



# OIL ANALYSIS REPORT

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

Area  
**[SPM702306]**  
 Machine Id  
**SENNEBOGEN 835 835.0.3213**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current     | History1    | History2 |
|----------------|-----|-------------|-----------|-------------|-------------|----------|
| Sample Number  |     | Client Info |           | VCP446156   | VCP415027   | ---      |
| Sample Date    |     | Client Info |           | 16 Jun 2024 | 12 Sep 2023 | ---      |
| Machine Age    | hrs | Client Info |           | 2305        | 543         | ---      |
| Oil Age        | hrs | Client Info |           | 0           | 0           | ---      |
| Filter Age     | hrs | Client Info |           | 0           | 0           | ---      |
| Oil Changed    |     | Client Info |           | Changed     | Changed     | ---      |
| Filter Changed |     | Client Info |           | Changed     | Changed     | ---      |
| Sample Status  |     |             |           | NORMAL      | ABNORMAL    | ---      |

## WEAR

All component wear rates are normal.

|              |        |             |      |      |      |     |
|--------------|--------|-------------|------|------|------|-----|
| Iron         | ppm    | ASTM D5185m | >100 | 38   | 30   | --- |
| Chromium     | ppm    | ASTM D5185m | >20  | 1    | 1    | --- |
| Nickel       | ppm    | ASTM D5185m | >4   | 0    | <1   | --- |
| Titanium     | ppm    | ASTM D5185m |      | 0    | 1    | --- |
| Silver       | ppm    | ASTM D5185m | >3   | 0    | 0    | --- |
| Aluminum     | ppm    | ASTM D5185m | >20  | 8    | 26   | --- |
| Lead         | ppm    | ASTM D5185m | >40  | 0    | <1   | --- |
| Copper       | ppm    | ASTM D5185m | >330 | 8    | 12   | --- |
| Tin          | ppm    | ASTM D5185m | >15  | 1    | <1   | --- |
| Vanadium     | ppm    | ASTM D5185m |      | 0    | 0    | --- |
| White Metal  | scalar | *Visual     | NONE | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual     | NONE | NONE | NONE | --- |

## CONTAMINATION

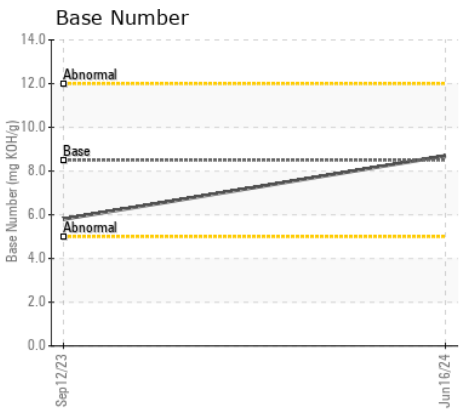
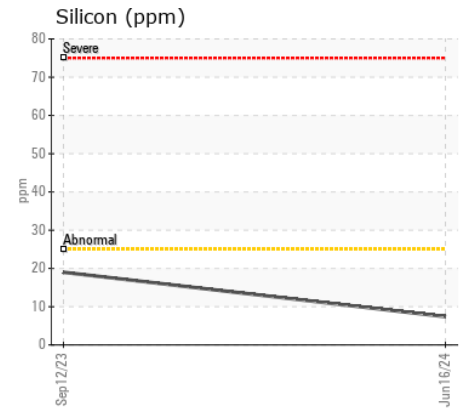
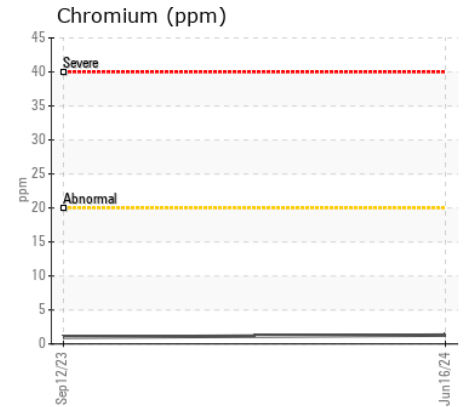
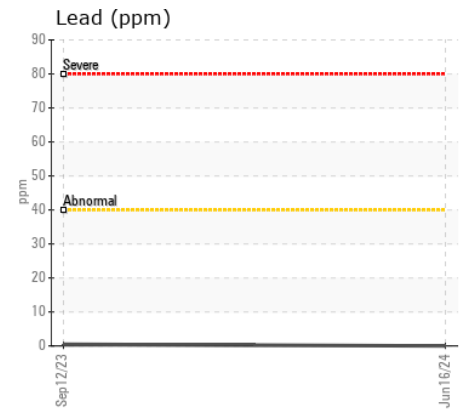
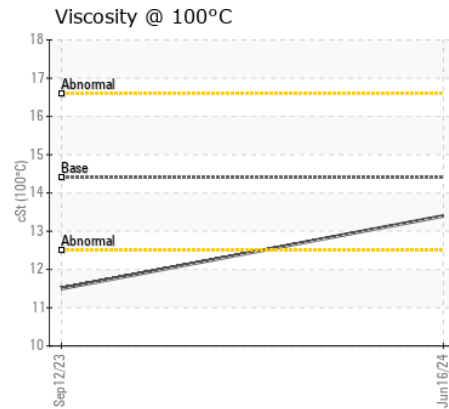
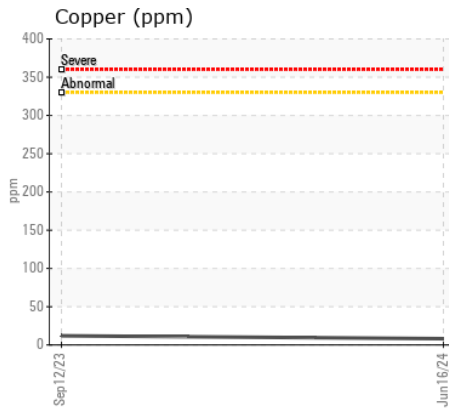
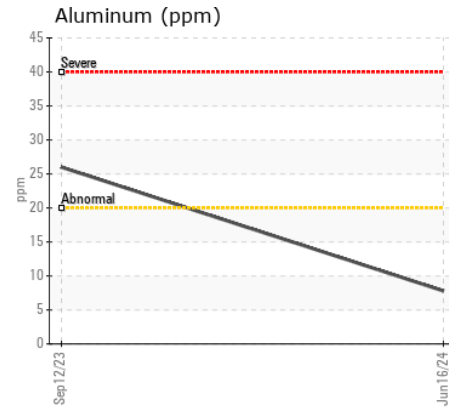
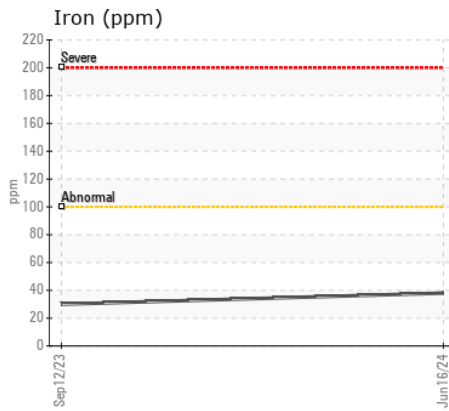
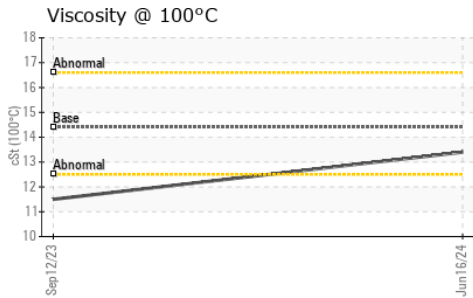
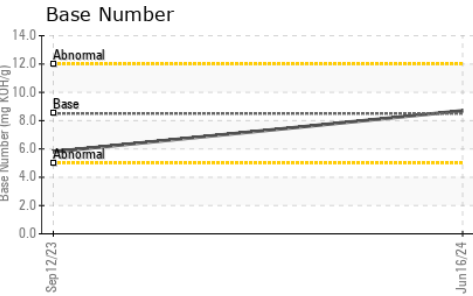
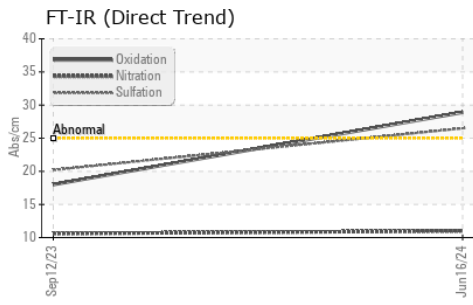
There is no indication of any contamination in the oil.

