



TRAAP

Texas Refinery Advanced Analysis Program

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CATERPILLAR 972M L09 A8P00259
 Component
Diesel Engine
 Fluid
TRC MOLY XL PRO-SPEC IV XP 15W40 (7 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TR05948275	TR05889799	---
Sample Date		Client Info		01 Sep 2023	04 Jul 2023	---
Machine Age	hrs	Client Info		7992	7533	---
Oil Age	hrs	Client Info		628	169	---
Filter Age	hrs	Client Info		628	169	---
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	>100	20	13	---
Chromium	ppm	ASTM D5185m	>20	<1	<1	---
Nickel	ppm	ASTM D5185m	>2	0	0	---
Titanium	ppm	ASTM D5185m	>2	<1	0	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>25	0	2	---
Lead	ppm	ASTM D5185m	>40	5	2	---
Copper	ppm	ASTM D5185m	>330	<1	<1	---
Tin	ppm	ASTM D5185m	>15	<1	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

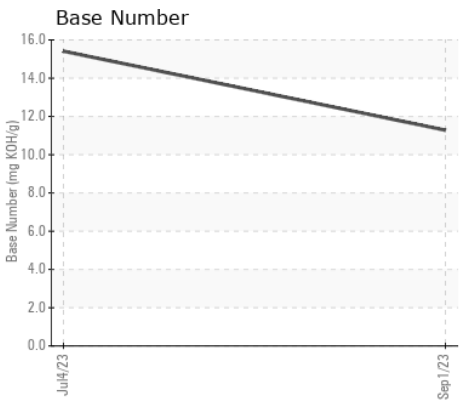
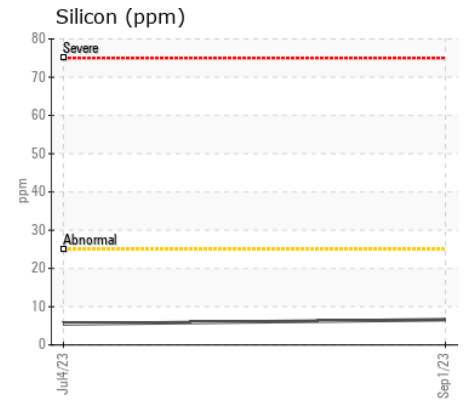
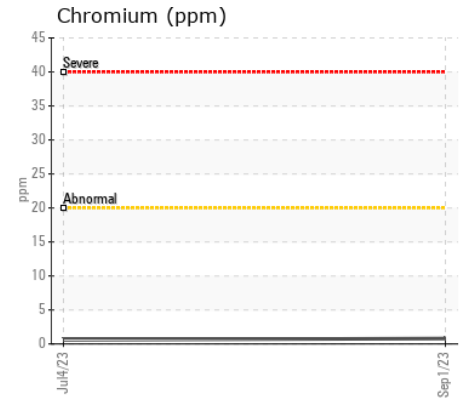
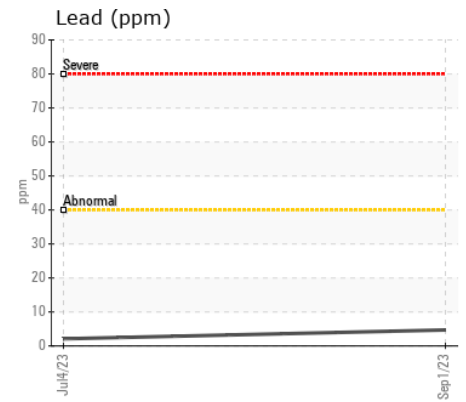
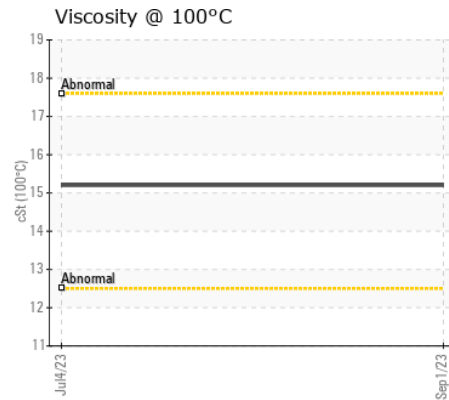
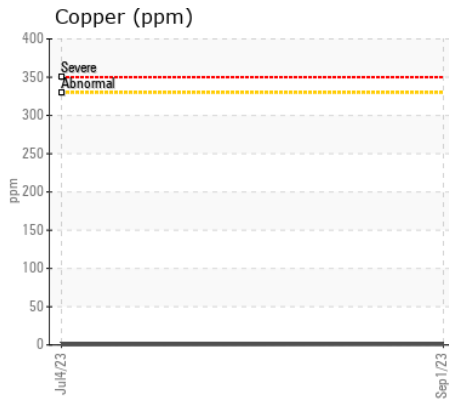
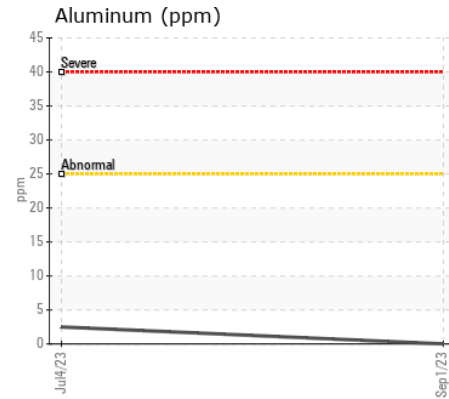
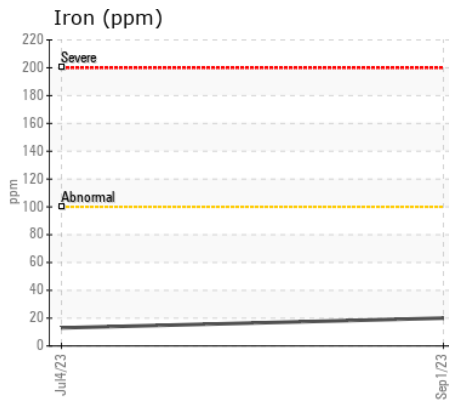
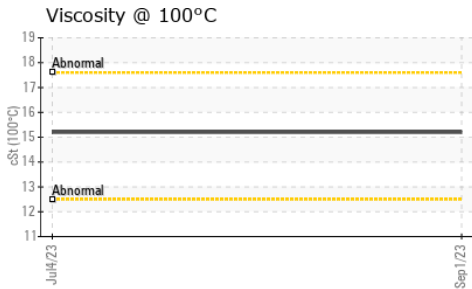
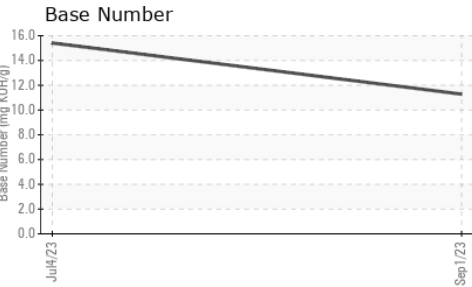
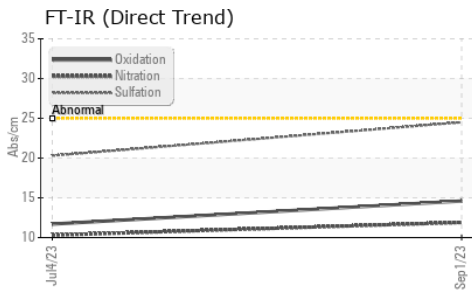
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	6	---
Potassium	ppm	ASTM D5185m	>20	3	1	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	1.3	0.7	---
Nitration	Abs/cm	*ASTM D7624	>20	11.9	10.3	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.5	20.3	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
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	>0.2	NEG	NEG	---

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		4	3	---
Boron	ppm	ASTM D5185m		0	3	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		127	137	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m		26	25	---
Calcium	ppm	ASTM D5185m		4657	4665	---
Phosphorus	ppm	ASTM D5185m		1012	995	---
Zinc	ppm	ASTM D5185m		1215	1168	---
Sulfur	ppm	ASTM D5185m		5735	5750	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.6	11.7	---
Base Number (BN)	mg KOH/g	ASTM D2896		11.28	15.41	---
Visc @ 100°C	cSt	ASTM D445		15.2	15.2	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR05948275 **Received** : 12 Sep 2023
Lab Number : 05948275 **Tested** : 13 Sep 2023
Unique Number : 10644234 **Diagnosed** : 13 Sep 2023 - Wes Davis
Test Package : MOB 2

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: