

#### Machine Id FORD F450 MT1143 (S/N EB31143) Component Diesel Engine Fluid DIESEL ENGINE OIL SAE 15W40 (--- QTS)

## RECOMMENDATION

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

#### **WEAR**

All component wear rates are normal.

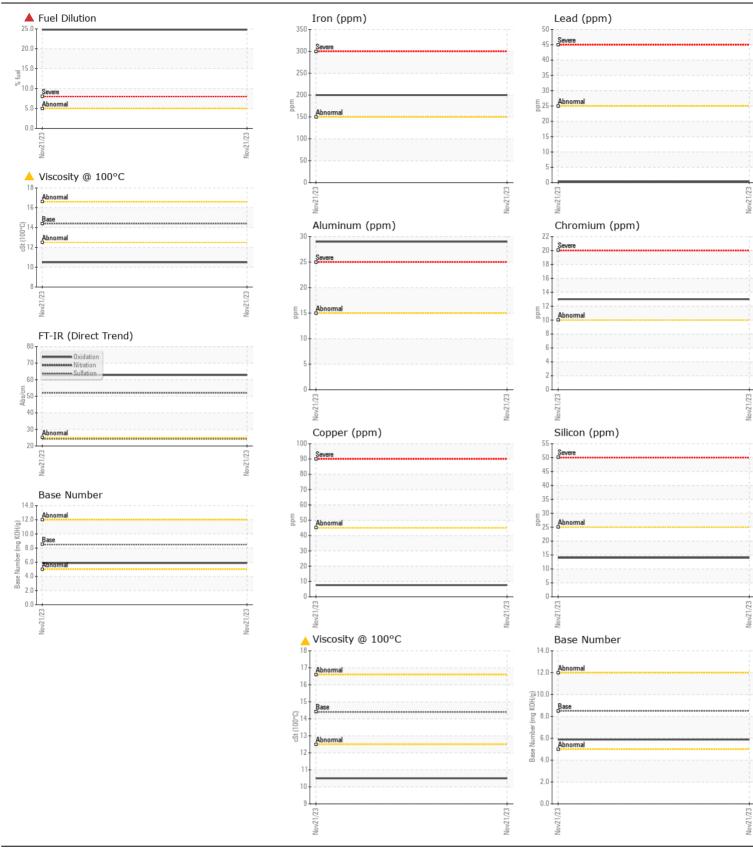
# CONTAMINATION

There is a high amount of fuel present in the oil.

### **FLUID CONDITION**

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

| Test                                  | UOM      | Method      | Limit/Abn | Current       | History1 | History2 |
|---------------------------------------|----------|-------------|-----------|---------------|----------|----------|
| Sample Number                         |          | Client Info |           | HPL0003990    |          |          |
| Sample Date                           |          | Client Info |           | 21 Nov 2023   |          |          |
| Machine Age                           | mls      | Client Info |           | 63660         |          |          |
| Oil Age                               | mls      | Client Info |           | 6230          |          |          |
| Filter Age                            | mls      | Client Info |           | 6230          |          |          |
| Oil Changed                           |          | Client Info |           | N/A           |          |          |
| Filter Changed                        |          | Client Info |           | N/A           |          |          |
| Sample Status                         |          |             |           | SEVERE        |          |          |
| · · · · · · · · · · · · · · · · · · · |          |             |           |               |          |          |
| Iron                                  | ppm      | ASTM D5185m | >150      | 200           |          |          |
| Chromium                              | ppm      | ASTM D5185m | >10       | 13            |          |          |
| Nickel                                | ppm      | ASTM D5185m | >10       | 2             |          |          |
| Titanium                              | ppm      | ASTM D5185m | >2        | <1            |          |          |
| Silver                                | ppm      | ASTM D5185m | >2        | 0             |          |          |
| Aluminum                              | ppm      | ASTM D5185m | >15       | 29            |          |          |
| Lead                                  | ppm      | ASTM D5185m | >25       | <1            |          |          |
| Copper                                | ppm      | ASTM D5185m | >45       | 8             |          |          |
| Tin                                   | ppm      | ASTM D5185m | >5        | <1            |          |          |
| Vanadium                              | ppm      | ASTM D5185m |           | <1            |          |          |
| White Metal                           | scalar   | *Visual     | NONE      | NONE          |          |          |
| Yellow Metal                          | scalar   | *Visual     | NONE      | NONE          |          |          |
|                                       |          |             |           |               |          |          |
| Silicon                               | ppm      | ASTM D5185m | >25       | 14            |          |          |
| Potassium                             | ppm      | ASTM D5185m | >20       | 2             |          |          |
| Fuel                                  | %        | ASTM D3524  | >5        | <b>4</b> 24.8 |          |          |
| Water                                 |          | WC Method   | >0.2      | NEG           |          |          |
| Glycol                                |          | WC Method   |           | NEG           |          |          |
| Soot %                                | %        | *ASTM D7844 | >3        | 1.2           |          |          |
| Nitration                             | Abs/cm   | *ASTM D7624 | >20       | 24.5          |          |          |
| Sulfation                             | Abs/.1mm | *ASTM D7415 | >30       | 52.0          |          |          |
| Silt                                  | scalar   | *Visual     | NONE      | NONE          |          |          |
| Debris                                | scalar   | *Visual     | NONE      | NONE          |          |          |
| Sand/Dirt                             | scalar   | *Visual     | NONE      | NONE          |          |          |
| Appearance                            | scalar   | *Visual     | NORML     | NORML         |          |          |
| Odor                                  | scalar   | *Visual     | NORML     | NORML         |          |          |
| Emulsified Water                      | scalar   | *Visual     | >0.2      | NEG           |          |          |
|                                       |          |             |           |               |          |          |
| Sodium                                | ppm      | ASTM D5185m | >158      | 3             |          |          |
| Boron                                 | ppm      | ASTM D5185m | 250       | 2             |          |          |
| Barium                                | ppm      | ASTM D5185m | 10        | 0             |          |          |
| Molybdenum                            | ppm      | ASTM D5185m | 100       | 469           |          |          |
| Manganese                             | ppm      | ASTM D5185m |           | 2             |          |          |
| Magnesium                             | ppm      | ASTM D5185m | 450       | 811           |          |          |
| Calcium                               | ppm      | ASTM D5185m | 3000      | 2187          |          |          |
| Phosphorus                            | ppm      | ASTM D5185m | 1150      | 924           |          |          |
| Zinc                                  | ppm      | ASTM D5185m | 1350      | 1071          |          |          |
| Sulfur                                | ppm      | ASTM D5185m | 4250      | 5492          |          |          |
| Oxidation                             | Abs/.1mm | *ASTM D7414 | >25       | 62.8          |          |          |
| Base Number (BN)                      | mg KOH/g | ASTM D2896  | 8.5       | 5.88          |          |          |
| Visc @ 100°C                          | cSt      | ASTM D445   | 14.4      | 🔺 10.5 🌙      |          |          |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 STEVENSON CRANE Sample No. Received 410 STEVENSON DR : HPL0003990 :08 Dec 2023 Lab Number : 06029575 Tested : 18 Dec 2023 BOLINGBROOK, IL Unique Number : 10779366 : 18 Dec 2023 - Jonathan Hester US 60440 Diagnosed Test Package : MOB 2 (Additional Tests: FuelDilution, PercentFuel) Contact: DAVE KOEHNE Certificate L2367 davidk@stevensoncrane.com 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. T: (630)972-9199 F: Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Contact/Location: DAVE KOEHNE - STEBOL Page 2 of 2