



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
THOMAS 1689
 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		WC0906098	WC0870769	WC0792945
Sample Date		Client Info		19 Mar 2024	29 Jan 2024	02 Mar 2023
Machine Age	mls	Client Info		0	0	84075
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	12	12	23
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	10	6	9
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	1	<1	<1
Tin	ppm	ASTM D5185m	>15	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

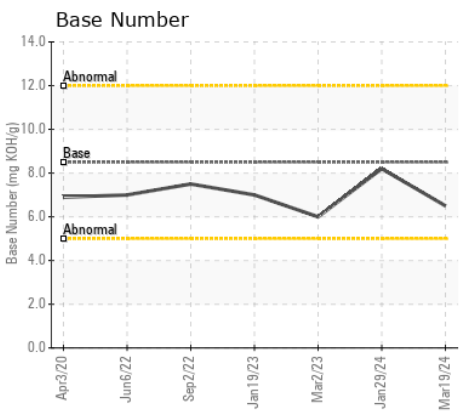
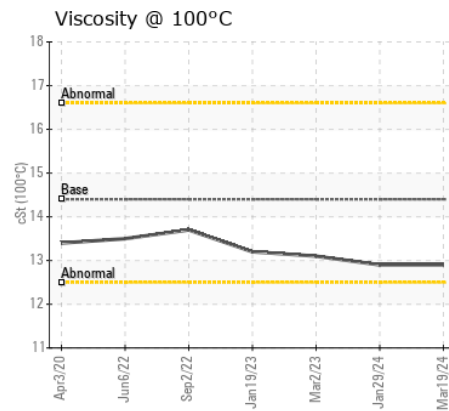
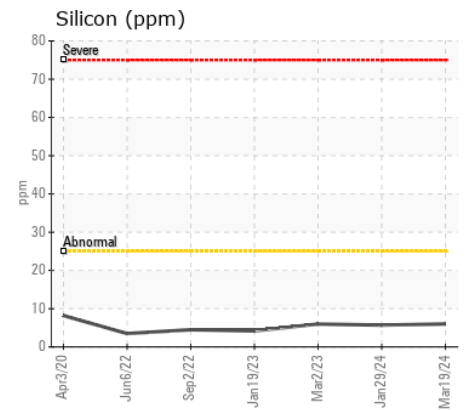
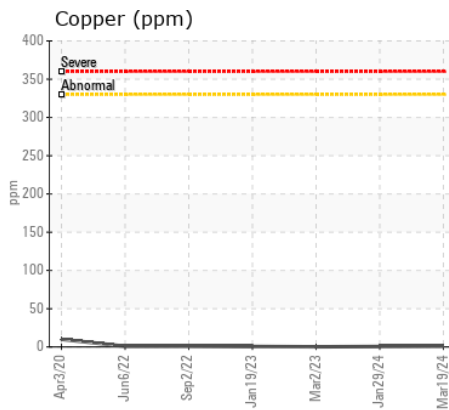
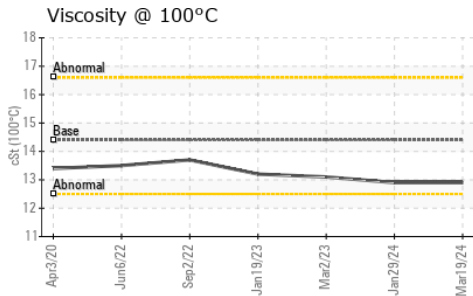
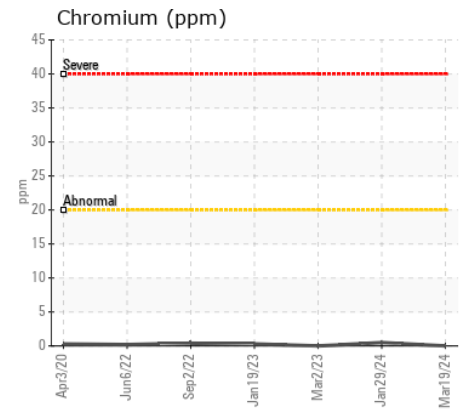
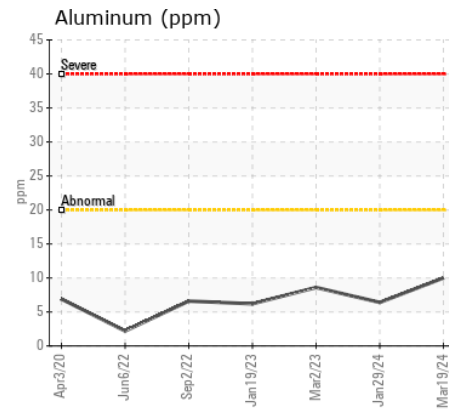
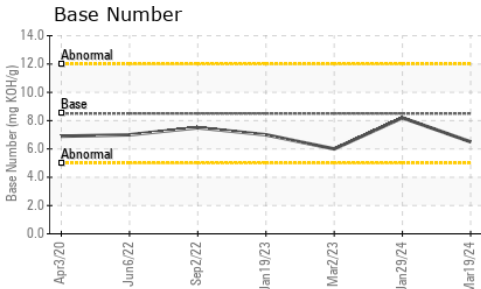
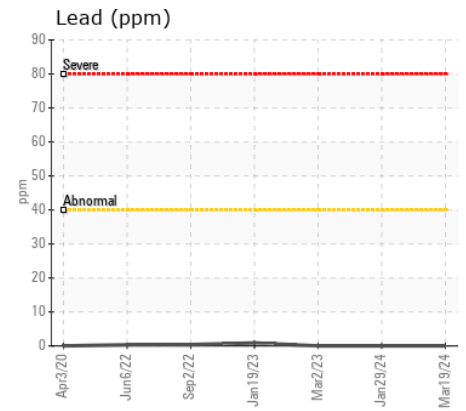
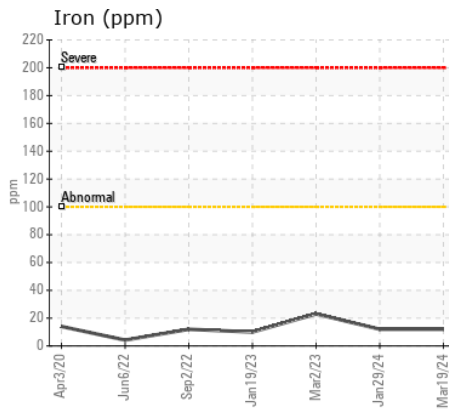
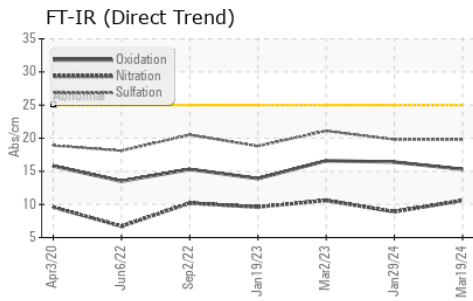
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	6	6
Potassium	ppm	ASTM D5185m	>20	6	4	8
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.5	0.7
Nitration	Abs/cm	*ASTM D7624	>20	10.6	8.9	10.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.8	19.8	21.1
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	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	2	2	3
Boron	ppm	ASTM D5185m	250	35	46	32
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	82	75	78
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	450	116	259	57
Calcium	ppm	ASTM D5185m	3000	2097	1944	2237
Phosphorus	ppm	ASTM D5185m	1150	1049	958	991
Zinc	ppm	ASTM D5185m	1350	1213	1157	1268
Sulfur	ppm	ASTM D5185m	4250	4114	3495	4186
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.3	16.4	16.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.5	8.2	6.0
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	12.9	13.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0906098
Lab Number : 06220883
Unique Number : 11099080
Test Package : MOB 1 (Additional Tests: TBN)

Received : 26 Jun 2024
Tested : 27 Jun 2024
Diagnosed : 27 Jun 2024 - Wes Davis

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

Contact: DEVIN WEBER
 dweber@wcpss.net
 T: (919)856-8076
 F: x:

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)