



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id

CME 222

Component

Hydraulic System

Fluid

TRC HYDRAULIC OIL ISO 32- SAE10W (40 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR02505209	---	---
Sample Date		Client Info		19 Oct 2009	---	---
Machine Age	hrs	Client Info		350	---	---
Oil Age	hrs	Client Info		350	---	---
Filter Age	hrs	Client Info		350	---	---
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		10	---	---
Chromium	ppm	ASTM D5185m		<1	---	---
Nickel	ppm	ASTM D5185m		0	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m		<1	---	---
Aluminum	ppm	ASTM D5185m		<1	---	---
Lead	ppm	ASTM D5185m		1	---	---
Copper	ppm	ASTM D5185m		21	---	---
Tin	ppm	ASTM D5185m		0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

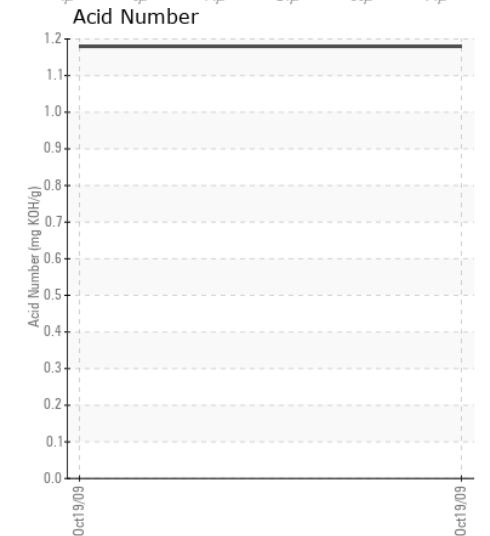
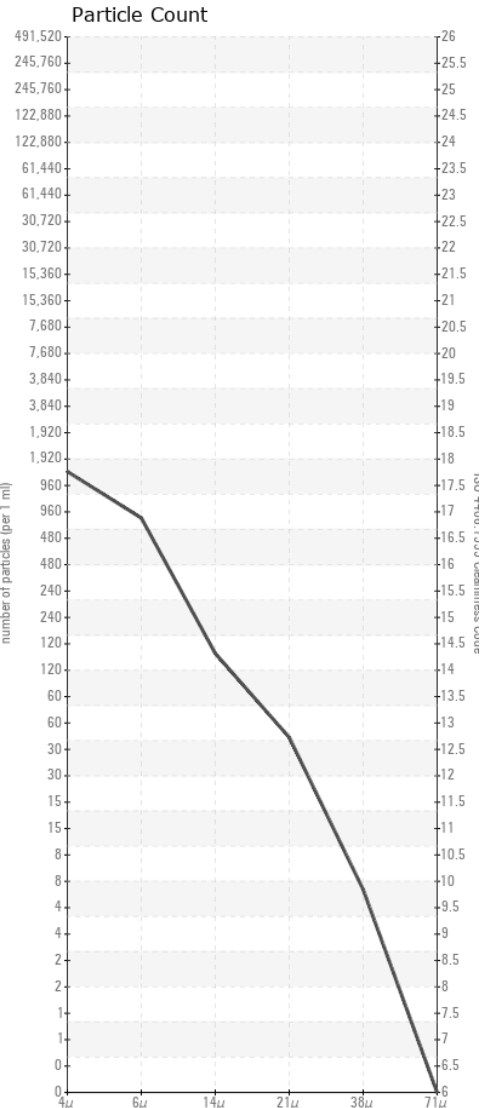
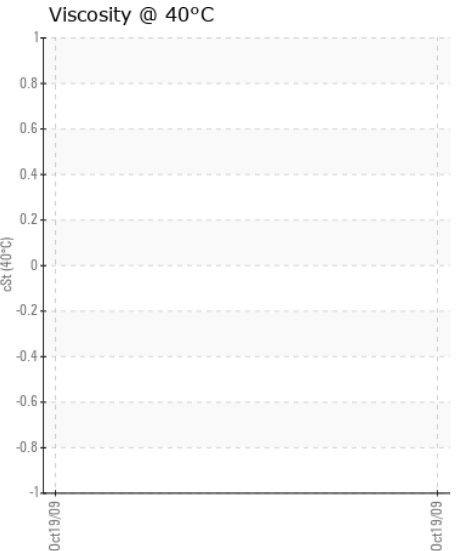
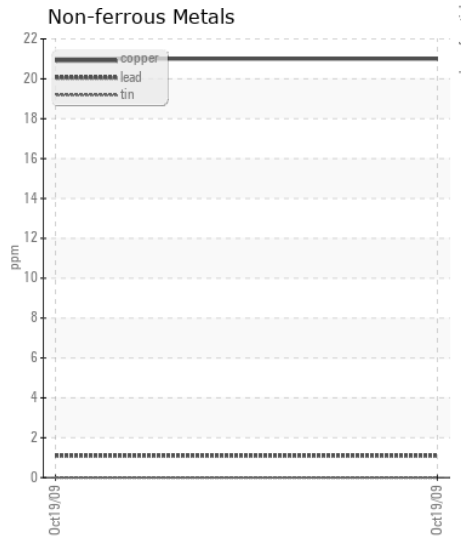
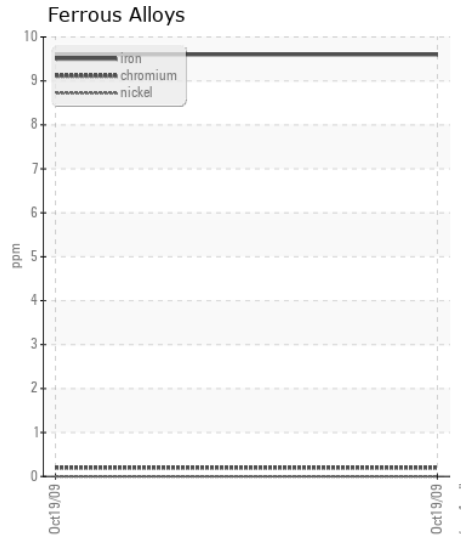
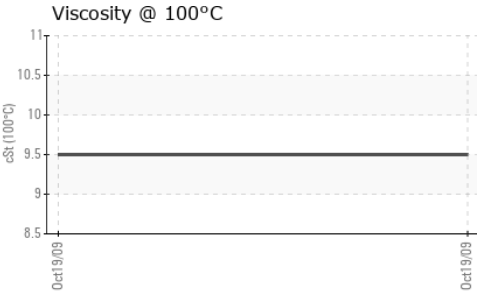
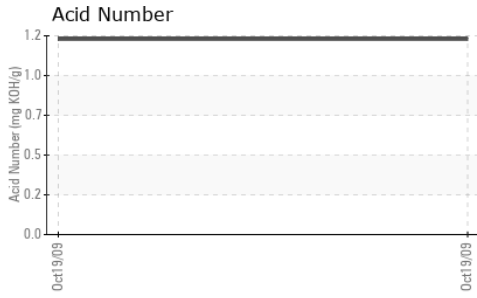
There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable.

Silicon	ppm	ASTM D5185m		3	---	---
Potassium	ppm	ASTM D5185m		<1	---	---
Water		WC Method		NEG	---	---
Particles >4µm		ASTM D7647		1426	---	---
Particles >6µm		ASTM D7647		777	---	---
Particles >14µm		ASTM D7647		132	---	---
Particles >21µm		ASTM D7647		44	---	---
Particles >38µm		ASTM D7647		6	---	---
Particles >71µm		ASTM D7647		0	---	---
Oil Cleanliness		ISO 4406 (c)		18/17/14	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	LIGHT	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual		NEG	---	---

FLUID CONDITION

The condition of oil is suitable for further service.

Sodium	ppm	ASTM D5185m		1	---	---
Boron	ppm	ASTM D5185m		2	---	---
Barium	ppm	ASTM D5185m		<1	---	---
Molybdenum	ppm	ASTM D5185m		0	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		2	---	---
Calcium	ppm	ASTM D5185m		133	---	---
Phosphorus	ppm	ASTM D5185m		577	---	---
Zinc	ppm	ASTM D5185m		722	---	---
Sulfur	ppm	ASTM D5185m		5350	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045		1.18	---	---
Visc @ 100°C	cSt	ASTM D445		9.5	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR02505209 **Received** : 22 Oct 2009
Lab Number : 02505209 **Tested** : 24 Oct 2009
Unique Number : 4989985 **Diagnosed** : 24 Oct 2009 - Doug Bogart
Test Package : MOB 2 (Additional Tests: KV100)

BUFFALO DRILLING
 12264 MAIN RD.
 AKRON, NY
 US 14001

Contact: MIKE GERSTUNG
 mikegerstung@yahoo.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)

T:
F: