



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**2008 TOYOTA 2008 TOYOTA TUNDRA**  
 Component  
**Gasoline Engine**  
 Fluid  
**TRC PRO-SPEC III SAE 10W30 (7 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TR06213676</b>	TR06029609	TR05688046
Sample Date		Client Info		<b>13 Jun 2024</b>	06 Nov 2023	04 Oct 2022
Machine Age	mls	Client Info		<b>218754</b>	210470	207834
Oil Age	mls	Client Info		<b>4534</b>	7500	7500
Filter Age	mls	Client Info		<b>4534</b>	7500	7500
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	<b>11</b>	8	18
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>40	<b>3</b>	5	6
Lead	ppm	ASTM D5185m	>50	<b>0</b>	1	0
Copper	ppm	ASTM D5185m	>155	<b>1</b>	<1	<1
Tin	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

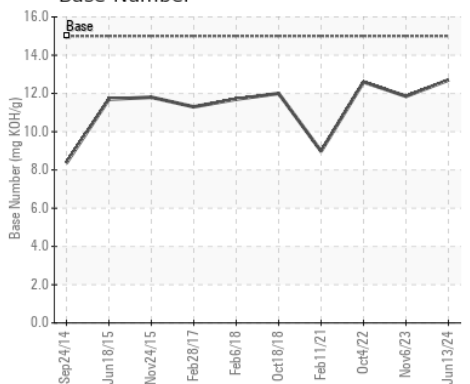
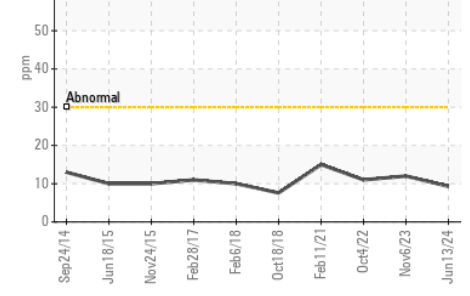
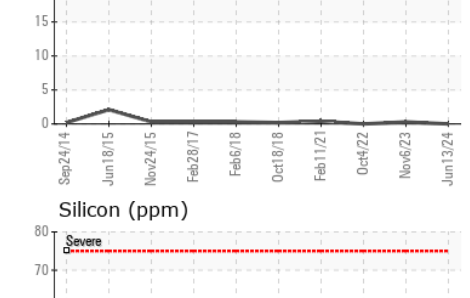
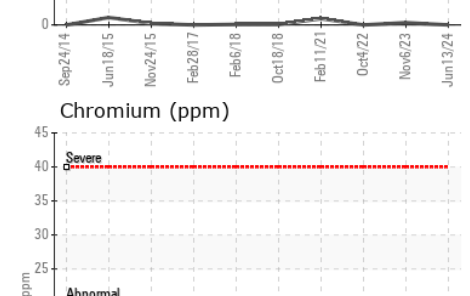
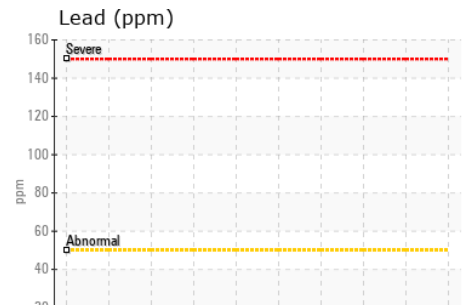
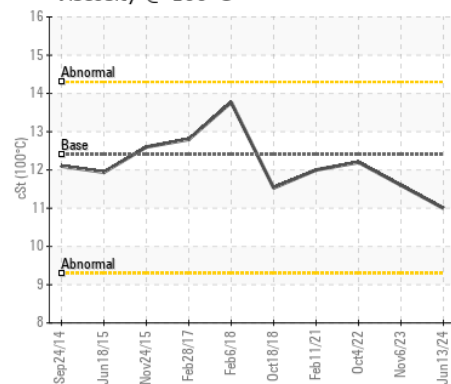
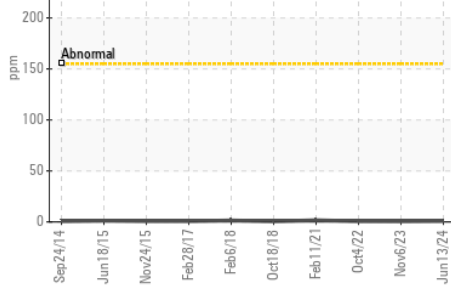
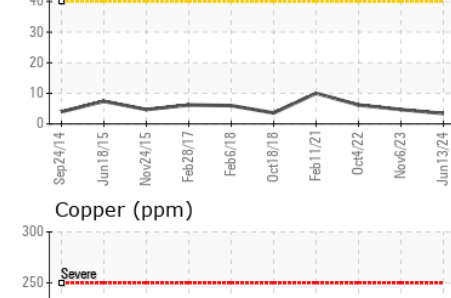
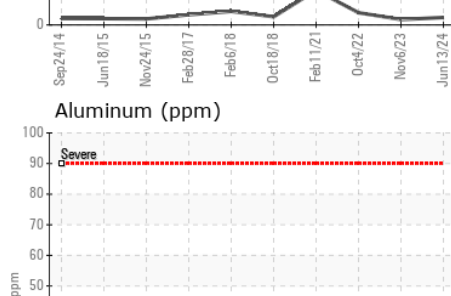
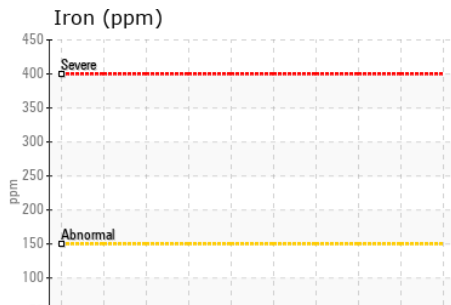
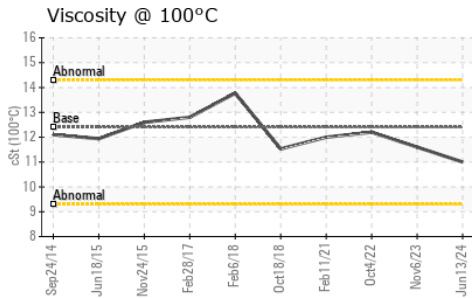
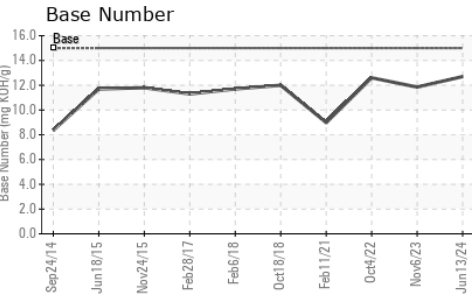
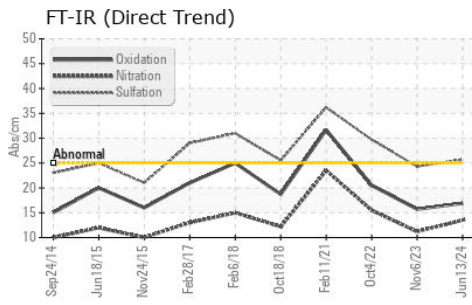
