



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**CATERPILLAR CP563 ROLLER 54225 (S/N 00688)**  
Component  
**Diesel Engine**  
Fluid  
**MOBIL 15W40 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0857127</b>	WC0905197	WC0846485
Sample Date		Client Info		<b>09 Jul 2024</b>	29 Apr 2024	30 Sep 2023
Machine Age	hrs	Client Info		<b>10691</b>	10475	10240
Oil Age	hrs	Client Info		<b>500</b>	250	240
Filter Age	hrs	Client Info		<b>500</b>	250	240
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

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>10</b>	2	<1
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>3</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>1</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>4</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	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.

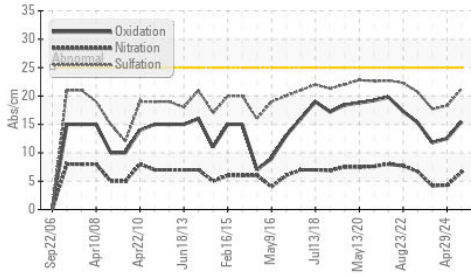
Silicon	ppm	ASTM D5185m	>25	<b>8</b>	7	4
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	<1	<1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.6</b>	4.3	4.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.3</b>	18.3	17.7
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

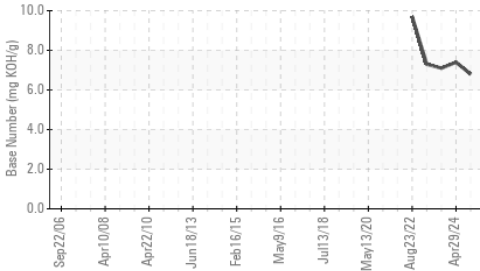
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>118	<b>&lt;1</b>	<1	0
Boron	ppm	ASTM D5185m		<b>385</b>	474	476
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>87</b>	84	89
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m		<b>367</b>	411	413
Calcium	ppm	ASTM D5185m		<b>1355</b>	1443	1415
Phosphorus	ppm	ASTM D5185m		<b>1003</b>	1040	1109
Zinc	ppm	ASTM D5185m		<b>1178</b>	1230	1321
Sulfur	ppm	ASTM D5185m		<b>2859</b>	3965	3508
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.5</b>	12.5	11.8
Base Number (BN)	mg KOH/g	ASTM D2896		<b>6.8</b>	7.4	7.1
Visc @ 100°C	cSt	ASTM D445		<b>12.8</b>	13.8	13.5

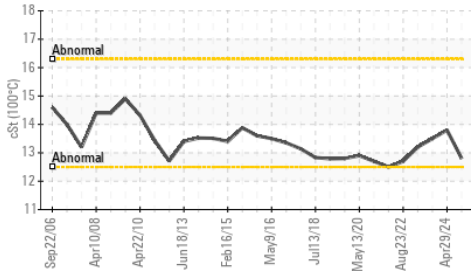
**FT-IR (Direct Trend)**



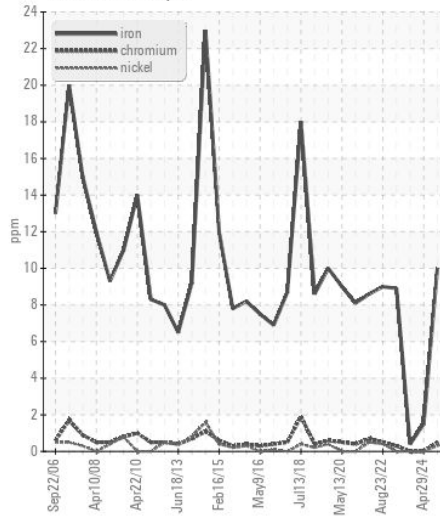
**Base Number**



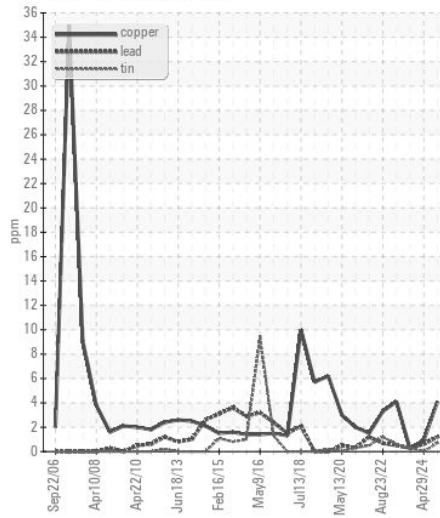
**Viscosity @ 100°C**



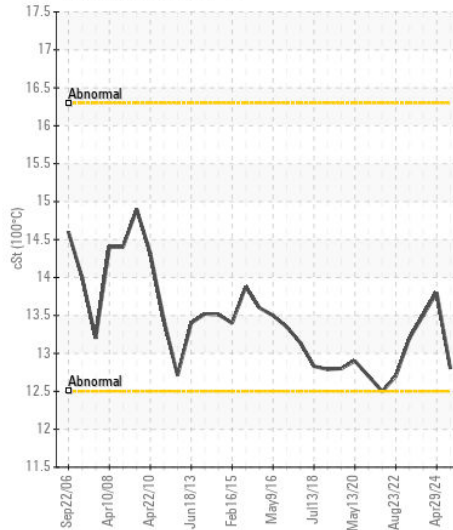
**Ferrous Alloys**



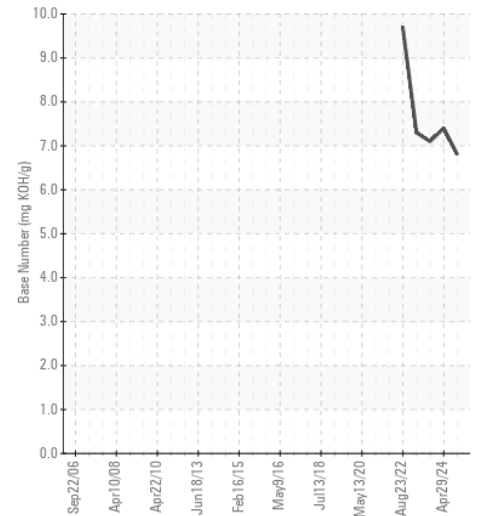
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0857127 **Received** : 11 Jul 2024  
**Lab Number** : 06233040 **Tested** : 11 Jul 2024  
**Unique Number** : 11116533 **Diagnosed** : 11 Jul 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

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