

# **OIL ANALYSIS REPORT**

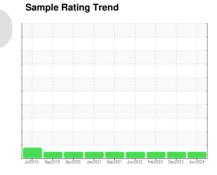


[W/O 10981] VOLVO A35G 340110

Component

Diesel Engine

Fluid CHEVRON 15W40 (13 GAL)





# DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

## Contamination

There is no indication of any contamination in the

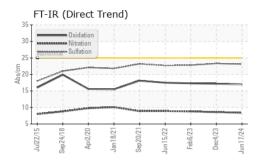
## **Fluid Condition**

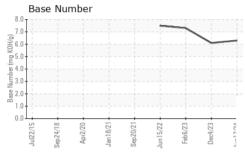
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

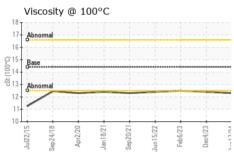
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		ML0002093	VCP388522	VCP371060
Sample Date		Client Info		17 Jun 2024	04 Dec 2023	06 Feb 2023
Machine Age	hrs	Client Info		8179	7486	6653
Oil Age	hrs	Client Info		693	0	0
Oil Changed	0	Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method	7 0.2	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	12	12	9
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	1	<1
Titanium	ppm	ASTM D5185m	<i>/L</i>	<1	2	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	3	3	3
Lead	ppm	ASTM D5185m	>40	ა 1	1	2
Copper	ppm	ASTM D5185m	>330	<1	1	<1
Tin	ppm	ASTM D5185m	>15	<1	1	<1
Vanadium	ppm	ASTM D5185m	>10	0	0	0
Cadmium		ASTM D5185m		0	<1	0
	ppm	AOTIVI DOTOSIII		<u> </u>	<u> </u>	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		245	281	280
<b>D</b> .				0	11	^
Barium	ppm	ASTM D5185m		U	11	0
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m		106	97	112
Molybdenum	ppm	ASTM D5185m		106	97	112
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m		106 0	97 <1	112
Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		106 0 495	97 <1 464	112 <1 520
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		106 0 495 1467	97 <1 464 1437	112 <1 520 1442
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		106 0 495 1467 993	97 <1 464 1437 909	112 <1 520 1442 796
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	106 0 495 1467 993 1212	97 <1 464 1437 909 1132	112 <1 520 1442 796 978
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >25	106 0 495 1467 993 1212 3077	97 <1 464 1437 909 1132 3711	112 <1 520 1442 796 978 3165
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	>25	106 0 495 1467 993 1212 3077	97 <1 464 1437 909 1132 3711 history1	112 <1 520 1442 796 978 3165 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>25	106 0 495 1467 993 1212 3077 current	97 <1 464 1437 909 1132 3711 history1 6	112 <1 520 1442 796 978 3165 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>25 >50 >20	106 0 495 1467 993 1212 3077 current 6	97 <1 464 1437 909 1132 3711 history1 6 2	112 <1 520 1442 796 978 3165 history2 5
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>25 >50 >20	106 0 495 1467 993 1212 3077 current 6 1	97 <1 464 1437 909 1132 3711 history1 6 2 2	112 <1 520 1442 796 978 3165 history2 5 2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>25 >50 >20 >6.0	106 0 495 1467 993 1212 3077 current 6 1 2 <1.0	97 <1 464 1437 909 1132 3711 history1 6 2 2 <1.0	112 <1 520 1442 796 978 3165 history2 5 2 3 <1.0
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D3524	>25 >50 >20 >6.0 limit/base	106 0 495 1467 993 1212 3077 current 6 1 2 <1.0	97 <1 464 1437 909 1132 3711 history1 6 2 2 <1.0 history1	112 <1 520 1442 796 978 3165 history2 5 2 3 <1.0 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm	ASTM D5185m ASTM D7844	>25 >50 >20 >6.0 limit/base >3	106 0 495 1467 993 1212 3077 current 6 1 2 <1.0 current 0.3	97 <1 464 1437 909 1132 3711 history1 6 2 <1.0 history1 0.3	112 <1 520 1442 796 978 3165 history2 5 2 3 <1.0 history2 0.3
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	>25 >50 >20 >6.0 limit/base >3 >20	106 0 495 1467 993 1212 3077 current 6 1 2 <1.0 current 0.3 8.4	97 <1 464 1437 909 1132 3711 history1 6 2 2 <1.0 history1 0.3 8.6	112 <1 520 1442 796 978 3165 history2 5 2 3 <1.0 history2 0.3 8.8
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	>25 >50 >20 >6.0 limit/base >3 >20 >30 limit/base	106 0 495 1467 993 1212 3077 current 6 1 2 <1.0 current 0.3 8.4 23.1	97 <1 464 1437 909 1132 3711 history1 6 2 <1.0 history1 0.3 8.6 23.3	112 <1 520 1442 796 978 3165 history2 5 2 3 <1.0 history2 0.3 8.8 22.8
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur  CONTAMINANTS Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRADA Oxidation	ppm	ASTM D5185m ASTM D7824  *ASTM D7844 *ASTM D7624 *ASTM D7615  method	>25 >50 >20 >6.0 limit/base >3 >20 >30 limit/base	106 0 495 1467 993 1212 3077 current 6 1 2 <1.0 current 0.3 8.4 23.1 current	97 <1 464 1437 909 1132 3711 history1 6 2 <1.0 history1 0.3 8.6 23.3 history1	112 <1 520 1442 796 978 3165 history2 5 2 3 <1.0 history2 0.3 8.8 22.8 history2

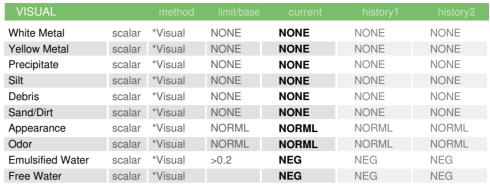


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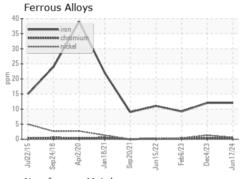


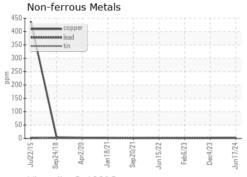


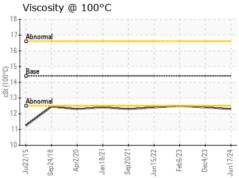


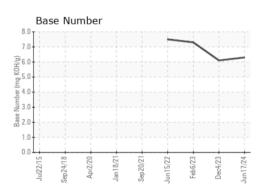
	FLUID PROPER	TIES	method				history2
,	Visc @ 100°C	cSt	ASTM D445	14.4	12.3	12.4	12.5

## **GRAPHS**













Certificate 12367

Laboratory Sample No.

: ML0002093 Lab Number : 06216427 Unique Number : 11089291

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 20 Jun 2024 **Tested** 

: 23 Jun 2024 Diagnosed

: 23 Jun 2024 - Don Baldridge

Test Package : CONST (Additional Tests: FuelDilution, PercentFuel, TBN) To discuss this sample report, contact Customer Service at 1-800-237-1369.

 $^st$  - 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)

**CLEAN EARTH - WALDORF** 

16301 GARDNER RD WALDORF, MD US 20601

Contact: RICK FORD rford@harso.com

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