

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL





VOLVO A30G HDTR0825

Component
Rear Differential

GEAR OIL SAE 80W90 (--- 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 condition of the oil is acceptable for the time in service.



Sample Number	SAMPLE INFORM	VIATION	memou	IIIIII/Dase	Current	TIISTOLA	HISTORYZ
Machine Age hrs Client Info 0 Oil Age hrs Client Info 0 Oil Changed Client Info Changed Sample Status NORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG Wear MC Method So.2 NEG Iron ppm ASTM D5185(m) >900 4 Chromium ppm ASTM D5185(m) >20 0 Nickel ppm ASTM D5185(m) >20 0 Nickel ppm ASTM D5185(m) >10 0 Titanium ppm ASTM D5185(m) 30 <1 Lead ppm ASTM D5185(m) >50 0 Copper ppm ASTM D5185(m) >50 0 Antimony ppm ASTM D5185(m) >50 0 Beryllium ppm ASTM D5185(m) >50 0 Beryllium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 20 0 Agnesium ppm ASTM D5185(m) 12 1 Agnesium ppm ASTM D5185(m) 150 15 Calcium ppm ASTM D5185(m) 150 15 Calcium ppm ASTM D5185(m) 150 15 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) 2500 23439 CONTAMINANTS method limit/base current history1 history2	Sample Number		Client Info		WC0886088		
Oil Age hrs Client Info Changed Sample Status Client Info Changed CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185(m) >900 4 Chromium ppm ASTM D5185(m) >20 0 Chromium ppm ASTM D5185(m) >10 0 Chromium ppm ASTM D5185(m) >10 0 Irickel ppm ASTM D5185(m) >30 <1 Aluminum ppm ASTM D5185(m) >50 0 Lead ppm ASTM D5185(m) >50 <1 <th< td=""><td>Sample Date</td><td></td><td>Client Info</td><td></td><td>29 Dec 2023</td><td></td><td></td></th<>	Sample Date		Client Info		29 Dec 2023		
Oil Changed Status Client Info Sample Status Changed NORMAL CONTAMINATION Method Imiti/base current history1 history2	Machine Age	hrs	Client Info		0		
CONTAMINATION method limit/base current history1 history2	Oil Age	hrs	Client Info		0		
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185(m) >900 4 Chromium ppm ASTM D5185(m) >20 0 Nickel ppm ASTM D5185(m) >10 0 Silver ppm ASTM D5185(m) >30 <1 Aluminum ppm ASTM D5185(m) >50 0 Aluminum ppm ASTM D5185(m) >50 0 Lead ppm ASTM D5185(m) >50 0 Copper ppm ASTM D5185(m) >50 0 Tin ppm ASTM D5185(m) >5	Oil Changed		Client Info		Changed		
Water WC Method >0.2 NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185(m) >900 4 Chromium ppm ASTM D5185(m) >20 0 Nickel ppm ASTM D5185(m) >10 0 Silver ppm ASTM D5185(m) >0 Aluminum ppm ASTM D5185(m) >50 0 Aluminum ppm ASTM D5185(m) >50 0 Aluminum ppm ASTM D5185(m) >50 0 Lead ppm ASTM D5185(m) >50 0 Copper ppm ASTM D5185(m) >20 0 Tin ppm ASTM D5185(m) >5 0 -	Sample Status				NORMAL		
WEAR METALS	CONTAMINATIO	N	method	limit/base	current	history1	history2
Iron	Water		WC Method	>0.2	NEG		
Chromium	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185(m)	>900	4		
Titanium	Chromium	ppm	ASTM D5185(m)	>20	0		
Silver	Nickel	ppm	ASTM D5185(m)	>10	0		
Aluminum	Titanium	ppm	ASTM D5185(m)		0		
Lead ppm ASTM D5185(m) >50 0 Copper ppm ASTM D5185(m) >150 <1	Silver	ppm	ASTM D5185(m)		0		
Copper ppm ASTM D5185(m) >150 <1 Tin ppm ASTM D5185(m) >20 0 Antimony ppm ASTM D5185(m) >5 0 Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 400 173 Barium ppm ASTM D5185(m) 200 0 Molybdenum ppm ASTM D5185(m) 12 1 Magnesium ppm ASTM D5185(m) 12 1 Calcium ppm ASTM D5185(m) 150 15	Aluminum	ppm	ASTM D5185(m)	>30	<1		
Tin ppm ASTM D5185(m) >20 0 Antimony ppm ASTM D5185(m) >5 0 Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 400 173 Barium ppm ASTM D5185(m) 200 0 Barium ppm ASTM D5185(m) 12 1 Molybdenum ppm ASTM D5185(m) 12 1 Magnesium ppm ASTM D5185(m) 12 1 Calcium ppm ASTM D5185(m) 150 15	Lead	ppm	ASTM D5185(m)	>50	0		
Antimony ppm ASTM D5185(m) >5 0 Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 400 173 Barium ppm ASTM D5185(m) 200 0 Molybdenum ppm ASTM D5185(m) 12 1 Manganese ppm ASTM D5185(m) 12 1 Magnesium ppm ASTM D5185(m) 150 15 Calcium ppm ASTM D5185(m) 1650 1021 Phosphorus ppm ASTM D5185(m) 22500 23439	Copper	ppm	ASTM D5185(m)	>150	<1		
Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 400 173 Barium ppm ASTM D5185(m) 200 0 Molybdenum ppm ASTM D5185(m) 12 1 Manganese ppm ASTM D5185(m) 12 1 Magnesium ppm ASTM D5185(m) 150 15 Calcium ppm ASTM D5185(m) 1650 1021 Phosphorus ppm ASTM D5185(m) 22500 23439 Sulfur ppm ASTM D5185(m) 250 21	Tin	ppm	ASTM D5185(m)	>20	0		
Beryllium	Antimony	ppm	ASTM D5185(m)	>5	0		
Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 400 173 Barium ppm ASTM D5185(m) 200 0 Molybdenum ppm ASTM D5185(m) 12 1 Manganese ppm ASTM D5185(m) 12 1 Magnesium ppm ASTM D5185(m) 12 1 Calcium ppm ASTM D5185(m) 150 15 Phosphorus ppm ASTM D5185(m) 125 8 Zinc ppm ASTM D5185(m) 22500 23439 Sulfur ppm ASTM D5185(m) <1	Vanadium	ppm	ASTM D5185(m)				
ADDITIVES	Beryllium	ppm	ASTM D5185(m)		0		
Boron ppm ASTM D5185(m) 400 173 Barium ppm ASTM D5185(m) 200 0 Molybdenum ppm ASTM D5185(m) 12 1 Manganese ppm ASTM D5185(m) 12 1 Magnesium ppm ASTM D5185(m) 150 15 Calcium ppm ASTM D5185(m) 1650 1021 Phosphorus ppm ASTM D5185(m) 125 8 Zinc ppm ASTM D5185(m) 22500 23439 Sulfur ppm ASTM D5185(m) <1	Cadmium	ppm	ASTM D5185(m)		0		
Barium ppm ASTM D5185(m) 200 0 Molybdenum ppm ASTM D5185(m) 12 1 Manganese ppm ASTM D5185(m) 12 1 Magnesium ppm ASTM D5185(m) 150 15 Calcium ppm ASTM D5185(m) 1650 1021 Phosphorus ppm ASTM D5185(m) 125 8 Sulfur ppm ASTM D5185(m) 22500 23439 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >50 <1 Sodium ppm ASTM D5185(m) >170 0	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185(m) 12 1 Manganese ppm ASTM D5185(m) 0 Magnesium ppm ASTM D5185(m) 12 1 Calcium ppm ASTM D5185(m) 150 15 Phosphorus ppm ASTM D5185(m) 1650 1021 Zinc ppm ASTM D5185(m) 125 8 Sulfur ppm ASTM D5185(m) 22500 23439 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >50 <1 Sodium ppm ASTM D5185(m) >170 0	Boron	ppm	ASTM D5185(m)	400	173		
Manganese ppm ASTM D5185(m) 0 Magnesium ppm ASTM D5185(m) 12 1 Calcium ppm ASTM D5185(m) 150 15 Phosphorus ppm ASTM D5185(m) 1650 1021 Zinc ppm ASTM D5185(m) 125 8 Sulfur ppm ASTM D5185(m) 22500 23439 Lithium ppm ASTM D5185(m) <1	Barium	ppm	ASTM D5185(m)	200	0		
Magnesium ppm ASTM D5185(m) 12 1 Calcium ppm ASTM D5185(m) 150 15 Phosphorus ppm ASTM D5185(m) 1650 1021 Zinc ppm ASTM D5185(m) 125 8 Sulfur ppm ASTM D5185(m) 22500 23439 Lithium ppm ASTM D5185(m) <1	Molybdenum	ppm	ASTM D5185(m)	12	1		
Calcium ppm ASTM D5185(m) 150 15 Phosphorus ppm ASTM D5185(m) 1650 1021 Zinc ppm ASTM D5185(m) 125 8 Sulfur ppm ASTM D5185(m) 22500 23439 Lithium ppm ASTM D5185(m) <1	Manganese	ppm	ASTM D5185(m)		0		
Phosphorus ppm ASTM D5185(m) 1650 1021 Zinc ppm ASTM D5185(m) 125 8 Sulfur ppm ASTM D5185(m) 22500 23439 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >50 <1 Sodium ppm ASTM D5185(m) >170 0	Magnesium	ppm	ASTM D5185(m)	12	1		
Zinc ppm ASTM D5185(m) 125 8 Sulfur ppm ASTM D5185(m) 22500 23439 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >50 <1 Sodium ppm ASTM D5185(m) >170 0	Calcium	ppm	ASTM D5185(m)	150	15		
Sulfur ppm ASTM D5185(m) 22500 23439 Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >50 <1 Sodium ppm ASTM D5185(m) >170 0	Phosphorus	ppm	ASTM D5185(m)	1650	1021		
Lithium ppm ASTM D5185(m) <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >50 <1	Zinc	ppm	ASTM D5185(m)	125	8		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >50 <1	Sulfur	ppm	ASTM D5185(m)	22500	23439		
Silicon ppm ASTM D5185(m) >50 <1 Sodium ppm ASTM D5185(m) >170 0	Lithium	ppm	ASTM D5185(m)		<1		
Sodium ppm ASTM D5185(m) >170 0	CONTAMINANTS	5	method	limit/base	current	history1	history2
	Silicon	ppm	ASTM D5185(m)	>50	<1		
Potassium ppm ASTM D5185(m) >20 4	Sodium	ppm	ASTM D5185(m)	>170	0		
	Potassium	ppm	ASTM D5185(m)	>20	4		

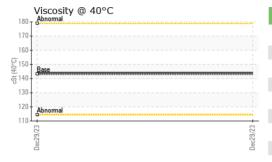


OIL ANALYSIS REPORT

cSt

ASTM D7279(m) 143

Visc @ 40°C



VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	VLITE		
Yellow Metal	scalar	Visual*	NONE	NONE		
Precipitate	scalar	Visual*	NONE	NONE		
Silt	scalar	Visual*	NONE	NONE		
Debris	scalar	Visual*	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	NONE		
Appearance	scalar	Visual*	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML		
Emulsified Water	scalar	Visual*	>0.2	NEG		
Free Water	scalar	Visual*		NEG		
FLUID PROPERT	IES	method	limit/base	current	history1	history2

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				no image	no image
Bottom				no image	no image

144

GRAPHS		
Iron (ppm)	Lead (ppm)	
2000 Severe	150 Severe	1
E 1000 - Abnormal	100 detect	
0	0	
Dec29/23	Dec29/23	Dec29/23
		Dec
Aluminum (ppm)	Chromium (ppm)	
Severe	Savara	
Abnormal	40 + Abnormal	
0		
Dec29/23	Dec29/23	Dec29/23
Copper (ppm)	Silicon (ppm)	0
400 Severe	150 _T	
E 200 - Abnormal	E 100 - Severe Abnormal	
	50 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	
	99/23	Dec29/23 -
Dec29/23	Dec29/23	Dec2
Viscosity @ 40°C	Additives	
200 Abnormal	1500	
5 Annormal 5 150 - Base Abnormal	E 1000 calcium.	
100	0	
Dec29/23	Dec29/23	Dec29/23
Dec	D D D D D D D D D D D D D D D D D D D	Dec



CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number : 5709344

Test Package : MOB 1

: WC0886088 : 02608258

Recieved Diagnosed Diagnostician : Wes Davis

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : 11 Jan 2024

: 11 Jan 2024

Agnico Eagle Canada 1350 Government Rd. W, MACASSA COMPLEX

Kirkland Lake, ON CA P2N 3J1

Contact: Mitch Lamontagne AEM_KL_macassaoilsampleresults@agnicoeagle.com

F: (705)567-5221

To discuss this sample report, contact Customer Service at 1-800-268-2131.

T: (705)567-5208

Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.