



OIL ANALYSIS REPORT

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

Machine Id
1583
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC0870702 | WC0821266 | WC0761183 |
| Sample Date | | Client Info | | 07 Dec 2023 | 19 May 2023 | 21 Nov 2022 |
| Machine Age | mls | Client Info | | 199431 | 184520 | 174021 |
| Oil Age | mls | Client Info | | 0 | 0 | 0 |
| Filter Age | mls | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Filter Changed | | Client Info | | Not Changd | Not Changd | Not Changd |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 12 | 24 | 19 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 5 | 8 | 5 |
| Lead | ppm | ASTM D5185m | >40 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >330 | <1 | 1 | <1 |
| Tin | ppm | ASTM D5185m | >15 | <1 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

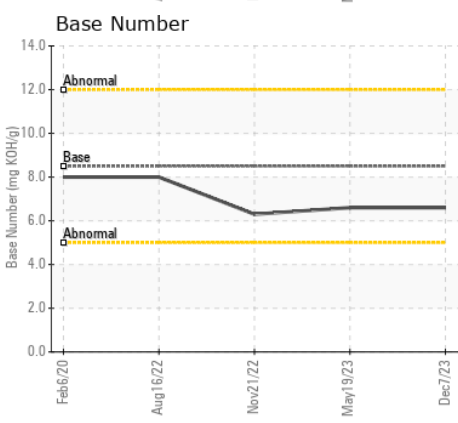
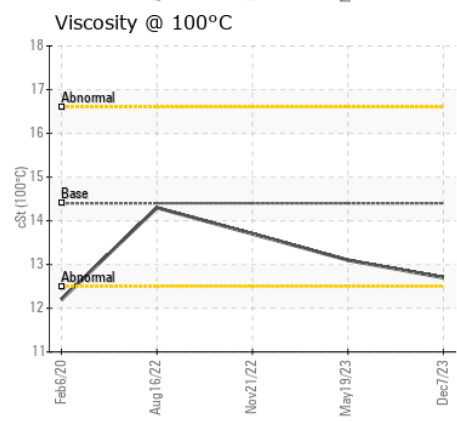
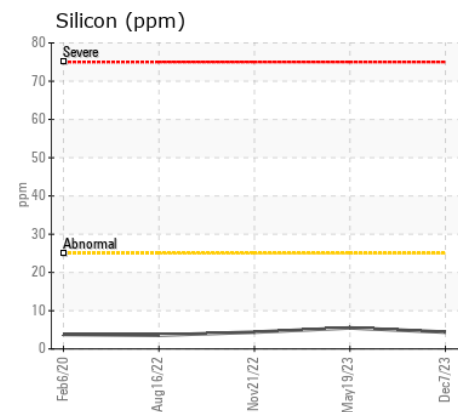
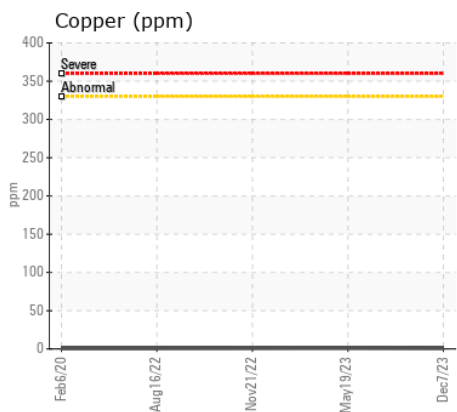
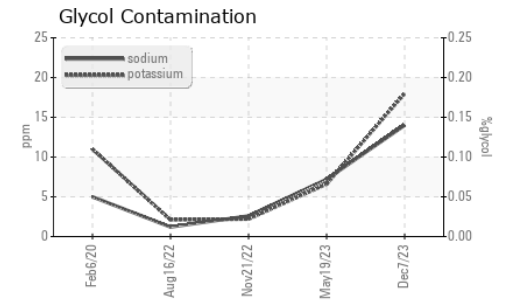
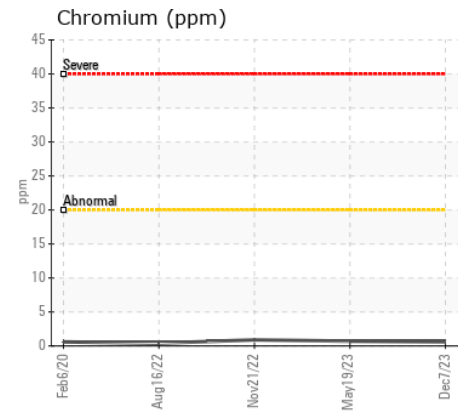
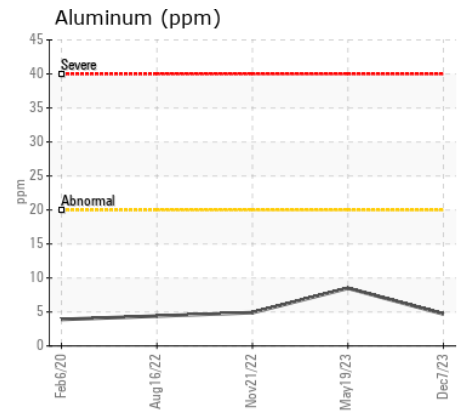
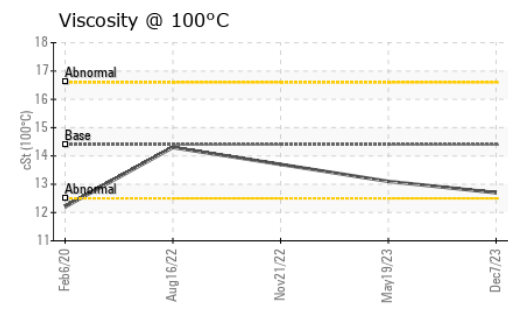
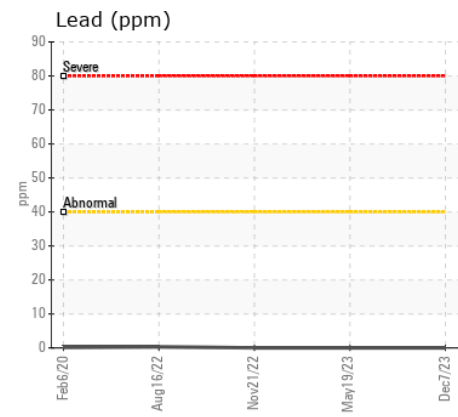
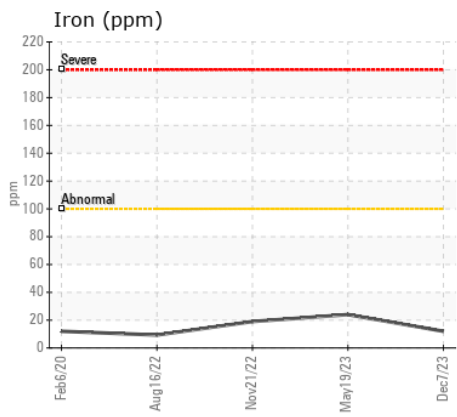
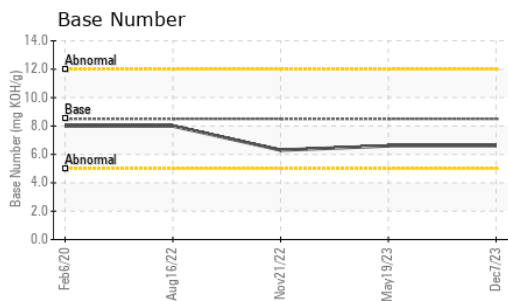
