



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ATTENTION

Machine Id

## FORD T-4

Component

## Diesel Engine

Fluid

## SHELL ROTELLA T4 15W40 (16 QTS)

### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06055548	---	---
Sample Date		Client Info		10 Nov 2023	---	---
Machine Age	mls	Client Info		220400	---	---
Oil Age	mls	Client Info		0	---	---
Filter Age	mls	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ATTENTION	---	---

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	41	---	---
Chromium	ppm	ASTM D5185m	>20	1	---	---
Nickel	ppm	ASTM D5185m	>2	<1	---	---
Titanium	ppm	ASTM D5185m	>2	0	---	---
Silver	ppm	ASTM D5185m	>2	0	---	---
Aluminum	ppm	ASTM D5185m	>25	5	---	---
Lead	ppm	ASTM D5185m	>40	<1	---	---
Copper	ppm	ASTM D5185m	>330	3	---	---
Tin	ppm	ASTM D5185m	>15	1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

### CONTAMINATION

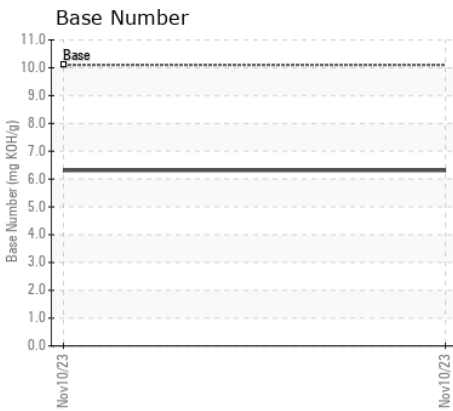
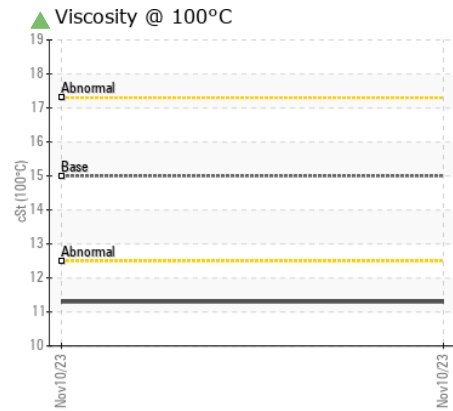
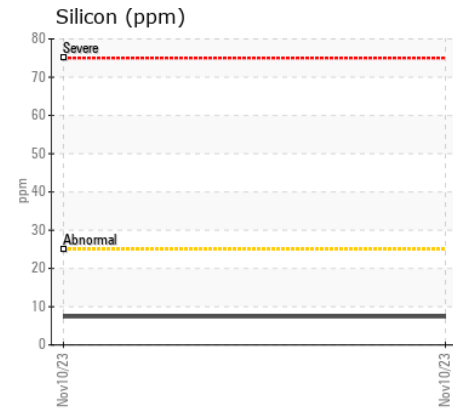
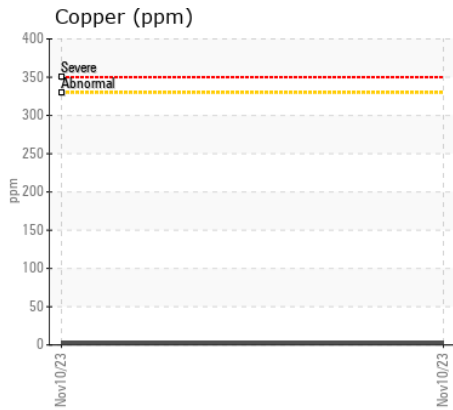
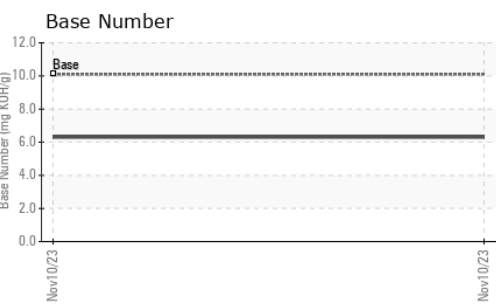
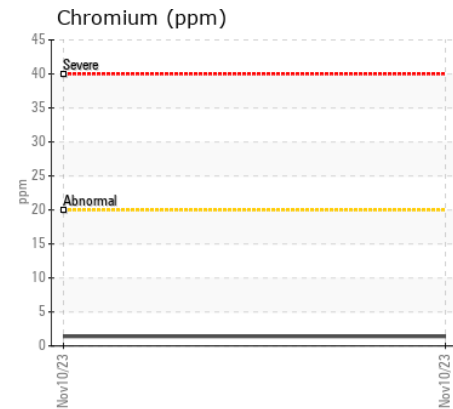
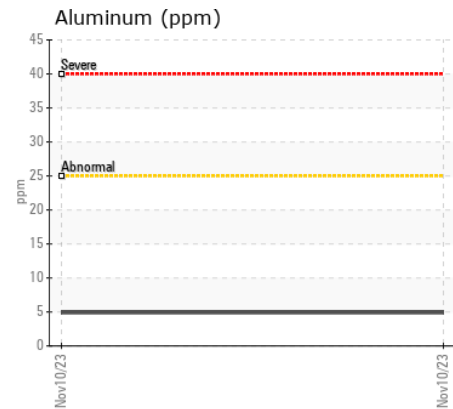
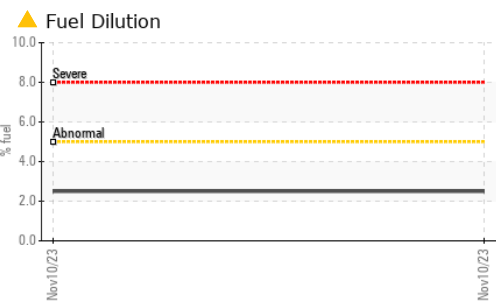
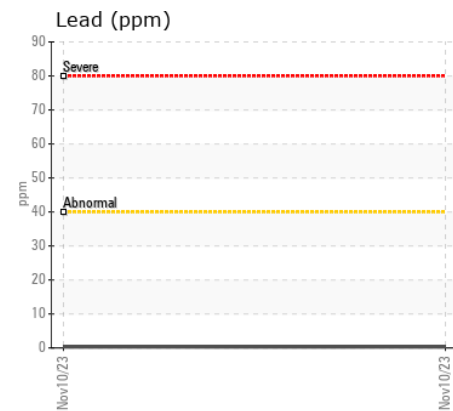
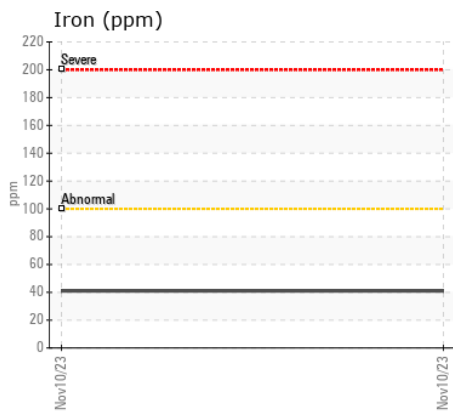
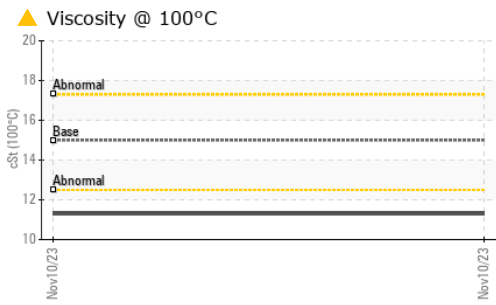
Light fuel dilution occurring.

Silicon	ppm	ASTM D5185m	>25	7	---	---
Potassium	ppm	ASTM D5185m	>20	0	---	---
Fuel	%	ASTM D3524	>5	▲ 2.5	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.6	---	---
Nitration	Abs/cm	*ASTM D7624	>20	14.1	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	29.0	---	---
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	---	---

### FLUID CONDITION

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		4	---	---
Boron	ppm	ASTM D5185m		19	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		42	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		551	---	---
Calcium	ppm	ASTM D5185m		1354	---	---
Phosphorus	ppm	ASTM D5185m		953	---	---
Zinc	ppm	ASTM D5185m		1179	---	---
Sulfur	ppm	ASTM D5185m		2569	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	36.2	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	6.31	---	---
Visc @ 100°C	cSt	ASTM D445	15	▲ 11.3	---	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06055548 **Received** : 09 Jan 2024  
**Lab Number** : 06055548 **Diagnosed** : 11 Jan 2024  
**Unique Number** : 10821497 **Diagnostician** : Jonathan Hester  
**Test Package** : MOB 2 ( Additional Tests: FuelDilution, PercentFuel )

**ELLMANS GARAGE**  
 4 E DOUGHTY ST  
 DUNKIRK, NY  
 US 14048  
 Contact: RON CUNNINGHAM

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)

T:  
F: