



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**THOMAS 1419**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0905839</b>	WC0870756	WC0729813
Sample Date		Client Info		<b>07 Mar 2024</b>	16 Nov 2023	25 Aug 2022
Machine Age	mls	Client Info		<b>234198</b>	229311	204216
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	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Sample Status				<b>NORMAL</b>	MARGINAL	SEVERE

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>29</b>	8	19
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>5</b>	4	5
Lead	ppm	ASTM D5185m	>40	<b>1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>1</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

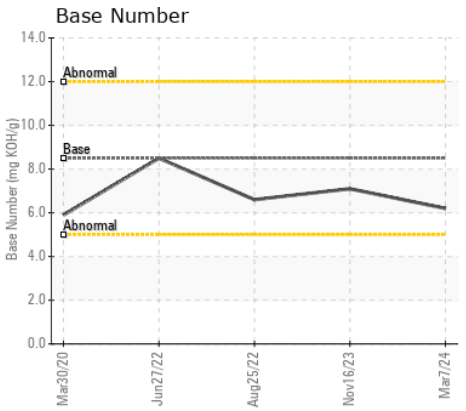
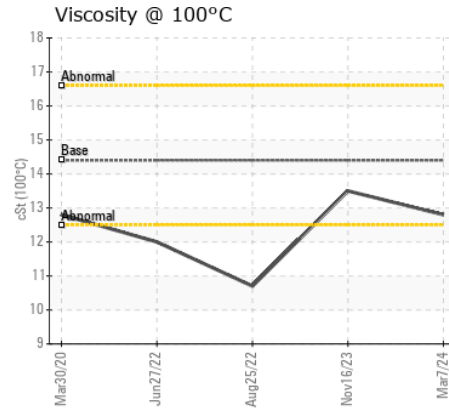
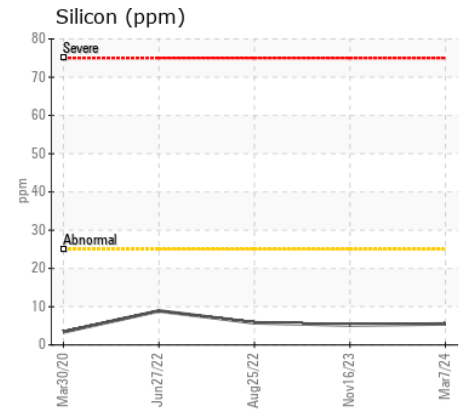
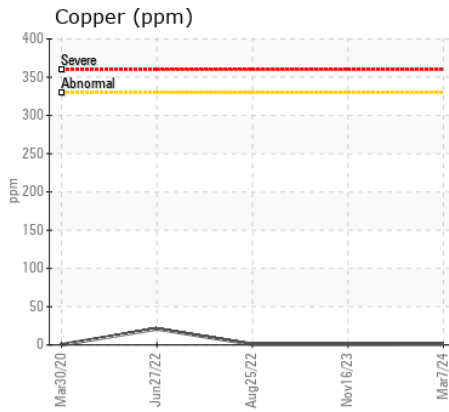
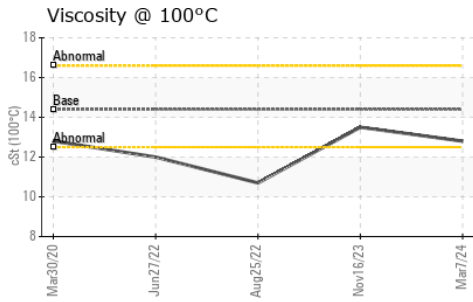
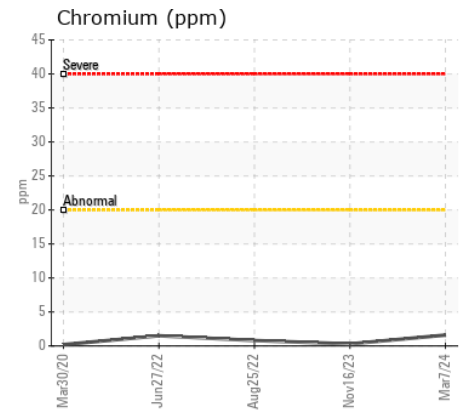
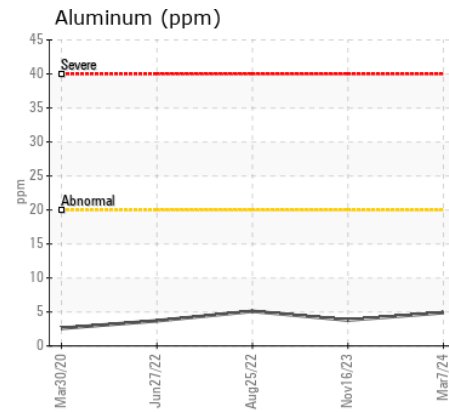
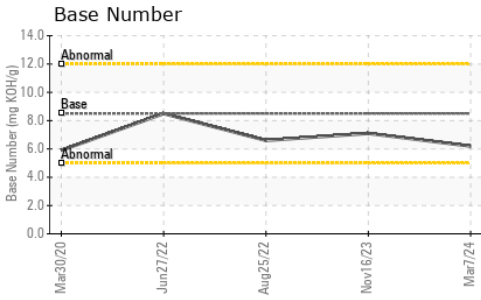
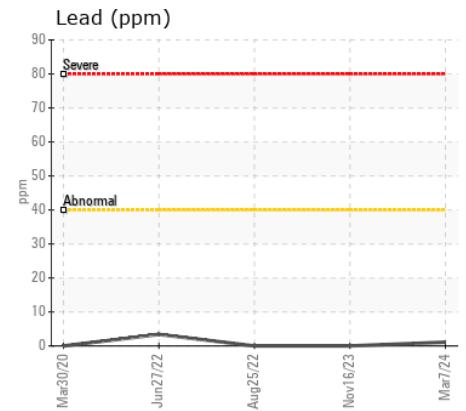
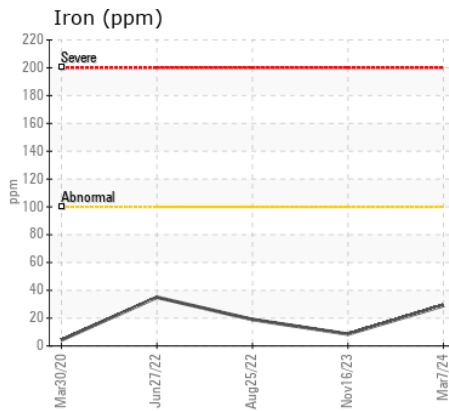
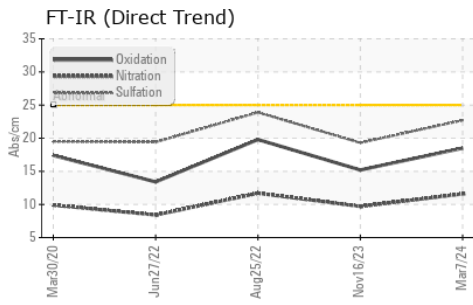
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	▲ 2.2	▲ 10.4
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1</b>	0.6	1.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.6</b>	9.7	11.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.7</b>	19.3	23.9
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 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	>158	<b>2</b>	2	2
Boron	ppm	ASTM D5185m	250	<b>16</b>	23	14
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m	100	<b>82</b>	80	47
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	450	<b>162</b>	174	75
Calcium	ppm	ASTM D5185m	3000	<b>2279</b>	1990	1710
Phosphorus	ppm	ASTM D5185m	1150	<b>1057</b>	1023	750
Zinc	ppm	ASTM D5185m	1350	<b>1265</b>	1221	919
Sulfur	ppm	ASTM D5185m	4250	<b>4126</b>	3551	2847
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.5</b>	15.2	19.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.2</b>	7.1	6.6
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.8</b>	13.5	▲ 10.7



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0905839 **Received** : 30 May 2024  
**Lab Number** : 06195114 **Tested** : 31 May 2024  
**Unique Number** : 11057237 **Diagnosed** : 31 May 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**WAKE COUNTY PUBLIC SCHOOL SYSTEM**  
 1551 ROCK QUARRY ROAD  
 RALEIGH, NC  
 US 27610

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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