



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
TORO 30809 SIDEWINDER 2 (S/N 404766074)
 Component
Left Gasoline Engine
 Fluid
TRC PRO-SPEC III SAE 10W30 (4 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06235151	---	---
Sample Date		Client Info		10 Jul 2024	---	---
Machine Age	hrs	Client Info		1190	---	---
Oil Age	hrs	Client Info		310	---	---
Filter Age	hrs	Client Info		310	---	---
Oil Changed		Client Info		Not Chngd	---	---
Filter Changed		Client Info		Not Chngd	---	---
Sample Status				NORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	20	---	---
Chromium	ppm	ASTM D5185m	>20	0	---	---
Nickel	ppm	ASTM D5185m	>5	<1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>2	0	---	---
Aluminum	ppm	ASTM D5185m	>40	6	---	---
Lead	ppm	ASTM D5185m	>50	24	---	---
Copper	ppm	ASTM D5185m	>155	6	---	---
Tin	ppm	ASTM D5185m	>10	<1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

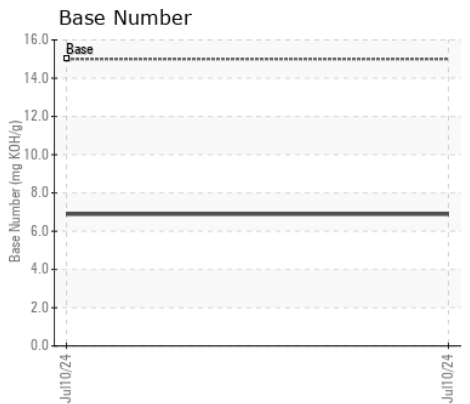
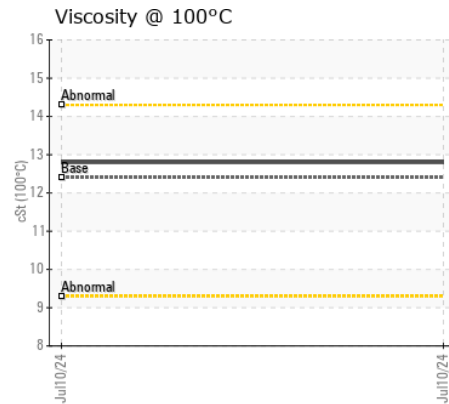
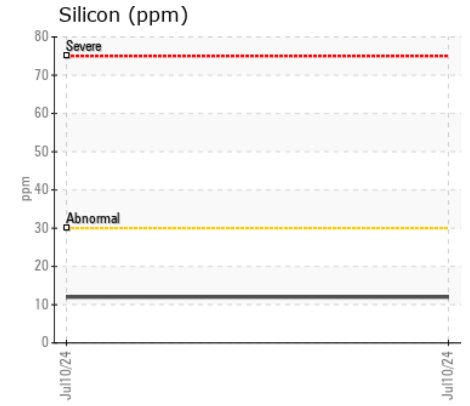
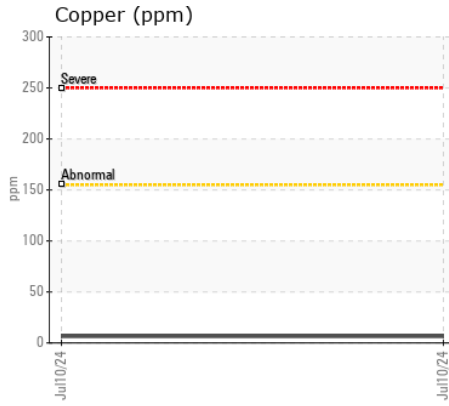
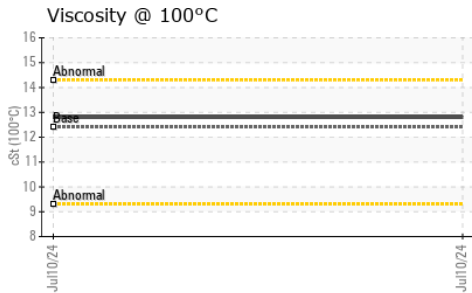
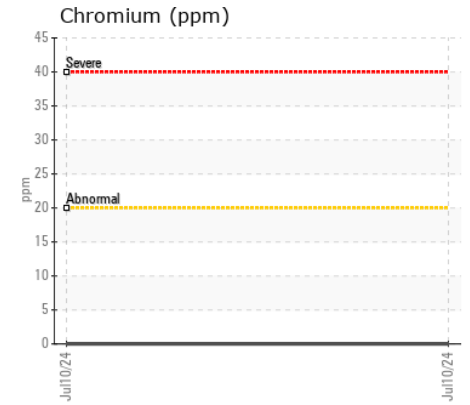
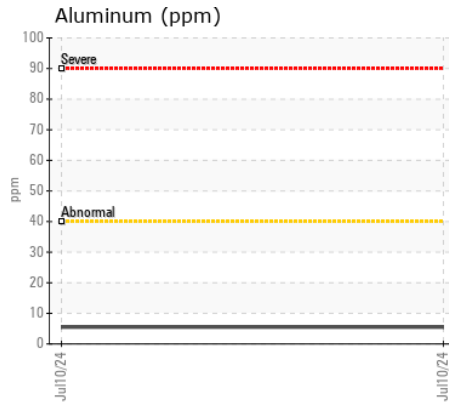
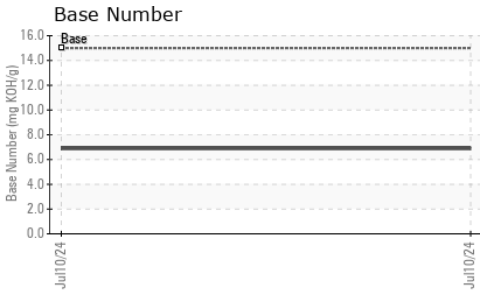
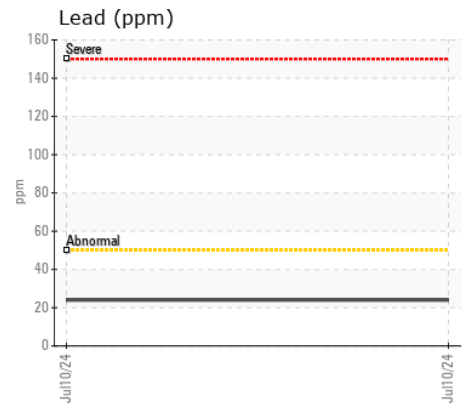
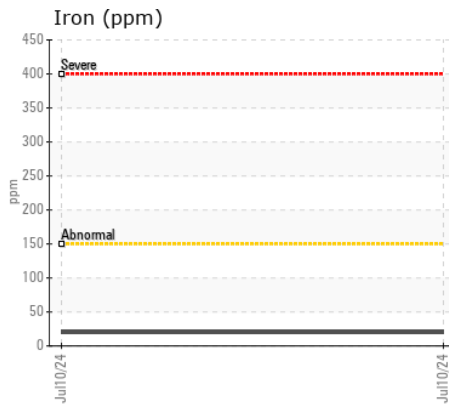
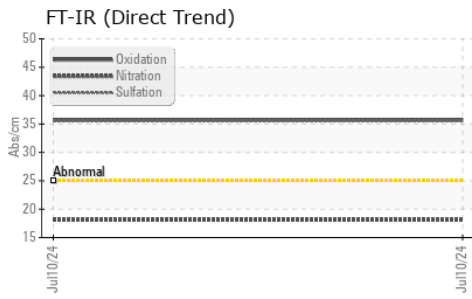
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>30	12	---	---
Potassium	ppm	ASTM D5185m	>20	5	---	---
Fuel		WC Method	>4.0	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844		0.1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	18.1	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	35.5	---	---
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>400	22	---	---
Boron	ppm	ASTM D5185m		9	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		105	---	---
Manganese	ppm	ASTM D5185m		0	---	---
Magnesium	ppm	ASTM D5185m		64	---	---
Calcium	ppm	ASTM D5185m	4500	3749	---	---
Phosphorus	ppm	ASTM D5185m		861	---	---
Zinc	ppm	ASTM D5185m	1400	1082	---	---
Sulfur	ppm	ASTM D5185m		4733	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	35.7	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	15	6.89	---	---
Visc @ 100°C	cSt	ASTM D445	12.4	12.8	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06235151
Lab Number : 06235151
Unique Number : 11123985
Test Package : MOB 2

Received : 12 Jul 2024
Tested : 15 Jul 2024
Diagnosed : 15 Jul 2024 - Sean Felton

CITY PARK GOLF COURSE
 3201 E 23RD AVE
 DENVER, CO
 US 80205
 Contact: COLIN MURPHY
 Colin.murphy@denvergov.org

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)

T:
F: