

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

2305 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.

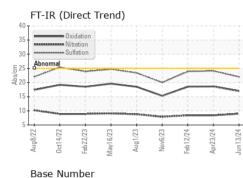
Fluid Condition

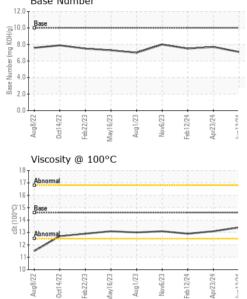
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0944456	WC0859265	WC0859287
Sample Date		Client Info		13 Jun 2024	23 Apr 2024	12 Feb 2024
Machine Age	mls	Client Info		167437	146712	127641
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N	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	>110	13	13	14
Chromium	ppm	ASTM D5185m	>4	<1	1	2
Nickel	ppm	ASTM D5185m	>2	<1	1	1
Titanium	ppm	ASTM D5185m		7	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m		5	8	6
Lead	ppm	ASTM D5185m	>45	1	2	2
Copper	ppm	ASTM D5185m		<1	1	1
Tin	ppm	ASTM D5185m	>4	<1	1	1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		<1	<1	<1
ADDITIVES		method				history2
	maa		limit/base			
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 142 <1	history1 277 0	history2 260 0
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	142	277 0	260 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m	limit/base	142 <1	277	260
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	142 <1 74 <1	277 0 126	260 0 131
Boron Barium Molybdenum	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	142 <1 74	277 0 126 <1	260 0 131 1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	142 <1 74 <1 623	277 0 126 <1 675	260 0 131 1 659
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		142 <1 74 <1 623 1436	277 0 126 <1 675 1523	260 0 131 1 659 1449
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	760	142 <1 74 <1 623 1436 833	277 0 126 <1 675 1523 851	260 0 131 1 659 1449 642
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	760 800	142 <1 74 <1 623 1436 833 947	277 0 126 <1 675 1523 851 897	260 0 131 1 659 1449 642 861
Boron 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	760 800 3000	142 <1 74 <1 623 1436 833 947 2689	277 0 126 <1 675 1523 851 897 3234	260 0 131 1 659 1449 642 861 2584
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	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	760 800 3000 limit/base	142 <1 74 <1 623 1436 833 947 2689 current	277 0 126 <1 675 1523 851 897 3234 history1	260 0 131 1 659 1449 642 861 2584 history2
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 ASTM D5185m ASTM D5185m	760 800 3000 limit/base	142 <1 74 <1 623 1436 833 947 2689 current 11	277 0 126 <1 675 1523 851 897 3234 history1 10	260 0 131 1 659 1449 642 861 2584 history2 9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	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 ASTM D5185m	760 800 3000 limit/base >30	142 <1 74 <1 623 1436 833 947 2689 current 11 2	277 0 126 <1 675 1523 851 897 3234 history1 10 3	260 0 131 1 659 1449 642 861 2584 history2 9 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	760 800 3000 limit/base >30	142 <1 74 <1 623 1436 833 947 2689 current 11 2 10	277 0 126 <1 675 1523 851 897 3234 history1 10 3 10	260 0 131 1 659 1449 642 861 2584 history2 9 0 13
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	760 800 3000 limit/base >30 >20 limit/base	142 <1 74 <1 623 1436 833 947 2689 <u>current</u> 11 2 10 <u>current</u>	277 0 126 <1 675 1523 851 897 3234 history1 10 3 10 history1	260 0 131 659 1449 642 861 2584 history2 9 0 13 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 ppm	ASTM D5185m ASTM D5185m	760 800 3000 limit/base >30 limit/base >20 limit/base	142 <1 74 <1 623 1436 833 947 2689 <u>current</u> 11 2 10 <u>current</u>	277 0 126 <1 675 1523 851 897 3234 history1 10 3 10 history1 0.3	260 0 131 659 1449 642 861 2584 history2 9 0 13 history2 0.3
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	760 800 3000 limit/base >30 limit/base >20 limit/base	142 <1 74 <1 623 1436 833 947 2689 <u>current</u> 11 2 10 <u>current</u> 0.4 9.0	277 0 126 <1 675 1523 851 897 3234 history1 10 3 10 history1 0.3 8.4	260 0 131 1 659 1449 642 861 2584 history2 9 0 13 history2 0.3 8.4
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	760 800 3000 limit/base >30 >20 limit/base >3 >20 >30	142 <1 74 <1 623 1436 833 947 2689 <u>current</u> 11 2 10 <u>current</u> 0.4 9.0 22.0	277 0 126 <1 675 1523 851 897 3234 history1 10 3 10 history1 0.3 8.4 24.1	260 0 131 1 659 1449 642 861 2584 history2 9 0 13 history2 0.3 8.4 23.9
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 D7415	760 800 3000 limit/base >30 limit/base >30 limit/base >30 >20 >30	142 <1 74 <1 623 1436 833 947 2689 Current 11 2 10 Current 0.4 9.0 22.0 Current	277 0 126 <1 675 1523 851 897 3234 history1 10 3 10 10 history1 0.3 8.4 24.1 history1	260 0 131 1 659 1449 642 861 2584 history2 9 0 13 history2 0.3 8.4 23.9 history2



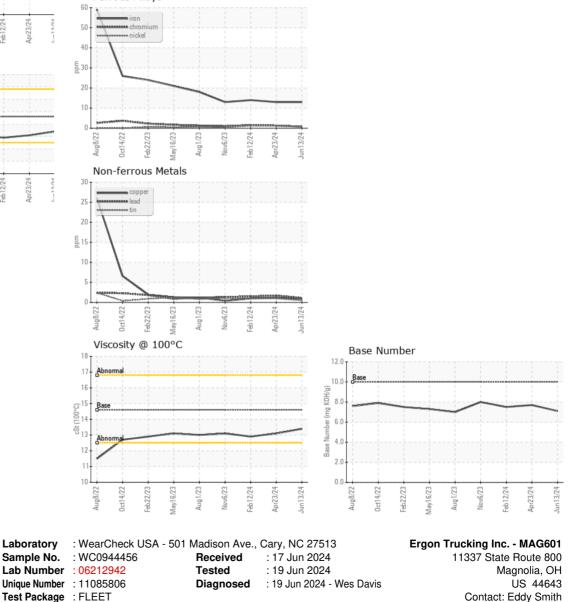
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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*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	13.4	13.1	12.9
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)

Certificate 12367

Submitted By: Eddy Smith Page 2 of 2

eddy.smith@ergon.com

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