



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CATERPILLAR 0140HP0CA03673

Component
Hydraulic System

Fluid
TRC HYDRAULIC OIL ISO 32- SAE10W (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR02521453	---	---
Sample Date		Client Info		15 Jul 2009	---	---
Machine Age	hrs	Client Info		2241	---	---
Oil Age	hrs	Client Info		245	---	---
Filter Age	hrs	Client Info		245	---	---
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		2	---	---
Chromium	ppm	ASTM D5185m		0	---	---
Nickel	ppm	ASTM D5185m		0	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m		0	---	---
Lead	ppm	ASTM D5185m		0	---	---
Copper	ppm	ASTM D5185m		6	---	---
Tin	ppm	ASTM D5185m		0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

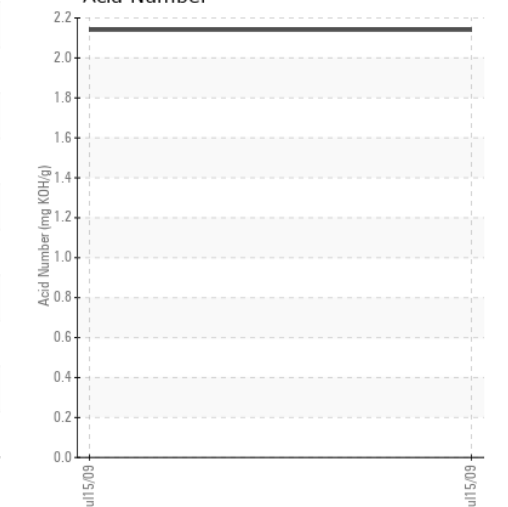
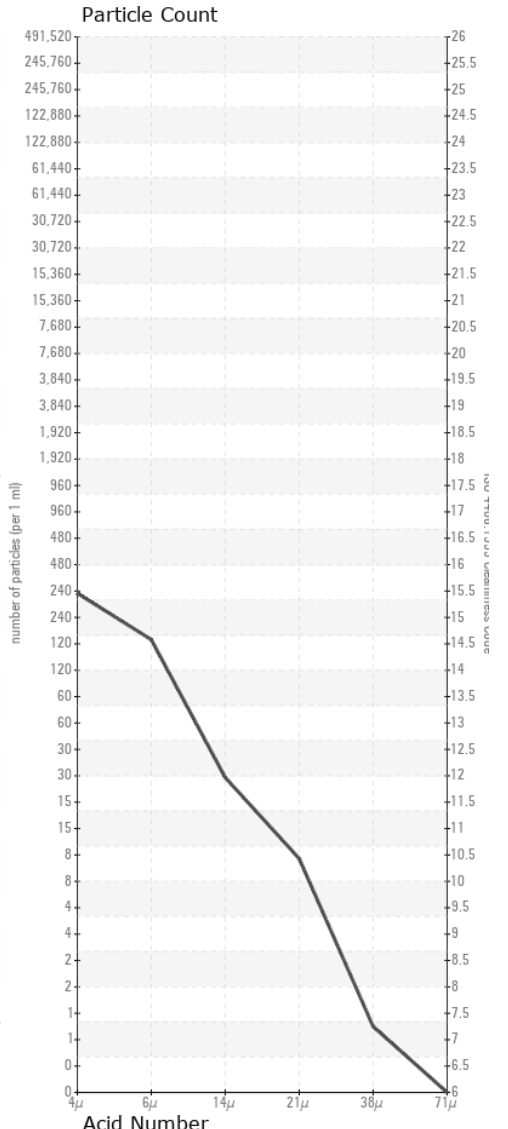
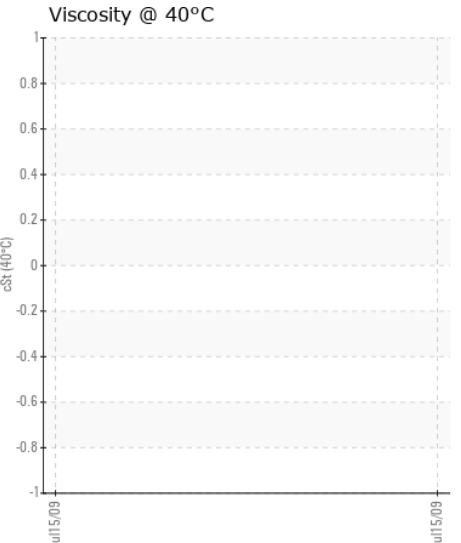
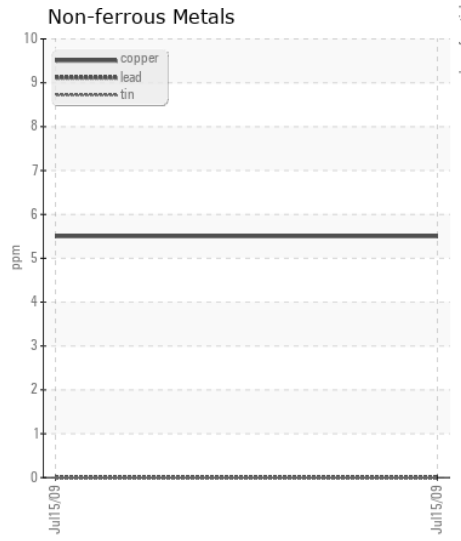
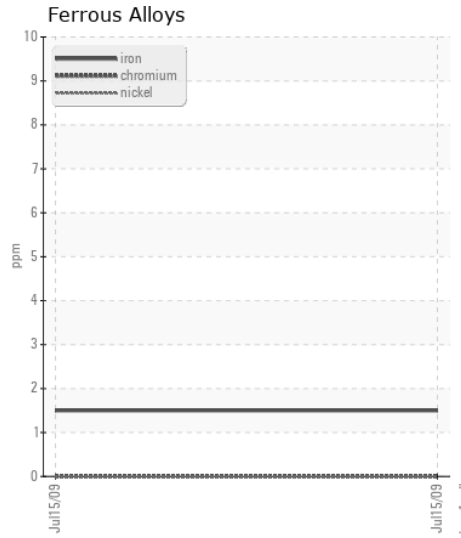
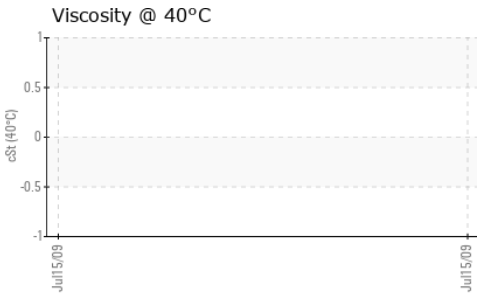
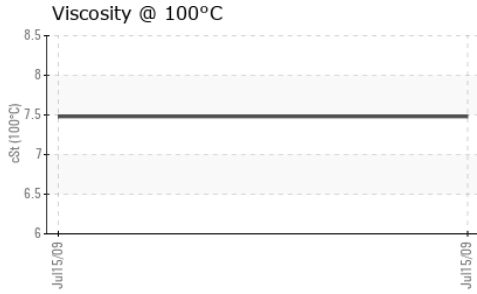
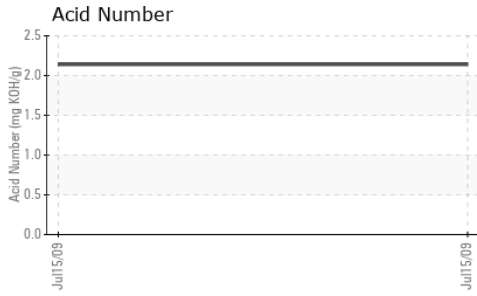
There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable.

Silicon	ppm	ASTM D5185m		2	---	---
Potassium	ppm	ASTM D5185m		0	---	---
Water		WC Method		NEG	---	---
Particles >4µm		ASTM D7647		290	---	---
Particles >6µm		ASTM D7647		158	---	---
Particles >14µm		ASTM D7647		26	---	---
Particles >21µm		ASTM D7647		9	---	---
Particles >38µm		ASTM D7647		1	---	---
Particles >71µm		ASTM D7647		0	---	---
Oil Cleanliness		ISO 4406 (c)		15/14/12	---	---
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		5	---	---
Boron	ppm	ASTM D5185m		12	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		0	---	---
Manganese	ppm	ASTM D5185m		0	---	---
Magnesium	ppm	ASTM D5185m		394	---	---
Calcium	ppm	ASTM D5185m		354	---	---
Phosphorus	ppm	ASTM D5185m		933	---	---
Zinc	ppm	ASTM D5185m		1083	---	---
Sulfur	ppm	ASTM D5185m		6264	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045		2.14	---	---
Visc @ 100°C	cSt	ASTM D445		7.48	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR02521453 **Received** : 17 Nov 2009
Lab Number : 02521453 **Tested** : 19 Nov 2009
Unique Number : 5021354 **Diagnosed** : 19 Nov 2009 - Jonathan Hester
Test Package : MOB 2 (Additional Tests: KV100)

UNION COUNTY ROAD DEPT.
P.O. BOX 430
CLAYTON, NM
US 88415
Contact: ELOY GONZALES

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: