WEAR CONTAMINATION FLUID CONDITION

NORMAL NORMAL

Area

Ascendum Machinery VOLVO L70H 624974

Component Diesel Engine

VOLVO VDS-4.5 Premium Motor Oil 15W40 (--- GAL)

Test	VOLVO VDS-4.5 Premium Motor Oil 15W40 (GAL)								
Resample at the next service interval to monitor. Sample Date Client Info Saroppe Date Client Info Saroppe Date Client Info Saroppe Client Info Saroppe Client Info Saroppe	RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2	
Machine Age hrs Client Info 486 Filter Age hrs Client Info 486 Filter Age hrs Client Info 0 Filter Changed Client Info Changed Filter Changed Changed Changed Filter Changed Changed Changed Filter Changed Change		Sample Number							
Cil Age hrs Client Info Changed Filter Age Filter Age Filter Age Filter Age Filter Age Filter Age Client Info Changed Ch	Resample at the next service interval to monitor.	•				30 Oct 2023			
Filter Age		Machine Age	hrs	Client Info		486			
Cilchanged Cilent Info Changed Cilent Info Changed Cha		Oil Age	hrs	Client Info		486			
Filter Changed Sample Status		-	hrs	Client Info		0			
Normal N		Oil Changed		Client Info		Changed			
Iron		Filter Changed		Client Info		Changed			
Metal levels are typical for a components first oil change. Chromium ppm ASTM D5185m >10 0		Sample Status				NORMAL			
Metal levels are typical for a components first oil change. Chromium ppm ASTM D5185m >10 0									
Nicket ppm ASTM D5185m 10 0	WEAR								
Titanium ppm ASTMD588m 0 0 0 0 0 0 0 0 0	Metal levels are typical for a components first oil change.								
Silver ppm ASTM D5186m >2 0 0 0 0 0 0 0 0 0			ppm		>10				
Aluminum ppm ASTM D5185m >20			ppm						
Lead ppm ASTM DS185m >20 0			ppm						
Copper		Aluminum	ppm						
Tin			ppm						
Vanadium ppm ASTM D5185m NONE NONE White Metal scalar Visual NONE NONE NONE Water Visual NONE NONE			ppm						
White Metal Yellow Metal Scalar Visual NONE NONE			ppm		>10				
Vellow Metal Scalar Visual NONE NO		Vanadium	ppm			_			
Silicon ppm ASTM D5185m >20 8			scalar						
Potassium ppm ASTM D5185m >20 0		Yellow Metal	scalar	*Visual	NONE	NONE			
Potassium ppm ASTM D5185m >20 0	CONTAMINATION	Ciliaan		ACTM DE10E	00				
Fuel WC Method >6.0 <1.0	CONTAMINATION		• • • • • • • • • • • • • • • • • • • •						
Water Wo Method So.0 NEG	There is no indication of any contamination in the oil.		ppm						
Glycol	,								
Soot % % 'ASTM D7844 >3					>0.1				
Nitration Abs/cm "ASTM D7624 >20 6.0			0/		0				
Sulfation Abs/.fmm *ASTM D7415 >30 18.6 Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Appearance scalar *Visual NORML NORML NORML Appearance scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML									
Silt scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NORML									
Debris Scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NONE NONE Sand/Dirt Scalar *Visual NONE NORML Scalar *Visual NORML NORML Scalar *Visual NORML NORML Scalar *Visual NORML NORML Scalar *Visual NORML Scalar									
Sand/Dirt Scalar *Visual NONE NONE NORML NOR									
Appearance									
Odor Scalar *Visual NORML NORML NORML Emulsified Water Scalar *Visual >0.1 NEG									
Emulsified Water scalar *Visual >0.1 NEG									
Sodium ppm ASTM D5185m D									
Boron ppm ASTM D5185m 11 Barium ppm ASTM D5185m 0 Molybdenum ppm ASTM D5185m 58 Magnesium ppm ASTM D5185m 1 Magnesium ppm ASTM D5185m 1 Magnesium ppm ASTM D5185m 1192 Phosphorus ppm ASTM D5185m 1192 Zinc ppm ASTM D5185m 1096 Sulfur ppm ASTM D5185m 1345 Sulfur ppm ASTM D5185m 3323 Oxidation Abs/.1mm *ASTM D7414 >25 14.4 Base Number (BN) mg KOH/g ASTM D2896 9.7				v 150aa1					
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 58 Molybdenum ppm ASTM D5185m 58 Magnaese ppm ASTM D5185m 1 Magnesium ppm ASTM D5185m 969 Calcium ppm ASTM D5185m 1192 Phosphorus ppm ASTM D5185m 1096 Zinc ppm ASTM D5185m 1345 Sulfur ppm ASTM D5185m 3323 Oxidation Abs/.1mm *ASTM D7414 >25 14.4 Base Number (BN) mg KOH/g ASTM D2896 9.7	FLUID CONDITION	Sodium	ppm	ASTM D5185m		0			
oil. The condition of the oil is suitable for further service. Molybdenum ppm ASTM D5185m 58 Magnesium ppm ASTM D5185m 1 Magnesium ppm ASTM D5185m 1192 Calcium ppm ASTM D5185m 1192 Phosphorus ppm ASTM D5185m 1096 Zinc ppm ASTM D5185m 1345 Sulfur ppm ASTM D5185m 3323 Oxidation Abs/.1mm *ASTM D7414 >25 14.4 Base Number (BN) mg KOH/g ASTM D2896 9.7			ppm			11			
Molybdenum ppm ASTM D5185m		Barium	ppm	ASTM D5185m		0			
Magnesium ppm ASTM D5185m 969 Calcium ppm ASTM D5185m 1192 Phosphorus ppm ASTM D5185m 1096 Zinc ppm ASTM D5185m 1345 Sulfur ppm ASTM D5185m 3323 Oxidation Abs/.1mm *ASTM D7414 >25 14.4 Base Number (BN) mg KOH/g ASTM D2896 9.7		Molybdenum	ppm	ASTM D5185m		58			
Calcium ppm ASTM D5185m 1192 Phosphorus ppm ASTM D5185m 1096 Zinc ppm ASTM D5185m 1345 Sulfur ppm ASTM D5185m 3323 Oxidation Abs/.1mm *ASTM D7414 >25 14.4 Base Number (BN) mg KOH/g ASTM D2896 9.7		Manganese	ppm	ASTM D5185m		1			
Calcium ppm ASTM D5185m 1192 Phosphorus ppm ASTM D5185m 1096 Zinc ppm ASTM D5185m 1345 Sulfur ppm ASTM D5185m 3323 Oxidation Abs/.1mm *ASTM D7414 >25 14.4 Base Number (BN) mg KOH/g ASTM D2896 9.7		Magnesium	ppm	ASTM D5185m		969			
Zinc ppm ASTM D5185m 1345 Sulfur ppm ASTM D5185m 3323 Oxidation Abs/.1mm *ASTM D7414 >25 14.4 Base Number (BN) mg KOH/g ASTM D2896 9.7		Calcium	ppm	ASTM D5185m		1192			
Sulfur ppm ASTM D5185m 3323 Oxidation Abs/.1mm *ASTM D7414 >25 14.4 Base Number (BN) mg KOH/g ASTM D2896 9.7		Phosphorus	ppm	ASTM D5185m		1096			
Oxidation Abs/.1mm *ASTM D7414 >25 14.4 Base Number (BN) mg KOH/g ASTM D2896 9.7		Zinc	ppm	ASTM D5185m		1345			
Base Number (BN) mg KOH/g ASTM D2896 9.7		Sulfur	ppm	ASTM D5185m		3323			
		Oxidation	Abs/.1mm	*ASTM D7414	>25	14.4			
Visc @ 100°C cSt ASTM D445 (13.8)		Base Number (BN)	mg KOH/g	ASTM D2896		9.7			
		Visc @ 100°C	cSt	ASTM D445		13.8			





Laboratory Sample No.

Lab Number : 05996571 Unique Number : 10724931

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : ASC0000662 Received **Tested**

Diagnosed Test Package: MOBCE (Additional Tests: TBN)

: 02 Nov 2023 : 02 Nov 2023 : 02 Nov 2023 - Wes Davis

BRS INC 208 STATE HWY 49 RICHFIELD, NC US 28137 Contact: Service Manager

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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