



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
FORD E350 736

Component
Gasoline Engine

Fluid
MOTORCRAFT FULL SYNTHETIC SAE 5W30 (6 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		TR06218921	TR04445577	TR04362050
Sample Date		Client Info		01 Jun 2024	20 Mar 2018	20 Nov 2017
Machine Age	mls	Client Info		85000	82000	70000
Oil Age	mls	Client Info		10000	12000	10000
Filter Age	mls	Client Info		10000	12000	10000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	22	35	27
Chromium	ppm	ASTM D5185m	>20	1	2	1
Nickel	ppm	ASTM D5185m	>5	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>40	6	5	6
Lead	ppm	ASTM D5185m	>50	<1	<1	0
Copper	ppm	ASTM D5185m	>155	5	1	1
Tin	ppm	ASTM D5185m	>10	<1	1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

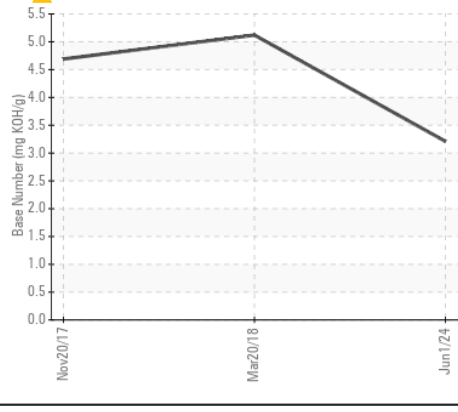
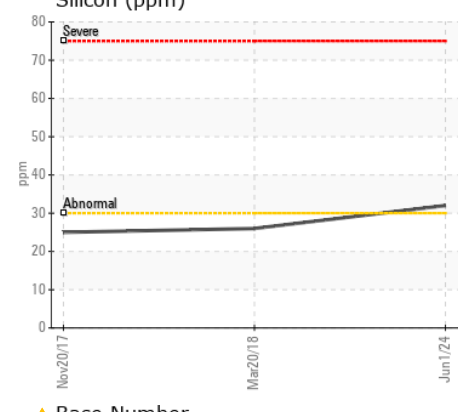
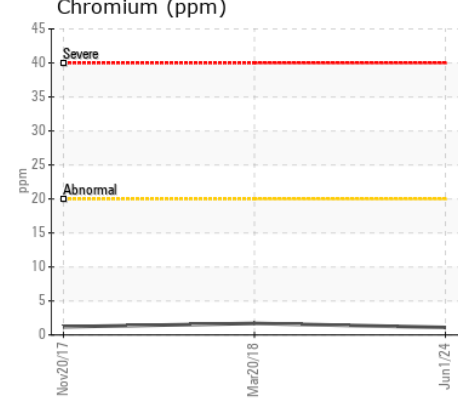
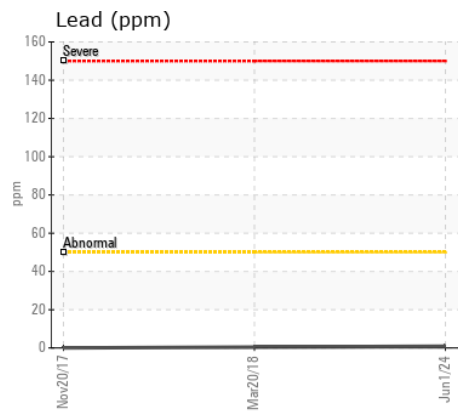
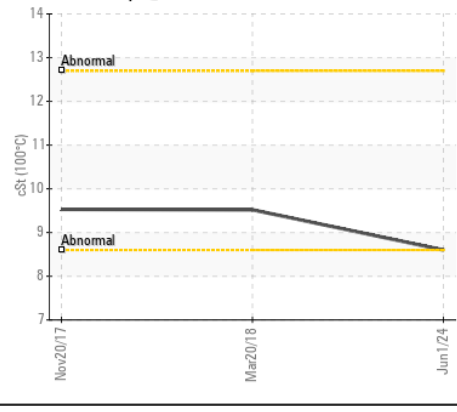
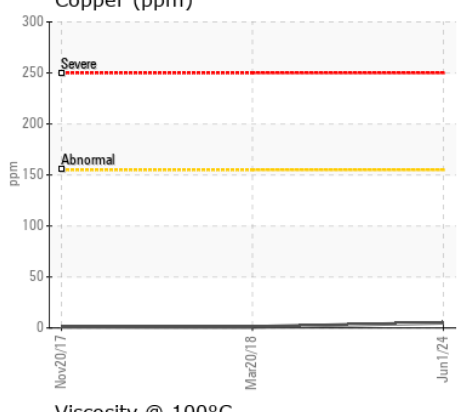
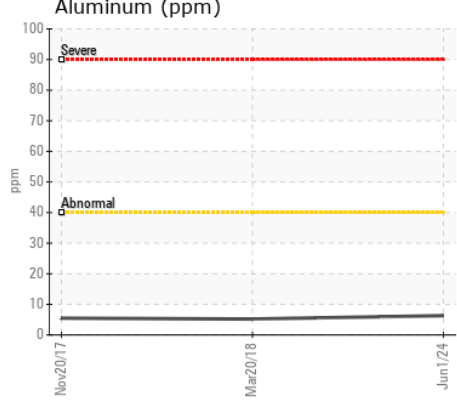
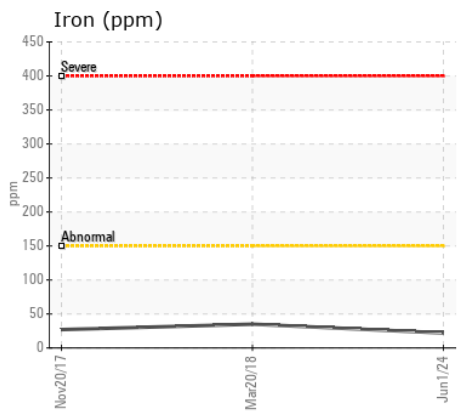
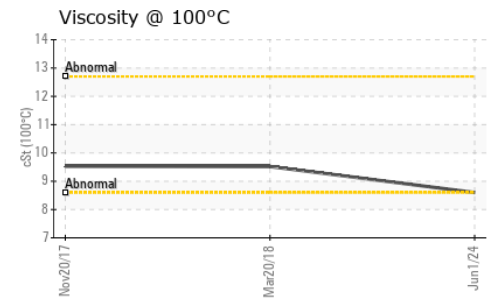
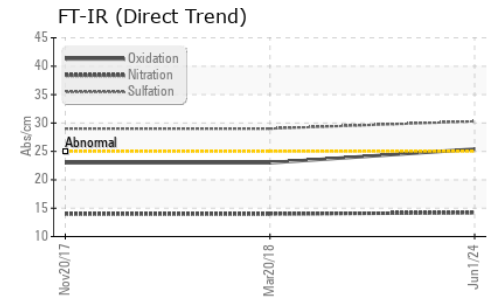
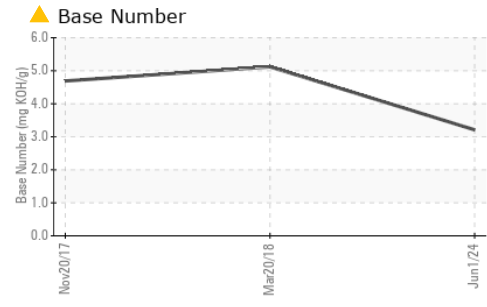
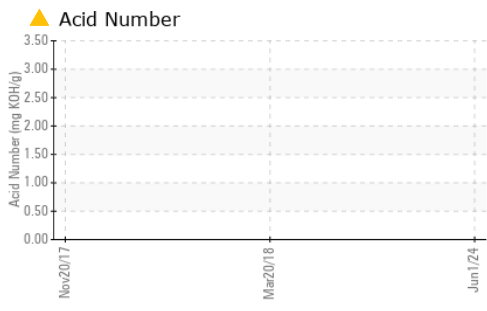
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	32	26	25
Potassium	ppm	ASTM D5185m	>20	4	2	4
Fuel	%	ASTM D3524	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0	0
Nitration	Abs/cm	*ASTM D7624	>20	14.2	14.	14.
Sulfation	Abs/.1mm	*ASTM D7415	>30	30.3	29.	29.
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 level is low. The AN level is at the top-end of the recommended limit. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>400	4	6	6
Boron	ppm	ASTM D5185m		22	22	17
Barium	ppm	ASTM D5185m		5	<1	0
Molybdenum	ppm	ASTM D5185m		109	215	163
Manganese	ppm	ASTM D5185m		2	5	<1
Magnesium	ppm	ASTM D5185m		587	8	13
Calcium	ppm	ASTM D5185m		1158	2655	2033
Phosphorus	ppm	ASTM D5185m		850	720	659
Zinc	ppm	ASTM D5185m		908	837	780
Sulfur	ppm	ASTM D5185m		3167	1768	1847
Oxidation	Abs/.1mm	*ASTM D7414	>25	25.4	23.	23.
Acid Number (AN)	mg KOH/g	ASTM D8045		▲ 3.26	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		▲ 3.21	5.12	4.69
Visc @ 100°C	cSt	ASTM D445		8.6	9.52	9.53



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06218921 **Received** : 24 Jun 2024
Lab Number : 06218921 **Tested** : 27 Jun 2024
Unique Number : 11097118 **Diagnosed** : 27 Jun 2024 - Jonathan Hester
Test Package : MOB 2 (Additional Tests: FUELDILUTION, PercentFuel)

WIE - WESTERN INDUSTRIAL EQUIPMENT
 10761 N WILSON RD
 LAKE CITY, MI
 US 49651
 Contact: JOHN HIGGINS

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: