



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

Machine Id  
**ADVANCE MIXER 243**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

### RECOMMENDATION

The oil 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 |           | <b>LP0001456</b>   | LP0000941   | LP0000509   |
| Sample Date    |     | Client Info |           | <b>18 Jun 2024</b> | 23 Jan 2024 | 17 Oct 2023 |
| Machine Age    | hrs | Client Info |           | <b>40000</b>       | 40000       | 40000       |
| Oil Age        | hrs | Client Info |           | <b>500</b>         | 500         | 500         |
| Filter Age     | hrs | Client Info |           | <b>500</b>         | 500         | 500         |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Sample Status  |     |             |           | <b>ABNORMAL</b>    | NORMAL      | NORMAL      |

### WEAR

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >90  | <b>10</b>    | 10   | 7    |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | <1   | <1   |
| Nickel       | ppm    | ASTM D5185m | >2   | <b>&lt;1</b> | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m | >2   | <b>1</b>     | 0    | 0    |
| Silver       | ppm    | ASTM D5185m | >2   | <b>&lt;1</b> | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>3</b>     | 2    | 1    |
| Lead         | ppm    | ASTM D5185m | >40  | <b>1</b>     | 2    | 1    |
| Copper       | ppm    | ASTM D5185m | >330 | <b>3</b>     | 3    | <1   |
| Tin          | ppm    | ASTM D5185m | >15  | <b>&lt;1</b> | 0    | 0    |
| Vanadium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | 0    | 0    |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

### CONTAMINATION

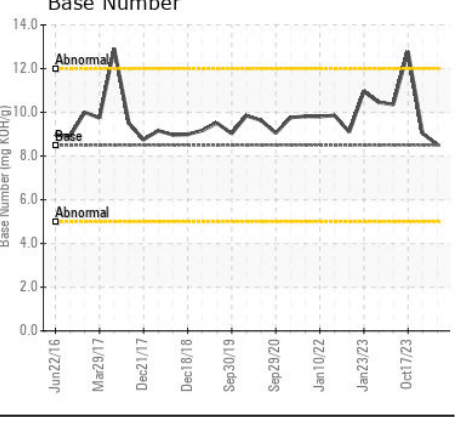
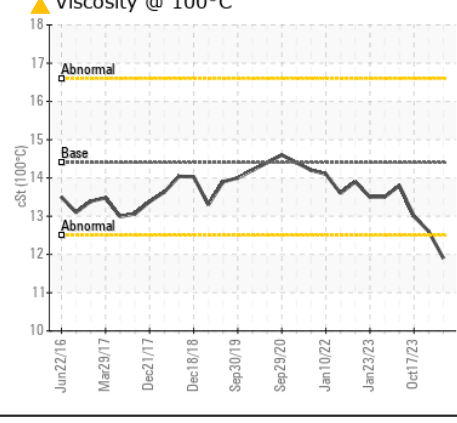
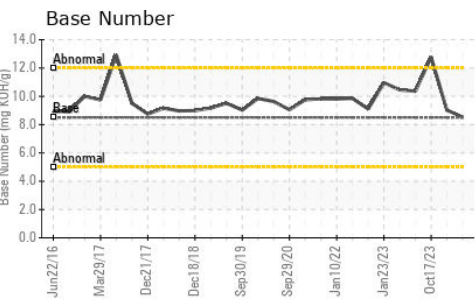
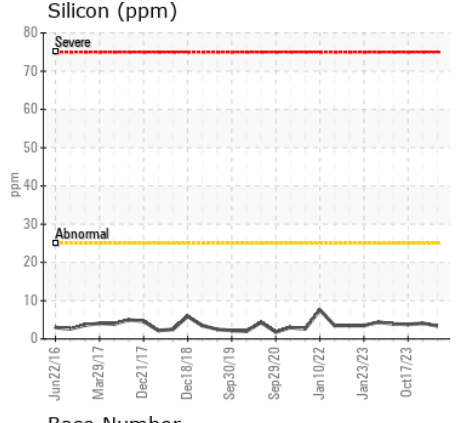
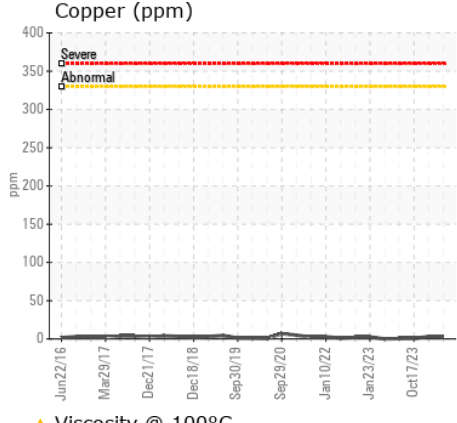
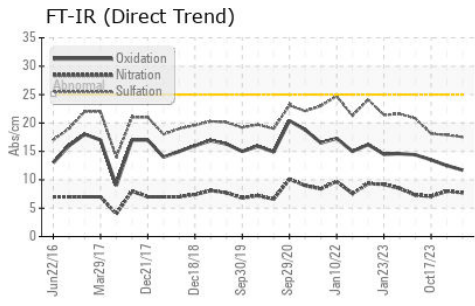
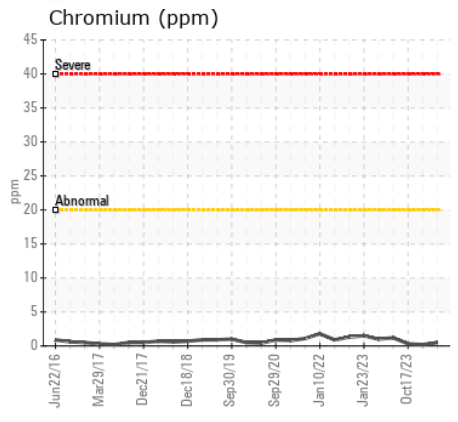
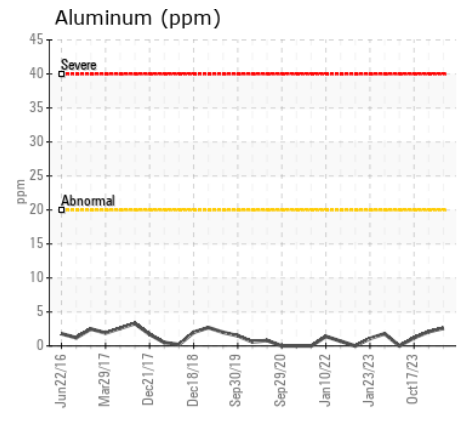
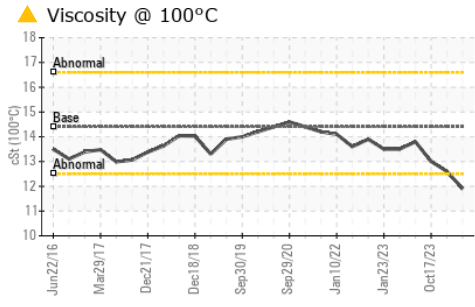
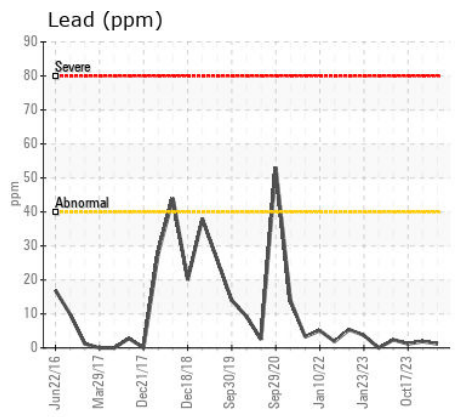
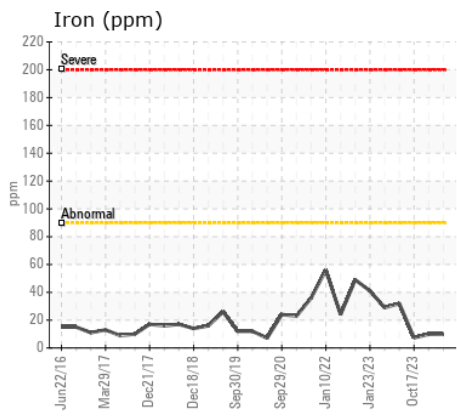
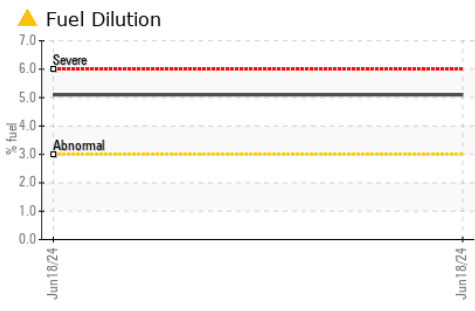
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

|                  |          |             |       |              |       |       |
|------------------|----------|-------------|-------|--------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>3</b>     | 4     | 4     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>2</b>     | 2     | 1     |
| Fuel             | %        | ASTM D3524  | >3.0  | <b>▲ 5.1</b> | <1.0  | <1.0  |
| Water            |          | WC Method   | >0.2  | <b>NEG</b>   | NEG   | NEG   |
| Glycol           |          | WC Method   |       | <b>NEG</b>   | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 | >6    | <b>0.4</b>   | 0.4   | 0.4   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>7.7</b>   | 8.0   | 7.1   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>17.5</b>  | 17.9  | 18.1  |
| Silt             | scalar   | *Visual     | NONE  | <b>NONE</b>  | NONE  | NONE  |
| Debris           | scalar   | *Visual     | NONE  | <b>NONE</b>  | NONE  | NONE  |
| Sand/Dirt        | scalar   | *Visual     | NONE  | <b>NONE</b>  | NONE  | NONE  |
| Appearance       | scalar   | *Visual     | NORML | <b>NORML</b> | NORML | NORML |
| Odor             | scalar   | *Visual     | NORML | <b>NORML</b> | NORML | NORML |
| Emulsified Water | scalar   | *Visual     | >0.2  | <b>NEG</b>   | NEG   | NEG   |

### FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

|                  |          |             |      |               |      |       |
|------------------|----------|-------------|------|---------------|------|-------|
| Sodium           | ppm      | ASTM D5185m | >158 | <b>0</b>      | <1   | 0     |
| Boron            | ppm      | ASTM D5185m | 250  | <b>14</b>     | 32   | 15    |
| Barium           | ppm      | ASTM D5185m | 10   | <b>1</b>      | 0    | 0     |
| Molybdenum       | ppm      | ASTM D5185m | 100  | <b>13</b>     | 41   | 52    |
| Manganese        | ppm      | ASTM D5185m |      | <b>&lt;1</b>  | <1   | <1    |
| Magnesium        | ppm      | ASTM D5185m | 450  | <b>75</b>     | 114  | 582   |
| Calcium          | ppm      | ASTM D5185m | 3000 | <b>2115</b>   | 1995 | 1406  |
| Phosphorus       | ppm      | ASTM D5185m | 1150 | <b>949</b>    | 923  | 987   |
| Zinc             | ppm      | ASTM D5185m | 1350 | <b>1003</b>   | 1075 | 1184  |
| Sulfur           | ppm      | ASTM D5185m | 4250 | <b>3537</b>   | 3267 | 3227  |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>11.7</b>   | 12.5 | 13.5  |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 8.5  | <b>8.52</b>   | 9.03 | 12.78 |
| Visc @ 100°C     | cSt      | ASTM D445   | 14.4 | <b>▲ 11.9</b> | 12.6 | 13.0  |



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LP0001456 **Received** : 24 Jun 2024  
**Lab Number** : 06218907 **Tested** : 27 Jun 2024  
**Unique Number** : 11097104 **Diagnosed** : 27 Jun 2024 - Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )

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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)