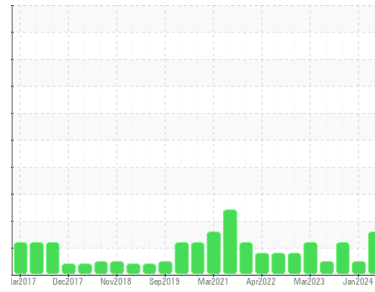




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
BUSCH CONVERSION P-21 CV-16 VACUUM (S/N U144700130)
 Component
Pump
 Fluid
USPI VAC 100 (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates 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 | USPM36789 | USPM30662 | USPM31065 |
| Sample Date | Client Info | 22 Apr 2024 | 17 Jan 2024 | 18 Oct 2023 |
| Machine Age | hrs | Client Info | 0 | 0 |
| Oil Age | hrs | Client Info | 0 | 0 |
| Oil Changed | Client Info | N/A | N/A | N/A |
| Sample Status | | ABNORMAL | NORMAL | ATTENTION |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|----------|------------|-----------------|--------------|----------|----|
| Iron | ppm | ASTM D5185m >90 | 40 | 9 | 13 |
| Chromium | ppm | ASTM D5185m >5 | <1 | 0 | 0 |
| Nickel | ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m >3 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >7 | <1 | <1 | <1 |
| Lead | ppm | ASTM D5185m >12 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m >30 | 0 | 0 | 0 |
| Tin | ppm | ASTM D5185m >9 | <1 | <1 | <1 |
| 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 | 0 | 0 |
| Barium | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | <1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m 0 | <1 | 1 | 0 |
| Calcium | ppm | ASTM D5185m 0 | <1 | 1 | 0 |
| Phosphorus | ppm | ASTM D5185m 1800 | 916 | 924 | 939 |
| Zinc | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m 0 | 0 | 13 | 6 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|------------------|--------------|----------|-------|
| Silicon | ppm | ASTM D5185m >60 | 3 | 2 | 2 |
| Sodium | ppm | ASTM D5185m | <1 | 0 | 0 |
| Potassium | ppm | ASTM D5185m >20 | <1 | 0 | <1 |
| Water | % | ASTM D6304 >.1 | 0.053 | 0.026 | 0.037 |
| ppm Water | ppm | ASTM D6304 >1000 | 537 | 262 | 370.7 |

FLUID CLEANLINESS

| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|-------------------|----------|------------|
| Particles >4µm | ASTM D7647 >5000 | ▲ 81950 | 4400 | ● 8211 |
| Particles >6µm | ASTM D7647 >1300 | ▲ 22395 | 1173 | ● 2174 |
| Particles >14µm | ASTM D7647 >160 | ▲ 193 | 125 | 94 |
| Particles >21µm | ASTM D7647 >40 | 15 | 37 | 22 |
| Particles >38µm | ASTM D7647 >10 | 1 | 2 | 1 |
| Particles >71µm | ASTM D7647 >3 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) >19/17/14 | ▲ 24/22/15 | 19/17/14 | ● 20/18/14 |

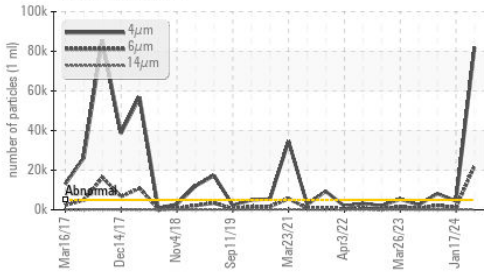
FLUID DEGRADATION

| method | limit/base | current | history1 | history2 | |
|------------------|------------|-----------------|-------------|----------|------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.05 | 0.25 | 0.21 | 0.22 |

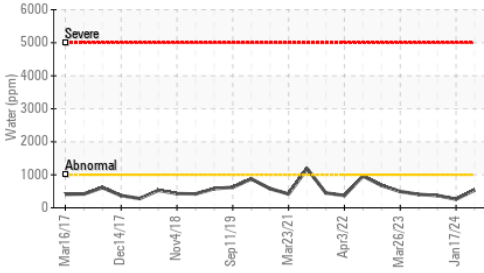


OIL ANALYSIS REPORT

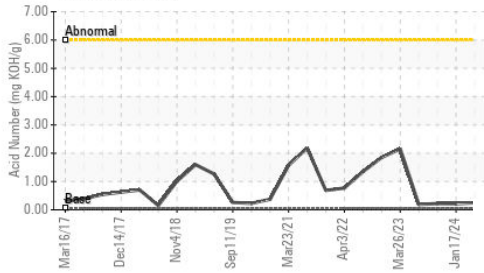
▲ Particle Trend



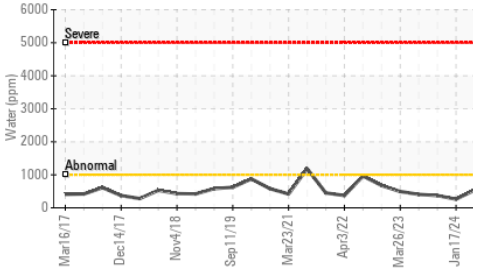
Water (KF)



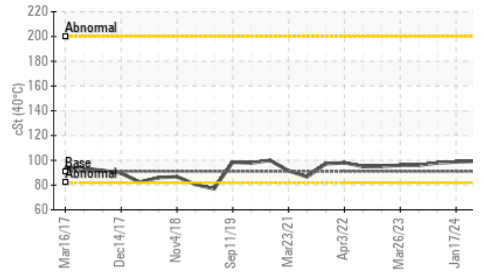
Acid Number



Water (KF)



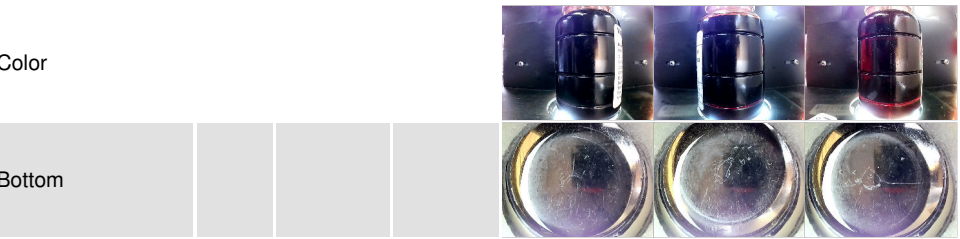
Viscosity @ 40°C



| 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 | >.1 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

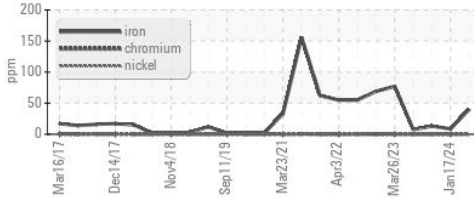
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 91 | 99.2 | 98.7 |

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

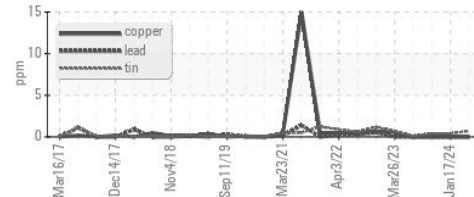


GRAPHS

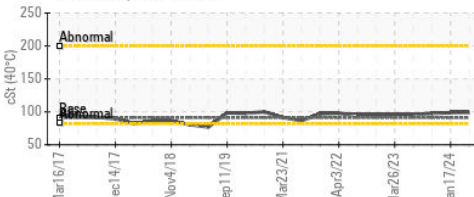
Ferrous Alloys



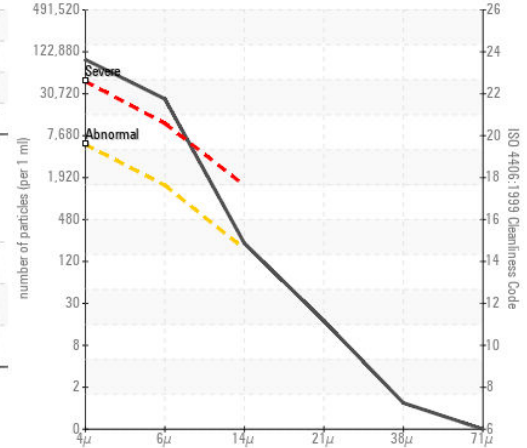
Non-ferrous Metals



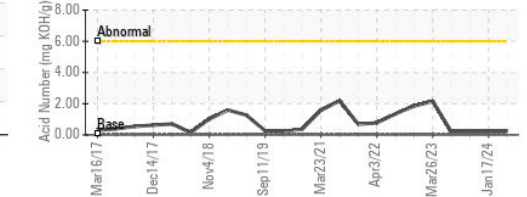
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : USPM36789

Lab Number : 06157730

Unique Number : 10993153

Test Package : IND 2

Received : 23 Apr 2024

Tested : 24 Apr 2024

Diagnosed : 25 Apr 2024 - Jonathan Hester

SMITHFIELD FOOD - TARHEEL

15855 HWY. 87 WEST

TARHEEL, NC

US 28392

Contact: SERVICE MANAGER

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)

T:

F: