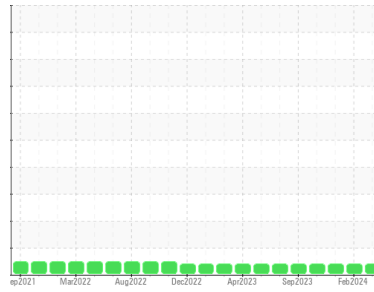




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id
TMC - P15 (S/N W102018)
 Component
Hydraulic System
 Fluid
AW HYDRAULIC OIL ISO 68 (--- QTS)

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

Viscosity of sample indicates oil is within ISO 46 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | | PTK0005490 | PTK0005473 | PTK0005087 |
| Sample Date | Client Info | | | 20 Apr 2024 | 20 Feb 2024 | 03 Jan 2024 |
| Machine Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | Client Info | | | N/A | N/A | N/A |
| Sample Status | | | | ATTENTION | ATTENTION | ATTENTION |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---------------|-----------|--------|------------|------------|----------|----------|
| Water | WC Method | | >0.1 | NEG | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|----------|----------|----------|
| Iron | ppm | ASTM D5185m | >20 | 1 | 2 | <1 |
| Chromium | ppm | ASTM D5185m | >10 | 0 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | 0 | <1 | 0 |
| Lead | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >75 | 5 | 4 | 5 |
| Tin | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | 0 |

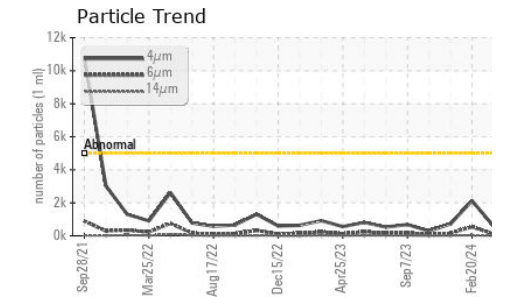
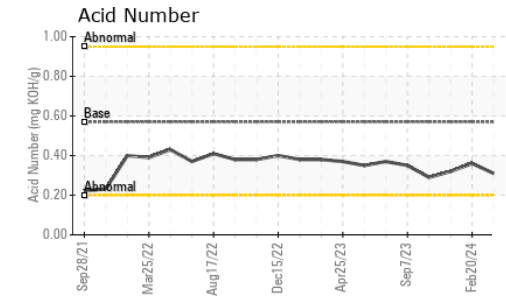
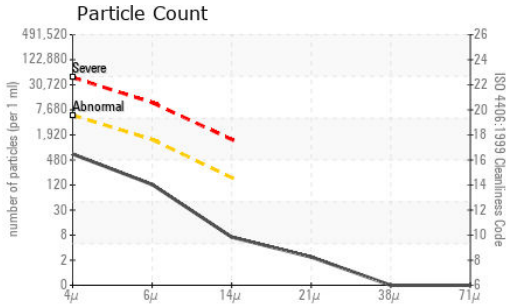
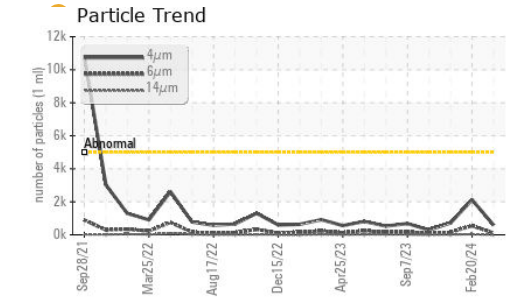
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | 5 | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | 5 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 5 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 25 | <1 | 1 | 0 |
| Calcium | ppm | ASTM D5185m | 200 | 49 | 53 | 51 |
| Phosphorus | ppm | ASTM D5185m | 300 | 375 | 340 | 314 |
| Zinc | ppm | ASTM D5185m | 370 | 434 | 455 | 423 |
| Sulfur | ppm | ASTM D5185m | 2500 | 3045 | 3196 | 2664 |

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

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|----------|----------|
| Particles >4µm | | ASTM D7647 | >5000 | 585 | 2122 | 719 |
| Particles >6µm | | ASTM D7647 | >1300 | 109 | 546 | 152 |
| Particles >14µm | | ASTM D7647 | >160 | 6 | 36 | 17 |
| Particles >21µm | | ASTM D7647 | >40 | 2 | 9 | 6 |
| Particles >38µm | | ASTM D7647 | >10 | 0 | 1 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | 16/14/10 | 18/16/12 | 17/14/11 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.57 | 0.31 | 0.36 | 0.32 |

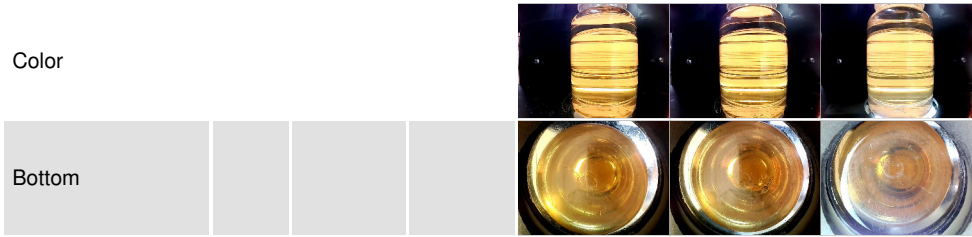
OIL ANALYSIS REPORT



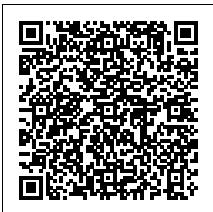
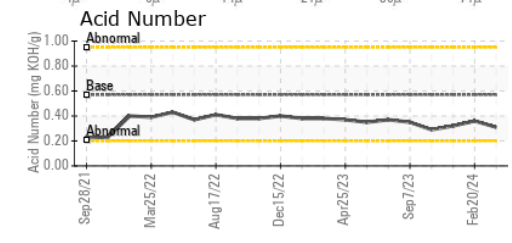
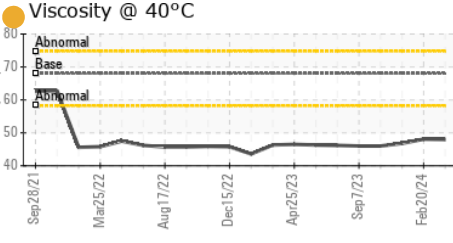
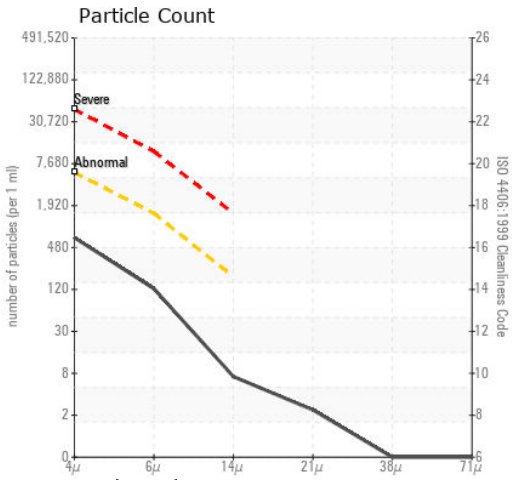
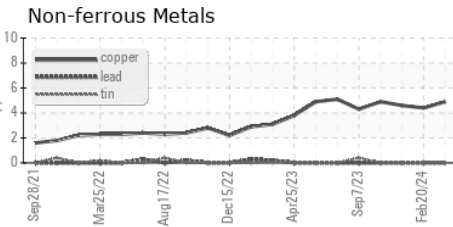
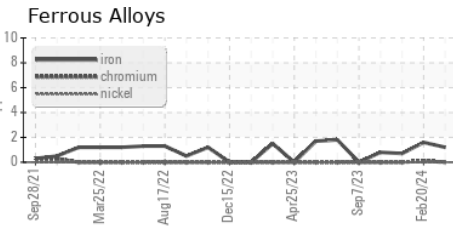
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE |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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 68 | ● 48.0 | ● 48.1 | ● 46.8 |

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PTK0005490 **Received** : 11 Jun 2024
Lab Number : 06206448 **Tested** : 13 Jun 2024
Unique Number : 11073909 **Diagnosed** : 13 Jun 2024 - Don Baldrige
Test Package : MOB 2

GENERAL PATTERN
 3075 84TH LN NE
 BLAINE, MN
 US 55449

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)

Contact: MIKE METHER
mmether@generalpattern.com

T:
F: