



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FORD 2014 F350
 Component
Gasoline Engine
 Fluid
TRC PRO-SPEC MULTI-VIS SB 5W20 (7 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR04825633	TR04607583	TR04374736
Sample Date		Client Info		10 Oct 2019	12 Oct 2018	14 Dec 2017
Machine Age	mls	Client Info		40552	34197	26711
Oil Age	mls	Client Info		6355	7486	7487
Filter Age	mls	Client Info		6355	7486	7487
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	92	81	82
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>5	<1	<1	1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>40	11	8	13
Lead	ppm	ASTM D5185m	>50	0	0	<1
Copper	ppm	ASTM D5185m	>155	3	3	5
Tin	ppm	ASTM D5185m	>10	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

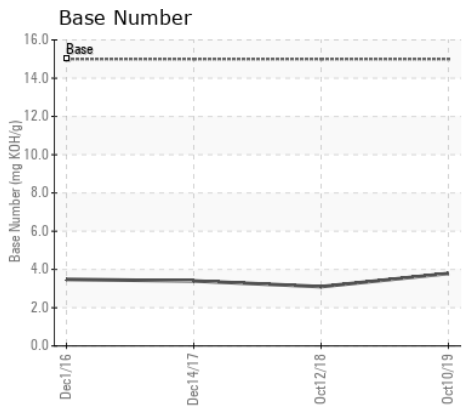
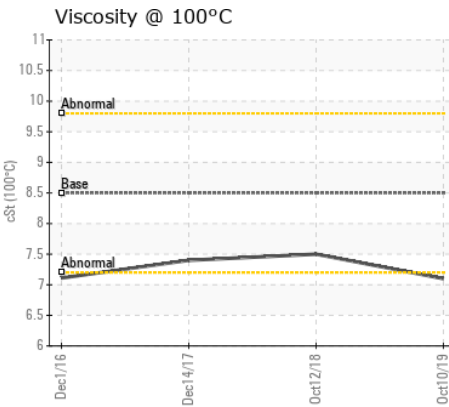
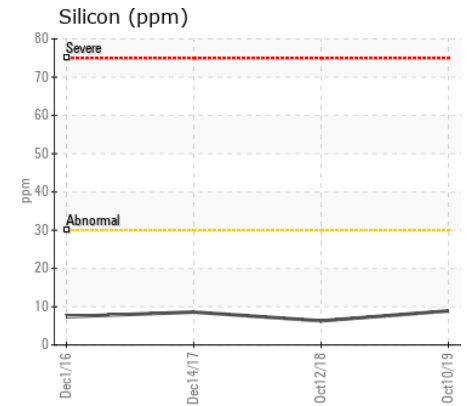
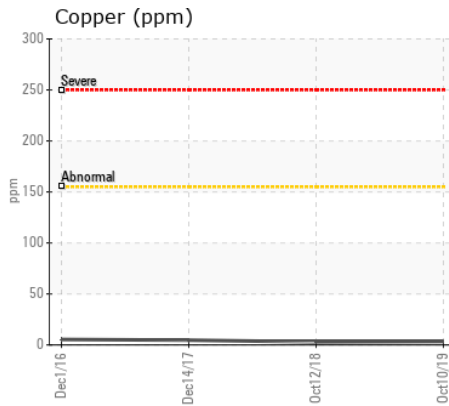
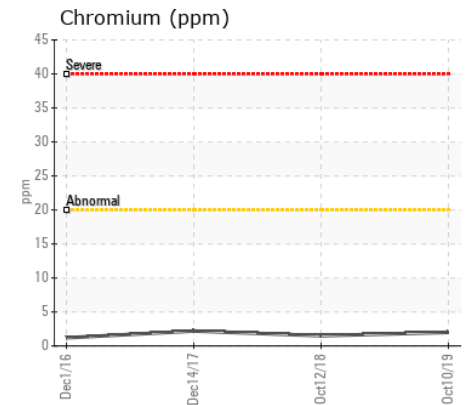
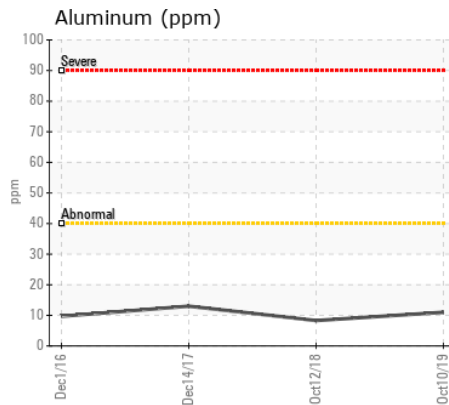
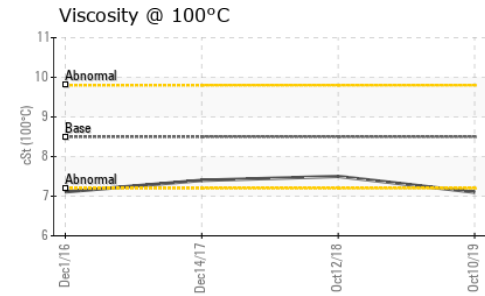
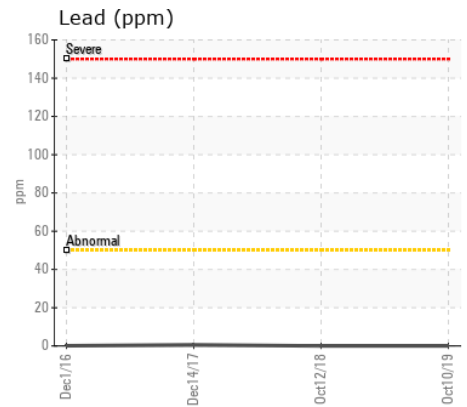
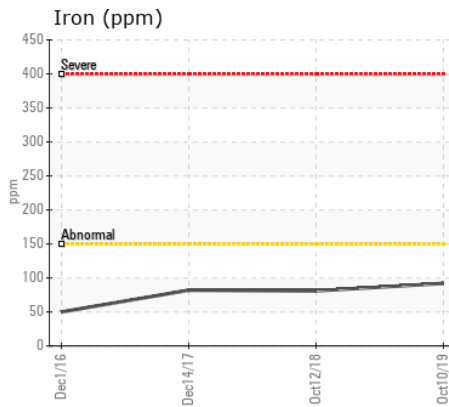
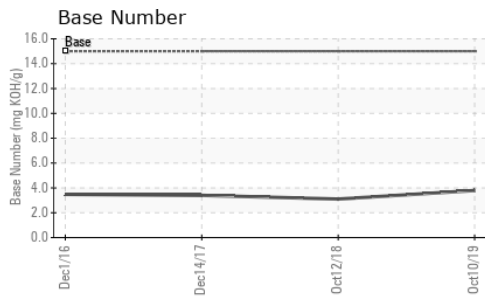
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	9	6	9
Potassium	ppm	ASTM D5185m	>20	4	3	5
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	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	13.9	13.5	14.
Sulfation	Abs/.1mm	*ASTM D7415	>30	25	25.6	27.
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. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>400	8	6	7
Boron	ppm	ASTM D5185m		22	21	22
Barium	ppm	ASTM D5185m		<1	0	<1
Molybdenum	ppm	ASTM D5185m		149	126	131
Manganese	ppm	ASTM D5185m		14	9	12
Magnesium	ppm	ASTM D5185m		10	10	25
Calcium	ppm	ASTM D5185m	4200	1896	1662	1693
Phosphorus	ppm	ASTM D5185m	800	587	533	578
Zinc	ppm	ASTM D5185m	800	729	621	709
Sulfur	ppm	ASTM D5185m		980	1902	1614
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.2	22.7	25.
Base Number (BN)	mg KOH/g	ASTM D2896	15	3.79	3.10	3.40
Visc @ 100°C	cSt	ASTM D445	8.5	7.1	7.5	7.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR04825633 **Received** : 17 Oct 2019
Lab Number : 04825633 **Tested** : 18 Oct 2019
Unique Number : 8785531 **Diagnosed** : 18 Oct 2019 - Don Baldrige
Test Package : MOB 2 (Additional Tests: FuelDilution)

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)

PHIL HARDER
 57803 350TH STREET
 MOUNTAIN LAKE, MN
 US 56159
 Contact: PHILIP HARDER
 philbren@frontiernet.net
 T: 5(07) 227-6074
 F: