TRAAP
Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
HAGIE HAGIE STS 10
Component
Hydrostatic
Fluid
TRC UNIVERSAL TORQUE FLUID (55 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

The copper level is abnormal. All other component wear rates are normal.

CONTAMINATION

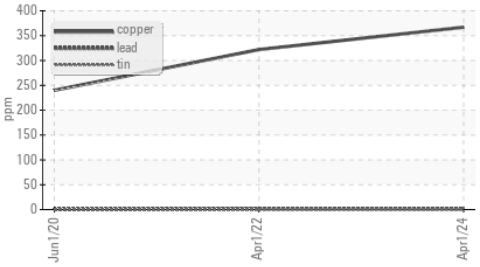
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

FLUID CONDITION

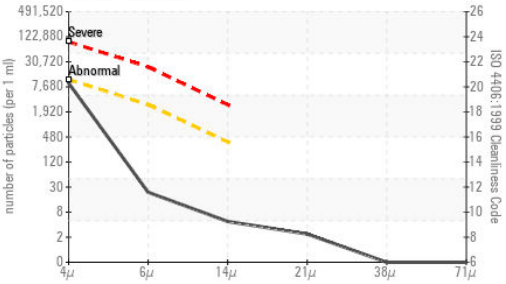
The AN level is acceptable for this fluid.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06151059	TR05515734	TR04999680
Sample Date		Client Info		01 Apr 2024	01 Apr 2022	01 Jun 2020
Machine Age	hrs	Client Info		3010	2878	2575
Oil Age	hrs	Client Info		1010	878	575
Filter Age	hrs	Client Info		425	293	575
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>200	6	1	5
Chromium	ppm	ASTM D5185m	>10	0	0	<1
Nickel	ppm	ASTM D5185m		0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m		<1	<1	<1
Aluminum	ppm	ASTM D5185m	>50	3	2	3
Lead	ppm	ASTM D5185m	>50	1	2	0
Copper	ppm	ASTM D5185m	>200	▲ 367	▲ 322	▲ 240
Tin	ppm	ASTM D5185m	>10	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>50	19	15	23
Potassium	ppm	ASTM D5185m	>20	3	4	8
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>10000	8202	---	---
Particles >6µm		ASTM D7647	>2500	20	---	---
Particles >14µm		ASTM D7647	>320	4	---	---
Particles >21µm		ASTM D7647	>80	2	---	---
Particles >38µm		ASTM D7647	>20	0	---	---
Particles >71µm		ASTM D7647	>4	0	---	---
Oil Cleanliness		ISO 4406 (c)	>20/18/15	20/11/9	---	---
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	VLITE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		4	0	2
Boron	ppm	ASTM D5185m		150	142	125
Barium	ppm	ASTM D5185m		0	0	<1
Molybdenum	ppm	ASTM D5185m		0	<1	<1
Manganese	ppm	ASTM D5185m		2	<1	<1
Magnesium	ppm	ASTM D5185m		24	19	22
Calcium	ppm	ASTM D5185m	4200	4530	4360	4718
Phosphorus	ppm	ASTM D5185m	1100	1417	1338	1442
Zinc	ppm	ASTM D5185m	2000	1766	1707	1789
Sulfur	ppm	ASTM D5185m		8693	6063	6932
Acid Number (AN)	mg KOH/g	ASTM D8045		1.17	0.89	0.990
Visc @ 40°C	cSt	ASTM D445	53.5	48.6	---	---
Visc @ 100°C	cSt	ASTM D445	9.55	7.7	7.9	7.9
Viscosity Index (VI)	Scale	ASTM D2270	164	124	---	---

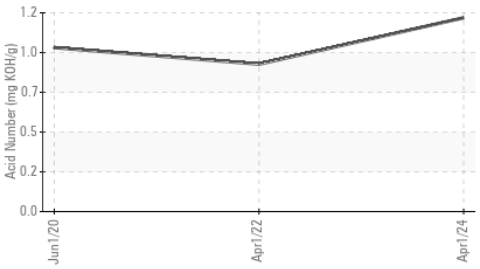
Non-ferrous Metals



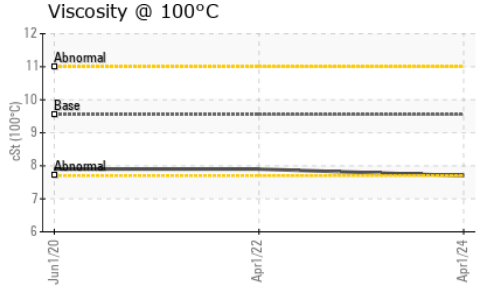
Particle Count



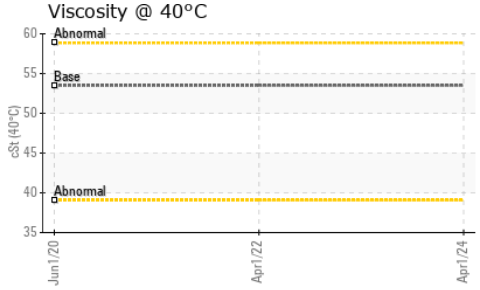
Acid Number



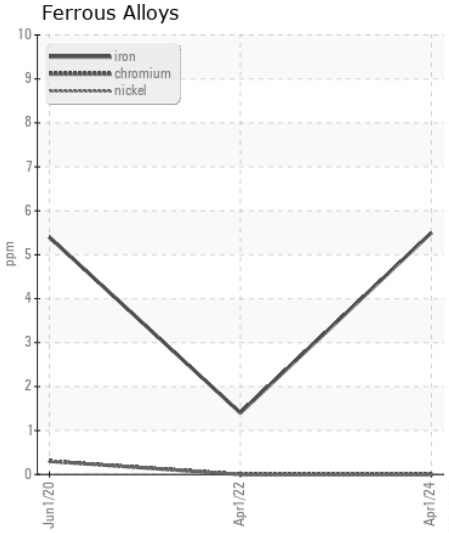
Viscosity @ 100°C



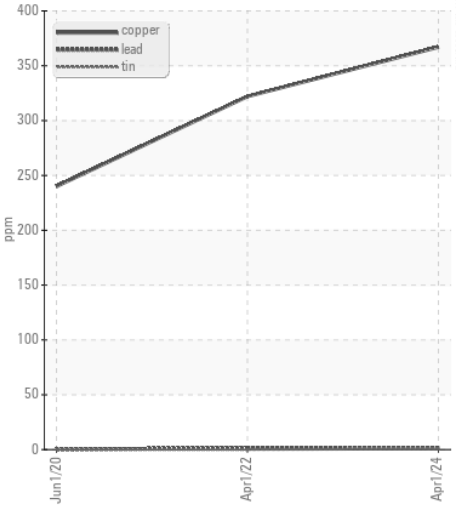
Viscosity @ 40°C



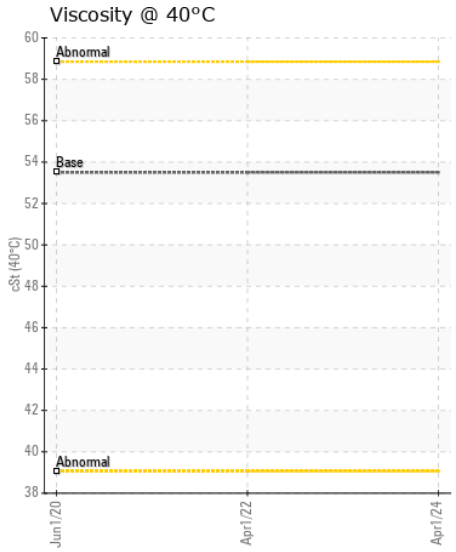
Ferrous Alloys



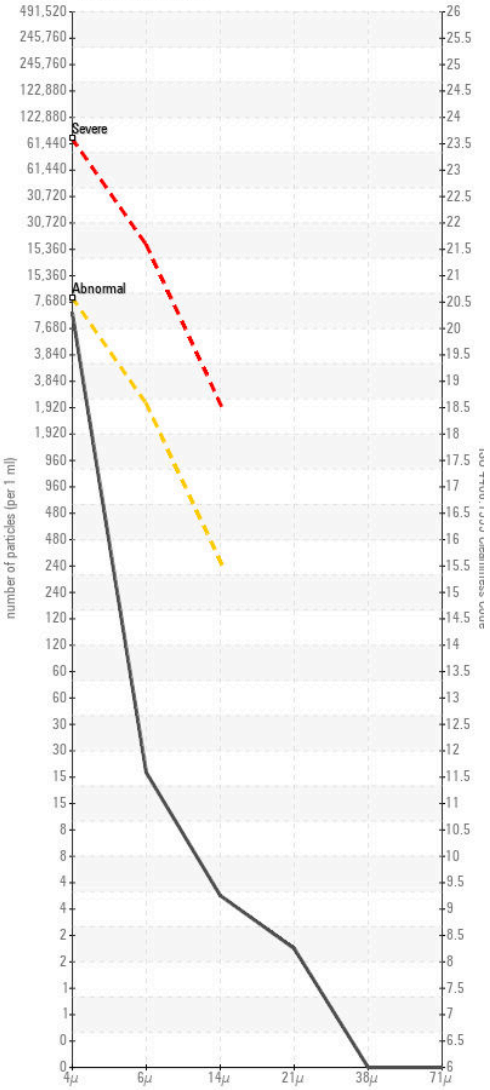
Non-ferrous Metals



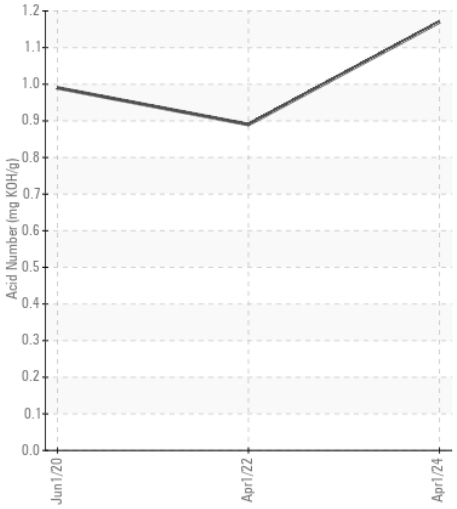
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06151059 **Received** : 16 Apr 2024
Lab Number : 06151059 **Tested** : 17 Apr 2024
Unique Number : 10981137 **Diagnosed** : 19 Apr 2024 - Jonathan Hester
Test Package : MOB 2 (Additional Tests: KV100, PrtCount, VI)

Certificate L2367

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)

ERIC JORDAN
605 BOYD ST
NEWPORT, AR
US 72112-8049
Contact: ERIC JORDAN
EW_JORDAN@YAHOO.COM
T:
F: