TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FORD 2015 EXP
Component
Gasoline Engine
Fluid
TRC PRO-SPEC MULTI-VIS SB 5W20 (6 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

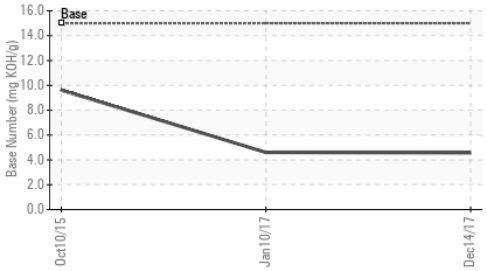
There is no indication of any contamination in the oil.

FLUID CONDITION

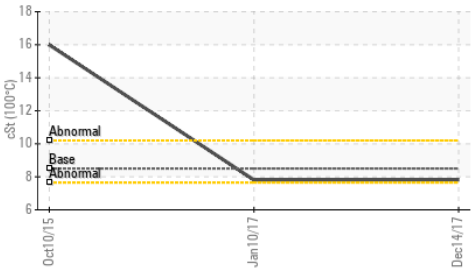
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR04374738	TR04139962	TR03895192
Sample Date		Client Info		14 Dec 2017	10 Jan 2017	10 Oct 2015
Machine Age	mls	Client Info		42179	27747	12288
Oil Age	mls	Client Info		9237	5265	4537
Filter Age	mls	Client Info		9237	5265	4537
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>150	10	11	18
Chromium	ppm	ASTM D5185m	>20	<1	<1	2
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>40	5	6	2
Lead	ppm	ASTM D5185m	>50	<1	0	6
Copper	ppm	ASTM D5185m	>155	18	30	3
Tin	ppm	ASTM D5185m	>10	0	3	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>30	9	17	4
Potassium	ppm	ASTM D5185m	>20	4	3	2
Fuel		WC Method	>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	0	0.1
Nitration	Abs/cm	*ASTM D7624	>25	11.	10.	8.
Sulfation	Abs/.1mm	*ASTM D7415	>35	22.	21.	14.
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
Sodium	ppm	ASTM D5185m	>400	4	3	4
Boron	ppm	ASTM D5185m		23	27	3
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		137	139	196
Manganese	ppm	ASTM D5185m		4	8	<1
Magnesium	ppm	ASTM D5185m		12	16	1015
Calcium	ppm	ASTM D5185m	4200	1783	1818	1400
Phosphorus	ppm	ASTM D5185m	800	602	666	1111
Zinc	ppm	ASTM D5185m	800	700	704	1359
Sulfur	ppm	ASTM D5185m		1610	1871	3484
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.	16.	14.
Base Number (BN)	mg KOH/g	ASTM D2896	15	4.57	4.60	9.61
Visc @ 100°C	cSt	ASTM D445	8.5	7.83	7.81	15.99

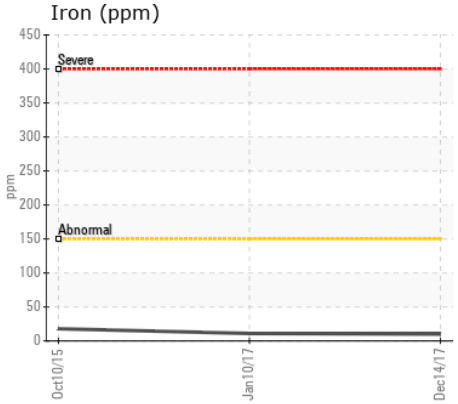
Base Number



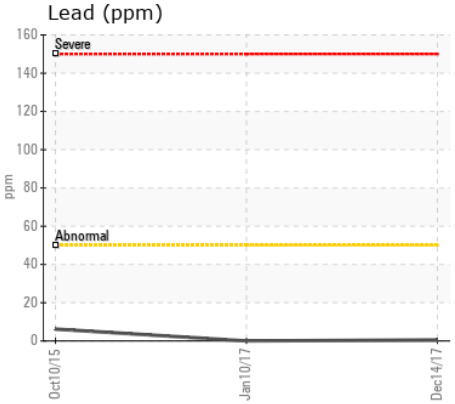
Viscosity @ 100°C



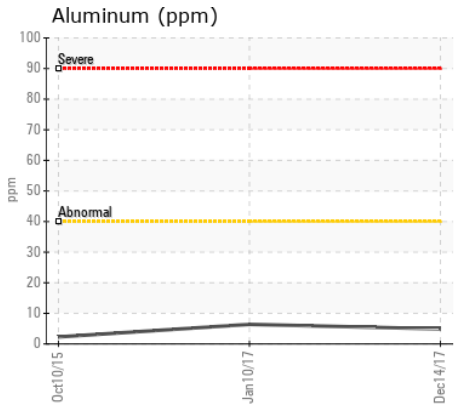
Iron (ppm)



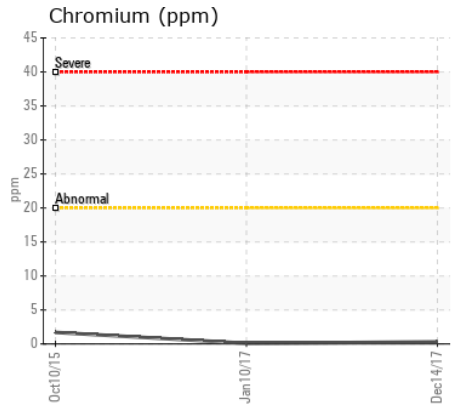
Lead (ppm)



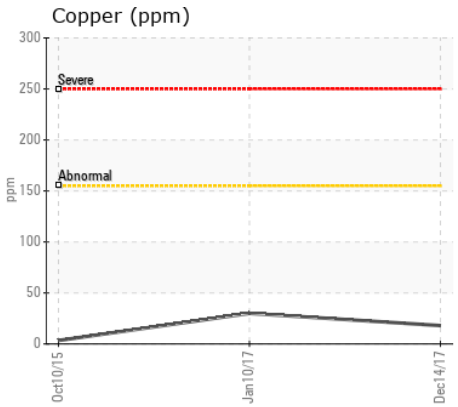
Aluminum (ppm)



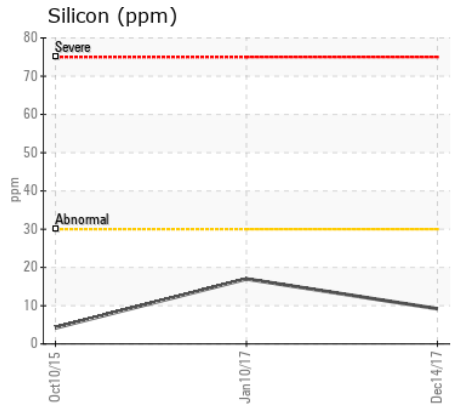
Chromium (ppm)



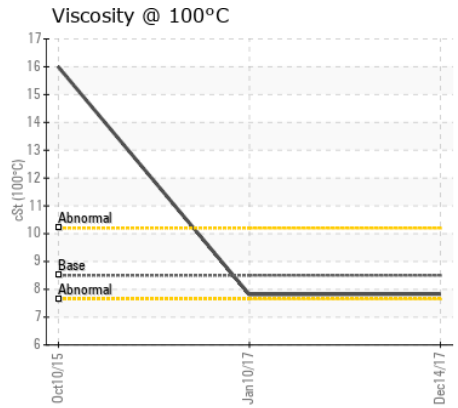
Copper (ppm)



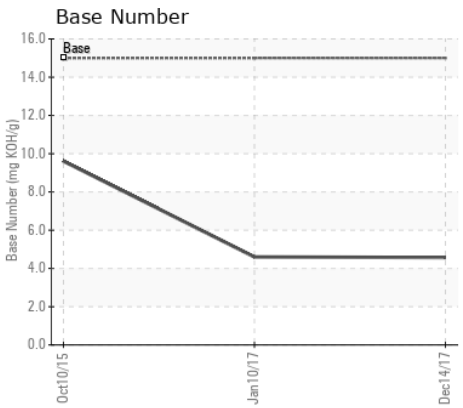
Silicon (ppm)



Viscosity @ 100°C



Base Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR04374738
Lab Number : 04374738
Unique Number : 8043377
Test Package : MOB 2
Received : 26 Dec 2017
Tested : 27 Dec 2017
Diagnosed : 27 Dec 2017 - Wes Davis

Certificate L2367

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: