



OIL ANALYSIS REPORT

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

Area

Contracting

Machine Id

7606 7606

Component

Diesel Engine

Fluid

MOBIL DELVAC 1300 SUPER15W40 (2 GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC0885971 | WC0808911 | WC0744821 |
| Sample Date | | Client Info | | 05 Jan 2024 | 27 Apr 2023 | 13 Oct 2022 |
| Machine Age | hrs | Client Info | | 3635 | 3437 | 3207 |
| Oil Age | hrs | Client Info | | 198 | 236 | 690 |
| Filter Age | hrs | Client Info | | 198 | 236 | 690 |
| Oil Changed | | Client Info | | Changed | Not Changd | Changed |
| Filter Changed | | Client Info | | Changed | Not Changd | Changed |
| Sample Status | | | | ABNORMAL | ABNORMAL | ABNORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 21 | 13 | 17 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 6 | 4 | 4 |
| Lead | ppm | ASTM D5185m | >40 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 2 | <1 | 2 |
| Tin | ppm | ASTM D5185m | >15 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

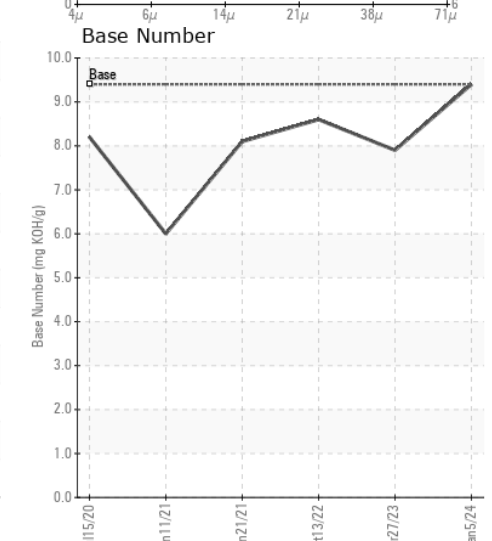
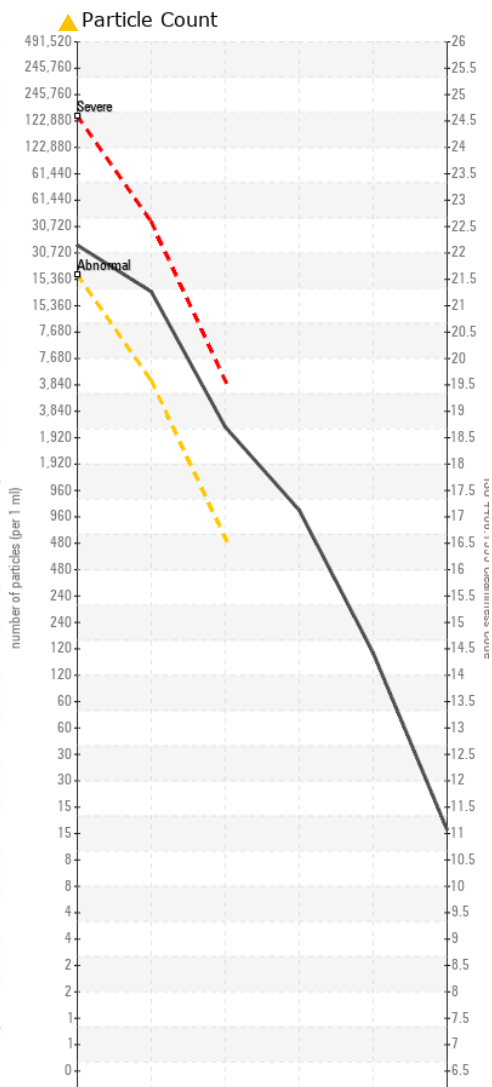
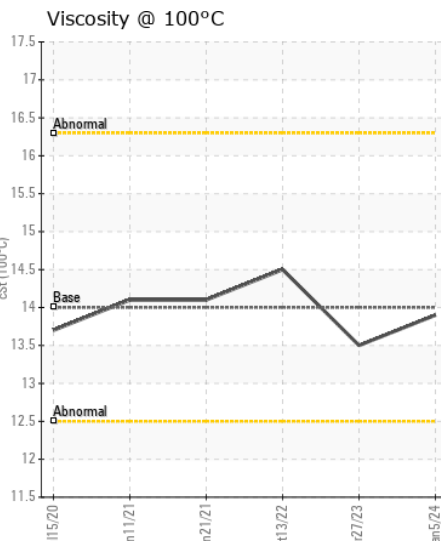
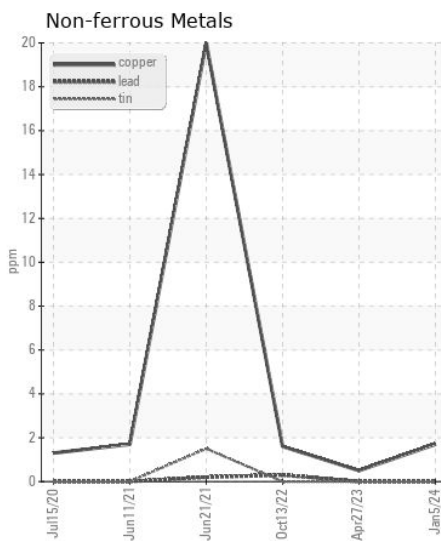
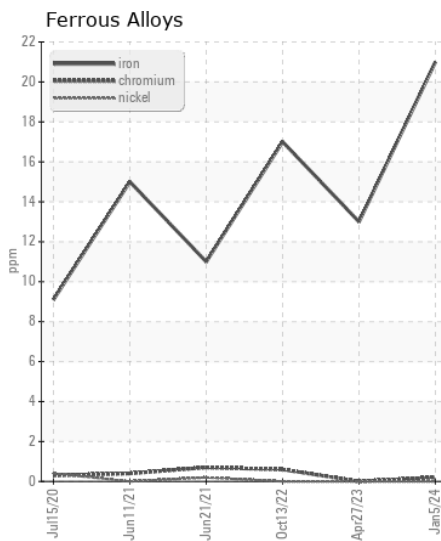
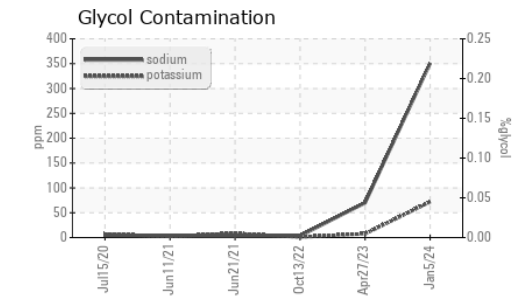
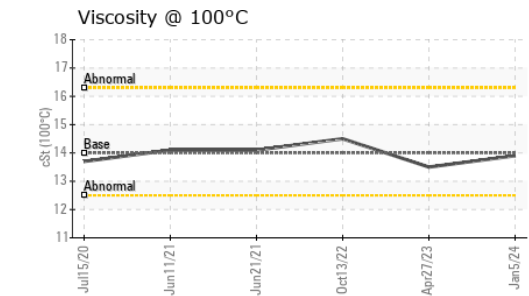
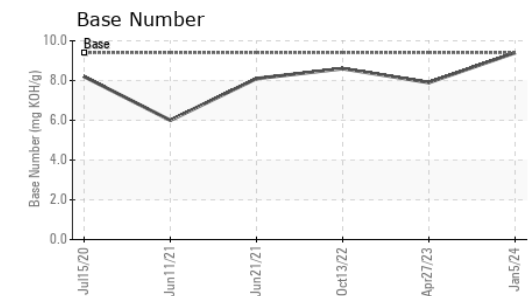
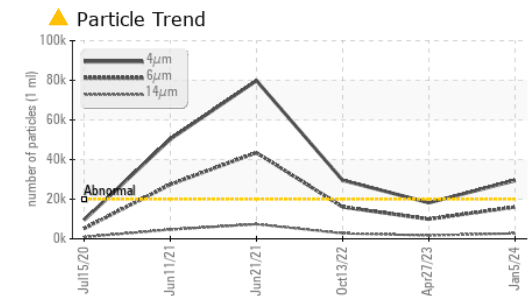
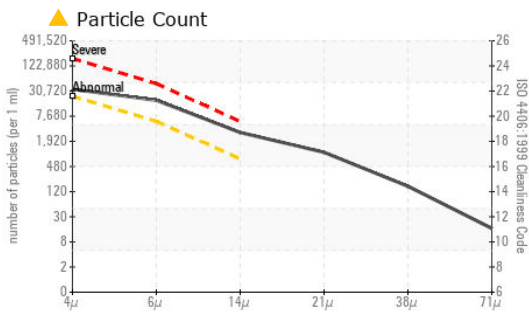
Sodium and/or potassium levels are high. There is a high amount of particulates present in the oil.

| | | | | | | |
|------------------|----------|--------------|-----------|-----------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >25 | 11 | 8 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | 72 | 8 | <1 |
| 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 | 0.3 | 0.2 | 0.4 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 11.5 | 9.2 | 13.1 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 24.1 | 21.1 | 26.3 |
| Particles >4µm | | ASTM D7647 | >20000 | 29440 | 18208 | 29540 |
| Particles >6µm | | ASTM D7647 | >5000 | 16038 | 9919 | 16092 |
| Particles >14µm | | ASTM D7647 | >640 | 2729 | 1688 | 2739 |
| Particles >21µm | | ASTM D7647 | >160 | 919 | 569 | 922 |
| Particles >38µm | | ASTM D7647 | >40 | 142 | 88 | 142 |
| Particles >71µm | | ASTM D7647 | >10 | 14 | 9 | 15 |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | 22/21/19 | 21/20/18 | 22/21/19 |
| 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.

| | | | | | | |
|------------------|----------|-------------|-----|-------------|------|------|
| Sodium | ppm | ASTM D5185m | | 351 | 70 | 3 |
| Boron | ppm | ASTM D5185m | 0 | 42 | 49 | 37 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 65 | 51 | 38 |
| Manganese | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 0 | 572 | 554 | 603 |
| Calcium | ppm | ASTM D5185m | | 1754 | 1627 | 1648 |
| Phosphorus | ppm | ASTM D5185m | | 836 | 757 | 738 |
| Zinc | ppm | ASTM D5185m | | 998 | 941 | 948 |
| Sulfur | ppm | ASTM D5185m | | 2783 | 2649 | 2967 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 24.0 | 21.3 | 25.9 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.4 | 9.4 | 7.9 | 8.6 |
| Visc @ 100°C | cSt | ASTM D445 | 14 | 13.9 | 13.5 | 14.5 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0885971 **Received** : 09 Jan 2024
Lab Number : 06055823 **Diagnosed** : 12 Jan 2024
Unique Number : 10821772 **Diagnostician** : Jonathan Hester
Test Package : CONST (Additional Tests: Glycol, PrtCount, TBN)

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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