



OIL ANALYSIS REPORT

| | |
|-----------------|---------------|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |

Area
AMR-St Louis
 Machine Id
574184 SENNEBOGEN 840M 84002065
 Component
Rear Gearbox
 Fluid
SHELL SPIRAX HD 80W90 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | DJJ0020708 | DJJ0012749 | DJJ0012609 |
| Sample Date | | Client Info | | 20 Feb 2024 | 21 Mar 2023 | 09 Sep 2022 |
| Machine Age | hrs | Client Info | | 15820 | 14586 | 13557 |
| Oil Age | hrs | Client Info | | 1000 | 500 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Not Changd | N/A |
| Filter Changed | | Client Info | | N/A | Not Changd | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|-------------|------|------|
| Iron | ppm | ASTM D5185m | >200 | 3 | 2 | 0 |
| Chromium | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >25 | 0 | 0 | 0 |
| Lead | ppm | ASTM D5185m | >50 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >200 | 0 | <1 | 0 |
| Tin | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

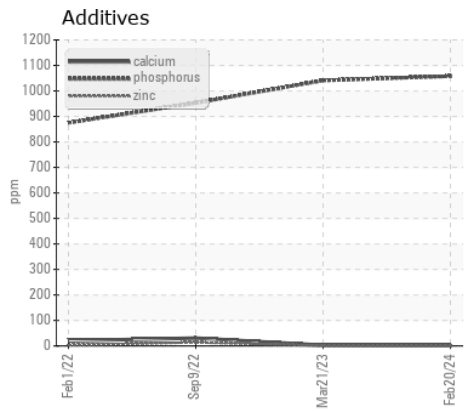
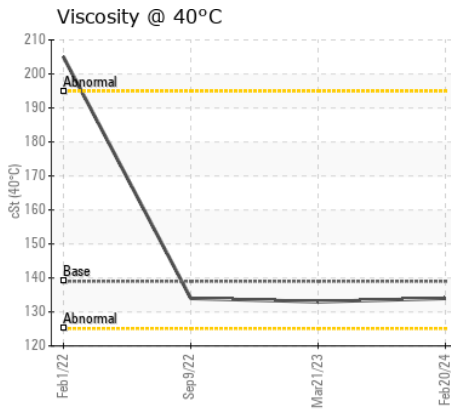
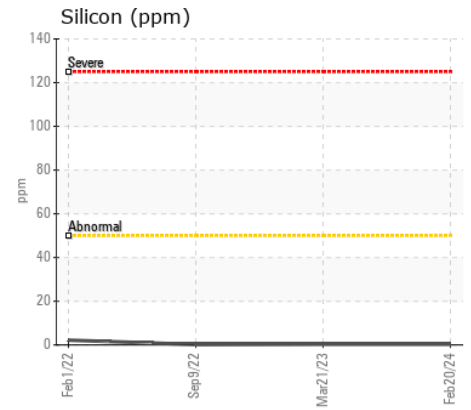
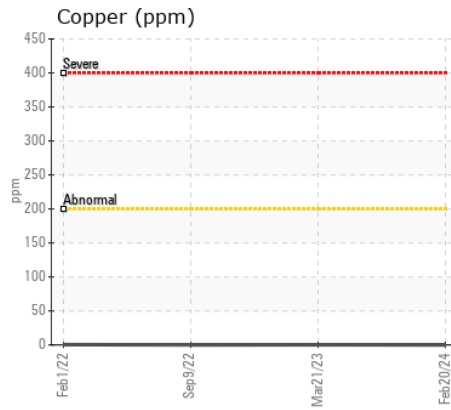
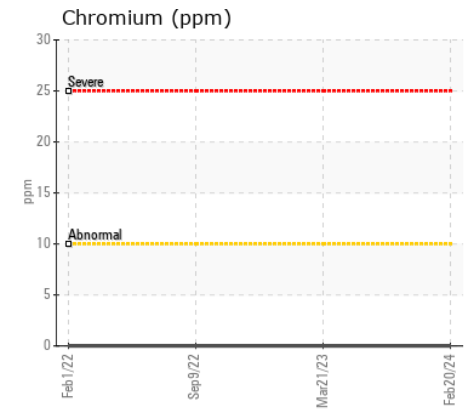
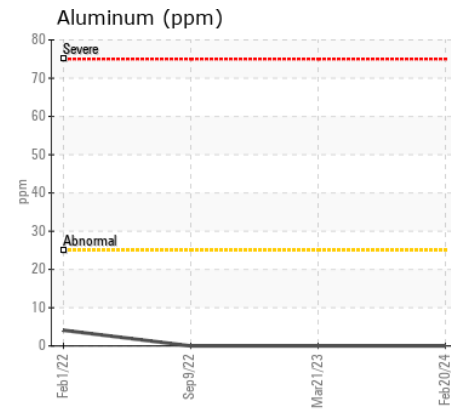
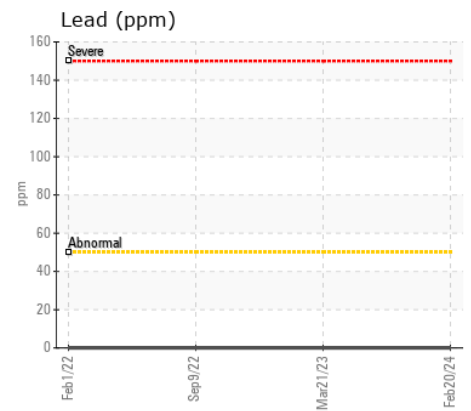
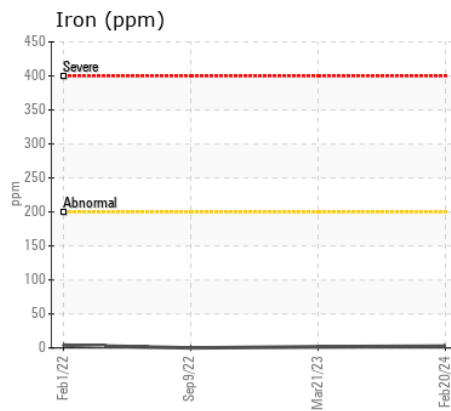
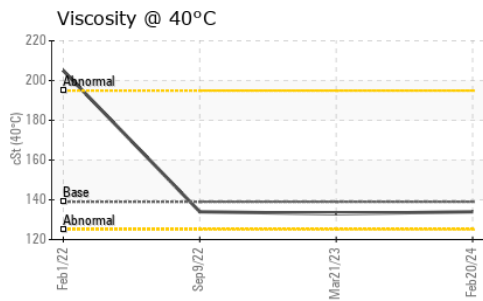
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|--------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >50 | <1 | <1 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | NEG |

