TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ATTENTION
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
FORD 2010 FORD
Component
Gasoline Engine
Fluid
TRC PRO-SPEC SYNTHETIC 5W30 (5 QTS)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

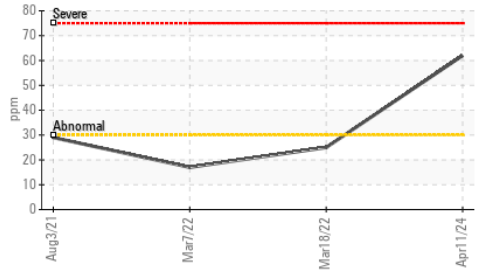
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

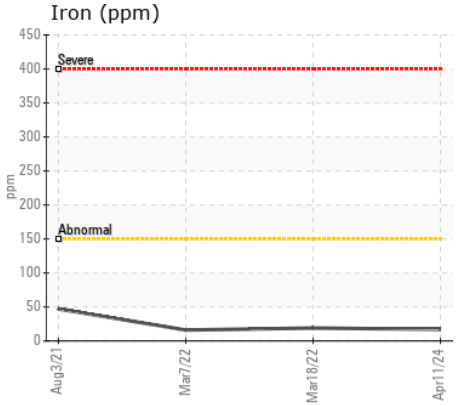
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06152194	TR05519914	TR05490159
Sample Date		Client Info		11 Apr 2024	18 Mar 2022	07 Mar 2022
Machine Age	mls	Client Info		0	0	0
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>150	17	19	16
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>40	6	4	5
Lead	ppm	ASTM D5185m	>50	<1	<1	<1
Copper	ppm	ASTM D5185m	>155	2	2	2
Tin	ppm	ASTM D5185m	>10	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>30	▲ 62	25	17
Potassium	ppm	ASTM D5185m	>20	5	5	4
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		0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	16.6	12.3	11.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	34.4	30.2	27.8
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	6	3	2
Boron	ppm	ASTM D5185m		34	22	16
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m	400	237	75	73
Manganese	ppm	ASTM D5185m		1	2	2
Magnesium	ppm	ASTM D5185m	600	445	574	560
Calcium	ppm	ASTM D5185m	1500	1608	1299	1145
Phosphorus	ppm	ASTM D5185m	800	751	688	659
Zinc	ppm	ASTM D5185m	900	971	933	874
Sulfur	ppm	ASTM D5185m		2798	1829	2023
Oxidation	Abs/.1mm	*ASTM D7414	>25	38.2	24.1	20.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	3.90	4.23	3.83
Visc @ 100°C	cSt	ASTM D445	10.5	14.8	13.6	13.34

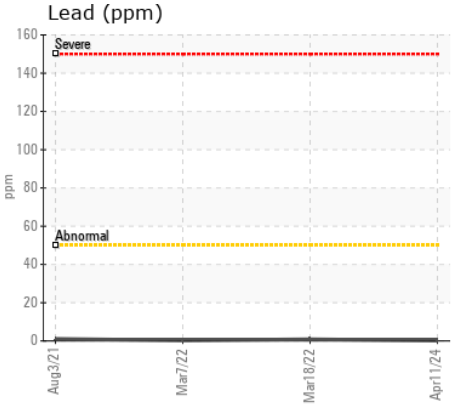
Silicon (ppm)



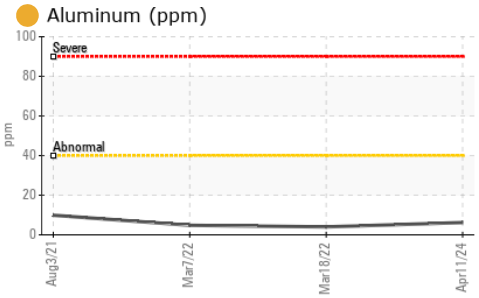
Iron (ppm)



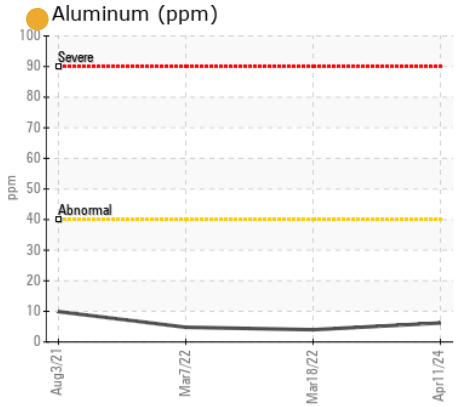
Lead (ppm)



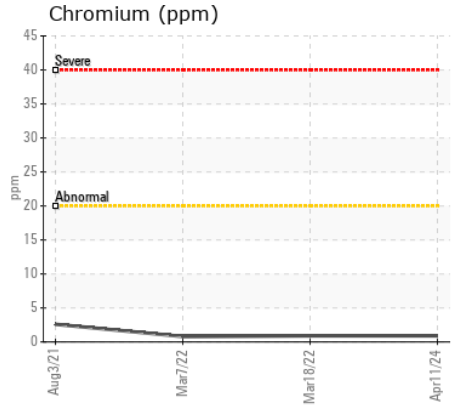
Aluminum (ppm)



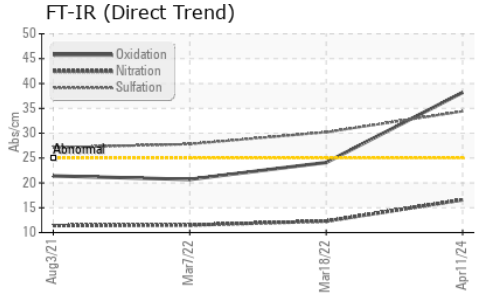
Aluminum (ppm)



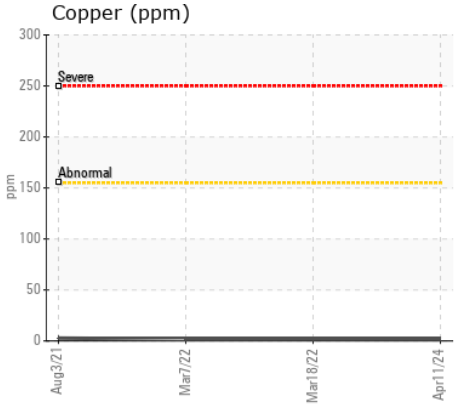
Chromium (ppm)



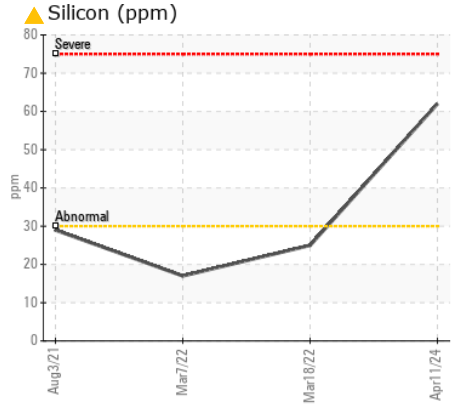
FT-IR (Direct Trend)



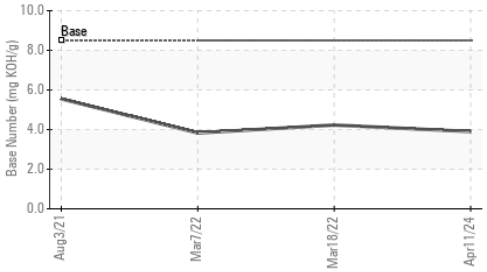
Copper (ppm)



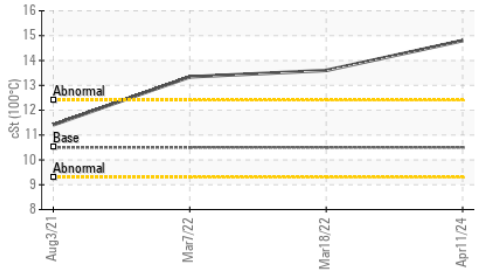
Silicon (ppm)



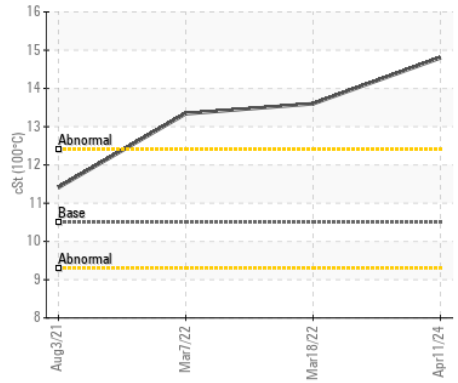
Base Number



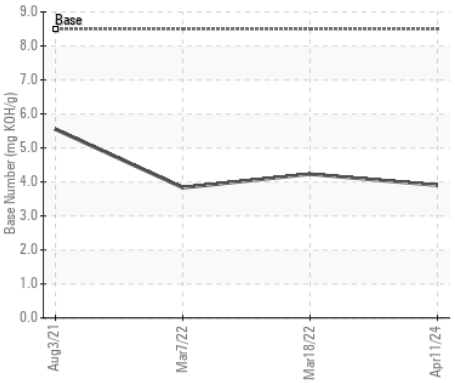
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: TR06152194	**Received**	: 17 Apr 2024
Lab Number	: 06152194	**Tested**	: 18 Apr 2024
Unique Number	: 10982272	**Diagnosed**	: 22 Apr 2024 - Don Baldridge
Test Package	: MOB 2		

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)

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