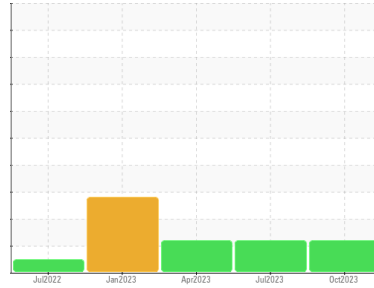




PROBLEM SUMMARY

Sample Rating Trend

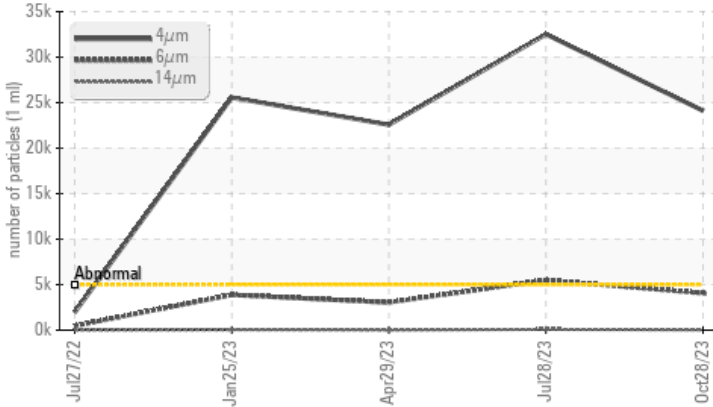
ISO



Area
VACUUM PUMP
 Machine Id
B70083-Bottom BUSCH ROTARY VANE
 Component
Vacuum Pump
 Fluid
BUSCH R530S (7 LTR)

COMPONENT CONDITION SUMMARY

▲ Particle Trend



RECOMMENDATION

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

PROBLEMATIC TEST RESULTS

| Sample Status | | | ABNORMAL | ABNORMAL | ABNORMAL |
|-----------------|--------------|-----------|------------|------------|------------|
| Particles >4µm | ASTM D7647 | >5000 | ▲ 24113 | ▲ 32517 | ▲ 22571 |
| Particles >6µm | ASTM D7647 | >1300 | ▲ 4057 | ▲ 5498 | ▲ 3042 |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | ▲ 22/19/12 | ▲ 22/20/14 | ▲ 22/19/11 |

Customer Id: PAPOMA
 Sample No.: WC0838694
 Lab Number: 05997938
 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Don Baldrige +1
don.b505@comcast.net

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|---------------|--------|------|---------|---|
| Change Filter | --- | --- | ? | We recommend you service the filters on this component if applicable. |

HISTORICAL DIAGNOSIS

28 Jul 2023 Diag: Don Baldrige

ISO



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



29 Apr 2023 Diag: Doug Bogart

ISO



We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



25 Jan 2023 Diag: Jonathan Hester

DEGRADATION



We advise that you check for a possible overheat condition. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is above the recommended limit. The oil viscosity is higher than normal. The oil is no longer serviceable.

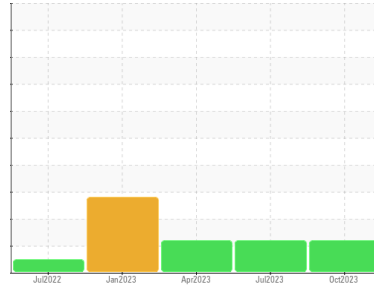
view report





OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
VACUUM PUMP
 Machine Id
B70083-Bottom BUSCH ROTARY VANE
 Component
Vacuum Pump
 Fluid
BUSCH R530S (7 LTR)

DIAGNOSIS

Recommendation

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

Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 14 microns in size) 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 | WC0838694 | WC0814292 | WC0755361 |
| Sample Date | Client Info | 28 Oct 2023 | 28 Jul 2023 | 29 Apr 2023 |
| Machine Age | hrs | Client Info | 0 | 0 |
| Oil Age | hrs | Client Info | 0 | 0 |
| Oil Changed | Client Info | Not Changed | Not Changed | Not Changed |
| Sample Status | | ABNORMAL | ABNORMAL | ABNORMAL |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|----------|------------|-----------------|--------------|----------|----|
| Iron | ppm | ASTM D5185m >20 | 11 | 10 | 5 |
| Chromium | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m >20 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >20 | 0 | <1 | 3 |
| Lead | ppm | ASTM D5185m >20 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m >20 | 0 | <1 | 0 |
| Tin | ppm | ASTM D5185m >20 | <1 | 0 | <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 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | <1 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | <1 | <1 | 2 |
| Calcium | ppm | ASTM D5185m | 2 | 0 | <1 |
| Phosphorus | ppm | ASTM D5185m | 1 | 2 | 3 |
| Zinc | ppm | ASTM D5185m | 0 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | 602 | 844 | 954 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|-----------------|--------------|----------|----|
| Silicon | ppm | ASTM D5185m >15 | 2 | 1 | <1 |
| Sodium | ppm | ASTM D5185m | <1 | 6 | 3 |
| Potassium | ppm | ASTM D5185m >20 | 0 | 1 | 2 |

FLUID CLEANLINESS

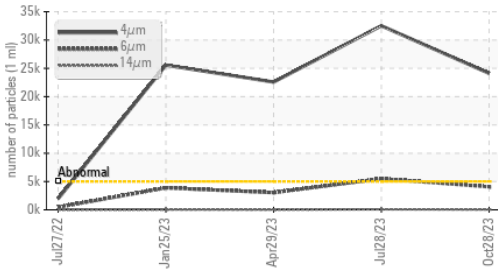
| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|-------------------|------------|------------|
| Particles >4µm | ASTM D7647 >5000 | ▲ 24113 | ▲ 32517 | ▲ 22571 |
| Particles >6µm | ASTM D7647 >1300 | ▲ 4057 | ▲ 5498 | ▲ 3042 |
| Particles >14µm | ASTM D7647 >160 | 40 | 88 | 18 |
| Particles >21µm | ASTM D7647 >40 | 8 | 18 | 4 |
| Particles >38µm | ASTM D7647 >10 | 1 | 1 | 0 |
| Particles >71µm | ASTM D7647 >3 | 1 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) >19/17/14 | ▲ 22/19/12 | ▲ 22/20/14 | ▲ 22/19/11 |

FLUID DEGRADATION

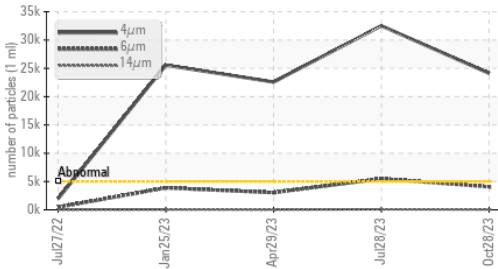
| method | limit/base | current | history1 | history2 | |
|------------------|------------|------------|-------------|----------|------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.64 | 0.58 | 0.48 |

OIL ANALYSIS REPORT

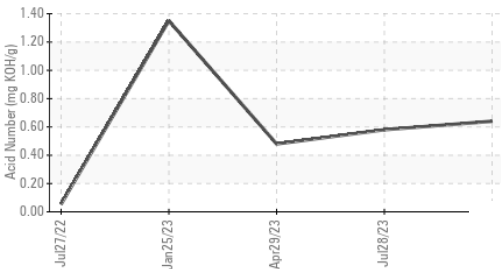
▲ Particle Trend



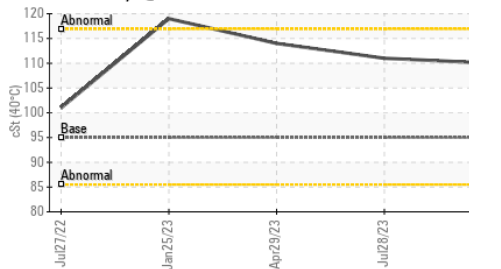
▲ Particle Trend



Acid Number



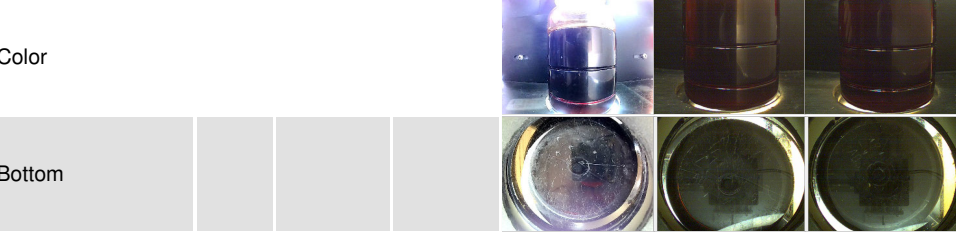
Viscosity @ 40°C



| 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 |

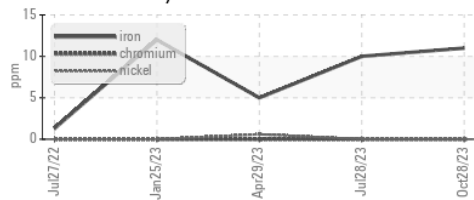
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 95.0 | 110 | 111 |

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

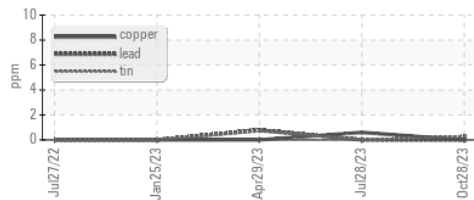


GRAPHS

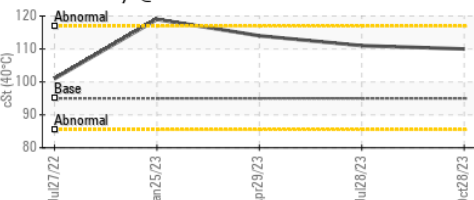
Ferrous Alloys



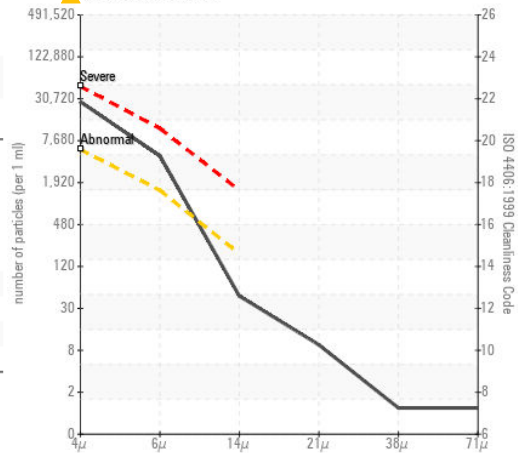
Non-ferrous Metals



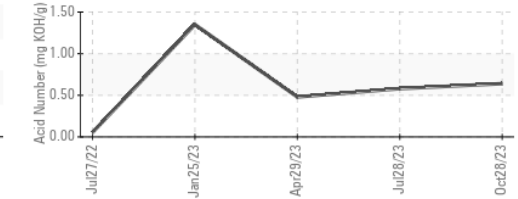
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0838694 **Received** : 03 Nov 2023
Lab Number : 05997938 **Diagnosed** : 06 Nov 2023
Unique Number : 10726298 **Diagnostician** : Don Baldrige
Test Package : IND 2 (Additional Tests: PrtCount)

PAPILLION FOODS
 10808 S 132ND ST
 OMAHA, NE
 US 68138
 Contact: NEIL ARIANO
 njariano@hormel.com

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)