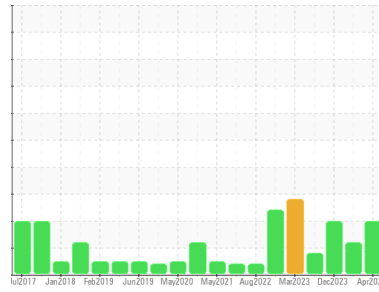




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
FAB-CV 2-PUMP 2 (S/N DR8630.U135)
 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 | | USPM36801 | USP0005328 | USPM31694 |
| Sample Date | Client Info | | 23 Apr 2024 | 28 Jan 2024 | 28 Dec 2023 |
| 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 | | | ABNORMAL | ABNORMAL | ABNORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|-----------------|----------|----------|----------|
| Iron | ppm | ASTM D5185m >90 | 0 | 0 | 0 |
| Chromium | ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m >3 | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >7 | 0 | 0 | <1 |
| Lead | ppm | ASTM D5185m >12 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m >30 | 0 | 0 | 0 |
| Tin | ppm | ASTM D5185m >9 | 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 | 0 | 0 |
| Barium | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | 0 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Calcium | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m 1800 | 741 | 789 | 733 |
| Zinc | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m 0 | 27 | 0 | 0 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >60 | 7 | 4 | 4 |
| Sodium | ppm | ASTM D5185m | 0 | 0 | 3 |
| Potassium | ppm | ASTM D5185m >20 | 0 | 0 | 2 |
| Water | % | ASTM D6304 >.1 | 0.025 | 0.030 | 0.025 |
| ppm Water | ppm | ASTM D6304 >1000 | 260 | 302 | 254 |

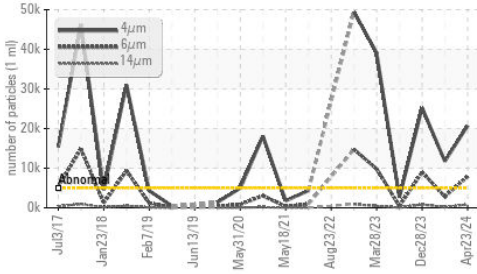
FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|------------|------------|
| Particles >4µm | ASTM D7647 | >5000 | ▲ 20724 | ▲ 11753 | ▲ 25241 |
| Particles >6µm | ASTM D7647 | >1300 | ▲ 7884 | ▲ 2837 | ▲ 8994 |
| Particles >14µm | ASTM D7647 | >160 | ▲ 850 | 155 | ▲ 841 |
| Particles >21µm | ASTM D7647 | >40 | ▲ 245 | 32 | ▲ 227 |
| Particles >38µm | ASTM D7647 | >10 | 8 | 1 | 10 |
| Particles >71µm | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | ▲ 22/20/17 | ▲ 21/19/14 | ▲ 22/20/17 |

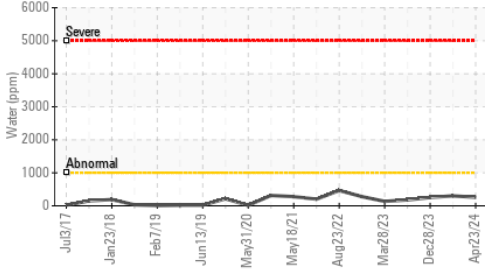
FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|--------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.05 | 0.052 | 0.085 | 0.055 |

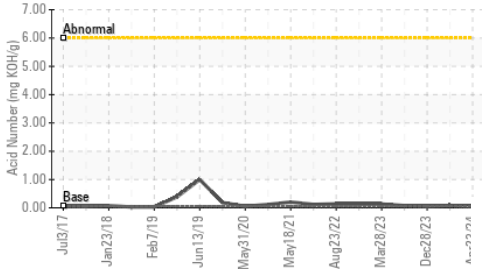
Particle Trend



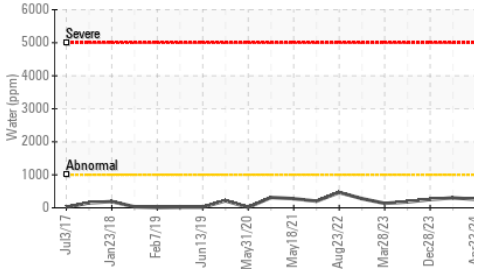
Water (KF)



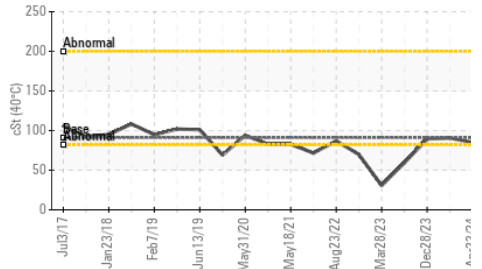
Acid Number



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 | NONE |
| 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 |

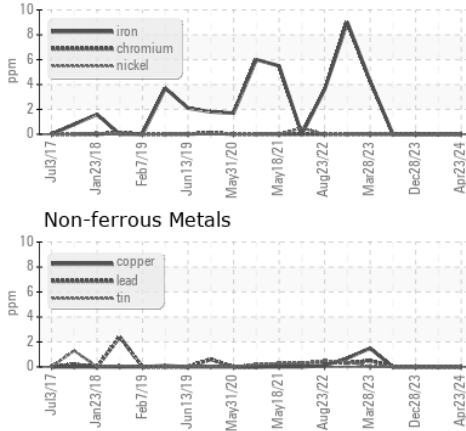
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 91 | 85.1 | 90.6 | 89.4 |

SAMPLE IMAGES

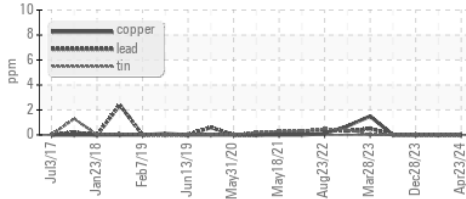
| method | limit/base | current | history1 | history2 |
|--------|------------|---------|----------|----------|
| Color | | | | |
| Bottom | | | | |

GRAPHS

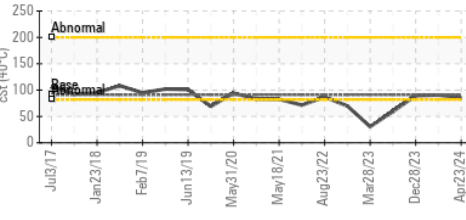
Ferrous Alloys



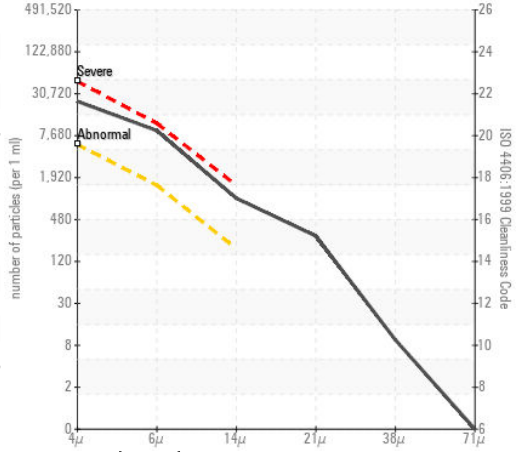
Non-ferrous Metals



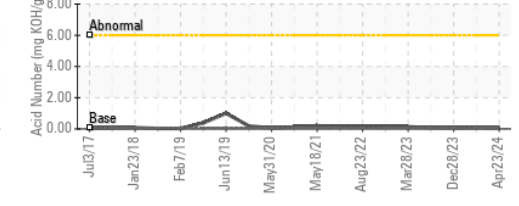
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USPM36801 **Received** : 24 Apr 2024
Lab Number : 06159142 **Tested** : 25 Apr 2024
Unique Number : 10994565 **Diagnosed** : 26 Apr 2024 - Jonathan Hester
Test Package : IND 2

JBS - TOLLESON
 TOLLESON, AZ
 US 85353
 Contact:

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)