



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
1493
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		WC0870681	WC0806618	WC0761141
Sample Date		Client Info		29 Nov 2023	04 May 2023	22 Nov 2022
Machine Age	mls	Client Info		249734	243987	0
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				ABNORMAL	NORMAL	NORMAL

WEAR

The aluminum level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	91	16	39
Chromium	ppm	ASTM D5185m	>20	8	<1	1
Nickel	ppm	ASTM D5185m	>4	1	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	▲ 26	6	16
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	4	<1	2
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	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.

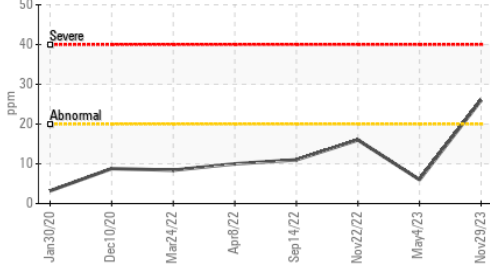
Silicon	ppm	ASTM D5185m	>25	22	5	5
Potassium	ppm	ASTM D5185m	>20	13	3	7
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	1.2	0.8	1.4
Nitration	Abs/cm	*ASTM D7624	>20	12.3	9.7	11.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.6	20.2	23.2
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

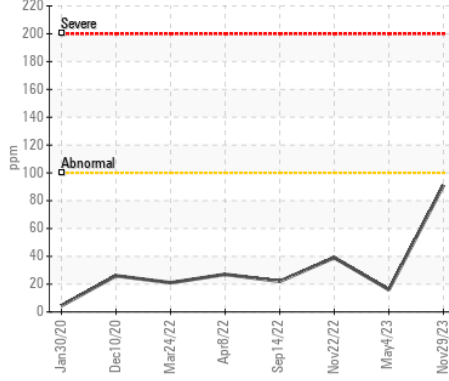
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>158	3	2	2
Boron	ppm	ASTM D5185m	250	17	33	12
Barium	ppm	ASTM D5185m	10	4	2	0
Molybdenum	ppm	ASTM D5185m	100	77	85	55
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	122	130	93
Calcium	ppm	ASTM D5185m	3000	1908	2150	2080
Phosphorus	ppm	ASTM D5185m	1150	910	1059	910
Zinc	ppm	ASTM D5185m	1350	1107	1249	1099
Sulfur	ppm	ASTM D5185m	4250	3454	3898	3945
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.5	15.8	17.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.6	7.4	6.5
Visc @ 100°C	cSt	ASTM D445	14.4	13.2	13.0	12.9

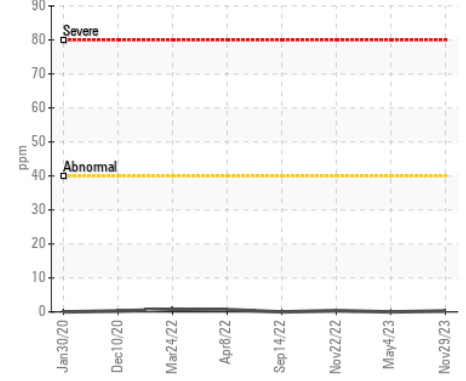
▲ Aluminum (ppm)



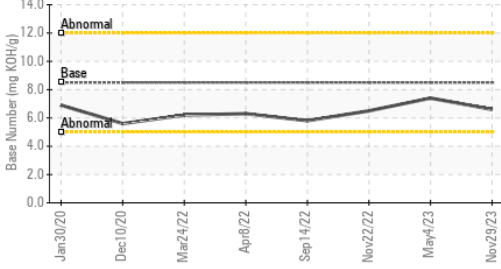
Iron (ppm)



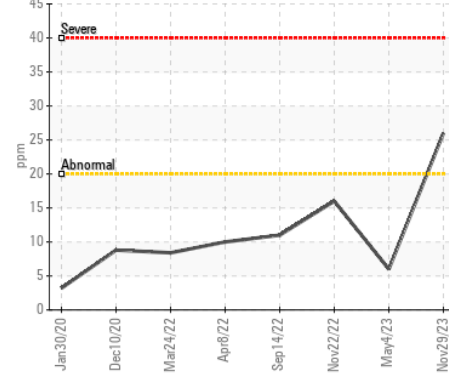
Lead (ppm)



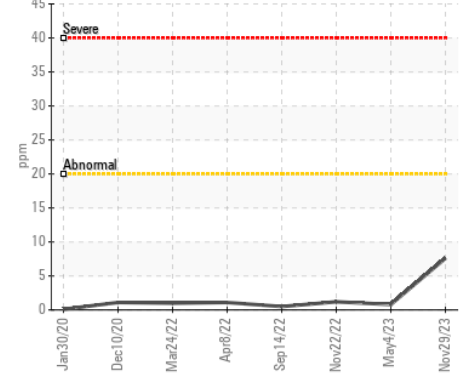
Base Number



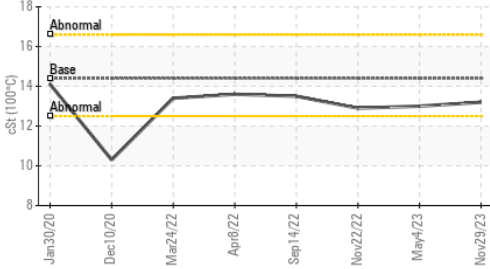
▲ Aluminum (ppm)



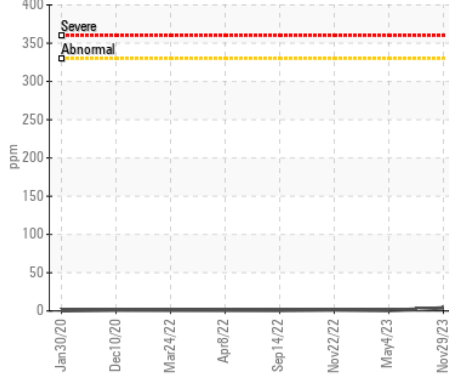
Chromium (ppm)



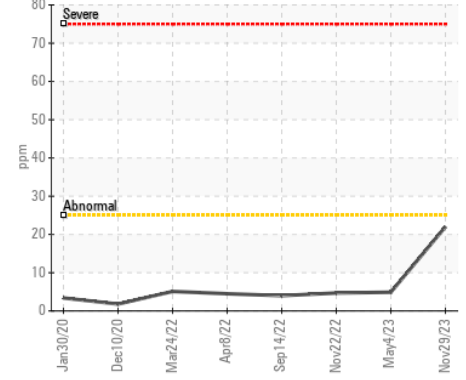
Viscosity @ 100°C



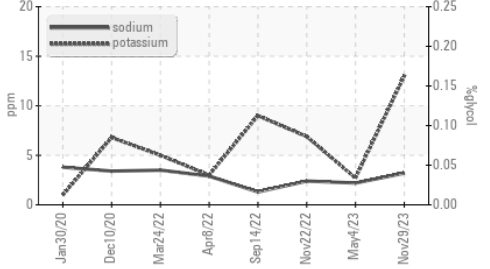
Copper (ppm)



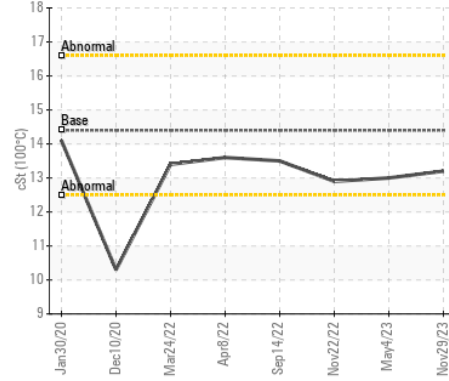
Silicon (ppm)



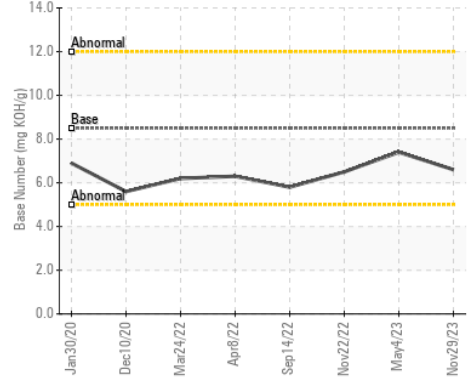
Glycol Contamination



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0870681 **Received** : 12 Jan 2024
Lab Number : 06059796 **Diagnosed** : 16 Jan 2024
Unique Number : 10831178 **Diagnostician** : Don Baldrige
Test Package : MOB 1 (Additional Tests: Glycol, TBN)

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)