



TRAAP

Texas Refinery Advanced Analysis Program

# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id  
**FORD 2006 F-450**  
 Component  
**Diesel Engine**  
 Fluid  
**TRC MOLY XL PRO-SPEC IV HD SYN 5W40 (15 QTS)**

## RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06048444	TR05908351	TR05237432
Sample Date		Client Info		26 Dec 2023	23 Jul 2023	03 Apr 2021
Machine Age	mls	Client Info		458689	449694	392353
Oil Age	mls	Client Info		6118	5080	10410
Filter Age	mls	Client Info		6118	5080	10410
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				ABNORMAL	SEVERE	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	17	19	30
Chromium	ppm	ASTM D5185m	>10	<1	<1	1
Nickel	ppm	ASTM D5185m	>10	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>15	3	2	0
Lead	ppm	ASTM D5185m	>25	2	<1	4
Copper	ppm	ASTM D5185m	>45	1	<1	1
Tin	ppm	ASTM D5185m	>5	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

## CONTAMINATION

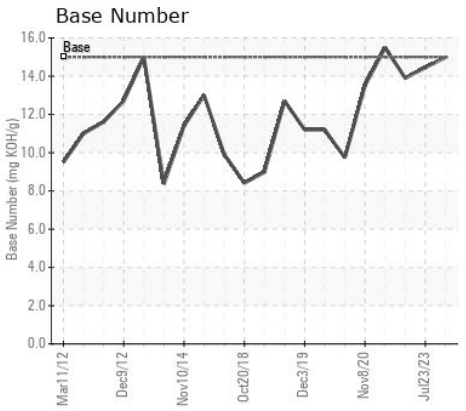
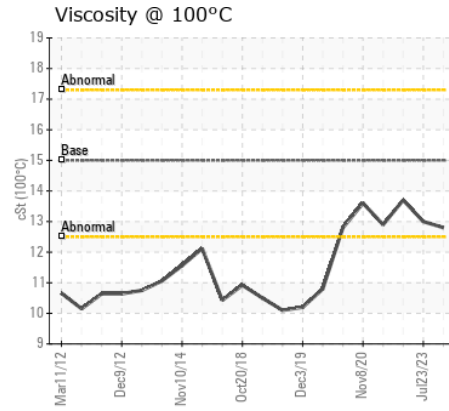
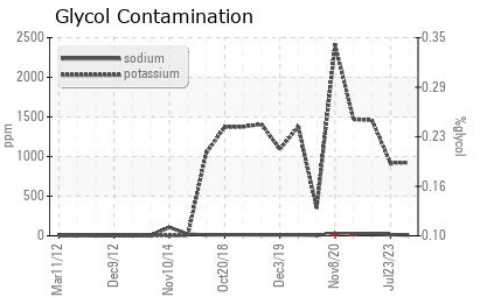
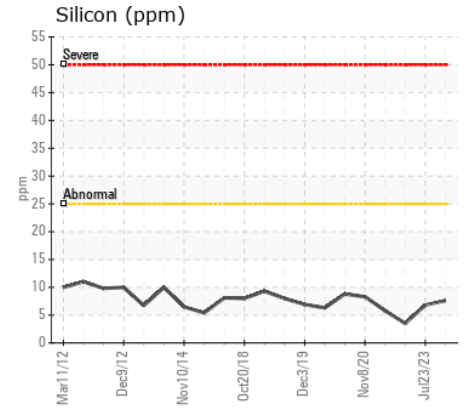
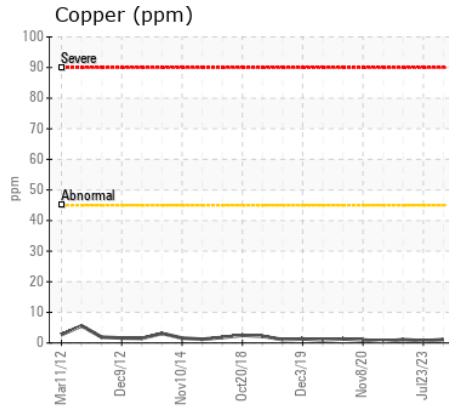
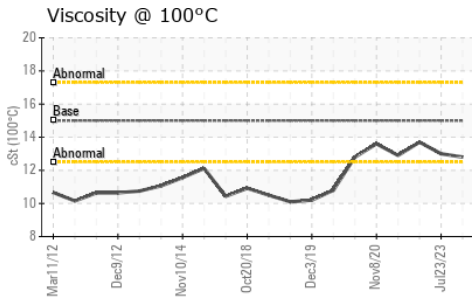
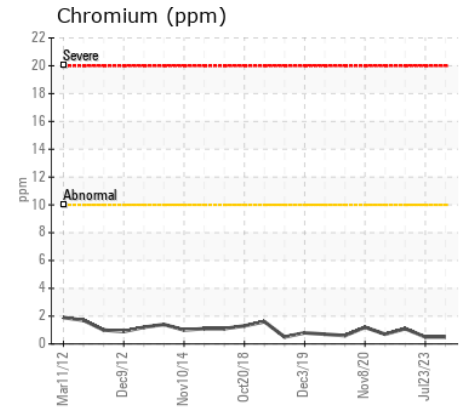
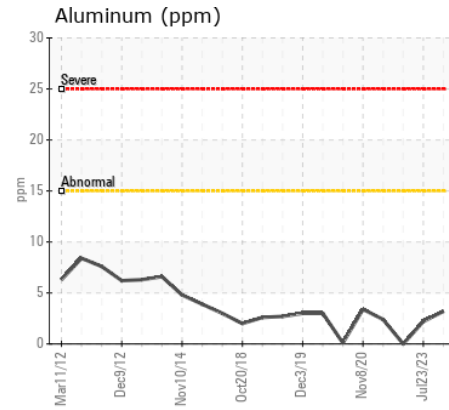
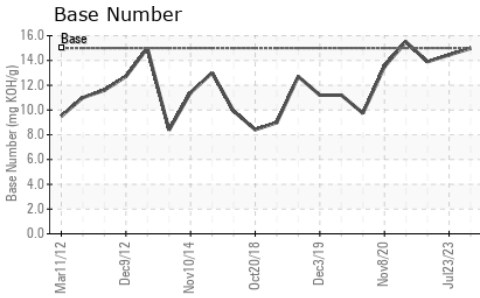
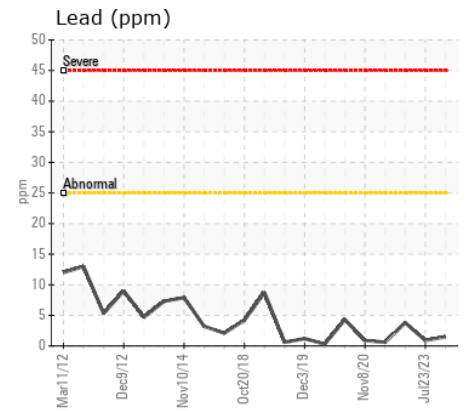
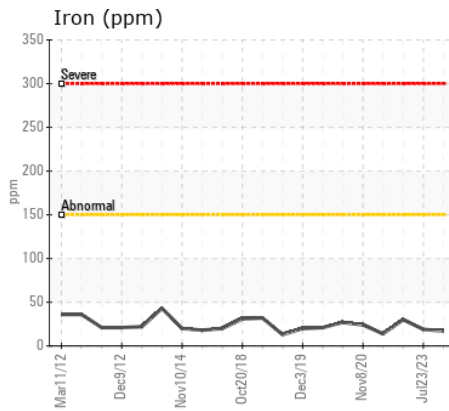
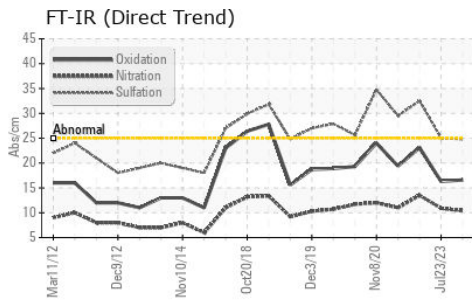
Sodium and/or potassium levels remain high.

Silicon	ppm	ASTM D5185m	>25	8	7	4
Potassium	ppm	ASTM D5185m	>20	▲ 923	▲ 920	▲ 1461
Fuel		WC Method	>2.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	▲ 0.10	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	10.4	10.9	13.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.8	25.0	32.5
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

## FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		10	15	21
Boron	ppm	ASTM D5185m		795	● 759	1084
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		37	● 9	13
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		67	60	36
Calcium	ppm	ASTM D5185m	4500	4245	4300	4810
Phosphorus	ppm	ASTM D5185m		992	897	957
Zinc	ppm	ASTM D5185m	1200	1092	1067	1068
Sulfur	ppm	ASTM D5185m		4133	4644	3359
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.6	16.3	23.1
Base Number (BN)	mg KOH/g	ASTM D2896	15	14.98	14.45	13.9
Visc @ 100°C	cSt	ASTM D445	15	12.8	13.0	13.7



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06048444  
**Lab Number** : 06048444  
**Unique Number** : 10809052  
**Test Package** : MOB 2  
**Received** : 29 Dec 2023  
**Tested** : 03 Jan 2024  
**Diagnosed** : 03 Jan 2024 - Jonathan Hester

**FRANCIS TRACTOR SERVICE**  
 126 NORTH MILL DAM RD  
 CAMDEN, NC  
 US 27921  
 Contact: MICHAEL FRANCIS  
 francistractor@aol.com

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)