



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CATERPILLAR 972K L11 Z4W00455
 Component
Front Differential
 Fluid
CHEVRON DELO TORQFORCE SAE 30 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR06196009	TR06165913	---
Sample Date		Client Info		17 May 2024	03 Apr 2024	---
Machine Age	hrs	Client Info		17940	17615	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Not Changd	Not Changd	---
Filter Changed		Client Info		Not Changd	Not Changd	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>500	81	76	---
Chromium	ppm	ASTM D5185m	>3	<1	<1	---
Nickel	ppm	ASTM D5185m	>3	0	0	---
Titanium	ppm	ASTM D5185m	>2	<1	<1	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>30	2	1	---
Lead	ppm	ASTM D5185m	>13	1	0	---
Copper	ppm	ASTM D5185m	>103	27	29	---
Tin	ppm	ASTM D5185m	>5	<1	<1	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

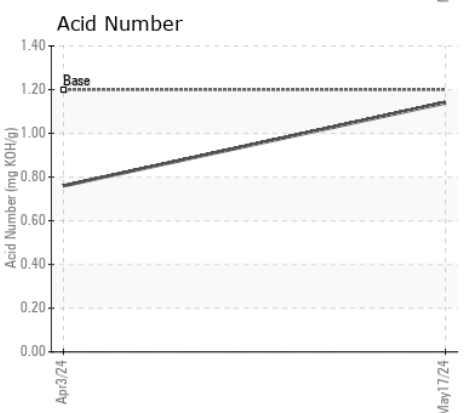
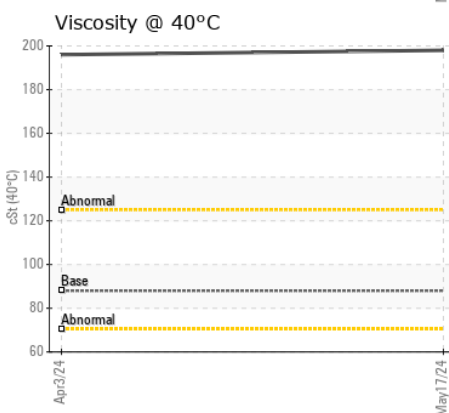
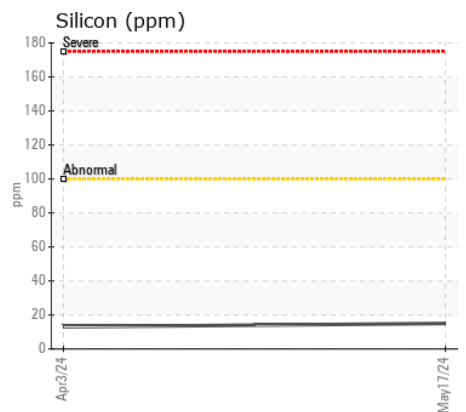
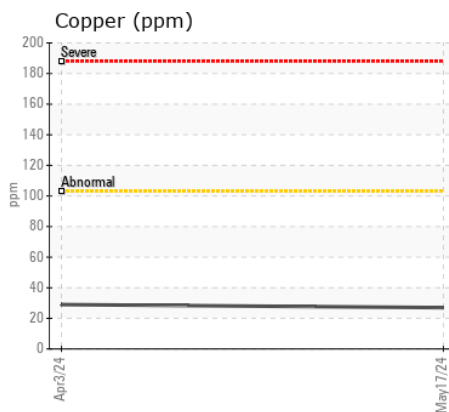
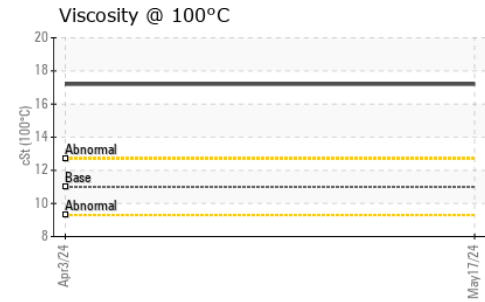
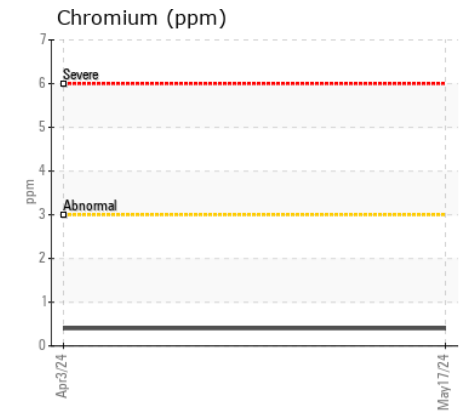
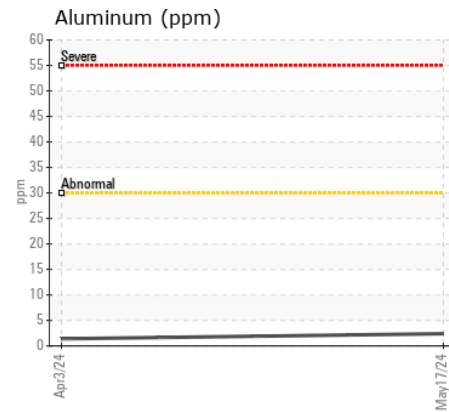
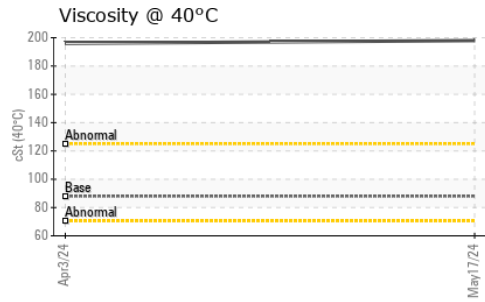
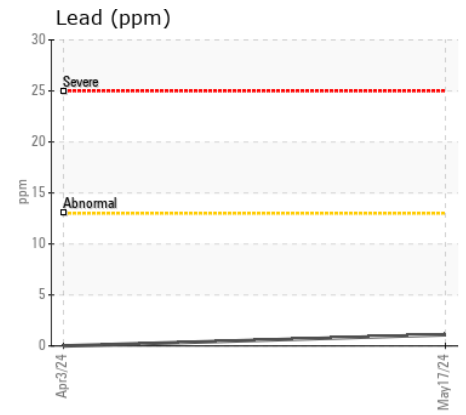
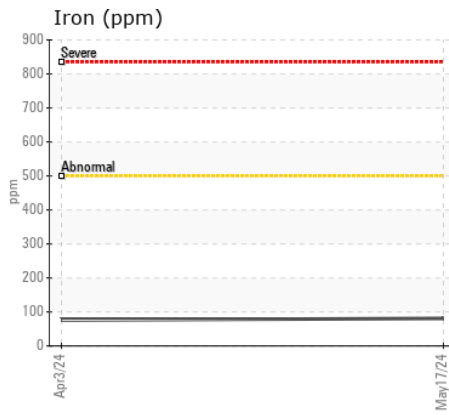
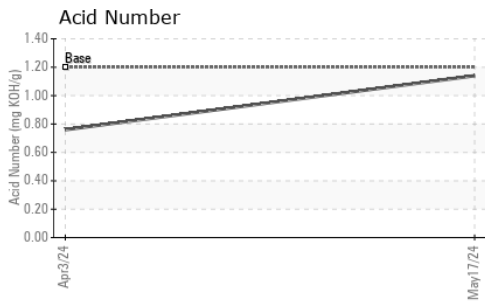
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>100	15	13	---
Potassium	ppm	ASTM D5185m	>20	0	0	---
Water		WC Method	>.2	NEG	NEG	---
Silt	scalar	*Visual	NONE	NONE	LIGHT	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>.2	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	<1	---
Boron	ppm	ASTM D5185m	4	0	2	---
Barium	ppm	ASTM D5185m		0	<1	---
Molybdenum	ppm	ASTM D5185m		<1	<1	---
Manganese	ppm	ASTM D5185m		1	2	---
Magnesium	ppm	ASTM D5185m	13	9	7	---
Calcium	ppm	ASTM D5185m	4000	3382	3516	---
Phosphorus	ppm	ASTM D5185m	990	951	986	---
Zinc	ppm	ASTM D5185m	1310	1161	1133	---
Sulfur	ppm	ASTM D5185m	3010	10856	10670	---
Acid Number (AN)	mg KOH/g	ASTM D8045	1.2	1.14	0.76	---
Visc @ 40°C	cSt	ASTM D445	88	198	196	---
Visc @ 100°C	cSt	ASTM D445	11	17.2	17.2	---
Viscosity Index (VI)	Scale	ASTM D2270	110	92	93	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06196009 **Received** : 30 May 2024
Lab Number : 06196009 **Tested** : 02 Jun 2024
Unique Number : 11058132 **Diagnosed** : 02 Jun 2024 - Don Baldrige
Test Package : MOB 2 (Additional Tests: KV100, VI)

BARR-TECH COMPOSTING
 9117 KALLENBERGER RD N
 SPRAGUE, WA
 US 99032
 Contact: RON GROGAN

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: (509)590-0437

F: