2 | --- | --- |
| Tin ppm | ASTM D5185m >10 | <1 | --- | --- |
| Vanadium ppm | ASTM D5185m | <1 | --- | --- |
| Cadmium ppm | ASTM D5185m | <1 | --- | --- |

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 | <1 | --- | --- |
| Magnesium ppm | ASTM D5185m 25 | 1 | --- | --- |
| Calcium ppm | ASTM D5185m 200 | 127 | --- | --- |
| Phosphorus ppm | ASTM D5185m 300 | 374 | --- | --- |
| Zinc ppm | ASTM D5185m 370 | 417 | --- | --- |
| Sulfur ppm | ASTM D5185m 2500 | 3849 | --- | --- |

CONTAMINANTS

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

FLUID CLEANLINESS

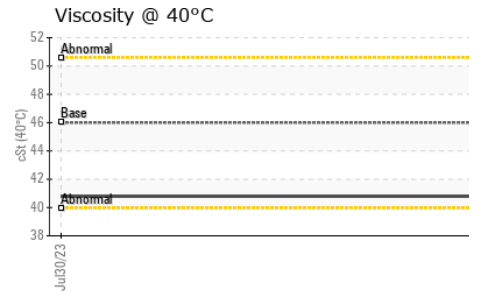
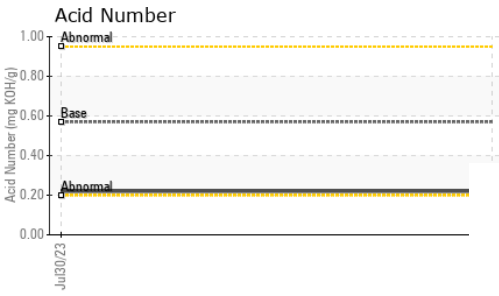
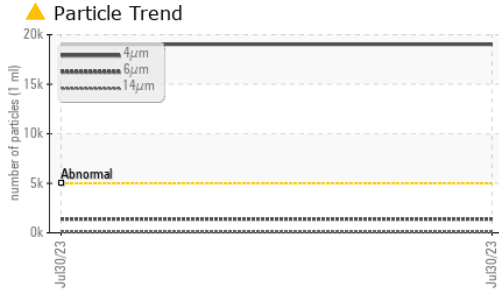
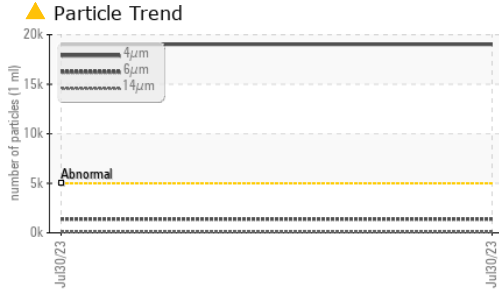
| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|-------------------|----------|----------|
| Particles >4µm | ASTM D7647 >5000 | ▲ 19027 | --- | --- |
| Particles >6µm | ASTM D7647 >1300 | ▲ 1388 | --- | --- |
| Particles >14µm | ASTM D7647 >160 | 74 | --- | --- |
| Particles >21µm | ASTM D7647 >40 | 22 | --- | --- |
| Particles >38µm | ASTM D7647 >10 | 3 | --- | --- |
| Particles >71µm | ASTM D7647 >3 | 1 | --- | --- |
| Oil Cleanliness | ISO 4406 (c) >19/17/14 | ▲ 21/18/13 | --- | --- |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 |
|---------------------------|-----------------|-------------|----------|----------|
| Acid Number (AN) mg KOH/g | ASTM D8045 0.57 | 0.22 | --- | --- |



OIL ANALYSIS REPORT



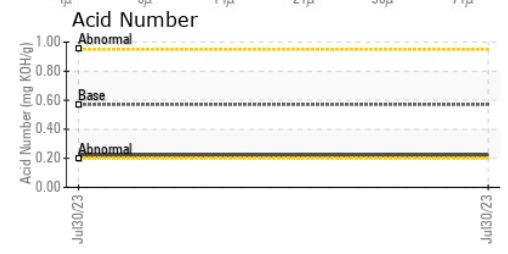
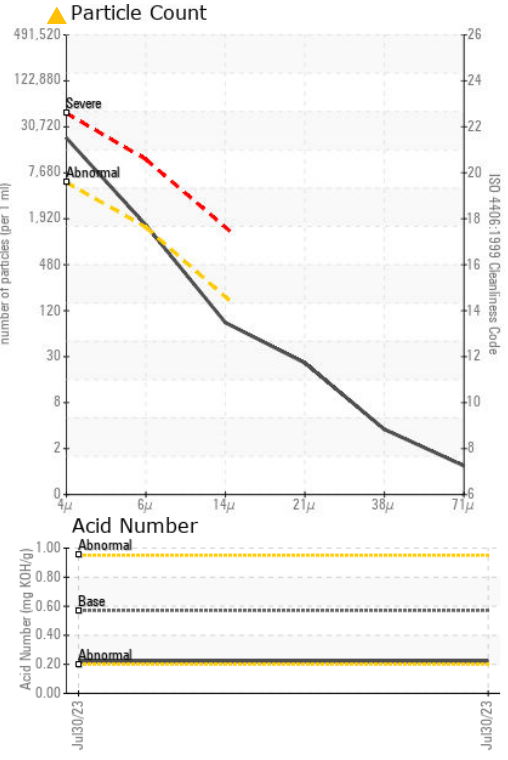
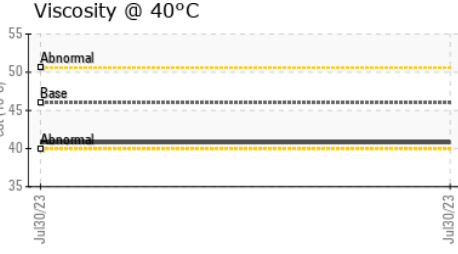
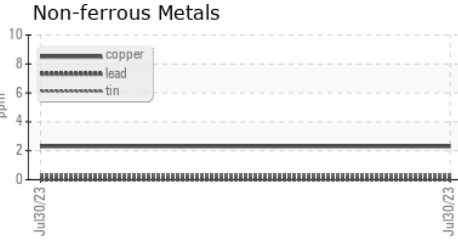
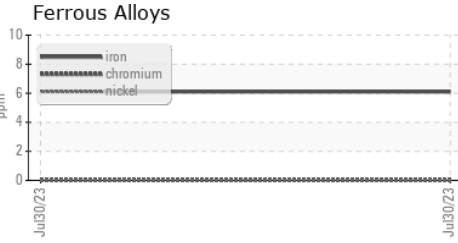
| VISUAL | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|----------|----------|-----|
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Precipitate | scalar | *Visual | NONE | NONE | --- | --- |
| Silt | scalar | *Visual | NONE | NONE | --- | --- |
| Debris | scalar | *Visual | NONE | NONE | --- | --- |
| 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 | 46 | 40.8 | --- | --- |

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

| | | | | | |
|--------|--|--|--|----------|----------|
| Color | | | | no image | no image |
| Bottom | | | | no image | no image |

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0780062 **Received** : 26 Sep 2023
Lab Number : 05961720 **Diagnosed** : 28 Sep 2023
Unique Number : 10662933 **Diagnostician** : Wes Davis
Test Package : CONST

PALFINGER
 CALIFORNIA 291
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 Contact: S. GARIBAY
 s.garibay@palfinger.com

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)