



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id  
**31260**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL 10W40 (--- QTS)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0950531</b>	WC0905140	WC0846353
Sample Date		Client Info		<b>05 Jul 2024</b>	04 Mar 2024	29 Nov 2023
Machine Age	hrs	Client Info		<b>1565</b>	1309	1057
Oil Age	hrs	Client Info		<b>1500</b>	1250	1250
Filter Age	hrs	Client Info		<b>1500</b>	1250	1250
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	MARGINAL	NORMAL

## WEAR

All component wear rates are normal.

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

## CONTAMINATION

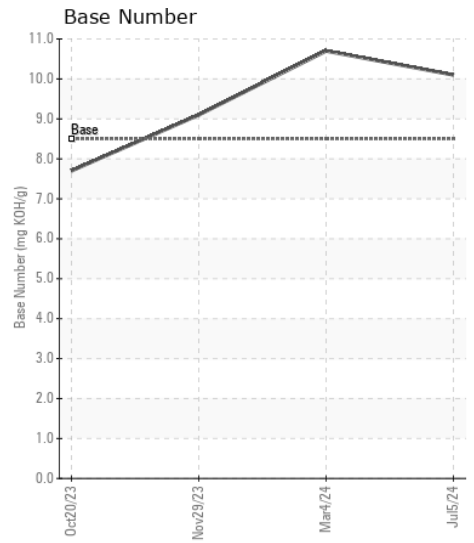
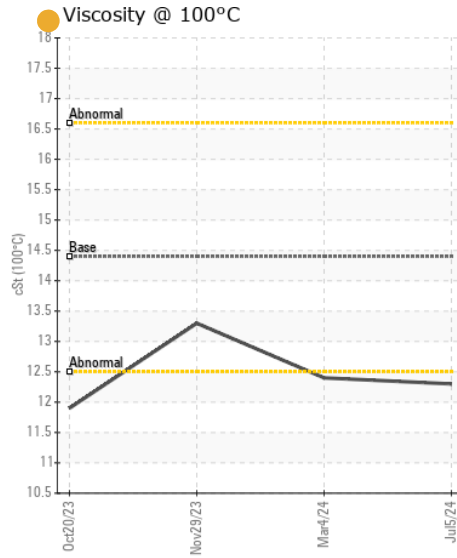
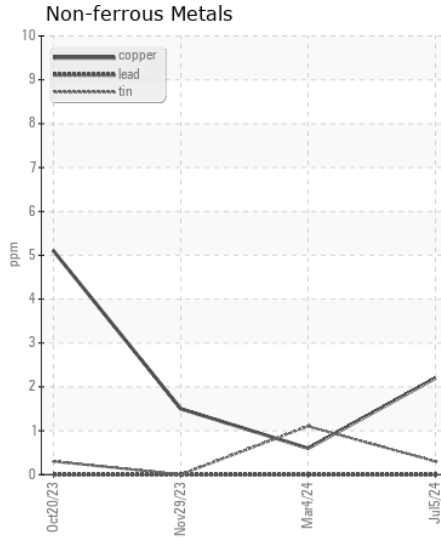
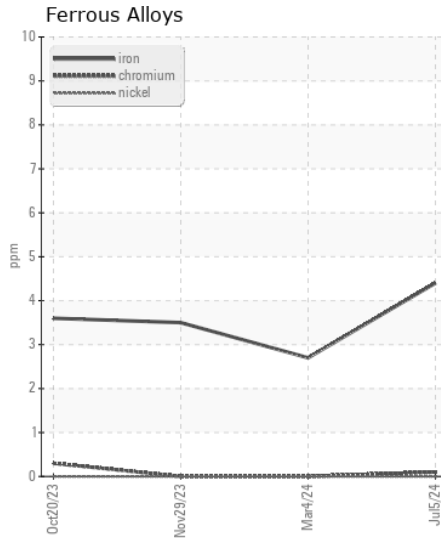
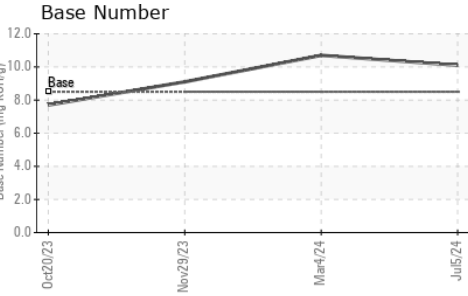
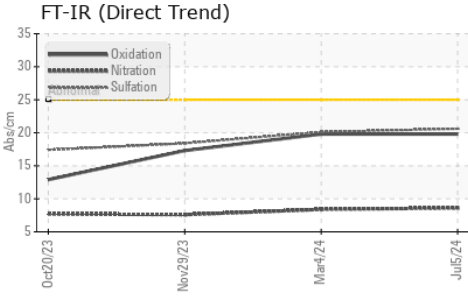
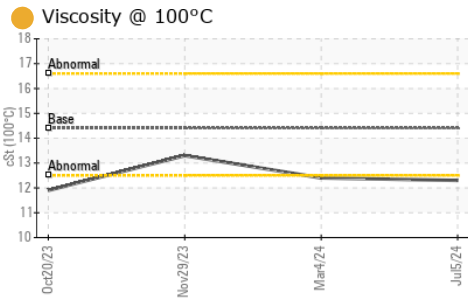
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	6	7
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	0	3
Fuel		WC Method	>5	<b>&lt;1.0</b>	0.9	<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>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.6</b>	8.4	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.6</b>	20.1	18.4
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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		<b>0</b>	<1	2
Boron	ppm	ASTM D5185m	250	<b>138</b>	133	162
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>33</b>	27	<1
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m	450	<b>851</b>	901	723
Calcium	ppm	ASTM D5185m	3000	<b>1357</b>	1477	1255
Phosphorus	ppm	ASTM D5185m	1150	<b>820</b>	792	767
Zinc	ppm	ASTM D5185m	1350	<b>935</b>	910	867
Sulfur	ppm	ASTM D5185m	4250	<b>2874</b>	3161	3699
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.8</b>	19.8	17.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>10.1</b>	10.7	9.1
Visc @ 100°C	cSt	ASTM D445	14.4	<b>12.3</b>	12.4	13.3



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0950531 **Received** : 11 Jul 2024  
**Lab Number** : 06233030 **Tested** : 11 Jul 2024  
**Unique Number** : 11116523 **Diagnosed** : 12 Jul 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: TBN )

**SULLIVAN EASTERN INC**  
 2860 C SLATER RD  
 MORRISVILLE, NC  
 US 27560

Contact: SCOTT SULLIVAN  
 ssullivan@sullivaneastern.com

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)

T: (919)484-8993  
 F: (919)484-2136