

# **OIL ANALYSIS REPORT**

#### Sample Rating Trend



Machine Id **G2** Component

## Diesel Engine

### CHEVRON URSA SUPER PLUS EC 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.

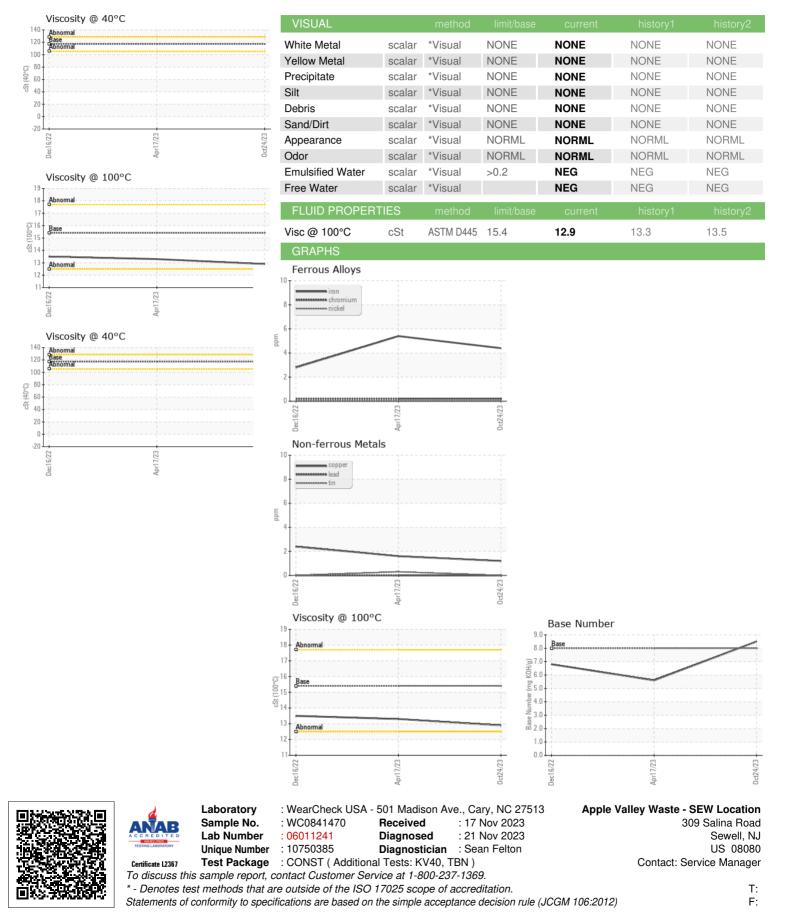
### Fluid Condition

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	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0841470	WC0758957	WC0758946
Sample Date		Client Info		24 Oct 2023	17 Apr 2023	16 Dec 2022
Machine Age	hrs	Client Info		10503	9433	8945
Oil Age	hrs	Client Info		548	481	88
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	١	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<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	>100	4	5	3
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	3	2
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	1	2	2
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 10	history1 63	history2 74
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	10	63	74
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	10 <1	63 0	74 2
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	10 <1 62	63 0 92	74 2 84
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	10 <1 62 0	63 0 92 <1	74 2 84 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	10 <1 62 0 730	63 0 92 <1 66 2202 1029	74 2 84 0 73 2016 963
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		10 <1 62 0 730 1205	63 0 92 <1 66 2202	74 2 84 0 73 2016 963 1099
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1200	10 <1 62 0 730 1205 902	63 0 92 <1 66 2202 1029	74 2 84 0 73 2016 963
Boron 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	1200	10 <1 62 0 730 1205 902 1127	63 0 92 <1 66 2202 1029 1252	74 2 84 0 73 2016 963 1099
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	1200 1300 limit/base	10 <1 62 0 730 1205 902 1127 3367	63 0 92 <1 66 2202 1029 1252 4480	74 2 84 0 73 2016 963 1099 3312
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m	1200 1300 limit/base >25	10 <1 62 0 730 1205 902 1127 3367 current 3 <1	63 0 92 <1 66 2202 1029 1252 4480 history1 5 1	74 2 84 0 73 2016 963 1099 3312 history2 5 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	1200 1300 limit/base >25	10 <1 62 0 730 1205 902 1127 3367 current 3	63 0 92 <1 66 2202 1029 1252 4480 history1 5	74 2 84 0 73 2016 963 1099 3312 history2 5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m	1200 1300 limit/base >25	10 <1 62 0 730 1205 902 1127 3367 current 3 <1 2 Current	63 0 92 <1 66 2202 1029 1252 4480 history1 5 1 <1 <1 history1	74 2 84 0 73 2016 963 1099 3312 history2 5 1 1 1 history2
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	ASTM D5185m ASTM D5185m	1200 1300 limit/base >25 >20 limit/base >3	10 <1 62 0 730 1205 902 1127 3367 current 3 <1 2 current 0.3	63 0 92 <1 66 2202 1029 1252 4480 history1 5 1 5 1 <1 <1 0.2	74 2 84 0 73 2016 963 1099 3312 history2 5 1 1 1 history2 0.1
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	ASTM D5185m ASTM D5185m	1200 1300 limit/base >25 >20 limit/base >3	10 <1 62 0 730 1205 902 1127 3367 <i>current</i> 3 <1 2 <i>current</i> 0.3 7.4	63 0 92 <1 66 2202 1029 1252 4480 history1 5 1 <1 <1 history1 0.2 10.2	74 2 84 0 73 2016 963 1099 3312 history2 5 1 1 1 history2 0.1 7.4
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	ASTM D5185m ASTM D5185m	1200 1300 limit/base >25 >20 limit/base >3	10 <1 62 0 730 1205 902 1127 3367 current 3 <1 2 current 0.3	63 0 92 <1 66 2202 1029 1252 4480 history1 5 1 5 1 <1 <1 0.2	74 2 84 0 73 2016 963 1099 3312 history2 5 1 1 1 history2 0.1
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	ASTM D5185m ASTM D5185m	1200 1300 limit/base >25 >20 limit/base >3 >20	10 <1 62 0 730 1205 902 1127 3367 <i>current</i> 3 <1 2 <i>current</i> 0.3 7.4	63 0 92 <1 66 2202 1029 1252 4480 history1 5 1 <1 <1 history1 0.2 10.2	74 2 84 0 73 2016 963 1099 3312 history2 5 1 1 1 history2 0.1 7.4
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	ASTM D5185m ASTM D5185m	1200 1300 1300 225 >25 >20 1imit/base >3 >20 >3 >20	10 <1 62 0 730 1205 902 1127 3367 current 3 <1 2 current 0.3 7.4 18.1	63 0 92 <1 66 2202 1029 1252 4480 history1 5 1 <1 history1 0.2 10.2 18.4	74 2 84 0 73 2016 963 1099 3312 history2 5 1 1 1 history2 0.1 7.4 16.8
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	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7615	1200 1300 1300 225 >20 limit/base >3 >20 >30 limit/base >30	10 <1 62 0 730 1205 902 1127 3367 Current 3 <1 2 Current 0.3 7.4 18.1	63 0 92 <1 66 2202 1029 1252 4480 history1 5 1 <1 istory1 0.2 10.2 18.4 history1	74 2 84 0 73 2016 963 1099 3312 history2 5 1 1 1 history2 0.1 7.4 16.8 history2



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Contact/Location: Service Manager - AVWSEW