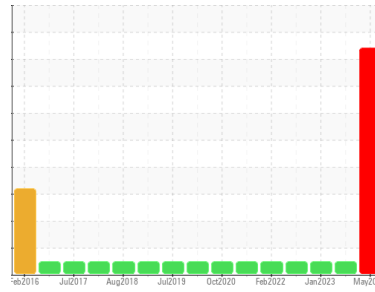




# OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL



Machine Id  
**E-ONE M00424**  
 Component  
**Diesel Engine**  
 Fluid  
**DISEL ENGINE OIL SAE 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

Metal levels are typical for a new component breaking in.

### Contamination

Test for glycol is positive. There is a high concentration of glycol present in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>DC0036423</b>	DC0028283	DC0023043
Sample Date	Client Info		<b>21 May 2024</b>	25 Sep 2023	24 Jan 2023
Machine Age	mls	Client Info	<b>30911</b>	27935	19279
Oil Age	mls	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>SEVERE</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>100	<b>43</b>	21	7
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	1	<1
Nickel	ppm	ASTM D5185m	>4	<b>2</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>6</b>	4	<1
Lead	ppm	ASTM D5185m	>40	<b>4</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>6</b>	4	1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	250	<b>2</b>	<1	3
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>51</b>	3	3
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>40</b>	41	36
Calcium	ppm	ASTM D5185m	3000	<b>2298</b>	2178	2114
Phosphorus	ppm	ASTM D5185m	1150	<b>933</b>	872	807
Zinc	ppm	ASTM D5185m	1350	<b>997</b>	1067	955
Sulfur	ppm	ASTM D5185m	4250	<b>4171</b>	3684	3573

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	<b>14</b>	6	4
Sodium	ppm	ASTM D5185m	>158	<b>723</b>	3	2
Potassium	ppm	ASTM D5185m	>20	<b>685</b>	1	2
Glycol	%	*ASTM D2982		<b>0.12</b>	NEG	NEG

## INFRA-RED

	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.7</b>	7.9	6.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.8</b>	18.3	15.7

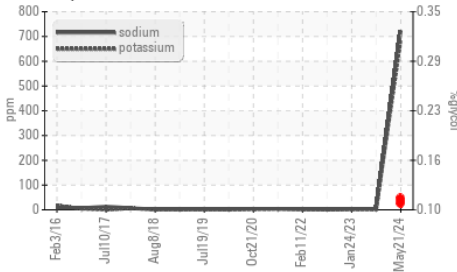
## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>11.2</b>	10.5	9.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>10.4</b>	6.8	8.3



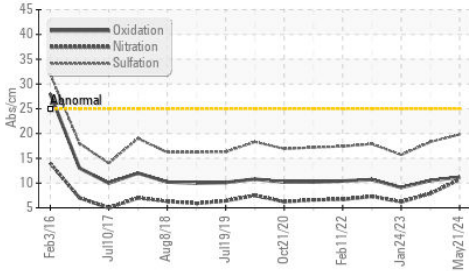
# OIL ANALYSIS REPORT

## ▲ Glycol Contamination



PARAMETER	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	NEG

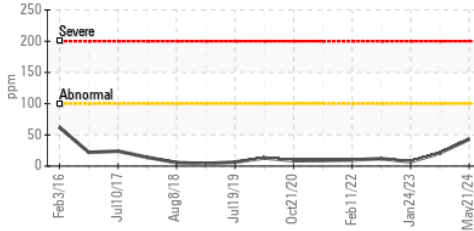
## FT-IR (Direct Trend)



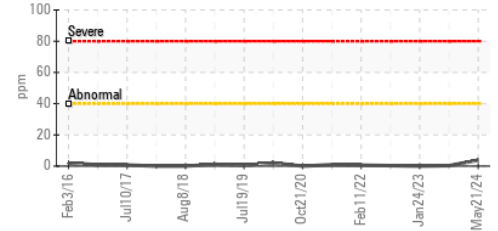
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	13.4	13.5

## GRAPHS

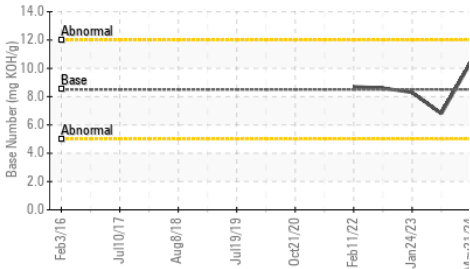
### Iron (ppm)



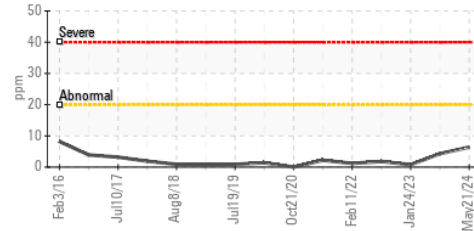
### Lead (ppm)



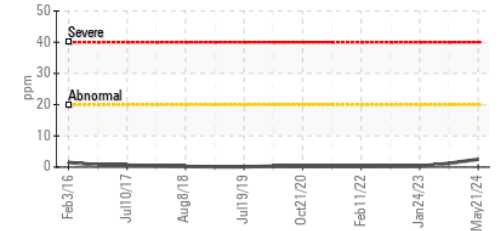
## Base Number



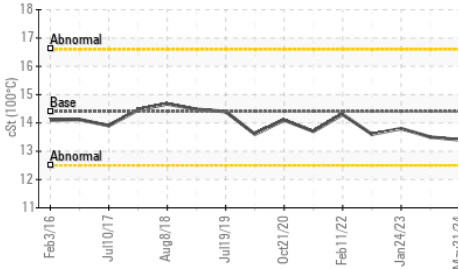
### Aluminum (ppm)



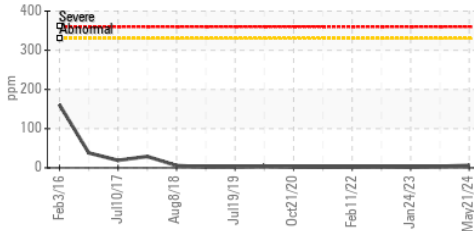
### Chromium (ppm)



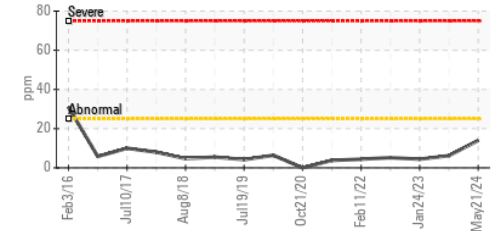
## Viscosity @ 100°C



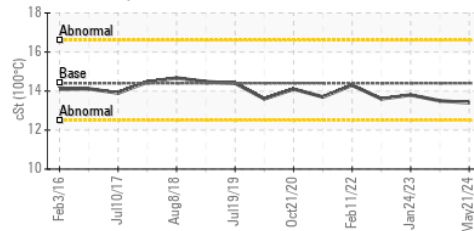
### Copper (ppm)



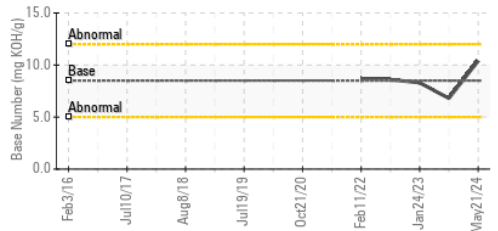
### Silicon (ppm)



### Viscosity @ 100°C



### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DC0036423 **Received** : 29 May 2024  
**Lab Number** : 06194818 **Tested** : 31 May 2024  
**Unique Number** : 11056941 **Diagnosed** : 31 May 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: Glycol, TBN )

**M&M FLEET**  
 5046 BUCHANAN ST.  
 HYATTSVILLE, MD  
 US 20781  
 Contact: June McClosky  
 office@mmfleet.net  
 T: (301)779-4545  
 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)