



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
5 - 2 DROP MILL

Component
Gearbox

Fluid
TRC 890 VARI-PURPOSE 85W140 (--- 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		TR06029539	TR05939821	TR05854476
Sample Date		Client Info		21 Nov 2023	30 Aug 2023	18 May 2023
Machine Age	yrs	Client Info		0	0	0
Oil Age	yrs	Client Info		0	0	0
Filter Age	yrs	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	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	22	41	58
Chromium	ppm	ASTM D5185m	>10	0	0	<1
Nickel	ppm	ASTM D5185m	>10	1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	1	5	<1
Lead	ppm	ASTM D5185m	>50	<1	0	<1
Copper	ppm	ASTM D5185m	>200	5	2	1
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

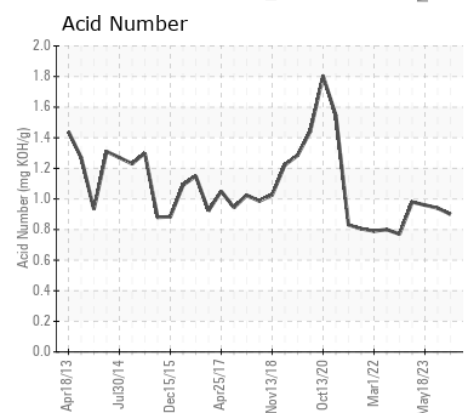
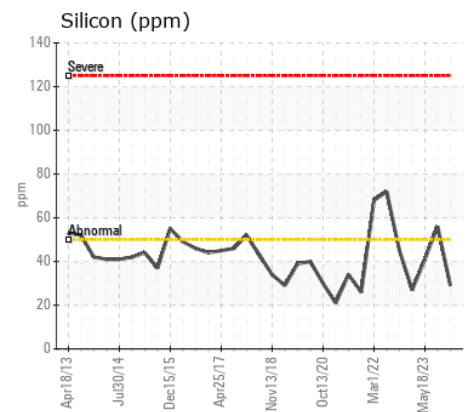
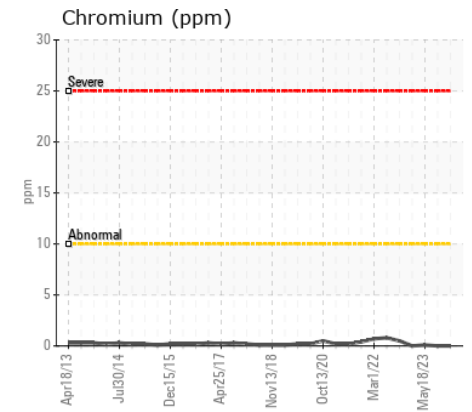
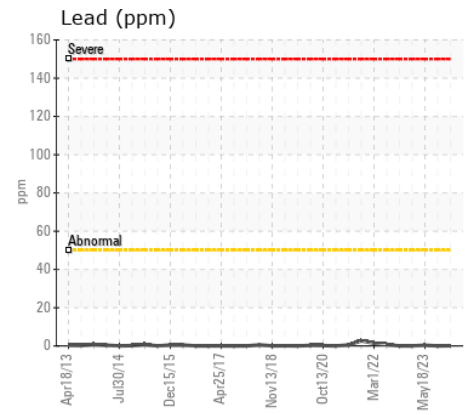
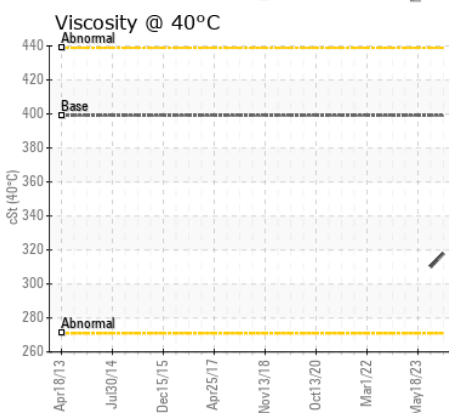
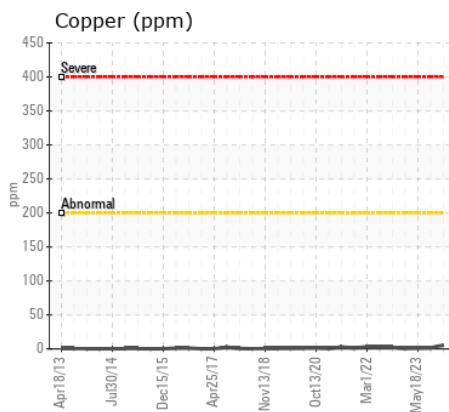
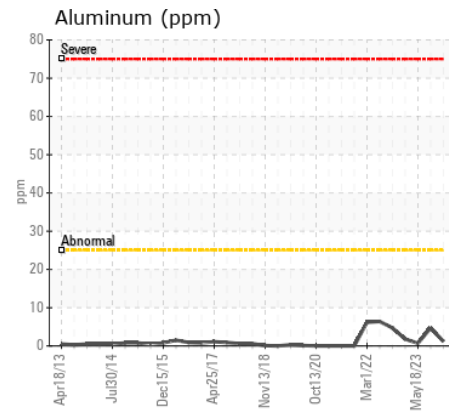
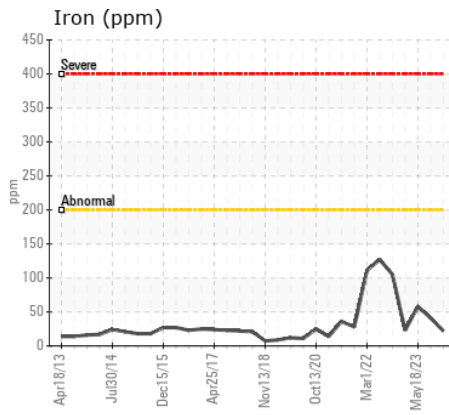
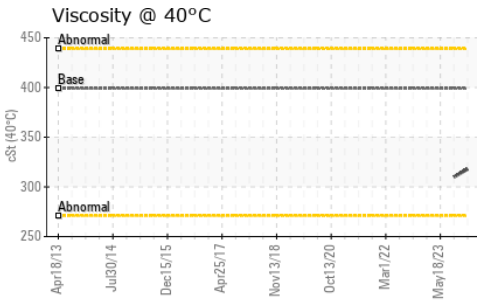
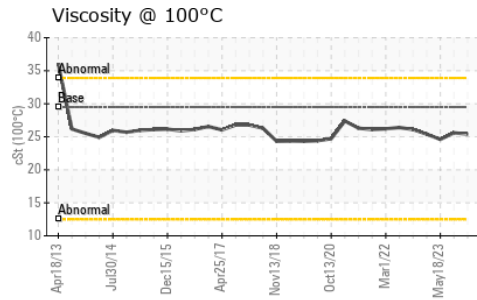
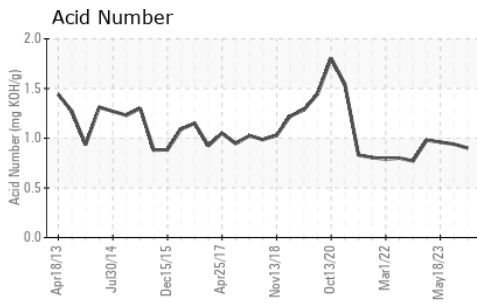
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	29	▲ 56	41
Potassium	ppm	ASTM D5185m	>20	3	1	<1
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	LIGHT	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	▲ 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	▲ 0.2%

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		0	<1	0
Boron	ppm	ASTM D5185m		0	0	<1
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		0	4	7
Calcium	ppm	ASTM D5185m		0	6	9
Phosphorus	ppm	ASTM D5185m		830	810	749
Zinc	ppm	ASTM D5185m		0	0	10
Sulfur	ppm	ASTM D5185m		20192	25056	17710
Acid Number (AN)	mg KOH/g	ASTM D8045		0.90	0.94	0.96
Visc @ 40°C	cSt	ASTM D445	399	318	310	---
Visc @ 100°C	cSt	ASTM D445	29.5	25.4	25.6	24.6
Viscosity Index (VI)	Scale	ASTM D2270		103	107	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06029539 **Received** : 08 Dec 2023
Lab Number : 06029539 **Tested** : 11 Dec 2023
Unique Number : 10779330 **Diagnosed** : 11 Dec 2023 - Wes Davis
Test Package : MOB 2 (Additional Tests: KV100, VI)

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)

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