



OIL ANALYSIS REPORT

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

Machine Id
1243
 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 | | WC0932781 | WC0870686 | WC0447074 |
| Sample Date | | Client Info | | 07 May 2024 | 03 Jan 2024 | 09 Jun 2020 |
| Machine Age | mls | Client Info | | 234093 | 0 | 189842 |
| 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 | SEVERE |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 15 | 22 | 75 |
| Chromium | ppm | ASTM D5185m | >20 | 1 | <1 | 3 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | <1 | 1 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >3 | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 4 | 3 | 6 |
| Lead | ppm | ASTM D5185m | >40 | <1 | 0 | 3 |
| Copper | ppm | ASTM D5185m | >330 | 2 | 1 | 18 |
| Tin | ppm | ASTM D5185m | >15 | 1 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

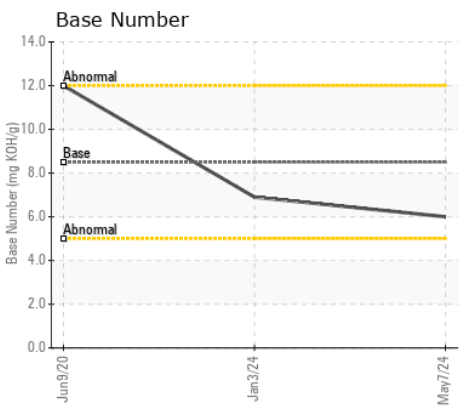
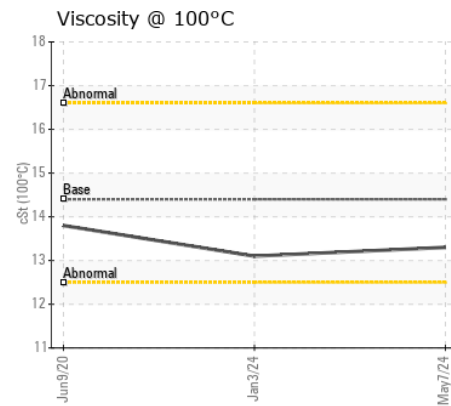
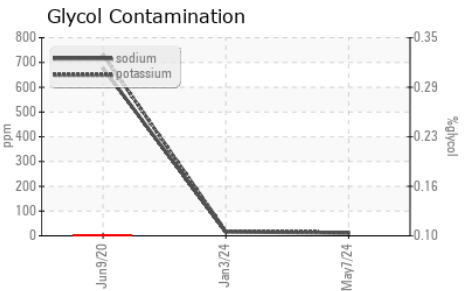
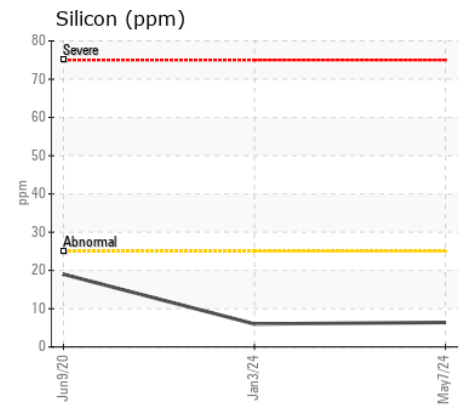
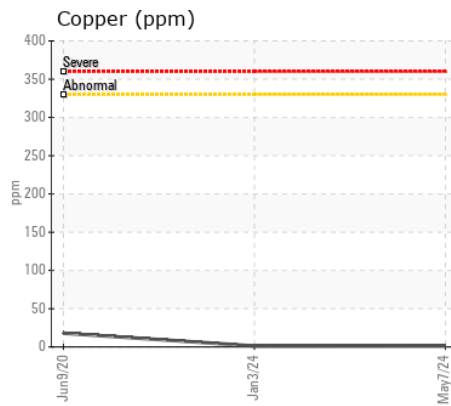
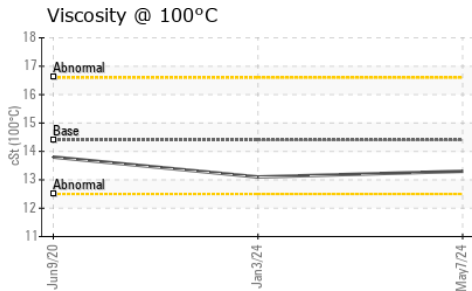
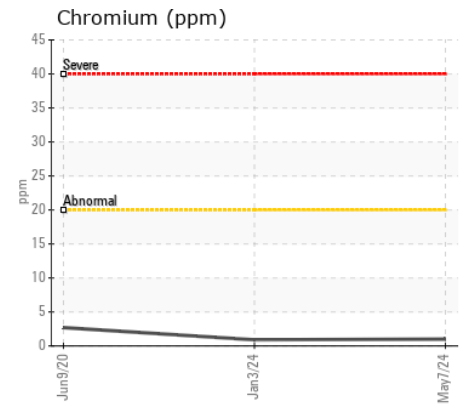
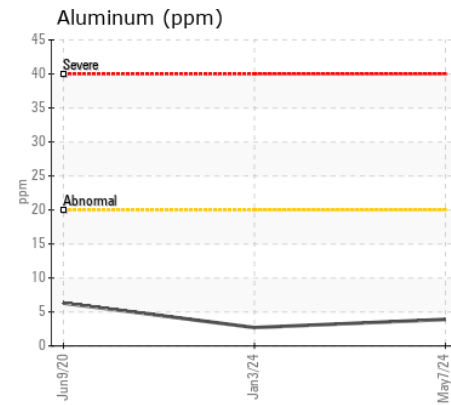
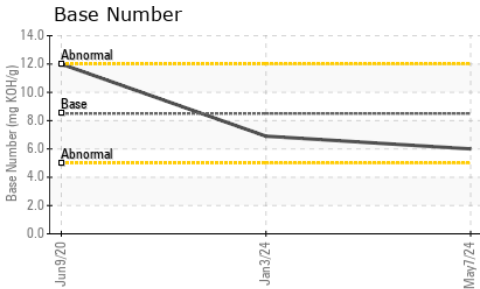
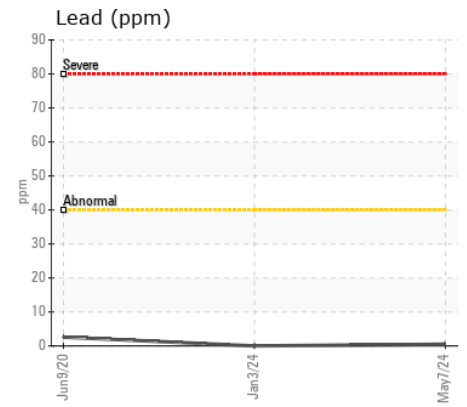
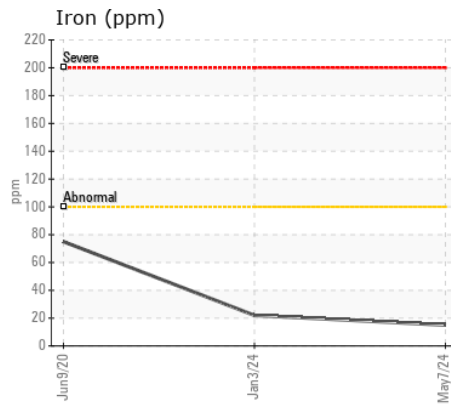
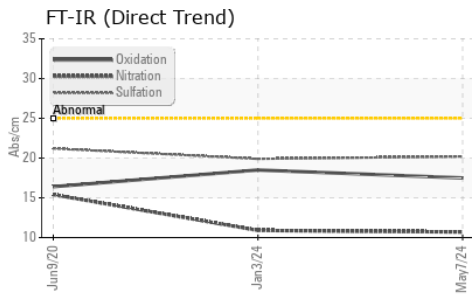
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|--------|
| Silicon | ppm | ASTM D5185m | >25 | 6 | 6 | 19 |
| Potassium | ppm | ASTM D5185m | >20 | 13 | 18 | ▲ 732 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | % | *ASTM D2982 | | NEG | NEG | ▲ 0.10 |
| Soot % | % | *ASTM D7844 | >3 | 0.5 | 0.5 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.7 | 10.9 | 15.4 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 20.2 | 19.9 | 21.2 |
| 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 | 11 | 16 | ▲ 678 |
| Boron | ppm | ASTM D5185m | 250 | 40 | 30 | 28 |
| Barium | ppm | ASTM D5185m | 10 | 0 | 3 | <1 |
| Molybdenum | ppm | ASTM D5185m | 100 | 88 | 75 | 102 |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | 2 |
| Magnesium | ppm | ASTM D5185m | 450 | 140 | 156 | 191 |
| Calcium | ppm | ASTM D5185m | 3000 | 2085 | 1806 | 1938 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1095 | 922 | 943 |
| Zinc | ppm | ASTM D5185m | 1350 | 1250 | 1103 | 1126 |
| Sulfur | ppm | ASTM D5185m | 4250 | 3941 | 3432 | 2697 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 17.5 | 18.5 | 16.4 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | 6.0 | 6.9 | 12 |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | 13.3 | 13.1 | 13.8 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0932781 **Received** : 23 May 2024
Lab Number : 06189068 **Tested** : 28 May 2024
Unique Number : 11045820 **Diagnosed** : 28 May 2024 - Sean Felton
Test Package : MOB 1 (Additional Tests: Glycol, 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)