



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
8531
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0870729	WC0761279	WC0697228
Sample Date		Client Info		20 Nov 2023	16 Dec 2022	23 May 2022
Machine Age	mls	Client Info		19088	9809	5085
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	ATTENTION	ATTENTION

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	34	75	43
Chromium	ppm	ASTM D5185m	>20	1	2	1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	21	32	13
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	12	101	98
Tin	ppm	ASTM D5185m	>15	<1	2	1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

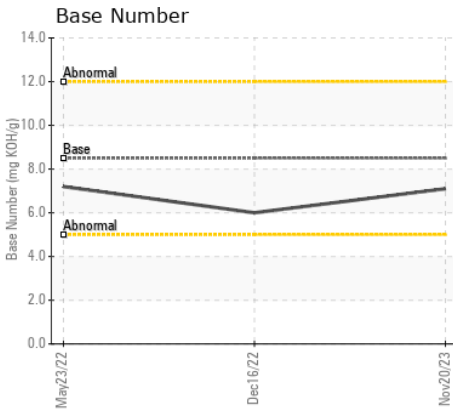
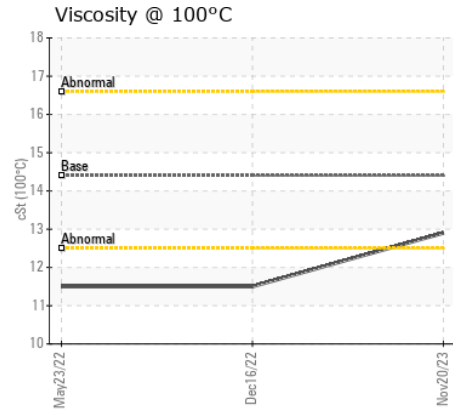
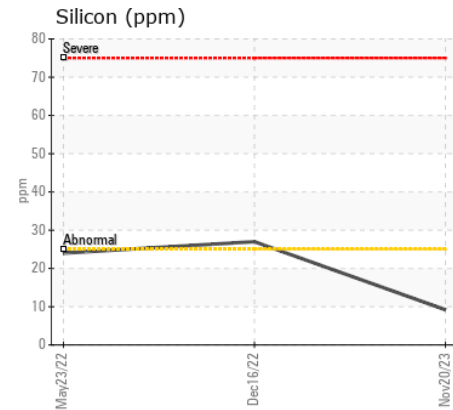
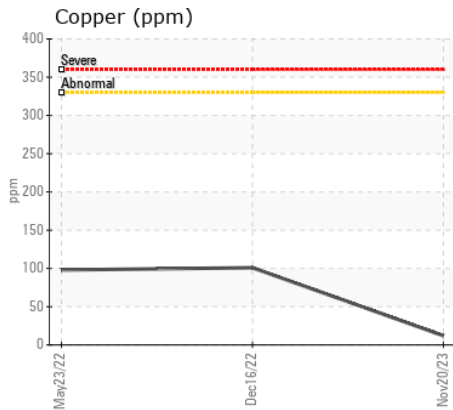
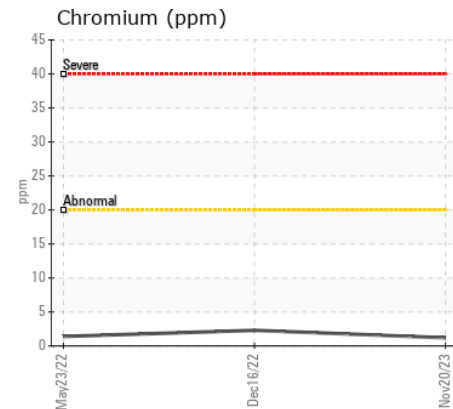
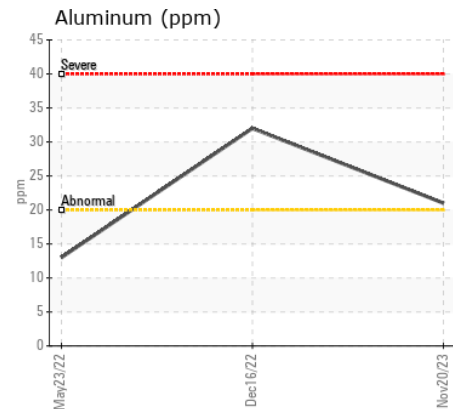
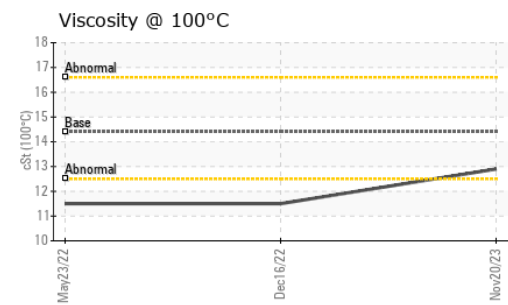
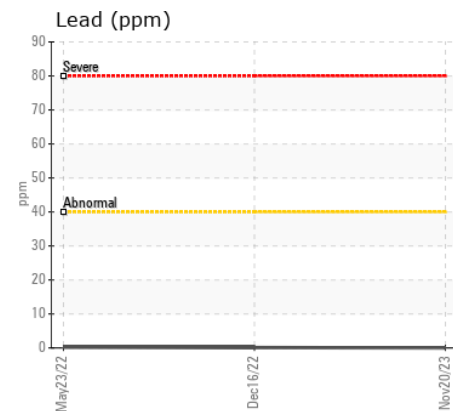
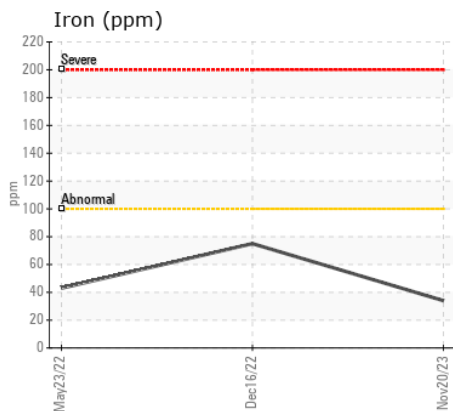
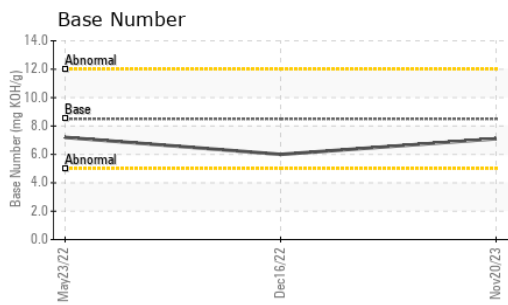
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	9	27	24
Potassium	ppm	ASTM D5185m	>20	62	111	41
Fuel		WC Method	>5	<1.0	<1.0	1.6
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.5	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.2	12.8	10.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.8	23.0	20.8
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	7	7
Boron	ppm	ASTM D5185m	250	37	20	45
Barium	ppm	ASTM D5185m	10	0	9	0
Molybdenum	ppm	ASTM D5185m	100	78	45	51
Manganese	ppm	ASTM D5185m		<1	4	4
Magnesium	ppm	ASTM D5185m	450	184	675	783
Calcium	ppm	ASTM D5185m	3000	1997	1095	1274
Phosphorus	ppm	ASTM D5185m	1150	992	554	737
Zinc	ppm	ASTM D5185m	1350	1182	788	961
Sulfur	ppm	ASTM D5185m	4250	3463	1824	2455
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.8	21.9	19.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.1	6.0	7.2
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	▲ 11.5	▲ 11.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0870729 **Received** : 16 Jan 2024
Lab Number : 06061776 **Diagnosed** : 18 Jan 2024
Unique Number : 10833158 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: 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)