

WEAR CONTAMINATION FLUID CONDITION

NORMAL

ABNORMAL

NORMAL



VOLVO A45GFS 352657

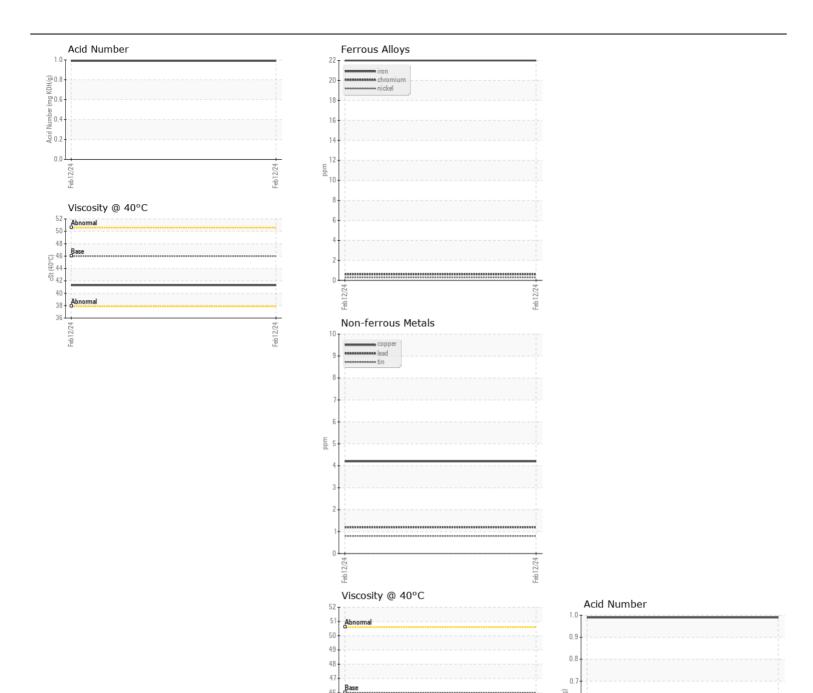
Component Hydraulic System

VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)

VOLVO SUPER HYDRAULIC OI	L 46 (GA	<u></u> /					
RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.	Sample Number		Client Info		VKC0001143		
	Sample Date		Client Info		12 Feb 2024		
	Machine Age	hrs	Client Info		4166		
	Oil Age	hrs	Client Info		0		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				ABNORMAL		
WEAR	Iron	ppm	ASTM D5185m	>50	22		
All component wear rates are normal.	Chromium	ppm	ASTM D5185m	>20	<1		
	Nickel	ppm	ASTM D5185m	>10	<1		
	Titanium	ppm	ASTM D5185m		<1		
	Silver	ppm	ASTM D5185m		<1		
	Aluminum	ppm	ASTM D5185m	>20	<1		
	Lead	ppm	ASTM D5185m	>20	1		
	Copper	ppm	ASTM D5185m	>150	4		
	Tin	ppm	ASTM D5185m	>20	<1		
	Vanadium	ppm	ASTM D5185m		0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*\/;	NONE	NONE		
	i ellow ivietal	Scalai	*Visual	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185m		8		
				>20			
CONTAMINATION Moderate concentration of visible dirt/debris present in the oil.	Silicon	ppm	ASTM D5185m	>20	8		
	Silicon Potassium	ppm	ASTM D5185m ASTM D5185m	>20 >20	8 1		
	Silicon Potassium Water	ppm	ASTM D5185m ASTM D5185m WC Method	>20 >20 >20 >0.1	8 1 NEG		
	Silicon Potassium Water Silt	ppm ppm scalar	ASTM D5185m ASTM D5185m WC Method *Visual	>20 >20 >0.1 NONE	8 1 NEG MODER	 	
	Silicon Potassium Water Silt Debris	ppm ppm scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual	>20 >20 >0.1 NONE NONE	8 1 NEG MODER NONE	 	
	Silicon Potassium Water Silt Debris Sand/Dirt	ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual	>20 >20 >0.1 NONE NONE	8 1 NEG MODER NONE	 	
	Silicon Potassium Water Silt Debris Sand/Dirt Appearance	ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual	>20 >20 >0.1 NONE NONE NONE	8 1 NEG MODER NONE NONE NORML	 	
	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor	ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual	>20 >20 >0.1 NONE NONE NONE NORML	8 1 NEG MODER NONE NONE NORML	 	
Moderate concentration of visible dirt/debris present in the oil.	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>20 >20 >0.1 NONE NONE NONE NORML NORML >0.1	8 1 NEG MODER NONE NONE NORML NORML	 	
Moderate concentration of visible dirt/debris present in the oil. FLUID CONDITION	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium	ppm ppm scalar scalar scalar scalar scalar ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>20 >20 >0.1 NONE NONE NONE NORML NORML >0.1	8 1 NEG MODER NONE NONE NORML NORML NEG	 	
Moderate concentration of visible dirt/debris present in the oil. FLUID CONDITION The AN level is acceptable for this fluid. The condition of the oil is	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm ppm scalar scalar scalar scalar scalar scalar ppm	ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual *Visual *ASTM D5185m	>20 >20 >0.1 NONE NONE NORML NORML >0.1	8 1 NEG MODER NONE NONE NORML NORML NEG 0 0		
Moderate concentration of visible dirt/debris present in the oil. FLUID CONDITION The AN level is acceptable for this fluid. The condition of the oil is	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm ppm scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m ASTM D5185m	>20 >20 >0.1 NONE NONE NORML NORML >0.1	8 1 NEG MODER NONE NONE NORML NORML NEG 0 0 5		
Moderate concentration of visible dirt/debris present in the oil. FLUID CONDITION The AN level is acceptable for this fluid. The condition of the oil is	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>20 >20 >0.1 NONE NONE NORML NORML >0.1	8 1 NEG MODER NONE NORML NORML NEG 0 0 5 15		
Moderate concentration of visible dirt/debris present in the oil. FLUID CONDITION The AN level is acceptable for this fluid. The condition of the oil is	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m	>20 >20 >0.1 NONE NONE NORML NORML >0.1 14 0.0 0.0 0.0 2.6 49	8 1 NEG MODER NONE NORML NORML NEG 0 0 5 15 <1 289 364		
Moderate concentration of visible dirt/debris present in the oil. FLUID CONDITION The AN level is acceptable for this fluid. The condition of the oil is	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m	>20 >20 >0.1 NONE NONE NORML NORML >0.1 14 0.0 0.0 0.0 2.6 49 354	8 1 NEG MODER NONE NONE NORML NORML NEG 0 5 15 <1 289 364 509		
Moderate concentration of visible dirt/debris present in the oil. FLUID CONDITION The AN level is acceptable for this fluid. The condition of the oil is	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m	>20 >20 >0.1 NONE NONE NORML NORML >0.1 14 0.0 0.0 0.0 2.6 49 354 419	8 1 NEG MODER NONE NORML NORML NEG 0 0 5 15 <1 289 364 509 644		
Moderate concentration of visible dirt/debris present in the oil. FLUID CONDITION The AN level is acceptable for this fluid. The condition of the oil is	Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *ASTM D5185m ASTM D5185m	>20 >20 >0.1 NONE NONE NORML NORML >0.1 14 0.0 0.0 0.0 2.6 49 354 419	8 1 NEG MODER NONE NONE NORML NORML NEG 0 5 15 <1 289 364 509		

Visc @ 40°C cSt ASTM D445 46

41.3







Certificate L2367

Laboratory Sample No.

: VKC0001143 Lab Number : 06098309 Unique Number: 10896539 Test Package : MOBCE

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37 36 Feb12/24

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 23 Feb 2024 : 26 Feb 2024 **Tested**

Diagnosed : 26 Feb 2024 - Don Baldridge

Feb12/24

GW VAN KEPPEL CO 1801 NORTH 9TH ST KANSAS CITY, KS US 66110

Contact: PAT SAUSE psause@vankeppel.com

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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