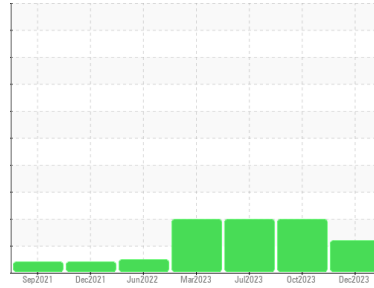




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
GEA-3 (S/N S2078)

Component
Refrigeration Compressor
Fluid
USPI 1009-68 SC (--- GAL)

DIAGNOSIS

Recommendation

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 | | USP0004950 | USP0003710 | USP0000651 |
| Sample Date | Client Info | | 16 Dec 2023 | 18 Oct 2023 | 29 Jul 2023 |
| Machine Age | hrs | Client Info | 56366 | 55217 | 54365 |
| 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 >8 | 0 | 0 | <1 |
| Chromium | ppm | ASTM D5185m >2 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >3 | 0 | 0 | <1 |
| Lead | ppm | ASTM D5185m >2 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m >8 | 0 | <1 | <1 |
| Tin | ppm | ASTM D5185m >4 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | 0 | <1 | <1 |
| 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 | <1 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 0 | 0 | 0 |
| Calcium | ppm | ASTM D5185m | 0 | 0 | <1 |
| Phosphorus | ppm | ASTM D5185m | 0 | 0 | 0 |
| Zinc | ppm | ASTM D5185m | 0 | 2 | 0 |
| Sulfur | ppm | ASTM D5185m 50 | 0 | 10 | 0 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >15 | 1 | 2 | 7 |
| Sodium | ppm | ASTM D5185m | 0 | <1 | 1 |
| Potassium | ppm | ASTM D5185m >20 | 0 | <1 | <1 |
| Water | % | ASTM D6304 >0.01 | 0.002 | 0.003 | 0.003 |
| ppm Water | ppm | ASTM D6304 >100 | 22 | 29.8 | 34.2 |

FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|------------|------------|
| Particles >4µm | ASTM D7647 | >10000 | ▲ 38085 | ▲ 91447 | ▲ 42309 |
| Particles >6µm | ASTM D7647 | >2500 | ▲ 8318 | ▲ 32434 | ▲ 13317 |
| Particles >14µm | ASTM D7647 | >320 | 251 | ▲ 1051 | ▲ 484 |
| Particles >21µm | ASTM D7647 | >80 | 34 | ▲ 154 | ▲ 90 |
| Particles >38µm | ASTM D7647 | >20 | 1 | 1 | 0 |
| Particles >71µm | ASTM D7647 | >4 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >20/18/15 | ▲ 22/20/15 | ▲ 24/22/17 | ▲ 23/21/16 |

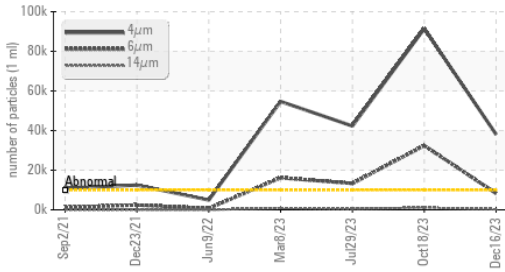
FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|--------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974 0.005 | 0.014 | 0.014 | 0.014 |

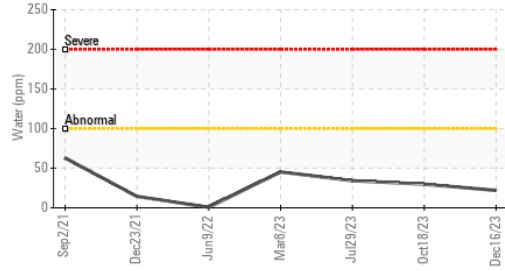


OIL ANALYSIS REPORT

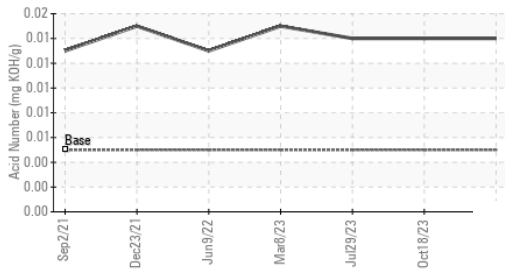
Particle Trend



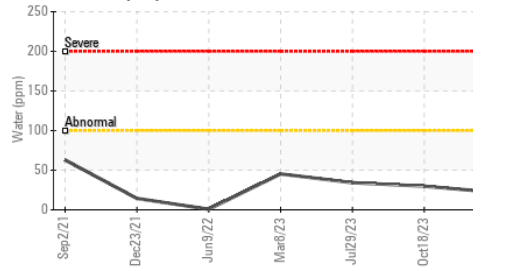
Water (KF)



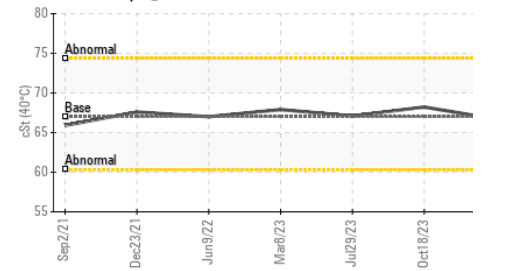
Acid Number



Water (KF)



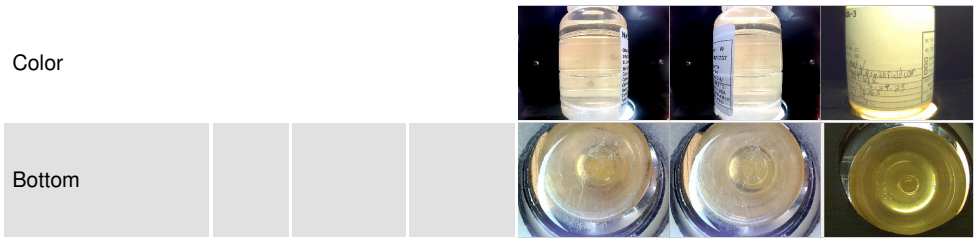
Viscosity @ 40°C



| 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 | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.01 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

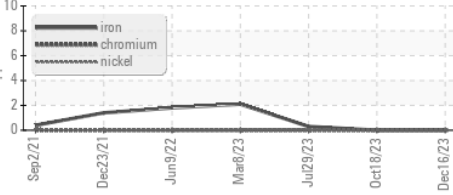
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 67 | 66.7 | 68.22 | 67.1 |

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

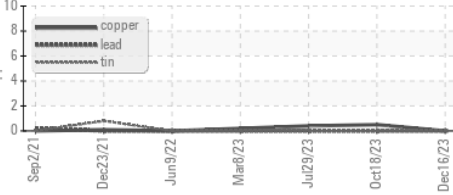


GRAPHS

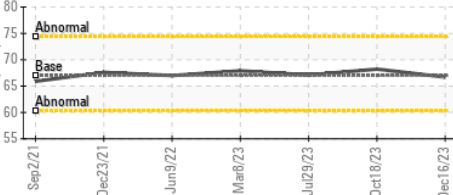
Ferrous Alloys



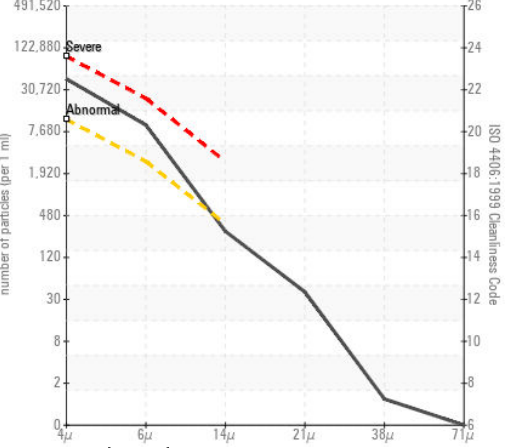
Non-ferrous Metals



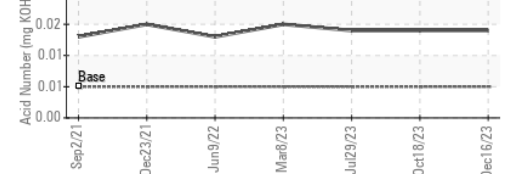
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : USP0004950 **Received** : 12 Jan 2024
Lab Number : 06059317 **Diagnosed** : 15 Jan 2024
Unique Number : 10830699 **Diagnostician** : Doug Bogart
Test Package : IND 2

SMITHFIELD - LINCOLN
 200 S 2ND ST
 LINCOLN, NE
 US 68508
 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: