TRC TRAAP
Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

| | |
|---|---|
| WEAR | SEVERE |
| CONTAMINATION | SEVERE |
| FLUID CONDITION | ABNORMAL |

Machine Id
## FORD 1FT7W2B63DEA25509
Component
## Gasoline Engine
Fluid
## TRC PRO-SPEC SYNTHETIC 5W30 (6 LTR)

## RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We recommend that you drain the oil from the component if this has not already been done. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

## WEAR

Iron ppm levels are severe. Nickel ppm levels are abnormal. Aluminum ppm levels are noted. Cylinder, crank, or cam shaft wear is indicated. Exhaust valve wear is indicated.

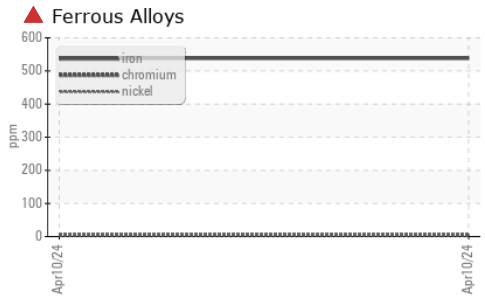
## CONTAMINATION

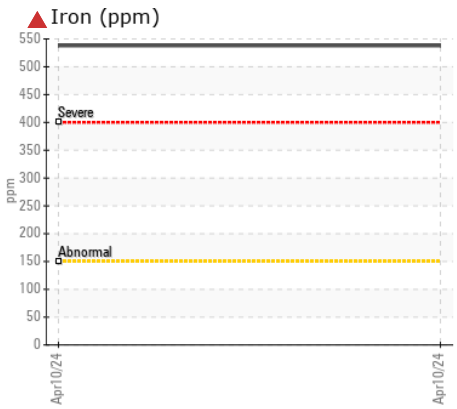
Light fuel dilution occurring. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. High amount of ingressed dirt has caused abrasive wear to the component.

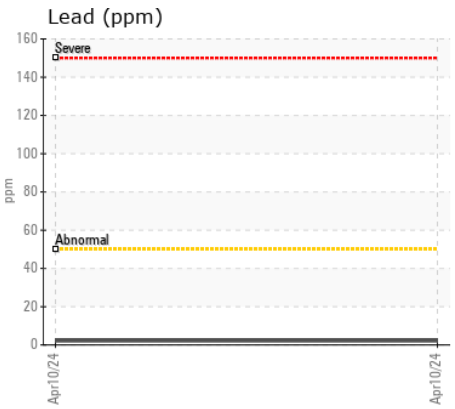
## FLUID CONDITION

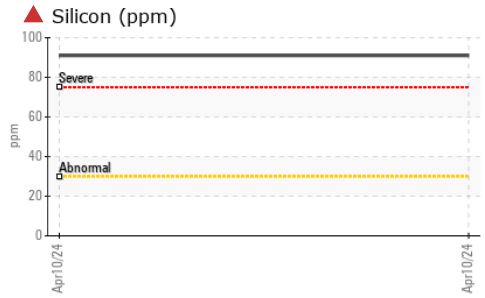
The BN level is low. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

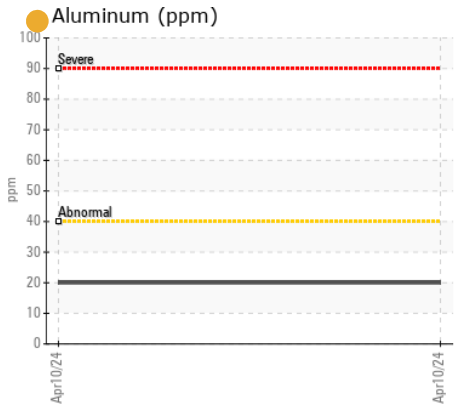
| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | TR02629205 | --- | --- |
| Sample Date | | Client Info | | 10 Apr 2024 | --- | --- |
| Machine Age | kms | Client Info | | 438563 | --- | --- |
| Oil Age | kms | Client Info | | 4640 | --- | --- |
| Filter Age | kms | Client Info | | 4640 | --- | --- |
| Oil Changed | | Client Info | | Changed | --- | --- |
| Filter Changed | | Client Info | | Changed | --- | --- |
| Sample Status | | | | SEVERE | --- | --- |
| PQ | | ASTM D8184* | | 13 | --- | --- |
| Iron | ppm | ASTM D5185(m) | >150 | ▲ 538 | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | 4 | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >5 | ▲ 8 | --- | --- |
| Titanium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Silver | ppm | ASTM D5185(m) | >2 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >40 | ● 20 | --- | --- |
| Lead | ppm | ASTM D5185(m) | >50 | 2 | --- | --- |
| Copper | ppm | ASTM D5185(m) | >155 | 42 | --- | --- |
| Tin | ppm | ASTM D5185(m) | >10 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Silicon | ppm | ASTM D5185(m) | >30 | ▲ 91 | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | 9 | --- | --- |
| Fuel | % | ASTM D7593* | >4.0 | ▲ 3.5 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Glycol | % | ASTM D7922* | | 0.0 | --- | --- |
| Soot % | % | ASTM D7844* | | 0 | --- | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | 19.9 | --- | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 34.1 | --- | --- |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | --- | --- |
| Sodium | ppm | ASTM D5185(m) | >400 | 58 | --- | --- |
| Boron | ppm | ASTM D5185(m) | | 24 | --- | --- |
| Barium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | 400 | ● 53 | --- | --- |
| Manganese | ppm | ASTM D5185(m) | | 10 | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | 600 | 348 | --- | --- |
| Calcium | ppm | ASTM D5185(m) | 1500 | ● 889 | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | 800 | ● 546 | --- | --- |
| Zinc | ppm | ASTM D5185(m) | 900 | ● 625 | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | | 2580 | --- | --- |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 37.5 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896* | 8.5 | ▲ 2.65 | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 10.5 | ▲ 8.5 | --- | --- |

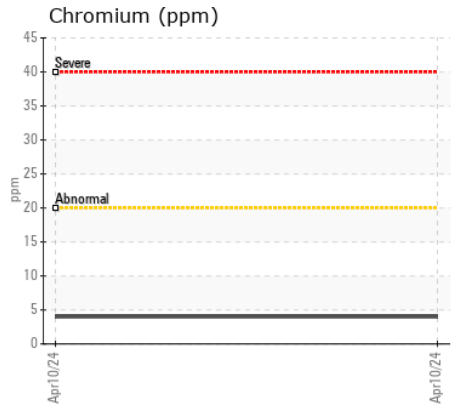


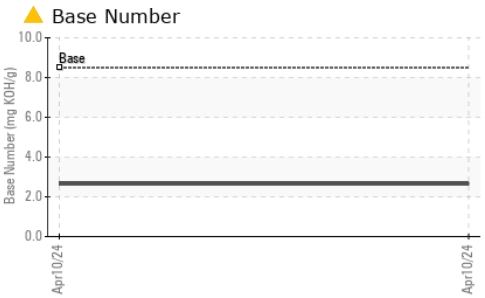



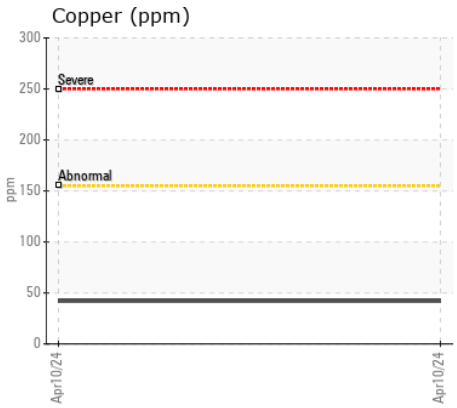



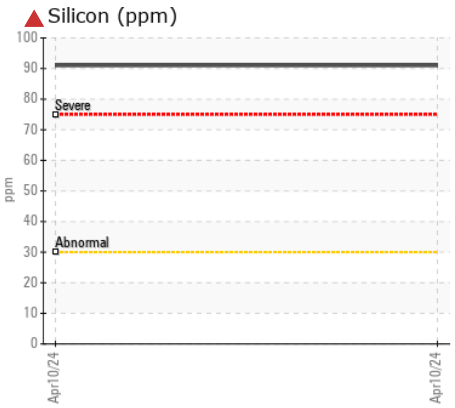



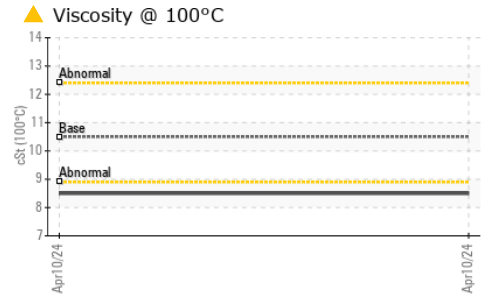



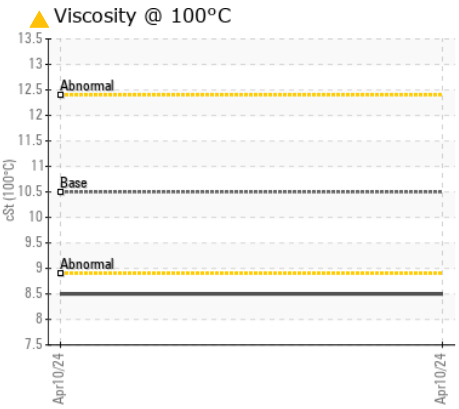



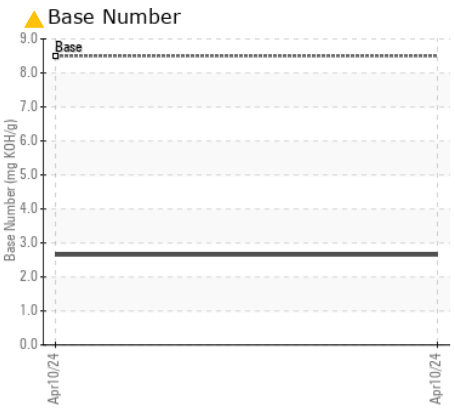



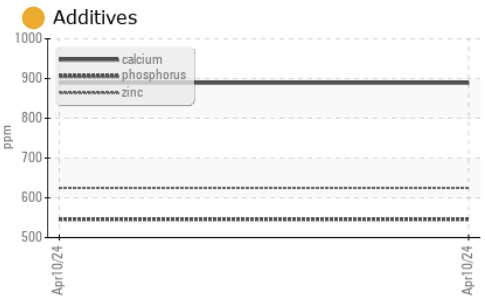




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : TR02629205 **Received** : 16 Apr 2024
**Lab Number** : 02629205 **Tested** : 18 Apr 2024
**Unique Number** : 5762337 **Diagnosed** : 18 Apr 2024 - Kevin Marson
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, Glycol, PercentFuel, PQ )

*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)*

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