

# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**41-004**  
 Component  
**Diesel Engine**  
 Fluid  
**CHEVRON DELO 400 SAE 10W30 (--- GAL)**

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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 acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PCA0073327</b>	---	---
Sample Date	Client Info		<b>01 Dec 2023</b>	---	---
Machine Age	mls	Client Info	<b>35370</b>	---	---
Oil Age	mls	Client Info	<b>35370</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>NORMAL</b>	---	---

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>60</b>	---	---
Chromium	ppm	ASTM D5185m >20	<b>5</b>	---	---
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185m	<b>0</b>	---	---
Silver	ppm	ASTM D5185m >3	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >20	<b>60</b>	---	---
Lead	ppm	ASTM D5185m >40	<b>2</b>	---	---
Copper	ppm	ASTM D5185m >330	<b>160</b>	---	---
Tin	ppm	ASTM D5185m >15	<b>4</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>31</b>	---	---
Barium	ppm	ASTM D5185m	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m	<b>40</b>	---	---
Manganese	ppm	ASTM D5185m	<b>3</b>	---	---
Magnesium	ppm	ASTM D5185m	<b>475</b>	---	---
Calcium	ppm	ASTM D5185m	<b>1590</b>	---	---
Phosphorus	ppm	ASTM D5185m 1260	<b>675</b>	---	---
Zinc	ppm	ASTM D5185m 1400	<b>795</b>	---	---
Sulfur	ppm	ASTM D5185m	<b>1708</b>	---	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>8</b>	---	---
Sodium	ppm	ASTM D5185m	<b>5</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>135</b>	---	---

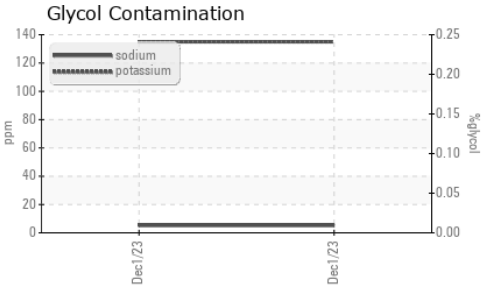
## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.8</b>	---	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.7</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>23.3</b>	---	---

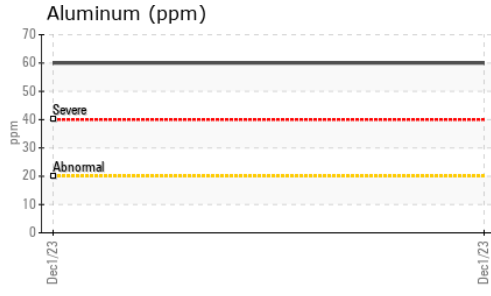
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>23.1</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 10.1	<b>7.8</b>	---	---

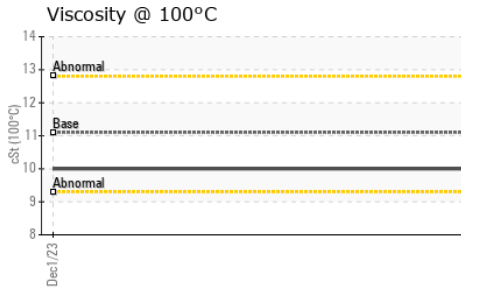
# OIL ANALYSIS REPORT



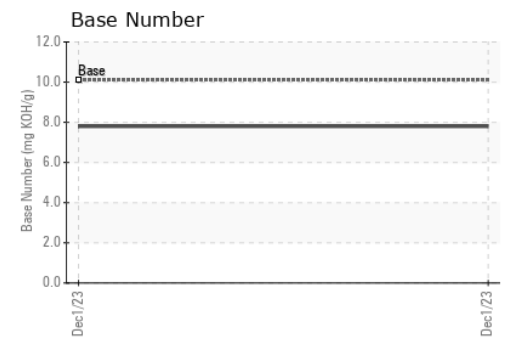
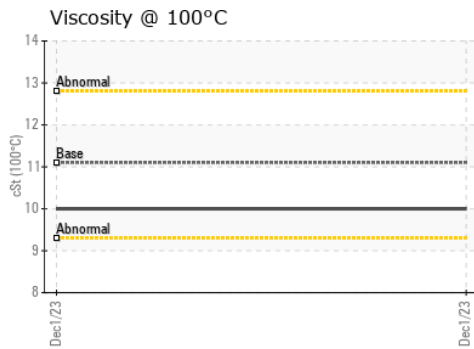
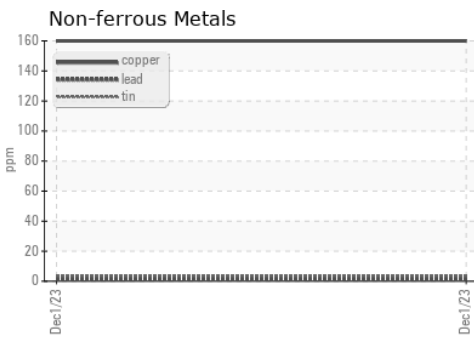
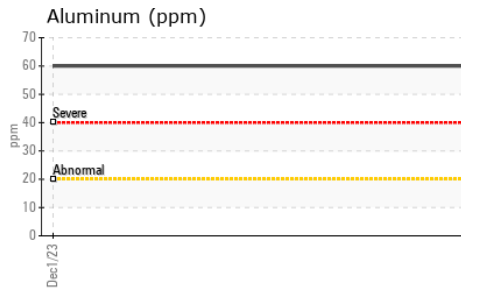
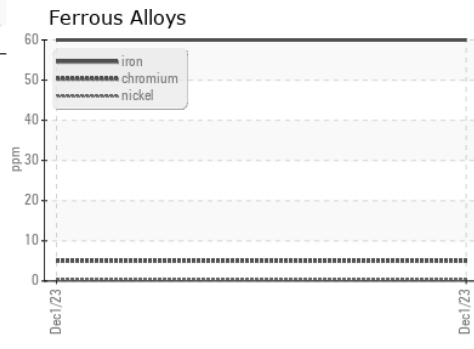
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	---	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	---	---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



FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	11.1	<b>10.0</b>	---	---



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0073327 **Recieved** : 16 Jan 2024  
**Lab Number** : 06060600 **Diagnosed** : 16 Jan 2024  
**Unique Number** : 10831982 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

**MIDWEST MOTOR EXPRESS**  
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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)