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

| | | | | | | |
|-------------|-----|-------------|-------|--------------|-------|-------|
| Sodium | ppm | ASTM D5185m | | 2 | 2 | 0 |
| Boron | ppm | ASTM D5185m | 234 | 251 | 300 | 349 |
| Barium | ppm | ASTM D5185m | 0.1 | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | 0.0 | <1 | 0 | 0 |
| Calcium | ppm | ASTM D5185m | 0.4 | 2 | 3 | 31 |
| Phosphorus | ppm | ASTM D5185m | 864 | 1058 | 1041 | 953 |
| Zinc | ppm | ASTM D5185m | 0.6 | 0 | <1 | 14 |
| Sulfur | ppm | ASTM D5185m | 16893 | 20953 | 24160 | 18030 |
| Visc @ 40°C | cSt | ASTM D445 | 139 | 134 | 133 | 134 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : DJJ0020708
Lab Number : 06105580
Unique Number : 10903810
Test Package : MOBCE

Received : 29 Feb 2024
Tested : 02 Mar 2024
Diagnosed : 02 Mar 2024 - Wes Davis

ADVANTAGE METALS RECYCLING - ST LOUIS
 5 N MARKET
 ST LOUIS, MO
 US 63102
 Contact: JEANETTE VAGO
 jeanette.vago@advantagerecycling.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)

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