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 4 | 6 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | 18 | 7 | 2 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | % | *ASTM D2982 | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.6 | 0.6 | 0.8 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.1 | 12.3 | 10.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.0 | 22.8 | 21.8 |
| 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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|-------------|------|------|
| Sodium | ppm | ASTM D5185m | >158 | 14 | 7 | 3 |
| Boron | ppm | ASTM D5185m | 250 | 28 | 29 | 10 |
| Barium | ppm | ASTM D5185m | 10 | 4 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 100 | 79 | 88 | 56 |
| Manganese | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 450 | 108 | 69 | 82 |
| Calcium | ppm | ASTM D5185m | 3000 | 1809 | 2356 | 1964 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 923 | 1052 | 846 |
| Zinc | ppm | ASTM D5185m | 1350 | 1093 | 1308 | 1065 |
| Sulfur | ppm | ASTM D5185m | 4250 | 3511 | 4686 | 3366 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.5 | 18.1 | 16.7 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | 6.6 | 6.6 | 6.3 |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | 12.7 | 13.1 | 13.7 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0870702 **Received** : 12 Jan 2024
Lab Number : 06059768 **Diagnosed** : 16 Jan 2024
Unique Number : 10831150 **Diagnostician** : Don Baldrige
Test Package : MOB 1 (Additional Tests: Glycol, TBN)

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Certificate L2367
 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)