



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id  
**1307**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

## RECOMMENDATION

We advise that you check the fuel injection system. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0870836</b>	WC0870755	WC0792907
Sample Date		Client Info		<b>19 Jan 2024</b>	08 Nov 2023	30 Mar 2023
Machine Age	mls	Client Info		<b>264218</b>	0	244137
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>Not Changd</b>	Not Changd	N/A
Filter Changed		Client Info		<b>Not Changd</b>	Changed	N/A
Sample Status				<b>ABNORMAL</b>	NORMAL	ABNORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>11</b>	8	76
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	5
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>5</b>	3	▲ 31
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	2
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	0
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

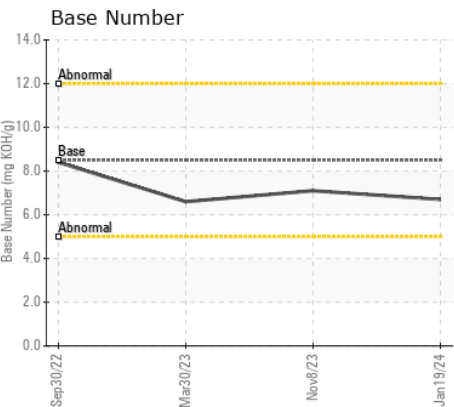
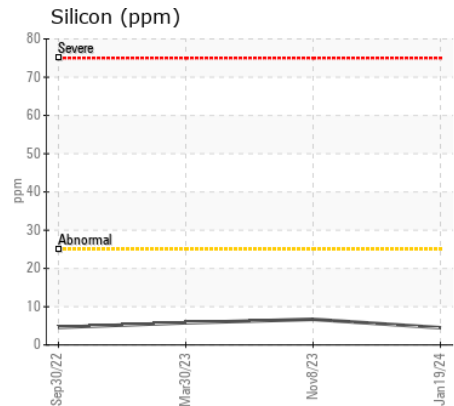
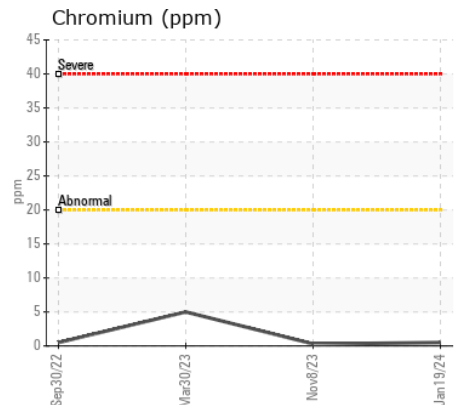
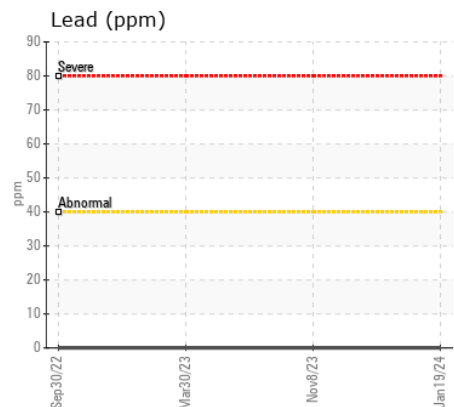
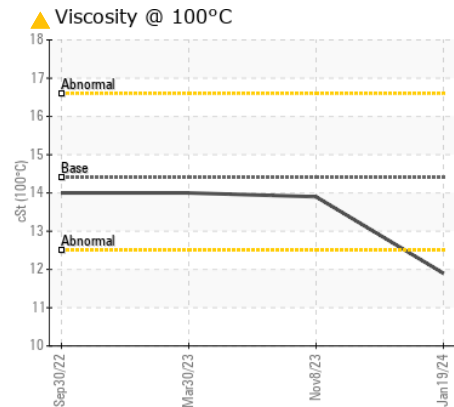
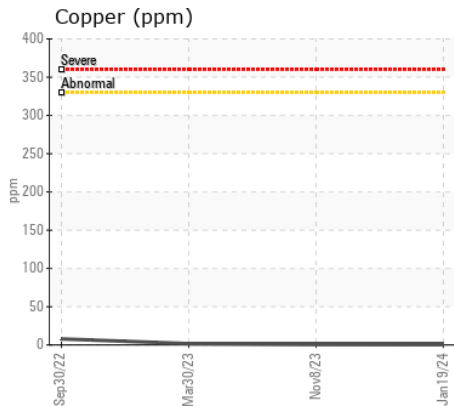
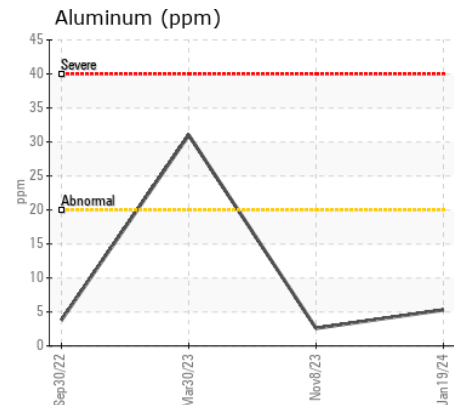
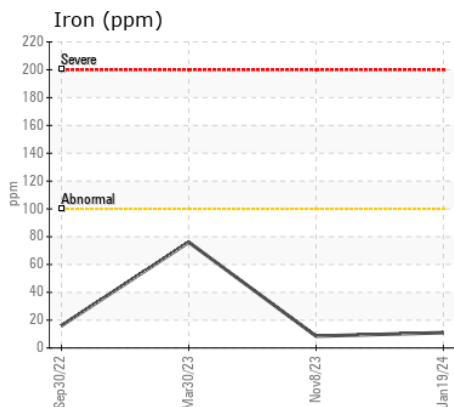
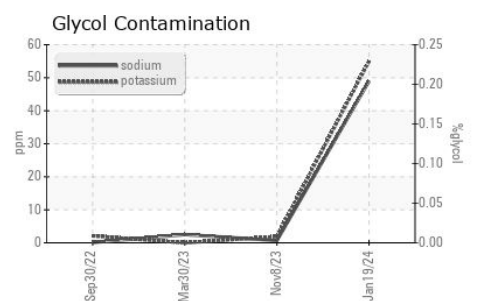
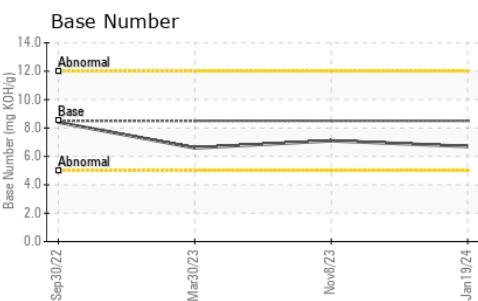
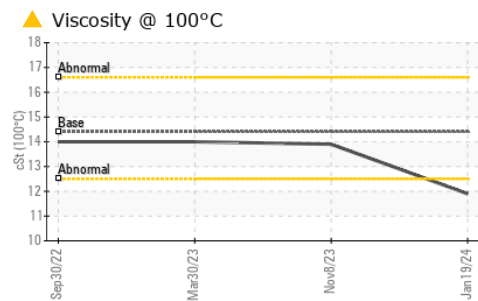
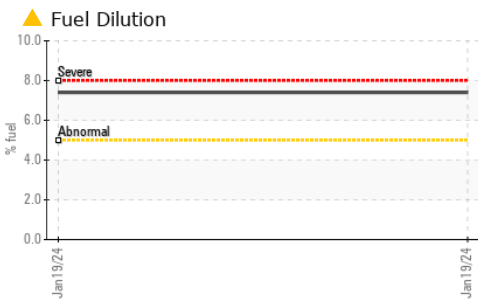
Sodium and/or potassium levels are high. There is a moderate amount of fuel present in the oil. Test for glycol is negative.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	7	6
Potassium	ppm	ASTM D5185m	>20	▲ <b>55</b>	2	0
Fuel	%	ASTM D3524	>5	▲ <b>7.4</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol	%	*ASTM D2982		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.7</b>	0.3	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.2</b>	8.4	10.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.1</b>	18.2	19.0
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

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>158	<b>49</b>	<1	2
Boron	ppm	ASTM D5185m	250	<b>23</b>	43	54
Barium	ppm	ASTM D5185m	10	<b>0</b>	5	0
Molybdenum	ppm	ASTM D5185m	100	<b>75</b>	83	92
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	1
Magnesium	ppm	ASTM D5185m	450	<b>104</b>	144	36
Calcium	ppm	ASTM D5185m	3000	<b>1738</b>	2064	2289
Phosphorus	ppm	ASTM D5185m	1150	<b>877</b>	1004	1062
Zinc	ppm	ASTM D5185m	1350	<b>1061</b>	1185	1328
Sulfur	ppm	ASTM D5185m	4250	<b>3107</b>	4102	4416
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.8</b>	13.8	15.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.7</b>	7.1	6.6
Visc @ 100°C	cSt	ASTM D445	14.4	▲ <b>11.9</b>	13.9	14.0



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0870836  
**Lab Number** : 06100825  
**Unique Number** : 10899055  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, Glycol, PercentFuel, TBN )  
*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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