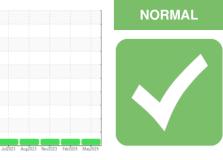


## **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

### 2308 Component

# Diesel Engine

CHEVRON DELO 400 SDE SAE 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.

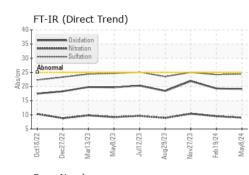
### Fluid Condition

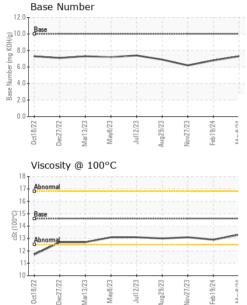
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0859274	WC0859288	WC0859282
Sample Date		Client Info		08 May 2024	19 Feb 2024	27 Nov 2023
Machine Age	mls	Client Info		173000	154590	136877
Oil Age	mls	Client Info		20000	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	17	19	19
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	11	13	12
Lead	ppm	ASTM D5185m	>40	1	1	2
Copper	ppm	ASTM D5185m	>330	1	<1	<1
Tin	ppm	ASTM D5185m	>15	1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	nom	ASTM D5185m			0	0
Caumum	ppm	ASTIVI DO TOOTT		<1	0	0
ADDITIVES	ррпп	method	limit/base	<1 current	0 history1	history2
	ppm		limit/base		-	-
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 269	history1 239	history2 147
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 269 2	history1 239 0	history2 147 2
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 269 2 140	history1 239 0 137	history2 147 2 126
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 269 2 140 <1	history1 239 0 137 <1	history2 147 2 126 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current     269     2     140     <1     660	history1 239 0 137 <1 717	history2 147 2 126 0 602
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185mASTM D5185mASTM D5185mASTM D5185mASTM D5185m		current     269     2     140     <1     660     1557	history1 239 0 137 <1 717 1636	history2 147 2 126 0 602 1454
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	760	current     269     2     140     <1     660     1557     750	history1 239 0 137 <1 717 1636 790	history2 147 2 126 0 602 1454 615
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	760 800	current     269     2     140     <1     660     1557     750     865	history1     239     0     137     <1     717     1636     790     910	history2 147 2 126 0 602 1454 615 771
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	760 800 3000 limit/base	Current 269 2 140 <1 660 1557 750 865 2678	history1 239 0 137 <1 717 1636 790 910 2648	history2 147 2 126 0 602 1454 615 771 2556
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	760 800 3000 limit/base	269   2   140   <1   660   1557   750   865   2678	history1     239     0     137     <1     717     1636     790     910     2648     history1	history2 147 2 126 0 602 1454 615 771 2556 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	760 800 3000 limit/base >25	current     269     2     140     <1     660     1557     750     865     2678     current     11	history1     239     0     137     <1     717     1636     790     910     2648     history1     8	history2 147 2 126 0 602 1454 615 771 2556 history2 8
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	760 800 3000 limit/base >25	current     269     2     140     <1     660     1557     750     865     2678     current     11     0	history1     239     0     137     <1     717     1636     790     910     2648     history1     8     2	history2     147     2     126     0     602     1454     615     771     2556     history2     8     0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	760 800 3000 limit/base >25 >20	current   269   2   140   <1   660   1557   750   865   2678   current   11   0   22	history1   239   0   137   <1   717   1636   790   910   2648   history1   8   2   20	history2   147   2   126   0   602   1454   615   771   2556   history2   8   0   28
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	760 800 3000 limit/base >25 >20 limit/base >20	current   269   2   140   <1   660   1557   750   865   2678   11   0   22   current	history1   239   0   137   <1   717   1636   790   910   2648   history1   8   2   20   history1	history2   147   2   126   0   602   1454   615   771   2556   history2   8   0   28   history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm   ppm	method     ASTM D5185m	760 800 3000 limit/base >25 >20 limit/base >20	current   269   2   140   <1   660   1557   750   865   2678   11   0   22   current   0.3	history1     239     0     137     <1     717     1636     790     910     2648     history1     8     2     20     history1     0.3	history2   147   2   126   0   602   1454   615   771   2556   history2   8   0   28   history2   0.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method   ASTM D5185m	760 800 3000 imit/base >25 >20 imit/base >6 >20	current   269   2   140   <1   660   1557   750   865   2678   current   11   0   22   current   0.3   9.0	history1     239     0     137     <1     717     1636     790     910     2648     history1     8     2     20     history1     0.3     9.5	history2   147   2   126   0   602   1454   615   771   2556   history2   8   0   28   history2   0.4   10.4
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m     ASTM D5185m	760 800 3000 limit/base >25 >20 limit/base >20 limit/base >6 >20	current   269   2   140   <1   660   1557   750   865   2678   current   11   0   22   current   0.3   9.0   24.4	history1   239   0   137   <1   717   1636   790   910   2648   history1   8   2   20   history1   0.3   9.5   24.2	history2   147   2   126   0   602   1454   615   771   2556   history2   8   0   28   history2   0.4   10.4   25.0



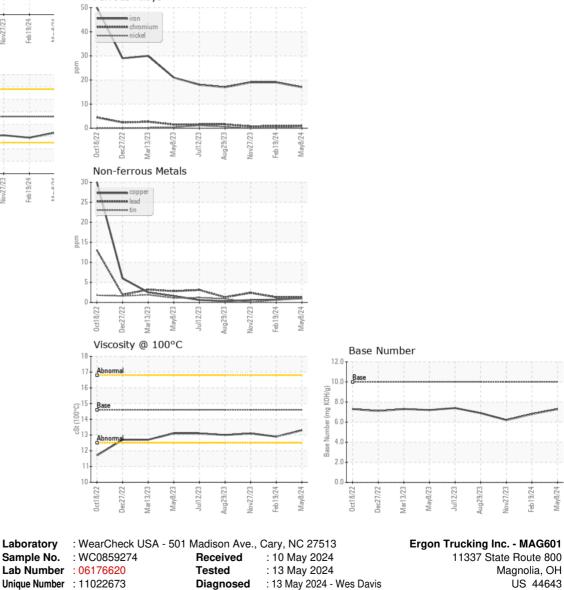
# **OIL ANALYSIS REPORT**





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
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.6	13.3	12.9	13.1
GRAPHS						

Ferrous Alloys





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)

Test Package : FLEET

Certificate 12367

Submitted By: Eddy Smith

Contact: Eddy Smith

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May8/24

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