WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL



## [716013 HERC RENTALS] Wachine Id VOLVO ECR145 316464

Diesel Engine

**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)** 

Sample Number   Client Info   Vol. 9454781	VOLVO ULTRA DIESEL ENGIN	_ OIL 10114		, , , , ,	' <u>-</u> /			
Sample Number   Client Info   VCP457781   Sample Date   Client Info   Client Info   Sept   Client Info	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine Age   hrs   Client Info   988	Resample at the next service interval to monitor.	Sample Number		Client Info		VCP454781		
Oil Age   hrs   Citent Info   0		Sample Date		Client Info		23 May 2024		
Filter Age   brs   Client Info   Changed   C		Machine Age	hrs	Client Info		958		
Oil Changed   Filter Changed   Sample Status   Client Info   Changed   Client Info   Changed   Changed   Client Info   Changed   Chang		Oil Age	hrs	Client Info		0		
Filter Changed   Cample   Changed   Cample   Changed   Cample		•	hrs	Client Info		0		
NORMAL		-		Client Info		Changed		
Iron		_		Client Info		Changed		
All component wear rates are normal.    Chromium   ppm   ASTM 0585m   >10   5		Sample Status				NORMAL		
All component wear rates are normal.    Chromium   ppm   ASTM 0585m   >10   5	WEAR  All component wear rates are normal.	Iron	mag	ASTM D5185m	>100	30		
Nicke								
Titanium   ppm   ASTM 05185m   <1								
Silver			• •		7.0			
Aluminum   ppm   ASTM D5185m   >10   7					>2			
Lead								
Copper								
Tin								
Vanadium   ppm   ASTM D5185m   NONE   NONE   NONE   Yellow Metal   scalar   Yisual   NONE								
White Metal   Scalar   Visual   NONE   NON					710			
Silicon   ppm   ASTM D5185m   >20   11					NONE	-		
Silicon   ppm   ASTM D5185m   >20   11								
Potassium   ppm   ASTM D5185m   20   2				· · · · · · · · · · · · · · · · · · ·		·····		
Fuel   WC Method   So.0   WC Method   NEG   WC Method   So.0   WC Method   NEG   WC Method   So.0   WC Method   NEG   WC Metho	CONTAMINATION	Silicon	ppm	ASTM D5185m	>20	11		
Water   Wc Method   So.0   NEG	There is no indication of any contamination in the oil.	Potassium	ppm	ASTM D5185m	>20	2		
Glycol   Scot % % 'ASTM D7844   3   0.5         Nitration   Abs/cm 'ASTM D78624   >20   12.6         Sulfation   Abs/cm 'ASTM D78624   >20   12.6         Sulfation   Abs/cm 'ASTM D78624   >20   12.6         Sulfation   Abs/cm 'ASTM D78624   >20   26.9         Silt   scalar 'Visual   NONE   NONE   NONE         Debris   scalar 'Visual   NONE   NONE   NONE         Appearance   scalar 'Visual   NORML   NO		Fuel		WC Method	>6.0	<1.0		
Soot %		Water		WC Method	>0.1	NEG		
Nitration		Glycol		WC Method		NEG		
Sulfation   Abs/.1mm   *ASTM D7415   >30   26.9         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	0.5		
Silt   Scalar   *Visual   NONE   NONE   NONE   NONE   Sand/Dirt   Scalar   *Visual   NORML   NOR		Nitration	Abs/cm	*ASTM D7624	>20	12.6		
Debris   Scalar   *Visual   NONE   NONE   Sand/Dirt   Scalar   *Visual   NORML   NORML   Scalar   *Visual   NORML   NORML   Scalar   *Visual   NORML   NORML   Scalar   *Visual   NORML   NORML   Scalar   *Visual   Scala		Sulfation	Abs/.1mm	*ASTM D7415	>30	26.9		
Sand/Dirt   Scalar   *Visual   NONE   NONE   Appearance   Scalar   *Visual   NORML		Silt	scalar	*Visual	NONE	NONE		
Appearance   Scalar   *Visual   NORML   NORM		Debris	scalar	*Visual	NONE	NONE		
Codor   Scalar   *Visual   NORML   NORML   NORML   Full   Emulsified Water   Scalar   *Visual   >0.1   NEG		Sand/Dirt	scalar	*Visual	NONE	NONE		
Emulsified Water   scalar   *Visual   >0.1   NEG		Appearance	scalar	*Visual	NORML	NORML		
Sodium   ppm   ASTM D5185m   2.5   0		Odor	scalar	*Visual	NORML	NORML		
Boron   ppm   ASTM D5185m   2.5   0         Barium   ppm   ASTM D5185m   0.0   1         Molybdenum   ppm   ASTM D5185m   0.0   1         Manganese   ppm   ASTM D5185m   0.0   < 1         Magnesium   ppm   ASTM D5185m   256   806         Calcium   ppm   ASTM D5185m   2057   1156         Phosphorus   ppm   ASTM D5185m   935   983         Zinc   ppm   ASTM D5185m   1223   1106         Sulfur   ppm   ASTM D5185m   4079   2809         Oxidation   Abs/.1mm   *ASTM D7414   >25   28.2         Base Number (BN)   mg KOH/g   ASTM D2896   10   4.0		<b>Emulsified Water</b>	scalar	*Visual	>0.1	NEG		
Boron   ppm   ASTM D5185m   2.5   0         Barium   ppm   ASTM D5185m   0.0   1         Molybdenum   ppm   ASTM D5185m   0.0   1         Manganese   ppm   ASTM D5185m   0.0   < 1         Magnesium   ppm   ASTM D5185m   256   806         Calcium   ppm   ASTM D5185m   2057   1156         Phosphorus   ppm   ASTM D5185m   935   983         Zinc   ppm   ASTM D5185m   1223   1106         Sulfur   ppm   ASTM D5185m   4079   2809         Oxidation   Abs/.1mm   *ASTM D7414   >25   28.2         Base Number (BN)   mg KOH/g   ASTM D2896   10   4.0	ELUID CONDITION	Cadium		ACTM DE10Em		4		
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.    Barium   ppm   ASTM D5185m   0.0   1         Molybdenum   ppm   ASTM D5185m   0.0   <1         Manganese   ppm   ASTM D5185m   0.0   <1         Magnesium   ppm   ASTM D5185m   256   806         Calcium   ppm   ASTM D5185m   2057   1156         Phosphorus   ppm   ASTM D5185m   935   983         Zinc   ppm   ASTM D5185m   1223   1106         Sulfur   ppm   ASTM D5185m   4079   2809         Oxidation   Abs/.1mm *ASTM D7414   >25   28.2         Base Number (BN)   mg KOH/g   ASTM D2896   10   4.0	FLUID CONDITION				25			
Molybdenum ppm ASTM D5185m 0.7 54 Magnesium ppm ASTM D5185m 0.0 <1 Calcium ppm ASTM D5185m 256 806 Calcium ppm ASTM D5185m 2057 1156 Zinc ppm ASTM D5185m 1223 1106 Sulfur ppm ASTM D5185m 1223 1106 Calcium ppm ASTM D5185m 1223 1106 Sulfur ppm ASTM D5185m 4079 2809 Calcium ppm ASTM D5185m 4079 2809 Sulfur ppm ASTM D5185m 4079 2809 Sulfur ppm ASTM D5185m 4079 2809 Base Number (BN) mg KOH/g ASTM D2896 10 4.0	The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.							
Manganese         ppm         ASTM D5185m         0.0         <1								
Magnesium         ppm         ASTM D5185m         256         806             Calcium         ppm         ASTM D5185m         2057         1156             Phosphorus         ppm         ASTM D5185m         935         983             Zinc         ppm         ASTM D5185m         1223         1106             Sulfur         ppm         ASTM D5185m         4079         2809             Oxidation         Abs/.1mm         *ASTM D7414         >25         28.2             Base Number (BN)         mg KOH/g         ASTM D2896         10         4.0		•						
Calcium         ppm         ASTM D5185m         2057         1156             Phosphorus         ppm         ASTM D5185m         935         983             Zinc         ppm         ASTM D5185m         1223         1106             Sulfur         ppm         ASTM D5185m         4079         2809             Oxidation         Abs/.1mm         *ASTM D7414         >25         28.2             Base Number (BN)         mg KOH/g         ASTM D2896         10         4.0		-						
Phosphorus         ppm         ASTM D5185m         935         983             Zinc         ppm         ASTM D5185m         1223         1106             Sulfur         ppm         ASTM D5185m         4079         2809             Oxidation         Abs/.1mm         *ASTM D7414         >25         28.2             Base Number (BN)         mg KOH/g         ASTM D2896         10         4.0		-						
Zinc         ppm         ASTM D5185m         1223         1106             Sulfur         ppm         ASTM D5185m         4079         2809             Oxidation         Abs/.1mm         *ASTM D7414         >25         28.2             Base Number (BN)         mg KOH/g         ASTM D2896         10         4.0								
Sulfur         ppm         ASTM D5185m         4079         2809             Oxidation         Abs/.1mm         *ASTM D7414         >25         28.2             Base Number (BN)         mg KOH/g         ASTM D2896         10         4.0								
Oxidation         Abs/.1mm         *ASTM D7414         >25         28.2             Base Number (BN)         mg KOH/g         ASTM D2896         10         4.0								
Base Number (BN)         mg KOH/g         ASTM D2896         10         4.0								
VISC @ 100 O COL NOTINI D440 10.0 10.0		,	0 0					
		VISC @ 100 C	COL	CPPU IVI UM	10.0	13.0		





Certificate L2367

Laboratory

Sample No.

Lab Number : 06194965

Unique Number : 11057088

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : VCP454781 Received **Tested** 

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Diagnosed Test Package : MOB 1 ( Additional Tests: TBN )

: 30 May 2024 : 31 May 2024

: 31 May 2024 - Don Baldridge

US 33314 Contact: N. FACEY nfacey@altaequipfl.com T: (954)581-4744

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.

F: (954)583-0318

5210 REESE ROAD

**ALTA EQUIPMENT COMPANY** 

DAVIE, FL