



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FORD 4
 Component
Transmission
 Fluid
TRC UNIVERSAL TORQUE FLUID (16 QTS)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR05989877	TR05584258	TR02187072
Sample Date		Client Info		21 Oct 2023	28 Jun 2022	02 Jun 2008
Machine Age	mls	Client Info		519869	507600	298500
Oil Age	mls	Client Info		69589	57316	17961
Filter Age	mls	Client Info		69589	57316	17961
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

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

Iron	ppm	ASTM D5185m	>200	80	85	39
Chromium	ppm	ASTM D5185m	>10	0	<1	<1
Nickel	ppm	ASTM D5185m		1	0	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>50	▲ 69	▲ 65	3
Lead	ppm	ASTM D5185m	>50	14	12	5
Copper	ppm	ASTM D5185m	>200	18	17	19
Tin	ppm	ASTM D5185m	>10	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the fluid.

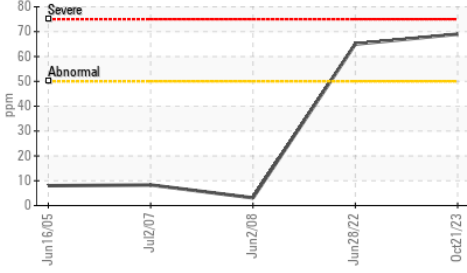
Silicon	ppm	ASTM D5185m	>50	21	23	10
Potassium	ppm	ASTM D5185m	>20	<1	2	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG

FLUID CONDITION

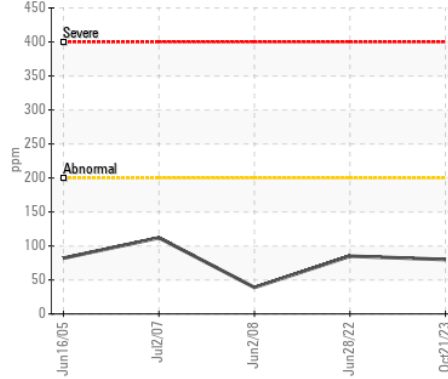
The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

Sodium	ppm	ASTM D5185m		5	2	9
Boron	ppm	ASTM D5185m		150	172	116
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		0	<1	0
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m		11	9	4
Calcium	ppm	ASTM D5185m	4200	4025	4292	4235
Phosphorus	ppm	ASTM D5185m	1100	1343	1414	1434
Zinc	ppm	ASTM D5185m	2000	1776	1688	1664
Sulfur	ppm	ASTM D5185m		6659	8592	8859
Acid Number (AN)	mg KOH/g	ASTM D8045		1.62	1.55	2.99
Visc @ 40°C	cSt	ASTM D445	53.5	33.9	---	---
Visc @ 100°C	cSt	ASTM D445	9.55	6.5	6.6	7.69
Viscosity Index (VI)	Scale	ASTM D2270	164	148	---	---

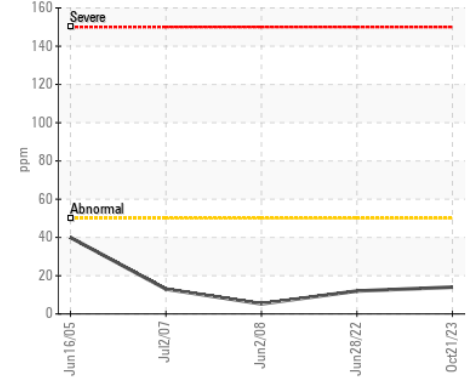
▲ Aluminum (ppm)



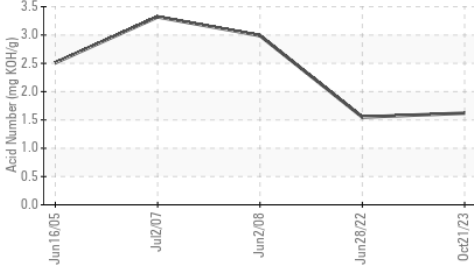
Iron (ppm)



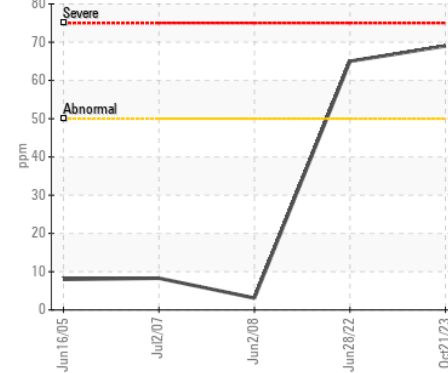
Lead (ppm)



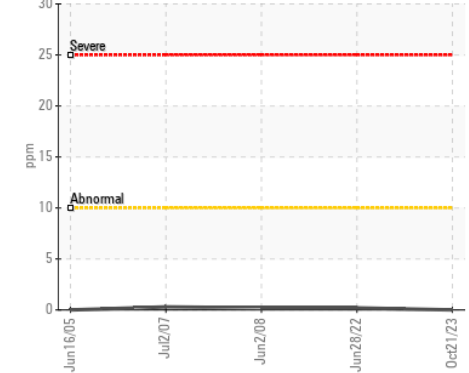
Acid Number



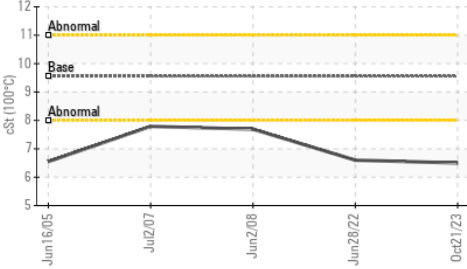
▲ Aluminum (ppm)



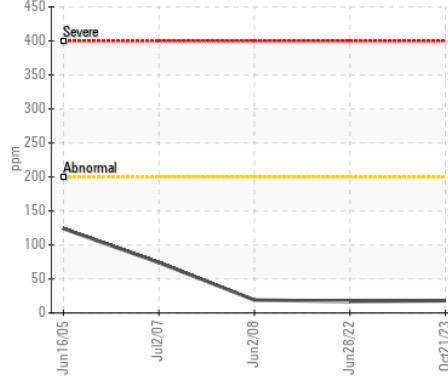
Chromium (ppm)



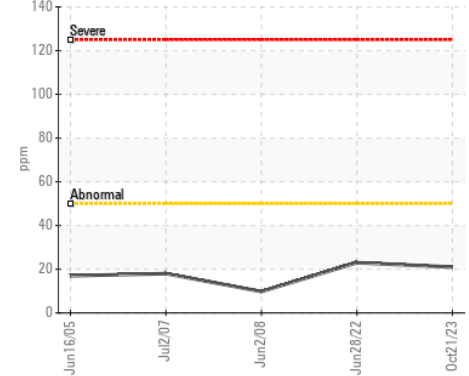
Viscosity @ 100°C



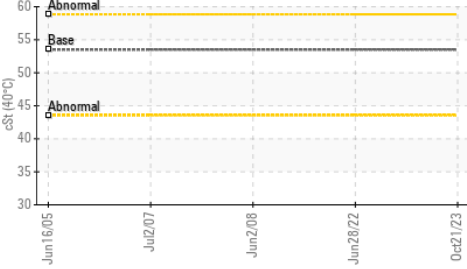
Copper (ppm)



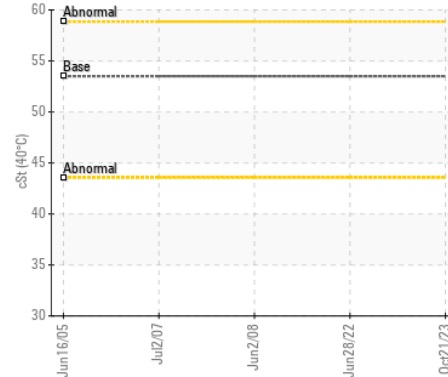
Silicon (ppm)



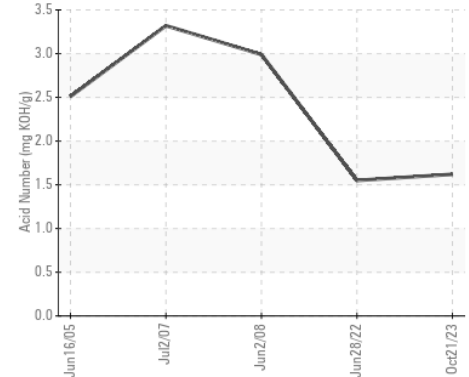
Viscosity @ 40°C



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : TR05989877
 Lab Number : 05989877
 Unique Number : 10712539
 Test Package : MOB 2 (Additional Tests: KV100, VI)

Received : 25 Oct 2023
 Tested : 27 Oct 2023
 Diagnosed : 27 Oct 2023 - Don Baldrige

JIM WHITLOW
 P.O. BOX 366
 HAW RIVER, NC
 US 27258

Contact: JIM WHITLOW
 JWHITLOW45@YAHOO.COM
 T: (336)421-8700
 F: (336)421-0527

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)