



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id  
**210 (S/N 1XKWD49X6JJ185984)**

Component  
**Diesel Engine**

Fluid  
**DIESEL ENGINE OIL SAE 40 (--- GAL)**

## RECOMMENDATION

The oil is near the end of it's useful service life, recommend schedule an oil change. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0851036</b>	WC0850998	WC0834221
Sample Date		Client Info		<b>31 Jan 2024</b>	20 Nov 2023	02 Aug 2023
Machine Age	mls	Client Info		<b>0</b>	0	0
Oil Age	mls	Client Info		<b>0</b>	0	0
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	NORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>53</b>	61	▲ 100
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	4	7
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>12</b>	10	▲ 18
Lead	ppm	ASTM D5185m	>40	<b>3</b>	3	6
Copper	ppm	ASTM D5185m	>330	<b>2</b>	3	6
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	2
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

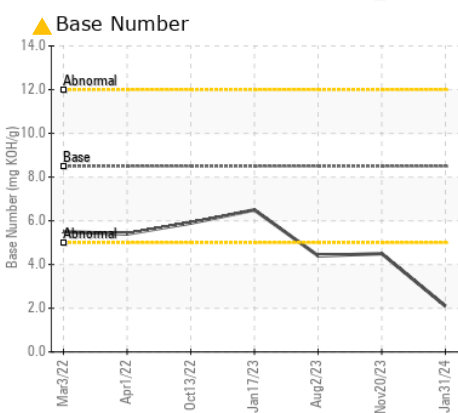
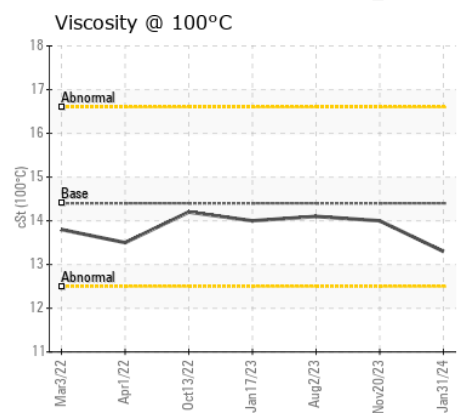
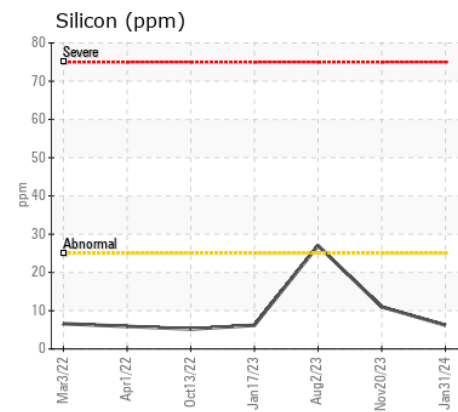
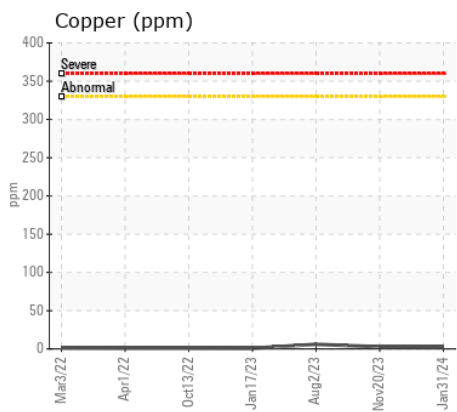
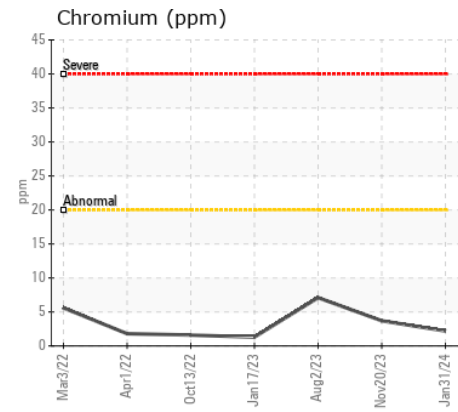
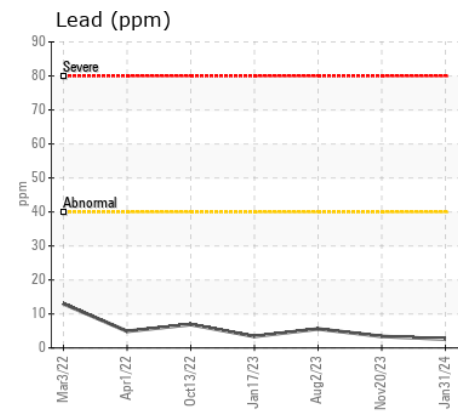
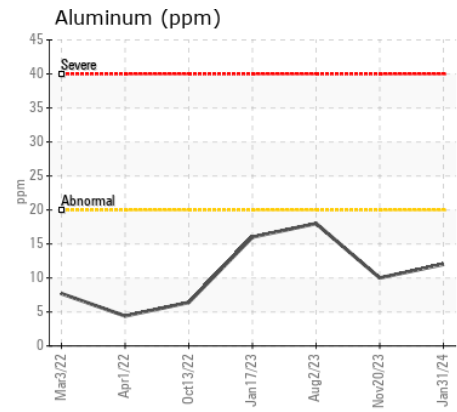
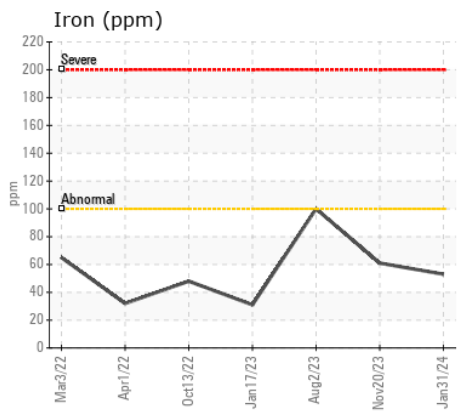
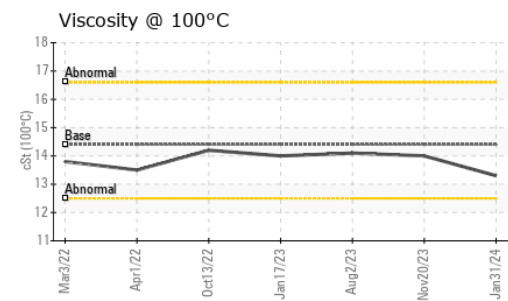
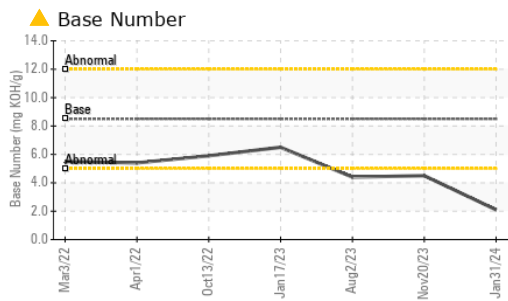
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	11	▲ 27
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	8	26
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1.3</b>	2	2.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.9</b>	13.3	14.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.8</b>	29.6	31.3
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The BN level is low.

Sodium	ppm	ASTM D5185m	>216	<b>&lt;1</b>	3	7
Boron	ppm	ASTM D5185m	250	<b>13</b>	2	1
Barium	ppm	ASTM D5185m	10	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>94</b>	62	69
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	1	4
Magnesium	ppm	ASTM D5185m	450	<b>621</b>	955	1080
Calcium	ppm	ASTM D5185m	3000	<b>1828</b>	1236	1217
Phosphorus	ppm	ASTM D5185m	1150	<b>1136</b>	997	1091
Zinc	ppm	ASTM D5185m	1350	<b>1473</b>	1291	1433
Sulfur	ppm	ASTM D5185m	4250	<b>3511</b>	2644	2934
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>21.3</b>	26.9	29.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	▲ <b>2.1</b>	4.5	4.4
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.3</b>	14.0	14.1



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0851036 **Received** : 01 Feb 2024  
**Lab Number** : 06077574 **Diagnosed** : 04 Feb 2024  
**Unique Number** : 10859665 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 1 ( Additional Tests: TBN )

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Certificate L2367  
 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)