



OIL ANALYSIS REPORT

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

Area
Mobile Fleet
 Machine Id
6403 6403
 Component
Diesel Engine
 Fluid
MOBIL DELVAC 1300 SUPER 10W30 (10 GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | WC0937797 | WC0902851 | WC0861742 |
| Sample Date | | Client Info | | 20 May 2024 | 27 Feb 2024 | 20 Nov 2023 |
| Machine Age | hrs | Client Info | | 10727 | 10476 | 10268 |
| Oil Age | hrs | Client Info | | 251 | 242 | 637 |
| Filter Age | hrs | Client Info | | 251 | 242 | 637 |
| Oil Changed | | Client Info | | Not Chngd | Changed | Changed |
| Filter Changed | | Client Info | | Not Chngd | Changed | Changed |
| Sample Status | | | | ABNORMAL | ATTENTION | ABNORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 71 | 18 | 33 |
| Chromium | ppm | ASTM D5185m | >20 | 3 | <1 | 1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >3 | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 16 | 7 | 9 |
| Lead | ppm | ASTM D5185m | >40 | <1 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >330 | 6 | 7 | 4 |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

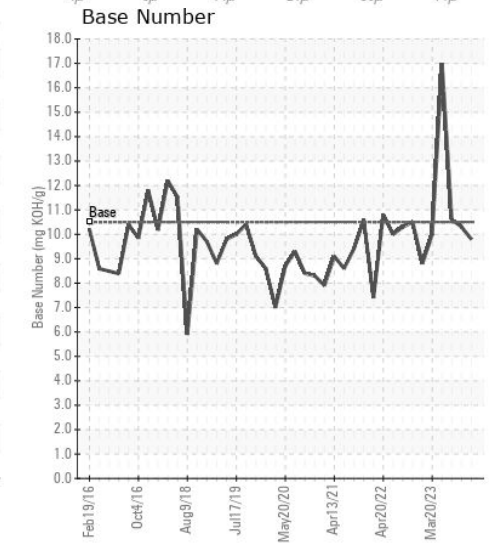
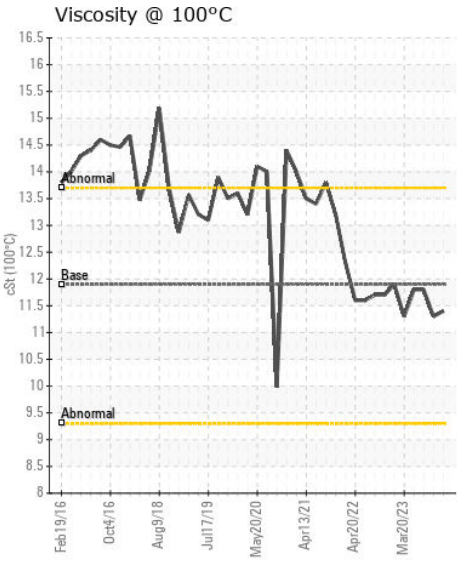
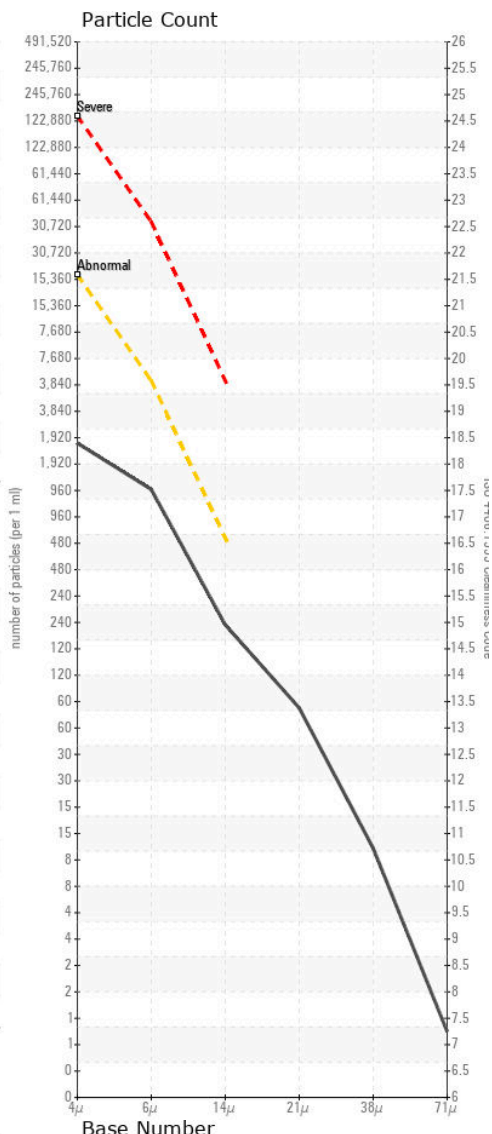
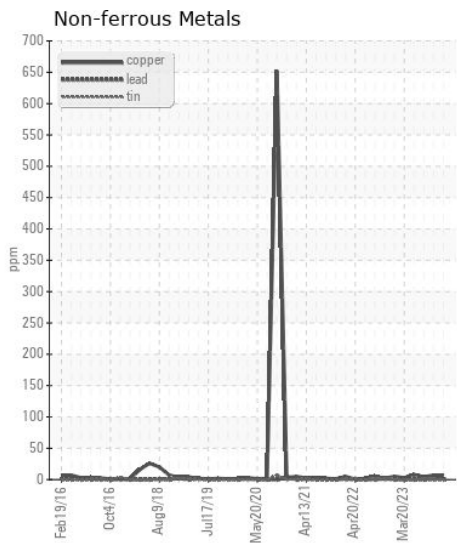
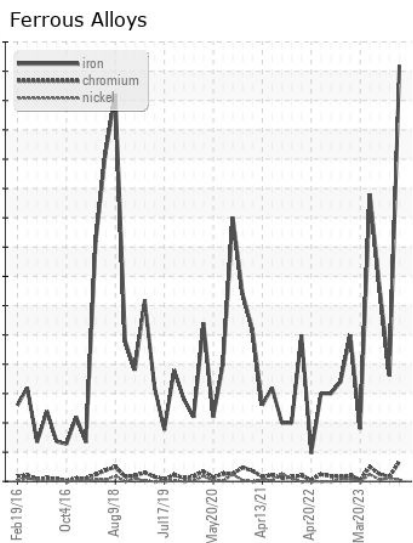
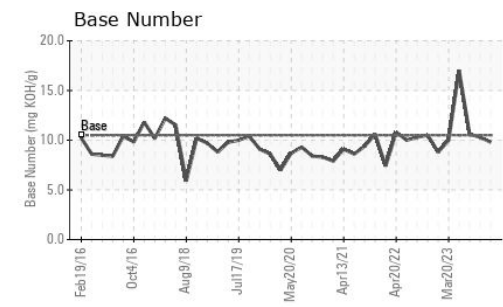
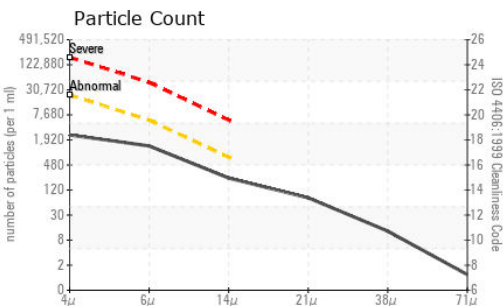
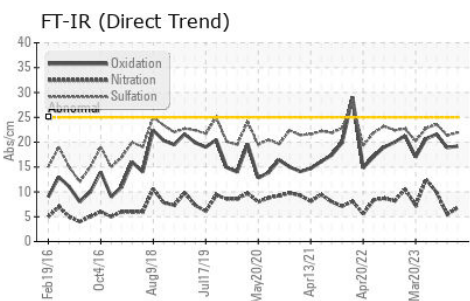
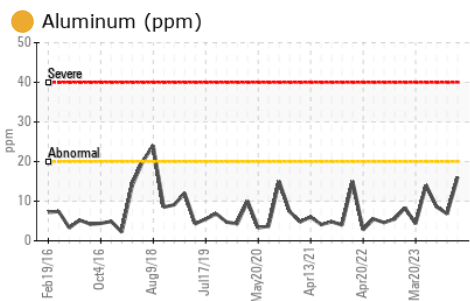
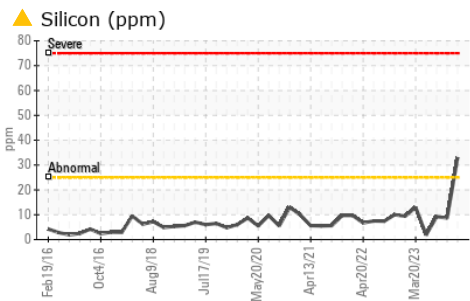
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The amount and size of particulates present in the system are acceptable.

| | | | | | | |
|------------------|----------|--------------|-----------|-----------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >25 | 33 | 9 | 9 |
| Potassium | ppm | ASTM D5185m | >20 | 23 | 62 | 161 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | 0.06 |
| Soot % | % | *ASTM D7844 | >3 | 0.5 | 0.1 | 1.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.8 | 5.5 | 9.9 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 21.9 | 21.4 | 23.6 |
| Particles >4µm | | ASTM D7647 | >20000 | 2210 | 7447 | 7934 |
| Particles >6µm | | ASTM D7647 | >5000 | 1204 | 4057 | 4322 |
| Particles >14µm | | ASTM D7647 | >640 | 205 | 690 | 736 |
| Particles >21µm | | ASTM D7647 | >160 | 69 | 233 | 248 |
| Particles >38µm | | ASTM D7647 | >40 | 11 | 36 | 38 |
| Particles >71µm | | ASTM D7647 | >10 | 1 | 4 | 4 |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | 18/17/15 | 20/19/17 | 20/19/17 |
| 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 acceptable for the time in service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 23 | 45 | 214 |
| Boron | ppm | ASTM D5185m | | 45 | 38 | 23 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 51 | 55 | 77 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | 1 |
| Magnesium | ppm | ASTM D5185m | | 552 | 590 | 520 |
| Calcium | ppm | ASTM D5185m | | 1882 | 1937 | 1642 |
| Phosphorus | ppm | ASTM D5185m | | 815 | 773 | 762 |
| Zinc | ppm | ASTM D5185m | | 1017 | 1122 | 939 |
| Sulfur | ppm | ASTM D5185m | | 3087 | 2893 | 2390 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 19.2 | 18.9 | 21.6 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.5 | 9.8 | 10.3 | 10.6 |
| Visc @ 100°C | cSt | ASTM D445 | 11.9 | 11.4 | 11.3 | 11.8 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0937797 **Received** : 22 May 2024
Lab Number : 06187520 **Tested** : 23 May 2024
Unique Number : 11044272 **Diagnosed** : 24 May 2024 - Don Baldrige
Test Package : CONST (Additional Tests: 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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