



# OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id  
**1271**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

## RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0905777	---	---
Sample Date		Client Info		01 Apr 2024	---	---
Machine Age	mls	Client Info		249425	---	---
Oil Age	mls	Client Info		0	---	---
Filter Age	mls	Client Info		0	---	---
Oil Changed		Client Info		Not Changd	---	---
Filter Changed		Client Info		Not Changd	---	---
Sample Status				SEVERE	---	---

## WEAR

Piston and cylinder wear is indicated.

Iron	ppm	ASTM D5185m	>100	▲ 225	---	---
Chromium	ppm	ASTM D5185m	>20	6	---	---
Nickel	ppm	ASTM D5185m	>4	3	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	<1	---	---
Aluminum	ppm	ASTM D5185m	>20	▲ 20	---	---
Lead	ppm	ASTM D5185m	>40	6	---	---
Copper	ppm	ASTM D5185m	>330	4	---	---
Tin	ppm	ASTM D5185m	>15	2	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

## CONTAMINATION

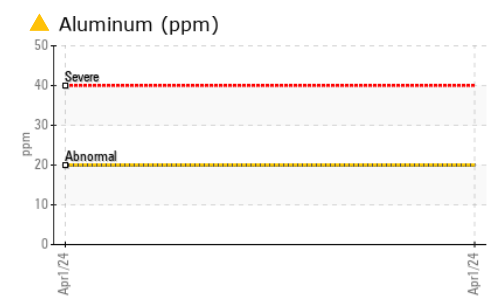
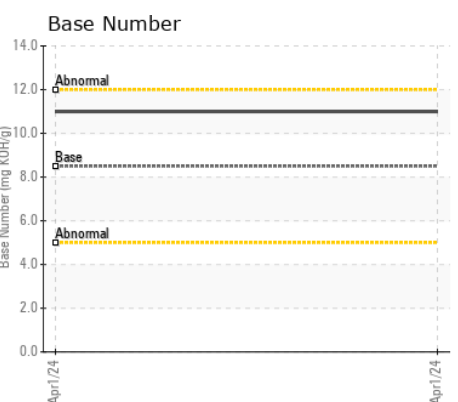
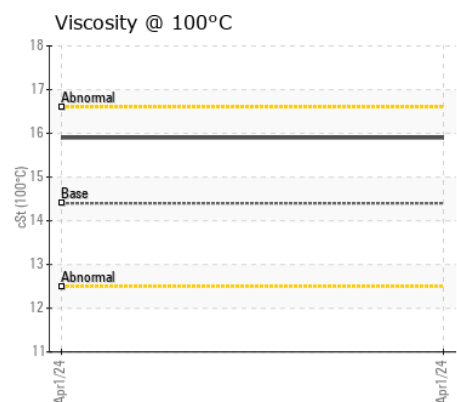
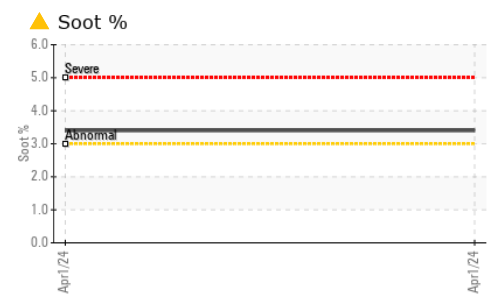
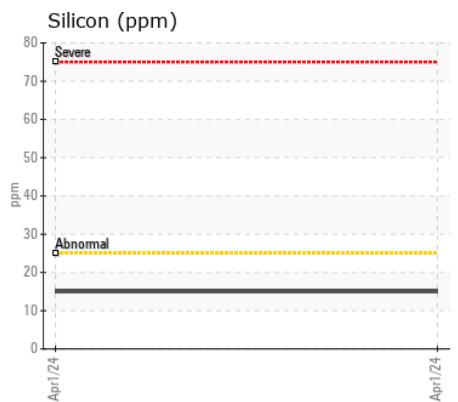
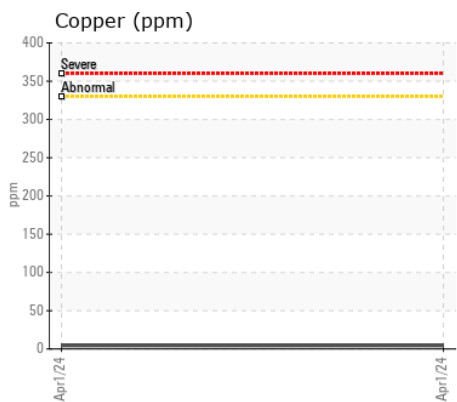
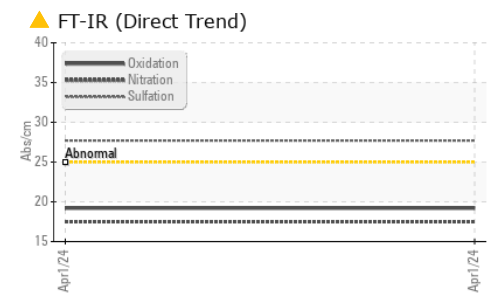
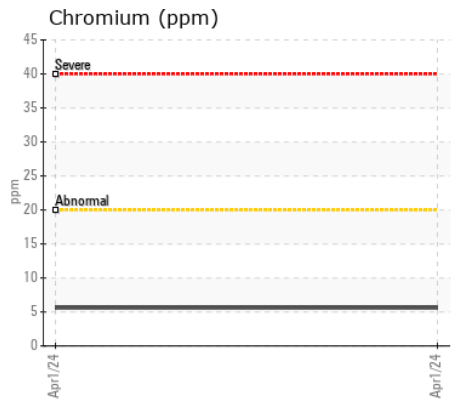
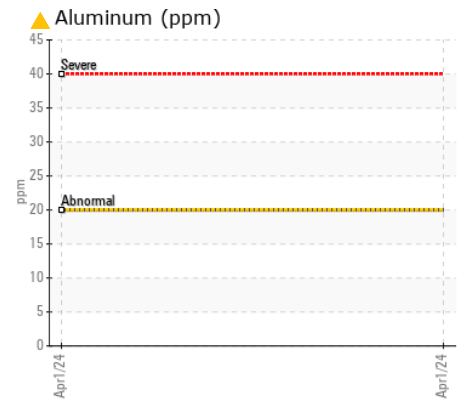
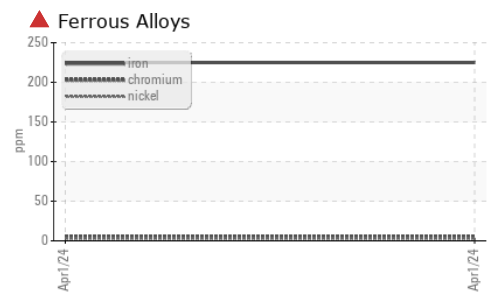
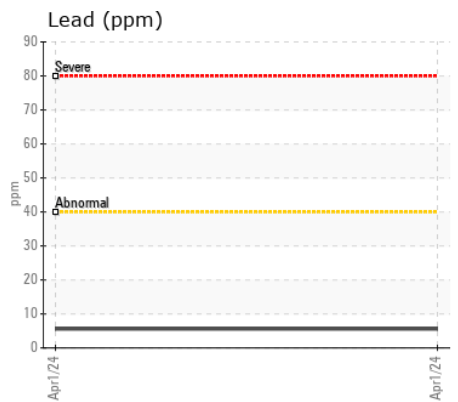
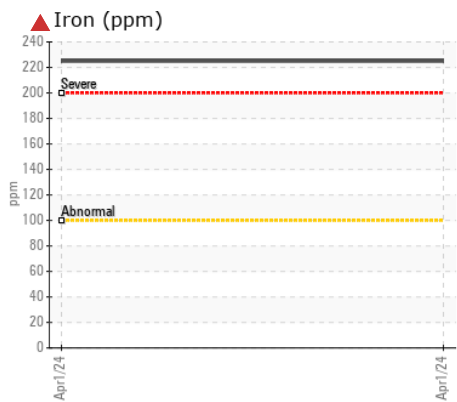
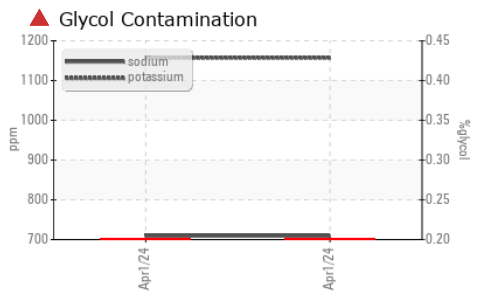
Sodium and/or potassium levels are high. Test for glycol is positive. There is an abnormal amount of solids and carbon present in the oil.

Silicon	ppm	ASTM D5185m	>25	15	---	---
Potassium	ppm	ASTM D5185m	>20	▲ 1157	---	---
Fuel	%	ASTM D3524	>5	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol	%	*ASTM D2982		▲ 0.20	---	---
Soot %	%	*ASTM D7844	>3	▲ 3.4	---	---
Nitration	Abs/cm	*ASTM D7624	>20	17.5	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.7	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

## FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m	>158	▲ 709	---	---
Boron	ppm	ASTM D5185m	250	10	---	---
Barium	ppm	ASTM D5185m	10	<1	---	---
Molybdenum	ppm	ASTM D5185m	100	224	---	---
Manganese	ppm	ASTM D5185m		2	---	---
Magnesium	ppm	ASTM D5185m	450	221	---	---
Calcium	ppm	ASTM D5185m	3000	2179	---	---
Phosphorus	ppm	ASTM D5185m	1150	1102	---	---
Zinc	ppm	ASTM D5185m	1350	1253	---	---
Sulfur	ppm	ASTM D5185m	4250	4245	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.2	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	11.0	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	15.9	---	---



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0905777 **Received** : 30 May 2024  
**Lab Number** : 06195119 **Tested** : 31 May 2024  
**Unique Number** : 11057242 **Diagnosed** : 31 May 2024 - Jonathan Hester  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, Glycol, TBN )

**WAKE COUNTY PUBLIC SCHOOL SYSTEM**  
 1551 ROCK QUARRY ROAD  
 RALEIGH, NC  
 US 27610  
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 dweber@wcpss.net  
 T: (919)856-8076  
 F: x:

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)