

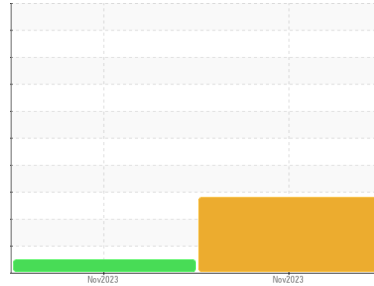


GREASE ANALYSIS

Sample Rating Trend

VISUAL METAL

Area
[7205201]
 Machine Id
IAP FAN TYPE B E-SF54101 (S/N 34452)
 Component
Opposite Drive End Grease
 Fluid
MOBIL MOBILITH SHC SERIES 220 (--- GAL)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Analytical Ferrography: Results indicate normal operation, with typical amounts of ferrous wear and contamination present.

Wear

Chromium and iron ppm levels are noted. All other component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.

Grease Condition

The condition of the grease is acceptable for the time in service. The AN level is acceptable for this fluid. Linear Sweep Voltammetry (RULER – ASTM D6971) testing indicates normal levels of anti-oxidants present in the oil.

Contaminants

There is no indication of any contamination in the grease.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|-----------------|-------------|-------------|--------------------|-------------|----------|
| Sample Number | Client Info | | RP0039396 | RP0039401 | --- |
| Sample Date | Client Info | | 02 Nov 2023 | 02 Nov 2023 | --- |
| Machine Age | mths | Client Info | 4 | 4 | --- |
| Grease Age | mths | Client Info | 0 | 0 | --- |
| Grease Serviced | Client Info | | N/A | N/A | --- |
| Sample Status | | | ATTENTION | NORMAL | --- |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|------------|-------------|------------|---------------|----------|
| PQ | ASTM D8184 | >200 | 103 | --- | --- |
| Iron | ppm | ASTM D5185m | >250 | ▲ 2777 | 57 |
| Chromium | ppm | ASTM D5185m | >10 | ▲ 14 | <1 |
| Nickel | ppm | ASTM D5185m | >5 | 3 | 2 |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | 1 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 |
| Lead | ppm | ASTM D5185m | >25 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >75 | 1 | 26 |
| Tin | ppm | ASTM D5185m | >5 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >5 | 0 | <1 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|-------------|---------|-------------|----------|
| Boron | ppm | ASTM D5185m | | 245 | 230 |
| Magnesium | ppm | ASTM D5185m | | 2 | 2 |
| Manganese | ppm | ASTM D5185m | | 9 | <1 |
| Molybdenum | ppm | ASTM D5185m | | 1 | 5 |
| Phosphorus | ppm | ASTM D5185m | | 1959 | 1880 |
| Zinc | ppm | ASTM D5185m | | 2910 | 2908 |

THICKENER/SOAP

| | method | limit/base | current | history1 | history2 |
|----------|--------|-------------|---------|-------------|----------|
| Aluminum | ppm | ASTM D5185m | | 3 | 2 |
| Barium | ppm | ASTM D5185m | | 2 | 6 |
| Calcium | ppm | ASTM D5185m | | 13 | 18 |
| Sodium | ppm | ASTM D5185m | | 31 | 40 |
| Lithium | ppm | ASTM D5185m | | 3240 | 2513 |

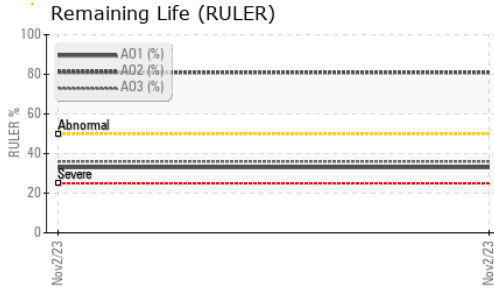
CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-------------|---------|--------------|----------|
| Silicon | ppm | ASTM D5185m | >150 | 15 | 78 |
| Potassium | ppm | ASTM D5185m | | 10 | 13 |
| Water | % | ASTM D6304 | >0.1 | 0.060 | --- |
| ppm Water | ppm | ASTM D6304 | >1000 | 610 | --- |

GREASE CONDITION

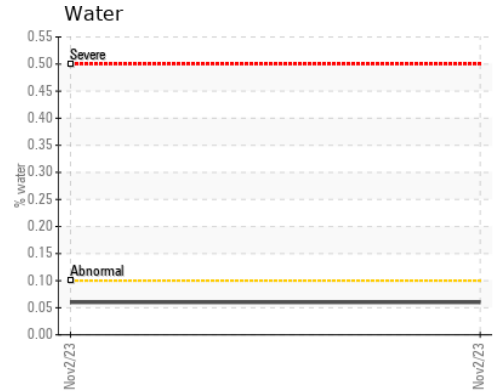
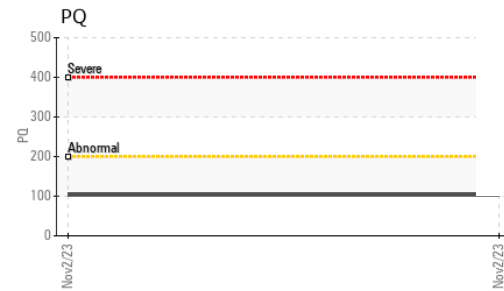
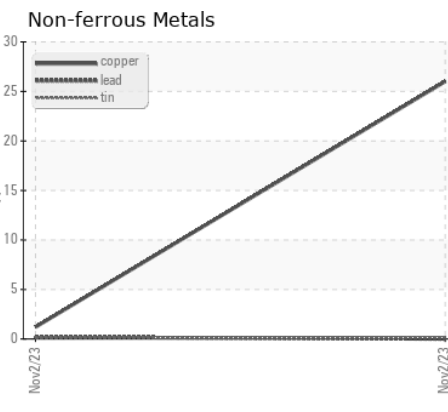
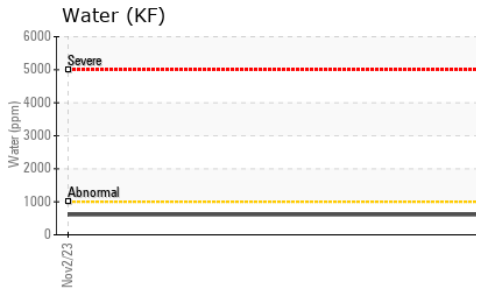
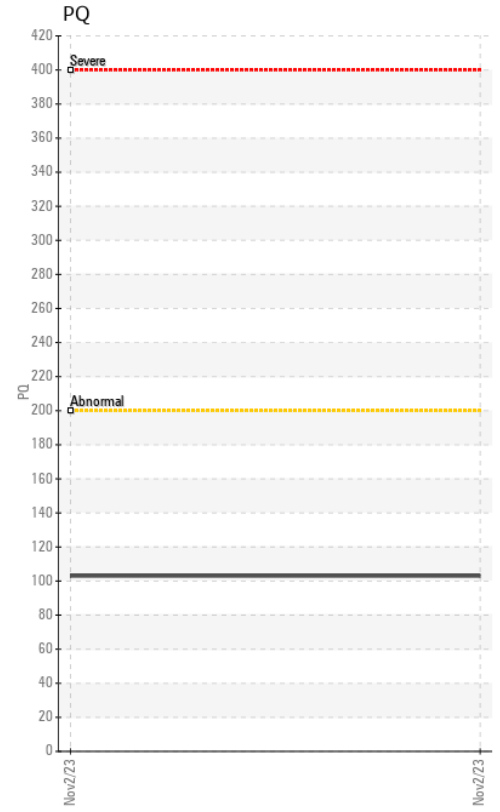
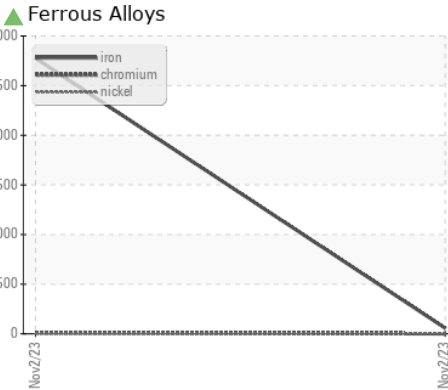
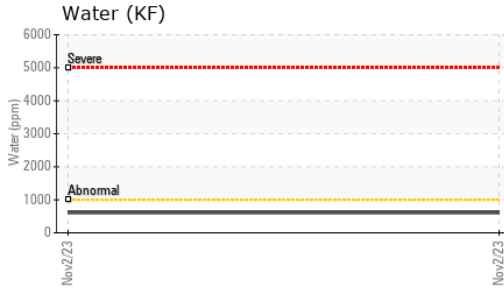
| | method | limit/base | current | history1 | history2 |
|------------------|------------------------|------------|--------------------|-----------|----------|
| Grease Color | *Visual | | Burgundy | --- | --- |
| Texture | *In-house | | Short fiber | --- | --- |
| NLGI Consistency | NLGI Scale *SKF Method | | 2-3 | --- | --- |
| Anti-Oxidant 1 | % | ASTM D6971 | <25% | 33 | --- |
| Anti-Oxidant 2 | % | ASTM D6971 | <25% | 81 | --- |
| Anti-Oxidant 3 | % | ASTM D6971 | <25% | 36 | --- |

GREASE ANALYSIS



| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
| Color | | | | | no image |
| Bottom | | | | | no image |

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0039396 **Received** : 24 Nov 2023
Lab Number : 06016961 **Diagnosed** : 22 Dec 2023
Unique Number : 10756105 **Diagnostician** : Aaron Black
Test Package : GRS 3 (Additional Tests: SCREEN)

JCI
 1110 S 14TH AVE
 DODGE CITY, 46
 US 67801
 Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-237-1369.

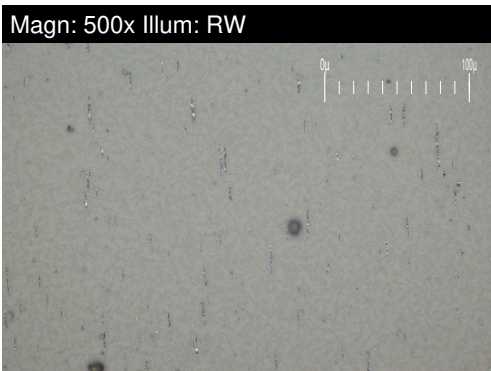
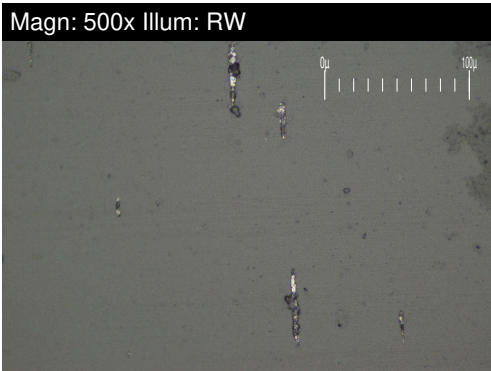
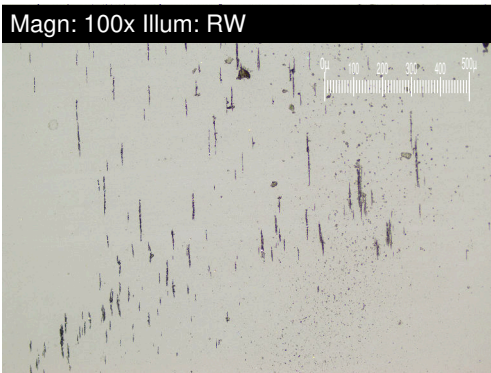
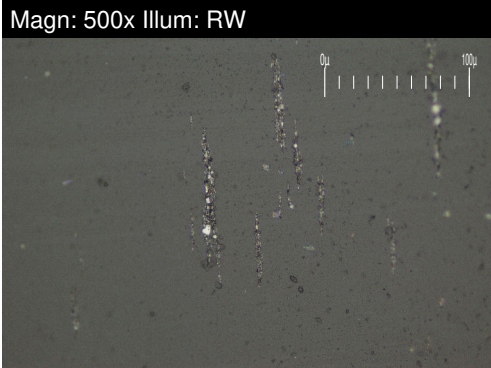
* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T:
F:

FERROGRAPHY REPORT

Area
[7205201]
 Machine Id
IAP FAN TYPE B E-SF54101 (S/N 34452)
 Component
Opposite Drive End Grease
 Fluid
MOBIL MOBILITH SHC SERIES 220 (--- GAL)



| FERROGRAPHY | method | limit/base | current | history1 | history2 |
|-----------------------|------------|-------------|---------|----------|----------|
| Ferrous Rubbing | Scale 0-10 | *ASTM D7684 | 2 | | |
| Ferrous Sliding | Scale 0-10 | *ASTM D7684 | | | |
| Ferrous Cutting | Scale 0-10 | *ASTM D7684 | | | |
| Ferrous Rolling | Scale 0-10 | *ASTM D7684 | | | |
| Ferrous Break-in | Scale 0-10 | *ASTM D7684 | | | |
| Ferrous Spheres | Scale 0-10 | *ASTM D7684 | | | |
| Ferrous Black Oxides | Scale 0-10 | *ASTM D7684 | | | |
| Ferrous Red Oxides | Scale 0-10 | *ASTM D7684 | | | |
| Ferrous Corrosive | Scale 0-10 | *ASTM D7684 | | | |
| Ferrous Other | Scale 0-10 | *ASTM D7684 | | | |
| Nonferrous Rubbing | Scale 0-10 | *ASTM D7684 | | | |
| Nonferrous Sliding | Scale 0-10 | *ASTM D7684 | | | |
| Nonferrous Cutting | Scale 0-10 | *ASTM D7684 | | | |
| Nonferrous Rolling | Scale 0-10 | *ASTM D7684 | | | |
| Nonferrous Other | Scale 0-10 | *ASTM D7684 | | | |
| Carbonaceous Material | Scale 0-10 | *ASTM D7684 | | | |
| Lubricant Degradation | Scale 0-10 | *ASTM D7684 | | | |
| Sand/Dirt | Scale 0-10 | *ASTM D7684 | | | |
| Fibres | Scale 0-10 | *ASTM D7684 | | | |
| Spheres | Scale 0-10 | *ASTM D7684 | | | |
| Other | Scale 0-10 | *ASTM D7684 | 2 | | |

WEAR

Chromium and iron ppm levels are noted. All other component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.

This page left intentionally blank