

## **OIL ANALYSIS REPORT**



#### Machine Id **2302** Component **Diesel Engine** Fluid **DIESEL ENGINE OIL SAE 5W30 (--- QTS)**

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

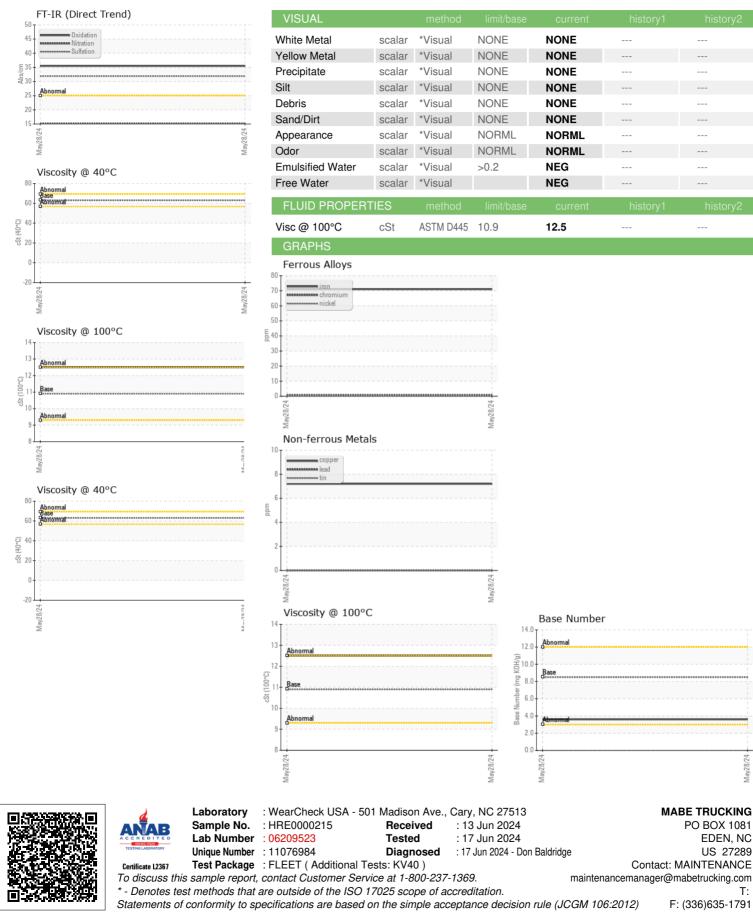
### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| SAMPLE INFORM    | ATION    | method      | limit/base | current     | history1 | history2 |
|------------------|----------|-------------|------------|-------------|----------|----------|
| Sample Number    |          | Client Info |            | HRE0000215  |          |          |
| Sample Date      |          | Client Info |            | 28 May 2024 |          |          |
| Machine Age      | mls      | Client Info |            | 295427      |          |          |
| Oil Age          | mls      | Client Info |            | 50000       |          |          |
| Oil Changed      |          | Client Info |            | Changed     |          |          |
| Sample Status    |          |             |            | NORMAL      |          |          |
| CONTAMINATION    | N        | method      | limit/base | current     | history1 | history2 |
| Fuel             |          | WC Method   | >5         | <1.0        |          |          |
| Water            |          | WC Method   | >0.2       | NEG         |          |          |
| Glycol           |          | WC Method   | 20.L       | NEG         |          |          |
| -                |          |             |            | -           |          |          |
| WEAR METALS      |          | method      | limit/base | current     | history1 | history2 |
| Iron             | ppm      | ASTM D5185m | >100       | 71          |          |          |
| Chromium         | ppm      | ASTM D5185m | >20        | <1          |          |          |
| Nickel           | ppm      | ASTM D5185m | >4         | <1          |          |          |
| Titanium         | ppm      | ASTM D5185m |            | <1          |          |          |
| Silver           | ppm      | ASTM D5185m | >3         | 0           |          |          |
| Aluminum         | ppm      | ASTM D5185m | >20        | 9           |          |          |
| Lead             | ppm      | ASTM D5185m | >40        | 0           |          |          |
| Copper           | ppm      | ASTM D5185m | >330       | 7           |          |          |
| Tin              | ppm      | ASTM D5185m | >15        | 0           |          |          |
| Vanadium         | ppm      | ASTM D5185m |            | 0           |          |          |
| Cadmium          | ppm      | ASTM D5185m |            | 2           |          |          |
| ADDITIVES        |          | method      | limit/base | current     | history1 | history2 |
| Boron            | ppm      | ASTM D5185m | 250        | 11          |          |          |
| Barium           | ppm      | ASTM D5185m | 10         | 0           |          |          |
| Molybdenum       | ppm      | ASTM D5185m | 100        | 71          |          |          |
| Manganese        | ppm      | ASTM D5185m |            | 2           |          |          |
| Magnesium        | ppm      | ASTM D5185m | 450        | 1176        |          |          |
| Calcium          | ppm      | ASTM D5185m | 3000       | 984         |          |          |
| Phosphorus       | ppm      | ASTM D5185m | 1150       | 1061        |          |          |
| Zinc             | ppm      | ASTM D5185m | 1350       | 1333        |          |          |
| Sulfur           | ppm      | ASTM D5185m | 4250       | 3302        |          |          |
| CONTAMINANTS     |          | method      | limit/base | current     | history1 | history2 |
| Silicon          | ppm      | ASTM D5185m | >25        | 17          |          |          |
| Sodium           | ppm      | ASTM D5185m |            | 9           |          |          |
| Potassium        | ppm      | ASTM D5185m | >20        | 19          |          |          |
| INFRA-RED        |          | method      | limit/base | current     | history1 | history2 |
| Soot %           | %        | *ASTM D7844 | >3         | 0.8         |          |          |
| Nitration        | Abs/cm   | *ASTM D7624 | >20        | 15.2        |          |          |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30        | 31.9        |          |          |
| FLUID DEGRADA    |          | method      | limit/base | current     | history1 | history2 |
|                  |          |             |            |             |          |          |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25        | 35.5        |          |          |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 8.5        | 3.6         |          |          |



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Contact/Location: MAINTENANCE ? - MABEDE