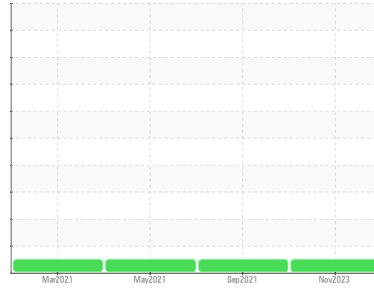




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**MACK 929042**  
 Component  
**Diesel Engine**  
 Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination 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>GFL0098381</b>	GFL0021592	GFL0021560
Sample Date	Client Info		<b>12 Nov 2023</b>	09 Sep 2021	24 May 2021
Machine Age	hrs	Client Info	<b>12001</b>	6571	6129
Oil Age	hrs	Client Info	<b>0</b>	6571	300
Oil Changed	Client Info		<b>N/A</b>	Changed	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	<b>4</b>	22	5
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m >5	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	13	6
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	1
Copper	ppm	ASTM D5185m >330	<b>&lt;1</b>	2	<1
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	0	<1
Antimony	ppm	ASTM D5185m	<b>---</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>0</b>	116	335
Barium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>59</b>	122	124
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>904</b>	625	619
Calcium	ppm	ASTM D5185m	<b>1018</b>	1555	1544
Phosphorus	ppm	ASTM D5185m 1360	<b>985</b>	658	731
Zinc	ppm	ASTM D5185m 1480	<b>1187</b>	728	834
Sulfur	ppm	ASTM D5185m	<b>3015</b>	2026	2133

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>5</b>	7	4
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	5	5
Potassium	ppm	ASTM D5185m >20	<b>2</b>	9	2

## INFRA-RED

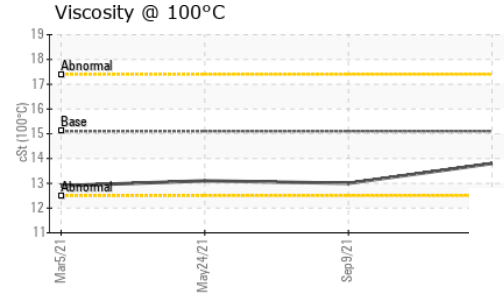
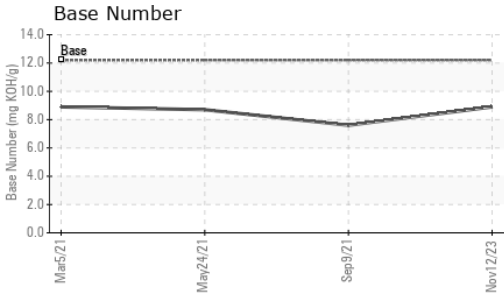
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.2</b>	1.1	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>5.3</b>	10.3	8.3
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>17.7</b>	24.8	24.3

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>13.1</b>	20.1	18.5
Base Number (BN)	mg KOH/g	ASTM D2896 12.2	<b>8.9</b>	7.6	8.7



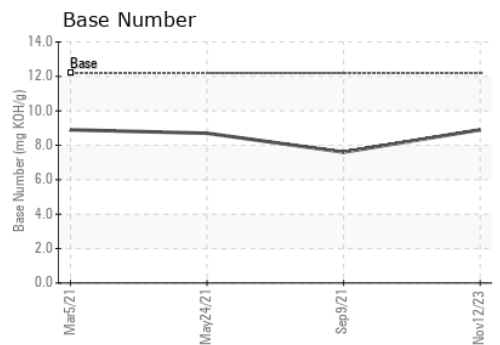
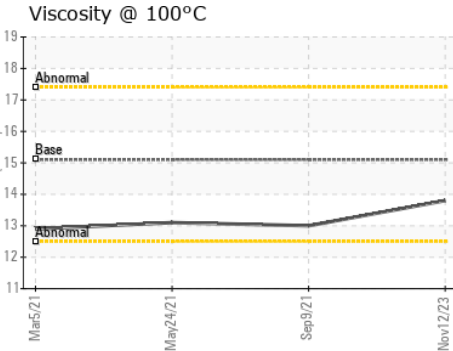
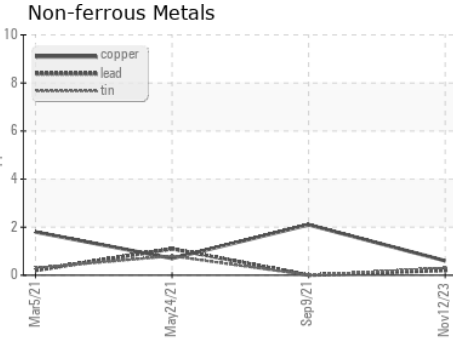
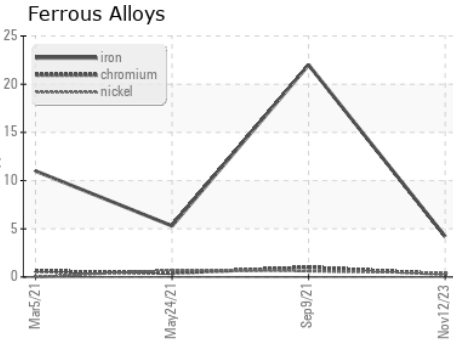
# OIL ANALYSIS REPORT



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>13.8</b>	13.0	13.1

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0098381 **Received** : 13 Nov 2023  
**Lab Number** : **06005410** **Diagnosed** : 15 Nov 2023  
**Unique Number** : 10739172 **Diagnostician** : Jonathan Hester  
**Test Package** : FLEET

NOBLE ENVIRONMENTAL dba GFL Environmental - 675 - McClellandtown  
 1192 MCCLELLANDTOWN RD  
 MCCLELLANDTOWN, PA  
 US 15458  
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 jking@nobleenviro.com  
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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)