



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

|                 |               |
|-----------------|---------------|
| WEAR            | <b>NORMAL</b> |
| CONTAMINATION   | <b>NORMAL</b> |
| FLUID CONDITION | <b>NORMAL</b> |

Machine Id  
**FORD FORD F-150**  
 Component  
**Gasoline Engine**  
 Fluid  
**TRC PRO-SPEC SYNTHETIC 5W30 (8 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current       | History1 | History2 |
|----------------|-----|-------------|-----------|---------------|----------|----------|
| Sample Number  |     | Client Info |           | TR06219931    | ---      | ---      |
| Sample Date    |     | Client Info |           | 29 May 2024   | ---      | ---      |
| Machine Age    | mls | Client Info |           | 105567        | ---      | ---      |
| Oil Age        | mls | Client Info |           | 12800         | ---      | ---      |
| Filter Age     | mls | Client Info |           | 12800         | ---      | ---      |
| Oil Changed    |     | Client Info |           | Changed       | ---      | ---      |
| Filter Changed |     | Client Info |           | Changed       | ---      | ---      |
| Sample Status  |     |             |           | <b>NORMAL</b> | ---      | ---      |

## WEAR

All component wear rates are normal.

|              |        |             |      |      |     |     |
|--------------|--------|-------------|------|------|-----|-----|
| Iron         | ppm    | ASTM D5185m | >150 | 14   | --- | --- |
| Chromium     | ppm    | ASTM D5185m | >20  | <1   | --- | --- |
| Nickel       | ppm    | ASTM D5185m | >5   | <1   | --- | --- |
| Titanium     | ppm    | ASTM D5185m |      | <1   | --- | --- |
| Silver       | ppm    | ASTM D5185m | >2   | <1   | --- | --- |
| Aluminum     | ppm    | ASTM D5185m | >40  | 6    | --- | --- |
| Lead         | ppm    | ASTM D5185m | >50  | 0    | --- | --- |
| Copper       | ppm    | ASTM D5185m | >155 | 1    | --- | --- |
| Tin          | ppm    | ASTM D5185m | >10  | 0    | --- | --- |
| Vanadium     | ppm    | ASTM D5185m |      | 0    | --- | --- |
| White Metal  | scalar | *Visual     | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual     | NONE | NONE | --- | --- |

## CONTAMINATION

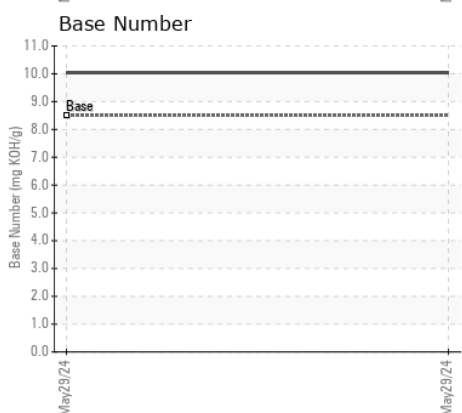
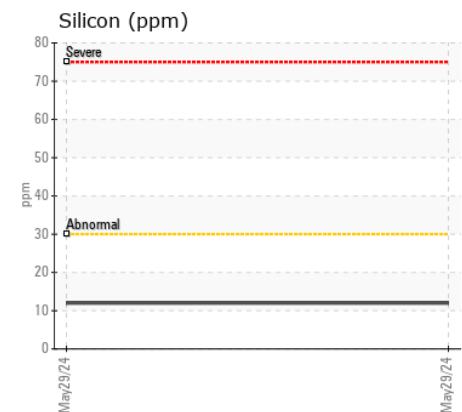
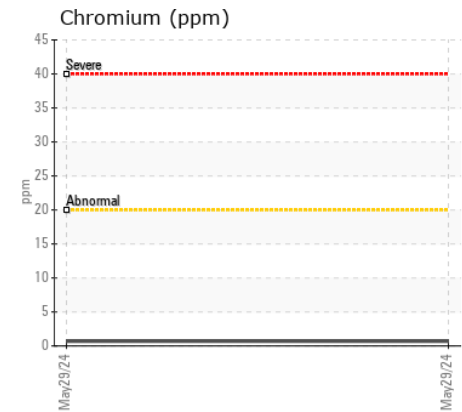
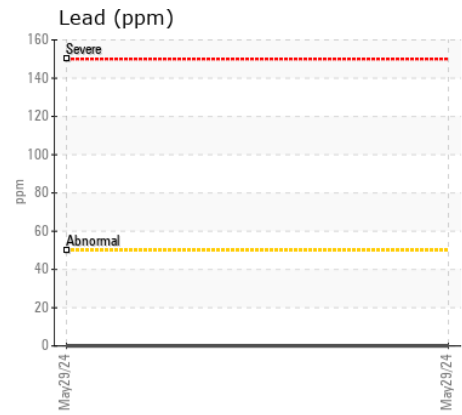
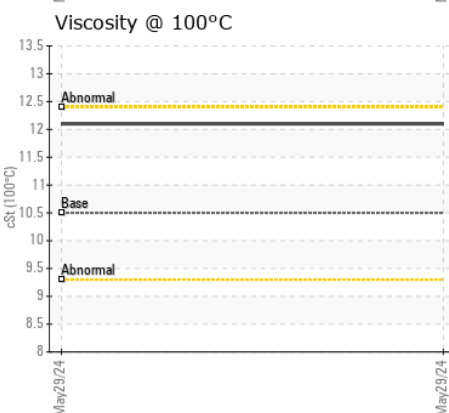
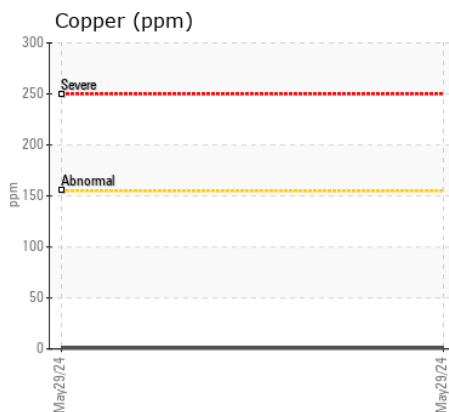
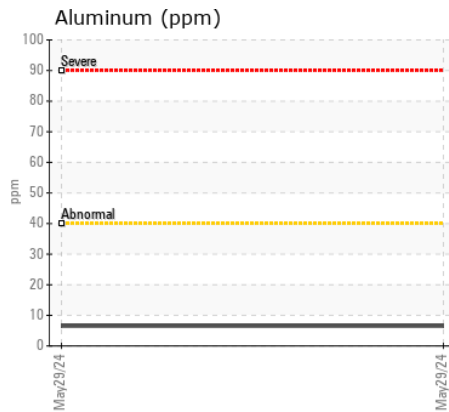
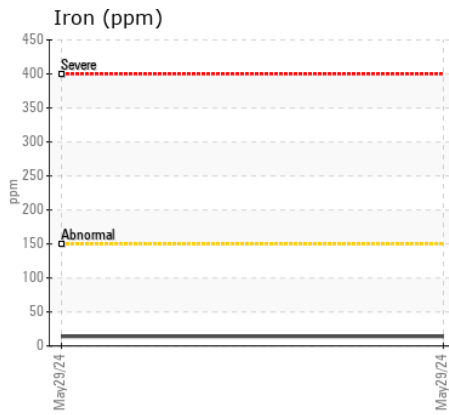
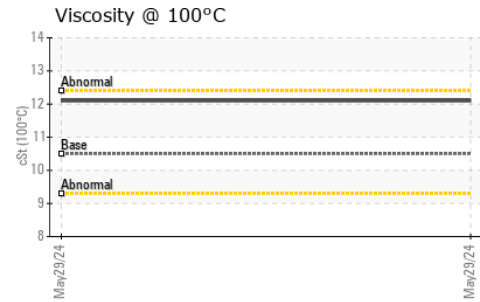
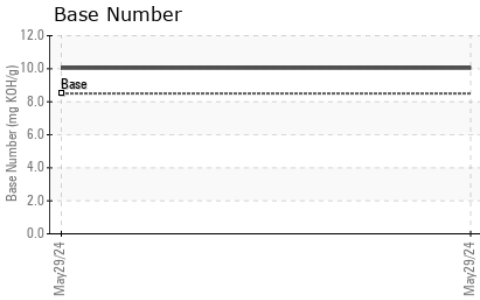
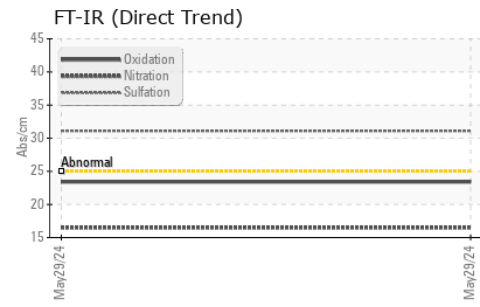
There is no indication of any contamination in the oil.

|                  |          |             |       |       |     |     |
|------------------|----------|-------------|-------|-------|-----|-----|
| Silicon          | ppm      | ASTM D5185m | >30   | 12    | --- | --- |
| Potassium        | ppm      | ASTM D5185m | >20   | 3     | --- | --- |
| Fuel             |          | WC Method   | >4.0  | <1.0  | --- | --- |
| Water            |          | WC Method   | >0.2  | NEG   | --- | --- |
| Glycol           |          | WC Method   |       | NEG   | --- | --- |
| Soot %           | %        | *ASTM D7844 |       | 0.1   | --- | --- |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | 16.5  | --- | --- |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | 31.1  | --- | --- |
| 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   | --- | --- |

## 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 | >400 | 8     | --- | --- |
| Boron            | ppm      | ASTM D5185m |      | <1    | --- | --- |
| Barium           | ppm      | ASTM D5185m |      | 0     | --- | --- |
| Molybdenum       | ppm      | ASTM D5185m | 400  | 0     | --- | --- |
| Manganese        | ppm      | ASTM D5185m |      | 1     | --- | --- |
| Magnesium        | ppm      | ASTM D5185m | 600  | 24    | --- | --- |
| Calcium          | ppm      | ASTM D5185m | 1500 | 5024  | --- | --- |
| Phosphorus       | ppm      | ASTM D5185m | 800  | 1116  | --- | --- |
| Zinc             | ppm      | ASTM D5185m | 900  | 1346  | --- | --- |
| Sulfur           | ppm      | ASTM D5185m |      | 5244  | --- | --- |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | 23.4  | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 8.5  | 10.04 | --- | --- |
| Visc @ 100°C     | cSt      | ASTM D445   | 10.5 | 12.1  | --- | --- |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06219931 **Received** : 25 Jun 2024  
**Lab Number** : 06219931 **Tested** : 26 Jun 2024  
**Unique Number** : 11098128 **Diagnosed** : 26 Jun 2024 - Sean Felton  
**Test Package** : MOB 2

**CALEB BROWN**  
 502 12TH AVE  
 CANYON, TX  
 US  
 Contact: MIKE LEWIS

To discuss this sample report, contact Customer Service at 1-800-827-0711.  
 \* - 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)