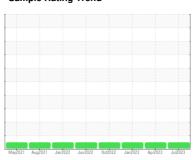


# **OIL ANALYSIS REPORT**

Sample Rating Trend



NORMAL



Machine Id **527024-736** 

Component

**Diesel Engine** 

CHEVRON DELO 400 XLE 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.

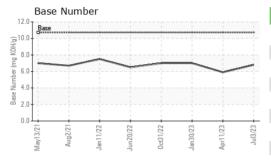
## **Fluid Condition**

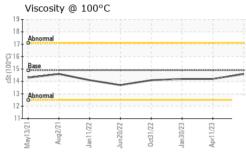
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Mmy2021 Amg2021 Jam2022 Jum2022 Oct2022 Jam2023 Apr2023 Jul2023						
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0084531	GFL0073508	GFL0064725
Sample Date		Client Info		03 Jul 2023	11 Apr 2023	30 Jan 2023
Machine Age	hrs	Client Info		18598	17998	17512
Oil Age	hrs	Client Info		600	486	550
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	21	19	20
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		16	15	11
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	<1	2
Lead	ppm	ASTM D5185m	>40	8	2	3
Copper	ppm	ASTM D5185m	>330	1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m	7.0	<1	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron		ASTM D5185m		63	78	82
DOION	ppm	AO HVI DO TOOTII				
Barium	ppm	ASTM D5185m		0	2	0
Barium	ppm			0 47	2 44	0 64
Barium Molybdenum	ppm ppm	ASTM D5185m				
Barium	ppm ppm	ASTM D5185m ASTM D5185m		47	44	64
Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		47 <1	44 <1	64 <1
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	760	47 <1 849	44 <1 681	64 <1 654
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	760 830	47 <1 849 1786	44 <1 681 1747	64 <1 654 1607
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		47 <1 849 1786 791	44 <1 681 1747 691	64 <1 654 1607 710
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	830	47 <1 849 1786 791 957	44 <1 681 1747 691 853	64 <1 654 1607 710 884
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	830 2770	47 <1 849 1786 791 957 3972	44 <1 681 1747 691 853 3155	64 <1 654 1607 710 884 3036
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	830 2770 limit/base	47 <1 849 1786 791 957 3972 current	44 <1 681 1747 691 853 3155 history1	64 <1 654 1607 710 884 3036 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	ASTM D5185m	830 2770 limit/base	47 <1 849 1786 791 957 3972  current	44 <1 681 1747 691 853 3155 history1	64 <1 654 1607 710 884 3036 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m	830 2770 limit/base >25	47 <1 849 1786 791 957 3972 current 6 4	44 <1 681 1747 691 853 3155 history1 5	64 <1 654 1607 710 884 3036 history2 6 3
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	830 2770 limit/base >25 >20	47 <1 849 1786 791 957 3972 current 6 4 6	44 <1 681 1747 691 853 3155 history1 5 3 5	64 <1 654 1607 710 884 3036 history2 6 3 5
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm	ASTM D5185m  method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	830 2770 limit/base >25 >20 limit/base >3	47 <1 849 1786 791 957 3972 current 6 4 6 current	44 <1 681 1747 691 853 3155 history1 5 3 history1	64 <1 654 1607 710 884 3036 history2 6 3 5
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m  method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	830 2770 limit/base >25 >20 limit/base >3	47 <1 849 1786 791 957 3972 current 6 4 6 current 0.4	44 <1 681 1747 691 853 3155 history1 5 history1 0.4	64 <1 654 1607 710 884 3036 history2 6 3 5 history2 0.4
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m  method ASTM D5185m	830 2770 limit/base >25 >20 limit/base >3 >20	47 <1 849 1786 791 957 3972 current 6 4 6 current 0.4 12.4	44 <1 681 1747 691 853 3155 history1 5 3 5 history1 0.4 10.8	64 <1 654 1607 710 884 3036 history2 6 3 5 history2 0.4 11.7
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m  Method ASTM D5185m ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D7844  *ASTM D7624  *ASTM D76145	830 2770 limit/base >25 >20 limit/base >3 >20 >30	47 <1 849 1786 791 957 3972 current 6 4 6 current 0.4 12.4 25.5	44 <1 681 1747 691 853 3155 history1 5 3 5 history1 0.4 10.8 20.8	64 <1 654 1607 710 884 3036 history2 6 3 5 history2 0.4 11.7 23.5



# **OIL ANALYSIS REPORT**

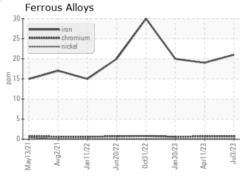


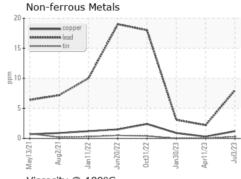


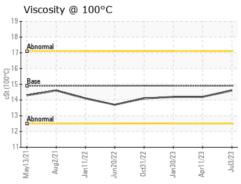
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

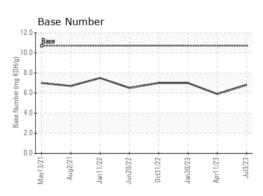
FLUID PROPE	RHES	method				history2
Visc @ 100°C	cSt	ASTM D445	14.9	14.6	14.2	14.2

## **GRAPHS**













Certificate L2367

Laboratory Sample No. Lab Number Test Package : FLEET

Unique Number : 10548449

: GFL0084531 : 05892639

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 07 Jul 2023

Diagnosed

: 10 Jul 2023 Diagnostician : Sean Felton GFL Environmental - 629 - Northern A1

3947 US 131 N Kalkaska, MI US 49646-8428

Contact: MITCH HERSHBERGER

T: (231)624-0848

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)

F: