



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 5609
Component
Diesel Engine
Fluid
GIBRALTAR 15W/40 SUPER S-3 LX (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0840507	WC0840502	---
Sample Date		Client Info		18 Dec 2023	30 Oct 2023	---
Machine Age	hrs	Client Info		7226	6967	---
Oil Age	hrs	Client Info		296	250	---
Filter Age	hrs	Client Info		0	250	---
Oil Changed		Client Info		Changed	N/A	---
Filter Changed		Client Info		Changed	N/A	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	15	50	---
Chromium	ppm	ASTM D5185m	>20	2	3	---
Nickel	ppm	ASTM D5185m	>2	1	3	---
Titanium	ppm	ASTM D5185m	>2	<1	0	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>25	4	11	---
Lead	ppm	ASTM D5185m	>40	2	2	---
Copper	ppm	ASTM D5185m	>330	9	72	---
Tin	ppm	ASTM D5185m	>15	1	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

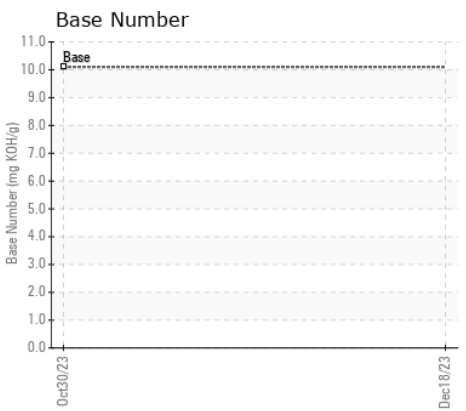
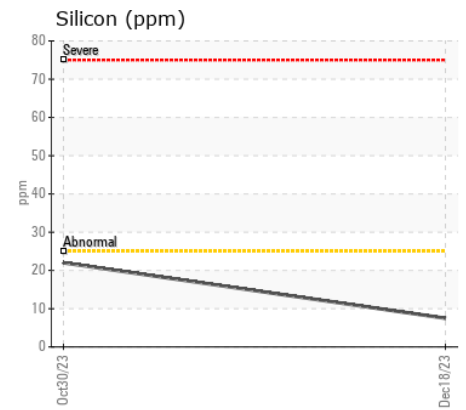
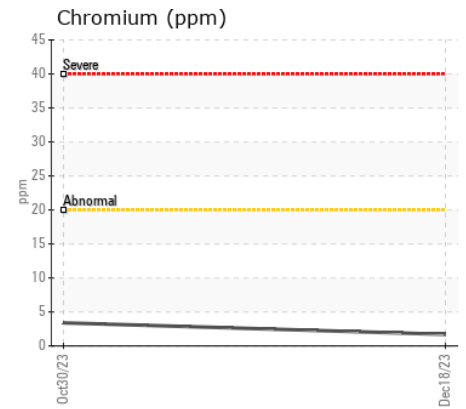
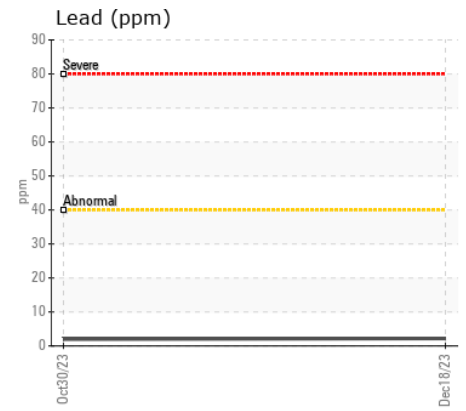
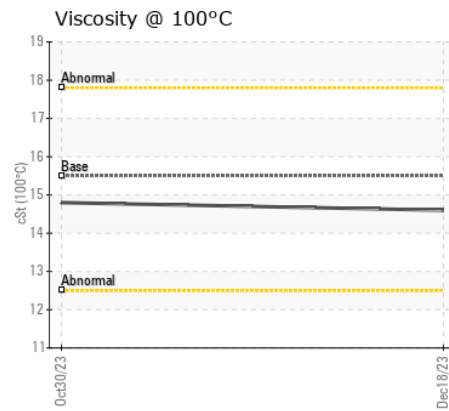
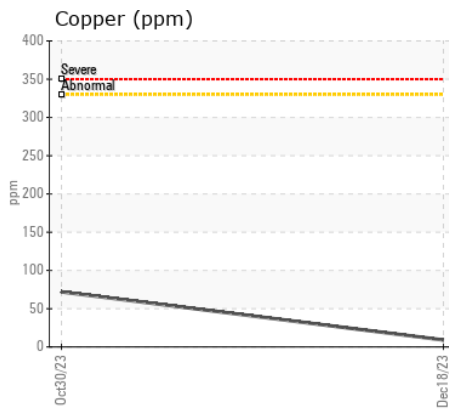
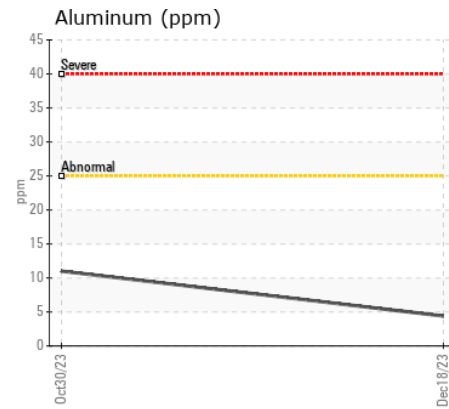
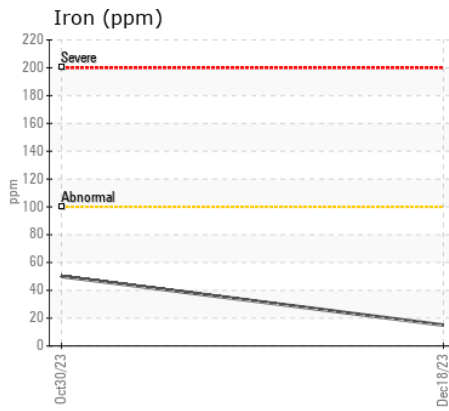
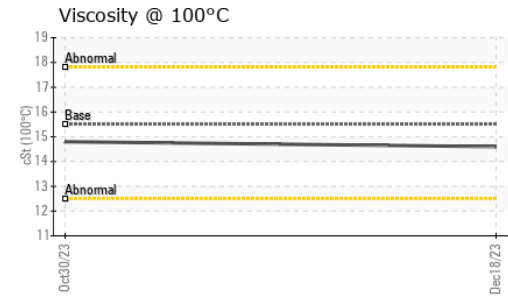
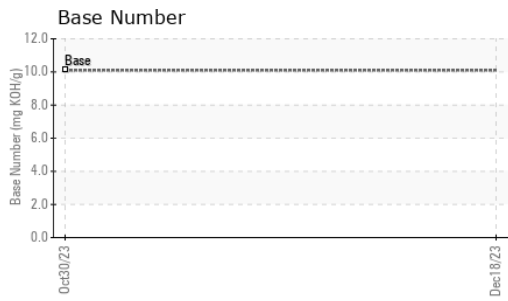
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	8	22	---
Potassium	ppm	ASTM D5185m	>20	4	31	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.6	---	---
Nitration	Abs/cm	*ASTM D7624	>20	8.4	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.8	---	---
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		13	79	---
Boron	ppm	ASTM D5185m		9	4	---
Barium	ppm	ASTM D5185m		0	2	---
Molybdenum	ppm	ASTM D5185m	66	71	86	---
Manganese	ppm	ASTM D5185m		<1	0	---
Magnesium	ppm	ASTM D5185m	1000	759	782	---
Calcium	ppm	ASTM D5185m	1050	1225	1335	---
Phosphorus	ppm	ASTM D5185m	1150	1021	884	---
Zinc	ppm	ASTM D5185m	1270	1173	1167	---
Sulfur	ppm	ASTM D5185m		3035	2690	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.9	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	8.0	---	---
Visc @ 100°C	cSt	ASTM D445	15.5	14.6	14.8	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0840507 **Received** : 01 Feb 2024
Lab Number : 06077377 **Diagnosed** : 02 Feb 2024
Unique Number : 10859468 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

INTERSTATE WASTE-NEW BRUNSWICK
 986 JERSEY AVE
 NEW BRUNSWICK, NJ
 US 08901
 Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - 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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F: