



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

**Current**  
Machine Id  
**IC 18-19**

Component  
**Front Diesel Engine**

Fluid  
**DIESEL ENGINE OIL SAE 10W30 (17 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0849398</b>	WC0693098	WC0693072
Sample Date		Client Info		<b>14 Dec 2023</b>	01 May 2023	18 Nov 2022
Machine Age	mls	Client Info		<b>72864</b>	66944	60835
Oil Age	mls	Client Info		<b>5920</b>	6109	6389
Filter Age	mls	Client Info		<b>5920</b>	6109	6389
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	<b>24</b>	27	16
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>15</b>	17	11
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>2</b>	1	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

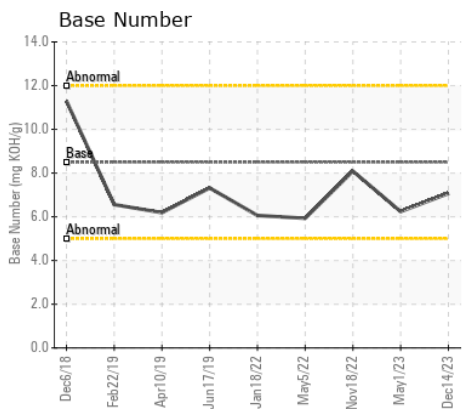
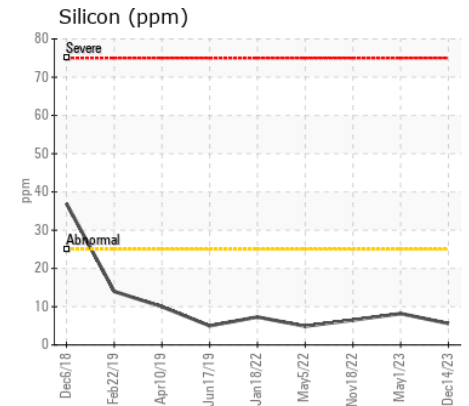
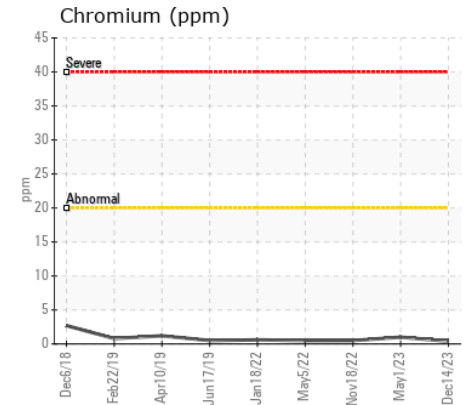
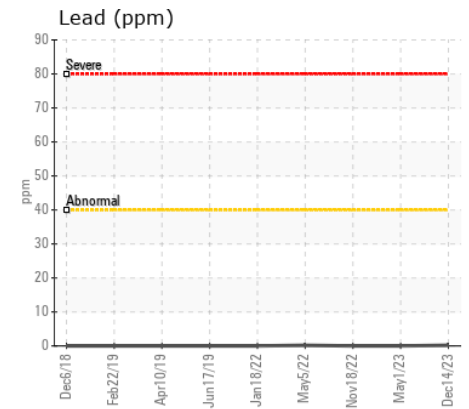
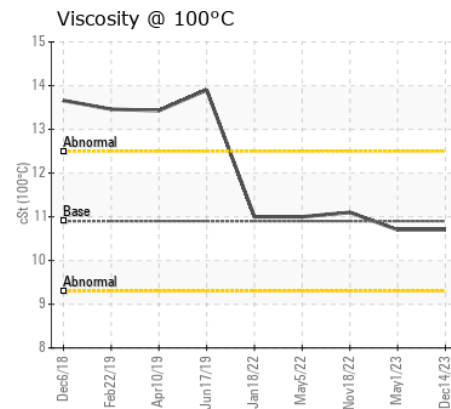
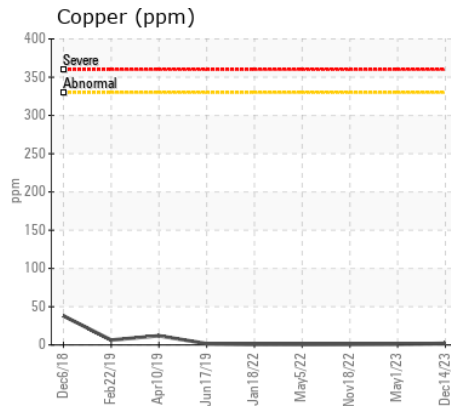
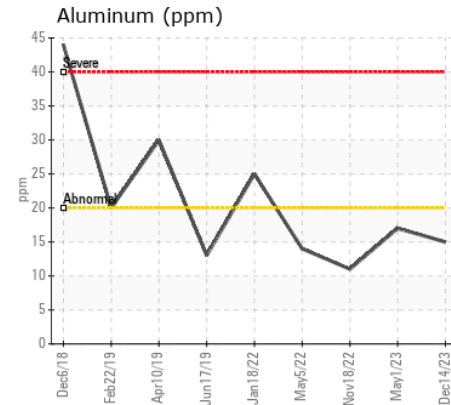
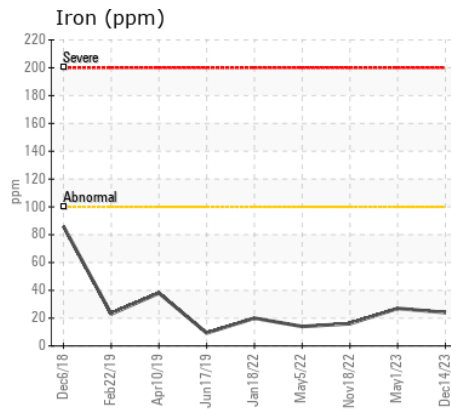
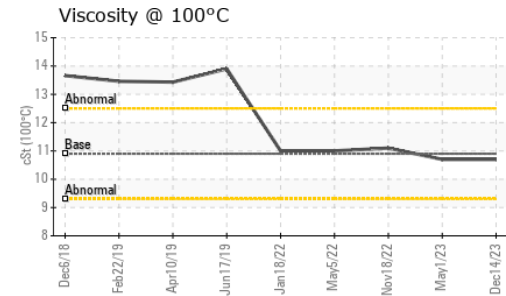
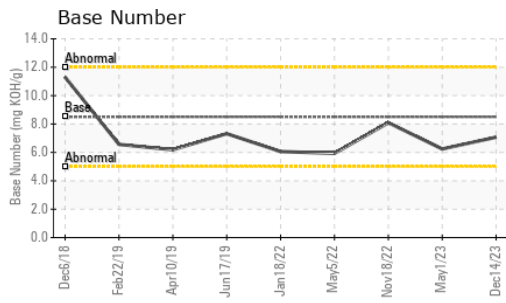
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	8	6
Potassium	ppm	ASTM D5185m	>20	<b>24</b>	16	16
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<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>0.5</b>	0.6	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.9</b>	8.9	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.2</b>	20.3	20.9
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		<b>0</b>	<1	2
Boron	ppm	ASTM D5185m	250	<b>3</b>	3	2
Barium	ppm	ASTM D5185m	10	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>2</b>	7	2
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>25</b>	31	19
Calcium	ppm	ASTM D5185m	3000	<b>2192</b>	2367	2554
Phosphorus	ppm	ASTM D5185m	1150	<b>899</b>	891	957
Zinc	ppm	ASTM D5185m	1350	<b>1060</b>	1082	1073
Sulfur	ppm	ASTM D5185m	4250	<b>3581</b>	4154	4292
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.4</b>	12.7	12.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.07</b>	6.24	8.09
Visc @ 100°C	cSt	ASTM D445	10.9	<b>10.7</b>	10.7	11.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0849398 **Received** : 18 Jan 2024  
**Lab Number** : 06065123 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10836505 **Diagnostician** : Wes Davis  
**Test Package** : MOB 2

**INDIANOLA COMMUNITY SCHOOL DISTRICT**  
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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)