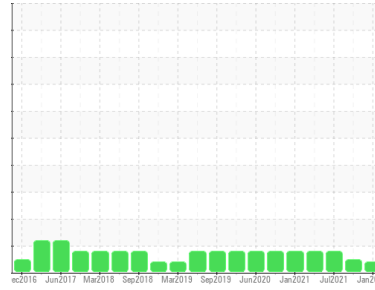




OIL ANALYSIS REPORT

Sample Rating Trend



VIS DEBRIS



Area
RING CONTAINER
Machine Id
EXTRUDER K - MAIN PLANT
Component
Hydraulic Power Pack
Fluid
SHELL TELLUS 46 (--- GAL)

DIAGNOSIS

▲ Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Wear

All component wear rates are normal.

▲ Contamination

Moderate concentration of visible dirt/debris present in the oil.

Fluid Condition

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

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | WC0648043 | WC0606523 | WC0596741 |
| Sample Date | Client Info | | 18 Jan 2022 | 20 Oct 2021 | 06 Jul 2021 |
| Machine Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Age | hrs | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | Not Changed | Not Changed | N/A |
| Sample Status | | | ABNORMAL | NORMAL | ABNORMAL |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.05 | NEG | NEG | NEG |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >20 | 15 | 16 | 15 |
| Chromium | ppm | ASTM D5185m >20 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m >20 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >20 | <1 | 0 | 0 |
| Lead | ppm | ASTM D5185m >20 | <1 | <1 | <1 |
| Copper | ppm | ASTM D5185m >20 | 19 | 20 | ▲ 23 |
| Tin | ppm | ASTM D5185m >20 | 0 | <1 | <1 |
| Antimony | ppm | ASTM D5185m | 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 0.0 | <1 | 2 | 2 |
| Barium | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m 0 | 118 | 129 | 127 |
| Manganese | ppm | ASTM D5185m | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m 11 | 0 | <1 | <1 |
| Calcium | ppm | ASTM D5185m 35 | 48 | 50 | 54 |
| Phosphorus | ppm | ASTM D5185m 266 | 382 | 448 | 436 |
| Zinc | ppm | ASTM D5185m 276 | 362 | 397 | 383 |
| Sulfur | ppm | ASTM D5185m 1847 | 2445 | 2490 | 2568 |

CONTAMINANTS

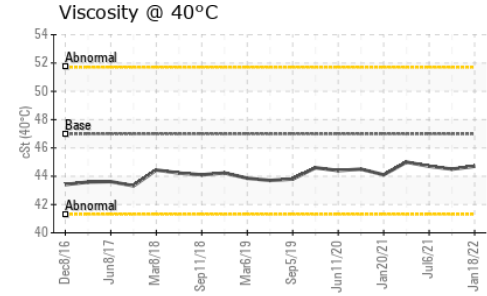
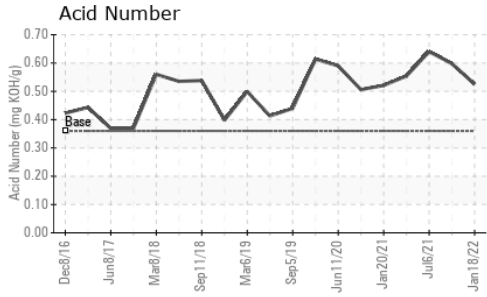
| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >15 | 2 | 3 | 3 |
| Sodium | ppm | ASTM D5185m | <1 | <1 | <1 |
| Potassium | ppm | ASTM D5185m >20 | 0 | 0 | 0 |

FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|------------|----------|----------|
| Particles >4µm | ASTM D7647 | >5000 | --- | 1021 | 755 |
| Particles >6µm | ASTM D7647 | >1300 | --- | 268 | 191 |
| Particles >14µm | ASTM D7647 | >160 | --- | 17 | 25 |
| Particles >21µm | ASTM D7647 | >40 | --- | 1 | 8 |
| Particles >38µm | ASTM D7647 | >10 | --- | 0 | 1 |
| Particles >71µm | ASTM D7647 | >3 | --- | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | --- | 17/15/11 | 17/15/12 |



OIL ANALYSIS REPORT

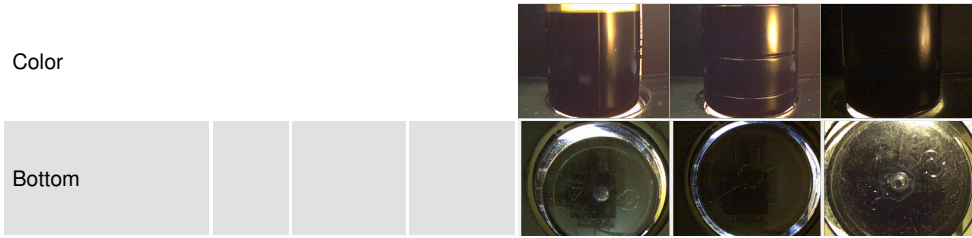


| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|--------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.36 | 0.525 | 0.598 | 0.640 |

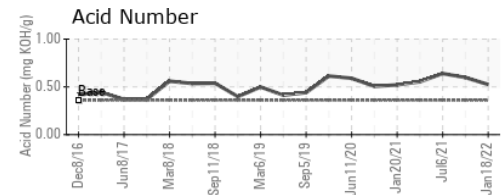
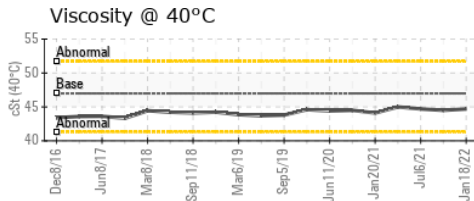
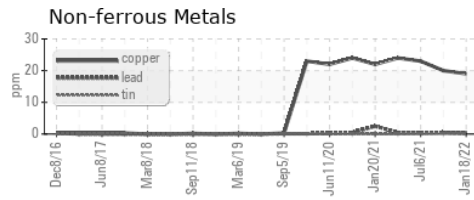
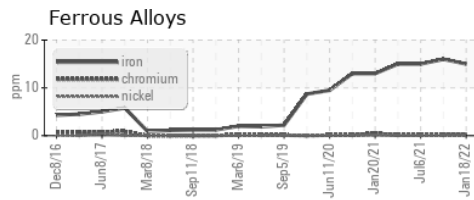
| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|---------|------------|----------------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | ▲ MODER | 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 | 46.99 | 44.7 | 44.5 | 44.7 |

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



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0648043
Lab Number : 05447639
Unique Number : 9816833
Test Package : IND 2
Received : 20 Jan 2022
Tested : 21 Jan 2022
Diagnosed : 21 Jan 2022 - Don Baldrige

MOTOR TECHNOLOGY INC
 515 WILLOW SPRINGS LN
 YORK, PA
 US 17406

Contact: Bill Trimmer
 btrimmer@motortechinc.com

T: (717)266-4045

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)

F: