



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id  
**CATERPILLAR 972M L09 A8P00259**

Component  
**Hydraulic System**

Fluid  
**CHEVRON DELO TORQFORCE SAE 30 (12 GAL)**

**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		TR06100116	---	---
Sample Date		Client Info		08 Feb 2024	---	---
Machine Age	hrs	Client Info		8574	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	9	---	---
Chromium	ppm	ASTM D5185m	>10	1	---	---
Nickel	ppm	ASTM D5185m	>10	0	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m	>10	5	---	---
Lead	ppm	ASTM D5185m	>10	<1	---	---
Copper	ppm	ASTM D5185m	>75	7	---	---
Tin	ppm	ASTM D5185m	>10	0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

**CONTAMINATION**

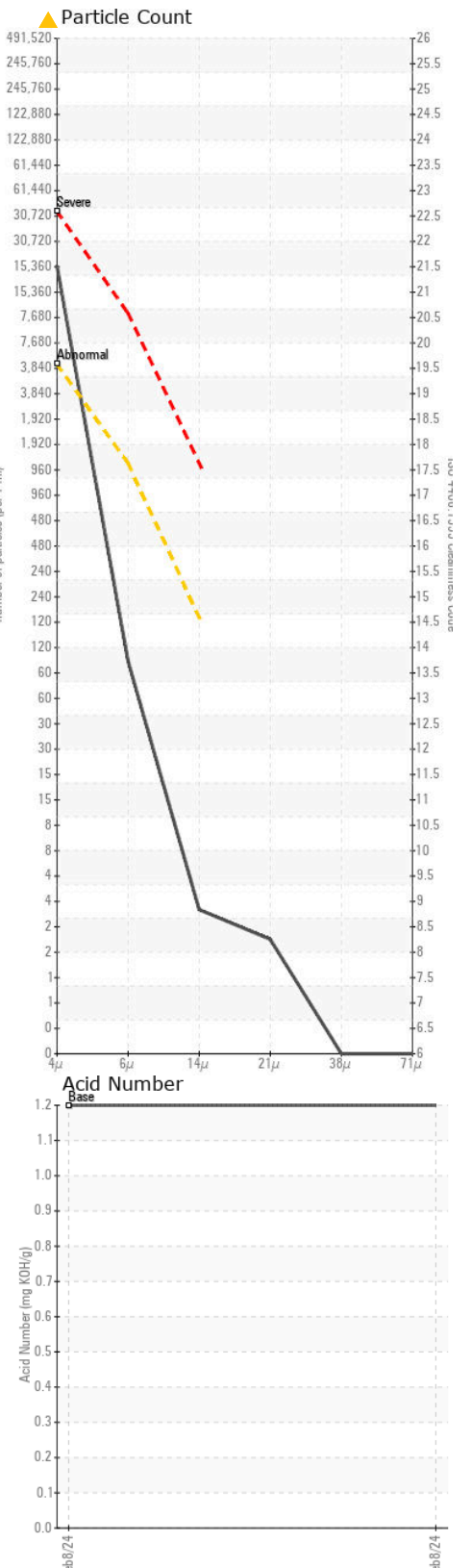
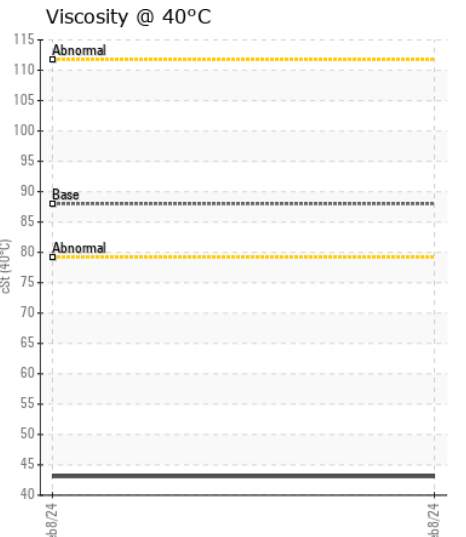
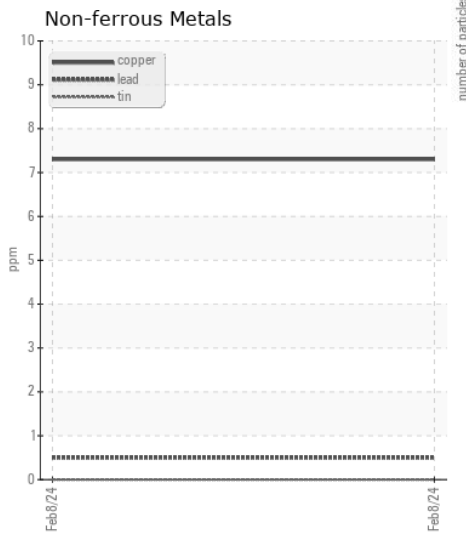
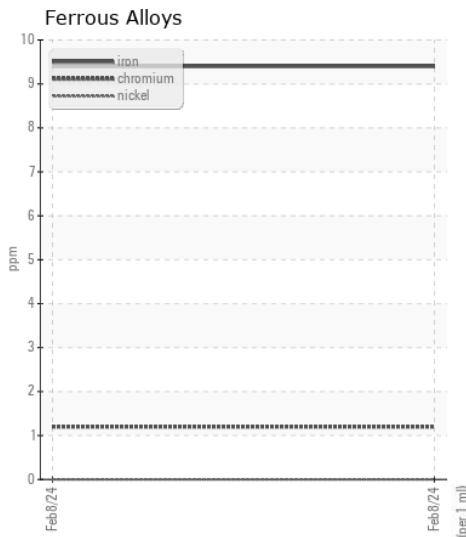
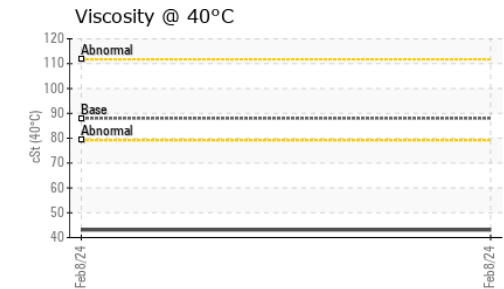
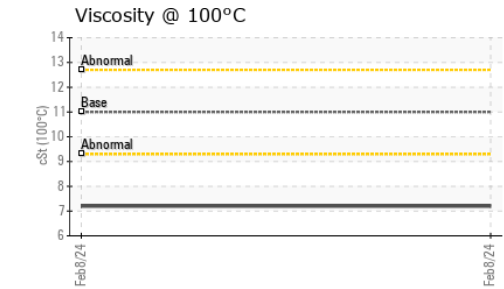
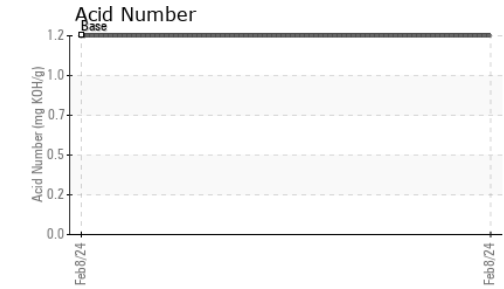
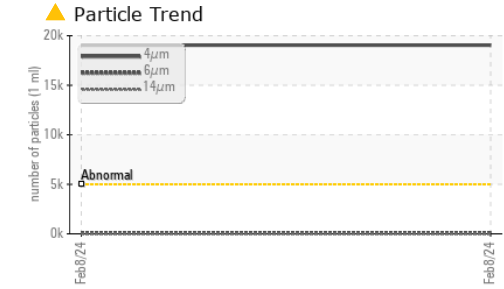
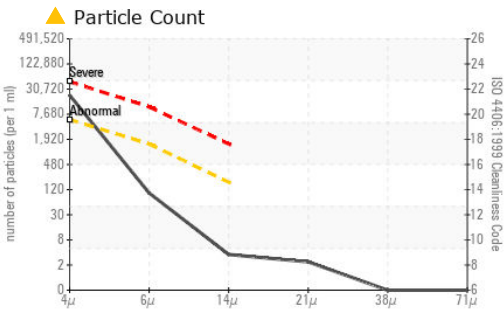
There is a high amount of silt (particulates < 6 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	13	---	---
Potassium	ppm	ASTM D5185m	>20	6	---	---
Water		WC Method	>0.1	NEG	---	---
Particles >4µm		ASTM D7647	>5000	▲ 19037	---	---
Particles >6µm		ASTM D7647	>1300	88	---	---
Particles >14µm		ASTM D7647	>160	3	---	---
Particles >21µm		ASTM D7647	>40	2	---	---
Particles >38µm		ASTM D7647	>10	0	---	---
Particles >71µm		ASTM D7647	>3	0	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 21/14/9	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.1	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		7	---	---
Boron	ppm	ASTM D5185m	4	9	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		5	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m	13	29	---	---
Calcium	ppm	ASTM D5185m	4000	1893	---	---
Phosphorus	ppm	ASTM D5185m	990	831	---	---
Zinc	ppm	ASTM D5185m	1310	913	---	---
Sulfur	ppm	ASTM D5185m	3010	2861	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045	1.2	1.20	---	---
Visc @ 40°C	cSt	ASTM D445	88	43.1	---	---
Visc @ 100°C	cSt	ASTM D445	11	7.2	---	---
Viscosity Index (VI)	Scale	ASTM D2270	110	129	---	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TR06100116 **Received** : 26 Feb 2024  
**Lab Number** : 06100116 **Tested** : 27 Feb 2024  
**Unique Number** : 10898346 **Diagnosed** : 27 Feb 2024 - Doug Bogart  
**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: