



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**THOMAS 1788**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

## RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0932857</b>	WC0821235	WC0772886
Sample Date		Client Info		<b>09 May 2024</b>	05 Jun 2023	24 Jan 2023
Machine Age	mls	Client Info		<b>54393</b>	34100	24244
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>	ABNORMAL	NORMAL

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	<b>9</b>	13	30
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>20	<b>8</b>	9	28
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	2
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	5
Tin	ppm	ASTM D5185m	>15	<b>1</b>	0	1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

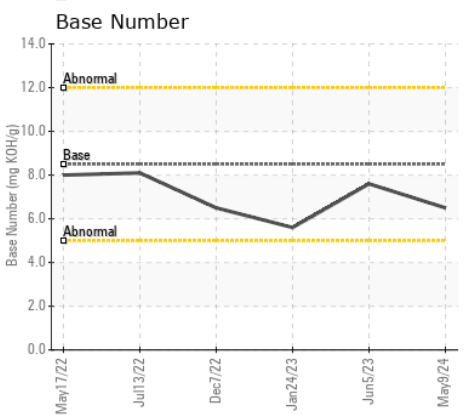
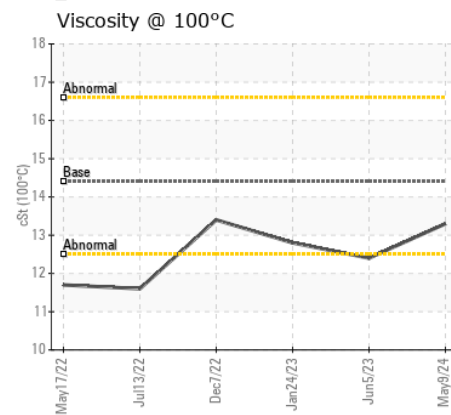
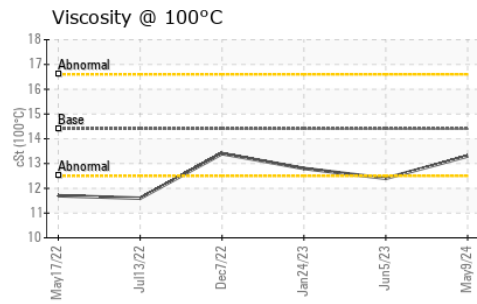
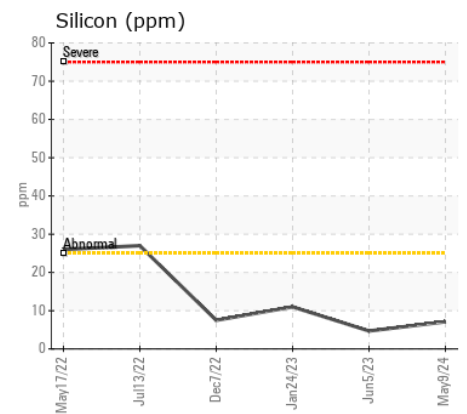
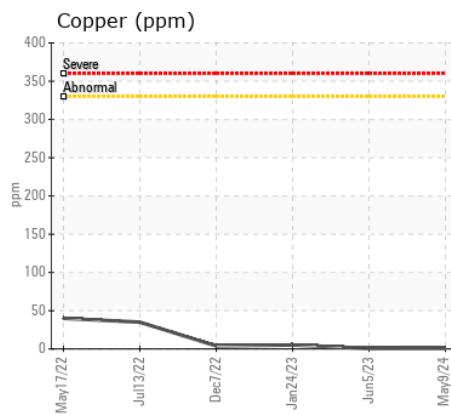
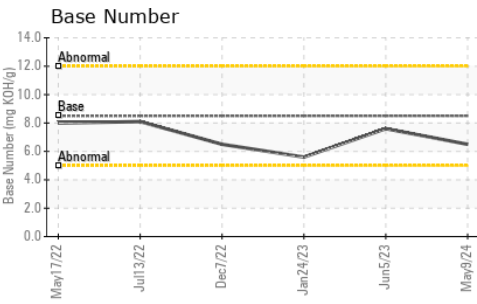
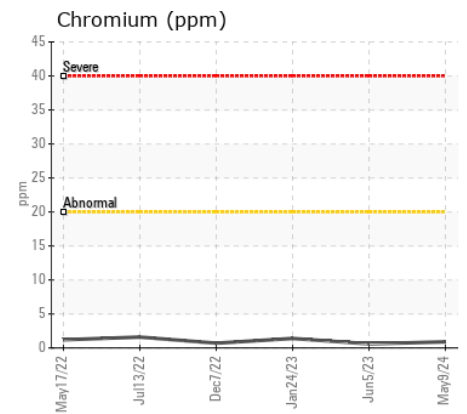
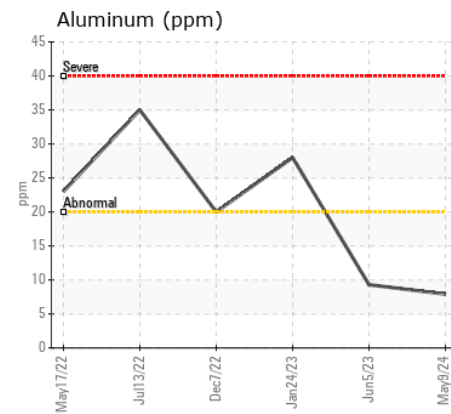
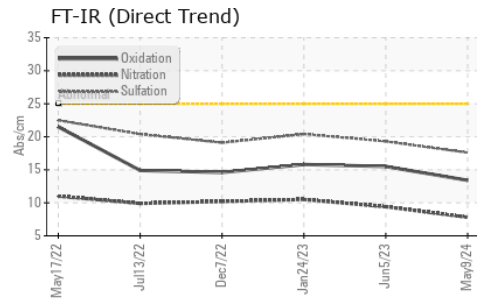
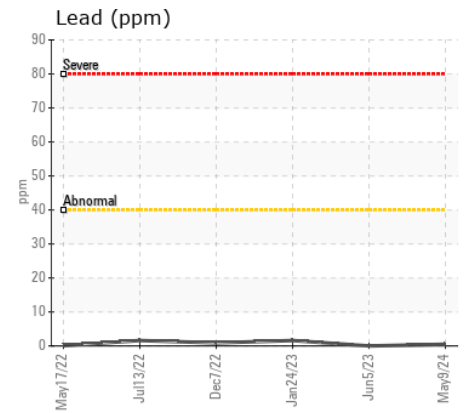
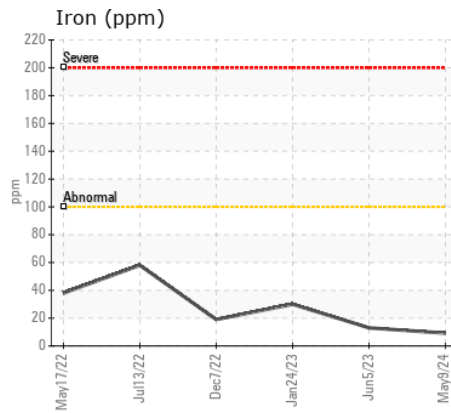
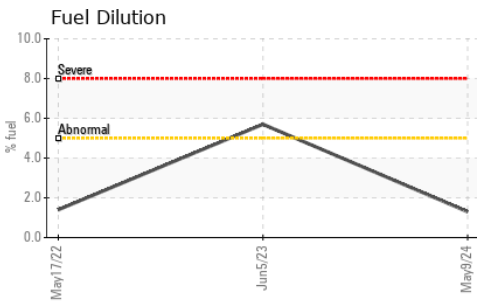
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>7</b>	5	11
Potassium	ppm	ASTM D5185m	>20	<b>9</b>	13	54
Fuel	%	ASTM D3524	>5	<b>1.3</b>	▲ 5.7	<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>0.2</b>	0.3	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.8</b>	9.4	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.6</b>	19.3	20.4
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>	1	4
Boron	ppm	ASTM D5185m	250	<b>122</b>	35	31
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>92</b>	81	79
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m	450	<b>93</b>	137	88
Calcium	ppm	ASTM D5185m	3000	<b>2041</b>	2176	2041
Phosphorus	ppm	ASTM D5185m	1150	<b>1034</b>	1061	907
Zinc	ppm	ASTM D5185m	1350	<b>1184</b>	1295	1117
Sulfur	ppm	ASTM D5185m	4250	<b>3828</b>	4541	3862
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.4</b>	15.5	15.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.5</b>	7.6	5.6
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.3</b>	▲ 12.4	12.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0932857 **Received** : 23 May 2024  
**Lab Number** : 06189069 **Tested** : 28 May 2024  
**Unique Number** : 11045821 **Diagnosed** : 28 May 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: PercentFuel, TBN )

**WAKE COUNTY PUBLIC SCHOOL SYSTEM**  
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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)