



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
TORO 30809 3500-G1 (S/N 402666814)

Component
Hydraulic System

Fluid
TORO PREMIUM ALL SEASON & TRC UTF RED & GREEN (13 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06221162	---	---
Sample Date		Client Info		21 Jun 2024	---	---
Machine Age	hrs	Client Info		1289	---	---
Oil Age	hrs	Client Info		1289	---	---
Filter Age	hrs	Client Info		40	---	---
Oil Changed		Client Info		Not Changd	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				NORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	20	---	---
Chromium	ppm	ASTM D5185m	>10	0	---	---
Nickel	ppm	ASTM D5185m	>10	0	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m		<1	---	---
Aluminum	ppm	ASTM D5185m	>10	2	---	---
Lead	ppm	ASTM D5185m	>10	1	---	---
Copper	ppm	ASTM D5185m	>75	53	---	---
Tin	ppm	ASTM D5185m	>10	0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

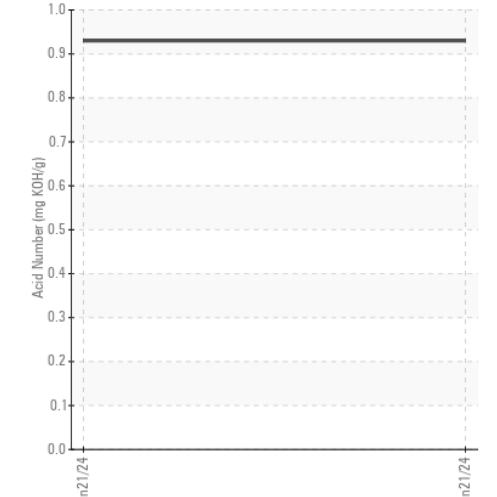
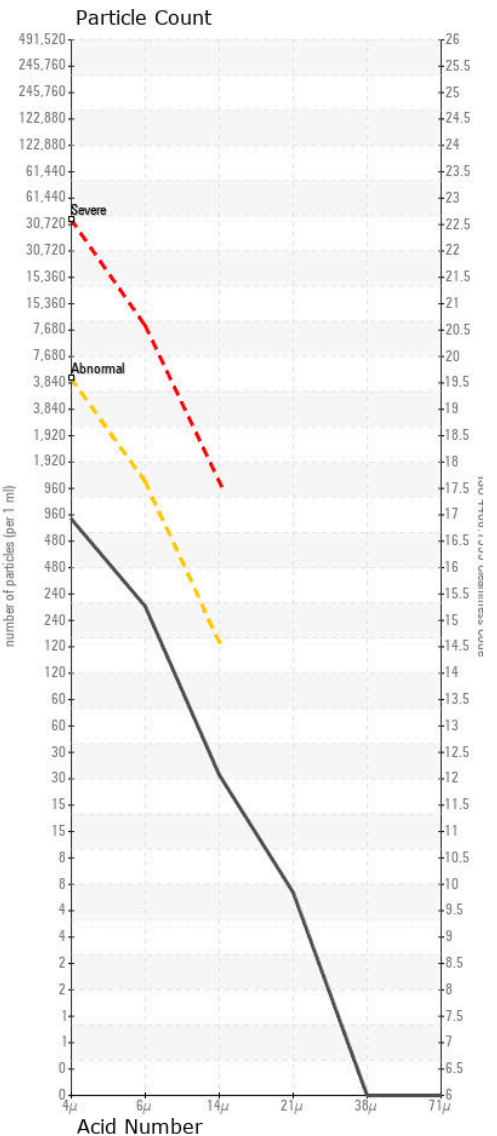
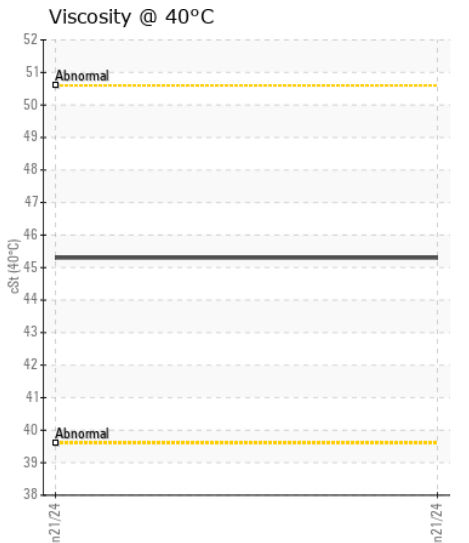
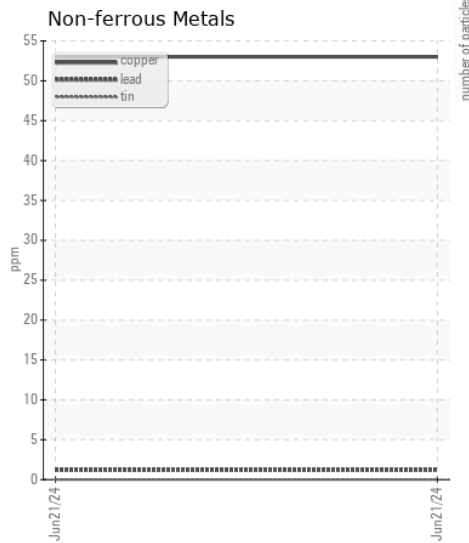
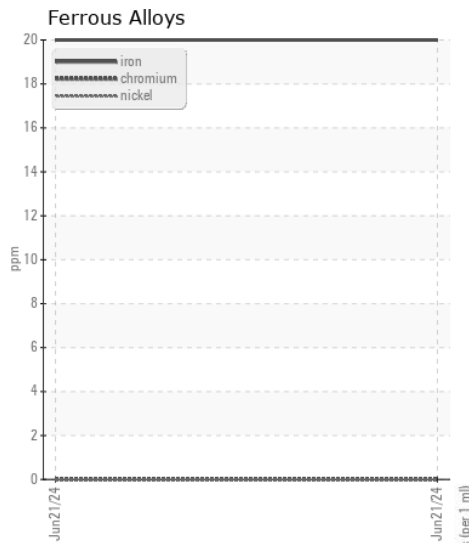
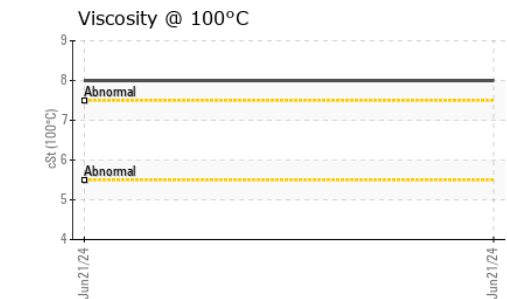
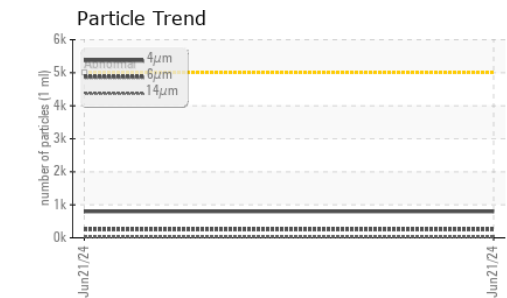
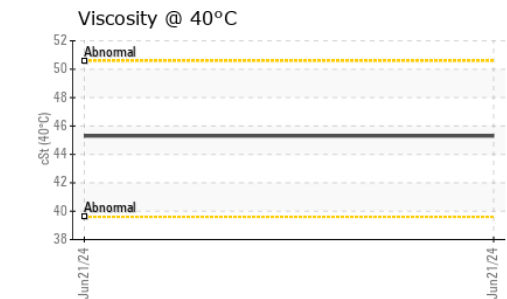
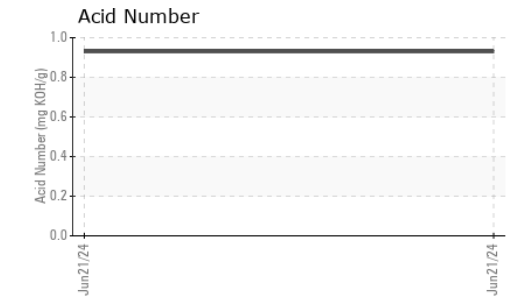
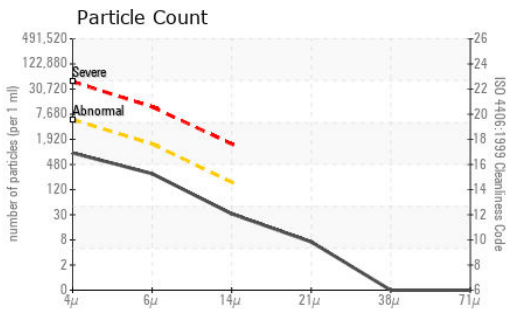
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	8	---	---
Potassium	ppm	ASTM D5185m	>20	3	---	---
Water		WC Method	>0.1	NEG	---	---
Particles >4µm		ASTM D7647	>5000	797	---	---
Particles >6µm		ASTM D7647	>1300	254	---	---
Particles >14µm		ASTM D7647	>160	28	---	---
Particles >21µm		ASTM D7647	>40	6	---	---
Particles >38µm		ASTM D7647	>10	0	---	---
Particles >71µm		ASTM D7647	>3	0	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	17/15/12	---	---
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	>0.1	NEG	---	---

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		4	---	---
Boron	ppm	ASTM D5185m		60	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		0	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		7	---	---
Calcium	ppm	ASTM D5185m		2143	---	---
Phosphorus	ppm	ASTM D5185m		1220	---	---
Zinc	ppm	ASTM D5185m		1355	---	---
Sulfur	ppm	ASTM D5185m		5350	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045		0.93	---	---
Visc @ 40°C	cSt	ASTM D445		45.3	---	---
Visc @ 100°C	cSt	ASTM D445		8.0	---	---
Viscosity Index (VI)	Scale	ASTM D2270		149	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : TR06221162 Received : 26 Jun 2024
 Lab Number : 06221162 Tested : 27 Jun 2024
 Unique Number : 11099359 Diagnosed : 27 Jun 2024 - Don Baldrige
 Test Package : MOB 2 (Additional Tests: KV100, VI)

KENNEDY GOLF COURSE
 10500 E HAMPDEN AVE
 DENVER, CO
 US 80014
 Contact: JAMES WEST

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: