



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
TOYOTA 14
 Component
Gasoline Engine
 Fluid
TRC PRO-SPEC MULTI-VIS SB 5W20 (5 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR04784216	---	---
Sample Date		Client Info		15 Jan 2019	---	---
Machine Age	mls	Client Info		117457	---	---
Oil Age	mls	Client Info		6887	---	---
Filter Age	mls	Client Info		6887	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				NORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	32	---	---
Chromium	ppm	ASTM D5185m	>20	<1	---	---
Nickel	ppm	ASTM D5185m	>5	<1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>2	0	---	---
Aluminum	ppm	ASTM D5185m	>40	7	---	---
Lead	ppm	ASTM D5185m	>50	0	---	---
Copper	ppm	ASTM D5185m	>155	1	---	---
Tin	ppm	ASTM D5185m	>10	0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

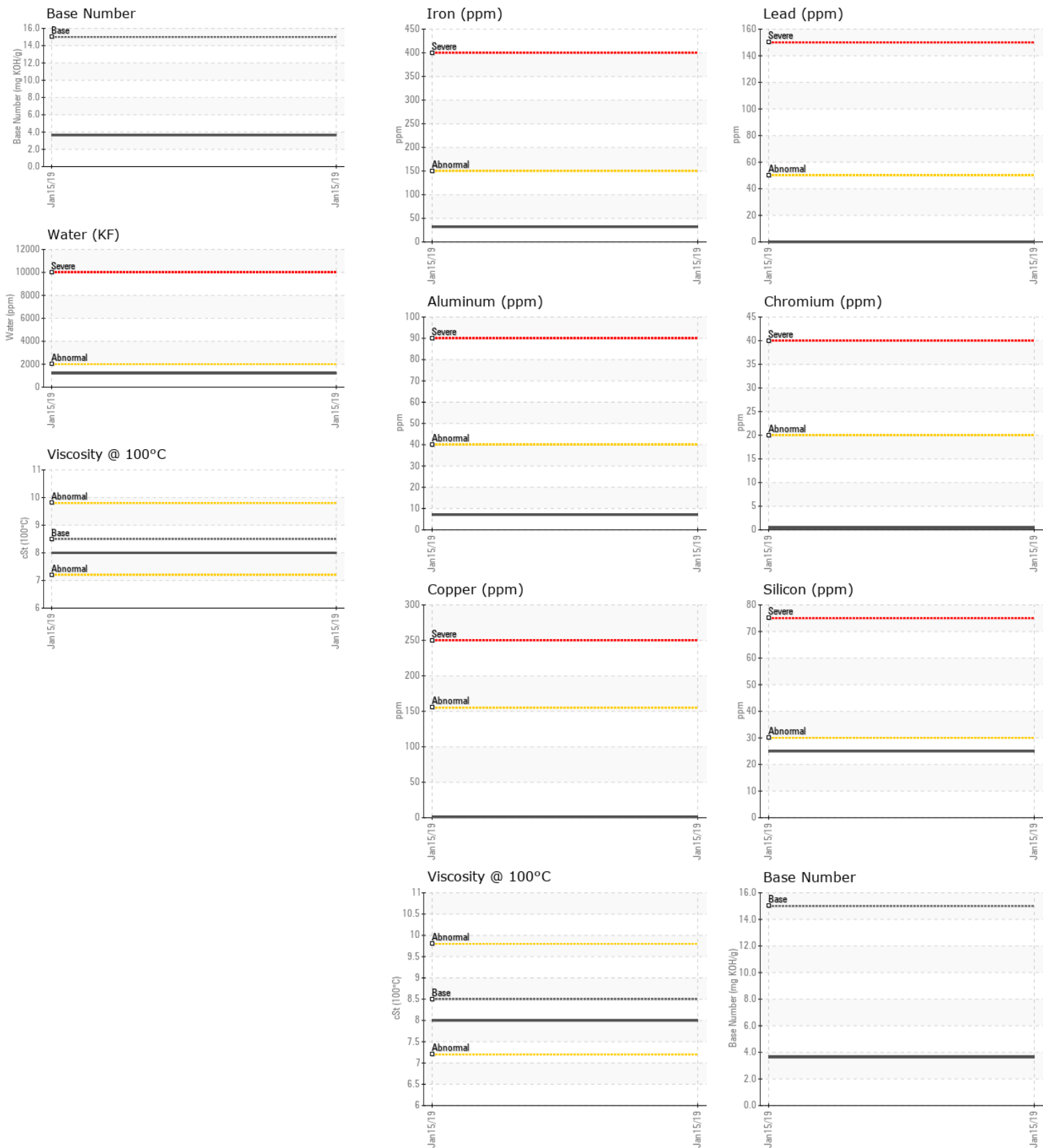
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	25	---	---
Potassium	ppm	ASTM D5185m	>20	8	---	---
Fuel		WC Method	>4.0	<1.0	---	---
Water	%	ASTM D6304	>0.2	0.121	---	---
ppm Water	ppm	ASTM D6304	>2000	1210	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844		0.1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	13.2	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.4	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	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	9	---	---
Boron	ppm	ASTM D5185m		28	---	---
Barium	ppm	ASTM D5185m		2	---	---
Molybdenum	ppm	ASTM D5185m		135	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		60	---	---
Calcium	ppm	ASTM D5185m	4200	2007	---	---
Phosphorus	ppm	ASTM D5185m	800	623	---	---
Zinc	ppm	ASTM D5185m	800	803	---	---
Sulfur	ppm	ASTM D5185m		1831	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.6	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	15	3.64	---	---
Visc @ 100°C	cSt	ASTM D445	8.5	8.0	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR04784216 **Received** : 23 Aug 2019
Lab Number : 04784216 **Tested** : 26 Aug 2019
Unique Number : 8712025 **Diagnosed** : 26 Aug 2019 - Don Baldrige
Test Package : MOB 2 (Additional Tests: KF)

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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