

# **OIL ANALYSIS REPORT**



### Machine Id **13036** Component **Diesel Engine** Fluid **CHEVRON DELO 400 XLE 10W30 (--- QTS)**

#### DIAGNOSIS

## Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

# Wear

Metal levels are typical for a new component breaking in.

# 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	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0906871	WC0906935	
Sample Date		Client Info		06 Jun 2024	14 Feb 2024	
Machine Age	mls	Client Info		40138	21499	
Oil Age	mls	Client Info		40138	0	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINATION	٨	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	39	42	
Chromium	ppm	ASTM D5185m	>20	<1	<1	
Nickel	ppm	ASTM D5185m	>4	0	0	
Titanium	ppm	ASTM D5185m		<1	0	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>20	10	17	
Lead	ppm	ASTM D5185m	>40	0	0	
Copper	ppm	ASTM D5185m	>330	10	14	
Tin	ppm	ASTM D5185m	>15	<1	1	
Vanadium	ppm	ASTM D5185m		<1	0	
Cadmium	ppm	ASTM D5185m		0	0	
Cadmium ADDITIVES	ppm	ASTM D5185m method	limit/base	0 current	0 history1	history2
	ppm ppm		limit/base		-	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 20	history1 30	history2
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 20 0	history1 30 0	history2 
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 20 0 4	history1 30 0 10	history2  
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 20 0 4 1	history1 30 0 10 2	history2  
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		current 20 0 4 1 805	history1 30 0 10 2 741	history2   
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2900	Current 20 0 4 1 805 1521	history1 30 0 10 2 741 1277	history2
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	2900 1100	Current 20 0 4 1 805 1521 767	history1 30 0 10 2 741 1277 706	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2900 1100 1200	Current 20 0 4 1 805 1521 767 993	history1 30 0 10 2 741 1277 706 834	history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm 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	2900 1100 1200 4000	Current 20 0 4 1 805 1521 767 993 3609	history1 30 0 10 2 741 1277 706 834 2834	history2
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	2900 1100 1200 4000 limit/base	current 20 0 4 1 805 1521 767 993 3609 current	history1           30           0           10           2           741           1277           706           834           2834           history1	history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Chosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2900 1100 1200 4000 limit/base >25	current           20           0           4           1           805           1521           767           993           3609           current           9	history1           30           0           10           2           741           1277           706           834           2834           history1           8	history2 history2
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	2900 1100 1200 4000 limit/base >25	current           20           0           4           1           805           1521           767           993           3609           current           9           3	history1           30           0           10           2           741           1277           706           834           2834           history1           8           0	history2
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	2900 1100 1200 4000 limit/base >25 >20	current           20           0           4           1           805           1521           767           993           3609           current           9           3           22	history1           30           0           10           2           741           1277           706           834           2834           history1           8           0           55	history2 history2
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	2900 1100 1200 4000 limit/base >25 >20 limit/base	current         20         0         4         1         805         1521         767         993         3609         current         9         3         22         current	history1         30         0         10         2         741         1277         706         834         2834         history1         8         0         55         history1	history2 history2 history2 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	method           ASTM D5185m	2900 1100 1200 4000 limit/base >25 >20 limit/base >3	current         20         0         4         1         805         1521         767         993         3609         current         9         3         22         current         0.9	history1           30           0           10           2           741           1277           706           834           2834           history1           8           0           55           history1           0.5	history2 history2 history2 history2
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	2900 1100 1200 4000 limit/base >25 >20 limit/base >3 >20	current         20         0         4         1         805         1521         767         993         3609         current         9         3         22         current         0.9         11.0	history1           30           0           10           2           741           1277           706           834           2834           history1           8           0           55           history1           0.5           11.2	history2   history2               history2
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	2900 1100 1200 4000 <b>Imit/base</b> >25 >20 <b>Imit/base</b> >3 >20 >30	current         20         0         4         1         805         1521         767         993         3609         current         9         3         22         current         0.9         11.0         25.8	history1         30         0         10         2         741         1277         706         834         2834         history1         8         0         55         history1         0.5         11.2         25.7	history2                           history2            history2                  history2   <



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