



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 5002

Component
Transmission (Auto)

Fluid
TRC TEXTRANS MULTI-VEHICLE SYN ATF (36 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		TR06215909	TR05518378	TR05197216
Sample Date		Client Info		07 Jun 2024	29 Mar 2022	02 Feb 2021
Machine Age	hrs	Client Info		26969	24562	23215
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

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

Iron	ppm	ASTM D5185m	>230	147	111	52
Chromium	ppm	ASTM D5185m	>2	0	0	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>5	0	0	0
Aluminum	ppm	ASTM D5185m	>65	22	21	7
Lead	ppm	ASTM D5185m	>55	13	4	2
Copper	ppm	ASTM D5185m	>85	▲ 230	173	159
Tin	ppm	ASTM D5185m	>5	2	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.

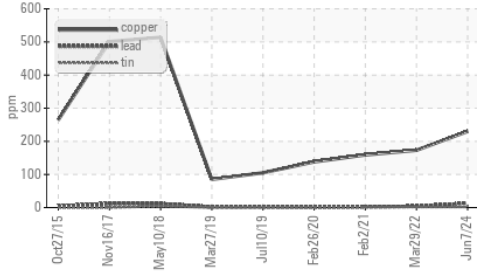
Silicon	ppm	ASTM D5185m	>20	15	12	9
Potassium	ppm	ASTM D5185m	>20	<1	2	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG

FLUID CONDITION

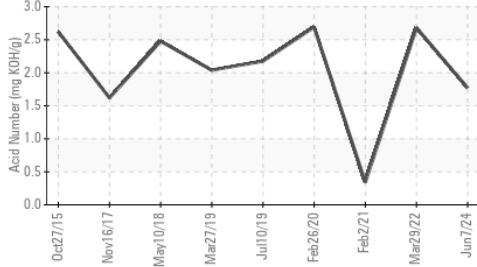
The AN level is acceptable for this fluid. The condition of the fluid is suitable for further service.

Sodium	ppm	ASTM D5185m		7	4	4
Boron	ppm	ASTM D5185m		248	313	313
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	1
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		<1	1	0
Calcium	ppm	ASTM D5185m		245	242	279
Phosphorus	ppm	ASTM D5185m		628	613	697
Zinc	ppm	ASTM D5185m		28	19	5
Sulfur	ppm	ASTM D5185m		3062	1977	2434
Acid Number (AN)	mg KOH/g	ASTM D8045		1.77	2.68	0.342
Visc @ 40°C	cSt	ASTM D445		30.3	---	---
Visc @ 100°C	cSt	ASTM D445	7.3	6.3	6.6	6.8
Viscosity Index (VI)	Scale	ASTM D2270	193	165	---	---

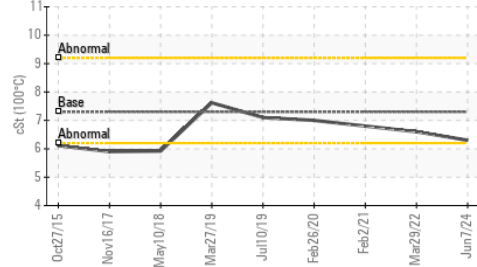
▲ Non-ferrous Metals



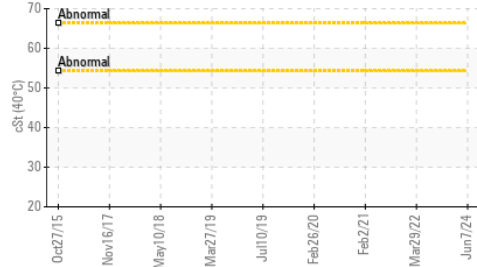
Acid Number



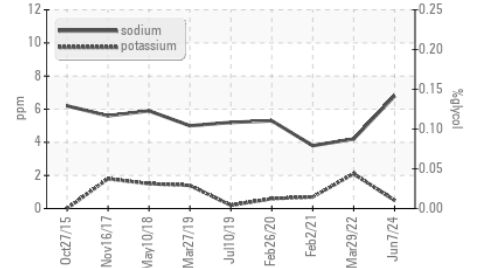
Viscosity @ 100°C



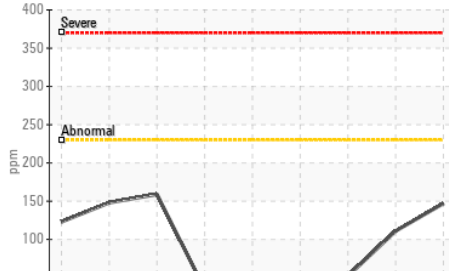
Viscosity @ 40°C



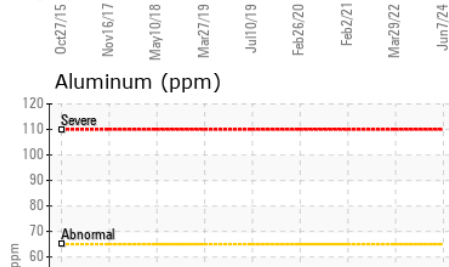
Glycol Contamination



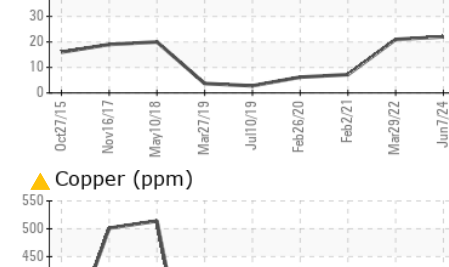
Iron (ppm)



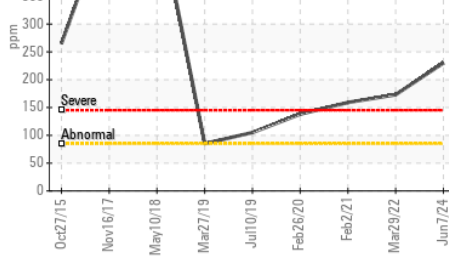
Aluminum (ppm)



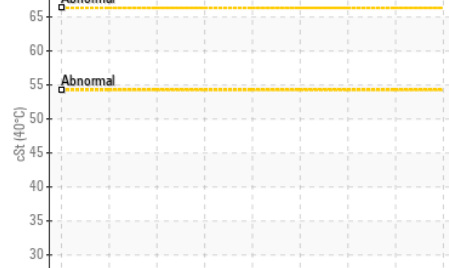
▲ Copper (ppm)



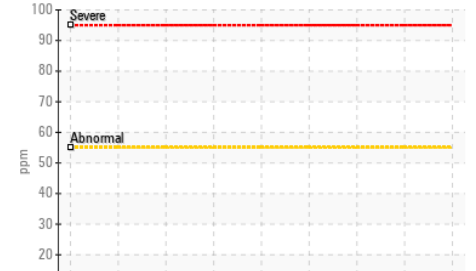
Viscosity @ 40°C



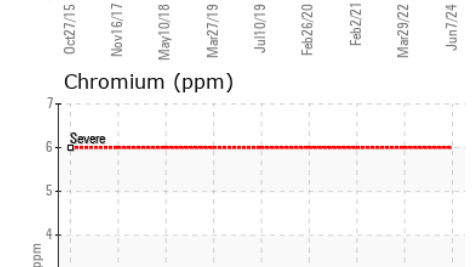
Acid Number



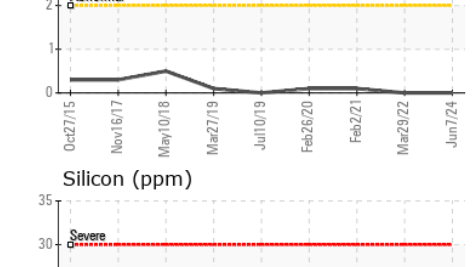
Lead (ppm)



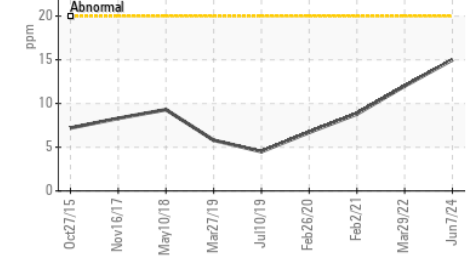
Chromium (ppm)



Silicon (ppm)



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06215909 **Received** : 20 Jun 2024
Lab Number : 06215909 **Tested** : 23 Jun 2024
Unique Number : 11088773 **Diagnosed** : 23 Jun 2024 - Don Baldrige
Test Package : MOB 2 (Additional Tests: Glycol, KV100, VI)

MATHIOWETZ CONSTRUCTION COMPANY
 30676 COUNTY RD 24
 SLEEPY EYE, MN
 US 56085
 Contact: Jim Warwick
 jimwarwick@mathiowetzconst.com

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: