



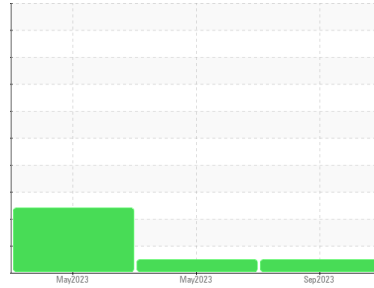
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**CATERPILLAR 99U0991**  
 Component  
**Main Diesel Engine**  
 Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (--- GAL)**



## DIAGNOSIS

### Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

### Wear

All component wear rates are normal.

### Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

### 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0859228</b>	WC0782593	WC0782597
Sample Date	Client Info		<b>28 Sep 2023</b>	31 May 2023	18 May 2023
Machine Age	hrs	Client Info	<b>5725</b>	5166	5200
Oil Age	hrs	Client Info	<b>250</b>	8	83
Oil Changed	Client Info		<b>Changed</b>	Not Changd	Changed
Sample Status			<b>NORMAL</b>	NORMAL	SEVERE

## CONTAMINATION

	method	limit/base	current	history1	history2
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>8</b>	3	5
Chromium	ppm	ASTM D5185m >20	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>2</b>	<1	0
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >330	<b>2</b>	<1	2
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>228</b>	90	152
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>79</b>	3	3
Manganese	ppm	ASTM D5185m	<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	<b>647</b>	742	29
Calcium	ppm	ASTM D5185m	<b>1298</b>	1291	1771
Phosphorus	ppm	ASTM D5185m 1360	<b>681</b>	701	762
Zinc	ppm	ASTM D5185m 1480	<b>839</b>	825	956
Sulfur	ppm	ASTM D5185m	<b>2492</b>	3639	3163

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	4	4
Sodium	ppm	ASTM D5185m	<b>2</b>	1	2
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	3	6
Fuel	%	ASTM D3524 >5	<b>1.1</b>	1.4	14.3

## INFRA-RED

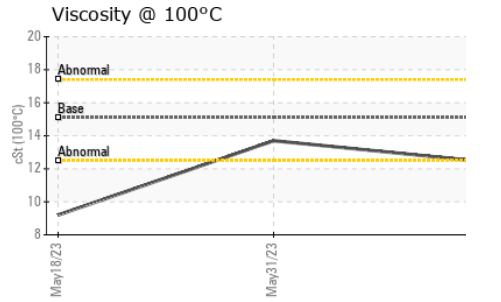
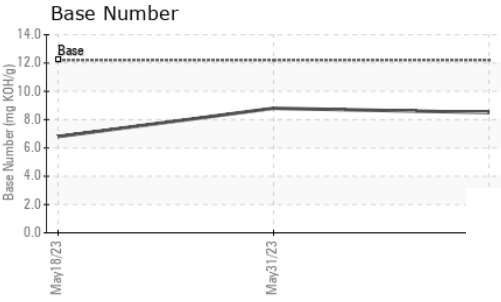
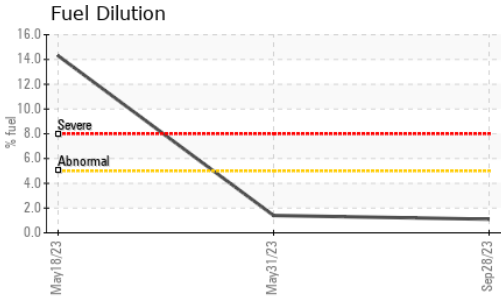
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.2</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.2</b>	6.1	5.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.9</b>	17.9	18.3

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.0</b>	12.1	13.7
Base Number (BN)	mg KOH/g	ASTM D2896 12.2	<b>8.5</b>	8.8	6.8



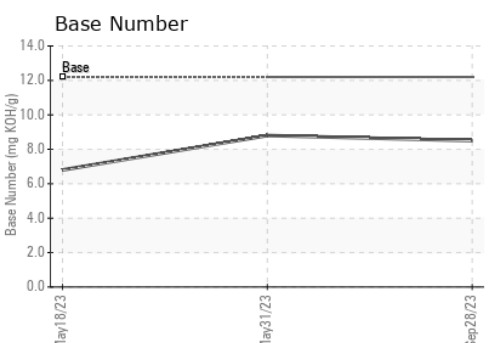
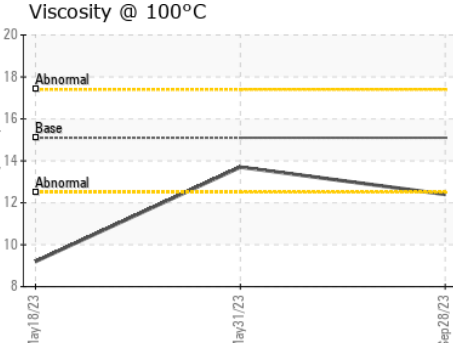
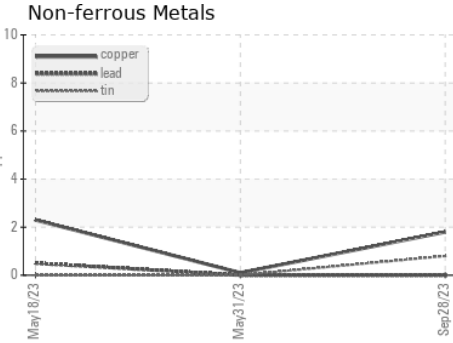
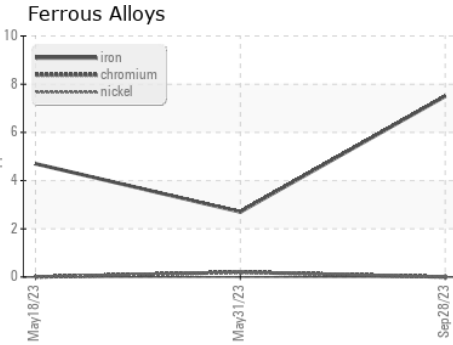
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445 15.1	<b>12.4</b>	13.7	▲ 9.2

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0859228      **Received** : 04 Oct 2023  
**Lab Number** : **05969521**      **Diagnosed** : 06 Oct 2023  
**Unique Number** : 10676072      **Diagnostician** : Wes Davis  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

**DISCOUNT DIESEL**  
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Certificate L2367  
 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)