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	<b>9</b>	12	11
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	4	3
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>13.5</b>	11.2	15.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.7</b>	24.3	29.7
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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	<b>6</b>	0	5
Boron	ppm	ASTM D5185m		<b>0</b>	0	<1
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>1</b>	15	1
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>32</b>	26	19
Calcium	ppm	ASTM D5185m	4500	<b>5602</b>	4542	4865
Phosphorus	ppm	ASTM D5185m		<b>1133</b>	1038	1030
Zinc	ppm	ASTM D5185m	1400	<b>1440</b>	1318	1344
Sulfur	ppm	ASTM D5185m		<b>5517</b>	4236	4820
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.9</b>	15.7	20.5
Base Number (BN)	mg KOH/g	ASTM D2896	15	<b>12.70</b>	11.85	12.6
Visc @ 100°C	cSt	ASTM D445	12.4	<b>11.0</b>	11.6	12.2



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06213676  
**Lab Number** : 06213676  
**Unique Number** : 11086540  
**Test Package** : MOB 2

**Received** : 18 Jun 2024  
**Tested** : 20 Jun 2024  
**Diagnosed** : 20 Jun 2024 - Wes Davis

**MIKE LEWIS**  
 CANYON, TX  
 US 79015

Contact: MIKE LEWIS  
 doug.bogart@wearcheck.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)