WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL NORMAL

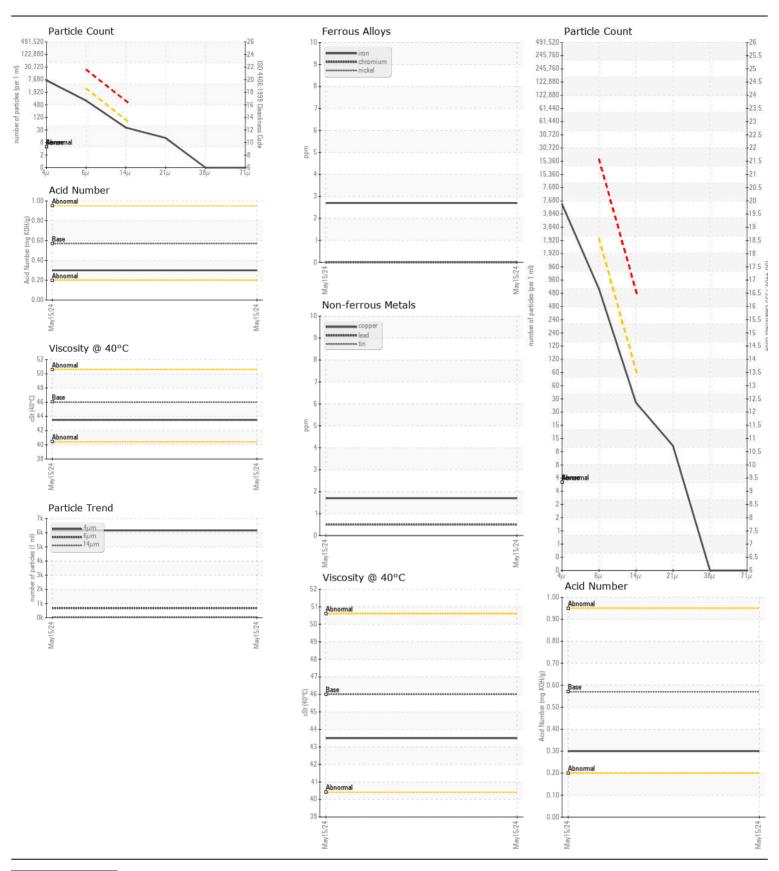


## Machine Id **VOLVO L70H 624754**

Transmission

AW HYDRAULIC OIL ISO 46 (--- GAL)

Sample Number   Client Info   ML0001557								
Sample Date   Assample at the time of sampling has been noted. Resample at the next service interval to monitor.   State   National Age   Inst.   Client Info.   15 May 2024   Machine Age   Inst.   Client Info.   0	RECOMMENDATION		UOM		Limit/Abn	Current	History1	History2
Machine Age   hrs   Cilient Info   Changed   Changed   Cilient Info   Changed   Changed   Cilient Info   Changed	Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.	•						
Machine Age   Mrs   Client Info   0   0   0   0   0   0   0   0   0						-		
Filter Age		•	hrs					
Oil Changed   Cilient Info   Changed   Chang			hrs			0		
Filter Changed   Sample Status		•	hrs	Client Info		0		
NORTHON   NORTH   NO								
Iron				Client Info				
Chromium   ppm   ASTM D5185m   20   0		Sample Status				NORMAL		
Chromium   ppm   ASTM D5165m   > 20	WEAD	lvon		ACTM DE10Em	. 50			
Nickel   ppm   ASTM D5185m   >10   0	WEAR							
Titanium   ppm   ASTM 05185m   0	All component wear rates are normal.							
Silver   ppm   ASTM D5185m   20   0					>10			
Aluminum   ppm   ASTM D6185m   >20   0						-		
Lead					- 20			
Copper								
Tin								
Vanadium								
White Metal Yellow Metal   Scalar *Visual NONE					>20			
Yellow Metal   Scalar   Visual   NONE   NONE           NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE					NONE	-		
Silicon   ppm   ASTM D5185m   >20   4						_		
Potassium   ppm   ASTM D5185m   >20   0		Yellow Metal	Scalar	visuai	NONE	NONE		
Potassium   ppm   ASTM D5185m   >20   0	CONTAMINATION	Silicon	mag	ASTM D5185m	>20	4		
Water   WC Method   No.1   NEG   N	SOUTAMINATION			ASTM D5185m	>20			
Particles >6µm	The amount and size of particulates present in the system are	Water				NEG		
Particles >6µm	acceptable. There is no indication of any contamination in the oil.	Particles >4µm						
Particles > 14µm					>2500			
Particles >21 \( \mu \)   Particles >38 \( \mu \)   ASTM D7647   >20   11         Particles >71 \( \mu \)   ASTM D7647   >4   0         Particles >71 \( \mu \)   ASTM D7647   >3   0         Oil Cleanliness   Silt   Socalar   *Visual   NONE   NONE   NONE     Debris   Scalar   *Visual   NONE   NONE   NONE   NONE         Debris   Scalar   *Visual   NONE   NONE   NONE         Debris   Scalar   *Visual   NONE   NONE   NONE         ASTM D7647   >3   0         Solit   Scalar   *Visual   NONE   NONE   NONE         Debris   Scalar   *Visual   NONE   NONE   NONE         ASTM D7647   >4   0         Debris   Scalar   *Visual   NONE   NONE   NONE         ASTM D7647   >3   0         Debris   Scalar   *Visual   NONE   NONE   NONE         ASTM D7647   >3   0         Debris   Scalar   *Visual   NONE   NONE   NONE         ASTM D7647   >3   0         Debris   Scalar   *Visual   NONE   NONE   NONE         ASTM D7647   >3   0         Debris   Scalar   *Visual   NONE   NONE   NONE         ASTM D7647   >3   0         Debris   Scalar   *Visual   NONE   NONE   NONE         ASTM D7647   >4   0         Debris   Scalar   *Visual   NONE   NONE   NONE         Debris   Scalar   *Visual   NONE   NONE   NONE         Debris   Scalar   *Visual   NONE   NONE   NONE         ASTM D76487   5   0         Debris   Scalar   *Visual   NONE   NONE         Debris   Scalar   *Visual   NORE   NONE         Debris   Scalar   *Visual   NORE   NONE   NONE         Debris   Scalar   *Visual   NORE   NONE   NORE         Debris   Scalar   *Visual   NORE   NORE         Debris   Scalar   *Visual   NORE								
Particles >38μm   ASTM D7647   >4   0         Particles >71μm   ASTM D7647   >3   0         Oil Cleanliness   ISO 4406 (c)   >-/18/13   20/17/12         Debris   Scalar   *Visual   NONE		Particles >21µm		ASTM D7647	>20	11		
Oil Cleanliness   ISO 4406 (c)   >-/18/13   20/17/12				ASTM D7647	>4	0		
Silt   scalar *Visual   NONE   NONE       NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE		Particles >71µm		ASTM D7647	>3	0		
Silt   scalar *Visual   NONE   NONE       NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE   NONE		Oil Cleanliness		ISO 4406 (c)	>/18/13	20/17/12		
Sand/Dirt   scalar   *Visual   NONE   NONE   NORML		Silt	scalar			NONE		
Appearance   Scalar   *Visual   NORML   NORM		Debris	scalar	*Visual	NONE	NONE		
Odor   Scalar *Visual   NORML   NORML   NORML   Emulsified Water   Scalar *Visual   Visual   NORML		Sand/Dirt	scalar	*Visual	NONE	NONE		
Emulsified Water   scalar   *Visual   >0.1   NEG		Appearance	scalar	*Visual	NORML	NORML		
Sodium   ppm   ASTM D5185m   5   0		Odor	scalar	*Visual	NORML	NORML		
Boron   ppm   ASTM D5185m   5   0		<b>Emulsified Water</b>	scalar	*Visual	>0.1	NEG		
Boron   ppm   ASTM D5185m   5   0	FLUID CONDITION	0 "				ļ		
The BN result indicates that there is suitable alkalinity remaining in the bil. The condition of the oil is suitable for further service.    Barium   ppm   ASTM D5185m   5   0         Molybdenum   ppm   ASTM D5185m   5   0         Manganese   ppm   ASTM D5185m   25   <1         Manganesium   ppm   ASTM D5185m   25   <1         Calcium   ppm   ASTM D5185m   200   83         Phosphorus   ppm   ASTM D5185m   300   338         Zinc   ppm   ASTM D5185m   370   460					-			
Molybdenum   ppm   ASTM D5185m   5   <1           Manganese   ppm   ASTM D5185m   5   <1           Magnesium   ppm   ASTM D5185m   25   <1         Calcium   ppm   ASTM D5185m   200   83         Phosphorus   ppm   ASTM D5185m   300   338         Zinc   ppm   ASTM D5185m   370   460	The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.							
Molybdenum         ppm         ASTM D5185m         S         <1								
Magnesium         ppm         ASTM D5185m         25         <1		,			5			
Calcium         ppm         ASTM D5185m         200         83             Phosphorus         ppm         ASTM D5185m         300         338             Zinc         ppm         ASTM D5185m         370         460					05			
Phosphorus         ppm         ASTM D5185m         300         338             Zinc         ppm         ASTM D5185m         370         460		•						
Zinc ppm ASTM D5185m 370 <b>460</b>								
		•						
Sulfur ppm ASIM D5185m 2500 2308								
Acid Number (AN) mg KOH/g ASTM D8045 0.57 0.30		. ,						
Visc @ 40°C   cSt   ASTM D445   46   43.5		VISC @ 40°C	COL	ASTIVI D445	40	43.5		





Certificate L2367

Report Id: VOLVO4589 [WUSCAR] 06190390 (Generated: 06/04/2024 02:55:19) Rev: 1

Laboratory Sample No.

Lab Number : 06190390

: ML0001557 Unique Number : 11047142

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

: 24 May 2024 : 28 May 2024 Diagnosed

: 29 May 2024 - Angela Borella Test Package: CONST (Additional Tests: ICP, KV40, PrtCount, SCREEN)

MCCLUNG-LOGAN EQUIPMENT CO - WINCHESTER 160 KENTMERE COURT WINCHESTER, VA US 22603

Contact: Dakota Hartley dhartley@mcclung-logan.com T:

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)

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