|                  |          |             |       |       |       |     |
|------------------|----------|-------------|-------|-------|-------|-----|
| Silicon          | ppm      | ASTM D5185m | >25   | 7     | 19    | --- |
| Potassium        | ppm      | ASTM D5185m | >20   | <1    | 85    | --- |
| Fuel             |          | WC Method   | >5    | <1.0  | ▲ 2.3 | --- |
| Water            |          | WC Method   | >0.2  | NEG   | NEG   | --- |
| Glycol           |          | WC Method   |       | NEG   | NEG   | --- |
| Soot %           | %        | *ASTM D7844 | >3    | 0.2   | 0.2   | --- |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | 11.0  | 10.6  | --- |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | 26.5  | 20.2  | --- |
| 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     | >0.2  | NEG   | NEG   | --- |

## FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

|                  |          |             |      |      |        |     |
|------------------|----------|-------------|------|------|--------|-----|
| Sodium           | ppm      | ASTM D5185m | >158 | 2    | 6      | --- |
| Boron            | ppm      | ASTM D5185m | 250  | 35   | 35     | --- |
| Barium           | ppm      | ASTM D5185m | 10   | 0    | 9      | --- |
| Molybdenum       | ppm      | ASTM D5185m | 100  | 43   | 77     | --- |
| Manganese        | ppm      | ASTM D5185m |      | <1   | 6      | --- |
| Magnesium        | ppm      | ASTM D5185m | 450  | 704  | 276    | --- |
| Calcium          | ppm      | ASTM D5185m | 3000 | 1638 | 2127   | --- |
| Phosphorus       | ppm      | ASTM D5185m | 1150 | 1128 | 1002   | --- |
| Zinc             | ppm      | ASTM D5185m | 1350 | 1269 | 1252   | --- |
| Sulfur           | ppm      | ASTM D5185m | 4250 | 4181 | 4412   | --- |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | 28.9 | 18.0   | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 8.5  | 8.7  | 5.8    | --- |
| Visc @ 100°C     | cSt      | ASTM D445   | 14.4 | 13.4 | ▲ 11.5 | --- |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP446156 **Received** : 17 Jun 2024  
**Lab Number** : 06211219 **Tested** : 19 Jun 2024  
**Unique Number** : 11084083 **Diagnosed** : 19 Jun 2024 - Sean Felton  
**Test Package** : MOB 1 ( Additional Tests: TBN )

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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)