



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
GROVE 5275 VALVE 1

Component
Hydraulic System

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

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR03453556	---	---
Sample Date		Client Info		13 Feb 2014	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	15	---	---
Chromium	ppm	ASTM D5185m	>10	1	---	---
Nickel	ppm	ASTM D5185m		<1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m	>10	4	---	---
Lead	ppm	ASTM D5185m	>10	6	---	---
Copper	ppm	ASTM D5185m	>75	34	---	---
Tin	ppm	ASTM D5185m	>10	0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

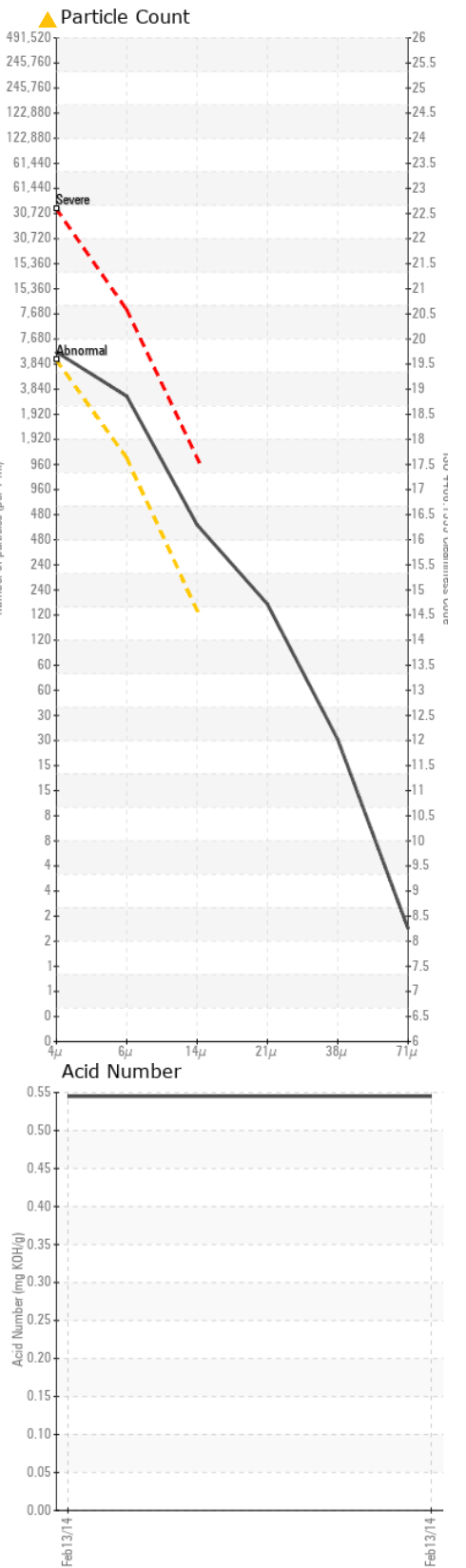
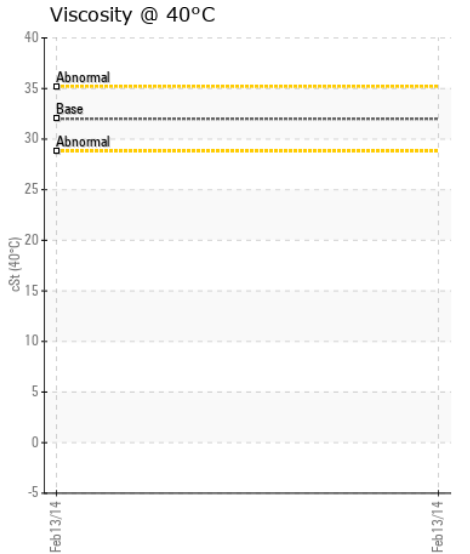
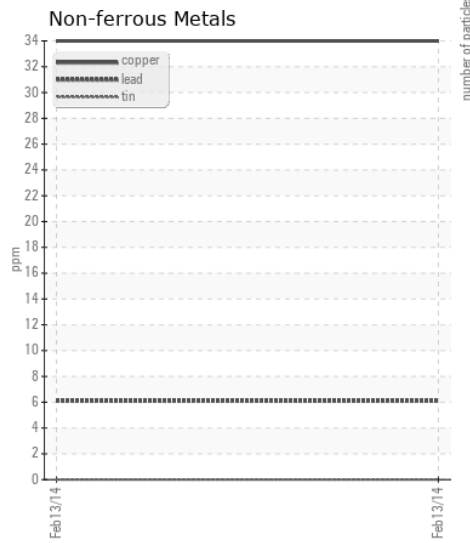
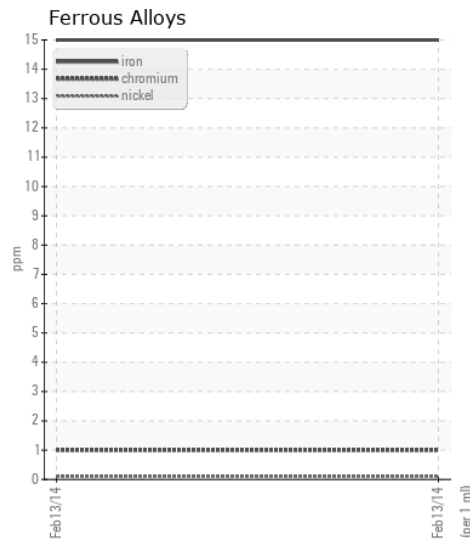
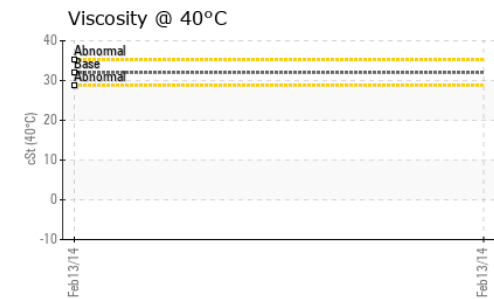
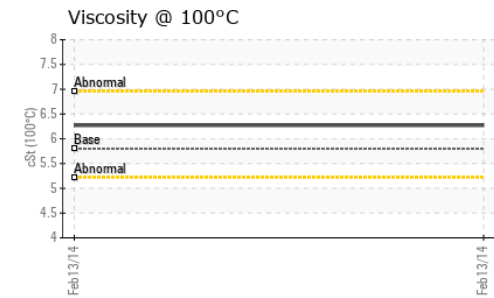
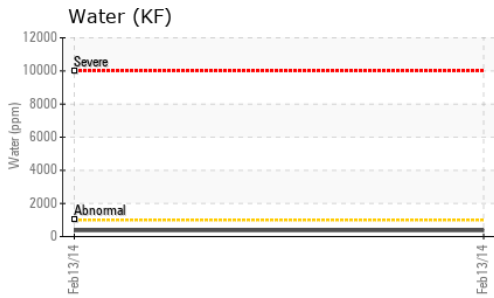
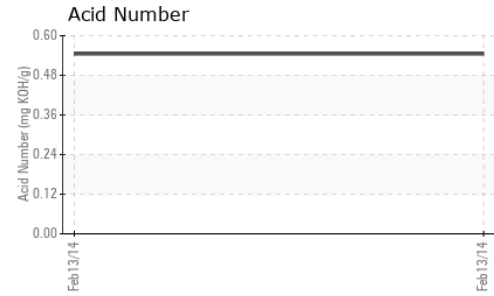
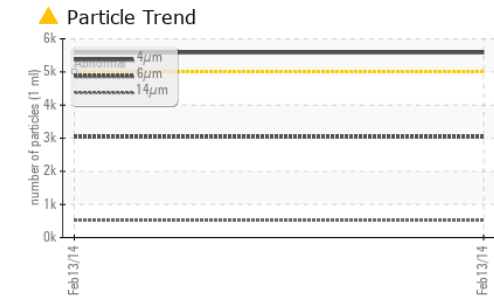
There is a high amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>20	5	---	---
Potassium	ppm	ASTM D5185m	>20	4	---	---
Water	%	ASTM D6304	>0.1	0.037	---	---
ppm Water	ppm	ASTM D6304	>1000	370	---	---
Particles >4µm		ASTM D7647	>5000	5584	---	---
Particles >6µm		ASTM D7647	>1300	▲ 3042	---	---
Particles >14µm		ASTM D7647	>160	▲ 518	---	---
Particles >21µm		ASTM D7647	>40	▲ 174	---	---
Particles >38µm		ASTM D7647	>10	▲ 27	---	---
Particles >71µm		ASTM D7647	>3	2	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 20/19/16	---	---
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	>0.1	0.1%	---	---

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		1	---	---
Boron	ppm	ASTM D5185m		1	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		1	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		8	---	---
Calcium	ppm	ASTM D5185m		74	---	---
Phosphorus	ppm	ASTM D5185m		336	---	---
Zinc	ppm	ASTM D5185m	1000	368	---	---
Sulfur	ppm	ASTM D5185m		2681	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045		0.545	---	---
Visc @ 100°C	cSt	ASTM D445	5.8	6.27	---	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR03453556 **Received** : 24 Feb 2014
Lab Number : 03453556 **Tested** : 24 Feb 2014
Unique Number : 6536364 **Diagnosed** : 24 Feb 2014 - Doug Bogart
Test Package : MOB 2 (Additional Tests: KF, KV100)

CCS CONSTRUCTORS
 138 MUNSON AVE
 MORRISVILLE, VT
 US 05661
 Contact: SCOTT BURRELL

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)