



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CLIPPER-JOSTING 14-119

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		TR02466697	TR01256224	---
Sample Date		Client Info		07 Jun 2009	25 May 2005	---
Machine Age	mls	Client Info		0	0	---
Oil Age	mls	Client Info		0	0	---
Filter Age	mls	Client Info		0	0	---
Oil Changed		Client Info		Not Chngd	N/A	---
Filter Changed		Client Info		Not Chngd	N/A	---
Sample Status				NORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m		<1	▲ 68	---
Chromium	ppm	ASTM D5185m		0	<1	---
Nickel	ppm	ASTM D5185m		0	<1	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m		<1	<1	---
Lead	ppm	ASTM D5185m		0	3	---
Copper	ppm	ASTM D5185m		1	3	---
Tin	ppm	ASTM D5185m		0	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	VLITE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

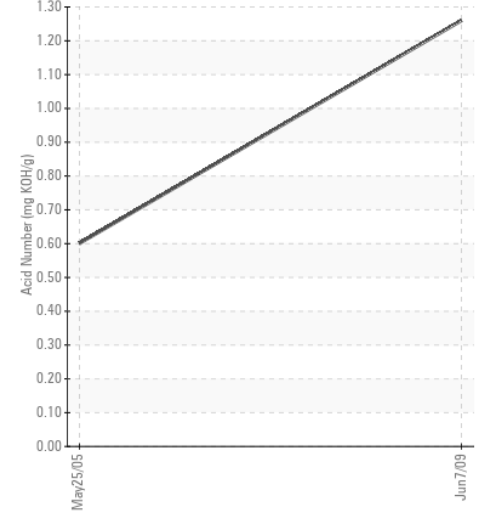
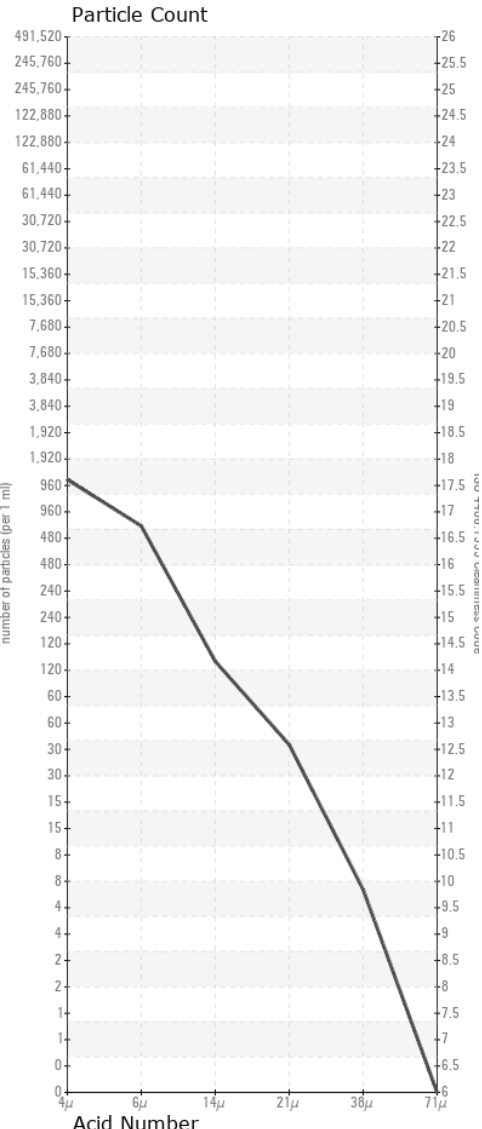
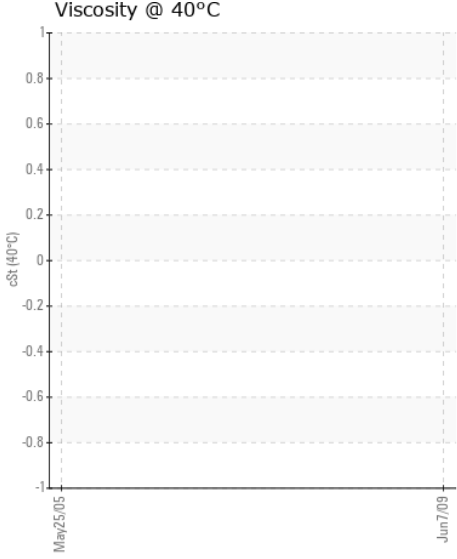
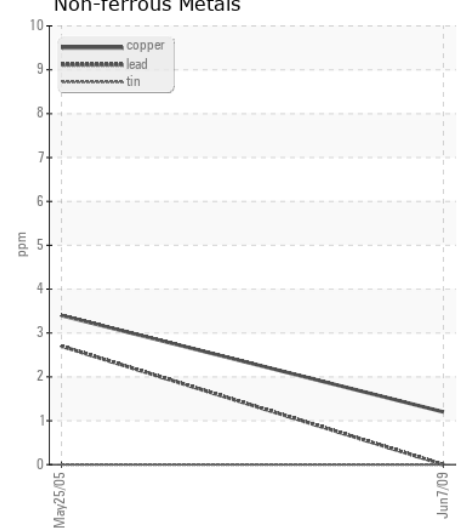
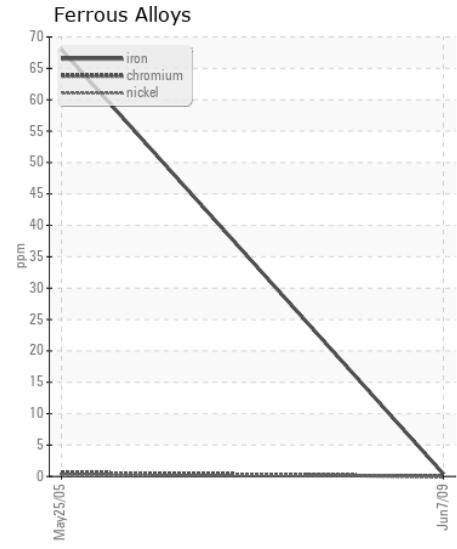
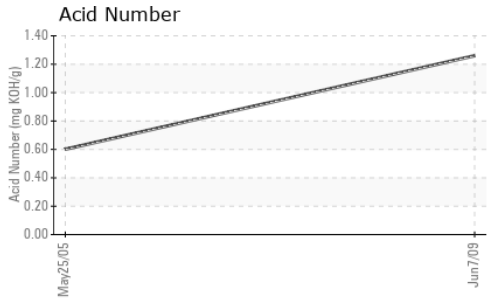
There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable.

Silicon	ppm	ASTM D5185m		5	7	---
Potassium	ppm	ASTM D5185m		0	9	---
Water		WC Method		NEG	NEG	---
Particles >4µm		ASTM D7647		1284	---	---
Particles >6µm		ASTM D7647		699	---	---
Particles >14µm		ASTM D7647		119	---	---
Particles >21µm		ASTM D7647		40	---	---
Particles >38µm		ASTM D7647		6	---	---
Particles >71µm		ASTM D7647		0	---	---
Oil Cleanliness		ISO 4406 (c)		17/17/14	---	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual		NEG	NEG	---

FLUID CONDITION

The condition of oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	▲ 1569	---
Boron	ppm	ASTM D5185m		0	2	---
Barium	ppm	ASTM D5185m		0	2	---
Molybdenum	ppm	ASTM D5185m		0	0	---
Manganese	ppm	ASTM D5185m		0	1	---
Magnesium	ppm	ASTM D5185m		0	2	---
Calcium	ppm	ASTM D5185m		102	3	---
Phosphorus	ppm	ASTM D5185m		835	● 1746	---
Zinc	ppm	ASTM D5185m		1070	● 1628	---
Sulfur	ppm	ASTM D5185m		7341	10697	---
Acid Number (AN)	mg KOH/g	ASTM D8045		1.26	0.601	---
Visc @ 100°C	cSt	ASTM D445		7.15	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR02466697
Lab Number : 02466697
Unique Number : 4931455
Test Package : MOB 2 (Additional Tests: KV100)

Received : 25 Aug 2009
Tested : 26 Aug 2009
Diagnosed : 26 Aug 2009 - Jonathan Hester

MERILLAT IND
P.O. BOX 259
ATKINS, VA
US 24311
Contact: MAURA HARVEY

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)