



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

| | |
|-----------------|--------|
| WEAR | NORMAL |
| CONTAMINATION | SEVERE |
| FLUID CONDITION | NORMAL |

Machine Id
FORD F150 RED 1 - F150 (S/N 1FTFW1EVXAF65250)
 Component
Gasoline Engine
 Fluid
TRC PRO-SPEC MULTI-VIS SB 5W20 (7 QTS)

RECOMMENDATION

We advise that you check for the source of water entry. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please note that there was too much water present in the oil to perform an accurate viscosity test.

WEAR

All component wear rates are normal.

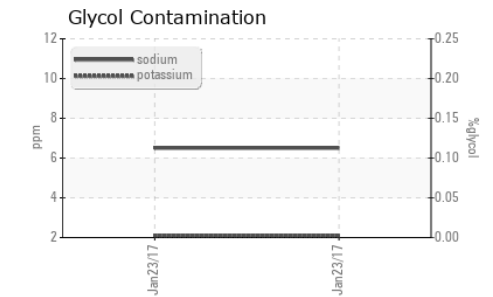
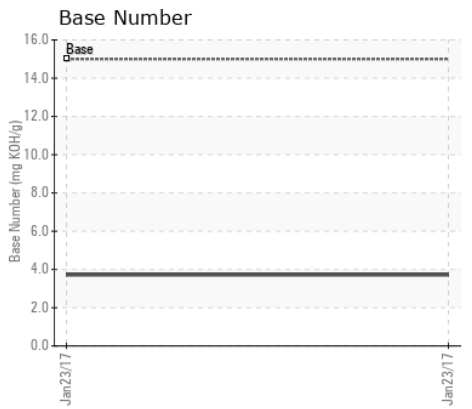
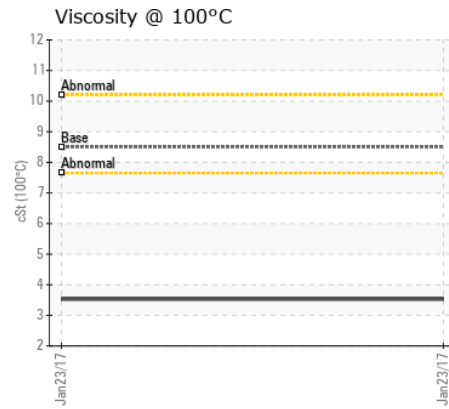
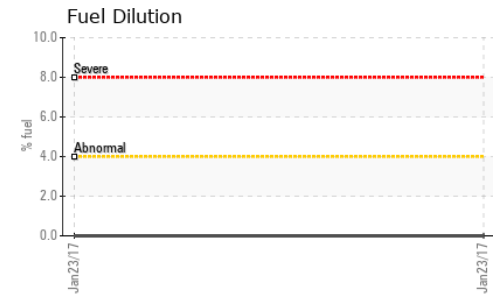
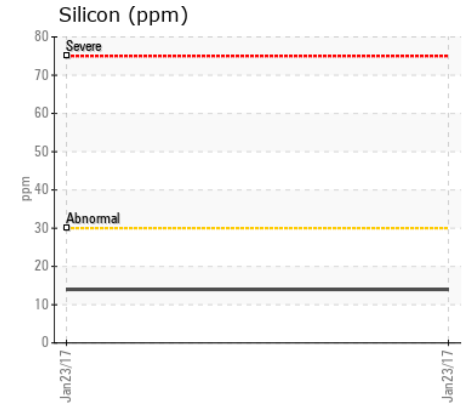
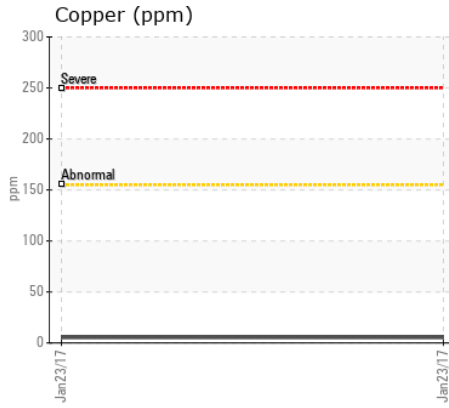
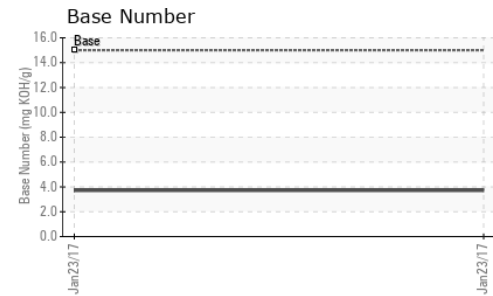
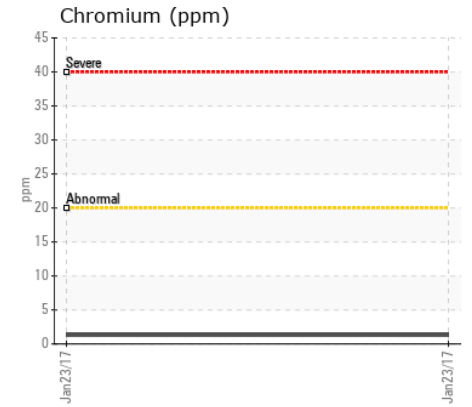
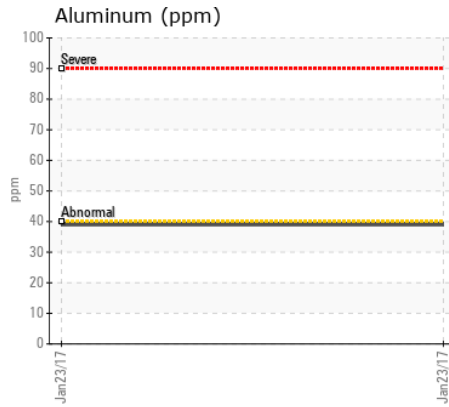
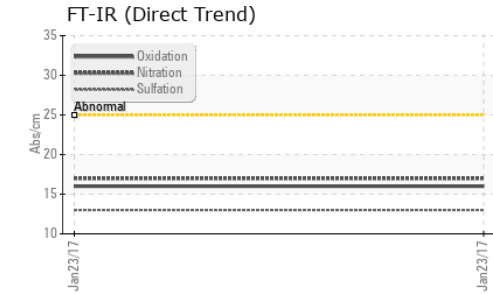
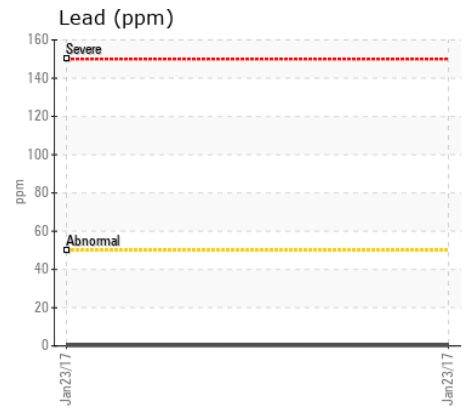
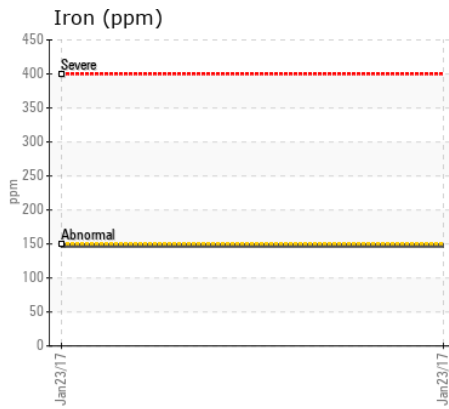
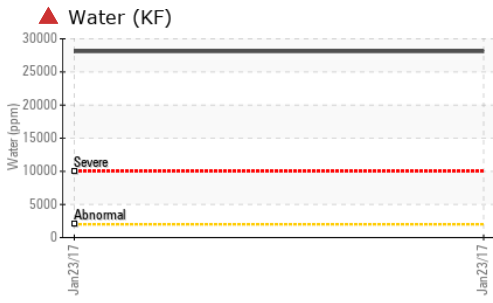
CONTAMINATION

There is a high concentration of water present in the oil. Test for glycol is negative.

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|------------------|----------|-------------|-----------|-------------|----------|----------|
| Sample Number | | Client Info | | TR04155590 | --- | --- |
| Sample Date | | Client Info | | 23 Jan 2017 | --- | --- |
| Machine Age | mls | Client Info | | 79000 | --- | --- |
| Oil Age | mls | Client Info | | 7000 | --- | --- |
| Filter Age | mls | Client Info | | 7000 | --- | --- |
| Oil Changed | | Client Info | | Changed | --- | --- |
| Filter Changed | | Client Info | | Changed | --- | --- |
| Sample Status | | | | SEVERE | --- | --- |
| Iron | ppm | ASTM D5185m | >150 | 147 | --- | --- |
| Chromium | ppm | ASTM D5185m | >20 | 1 | --- | --- |
| Nickel | ppm | ASTM D5185m | >5 | 1 | --- | --- |
| Titanium | ppm | ASTM D5185m | | 0 | --- | --- |
| Silver | ppm | ASTM D5185m | >2 | <1 | --- | --- |
| Aluminum | ppm | ASTM D5185m | >40 | 39 | --- | --- |
| Lead | ppm | ASTM D5185m | >50 | <1 | --- | --- |
| Copper | ppm | ASTM D5185m | >155 | 5 | --- | --- |
| Tin | ppm | ASTM D5185m | >10 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | --- | --- |
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Silicon | ppm | ASTM D5185m | >30 | 14 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | 2 | --- | --- |
| Fuel | % | ASTM D3524 | >4.0 | <1.0 | --- | --- |
| Water | % | ASTM D6304 | >0.2 | ▲ 2.81 | --- | --- |
| ppm Water | ppm | ASTM D6304 | >2000 | ▲ 28100 | --- | --- |
| Glycol | % | *ASTM D2982 | | NEG | --- | --- |
| Soot % | % | *ASTM D7844 | | 0 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 | | 17. | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | | 13. | --- | --- |
| 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 | ▲ 2.0% | --- | --- |
| Sodium | ppm | ASTM D5185m | >400 | 6 | --- | --- |
| Boron | ppm | ASTM D5185m | | 28 | --- | --- |
| Barium | ppm | ASTM D5185m | | 4 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | 108 | --- | --- |
| Manganese | ppm | ASTM D5185m | | 5 | --- | --- |
| Magnesium | ppm | ASTM D5185m | | 13 | --- | --- |
| Calcium | ppm | ASTM D5185m | 4200 | 1366 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 800 | 417 | --- | --- |
| Zinc | ppm | ASTM D5185m | 800 | 684 | --- | --- |
| Sulfur | ppm | ASTM D5185m | | 1628 | --- | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | | 16. | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 15 | 3.72 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 8.5 | 3.53 | --- | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR04155590
Lab Number : 04155590
Unique Number : 7688998
Test Package : MOB 2 (Additional Tests: FuelDilution, Glycol, KF, TAN Man)

AG BUILDERS OF SOUTHERN MINNESOTA
 1815 1ST AVE N
 WINDOM, MN
 US 56101-0026
 Contact: DARRYL BARGEN

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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F: