



# OIL ANALYSIS REPORT

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

Machine Id  
**857-4023**  
 Component  
**Diesel Engine**  
 Fluid  
**CHEVRON DELO 400 XLE 10W30 (--- GAL)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>RPL0014864</b>	RPL0010182	RPL0005709
Sample Date		Client Info		<b>19 Dec 2023</b>	19 Jun 2023	13 Sep 2022
Machine Age	mls	Client Info		<b>239966</b>	209423	183413
Oil Age	mls	Client Info		<b>30543</b>	26010	23285
Filter Age	mls	Client Info		<b>30543</b>	26010	23285
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>SEVERE</b>	NORMAL	NORMAL

## WEAR

Cylinder, crank, or cam shaft wear is indicated. Valve wear is indicated.

Iron	ppm	ASTM D5185m	>100	<b>215</b>	67	39
Chromium	ppm	ASTM D5185m	>20	<b>20</b>	2	1
Nickel	ppm	ASTM D5185m	>4	<b>24</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>22</b>	8	12
Lead	ppm	ASTM D5185m	>40	<b>2</b>	2	2
Copper	ppm	ASTM D5185m	>330	<b>14</b>	4	3
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

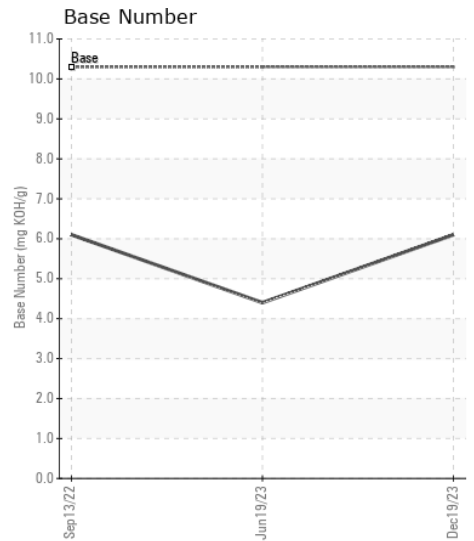
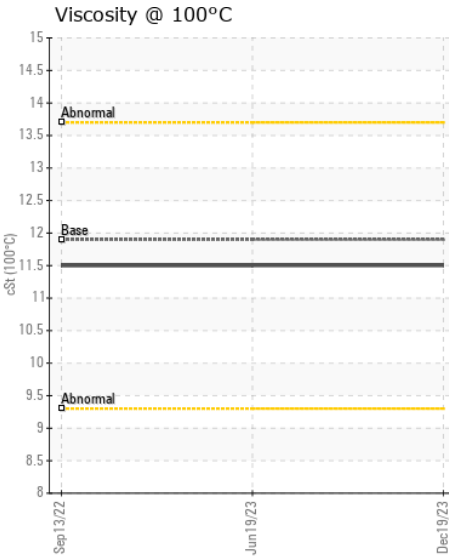
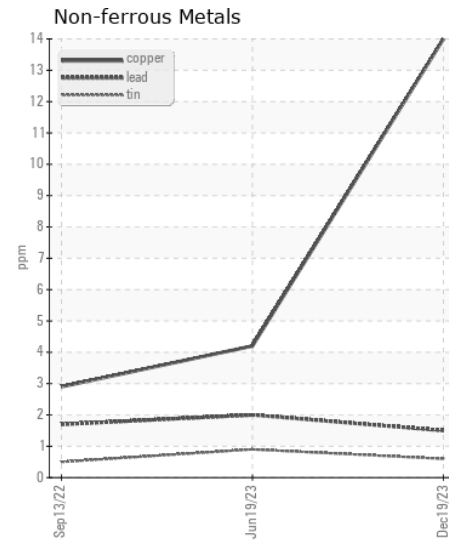
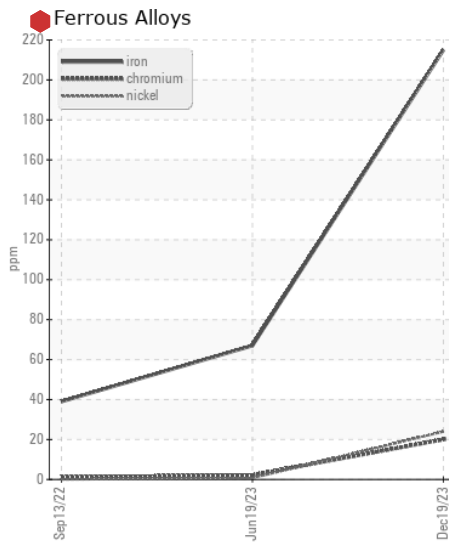
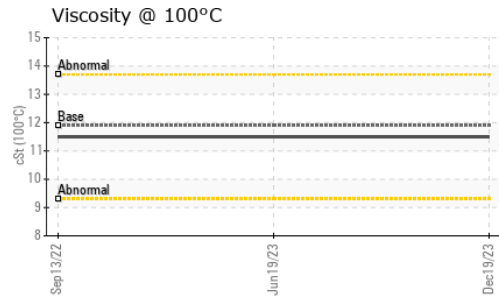
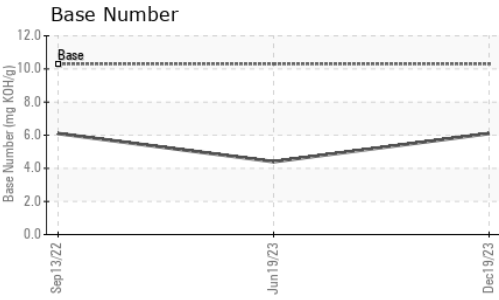
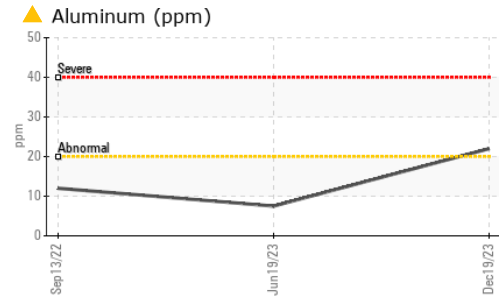
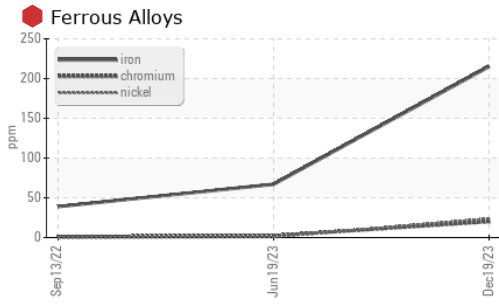
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>13</b>	15	8
Potassium	ppm	ASTM D5185m	>20	<b>13</b>	17	23
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>0.8</b>	0.7	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>13.4</b>	12.1	13.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>25.7</b>	25.8	28.1
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 oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185m		<b>3</b>	8	6
Boron	ppm	ASTM D5185m		<b>18</b>	22	15
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>18</b>	26	19
Manganese	ppm	ASTM D5185m		<b>2</b>	1	<1
Magnesium	ppm	ASTM D5185m		<b>700</b>	784	635
Calcium	ppm	ASTM D5185m	2900	<b>1306</b>	1567	1350
Phosphorus	ppm	ASTM D5185m	1100	<b>647</b>	751	672
Zinc	ppm	ASTM D5185m	1200	<b>851</b>	913	812
Sulfur	ppm	ASTM D5185m	4000	<b>2824</b>	3640	3286
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>25.6</b>	23.9	24.8
Base Number (BN)	mg KOH/g	ASTM D2896	10.3	<b>6.1</b>	4.4	6.1
Visc @ 100°C	cSt	ASTM D445	11.9	<b>11.5</b>	11.5	11.5



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RPL0014864 **Received** : 30 Jan 2024  
**Lab Number** : 06073697 **Diagnosed** : 31 Jan 2024  
**Unique Number** : 10850374 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

**RTL PACLEASE - 7001 - Houston**  
 6300 N. Loop East  
 Houston, TX  
 US 77026  
 Contact: RODNEY BRIGGS  
 briggsr@rushenterprises.com

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)

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