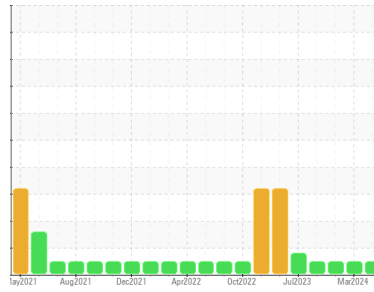




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

Pulp Mill A-Line

Machine Id

A-Line Unbleached ThickStockPmp Drive End (S/N 0241-02-05-010-030-010-030)

Component

Pump Drive

Fluid

ROYAL PURPLE SYNERGY 90/220 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The water content is negligible. There is no indication of any contamination 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 | | | RP0039750 | RP0039767 | RP0038215 |
| Sample Date | Client Info | | | 15 May 2024 | 22 Mar 2024 | 28 Feb 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 | | | | NORMAL | NORMAL | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m | >150 | 27 | 38 | 1 |
| Chromium | ppm | ASTM D5185m | >10 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >10 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Silver | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | 3 | 2 | 3 |
| Lead | ppm | ASTM D5185m | >100 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >50 | 1 | 0 | <1 |
| Tin | ppm | ASTM D5185m | >10 | <1 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Cadmium | ppm | ASTM D5185m | | <1 | 0 | <1 |

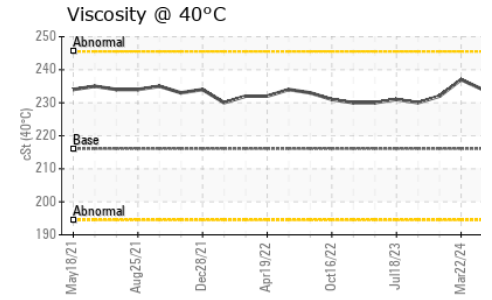
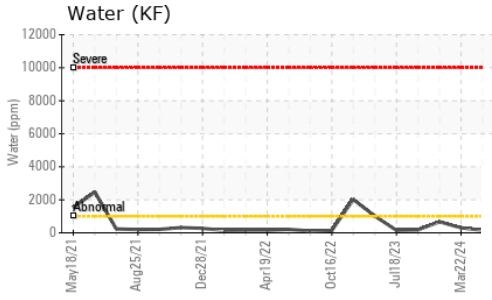
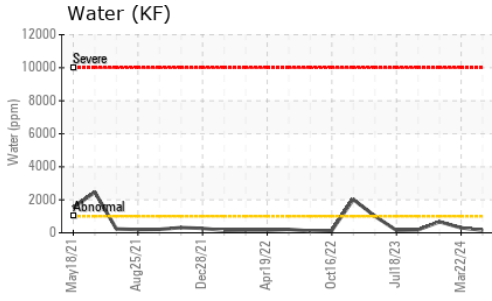
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Barium | ppm | ASTM D5185m | | 2 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 62 | 73 | <1 |
| Calcium | ppm | ASTM D5185m | | 9 | 3 | 0 |
| Phosphorus | ppm | ASTM D5185m | 370 | 32 | 7 | 213 |
| Zinc | ppm | ASTM D5185m | | 6 | 0 | 12 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >50 | 11 | 2 | 6 |
| Sodium | ppm | ASTM D5185m | | 2 | <1 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 0 | 1 |
| Water | % | ASTM D6304 | >0.1 | 0.015 | 0.030 | 0.067 |
| ppm Water | ppm | ASTM D6304 | >1000 | 156 | 302 | 670 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 1.33 | 0.42 | 0.45 | 0.42 |

| 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 | NONE | 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 | >0.1 | NEG | NEG | 0.2% |
| Free Water | scalar | *Visual | | NEG | NEG | NEG |

OIL ANALYSIS REPORT



| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|------------------|-----|-----------|------------|------------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 216.1 | 234 | 237 | 232 |

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

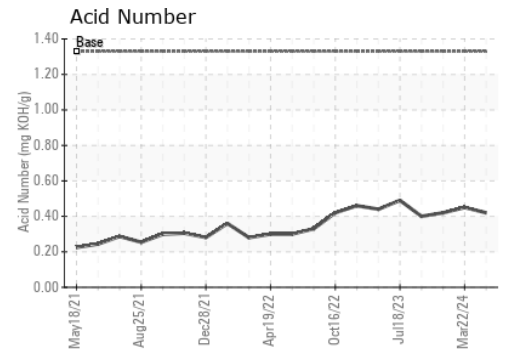
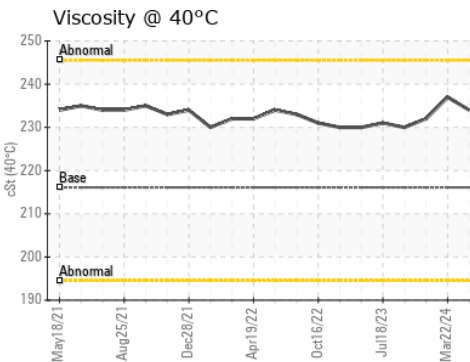
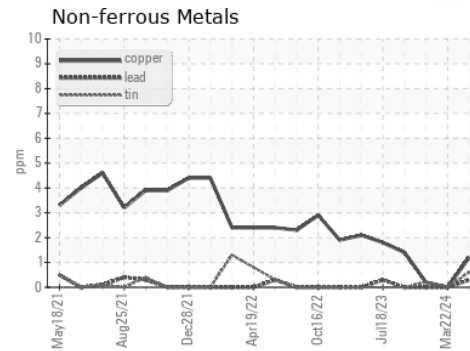
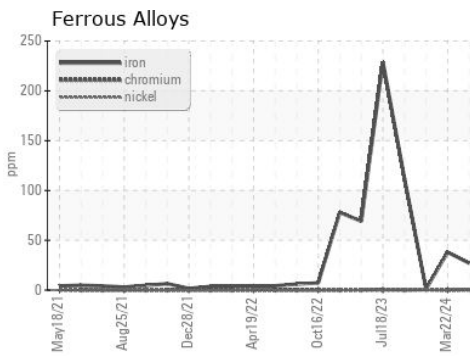
Color



Bottom



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0039750
Lab Number : **06181444**
Unique Number : 11032770
Test Package : IND 2

Received : 16 May 2024
Tested : 17 May 2024
Diagnosed : 20 May 2024 - Angela Borella

GRAPHIC PACKAGING INTERNATIONAL
 9978 FM 3129
 QUEEN CITY, TX
 US 75572

Contact: DAVID COTHREN
 david.cothren@graphicpkg.com

T: (903)796-1690
 F: (903)796-1969

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)