



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
4 - 1 BATCH OFF GEARBOX
 Component
Gearbox
 Fluid
TRC INDUSTRIAL GEAR 320 (68 GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06029545	TR05939823	TR05854475
Sample Date		Client Info		21 Nov 2023	30 Aug 2023	18 May 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	4	6	9
Chromium	ppm	ASTM D5185m	>10	0	0	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	<1	3	0
Lead	ppm	ASTM D5185m	>50	1	<1	1
Copper	ppm	ASTM D5185m	>200	2	1	2
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

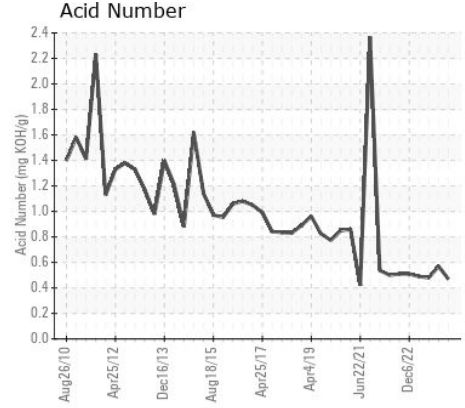
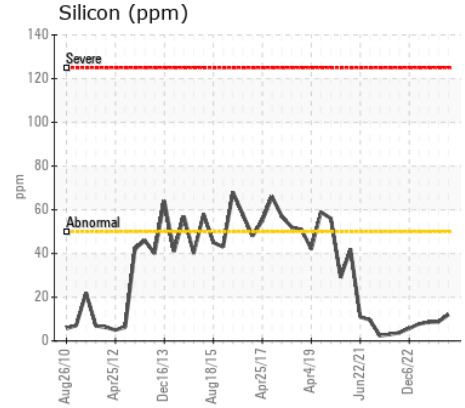
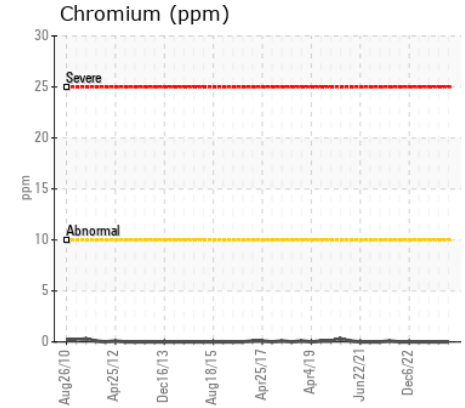
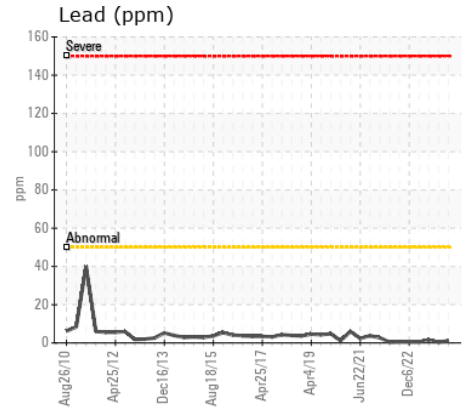
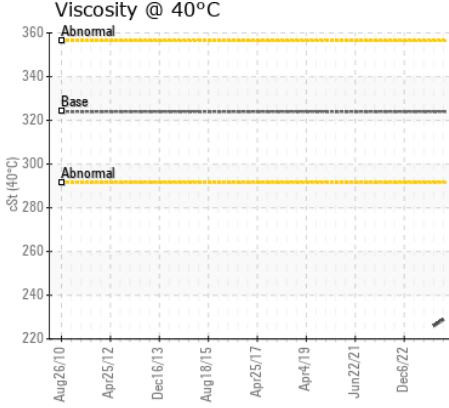
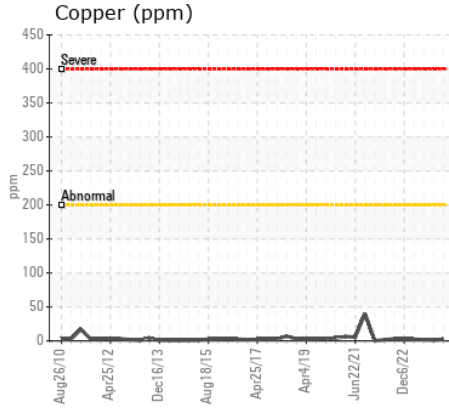
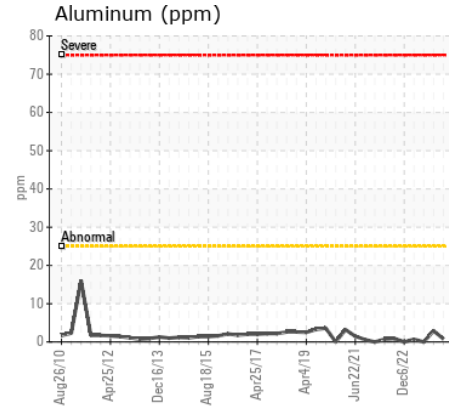
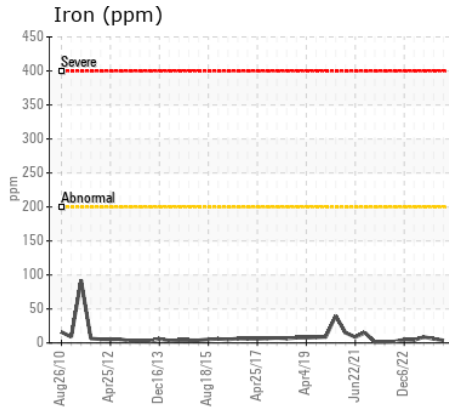
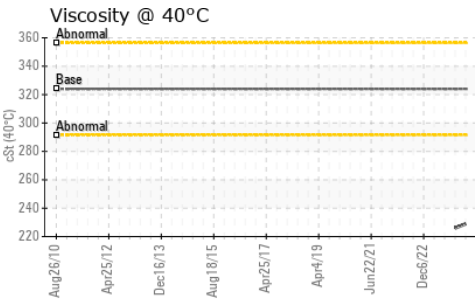
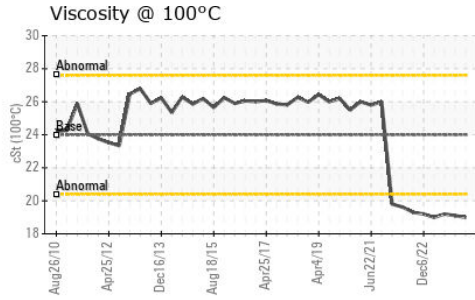
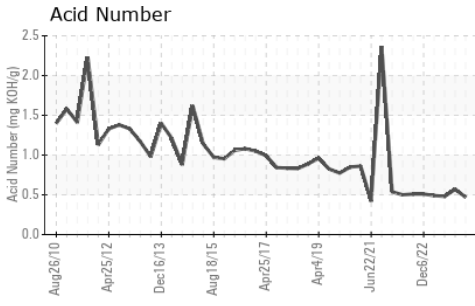
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	12	9	9
Potassium	ppm	ASTM D5185m	>20	1	1	<1
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	MODER	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	▲ MODER
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	>0.2	NEG	NEG	NEG

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	0	0
Boron	ppm	ASTM D5185m		84	93	79
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m		0	2	<1
Calcium	ppm	ASTM D5185m		0	0	3
Phosphorus	ppm	ASTM D5185m		325	327	284
Zinc	ppm	ASTM D5185m		0	0	1
Sulfur	ppm	ASTM D5185m		7946	10415	7326
Acid Number (AN)	mg KOH/g	ASTM D8045		0.47	0.57	0.48
Visc @ 40°C	cSt	ASTM D445	324	229	226	---
Visc @ 100°C	cSt	ASTM D445	24.0	19.0	19.1	19.2
Viscosity Index (VI)	Scale	ASTM D2270		93	95	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06029545
Lab Number : 06029545
Unique Number : 10779336
Test Package : MOB 2 (Additional Tests: KV100, VI)

Received : 08 Dec 2023
Tested : 11 Dec 2023
Diagnosed : 11 Dec 2023 - Wes Davis

CARLSTAR GROUP - FORMERLY CARLISLE TIRE
 520 JD YARNELL IND. PKWY
 CLINTON, TN
 US 37716
 Contact: JOHN GAINES

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:
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