

# **OIL ANALYSIS REPORT**

Sample Rating Trend





[W02008357] VOLVO A30G 752288

Component Diesel Engine Fluid

{not provided} (11 GAL)

### DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: W02008357 )  $\,$ 

Area

# 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		ML0002518		
Sample Date		Client Info		31 May 2024		
Machine Age	hrs	Client Info		4501		
Oil Age	hrs	Client Info		300		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATION	N	method	limit/base	current	history1	history2
Fuel		WC Method	>6.0	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	1		
Chromium	ppm	ASTM D5185m	>20	0		
Nickel	ppm	ASTM D5185m	>2	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m	>25	1		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	0		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 67	history1	history2
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	67		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	67 0		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	67 0 44 <1 509		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	67 0 44 <1 509 1642		
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 ASTM D5185m	limit/base	67 0 44 <1 509 1642 760		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	67 0 44 <1 509 1642 760 888	    	
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		67 0 44 <1 509 1642 760	  	   
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	limit/base	67 0 44 <1 509 1642 760 888 2531 current	    	
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>		67 0 44 <1 509 1642 760 888 2531 current 3		
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 <b>method</b> ASTM D5185m	limit/base >25	67 0 44 <1 509 1642 760 888 2531 current 3 2	     history1	      history2
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>	limit/base	67 0 44 <1 509 1642 760 888 2531 current 3	     history1 	     history2
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	limit/base >25 >20 limit/base	67 0 44 <1 509 1642 760 888 2531 current 3 2 0 0	      history1	      history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	67 0 44 <1 509 1642 760 888 2531 <i>current</i> 3 2 0 <i>current</i> 0.2	     history1   history1	     history2  history2  history2
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	limit/base >25 >20 limit/base >3 >20	67 0 44 <1 509 1642 760 888 2531 <i>current</i> 3 2 0 <i>current</i> 0.2 7.8	      history1   history1  history1	      history2   history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	67 0 44 <1 509 1642 760 888 2531 <i>current</i> 3 2 0 <i>current</i> 0.2	     history1   history1	     history2  history2  history2
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	limit/base >25 >20 limit/base >3 >20	67 0 44 <1 509 1642 760 888 2531 <i>current</i> 3 2 0 <i>current</i> 0.2 7.8	      history1   history1  history1	      history2   history2  history2
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	limit/base >25 >20 limit/base >3 >20 >30	67 0 44 <1 509 1642 760 888 2531 current 3 2 0 current 0.2 7.8 22.1	      history1  history1  history1	      history2  history2  history2 



(B/HOX Bu)

1.0 0.0 May31/24

18 <del>т</del> 17-Abnorm 16 (100°C) 15 14 13 Abnorm 12 11 May31/24

Base 8.0

# **OIL ANALYSIS REPORT**

FT-IR (Direct Trend)	VISUAL	metho	od limit/base	current	history1	history2	
0 - Oxidation	White Metal	scalar *Visual	NONE	NONE			
Removement Sulfation	Yellow Metal	scalar *Visual		NONE			
	Precipitate	scalar *Visual		NONE			
r l	Silt	scalar *Visual		NONE			
	Debris	scalar *Visual		NONE			
	Sand/Dirt	scalar *Visual		NONE			
	Appearance	scalar *Visual		NORML			
May31/24 May31/24	Odor	scalar *Visual		NORML			
	Emulsified Water	scalar *Visual		NEG			
Base Number	Free Water	scalar Visual		NEG			
0	FLUID PROPERT						
0 + . 0 + .	Visc @ 100°C	cSt ASTM D		current 12.5	history1	history2	
0+			110	12.0			
0	GRAPHS						
D	Ferrous Alloys						
	iron						
Р.2.1.24 А.с. т.с. – м	8 - accesses chromium						
W.							
Viscosity @ 100°C	6						
8	4						
7- Abnormal							
5	2						
4							
3 Abnormal	May31/24		May31/24				
2	May		May				
	Non-ferrous Metal	S					
May31/24	10 copper						
- wa	8 - management lead						
	Б						
	4						
	2-						
	0						
	v/31/24		81/24				
	Mavá		May31.				
	Viscosity @ 100°C			Base Numbe	r		
	18		<sup>8.0</sup> T				
	17- Abnormal		7.0				
	16		(6,6.) (6,HO) (0,HO) (0,HO) (1,0,1) (1	)			
	<u>ତି</u> 15		ЭХ В 5.0	)			
	[]		царана 19 4.1	D-			
				)			
	Abnormal		2.1				
	12-		1.0	1			
	11 <del>14</del>		1.0			24	
	May31/24		May31/24	May31/24		May31/24	
	2		2	2		2	
	: WearCheck USA - 50	1 Madison Ave., (	Cary, NC 27513		WILLIAM HAZEL		
Sample No.	: ML0002518	Received Tested	: 03 Jun 2024 : 04 Jun 2024			PO BOX 600	
Lab Number	C	HANTILLY, VA US 20153					
	Unique Number : 11060645 Diagnosed : 05 Jun 2024 - Don Baldridge						
Certificate 12367         Test Package         : CONST (Additional Tests: TBN)         Contact: SERVICE MA           To discuss this sample report, contact Customer Service at 1-800-237-1369.         jimmy_elswick@waha							
* - Denotes test methods that						(703)378-8300	
Statements of conformity to s				rule (JCGM 10		F:	

Report Id: WILCHA [WUSCAR] 06198522 (Generated: 06/07/2024 01:40:49) Rev: 1

Submitted By: DARRELL ANDES

Page 2 of 2