WEAR CONTAMINATION FLUID CONDITION

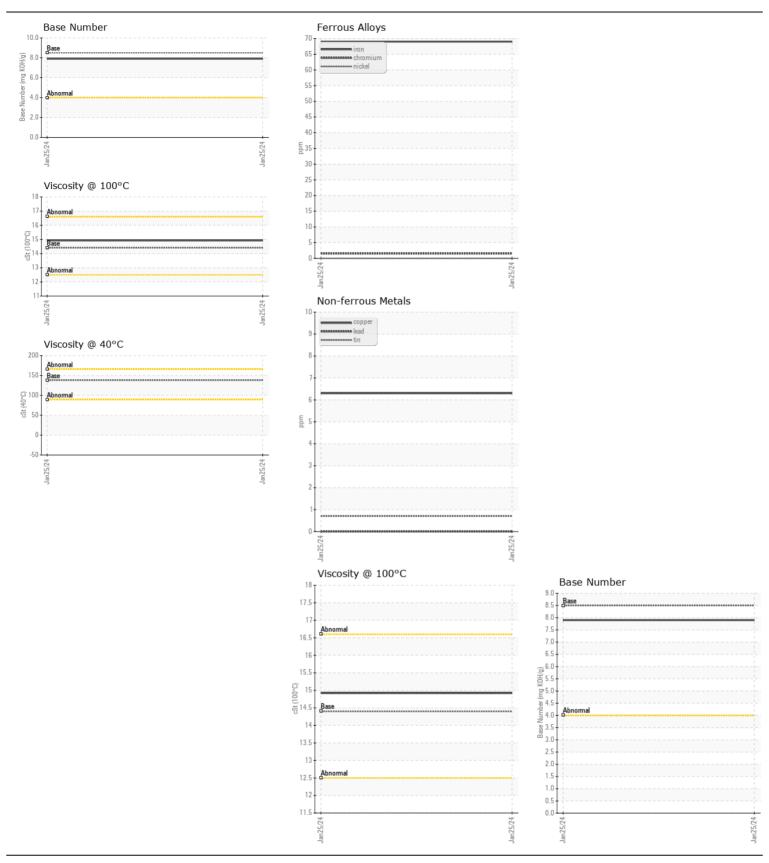
NORMAL NORMAL NORMAL



**VOLVO EC300DL 210909** 

Component Diesel Engine

Test   UOM   Method   Unitable   Current   Method   Changed   Method   Collect Info   Sample Date   Collect Info   Sample Date   Collect Info   Collect In	DIESEL ENGINE OIL SAE 40 (-	GAL)						
Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm.    Machine Age   hrs   Client Info   4259      Filter Age   hrs   Client Info   4259      Changed   Filter Changed   Client Info   4259      Changed   Filter Changed   Client Info   4259      Changed   Filter Changed   Client Info   4259      Changed   Client Info   4259      Changed   Filter Changed   Client Info   4259      Changed   Filter Changed   Client Info   4259      Changed   Changed   Changed   Changed   Changed   Changed   Changed   Changed   Chan	RECOMMENDATION		LIOM	Method	Limit/Ahn	Current	History1	History2
Resample at the next service interval to monifar. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40, Please confirm.	Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC)		OOW		LITTIOTOTT		,	
Machine Age   Install		•						
Oil Age			hrs			4259		
Oil Changed   Chient Info		Oil Age	hrs	Client Info		4259		
Filter Changed   Chlorit Info   Changed   NORMAL   NORM		Filter Age	hrs	Client Info		4259		
No		Oil Changed		Client Info		Changed		
Iron		Filter Changed		Client Info		Changed		
Metal levels are typical for a components first oil change.   Nickel pm		Sample Status				NORMAL		
Metal levels are typical for a components first oil change.   Nickel pm	WEAR	Iron	mag	ASTM D5185m	>100	69		
Nickel   ppm   ASTM D5185m   10   0								
Titanium   ppm   ASTM D5185m   2   0								
Silver   ppm   ASTM D5185n   >20   0   .								
Aluminum   ppm   ASTM 05485m   >20   0   7					>2	_		
Lead								
Copper								
Tin		Copper				6		
White Metal   Scalar   Visual   NONE   NON			ppm	ASTM D5185m	>10	<1		
Vellow Metal   Scalar   Visual   NONE   NONE           NONE		Vanadium	ppm	ASTM D5185m		0		
Silicon   ppm   ASTM D5185m   >20   12		White Metal	scalar	*Visual	NONE	NONE		
Potassium   ppm   ASTM 05185m   >20   9		Yellow Metal	scalar	*Visual	NONE	NONE		
Potassium   ppm   ASTM 05185m   >20   9	CONTAMINATION	Silicon	maa	ASTM D5185m	>20	12		
Fuel   WC Method   VC Method	SOUTHINITATION							
Water   WC Method   So.1   NEG   So.1   Ne	There is no indication of any contamination in the oil.		1-1-					
Glycol				WC Method	>0.1			
Soot %		Glycol		WC Method		NEG		
Sulfation   Abs/.tmm   *ASTM D7415   >30   24.2         Silt   scalar   *Visual   NONE   NONE         Debris   scalar   *Visual   NONE   NONE   NONE         Sand/Dirt   scalar   *Visual   NONE   NONE   NONE         Appearance   scalar   *Visual   NORML		Soot %	%	*ASTM D7844	>3	1.6		
Silt   scalar   *Visual   NONE   NONE   NONE   NONE   Sand/Dir   scalar   *Visual   NONE		Nitration	Abs/cm	*ASTM D7624	>20	11.0		
Debris   Scalar   *Visual   NONE   NONE   NONE   Sand/Dirt   Scalar   *Visual   NONE   NORML   NORML		Sulfation	Abs/.1mm	*ASTM D7415	>30	24.2		
Sand/Dirt   Scalar *Visual   NONE   NONE   Appearance   Scalar *Visual   NORML   NOR		Silt	scalar	*Visual	NONE	NONE		
Appearance   Scalar   *Visual   NORML   NORM		Debris	scalar	*Visual	NONE	NONE		
Codor   Scalar *Visual   NORML   NORML   NORML   Emulsified Water   Scalar *Visual   >0.1   NEG		Sand/Dirt	scalar	*Visual	NONE	NONE		
Emulsified Water   scalar *Visual   >0.1   NEG		Appearance	scalar	*Visual				
Sodium   ppm   ASTM D5185m   >216   2					NORML			
Boron   ppm   ASTM D5185m   250   78           Barium   ppm   ASTM D5185m   10   0           Molybdenum   ppm   ASTM D5185m   100             Manganese   ppm   ASTM D5185m   100             Manganese   ppm   ASTM D5185m   100           Manganese   ppm   ASTM D5185m   450   21           Calcium   ppm   ASTM D5185m   3000   2217           Phosphorus   ppm   ASTM D5185m   1150   986           Sulfur   ppm   ASTM D5185m   1350   1211           Sulfur   ppm   ASTM D5185m   4250   4171           Oxidation   Abs/.1mm   *ASTM D7414   >25   18.7           Base Number (BN)   mg KOH/g   ASTM D2896   8.5   7.9		Emulsified Water	scalar	*Visual	>0.1	NEG		
Boron   ppm   ASTM D5185m   250   78           Barium   ppm   ASTM D5185m   10   0           Molybdenum   ppm   ASTM D5185m   100             Manganese   ppm   ASTM D5185m   100             Manganese   ppm   ASTM D5185m   100           Manganese   ppm   ASTM D5185m   450   21           Calcium   ppm   ASTM D5185m   3000   2217           Phosphorus   ppm   ASTM D5185m   1150   986           Sulfur   ppm   ASTM D5185m   1350   1211           Sulfur   ppm   ASTM D5185m   4250   4171           Oxidation   Abs/.1mm   *ASTM D7414   >25   18.7           Base Number (BN)   mg KOH/g   ASTM D2896   8.5   7.9	FLUID CONDITION	Sodium	ppm	ASTM D5185m	>216	2		
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.    Barium   ppm   ASTM D5185m   100         Molybdenum   ppm   ASTM D5185m   100         Manganese   ppm   ASTM D5185m   450   21         Calcium   ppm   ASTM D5185m   3000   2217         Phosphorus   ppm   ASTM D5185m   1150   986         Zinc   ppm   ASTM D5185m   1350   1211         Sulfur   ppm   ASTM D5185m   4250   4171         Oxidation   Abs/.1mm   *ASTM D7414   >25   18.7         Base Number (BN)   mg KOH/g   ASTM D2896   8.5   7.9								
Molybdenum ppm ASTM D5185m 100 <1 Magnesium ppm ASTM D5185m 450 21 Calcium ppm ASTM D5185m 3000 2217 Phosphorus ppm ASTM D5185m 1150 986 Sulfur ppm ASTM D5185m 1350 1211 Sulfur ppm ASTM D5185m 4250 4171 Base Number (BN) mg KOH/g ASTM D2896 8.5 7.9	, ,							
Manganese         ppm         ASTM D5185m         0             Magnesium         ppm         ASTM D5185m         450         21             Calcium         ppm         ASTM D5185m         3000         2217             Phosphorus         ppm         ASTM D5185m         1150         986             Zinc         ppm         ASTM D5185m         1350         1211             Sulfur         ppm         ASTM D5185m         4250         4171             Oxidation         Abs/.1mm         *ASTM D7414         >25         18.7             Base Number (BN)         mg KOH/g         ASTM D2896         8.5         7.9								
Magnesium         ppm         ASTM D5185m         450         21             Calcium         ppm         ASTM D5185m         3000         2217             Phosphorus         ppm         ASTM D5185m         1150         986             Zinc         ppm         ASTM D5185m         1350         1211             Sulfur         ppm         ASTM D5185m         4250         4171             Oxidation         Abs/.1mm         *ASTM D7414         >25         18.7             Base Number (BN)         mg KOH/g         ASTM D2896         8.5         7.9		-						
Calcium         ppm         ASTM D5185m         3000         2217             Phosphorus         ppm         ASTM D5185m         1150         986             Zinc         ppm         ASTM D5185m         1350         1211             Sulfur         ppm         ASTM D5185m         4250         4171             Oxidation         Abs/.1mm         *ASTM D7414         >25         18.7             Base Number (BN)         mg KOH/g         ASTM D2896         8.5         7.9		-			450			
Phosphorus         ppm         ASTM D5185m         1150         986             Zinc         ppm         ASTM D5185m         1350         1211             Sulfur         ppm         ASTM D5185m         4250         4171             Oxidation         Abs/.1mm         *ASTM D7414         >25         18.7             Base Number (BN)         mg KOH/g         ASTM D2896         8.5         7.9		•						
Sulfur         ppm         ASTM D5185m         4250         4171             Oxidation         Abs/.1mm         *ASTM D7414         >25         18.7             Base Number (BN)         mg KOH/g         ASTM D2896         8.5         7.9		Phosphorus		ASTM D5185m	1150	986		
Oxidation         Abs/.1mm         *ASTM D7414         >25         18.7             Base Number (BN)         mg KOH/g         ASTM D2896         8.5         7.9		Zinc	ppm	ASTM D5185m	1350	1211		
Base Number (BN)         mg KOH/g         ASTM D2896         8.5         7.9		Sulfur	ppm	ASTM D5185m	4250	4171		
		Oxidation	Abs/.1mm	*ASTM D7414	>25	18.7		
Visc @ 100°C cSt ASTM D445 14.4 14.92		Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.9		
		Visc @ 100°C	cSt	ASTM D445	14.4	14.92		







Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** 

: ASC0003109 : 06073348 : 10850025

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved : 29 Jan 2024

: 01 Feb 2024 Diagnosed Diagnostician : Wes Davis

Test Package : CONST ( Additional Tests: KV40, TBN )

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)

**GRASSY CREEK CONSTRUCTION** 

PO BOX 6181 JOHNSON CITY, TN US 37602

Contact: Service Manager

T: F: